AN EVALUATION OF THE EFFECTS OF WATERSHED TREATMENT SYSTEMS ON THE SUMMERTIME PHOSPHORUS CONCENTRATION IN METROPOLITAN AREA LAKES

PART TWO OF A REPORT TO THE LEGISLATIVE COMMISSION ON MINNESOTA RESOURCES

by
Richard A. Osgood

METROPOLITAN COUNCIL
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METROPOLITAN COUNCIL

The Metropolitan Council coordinates the planning and development of the seven-county Metropolitan Area. The Council is authorized by state and federal laws to plan for highways and transit, sewers, parks and open space, airports, land use, air and water quality, health, housing, aging and arts.

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SUMMARY

The Metropolitan Council sampled six lakes (Carver, Crystal, Elmo, Holland, McCarrons and Tanners; Fig. 1) as part of a grant from the LCMR. This report addresses the following tasks in partial fulfillment of the grant:

1. Define sensitive periods in lakes relative to phosphorus inputs.

2. Develop a time-dependent phosphorus model to be used to evaluate the effectiveness of lake management techniques.

3. Evaluate the effectiveness of wetlands and ponds on lake water quality.

4. Evaluate the roles of watershed versus in-lake management techniques for lake management.

A companion report, "The Water Quality Performance of Select Urban Runoff Treatment Systems", summarizes the other tasks required to satisfy the LCMR grant.

The six lakes were sampled from October 1987 through October 1988 at monthly intervals during the winter and every other week during the open-water season. The sampling included measurements of temperature, dissolved oxygen, underwater light, Secchi disk transparency, total phosphorus plus dissolved phosphorus fractions, total Kjeldahl nitrogen plus dissolved nitrogen, chlorophyll a, pH, specific conductance, and plankton. These data, except the plankton, are included in the appendices, although this report specifically analyzes the phosphorus dynamics in these lakes.

The dissolved fractions of phosphorus and nitrogen were found in low concentrations at the surface of the lakes and were poorly correlated with algal abundance. The particulate fractions, the difference between the total and dissolved fraction, were highly correlated with algal abundance, indicating that algae contain most of the nutrients available in the lakes.

The six lakes were chosen because they had been managed or changed in some way, making them good candidates for testing the lake phosphorus model that was to be developed. The observed changes in water quality were assessed, although there are generally insufficient data available to detect trends in these lakes. No changes in the water quality of Carver, McCarrons or Tanners Lakes have been observed over the past decade. This does not necessarily indicate that changes have not occurred, rather that the data cannot detect them if they have occurred. Lake Elmo and Holland Lake appear to have improved following the recent diversion of large inflows. Crystal Lake's water quality was worse when the lake was circulated.

Phosphorus is important to lake managers because it controls the general productivity of lakes. Previous Council studies have shown that the summertime total phosphorus concentration is strongly correlated to nuisances associated with over-productive lakes. For example, the frequency and abundance of algae, and the predominance of blue-green algae increase with increases in phosphorus. Thus, phosphorus is a logical management target.

Commonly used annual phosphorus models poorly predict the response of TCMA lakes to changes in phosphorus inputs. It appears that the lakes' response to phosphorus inputs are strongly seasonal, especially during the summer. Since the watershed phosphorus inputs are not normally synchronized with the lakes' most sensitive seasons, the annual phosphorus models are not appropriate. Due to these constraints, the evaluation of lake phosphorus dynamics has been confined to the prediction of summertime surface concentrations. A modified input-output model is used to better predict the short-term (less than 10 years) response of TCMA lakes to changes in phosphorus income.

A summertime phosphorus model was tested using data from the six sampled lakes plus two others. The model was designed to predict the lakes' average summertime phosphorus concentration as a function of watershed inputs of dissolved phosphorus. The predicted and observed average summertime phosphorus concentrations were in close agreement. The model's ability to predict the lakes' response to changing inputs was also assessed. In terms of summertime phosphorus, TCMA lakes are generally insensitive to commonly used watershed management practices; that is, the magnitude of reductions in lake phosphorus is proportionately lower than the magnitude of the watershed load reductions. The model appears to be an adequate tool to evaluate the effectiveness of watershed management scenarios on a cross-section of TCMA lakes.

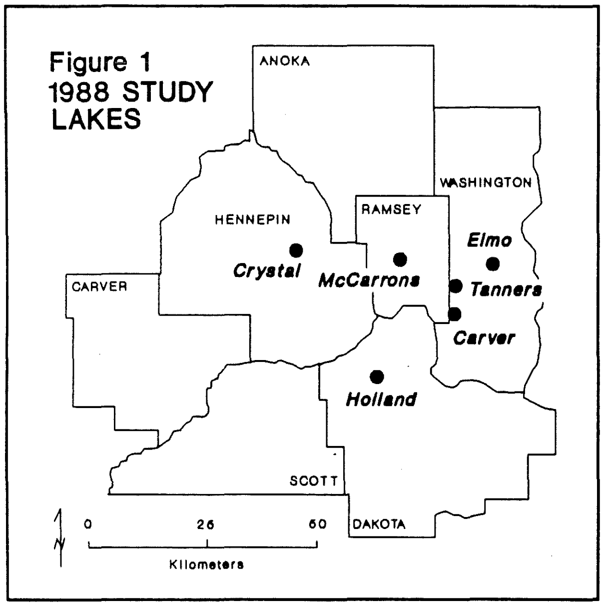
The model was used to simulate the normal response of the sampled lakes with and without treatments. Watershed treatments, such as those at Carver, McCarrons and Tanners Lakes, reduced the average summertime phosphorus load by up to 17%, while the reduction in the lakes' summertime phosphorus concentration did not exceed 8%. Watershed diversions, such as those at Elmo and Holland Lakes, reduced the summertime phosphorus loads by 78 and 16% (respectively), while the reduction in the lakes' phosphorus was only 29 and 6%. Circulating Crystal Lake led to a 200 - 360% increase in its summertime phosphorus, despite a reduced summertime phosphorus input. The model was further used to generally evaluate the response of TCMA lakes to extremely effective watershed treatments. The results indicate that an average of 3% reduction in lakes' summertime phosphorus is expected with watershed treatments and an average of a 5% reduction in summertime phosphorus is expected with watershed diversions. In other words, these analyses indicate that there will be some small short-term benefits with commonly-used watershed treatments compared to using no treatment. However, since these treatments are most commonly used in association with development projects which simultaneously increase the phosphorus load to lakes, the effects of the treatment will probably be completely negated. Whole-lake circulation does not appear to have any practical applications for reducing the summertime phosphorus in TCMA lakes.

The long-term effects of reductions in watershed loading were also evaluated. Due to the differential seasonal loading relative to the lakes' sensitivities, and also due to the magnitude of internal phosphorus sources, long-term improvements in the lakes' phosphorus following watershed management appear unlikely. In addition, the application of commonly-used watershed treatments (eg. ponding and wetlands), will probably not fully mitigate the impacts of land development because land development generally increases phosphorus inputs to lakes. However, these watershed treatments provide some mitigation as well as many other benefits and the Metropolitan Council is not recommending that watershed treatment practices be discontinued. Rather, the Metropolitan Council recommends that the impacts of nonpoint source pollution should be mitigated to the fullest possible extent in order to minimize the impacts of land development on lake water quality.

Since it appears likely that the enrichment of TCMA lakes will continue, the use of in-lake management techniques should be considered to treat the symptomatic nuisances associated with eutrophication. Since this approach is less direct than reducing nutrients, it is more costly and probably less effective. The treatment of symptoms without affecting the underlying causes of eutrophication is a long-term cost that appears to be required to manage our lakes. The Metropolitan Council recommends that in-lake management techniques be considered to treat nuisances related to eutrophication only after the most feasible watershed treatments have been included as part of the lake management plan.

INTRODUCTION

The Metropolitan Council sampled six lakes from October 1987 through October 1988 (Figure 1). These lakes were sampled as part of the Council's cooperative effort with the City of Roseville's restoration of Lake McCarrons (Oberts and Osgood 1988) as well as under a grant from the Legislative Commission on Minnesota Resources (LCMR). This report will address the following tasks to partially satisfy the LCMR's grant:



1. Define sensitive periods in lakes relative to phosphorus inputs.

2. Develop a time-dependent lake phosphorus model that can be used to evaluate the effectiveness of various lake management techniques relative to their effects on summertime phosphorus concentrations.

3. Evaluate the effects of wetlands and ponds on the water quality of lakes.

4. Generally evaluate the roles of watershed versus in-lake management for lake management in the Twin Cities Metropolitan Area (TCMA).

This report summarizes the results of the lakes' aspects of the LCMR study and presents guidelines for directing the efforts of lake managers. A companion report (Oberts et al. 1989) addresses the watershed aspects of the LCMR study and also provides the basis for the watershed loading estimates used in this report.

This report also follows the general format of previous Council lake studies which have examined the water quality of TCMA lakes:

YEAR	NUMBER OF LAKES	REFERENCE
1980	60	Osgood (1981)
1981	30	Osgood (1982a)
1982	7	Osgood (1983)
1983	28	Osgood (1984a)
1984	43	Osgood (1984b)
1985	32	Osgood (1985)
1986/87	10	Osgood (1988a)
1988	6	This study

In addition, the general results of the earlier studies have been summarized in Osgood (1988b).

METHODS

Six Metropolitan Area lakes were sampled from mid-October 1987 through mid-October 1988, including during the winter. The lakes were sampled at two-week intervals during the open water season and monthly during the period of ice-cover. The lakes were normally visited between 9 a.m. and 1 p.m. on the sampling days.

Samples were collected from one station located over the deepest spot near the center of the lakes (Figure 2). Time of day, surf and weather conditions (or ice and snow conditions in the winter) and station depth were recorded upon anchoring at the site. Temperature and dissolve oxygen were measured at one-meter intervals (half-meter intervals near the thermocline and larger intervals under the ice) using either a Yellow Springs, Inc. (model 50) field oxygen/temperature meter or by winkler titrations and a mercury thermometer during the winter. Water transparency was measured using a 20cm black-and-white Secchi disk. Underwater irradiation profiles were measured during the open water seasons. Underwater irradiance was measured at half-meter intervals down to a depth where light was $< 1\%$ of the surface irradiance using a Li-Cor underwater quantum sensor which measures photosynthetically active radiation (PAR, 400-700 nm).

Water was collected from the lakes' surface (0-2 m) during the open water seasons using a 2 m-long PVC pipe that held two liters of water. Three such samples were mixed in a 8-liter plastic jug. Three 2-liter Van Dorn grabs from 0.5, 1.0, and 1.5-m depths were mixed to composite the surface sample during the winter. The water samples were transported on ice in a dark cooler and processed and preserved within six hours of collection. Water from the surface jug was withdrawn for the following possible chemical analyses: total phosphorus (TP), total dissolved phosphorus (DP), ortho-phosphorus (OP), total Kjeldahl nitrogen (TKN), nitrate-nitrite-nitrogen (N/N), chlorophyll a (CLA), pH and specific conductance (COND). Subsurface water samples were also drawn for the following possible analyses: TP, TKN, CLA (McCarrons only), pH and COND. In addition, phytoplankton samples were withdrawn from the surface jug and preserved in the field in a 1% acid Lugol's solution. Zooplankton were collected by vertically towing a 153 μm mesh Wisconsin-type net through the entire water column and preserving the sample in a 4% formaldehyde with sucrose added (Haney and Hall 1973).

The routine chemical analyses were performed at the laboratory of the Metropolitan Waste Control Commission. The TP, DP and OP samples from the surface were analyzed in duplicate and average values are reported. DP samples were filtered through a 0.45 μm membrane filter and analyzed for TP. The two phosphorus samples (TP and DP) were digested with the sulfates of hydrogen, potassium and mercury (H_2SO4, K_2SO_4 and $HgSO_4$). Following digestion, phosphorus was analyzed using a modified ascorbic acid reduction method (APHA 1980). Dissolved orthophosphate (filterable reactive orthophosphate) was analyzed using an ascorbic acid method which excludes the oxidative digestion step used for TP and DP.

The TKN samples were chemically reduced the same way as the total phosphorus samples. TKN from the surface were analyzed in duplicate and average values are reported. The TKN samples were color-intensified with sodium nitroprusside and assayed for ammonia colorimetrically. Nitrate-nitrite-nitrogen was measured by reducing nitrate to nitrite, then diazotizing the nitrite and assaying colorimetrically.

Samples for CLA were filtered onto a 0.45 μm glass-fiber-filter, saturated with magnesium carbonate, and stored frozen in the dark until analyzed (within 30 days). Chlorophyll was extracted from the filters by homogenization in 90% aqueous acetone. The optical density of the extract was measured spectrophotometrically at 630, 647, 664 and 750 nm. CLA was calculated from a trichromatic equation that corrects for turbidity (APHA 1980).

Specific conductance and pH were measured in the laboratory using one of several available lab meters that were calibrated each day.

Preserved phytoplankton samples were settled onto slides and were counted using an inverted microscope. The phytoplankton were identified to genera. A preliminary scan determined those taxa which comprised at least 90% of the community biovolume. These dominant taxa were enumerated in at least five subsamples so that at least 400 individual cells were tallied. In addition, ten random cells of each dominant taxa were measured so their volumes could be computed. Fewer subsamples and fewer measurements were made on the remaining taxa. These data are not discussed in this report, but are available upon request.

The zooplankton samples were diluted and five subsamples were examined. All adult Cladocera were enumerated in each subsample; Daphnia were identified to species and other cladocerans were identified to genera. These counts included at least 100 of the dominant taxon and at least 400 total adult cladocerans. Copepods were identified to genera, but were not counted. Rather, their abundance relative to the cladoceran community was noted. The relative abundances of the copepods are not reported here. These data are not discussed in this report, but are available upon request.

Figure 2. 1988 STUDY LAKE BATHYMETRIC MAPS

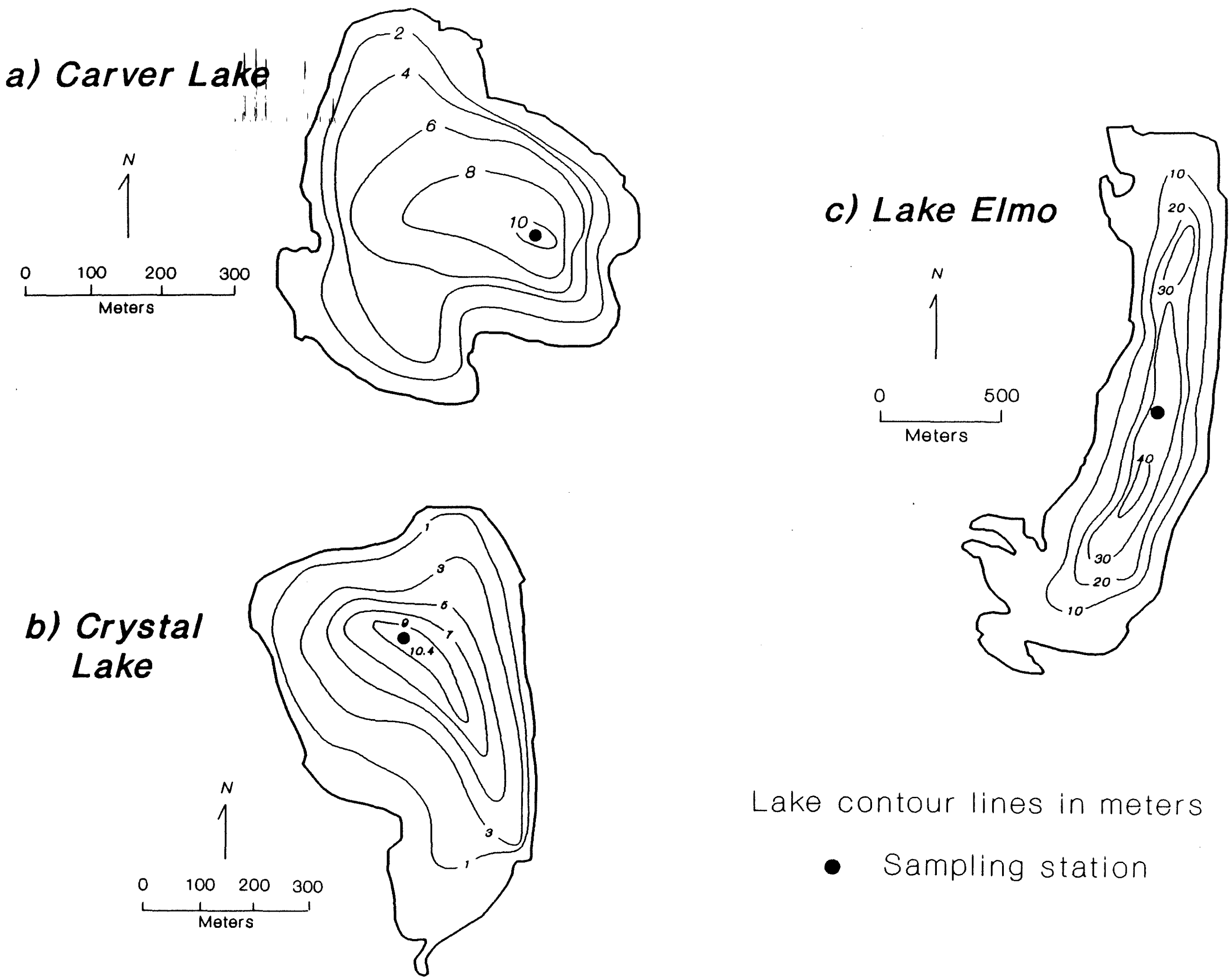
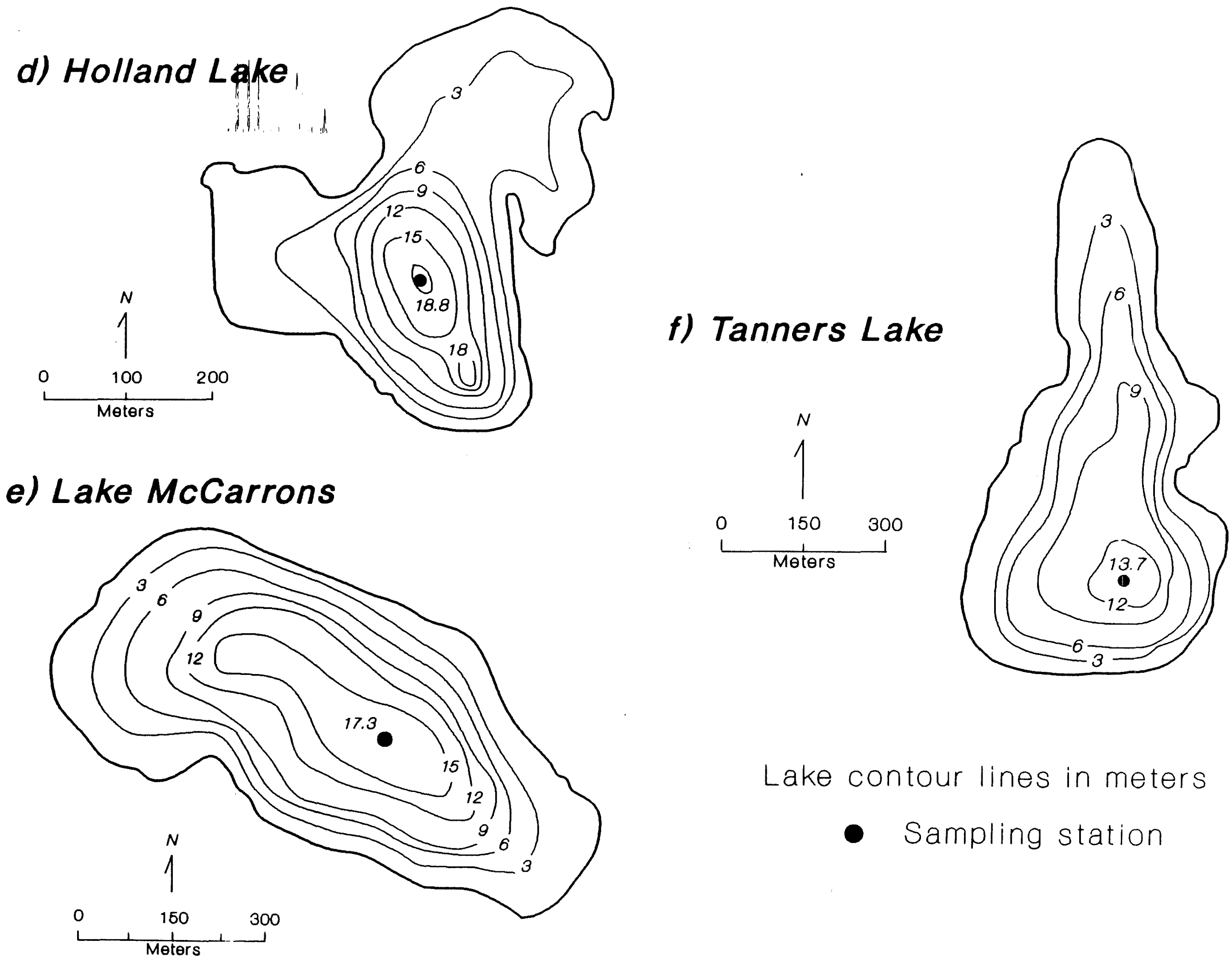


Figure 2, continued. 1988 STUDY LAKE BATHYMETRIC MAPS



LAKE WATER QUALITY SUMMARY

The surface nutrient concentrations of the six lakes are summarized in Figures 3a-f. The phosphorus fractions, DP and OP, are generally found in low concentrations in the surface of the lakes during the open water seasons and comprise larger fractions of the total phosphorus during the winter (Figures 3a-f). The particulate phosphorus fractions, as estimated by the difference between TP and either DP or OP, are highly correlated with CLA ($r > 0.9$) during the summer. The same is true for dissolved nitrogen; there is no significant correlation between N/N and CLA, but TKN and CLA are highly correlated ($r = 0.93$) during the summer, which is consistent with the findings in Osgood (1988b). Dissolved nitrogen (N/N) is found in uniformly low concentrations (< 0.2 $g \cdot m^{-3}$). These findings indicate that there is substantial summertime uptake of dissolved nutrients in these lakes.

The lakes for this project were selected because they had been managed or changed in some way. Thus, by monitoring these lakes and examining changes that have occurred, we can evaluate the effects of the management practices. For example, Carver, McCarrons and Tanners Lakes all had upstream watershed basins that were monitored; Elmo and Holland Lakes had diversions; and Crystal Lake was circulated. The effects of these management practices will be simulated in the following section. The extent to which that model can simulate the conditions in these lakes, it can be used to generalize the effects of these management practices on other TCMA lakes. The remainder of this section will establish the existing water quality of these lakes and whether or not it may be changing.

The trophic state of the six lakes is summarized in Table 1. Carlson's (1977) trophic state indices show that Elmo and Holland Lakes have 'good' water quality, Carver, McCarrons and Tanners Lakes have 'acceptable but sometimes unpleasant' water quality, and Crystal Lake has 'very poor' water quality (after Osgood 1985). Assuming that a change of ten TSI units indicates a change in trophic state, this analysis indicates that only Crystal Lake has gotten worse. The lakes are all eutrophic, although Elmo and Holland Lakes appear to have improved recently and may be mesotrophic, while Crystal Lake is hypereutrophic.

TABLE 1. Reported trophic state indices*.

Lake	1980	1981	1982	1983	1984	1985	1986	1987	1988
Carver	--	--	--	--	--	--	--	--	61
Crystal	--	--	--	--	--	--	68	73	88
Elmo	57	52	54	--	--	--	--	--	50
Holland	--	--	--	52-60	56-65	57-66	--	--	53
McCarrons	--	--	--	--	57	57	53	60	63
Tanners	53-62**	--	--	--	--	--	--	--	54-62

* After Osgood (1982b).
** Sampled only twice in 1980.

Figure 3A. SURFACE PHOSPHORUS, NITROGEN AND CHLOROPHYLL a, PLUS SECCHI DISK TRANSPARENCY FOR CARVER LAKE, 1988

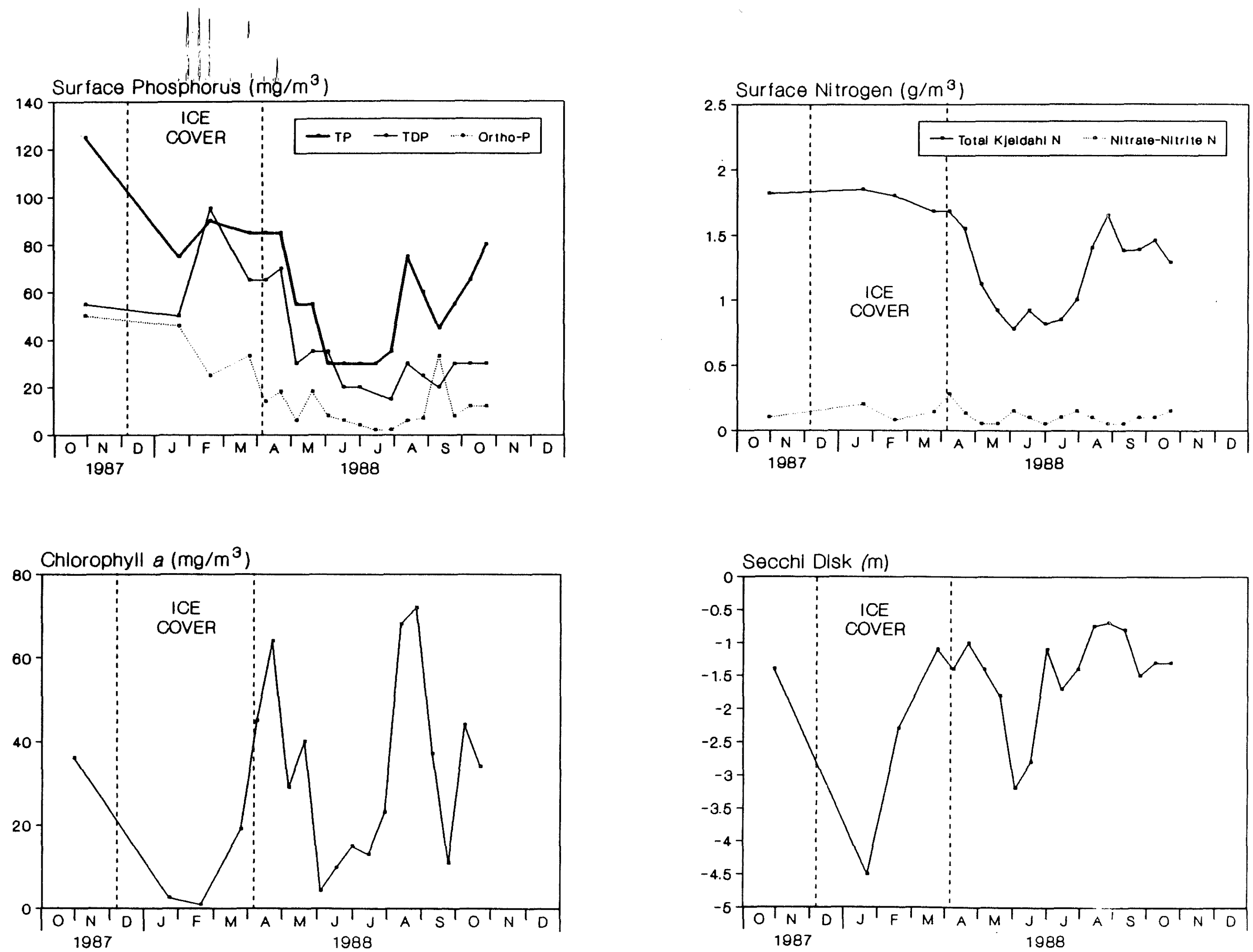


Figure 3B. SURFACE PHOSPHORUS, NITROGEN AND CHLOROPHYLL a, PLUS SECCHI DISK TRANSPARENCY FOR CRYSTAL LAKE, 1988

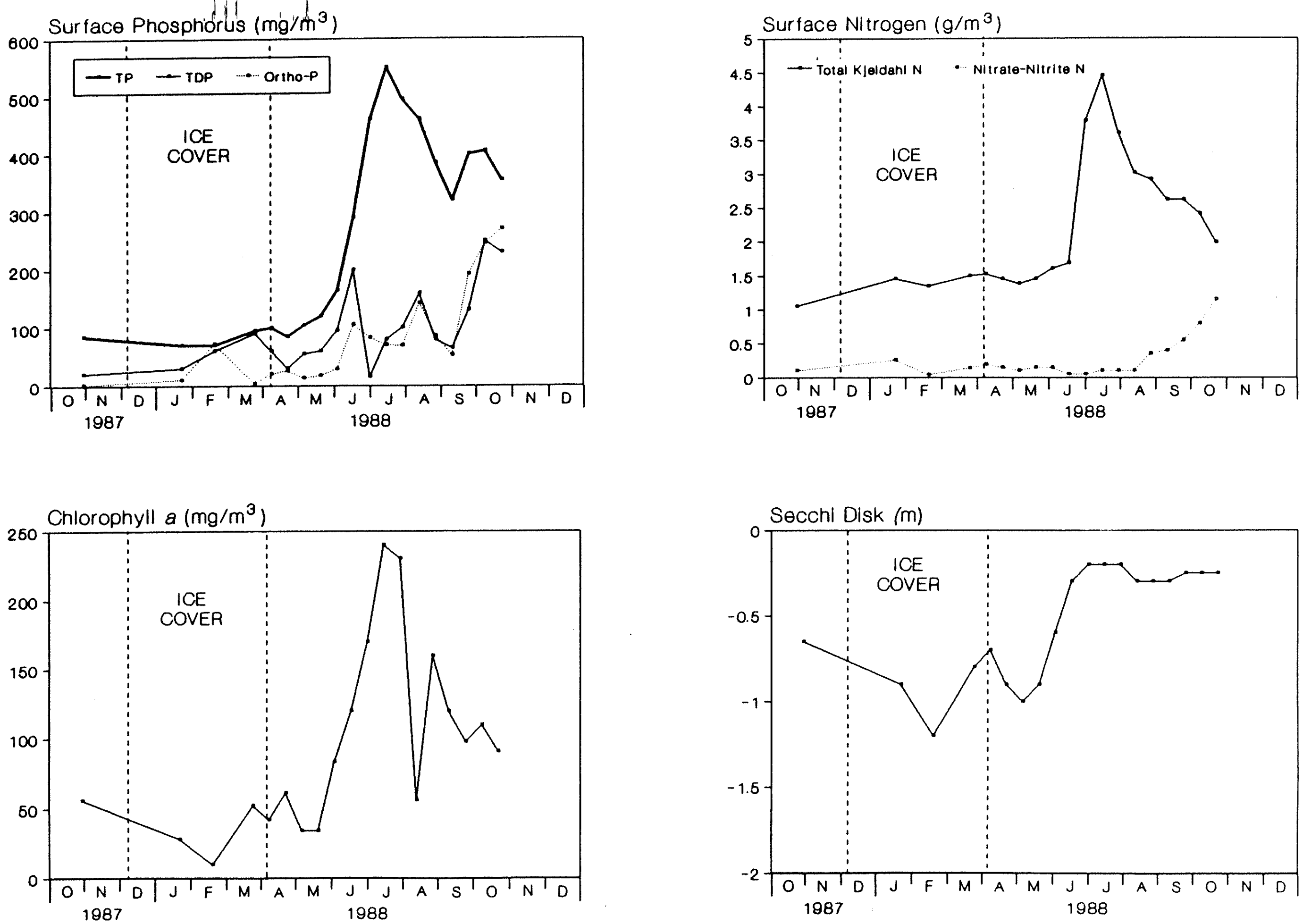


Figure 3C. SURFACE PHOSPHORUS, NITROGEN AND CHLOROPHYLL a, PLUS SECCHI DISK TRANSPARENCY FOR LAKE ELMO, 1988

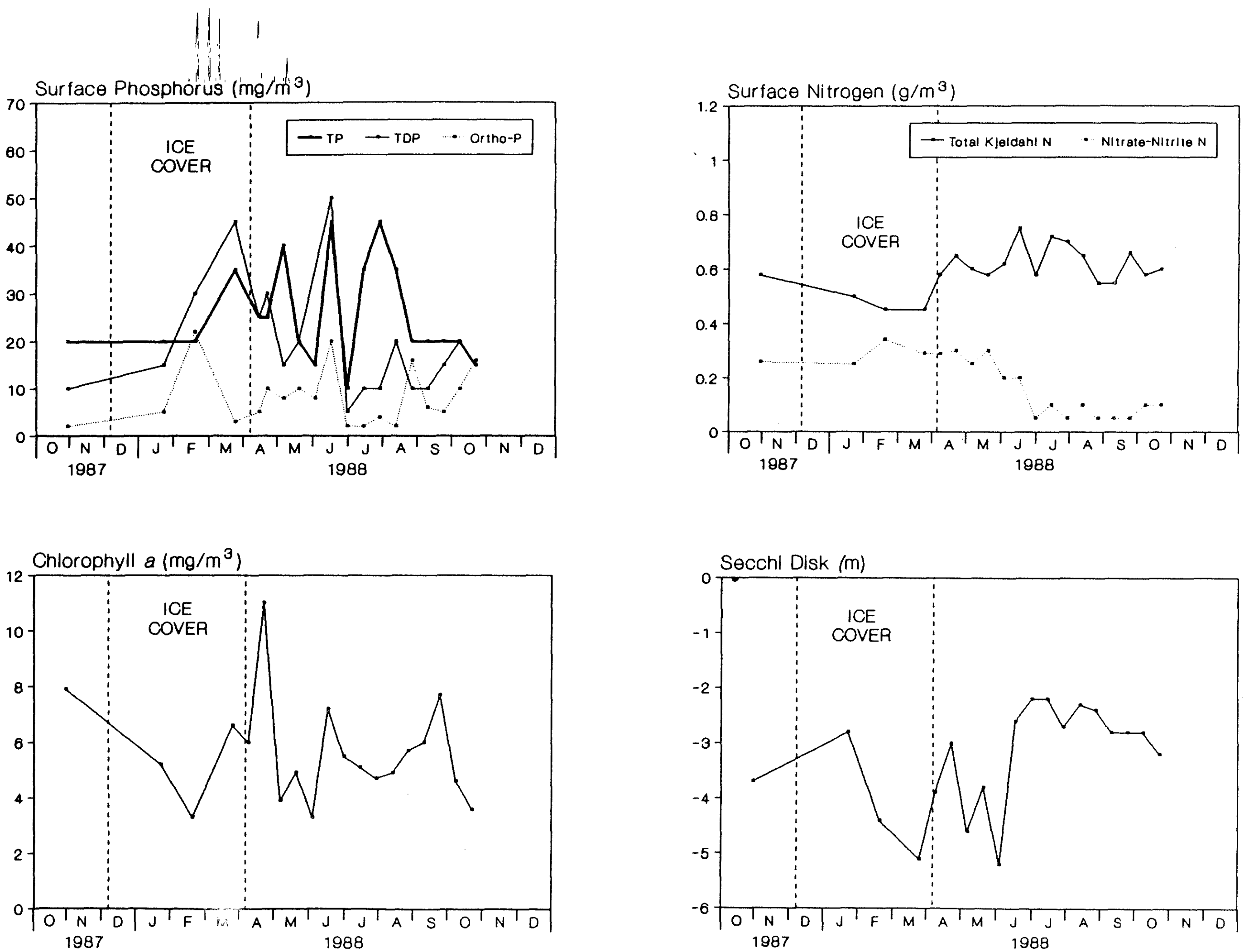


Figure 3D. SURFACE PHOSPHORUS, NITROGEN AND CHLOROPHYLL a, PLUS SECCHI DISK TRANSPARENCY FOR HOLLAND LAKE, 1988

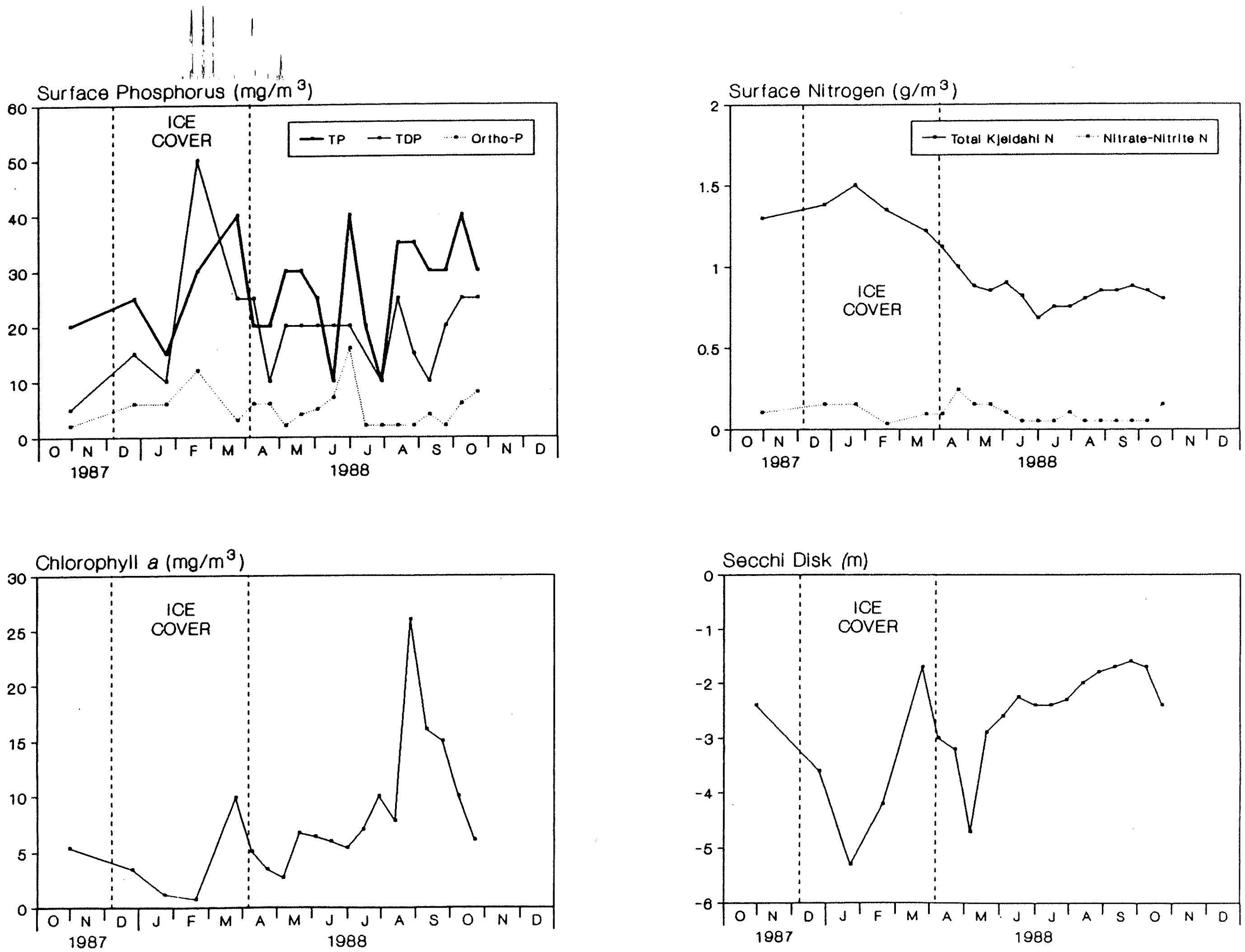


Figure 3E. SURFACE PHOSPHORUS, NITROGEN AND CHLOROPHYLL a, PLUS SECCHI DISK TRANSPARENCY FOR McCARRONS LAKE, 1988

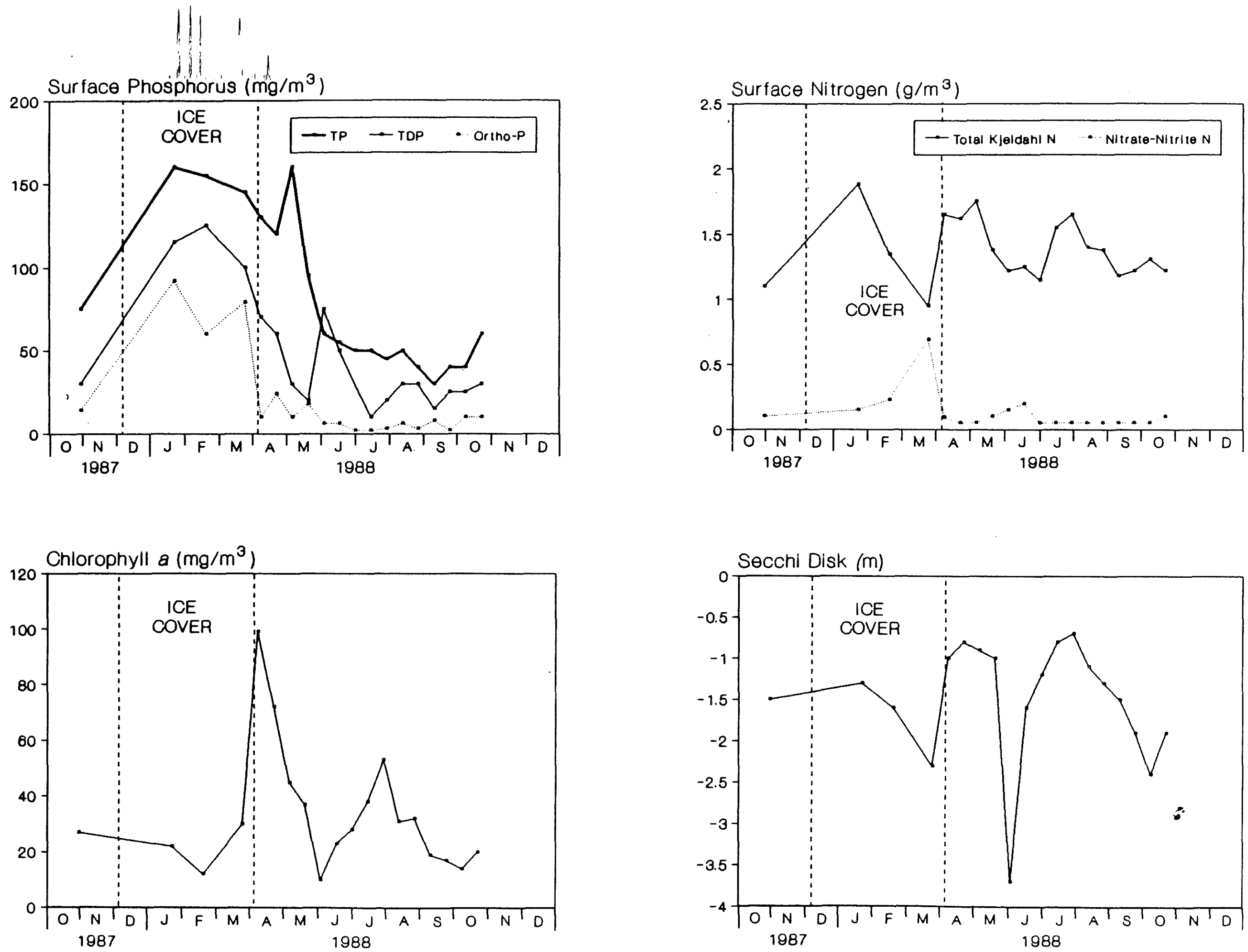
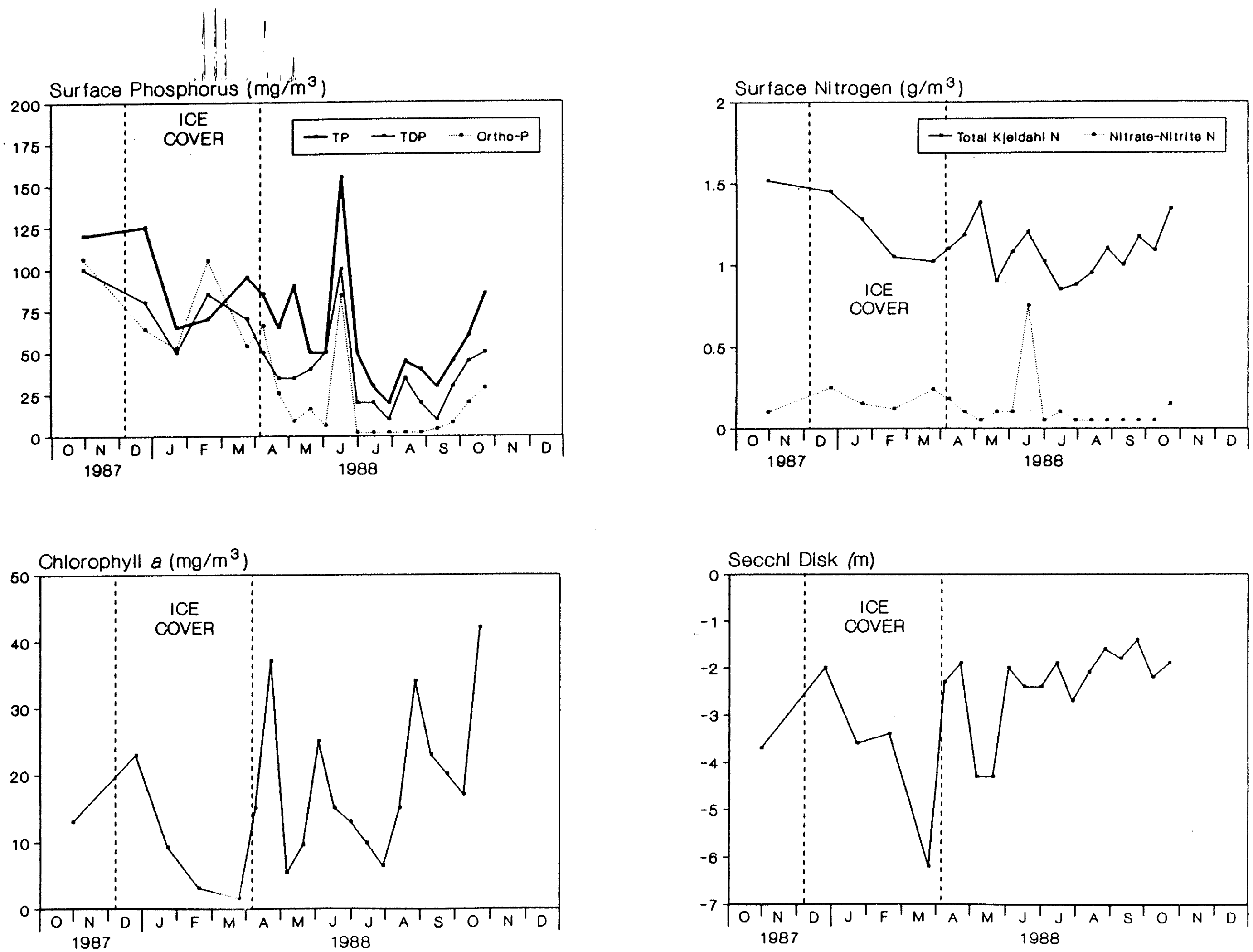


Figure 3F. SURFACE PHOSPHORUS, NITROGEN AND CHLOROPHYLL a, PLUS SECCHI DISK TRANSPARENCY FOR TANNERS LAKE, 1988



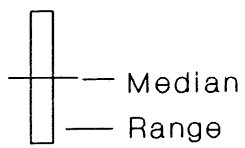
There appear to be inadequate data to evaluate trends in the water quality in these lakes, despite their intentional management. The two basins in Carver Lake's watershed were constructed in 1981 and 1977 (Lake Ridge and Carver Ravine, respectively); Crystal Lake has been circulated since 1973, except during 1986 and 1987; the underwater bypass at Lake Elmo was constructed in May 1987; the diversion at Holland Lake occurred in the autumn of 1986; the wetland management system at Lake McCarrons was functional sometime in 1986; and the wetland system at Tanners Lake was constructed during the spring of 1988. It is fortunate in one respect, that there was a drought in 1988; that is, the inflow of runoff into the lakes was extremely low and the impact of the reduced external phosphorus loading on the lakes should be large.

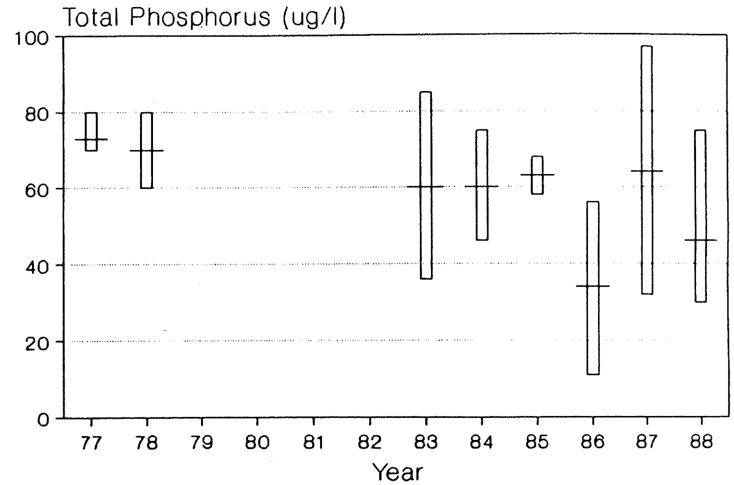
The normal variability in the quality of these lakes is difficult to assess due to the lack of data. However, it is important to understand the differences between trends in water quality that may be affected by intentional management schemes versus apparent trends due to annual or seasonal variability. The following evaluation attempts to summarize all available data from these lakes, then the following section on modelling attempts to explain this variability in order to assess the impacts of lake management practices.

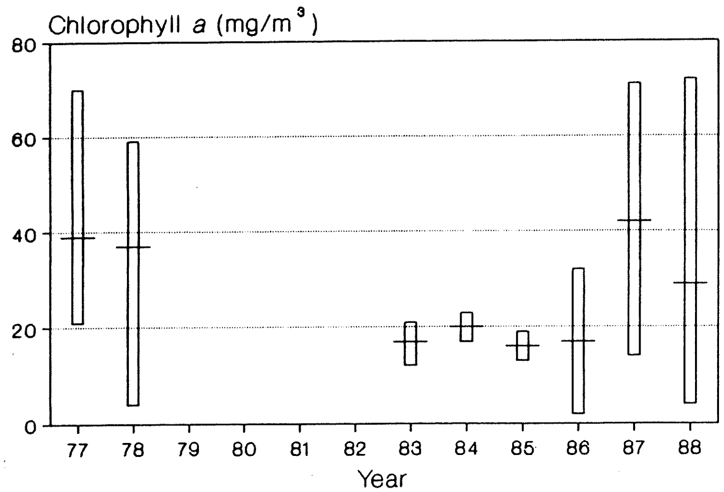
There are no apparent trends in the water quality of Carver Lake (Figure 4a). Changes in water quality following the installation of the two watershed treatment systems in the early-1980s are not apparent from these data. Since these annual averages are from small samples (n = 2 or 3 per year), the annual data were pooled to compare these water quality indicators from the period before the management (1977 and 1978) to the period following the treatments (1983 - 1987). The null hypothesis, that the means do not differ more than by chance, cannot be rejected at a probability of >90%. This means that either the lake's quality, as indicated by total phosphorus, chlorophyll or Secchi disk, has not changed or that there are insufficient data to indicate that a change has occurred.

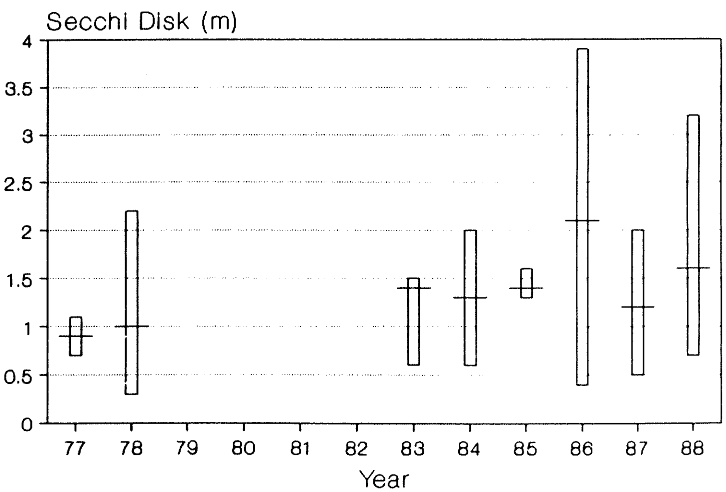
Figure 4A
TRENDS IN WATER QUALITY - CARVER LAKE

(data from Ramsey-Washington Metro Watershed District, except 1988)









There are no available data from Crystal Lake other than found in Table 2a. These data indicate a definite change in the quality of the lake has occurred with the artificial circulation of the lake. The lake's surface phosphorus and chlorophyll concentrations have doubled or tripled and the lake's clarity has been reduced to half or one third compared to the two earlier years. The few pre-1986 Secchi disk measurements that are available during other years that the lake was circulated (1973 - 1985) similarly indicate that the lake's quality was not improved (eg. no Secchi disk observations > 1 m).

TABLE 2a. Trends in the water quality of Crystal Lake.

Water quality Indicator*	1986	1987	1988
Mean TP ($mg \cdot m^{-3}$)	83	125	342
Mean TN ($g \cdot m^{-3}$)	1.40	1.47	2.84
TN/TP Ratio	17	12	8
CLA ($mg \cdot m^{-3}$)	61	70	113
SD (m)	1.2	0.8	0.4

* May - September averages from the surface

Lake Elmo's water quality appears to have improved following the diversion of a large portion of its normal inflow in 1987 (Table 2b). The summertime total phosphorus concentration has not changed, but the chlorophyll concentration is substantially reduced and the transparency is greater. It is not clear why there was less algal abundance with no change in phosphorus.

TABLE 2b. Trends in the water quality of Lake Elmo.

Water quality Indicator*	1980	1981	1982	1984	1988
Mean TP ($mg \cdot m^{-3}$)	35	21	26	20	28
Mean TN ($g \cdot m^{-3}$)	1.19	0.94	1.13	0.84	0.76
TN/TP Ratio	34	45	43	42	27
CLA ($mg \cdot m^{-3}$)	14	9.6	12	9.7	5.4
SD (m)	1.9	2.4	2.2	2.5	3.1

* May - September averages from the surface

The water quality of Holland Lake has changed. Prior to 1980, Holland Lake had the best water quality of lakes in Eagan and probably in all of Dakota County (Ayers et al. 1980). By the mid-1980s, Holland Lake's water quality was degraded (Table 2c). The quality of the lake improved in 1988; however, it is not clear to what extent the improvement is related to the diversion, because the summer's drought eliminated any surface inflows to the lake.

TABLE 2c. Trends in the water quality of Holland Lake.

Water quality Indicator*	pre-1980	1983	1984	1985	1988
Mean TP ($mg \cdot m^{-3}$)	≈10**	36	43	38	27
Mean TN ($g \cdot m^{-3}$)	≈0.80**	1.04	1.17	1.18	0.90
TN/TP Ratio	--	29	27	31	33
CLA ($mg \cdot m^{-3}$)	--	20	33	37	9.9
SD (m)	≈3.0**	2.6	2.2	1.5	2.4

* May - September averages from the surface
** From Ayers et al. 1980

Lake McCarrons' water quality does not appeared to have changed this decade (Table 2d), despite intensive watershed management (Oberts and Osgood 1988). In fact, the lake's phosphorus concentration was actually lowest when external loadings were highest. This unexpected observation has not been satisfactorily explained (Oberts and Osgood 1988).

TABLE 2d. Trends in the water quality of Lake McCarrons.

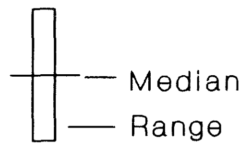
Water quality Indicator*	1981**	1984	1985	1986	1987	1988
Mean TP ($mg \cdot m^{-3}$)	52	38	32	28	46	61
Mean TN ($g \cdot m^{-3}$)	1.31	1.16	1.03	0.93	1.21	1.46
TN/TP Ratio	25	31	32	33	26	24
CLA ($mg \cdot m^{-3}$)	--	20	19	14	26	30
SD (m)	1.4	2.3	1.9	2.8	1.8	1.4

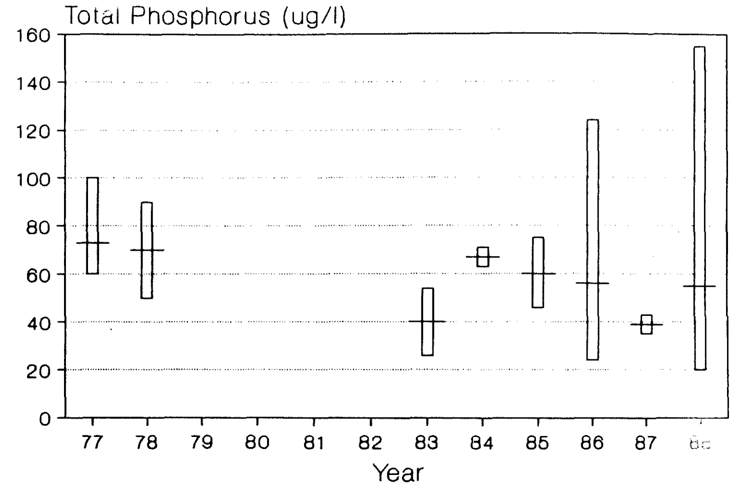
* May - September averages from the surface
** From Donohue 1983

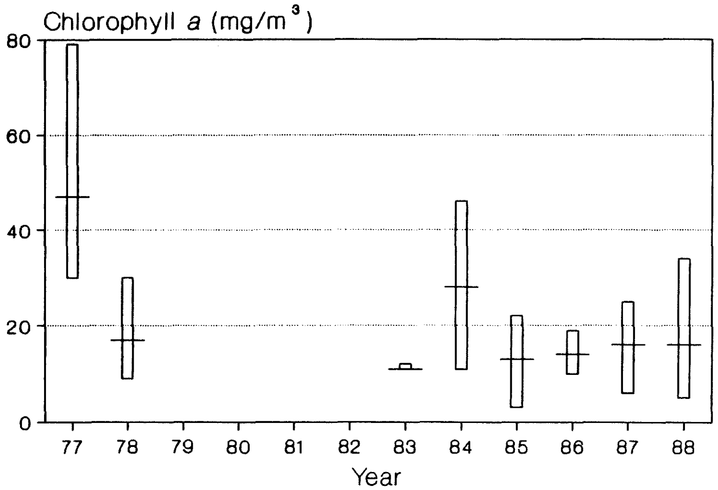
The water quality of Tanners Lake does not appear to have changed since the installation of the wetland treatment system in the spring of 1988 (Figure 4b); however, there has probably not been enough time to detect any immediate changes. Also, the drought in 1988 reduced the normal amount of runoff to the lake.

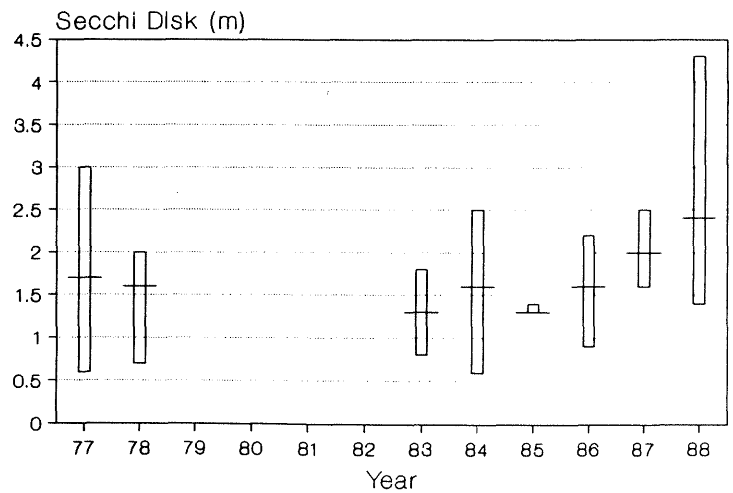
Figure 4B
TRENDS IN WATER QUALITY - TANNERS LAKE

(data from Ramsey-Washington Metro Watershed District, except 1988)









SUMMERTIME PHOSPHORUS MODEL

THE MODEL

Steady-state solutions to phosphorus input-output models are commonly used for predicting lake phosphorus concentrations in lake assessments. However, the assumption that lakes are at steady-state, implies that the loading functions, as well as internal settling and reaction processes are constant through time. These assumptions are valid in cases where large-scale changes in phosphorus or water loading have occurred (Edmondson and Lehman 1981; Welch and Patmont 1980). More commonly though, these assumptions are not true. Internal and external phosphorus loading, flushing and the settling and outflow of phosphorus do not occur uniformly within or between years. As a result, changes in lake quality are often not apparent following real changes in nutrient loading (Oberts and Osgood 1988; Ramsey Co. 1988). Perhaps of more immediate importance, is assessing shorter-term changes in the apparent quality of lakes. Since annual steady-state phosphorus models are of little use for this purpose, another analytical approach is needed.

The appearance of lakes during the summer is important to most lake users. Nuisances, such as the frequency and intensity of algal blooms, the predominance of blue-green algae or the clarity of the water, are related to summertime surface phosphorus concentrations (Osgood 1988a, b). It seems reasonable then, to confine the consideration of lake phosphorus concentrations to the summertime epilimnia. Since the inputs and outputs of water and phosphorus to the summertime epilimnia are not equal, the steady-state assumptions cannot be used. Instead, a time-dependent solution to an input-output model may be appropriate.

Existing input-output models assume that the lake is a completely mixed reactor and the pollutants are uniformly distributed (Chapra and Reckhow 1983). This model can be modified by considering inputs, outputs and reactions relative to the summertime epilimnion rather than to the whole lake throughout the year. Since the inputs and outputs are not in balance during the summer, a dynamic equilibrium does not exist. The necessary time and space constraints are as follows: the summertime epilimnion is the surface layer of the lake down to a depth where the temperature gradient exceeds 1°C m^{-1}; expressed as a summertime average from June through September. Inputs and outputs of water and phosphorus occur across these time and space boundaries. The available data do not allow the definition of loading functions or internal reactions with respect to time during the summer, so they will be assumed to occur at uniform rates during the summer. A time-dependent solution to a step loading function conforms to these conditions.

The time-dependent solution to a step input has been modified from Chapra and Reckhow (1983) as follows:

$$P_f = W/Q_i + kV\ [1-\exp((-Q_o/V)+k)]\ +\ P_i[\exp((-Q_o/V)+k)] \qquad (1)$$

where P_f is the epilimnetic phosphorus concentration ($mg \cdot m^{-3}$) at the end of the summer, P_i is the initial summertime phosphorus concentration ($mg \cdot m^{-3}$), W is the rate of available (to the epilimnion) phosphorus inflow into the epilimnion ($mg \cdot summer^{-1}$), Q_i is the inflow of water to the epilimnion ($m^3 \cdot summer^{-1}$), Q_o is the surface outflow of water from the lake ($m^3 \cdot summer^{-1}$), V is the epilimnetic volume (m^3), and k is first-order reaction coefficient ($summer^{-1}$). Since it has been assumed that the inputs and reactions occur at constant rates, the time factor has been removed from this solution by setting it equal to the length of the summer (=1). As a result, the form of Eq. 1 is linear, but the actual time-series of summertime epilimnetic phosphorus concentrations in lakes rarely takes this form (see Osgood 1988c). Thus, this equation cannot be used to predict intermediate phosphorus concentrations between P_i and P_f, so its only appropriate use is as an estimate of the summertime average epilimnetic phosphorus concentration (P):

$$P = (P_i + P_f) / 2 \qquad (2)$$

The summertime water loading terms are computed as follows:

$$Q_i = Q_r + Q_p \pm Q_g = Q_e + Q_o \pm Q_g \qquad (3)$$

where Q_r is the inflow from surface runoff, Q_p is direct precipitation onto the surface of the lake, Q_e is the water that is lost through evapotranspiration, Q_o is the lake's outflow and Q_g is the groundwater flow either to or from the epilimnion. The input of phosphorus to the epilimnion is computed as follows:

$$W = P_r + P_p + P_{int} \qquad (4)$$

where P_r is the mass of phosphorus that enters the epilimnion in surface runoff, P_p is the mass of phosphorus that enters the epilimnion from precipitation, and P_{int} is the mass of phosphorus that enters the epilimnion from internal sources. Since field data have shown that the particulate fraction of phosphorus in surface runoff is quickly settled (Oberts and Osgood 1988), inputs of dissolved phosphorus from surface runoff to the epilimnion will be considered here as the available fraction (see Hecky and Kilham 1988).

TESTING THE MODEL

Reasonably complete data for the inputs to the model have been measured for several lakes in the TCMA. These data plus "good" estimates for other inputs will be used to test the model's performance (Table 3). An alternate approach would be to estimate the input parameters for a large number of lakes and compare the predicted to the observed values in order to empirically determine the values for the constant (k) in the model. Since the relative error associated with estimating the input parameters is high (Winter 1981), the uncertainty in the estimate of k by this method would probably also be high. Since the theoretical basis for the model has been established, testing its performance using "good" input values should confirm its utility.

TABLE 3. Input parameters for testing the time-dependent phosphorus model.

LAKE-YEAR	Q_i	Q_o	V	P_p	P_r	P_{int}	P_i
	- (10^6 m^3) -			--- (kg) ---			($mg \cdot m^{-3}$)
Carver-1988	.261	0	.736	1.0	39.7	44.3	30
Crystal-1986	.843	0	.669	3.3	170	101.4	55
Crystal-1987	1.01	0	.669	3.9	203	101.4	110
Crystal-1988	.343	0	.951	1.3	69	1260	120
Elmo-1982	.504	.115	5.00	4.8	20.2	0	30
Elmo-1988	.3	0	5.00	5.3	14.7	0	15
Holland-1983	.115	0	.324	1.1	12.5	15.7	15
Holland-1984	.146	0	.324	1.3	15.9	15.7	25
Holland-1985	.107	0	.324	1.0	11.6	15.7	40
Holland-1988	.052	0	.324	0.6	4.3	15.7	17
McCarrons-1984	.527	.187	.853	3.0	59	23	65(20)
McCarrons-1985	.327	.213	.853	2.3	36	23	25
McCarrons-1986	.466	.480	.853	3.3	50	23	20
McCarrons-1987	.290	.198	.853	2.9	37	23	60(30)
McCarrons-1988	.140	0	.853	1.4	17.8	23	60
Spring-1980	2.24	.964	11.6	19	317	6426	120
Spring-1981	2.12	.952	11.6	19	315	6426	101
Spring-1982	1.16	0	11.6	10	165	6426	80
Spring-1984	2.09	.829	11.6	24	403	3672	50
Square-1980	.908	.488	2.89	6.4	14.5	0	20
Square-1981	.905	.485	2.89	6.3	14.5	0	18
Square-1982	.708	.288	2.89	3.3	5.3	0	20
Square-1983	.908	.488	2.89	6.4	14.5	0	10
Square-1984	1.01	.593	2.89	8.1	18.5	0	20
Square-1985	.882	.462	2.89	6.0	13.6	0	10
Tanners-1988	.108	0	.858	1.2	12.2	27.2	50

Underlined values are based on direct field observations.

The initial summertime phosphorus concentration in TCMA lakes is consistently observed to be low (Osgood 1988a). Normally, springtime phosphorus concentrations are elevated following ice-off and vernal mixis. The spring clear water phase (Lampert et al. 1986) occurs in mid-May and results in the accelerated loss of phosphorus from the epilimnion. This loss is the result of deposition and loss through the lake's outlet. It appears that the relative loss by these two mechanisms influences the magnitude of P_i, however very little field data are available to quantify this (see Model Sensitivity below). A summary of TCMA lakes that have been sampled in more than one year or sampled more frequently than monthly indicates that median P_i is 25 $mg \cdot m^{-3}$ (interquartile range: 20-30, range: 5-180, n=72) from sampling dates between 15 May and 15 June.

The hydrologic inputs to the summertime epilimnia include precipitation directly on the lakes surface, surface runoff and sometimes groundwater. Direct precipitation is the total summertime rainfall over the lakes' surface area (Q_p). Rainfall data were either gathered near each lake or were taken from the Twin Cities International Airport. Runoff volumes (Q_r) at sites adjacent to several TCMA lakes have been measured during several years. These data were used to calculate the runoff to the test lakes (see Oberts 1983; Oberts et al. 1989). In some cases the inputs of groundwater to the epilimnion can be estimated. In these cases, net groundwater inputs are added to Q_i and Q_o according to Eq. 3. Finally, in cases where the outflow was known to be > 0, but had not been measured, it was estimated as the difference between Q_i and evapotranspiration (0.7 x pan data, ca. 0.49 $m \cdot summer^{-1}$, see Osgood 1988b).

The phosphorus inputs to the summertime epilimnion include atmospheric sources, phosphorus in the runoff plus internally recirculated phosphorus. Atmospheric phosphorus (P_p) was estimated assuming that Q_p had a phosphorus concentration of 20 $mg \cdot m^{-3}$ (Oberts 1982). The phosphorus loads from surface runoff (P_r) were either measured or calculated from the measured inputs as were the runoff volumes (see above). Internal phosphorus inputs (P_{int}) could only be measured indirectly or estimated. The magnitude of internal phosphorus inputs into the epilimnion relates to the duration and extent of mixis in TCMA lakes (Osgood 1988c). Dimictic lakes remain stratified throughout the summer and internal phosphorus does not get mixed into the epilimnion. As lakes tend toward polymixis, internally supplied phosphorus comprises a larger fraction of the lakes' phosphorus budget. The frequency and extent of mixis in TCMA lakes are quantitatively related to lake morphometry (Osgood 1988b, c). The internal phosphorus input to lakes from littoral and profundal sources is generally estimated as follows:

> Phosphorus input from littoral sources occurs at a rate of 2.2 $mg \cdot m^{-2} \cdot d^{-1}$ (Jacoby et al. 1982) over the epilimnetic bottom area throughout the summer (120 d). The epilimnetic bottom area is the area exposed to epilimnetic water (0 down to the epilimnetic depth). The epilimnetic depth can be estimated using the surface area of the lake (see Osgood 1988b).
>
> Phosphorus input from the profundal sediments occurs at a rate of 12 $mg \cdot m^{-2} \cdot d^{-1}$ (Nürnberg 1984) over the hypolimnetic bottom area during the number of summertime days that the lake is likely to be mixing. This number of days equals the difference between the duration of the summer (120 d) and the duration of stratification. The duration of stratification can be estimated using the relative epilimnetic volume (see Osgood 1988b).

The first-order reaction coefficient describes the loss of phosphorus in the lake. Phosphorus loss is the result of two processes: loss of inflowing phosphorus and loss of in-lake phosphorus. Sedimentation is probably the sum of both processes (Prairie 1988). By considering the external input of total dissolved phosphorus rather than total phosphorus, the loss of the inflowing phosphorus need not be considered. This loss of in-lake phosphorus may be determined empirically (see Canfield et al. 1982), but here, $k = 1.05 \cdot summer^{-1}$ (Chapra and Reckhow 1983).

Inflows of water and phosphorus to Carver Lake were measured as part of the present study. Since the lake level was observed to drop throughout the summer, the outflow from the lake was presumed to be zero. Most of Carver Lake's epilimnetic phosphorus came from internal sources (52%) during the dry summer (Table 3). Table 4 shows that the predicted and observed phosphorus concentrations in Carver Lake to agree.

TABLE 4. Predicted and observed average summertime phosphorus concentrations ($mg \cdot m^{-3}$) using eqs. 1 and 2.

LAKE-YEAR	PREDICTED P	OBSERVED P
Carver-1988	47	43
Crystal-1986	95	85
Crystal-1987	133	141
Crystal-1988	403	394
Elmo-1982	22	22
Elmo-1988	11	27
Holland-1983	31	38
Holland-1984	39	47
Holland-1985	48	41
Holland-1988	29	26
McCarrons-1984	63(34)[1]	31
McCarrons-1985	34	32
McCarrons-1986	34	27
McCarrons-1987	57(38)[1]	39
McCarrons-1988	53	48
Spring-1980	238	237
Spring-1981	227	149
Spring-1982	215	149
Spring-1984	130	112
Square-1980	15	24
Square-1981	14	15
Square-1982	14	19
Square-1983	8	12
Square-1984	15	14
Square-1985	8	8
Tanners-1988	47	39 (52)[2]

1. Number in ( ) corresponds to predicted P using P_i in ( ) from Table 3.
2. Number in ( ) is the summertime average including the observation from June 14, the number outside excludes this observation.

Crystal Lake had been artificially circulated until early-1986, when the Council began studying the lake. The external water and phosphorus loads to the lake were estimated using runoff models developed with data from similar urban areas in the TCMA (Oberts 1983). The circulation system was returned to service during 1988, which affected the internal phosphorus load to the epilimnion by increasing the mixing depth of the lake. Based on observations of the net change in the lake's phosphorus content at a time when external inputs were zero, internal loading during the summer of 1988 occurred at a rate of 35 $mg \cdot m^{-2} \cdot d^{-1}$ over the epilimnetic bottom area. This rate was used to calculate P_{int} in 1988, which represented a 12-fold increase compared to the two earlier years. The circulation of the lake also affected the depth of the epilimnion and the initial phosphorus concentration compared to the earlier years. These adjustments were also included in Table 3. The change in the lake's phosphorus concentration is accurately predicted by the model (Table 4).

Inputs of water and phosphorus to Lake Elmo were measured in 1982 (Osgood 1983). Internal phosphorus from littoral sources was found to be zero. Since then, runoff from Eagle Point Lake has been routed into an underwater pipe to bypass Lake Elmo. As a result, no water or phosphorus entered Lake Elmo from Eagle Point Lake during 1988 (Table 3). The model predicts a reduction in phosphorus concentration that was not observed in 1988 (Table 4), although other trophic state indicators showed improvement (Table 2b).

Holland Lake was sampled from 1983 through 1985 and again during this study. Runoff from a large portion of its watershed was diverted in 1986, which led to a substantial reduction in the lake's external phosphorus load (Table 3). Internal phosphorus loading from the littoral area appears to contribute a large fraction of the lake's epilimnetic phosphorus budget. The impacts of the reduced phosphorus load are accurately predicted by the model (Table 4).

Lake McCarrons was sampled from 1984 - 1988 and its watershed was sampled in 1985 and 1987 (Oberts and Osgood 1988). A large fraction of its runoff was treated following the construction of a wetland and detention system in the watershed. This project, completed in 1986, resulted in the overall reduction of the summertime total dissolved phosphorus load by about 25%. The impacts of the reduced phosphorus loading to the lake were confusing (see Oberts and Osgood 1988) because the lake's phosphorus increased (Table 3). It appears that the varying initial phosphorus concentrations observed in the lake had a large effect on the lake's summertime phosphorus concentration. This is further evaluated in the following section.

Inputs of water and phosphorus to Spring Lake were measured in 1982 (Osgood 1983). Internal phosphorus contributed >90% of the lake's summertime phosphorus budget during years when flake-forming Aphanizomenon were dominant (Osgood 1988d). Internal phosphorus loading was observed to occur at rates averaging 21 $mg \cdot m^{-2} \cdot d^{-1}$ over the entire lake area during the years when flake-forming Aphanizomenon were present (1980-1982) and at rates of 12 $mg \cdot m^{-2} \cdot d^{-1}$ in 1984 when flakes were not observed. The model predicts the decrease in the lake's phosphorus in 1984 despite the increase in the external load.

The outflow of water and phosphorus from Square Lake were measured in 1982 (Osgood 1983). External inputs were low and groundwater contributed a large portion of flow into the lake. The impacts of the unusually high groundwater flow through the lake are accurately predicted by the model (Table 4).

Inflows of water and phosphorus to Tanners Lake were measured as part of the present study. Since the lake level was observed to drop throughout the summer, the outflow from the lake was presumed to be zero. The model appears to reasonably predict the observed phosphorus in Tanners Lake whether or not the lake's phosphorus concentration from June 14 ($=155$ $mg \cdot m^{-3}$) is excluded from the summertime average (Table 4).

The predicted average summertime epilimnetic phosphorus concentrations agree very well with observations from the lakes (Table 4). It appears that when "good" input data are used, this model accurately predicts average summertime phosphorus concentration in these lakes. It also appears that the model and the lakes are differentially sensitive to the input variables.

MODEL AND LAKE SENSITIVITY

The sensitivity to changes in runoff phosphorus and associated water loads (both internal and external), the initial phosphorus concentration and the reaction coefficient, k, will be evaluated in this section. The model's sensitivity to uncertain input values as well as the lakes' sensitivity to a range of inputs to their epilimnia can be evaluated simultaneously. To the extent that the test lakes represent a cross-section of TCMA lakes, this approach should provide a general assessment of lake behavior relative to common management practices in the TCMA. Once these sensitivities have been defined, the model may be used to evaluate the response of TCMA lakes to management practices which affect their summertime epilimnetic phosphorus dynamics.

The first input to be evaluated is the watershed loading of water and phosphorus. The model (Eqs. 1 and 2) will be used to evaluate the effects of changes in the surface inputs of phosphorus and water while keeping the other parameters constant. The test lakes' parameters from Table 3 will be modified as follows: both the water and phosphorus loads will be decreased and increased by a factor of 2, then only the phosphorus load will be both decreased and increased by a factor of 2. The results of this simulation compared to the unmodified condition are presented in Table 5. Since there were no test lakes with high levels of external loading and low levels of internal loading, Crystal Lake - 1987 input data were modified ($P_{int} = 0$) to mimic this situation.

TABLE 5. Simulated changes in summertime phosphorus concentrations with changes in the watershed inputs of water and/or phosphorus (from Eqs. 1 and 2 and Table 3).

LAKE-YEAR	UNCHANGED P INPUT ($mg \cdot m^{-3}$)	WATER AND P INPUTS x 1/2	WATER AND P INPUTS x 2	P INPUT x 1/2	P INPUT x 2
Carver-1988	47	43(-9)	57(+21)	35(-26)	54(+15)
Crystal-1987	133	126(-5)	140(+5)	114(-14)	172(+29)
Crystal-1987 (P_{int} = 0)	56	43(-23)	87(+52)	37(-34)	95(+70)
Crystal-1988	403	431(+7)	350(-13)	395(-2)	405(+0)
Elmo-1982	22	21(-5)	23(+5)	21(-5)	23(+5)
Holland-1984	39	35(-10)	45(+15)	34(-13)	49(+26)
McCarrons-1985	34	30(-12)	42(+24)	29(-15)	45(+31)
Spring-1982	215	217(+1)	214(-1)	213(-1)	219(+2)
Square-1982	14	14(0)	14(0)	14(0)	14(0)
Tanners-1988	47	45(-4)	50(+6)	45(-4)	51(+9)

Numbers in ( ) are percent change from the unchanged condition.

The results of this exercise indicate that when both the water and phosphorus watershed loads were changed by a factor of 2, the impact on the lake was slight and when only the phosphorus load was changed by a factor of 2, the impact in the lake was relatively greater, but still proportionately small. Further, this analysis indicates that the impact of watershed inputs is less in lakes where internal phosphorus comprises a greater fraction of the summertime budget (Table 5), even to the extreme where reductions in watershed loads can lead to increases in summertime epilimnetic phosphorus concentrations (eg. Crystal and Spring Lakes). This happens when internal phosphorus is a large fraction of the lake's budget, so the decrease in the water load causes the relative inflow phosphorus concentration ($P_i+P_r+P_{int}/Q_i$) to increase. In cases where internal loading is zero, such as dimictic lakes (see Osgood 1988c), the effect of reduced watershed loads is much greater, but still proportionately less than the reduction in the load.

The rates and magnitudes of internal phosphorus loading are highly variable (Böstrom et al. 1982; Nürnberg 1984). This variability occurs within lakes as well as between lakes, making it difficult to estimate the magnitude of the internal load. It is possible, however, to estimate the potential availability of internal phosphorus supplies during the summer based on the mixing characteristic of lakes (Osgood 1988c). The availability of internal phosphorus to the summertime epilimnia of the test lakes ranges from 0 to 97% of their budgets (Table 3). Clearly, the potential impact of estimation error is large. Since there are no direct field observations and no probability functions available which define this potential error, the sensitivity of the model cannot be fully evaluated. On the other hand, other general analyses of the effects of internal phosphorus loading impacts in TCMA lakes (Osgood 1988c) as well as the analyses of the test lakes presented here (Table 4), indicates that the presumed rates of internal loading are reasonable estimates.

The initial phosphorus concentration appears to have a large effect on the outcome of the model simulations. This is a concern because P_i appears to be relatively low and constant from lake-to-lake and from year-to-year, and perhaps independently of external events. The extent to which P_i affects the summertime phosphorus concentration as well as the ability to predict or manage P_i must be assessed.

The summertime phosphorus concentration is affected by changes in the initial phosphorus concentrations as follows (from Eqs. 1 and 2):

$$P = 0.675\ P_i + \text{constant} \qquad (5)$$

when the other input variables to Eq. 1 are held constant. The constant in the above equation is the predicted phosphorus concentration from Eqs. 1 and 2 when $P_i = 0$. The effect of uncertain or variable P_i compared to the average summertime phosphorus concentration decreases with P. For example, assuming that P_i is normally varies from 25 $mg \cdot m^{-3} \pm 15\ mg \cdot m^{-3}$, then the range of predicted P is 20 $mg \cdot m^{-3}$, which is a decreasing percentage of P as follows:

P at P_i=25 mg·m^{-3}	RANGE AS % OF P
10	202
20	101
30	68
40	51
50	41
100	20
200	10
300	7
400	5

indicating a greater sensitivity to changes in P_i when the summertime phosphorus concentrations are < 50 - 100 mg·m^{-3}, which is very common in TCMA lakes (see Osgood 1988b). Examples of this effect are clearly seen by examining Tables 3 and 4. Lakes with low summertime phosphorus concentrations (eg. Square and Elmo) have P's that vary with P_i despite the year-to-year changes in the other inputs. In the more enriched lakes (eg. Crystal and Spring), this effect is much less apparent.

The effect of variable P_i has confounded the interpretation of Lake McCarron's response to reduced loading (Oberts and Osgood 1988). A re-examination of that case indicates that the lake's increased summertime phosphorus concentration following the reduction of external loading may be related to the increased P_i observed in 1988 (Table 3). Lake McCarrons' early-summer phosphorus concentration normally falls to very low levels (< 30 mg·m^{-3}); however, it reaches this low level at different times during the summer. For example, the minimum observed surface phosphorus concentrations and their dates are as follows:

YEAR	P ON JUNE 1	MINIMUM P	DATE
1984	65	20	6/27
1985	25	25	5/23
1986	20	20	6/4
1987	60	30	6/25
1988	60	30	9/7

The initial phosphorus concentrations in 1985 and 1986 were low and the model accurately predicts the observed summertime conditions (Table 4). When P_i is greater on June 1, but still declining, the model poorly simulates the observed summertime conditions in the lake (eg. 1984 and 1987). However, the phosphorus concentration does reach similar low levels during June (see above); when these low levels are used in the model, the predicted summertime concentration is in close agreement with the observed conditions (Tables 3 and 4). During 1988, the phosphorus concentration did not reach these low levels until September and the summertime average phosphorus concentration was high despite a substantial reduction in loading (Oberts and Osgood 1988). It appears that the June 1 phosphorus concentration relates to the loss of phosphorus through the lake's outlet. Fortunately, this has been measured at Lake McCarrons and is related to P_i such that when the springtime outflow phosphorus load is large, P_i is low (Oberts and Osgood 1988):

YEAR	P_i	APRIL-MAY P OUTFLOW (KG)
1984	65	7
1985	25	9
1986	20	24
1987	50	0
1988	60	0

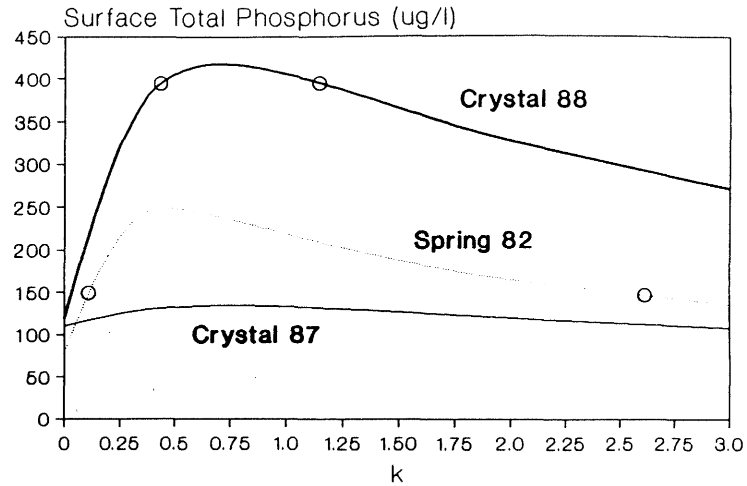
Unfortunately, outflow phosphorus loads have not been measured in other lakes, so the general effect cannot be quantified. Nonetheless, the effect, increased phosphorus loss with increased pre-summer outflow, is probably generally applicable. More significantly, this effect is probably not manageable because its magnitude is inversely related to the intensity of pre-summer runoff events. The best that can be expected when using the model to simulate future conditions is that the normal range of P_i for lakes can be defined.

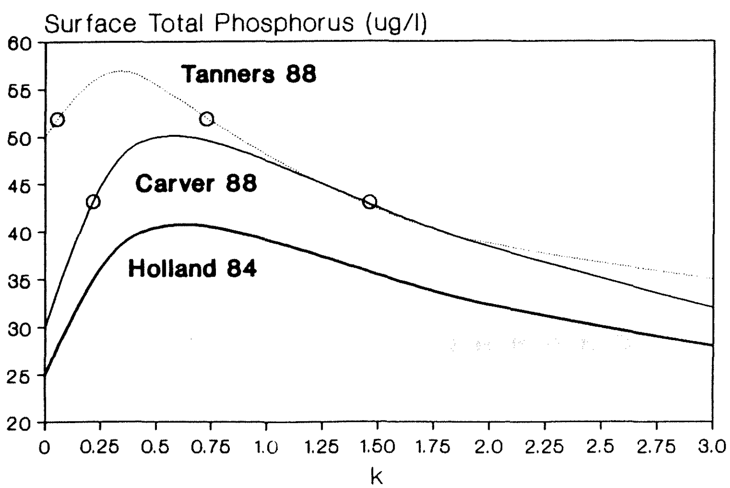
Since the first-order reaction coefficient, k, is a mathematical construct describing the transformation of epilimnetic phosphorus, its physical significance is unclear. It describes the cumulative loss or transformation of phosphorus from the summertime epilimnia as a first-order reaction. The actual loss of phosphorus from the epilimnion has not been measured in this study, but is apparently highly variable in lakes both spatially and seasonally (Canfield et al. 1982). Therefore, it is not possible to further describe the rates or mechanisms of phosphorus loss.

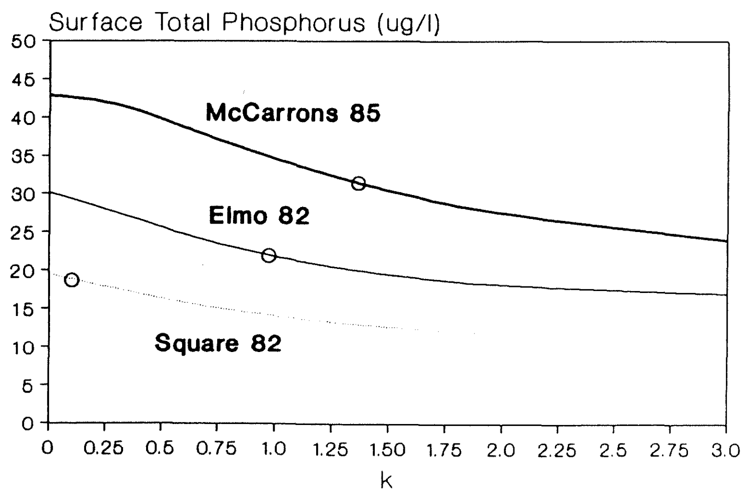
The model's sensitivity to k can be evaluated by holding all of the input parameters to several of the test lakes constant while varying the value of k. Values of k that are less than zero have no physical meaning because that allows P_i to increase through the summer with no other inputs of phosphorus (Eq. 1). Thus, $k < 0$ will not be considered. Also, $k > 3$ indicates that >95% of Pi will be lost during the summer (Eq. 1). Since greater losses are not likely, $k = 3$ will be the upper limit to be evaluated. The results of the model's simulations using variable values of k are shown in Fig. 5. There are two general types of curves that result: lakes with no summertime outflows where $P = P_i$ at $k = 0$ and lakes with outflows (Elmo, McCarrons and Square). The first type is a unimodal curve with two potential points of intersection with the observed and simulated P. The second type of curve descends in value through the range of k values used here, thus has only one point of potential intersection with the observed P. These intersection points are indicated in Figure 5. The points occurring on the ascending portions of the curves correspond to values of $k = 0.2$ (range: 0.1-0.35) while the points occurring on the descending portions of the curves correspond to values of $k = 1.09$ (range: 0.75-2.35). The descending portions of the unimodal curves are more gently sloping, and values of k on the second type of curve approximates the descending k values in the other curves, except for Square Lake. Since $k = 1.05$ agrees with the descending value of k in Figure 5 and since using this value in the model adequately simulates the observed phosphorus concentrations (Table 4), it is an appropriate value. Further, this analysis shows that the model is relatively insensitive to changes in k in this range.

Figure 5

PLOTS OF THE PREDICTED SUMMERTIME PHOSPHORUS CONCENTRATIONS USING INPUT PARAMETERS FROM TABLE 3 IN THE TEXT WITH VARYING VALUES OF K. POINTS ON THE CURVES INDICATE THE OBSERVED SUMMERTIME PHOSPHORUS CONCENTRATIONS IN THE LAKES.







The form of the model described above (Eqs. 1 and 2) describes the summertime epilimnetic phosphorus dynamics in TCMA lakes and allows the evaluation of various watershed and lake management practices in terms of their impacts on lakes' average summertime phosphorus concentrations. The lakes tested represent a cross-section of TCMA lakes as well as a suitable selection of management practices or measurable changes in environmental conditions. The extent to which internal changes to the lake systems, that is the constants used in the model (V, P_{int} and P_i), are effected by the various management scenarios have been presumed to be zero. Further assessment should also compare changes in these internal constants relative to the long-term effectiveness of the management practices and will be presented in a later section. For now, the model appears to an adequate tool to evaluate the short-term effectiveness of a range of management scenarios on a cross-section of TCMA lakes.

SHORT-TERM LAKE RESPONSES TO THE MANAGEMENT PRACTICES

The model will be used to evaluate the short-term responses of lakes to various management practices. Since 1988 was an abnormally dry year, the effectiveness of the management practices in the studied lakes will also be evaluated under normal hydrologic conditions. Following that analysis, the short-term effects of a suite of watershed and lake treatments will be simulated on a cross-section of TCMA lakes.

The effects of the various management practices on the six lakes as simulated using the time-dependent phosphorus model (Eqs. 1 and 2) are shown in Table 6. Table 6 does not show the change in the external load (P_r) as in Table 3, rather it presents the overall summertime load to the epilimnion (W). This illustrates: first, that due to internal (P_{int}) and atmospheric loading (P_p), the overall reductions that occur are relatively smaller than the treatment efficiencies of the monitored systems; and second, that the lakes' summertime P reductions are relatively smaller than the reductions in W. In particular, the three lakes with watershed treatments had phosphorus reductions (W) of 13, 17% and Tanners Lake had a 13% increase, but their summertime P was reduced by only 8, 8% and 4% increase in Tanners for a normal year (see Table 6). The lakes with watershed diversions had larger reductions in phosphorus loading (78% for Lake Elmo and 16% for Holland Lake), but with only 29 and 6% reductions in their summertime P in a normal year. Finally, Crystal Lake's phosphorus load to the epilimnion increased substantially with the circulation. There was a 442% increase in the lake's summertime P with the circulation in 1988, or an estimated 197 - 363% increase in a normal year, depending on the lake's P_i (Table 6).

The final short-term analysis deals with the effects of extremely effective management practices on the summertime phosphorus concentration in TCMA lakes. The management practices include: 1. a 25% reduction in P_r with no reduction in Q_i to simulate watershed treatments; 2. a 50% reduction in P_r and Q_i to simulate watershed diversions, and; 3. setting V = 90% of the lakes volume with no change in loading to simulate whole-lake circulation (see Table 7). These management scenarios include simulating the maximum phosphorus reductions that can reasonably be expected with general watershed-wide treatments and with whole-lake circulation. The watershed-wide treatments simulate phosphorus reductions through treatment and through diversion. These simulations were run on a cross-section of TCMA lakes (Table 7). The lakes range from dimictic (Holland and McCarrons) to polymictic (Spring and George) and internal loading ranges from 0 (George) to 97% (Spring) of the lakes' phosphorus budgets.

TABLE 6. Input parameters for the assessing the impacts of management practices on the summertime phosphorus concentration (P) in the test lakes using the time-dependent phosphorus model (Eqs 1 and 2 in the text).

	Q_i	Q_o	V	W	P_i	P
	-----	(10^6 m^3)	-----	(kg)	($mg \cdot m^{-3}$)	($mg \cdot m^{-3}$)
WATERSHED TREATMENTS						
Carver						
1988 with	.261	0	.736	85.0	30	47.0
1988 w/o	.261	0	.736	89.2	30	48.3
Normal with	.366	.272	.736	95.7	30	50.5
Normal w/o	.366	.272	.736	109.5	30	55.1
McCarrons						
1988 with	.140	0	.853	42.2	60	53.7
1988 w/o	.155	0	.853	49.0	60	55.7
Normal with	.227	.660	.853	54.2	25	32.9
Normal w/o	.251	.090	.853	65.3	25	35.9
Tanners						
1988 with	.108	0	.858	40.7	50	46.9
1988 w/o	.108	0	.858	40.6	50	46.8
Normal with	.188	.038	.858	49.7	50	48.6
Normal w/o	.188	.038	.858	43.9	50	46.8
WATERSHED DIVERSIONS						
Elmo						
Normal with	.880	.01	5.00	50.6	25	19.6
Normal w/o	1.76	.89	5.00	226.6	25	27.6
Holland						
1988 with	.052	0	.324	20.6	17	28.5
1988 w/o	.066	0	.324	23.5	17	30.3
Normal with	.084	0	.324	23.8	25	35.1
Normal w/o	.107	0	.324	28.3	25	37.4
CIRCULATION						
Crystal						
1988 with	.343	0	.951	1330	120	403
1988 w/o	.343	0	.669	120	55	74.4
Normal with	.559	0	.951	1375	120	368
Normal w/o	.559	0	.669	165	55(120)	79.6 (124)

TABLE 7. Estimated input parameters for simulating three management scenarios on a cross-section of TCMA lakes using the time-dependent phosphorus model. The management scenarios are as follows: 1. A 25% reduction in P_r with no reduction in Q_i to simulate watershed treatments; 2. A 50% reduction in P_r and Q_i to simulate watershed diversions; and 3. To simulate whole-lake circulation, V = 90% of the lake volume, but no change in P_{int}.

	Q_i	Q_o	V	P_p	P_r	P_{int}	P_i	P
	----- (10^6 m^3) -----			-------- (kg) --------			($mg \cdot m^{-3}$)	($mg \cdot m^{-3}$)
George								
1982	.640	0	4.50	7.7	31	0	20	15.8
1.	.640	0	4.50	7.7	23.2	0	20	15.4
2.	.583	0	4.50	7.7	15.5	0	20	14.9
3.	.640	0	4.78	7.7	31	0	20	15.7
Holland								
1988	.052	0	.324	0.6	4.3	15.7	17	28.5
1.	.052	0	.324	0.6	3.2	15.7	17	27.6
2.	.037	0	.324	0.6	2.1	15.7	17	27.3
3.	.052	0	.662	0.6	4.3	15.7	17	20.4
McCarrons								
1985	.327	.213	.853	2.3	36	23	25	34.1
1.	.327	.213	.853	2.3	27	23	25	31.5
2.	.270	.156	.853	2.3	18	23	25	29.3
3.	.327	.213	2.29	2.3	36	23	25	24.1
Medicine								
1983	5.11	3.29	15.0	30	556	1095	20	40.7
1.	5.11	3.29	15.0	30	417	1095	20	39.4
2.	3.31	1.49	15.0	30	278	1095	20	38.3
3.	5.11	3.29	17.2	30	556	1095	20	37.7
Riley								
1982	.487	.021	4.40	4.9	19.5	323	30	44.1
1.	.487	.021	4.40	4.9	14.6	323	30	42.0
2.	.370	0	4.40	4.9	9.7	323	30	42.3
3.	.487	.021	7.23	4.9	19.5	323	30	35.3
Spring								
1982	1.16	0	11.6	10	165	6462	80	216
1.	1.16	0	11.6	10	124	6462	80	209
2.	.684	0	11.6	10	82	6462	80	214
3.	1.16	0	(11.2)	10	165	6462	80	(221)
Stieger								
1984	.510	.190	2.00	6.3	27.6	76.4	25	30.9
1.	.510	.190	2.00	6.3	20.7	76.4	25	30.0
2.	.510	.090	2.00	6.3	13.8	76.4	25	29.5
3.	.510	.190	2.42	6.3	27.6	76.4	25	28.8

The short-term effects of the watershed treatments on the lakes' summertime phosphorus loads are small compared to the reductions observed in the treatment systems. The reduction in W with the 25% reduction in P_r ranged from 5-20% (median = 6%). The reduction in the summertime phosphorus concentration of these lakes was proportionately even less (range: 3-8%, median = 3%). The overall effect of the watershed diversion was greater, however, it was still small. The reduction in the summertime phosphorus loads (W) following the 50% diversion ranged from 5-40% (median = 13%), with a reduction in the lakes' P ranging from 0-14% (median = 5%). The greatest proportional reductions occurred in lakes with the smallest internal phosphorus budgets (George, McCarrons); however, that is atypical for TCMA lakes (Osgood 1988c).

The simulation of the whole-lake circulation shows reductions in the lakes' P (Table 7), contrary to the observations from Crystal Lake (Table 2a). The largest reductions occur in the most strongly stratified lakes and no reductions occur in the polymictic lakes, which normally circulate during the summer. Intermediate mixis lakes, such as Medicine and Stieger, show 7% reductions in P. Since whole-lake circulation is generally not used to reduce lakes' phosphorus content (Cooke et al. 1986), this exercise may be superfluous. The large reductions in the dimictic lakes are due to dilution, however, the energy requirements to circulate strongly stratified lakes probably renders this technique infeasible. Also, this simulation assumed that internal phosphorus loading to the mixing zone and P_i would not increase following the circulation. This is not what occurred in Crystal Lake (Table 2a), but there is inadequate information available to generalize the impacts of circulation-induced increases in internal phosphorus loading. It appears that whole-lake circulation is not a practical technique to reduce lakes' summertime phosphorus concentration in TCMA lakes.

LONG-TERM LAKE RESPONSES TO PHOSPHORUS REDUCTIONS

The long-term affects of watershed management are more difficult to evaluate. The consideration of annual nutrient and water loading using the steady-state models yields results that conflict with field observations. However, it is instructive to use a steady-state model to simulate changes in lake phosphorus concentration following watershed treatments and compare the results with the seasonal analyses that have been developed here.

A steady-state solution to the input-output model for lakes is as follows (after Chapra and Reckhow 1983):

$$P = W / (Q + kV) \qquad (6)$$

where P is the steady-state phosphorus concentration ($mg \cdot m^{-3}$), W is the annual dissolved phosphorus loading ($mg \cdot year^{-1}$), Q is the annual water input ($m^3 \cdot year^{-1}$), V is the lake volume (m^3) and k = 1.05. Notice that the parameters are the same as in Eq. 1, except that here they are annual values.

When Eq. 6 is used to simulate the effects of watershed changes similar to those in Table 7, it appears that the lakes are more responsive to these changes on an annual basis (Table 8). The results of this simulation on the same cross-section of lakes indicates that a 25% annual reduction of dissolved phosphorus loading yields an overall reduction in loading to the lake of 12% (median; range: 3 - 19%) with a similar reduction in the lake's phosphorus concentration (median = 12%; range: 3 - 19%). The results of the simulated diversion (50% reduction in water and phosphorus loading) indicates an overall reduction in loading to the lake of 26% (median; range: 7 - 38%) with a lower reduction in the lake's phosphorus concentration (median = 19%; range: 0 - 36%). As with the seasonal simulations, internally loaded phosphorus accounts for the lowered overall reductions (Table 8). A time-dependent model analogous to Eq. 1, except with annual loading rates and the whole-lake volumes substituted, indicates that the lakes in Table 8 would achieve 90% of their lowered steady-state P within two years of the reductions in loading. However, neither result of the simulation using annual data, the magnitude and speed of P reduction, has been observed in TCMA lakes (eg. Lake McCarrons, Oberts and Osgood 1988).

TABLE 8. Estimated annual input parameters for simulating the impacts of three management scenarios on the annual P in a cross-section of TCMA lakes using the steady-state phosphorus model (Eq. 6 in the text). The management scenarios are as follows: 1. A 25% reduction in P_r with no reduction in Q_i to simulate watershed treatments; and 2. A 50% reduction in P_r and Q_i to simulate watershed diversions.

	Q_i	Q_o	V	P_p	P_r	P_{int}	P
	---- (10^6 m^3) ----			---- (kg) ----			($mg \cdot m^{-3}$)
George							
1982	1.73	0	5.31	26	84	0	15.1
1.	1.73	0	5.31	26	63	0	12.2
2.	1.52	0	5.31	26	42	0	9.6
Holland							
1983	.23	0	.736	3.0	16.4	15.7	35.0
1.	.23	0	.736	3.0	12.3	15.7	30.9
2.	.17	0	.736	3.0	8.2	15.7	28.5
McCarrons							
1985	.69	.66	2.55	5	82	23	32.7
1.	.69	.66	2.55	5	62	23	26.7
2.	.48	.45	2.55	5	41	23	21.9
Medicine							
1983	8.79	6.93	19.1	53	1228	1095	82
1.	8.79	6.93	19.1	53	921	1095	72
2.	5.72	3.86	19.1	53	614	1095	68
Riley							
1982	2.44	1.25	8.03	40	360	323	66.5
1.	2.44	1.25	8.03	40	270	323	58.2
2.	1.65	0.46	8.03	40	180	323	53.9
Spring							
1982	7.7	6.5	12.4	38	1064	6462	365
1.	7.7	6.5	12.4	38	799	6462	352
2.	7.7	6.5	12.4	38	532	6462	395
Stieger							
1984	.74	.42	2.69	9.2	42.0	76.4	35.8
1.	.74	.42	2.69	9.2	31.5	76.4	32.9
2.	.60	.28	2.69	9.2	21.0	76.4	31.1

The explanation for the lack of observable lake responses following real changes in external loading probably deals with the magnitude of internal loading in TCMA lakes (Osgood 1988c) which reduces the effect of external load reductions. In addition, the differential effect of seasonal loading relative to lakes' responsiveness, which has been illustrated with the seasonal time-dependent phosphorus model (Eqs. 1 and 2), reduces the apparent effects of the annual load reductions. The above analysis using annual loading estimates and a steady-state model highlights the lack of validity of the steady-state assumptions relative to the behavior of TCMA lakes. It has been shown earlier in this report, that lakes are more sensitive to changes in external phosphorus that occur during the summertime. Those analyses indicate that substantial, long-term reductions in the summertime P of TCMA lakes will require reductions in the initial summertime phosphorus concentration (P_i) and in the internal phosphorus loading (P_{int}) as well reductions in the external loading of dissolved phosphorus during the summer.

It appears that the year-to-year variation of P_i in TCMA lakes is unrelated to large changes in watershed loading (see Oberts and Osgood 1988). Therefore, long-term reductions in external phosphorus loading does not appear to affect P_i. This is further supported by the observation that P_i in most TCMA lakes occurs within a narrow range. There is no evidence to suggest that watershed management will lead to long-term changes in the initial summertime phosphorus concentration of TCMA lakes.

Long-term reductions in the summertime phosphorus in TCMA lakes must result from the combination of sustained reductions in the external phosphorus load to the lakes and the reduction in the rate of internally supplied phosphorus. Unfortunately, we have data on neither the long-term effectiveness of watershed management systems nor the decay of internal phosphorus supplies following reduced external loads. In order to expect any long-term improvements in lake quality to occur, the length of effectiveness of watershed treatments must exceed the time necessary for the internal phosphorus sources to become substantially depleted. The depletion of phosphorus available in the lakes' sediments will occur only after the annual accumulation falls below some critical level, above which net accumulation still occurs. Since lakes in the TCMA retain ≈90% of the annual external total phosphorus loads (Osgood 1981), very large reductions in external loads are probably required in order to deplete the pool of available phosphorus in the lakes' sediments. Based upon our observations of the Lake McCarrons Wetland Treatment System (Oberts and Osgood 1988), it appears that without intensive maintenance of watershed treatment systems, that the depletion of lakes' internal phosphorus supplies will occur on time scales much longer than the normal effectiveness of the watershed systems. Thus, the time-dependent phosphorus model presented here adequately predicts the response of TCMA lakes to nutrient load modifications that apply for the duration of reasonable planning time scales.

SUMMARY OF PHOSPHORUS MODELLING

The modelling presented above shows TCMA lakes to be generally insensitive to changes in external phosphorus inputs, especially during the summer. It appears that substantial changes in the lakes' summertime phosphorus concentrations are unlikely to result following commonly-used watershed management techniques. Furthermore, due to the predominance of internal phosphorus loading to the lakes' summertime phosphorus budgets, it appears that the lakes are unlikely to improve over the long-term following annual reductions in phosphorus loading. The time-dependent phosphorus model, which has been shown to be appropriate for simulating the average summertime phosphorus concentrations in TCMA lakes in response to short-term changes in watershed loadings, probably also adequately simulates long-term impacts of watershed changes. Substantial, long-term reductions in the lakes' phosphorus concentration requires sustained reductions in the external phosphorus load to the lakes as well as the attenuation of the internal phosphorus supply.

The modelling presented here has been shown to simulate the response of TCMA lakes to changes in phosphorus income and is useful for understanding the general behavior of the lakes. The model can be used for individual lake analysis, provided equally "good" input parameters are available. Preliminary tests of the model using gross estimates of inputs provided poor results. It appears that several years' data from the lake and its watershed are necessary to provide "good" inputs to the model.

RECOMMENDATIONS FOR LAKE AND WATERSHED MANAGEMENT

The TCMA lake managers should plan to mitigate the impacts of nonpoint source pollution to the fullest possible extent, consider the use of in-lake management techniques to treat symptomatic nuisances in lakes and consider the long-term economic and environmental costs associated with both practices when planning development in the TCMA.

It has been shown that watershed treatments are generally ineffective with respect to reducing TCMA lakes' summertime phosphorus concentrations. Since land development also affects the phosphorus loading to lakes, the effectiveness of watershed treatments to mitigate the impacts of development is compromised. Thus, the common practice of requiring watershed treatments for new developments will probably lead to a net degradation of the lakes. The lakes will become more eutrophic; however, based on the analyses included here and observations over the past decade, this process is occurring slowly. It appears that the only watershed treatments that have the potential for reducing lake phosphorus are runoff diversions, which are seldom feasible.

The discontinuation of the watershed treatments and wetland preservation is not being recommended here. Rather, it is recommended that the impacts of nonpoint source pollution should be mitigated to the fullest possible extent in order to minimize the impacts of land development on lake water quality. In fact, watershed treatments and wetland preservation should occur more commonly in order to best address the long-term impacts on lakes. These systems provide plenty of other benefits which justify their continued use. In addition, they provide enough treatment of phosphorus, with proper maintenance, to at least partially mitigate the impacts of development (Oberts and Osgood 1988; Oberts et al. 1989).

Presuming that wholesale changes in the lakes' summertime phosphorus are not likely to occur, what approach is left for the management of eutrophication-related aquatic nuisances? The in-lake treatment of symptoms, rather than the underlying causes, is perhaps philosophically unpleasant, but may be the best remaining alternative available to TCMA lake managers. It is recommended that in-lake management techniques be considered to treat nuisances related to eutrophication only after the most feasible watershed treatments have been included as part of the lake management plan. In-lake treatments are inherently energy-demanding. They may lead to observable changes in lakes; however, these changes, while they may mimic improvements associated with lowered nutrient concentrations, are fundamentally different (see Lehman 1988). The discussion of specific in-lake management techniques will not be included here.

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APPENDIX A

Physical/Chemical Data

Parameter Code	Parameter	Units
DM	Depth	m
TC	Temperature	°C
DO	Dissolved Oxygen	$g \cdot m^{-3}$
LIGHT	Underwater Light	$\mu E \cdot m^{-2} \cdot s^{-1}$
TP	Total Phosphorus	$mg \cdot m^{-3}$
TDP	Total Dissolved Phosphorus	$mg \cdot m^{-3}$
OP	Ortho-phosphorus	$mg \cdot m^{-3}$
TKN	Total Kjeldahl Nitrogen	$g \cdot m^{-3}$
N23	Nitrate-Nitrite-Nitrogen	$g \cdot m^{-3}$
CLA	Chlorophyll a	$mg \cdot m^{-3}$
SDM	Secchi Disk	m
COND	Specific conductance	$\mu mho \cdot m^{-2} \cdot s^{-1}$
PHL	pH	standard units

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
1	CARV	CARVER	82-0166	871029	950	0.0	7.0	7.70	.	125	55	50	1.820	0.100	36.0	1.40	300	8.13
2	CARV	CARVER	82-0166	871029	950	1.0	7.0	7.70	.	.	.	.	.	.	.	.	.	.
3	CARV	CARVER	82-0166	871029	950	2.0	7.0	7.70	.	.	.	.	.	.	.	.	.	.
4	CARV	CARVER	82-0166	871029	950	3.0	7.0	7.70	.	130	.	.	.	.	.	.	300	8.13
5	CARV	CARVER	82-0166	871029	950	4.0	7.0	7.70	.	.	.	.	.	.	.	.	.	.
6	CARV	CARVER	82-0166	871029	950	5.0	7.0	7.70	.	140	.	.	.	.	.	.	335	8.12
7	CARV	CARVER	82-0166	871029	950	6.0	7.0	7.70	.	.	.	.	.	.	.	.	.	.
8	CARV	CARVER	82-0166	871029	950	7.0	7.0	7.70	.	.	.	.	.	.	.	.	.	.
9	CARV	CARVER	82-0166	871029	950	8.0	7.0	7.70	.	120	.	.	.	.	.	.	335	8.13
10	CARV	CARVER	82-0166	871029	950	9.0	7.0	7.00	.	.	.	.	.	.	.	.	.	.
11	CARV	CARVER	82-0166	871228	935	0.0	.	.	.	105	60	44	1.820	0.200	3.5	3.70	.	.
12	CARV	CARVER	82-0166	871228	935	1.0	2.5	8.95	.	.	.	.	.	.	.	.	.	.
13	CARV	CARVER	82-0166	871228	935	3.0	2.5	9.15	.	90	.	.	.	.	.	.	.	.
14	CARV	CARVER	82-0166	871228	935	6.0	2.5	7.85	.	90	.	.	.	.	.	.	.	.
15	CARV	CARVER	82-0166	871228	935	9.0	2.5	6.60	.	90	.	.	.	.	.	.	.	.
16	CARV	CARVER	82-0166	880119	930	0.0	.	.	.	75	50	46	1.850	0.200	2.6	4.50	.	.
17	CARV	CARVER	82-0166	880119	930	1.0	2.0	8.40	.	.	.	.	.	.	.	.	.	.
18	CARV	CARVER	82-0166	880119	930	3.0	2.5	8.35	.	80	.	.	.	.	.	.	.	.
19	CARV	CARVER	82-0166	880119	930	6.0	2.5	6.05	.	90	.	.	.	.	.	.	.	.
20	CARV	CARVER	82-0166	880119	930	9.0	3.0	2.80	.	150	.	.	.	.	.	.	.	.
21	CARV	CARVER	82-0166	880217	935	0.0	.	.	.	90	95	25	1.800	0.080	0.9	2.30	.	.
22	CARV	CARVER	82-0166	880217	935	1.0	1.0	8.10	.	.	.	.	.	.	.	.	.	.
23	CARV	CARVER	82-0166	880217	935	3.0	2.0	.	.	80	.	.	.	.	.	.	.	.
24	CARV	CARVER	82-0166	880217	935	6.0	2.5	4.50	.	90	.	.	.	.	.	.	.	.
25	CARV	CARVER	82-0166	880217	935	9.0	3.0	.	.	160	.	.	.	.	.	.	.	.
26	CARV	CARVER	82-0166	880323	950	0.0	.	.	.	85	65	33	1.680	0.140	19.0	1.10	.	.
27	CARV	CARVER	82-0166	880323	950	1.0	4.5	9.20	.	.	.	.	.	.	.	.	.	.
28	CARV	CARVER	82-0166	880323	950	3.0	4.0	5.60	.	100	.	.	.	.	.	.	.	.
29	CARV	CARVER	82-0166	880323	950	6.0	3.0	3.70	.	90	.	.	.	.	.	.	.	.
30	CARV	CARVER	82-0166	880323	950	9.0	3.0	0.45	.	170	.	.	.	.	.	.	.	.
31	CARV	CARVER	82-0166	880408	945	0.0	8.0	.	.	85	65	14	1.680	0.280	45.0	1.40	390	8.00
32	CARV	CARVER	82-0166	880408	945	1.0	8.0	.	.	.	.	.	.	.	.	.	.	.
33	CARV	CARVER	82-0166	880408	945	2.0	8.0	.	.	.	.	.	.	.	.	.	.	.
34	CARV	CARVER	82-0166	880408	945	4.0	7.0	.	.	80	.	.	.	.	.	.	390	7.97
35	CARV	CARVER	82-0166	880408	945	8.0	4.5	.	.	40	.	.	.	.	.	.	440	7.42
36	CARV	CARVER	82-0166	880420	955	0.0	9.0	13.80	1350.00	85	70	18	1.550	0.130	64.0	1.00	375	8.81
37	CARV	CARVER	82-0166	880420	955	0.5	.	.	410.00	.	.	.	.	.	.	.	.	.
38	CARV	CARVER	82-0166	880420	955	1.0	9.0	.	150.00	.	.	.	.	.	.	.	.	.
39	CARV	CARVER	82-0166	880420	955	1.5	.	.	65.00	.	.	.	.	.	.	.	.	.
40	CARV	CARVER	82-0166	880420	955	2.0	9.0	13.50	23.50	.	.	.	.	.	.	.	.	.
41	CARV	CARVER	82-0166	880420	955	2.5	.	.	10.20	.	.	.	.	.	.	.	.	.
42	CARV	CARVER	82-0166	880420	955	3.0	9.0	.	.	80	.	.	.	.	.	.	375	8.84
43	CARV	CARVER	82-0166	880420	955	4.0	9.0	13.50	.	.	.	.	.	.	.	.	.	.
44	CARV	CARVER	82-0166	880420	955	5.0	8.9	13.60	.	.	.	.	.	.	.	.	.	.
45	CARV	CARVER	82-0166	880420	955	5.5	8.9	.	.	.	.	.	.	.	.	.	.	.
46	CARV	CARVER	82-0166	880420	955	6.0	8.3	9.10	.	80	.	.	.	.	.	.	385	8.84
47	CARV	CARVER	82-0166	880420	955	6.5	5.5	.	.	.	.	.	.	.	.	.	.	.
48	CARV	CARVER	82-0166	880420	955	7.0	3.9	0.40	.	.	.	.	.	.	.	.	.	.
49	CARV	CARVER	82-0166	880420	955	8.0	3.8	0.40	.	.	.	.	.	.	.	.	.	.
50	CARV	CARVER	82-0166	880420	955	9.0	3.8	0.40	.	40	.	.	.	.	.	.	505	7.38
51	CARV	CARVER	82-0166	880503	1005	0.0	15.3	15.20	1250.00	55	30	6	1.120	0.050	29.0	1.40	370	9.04
52	CARV	CARVER	82-0166	880503	1005	0.5	.	.	580.00	.	.	.	.	.	.	.	.	.
53	CARV	CARVER	82-0166	880503	1005	1.0	15.2	.	320.00	.	.	.	.	.	.	.	.	.
54	CARV	CARVER	82-0166	880503	1005	1.5	15.1	.	190.00	.	.	.	.	.	.	.	.	.
55	CARV	CARVER	82-0166	880503	1005	2.0	12.9	15.20	105.00	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
56	CARV	CARVER	82-0166	880503	1005	2.5	10.9	.	45.00	.	.	.	.	.	.	.	.	.
57	CARV	CARVER	82-0166	880503	1005	3.0	9.7	10.10	20.70	40	.	.	.	.	.	.	365	9.01
58	CARV	CARVER	82-0166	880503	1005	3.5	.	.	8.90	.	.	.	.	.	.	.	.	.
59	CARV	CARVER	82-0166	880503	1005	4.0	9.3	8.90	5.20	.	.	.	.	.	.	.	.	.
60	CARV	CARVER	82-0166	880503	1005	5.0	9.0	8.40	.	.	.	.	.	.	.	.	.	.
61	CARV	CARVER	82-0166	880503	1005	6.0	8.3	4.30	.	50	.	.	.	.	.	.	360	8.57
62	CARV	CARVER	82-0166	880503	1005	6.5	7.4	.	.	.	.	.	.	.	.	.	.	.
63	CARV	CARVER	82-0166	880503	1005	7.0	6.4	0.40	.	.	.	.	.	.	.	.	.	.
64	CARV	CARVER	82-0166	880503	1005	7.5	5.8	.	.	.	.	.	.	.	.	.	.	.
65	CARV	CARVER	82-0166	880503	1005	8.0	5.0	0.50	.	.	.	.	.	.	.	.	.	.
66	CARV	CARVER	82-0166	880503	1005	9.0	4.1	0.50	.	40	.	.	.	.	.	.	475	7.31
67	CARV	CARVER	82-0166	880517	1010	0.0	15.1	12.20	1380.00	55	35	18	0.920	0.050	40.0	1.80	360	9.21
68	CARV	CARVER	82-0166	880517	1010	0.5	.	.	720.00	.	.	.	.	.	.	.	.	.
69	CARV	CARVER	82-0166	880517	1010	1.0	15.0	12.40	340.00	.	.	.	.	.	.	.	.	.
70	CARV	CARVER	82-0166	880517	1010	1.5	.	.	166.00	.	.	.	.	.	.	.	.	.
71	CARV	CARVER	82-0166	880517	1010	2.0	14.8	11.80	81.00	.	.	.	.	.	.	.	.	.
72	CARV	CARVER	82-0166	880517	1010	2.5	.	.	47.00	.	.	.	.	.	.	.	.	.
73	CARV	CARVER	82-0166	880517	1010	3.0	14.6	11.40	31.00	50	.	.	.	.	.	.	360	9.29
74	CARV	CARVER	82-0166	880517	1010	3.5	13.9	.	17.20	.	.	.	.	.	.	.	.	.
75	CARV	CARVER	82-0166	880517	1010	4.0	11.0	1.50	10.70	.	.	.	.	.	.	.	.	.
76	CARV	CARVER	82-0166	880517	1010	4.5	9.8	.	6.60	.	.	.	.	.	.	.	.	.
77	CARV	CARVER	82-0166	880517	1010	5.0	9.1	0.10	4.70	.	.	.	.	.	.	.	.	.
78	CARV	CARVER	82-0166	880517	1010	5.5	8.2	.	.	.	.	.	.	.	.	.	.	.
79	CARV	CARVER	82-0166	880517	1010	6.0	7.7	0.10	.	60	.	.	.	.	.	.	430	7.93
80	CARV	CARVER	82-0166	880517	1010	6.5	7.0	.	.	.	.	.	.	.	.	.	.	.
81	CARV	CARVER	82-0166	880517	1010	7.0	6.4	0.10	.	.	.	.	.	.	.	.	.	.
82	CARV	CARVER	82-0166	880517	1010	7.5	5.6	.	.	.	.	.	.	.	.	.	.	.
83	CARV	CARVER	82-0166	880517	1010	8.0	5.2	0.20	.	.	.	.	.	.	.	.	.	.
84	CARV	CARVER	82-0166	880517	1010	9.0	4.7	0.10	.	120	.	.	.	.	.	.	535	7.35
85	CARV	CARVER	82-0166	880602	1100	0.0	25.3	7.70	635.00	30	35	8	0.780	0.150	4.3	3.20	360	8.96
86	CARV	CARVER	82-0166	880602	1100	0.5	.	.	286.00	.	.	.	.	.	.	.	.	.
87	CARV	CARVER	82-0166	880602	1100	1.0	25.2	7.70	180.00	.	.	.	.	.	.	.	.	.
88	CARV	CARVER	82-0166	880602	1100	1.5	24.6	.	132.00	.	.	.	.	.	.	.	.	.
89	CARV	CARVER	82-0166	880602	1100	2.0	23.8	8.20	104.00	.	.	.	.	.	.	.	.	.
90	CARV	CARVER	82-0166	880602	1100	2.5	21.2	.	76.00	.	.	.	.	.	.	.	.	.
91	CARV	CARVER	82-0166	880602	1100	3.0	19.0	6.70	53.00	30	.	.	.	.	.	.	370	8.92
92	CARV	CARVER	82-0166	880602	1100	3.5	15.6	.	37.50	.	.	.	.	.	.	.	.	.
93	CARV	CARVER	82-0166	880602	1100	4.0	14.1	2.50	26.60	.	.	.	.	.	.	.	.	.
94	CARV	CARVER	82-0166	880602	1100	4.5	11.4	.	18.50	.	.	.	.	.	.	.	.	.
95	CARV	CARVER	82-0166	880602	1100	5.0	9.9	1.80	13.60	.	.	.	.	.	.	.	.	.
96	CARV	CARVER	82-0166	880602	1100	5.5	9.1	.	9.95	.	.	.	.	.	.	.	.	.
97	CARV	CARVER	82-0166	880602	1100	6.0	8.2	0.50	7.20	40	.	.	.	.	.	.	435	7.83
98	CARV	CARVER	82-0166	880602	1100	6.5	7.6	.	3.15	.	.	.	.	.	.	.	.	.
99	CARV	CARVER	82-0166	880602	1100	7.0	7.0	0.20	0.61	.	.	.	.	.	.	.	.	.
100	CARV	CARVER	82-0166	880602	1100	7.5	6.1	.	.	.	.	.	.	.	.	.	.	.
101	CARV	CARVER	82-0166	880602	1100	8.0	5.7	0.20	.	.	.	.	.	.	.	.	.	.
102	CARV	CARVER	82-0166	880602	1100	9.0	5.5	0.20	.	100	.	.	.	.	.	.	535	7.30
103	CARV	CARVER	82-0166	880614	955	0.0	24.5	9.10	.	30	20	6	0.920	0.100	9.8	2.80	.	8.92
104	CARV	CARVER	82-0166	880614	955	1.0	24.5	.	.	.	.	.	.	.	.	.	.	.
105	CARV	CARVER	82-0166	880614	955	2.0	24.4	9.00	.	.	.	.	.	.	.	.	.	.
106	CARV	CARVER	82-0166	880614	955	2.5	23.6	.	.	.	.	.	.	.	.	.	.	.
107	CARV	CARVER	82-0166	880614	955	3.0	21.6	.	.	20	.	.	.	.	.	.	.	8.96
108	CARV	CARVER	82-0166	880614	955	3.5	19.0	.	.	.	.	.	.	.	.	.	.	.
109	CARV	CARVER	82-0166	880614	955	4.0	17.0	.	.	.	.	.	.	.	.	.	.	.
110	CARV	CARVER	82-0166	880614	955	4.5	13.3	.	.	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
111	CARV	CARVER	82-0166	880614	955	5.0	11.1	4.00	.	.	.	.	.	.	.	.	.	.
112	CARV	CARVER	82-0166	880614	955	5.5	9.5	.	.	.	.	.	.	.	.	.	.	.
113	CARV	CARVER	82-0166	880614	955	6.0	8.7	.	.	20	.	.	.	.	.	.	.	8.46
114	CARV	CARVER	82-0166	880614	955	6.5	7.6	.	.	.	.	.	.	.	.	.	.	.
115	CARV	CARVER	82-0166	880614	955	7.0	7.1	0.20	.	.	.	.	.	.	.	.	.	.
116	CARV	CARVER	82-0166	880614	955	8.0	6.1	.	.	.	.	.	.	.	.	.	.	.
117	CARV	CARVER	82-0166	880614	955	9.0	5.4	0.20	.	150	.	.	.	.	.	.	.	.
118	CARV	CARVER	82-0166	880628	1015	0.0	25.7	10.00	1400.00	30	20	4	0.820	0.050	15.0	1.10	.	8.93
119	CARV	CARVER	82-0166	880628	1015	0.5	.	.	820.00	.	.	.	.	.	.	.	.	.
120	CARV	CARVER	82-0166	880628	1015	1.0	25.6	9.90	400.00	.	.	.	.	.	.	.	.	.
121	CARV	CARVER	82-0166	880628	1015	1.5	.	.	203.00	.	.	.	.	.	.	.	.	.
122	CARV	CARVER	82-0166	880628	1015	2.0	25.4	9.40	110.00	.	.	.	.	.	.	.	.	.
123	CARV	CARVER	82-0166	880628	1015	2.5	25.1	.	59.00	.	.	.	.	.	.	.	.	.
124	CARV	CARVER	82-0166	880628	1015	3.0	23.8	5.80	31.50	20	.	.	.	.	.	.	.	.
125	CARV	CARVER	82-0166	880628	1015	3.5	19.3	.	16.60	.	.	.	.	.	.	.	.	.
126	CARV	CARVER	82-0166	880628	1015	4.0	16.8	0.90	10.70	.	.	.	.	.	.	.	.	.
127	CARV	CARVER	82-0166	880628	1015	4.5	14.1	.	6.60	.	.	.	.	.	.	.	.	.
128	CARV	CARVER	82-0166	880628	1015	5.0	11.5	0.40	4.10	.	.	.	.	.	.	.	.	.
129	CARV	CARVER	82-0166	880628	1015	5.5	10.0	.	.	.	.	.	.	.	.	.	.	.
130	CARV	CARVER	82-0166	880628	1015	6.0	8.4	0.40	.	40	.	.	.	.	.	.	.	.
131	CARV	CARVER	82-0166	880628	1015	6.5	7.4	.	.	.	.	.	.	.	.	.	.	.
132	CARV	CARVER	82-0166	880628	1015	7.0	6.8	0.40	.	.	.	.	.	.	.	.	.	.
133	CARV	CARVER	82-0166	880628	1015	7.5	6.4	.	.	.	.	.	.	.	.	.	.	.
134	CARV	CARVER	82-0166	880628	1015	8.0	6.1	0.40	.	.	.	.	.	.	.	.	.	.
135	CARV	CARVER	82-0166	880628	1015	8.5	5.8	.	.	.	.	.	.	.	.	.	.	.
136	CARV	CARVER	82-0166	880628	1015	9.0	5.6	0.40	.	310	.	.	.	.	.	.	.	.
137	CARV	CARVER	82-0166	880712	1000	0.0	25.7	8.70	1380.00	30	.	2	0.850	0.100	13.0	1.70	375	9.15
138	CARV	CARVER	82-0166	880712	1000	0.5	.	.	890.00	.	.	.	.	.	.	.	.	.
139	CARV	CARVER	82-0166	880712	1000	1.0	25.7	8.60	460.00	.	.	.	.	.	.	.	.	.
140	CARV	CARVER	82-0166	880712	1000	1.5	.	.	290.00	.	.	.	.	.	.	.	.	.
141	CARV	CARVER	82-0166	880712	1000	2.0	25.5	8.20	172.00	.	.	.	.	.	.	.	.	.
142	CARV	CARVER	82-0166	880712	1000	2.5	25.4	.	110.00	.	.	.	.	.	.	.	.	.
143	CARV	CARVER	82-0166	880712	1000	3.0	24.5	6.60	54.50	30	.	.	.	.	.	.	370	9.15
144	CARV	CARVER	82-0166	880712	1000	3.5	20.9	.	28.20	.	.	.	.	.	.	.	.	.
145	CARV	CARVER	82-0166	880712	1000	4.0	18.4	0.30	12.60	.	.	.	.	.	.	.	.	.
146	CARV	CARVER	82-0166	880712	1000	4.5	14.7	.	7.20	.	.	.	.	.	.	.	.	.
147	CARV	CARVER	82-0166	880712	1000	5.0	12.1	0.20	3.65	.	.	.	.	.	.	.	.	.
148	CARV	CARVER	82-0166	880712	1000	5.5	9.9	.	.	.	.	.	.	.	.	.	.	.
149	CARV	CARVER	82-0166	880712	1000	6.0	9.0	0.20	.	40	.	.	.	.	.	.	450	7.62
150	CARV	CARVER	82-0166	880712	1000	6.5	7.8	.	.	.	.	.	.	.	.	.	.	.
151	CARV	CARVER	82-0166	880712	1000	7.0	6.7	0.30	.	.	.	.	.	.	.	.	.	.
152	CARV	CARVER	82-0166	880712	1000	7.5	6.3	.	.	.	.	.	.	.	.	.	.	.
153	CARV	CARVER	82-0166	880712	1000	8.0	6.1	0.30	.	160	.	.	.	.	.	.	535	7.19
154	CARV	CARVER	82-0166	880727	950	0.0	25.8	9.60	1300.00	35	15	2	1.000	0.150	23.0	1.40	355	9.10
155	CARV	CARVER	82-0166	880727	950	0.5	25.8	9.30	690.00	.	.	.	.	.	.	.	.	.
156	CARV	CARVER	82-0166	880727	950	1.0	25.8	8.90	295.00	.	.	.	.	.	.	.	.	.
157	CARV	CARVER	82-0166	880727	950	1.5	.	.	166.00	.	.	.	.	.	.	.	.	.
158	CARV	CARVER	82-0166	880727	950	2.0	25.7	8.90	87.00	.	.	.	.	.	.	.	.	.
159	CARV	CARVER	82-0166	880727	950	2.5	25.5	.	50.50	.	.	.	.	.	.	.	.	.
160	CARV	CARVER	82-0166	880727	950	3.0	24.1	4.40	27.00	30	.	.	.	.	.	.	365	.
161	CARV	CARVER	82-0166	880727	950	3.5	22.2	.	18.10	.	.	.	.	.	.	.	.	.
162	CARV	CARVER	82-0166	880727	950	4.0	19.5	0.70	12.10	.	.	.	.	.	.	.	.	.
163	CARV	CARVER	82-0166	880727	950	4.5	15.8	.	5.70	.	.	.	.	.	.	.	.	.
164	CARV	CARVER	82-0166	880727	950	5.0	13.0	0.70	3.30	.	.	.	.	.	.	.	.	.
165	CARV	CARVER	82-0166	880727	950	5.5	10.6	.	.	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
166	CARV	CARVER	82-0166	880727	950	6.0	9.1	0.80	.	30	.	.	.	.	.	.	440	.
167	CARV	CARVER	82-0166	880727	950	6.5	8.1	.	.	.	.	.	.	.	.	.	.	.
168	CARV	CARVER	82-0166	880727	950	7.0	7.4	0.80	.	.	.	.	.	.	.	.	.	.
169	CARV	CARVER	82-0166	880727	950	7.5	6.9	.	.	.	.	.	.	.	.	.	.	.
170	CARV	CARVER	82-0166	880727	950	8.0	6.6	0.80	.	.	.	.	.	.	.	.	.	.
171	CARV	CARVER	82-0166	880727	950	9.0	6.1	0.60	.	360	.	.	.	.	.	.	540	.
172	CARV	CARVER	82-0166	880809	1000	0.0	26.2	9.00	1450.00	75	30	6	1.400	0.100	68.0	0.75	340	9.13
173	CARV	CARVER	82-0166	880809	1000	0.5	.	.	395.00	.	.	.	.	.	.	.	.	.
174	CARV	CARVER	82-0166	880809	1000	1.0	26.1	8.60	94.00	.	.	.	.	.	.	.	.	.
175	CARV	CARVER	82-0166	880809	1000	1.5	.	.	34.00	.	.	.	.	.	.	.	.	.
176	CARV	CARVER	82-0166	880809	1000	2.0	25.9	8.10	12.10	.	.	.	.	.	.	.	.	.
177	CARV	CARVER	82-0166	880809	1000	2.5	.	.	5.10	.	.	.	.	.	.	.	.	.
178	CARV	CARVER	82-0166	880809	1000	3.0	25.5	4.70	2.15	70	.	.	.	.	.	.	340	.
179	CARV	CARVER	82-0166	880809	1000	3.5	24.4	.	.	.	.	.	.	.	.	.	.	.
180	CARV	CARVER	82-0166	880809	1000	4.0	21.3	0.20	.	.	.	.	.	.	.	.	.	.
181	CARV	CARVER	82-0166	880809	1000	4.5	17.9	.	.	.	.	.	.	.	.	.	.	.
182	CARV	CARVER	82-0166	880809	1000	5.0	14.7	0.20	.	.	.	.	.	.	.	.	.	.
183	CARV	CARVER	82-0166	880809	1000	5.5	11.8	.	.	.	.	.	.	.	.	.	.	.
184	CARV	CARVER	82-0166	880809	1000	6.0	9.7	0.20	.	150	.	.	.	.	.	.	475	.
185	CARV	CARVER	82-0166	880809	1000	6.5	8.7	.	.	.	.	.	.	.	.	.	.	.
186	CARV	CARVER	82-0166	880809	1000	7.0	8.2	0.20	.	.	.	.	.	.	.	.	.	.
187	CARV	CARVER	82-0166	880809	1000	7.5	7.4	.	.	.	.	.	.	.	.	.	.	.
188	CARV	CARVER	82-0166	880809	1000	8.0	7.1	0.20	.	.	.	.	.	.	.	.	.	.
189	CARV	CARVER	82-0166	880809	1000	8.5	6.6	.	.	.	.	.	.	.	.	.	.	.
190	CARV	CARVER	82-0166	880809	1000	9.0	6.5	0.20	.	470	.	.	.	.	.	.	575	.
191	CARV	CARVER	82-0166	880823	955	0.0	23.6	7.60	1100.00	60	25	7	1.650	0.050	72.0	0.70	325	8.72
192	CARV	CARVER	82-0166	880823	955	0.5	.	.	205.00	.	.	.	.	.	.	.	.	.
193	CARV	CARVER	82-0166	880823	955	1.0	23.4	6.70	47.00	.	.	.	.	.	.	.	.	.
194	CARV	CARVER	82-0166	880823	955	1.5	.	.	13.60	.	.	.	.	.	.	.	.	.
195	CARV	CARVER	82-0166	880823	955	2.0	23.3	6.20	3.45	.	.	.	.	.	.	.	.	.
196	CARV	CARVER	82-0166	880823	955	3.0	23.2	6.00	.	50	.	.	.	.	.	.	325	.
197	CARV	CARVER	82-0166	880823	955	3.5	23.0	.	.	.	.	.	.	.	.	.	.	.
198	CARV	CARVER	82-0166	880823	955	4.0	22.8	4.20	.	.	.	.	.	.	.	.	.	.
199	CARV	CARVER	82-0166	880823	955	4.5	18.5	.	.	.	.	.	.	.	.	.	.	.
200	CARV	CARVER	82-0166	880823	955	5.0	15.2	1.00	.	.	.	.	.	.	.	.	.	.
201	CARV	CARVER	82-0166	880823	955	5.5	12.5	.	.	.	.	.	.	.	.	.	.	.
202	CARV	CARVER	82-0166	880823	955	6.0	10.6	1.20	.	140	.	.	.	.	.	.	455	.
203	CARV	CARVER	82-0166	880823	955	6.5	9.1	.	.	.	.	.	.	.	.	.	.	.
204	CARV	CARVER	82-0166	880823	955	7.0	8.2	1.40	.	.	.	.	.	.	.	.	.	.
205	CARV	CARVER	82-0166	880823	955	7.5	7.6	.	.	.	.	.	.	.	.	.	.	.
206	CARV	CARVER	82-0166	880823	955	8.0	7.0	1.50	.	.	.	.	.	.	.	.	.	.
207	CARV	CARVER	82-0166	880823	955	8.5	6.8	.	.	.	.	.	.	.	.	.	.	.
208	CARV	CARVER	82-0166	880823	955	9.0	6.6	1.50	.	570	.	.	.	.	.	.	575	.
209	CARV	CARVER	82-0166	880906	935	0.0	19.3	7.20	930.00	45	20	33	1.380	0.050	37.0	0.80	360	8.98
210	CARV	CARVER	82-0166	880906	935	0.5	.	.	269.00	.	.	.	.	.	.	.	.	.
211	CARV	CARVER	82-0166	880906	935	1.0	19.2	7.20	84.50	.	.	.	.	.	.	.	.	.
212	CARV	CARVER	82-0166	880906	935	1.5	.	.	24.60	.	.	.	.	.	.	.	.	.
213	CARV	CARVER	82-0166	880906	935	2.0	19.1	6.60	10.50	.	.	.	.	.	.	.	.	.
214	CARV	CARVER	82-0166	880906	935	2.5	.	.	4.15	.	.	.	.	.	.	.	.	.
215	CARV	CARVER	82-0166	880906	935	3.0	19.1	6.50	1.58	40	.	.	.	.	.	.	360	.
216	CARV	CARVER	82-0166	880906	935	4.0	19.0	6.50	.	.	.	.	.	.	.	.	.	.
217	CARV	CARVER	82-0166	880906	935	4.5	18.8	.	.	.	.	.	.	.	.	.	.	.
218	CARV	CARVER	82-0166	880906	935	5.0	18.4	3.00	.	.	.	.	.	.	.	.	.	.
219	CARV	CARVER	82-0166	880906	935	5.5	15.5	.	.	.	.	.	.	.	.	.	.	.
220	CARV	CARVER	82-0166	880906	935	6.0	12.1	1.00	.	120	.	.	.	.	.	.	445	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
221	CARV	CARVER	82-0166	880906	935	6.5	9.9	.	.	.	.	.	.	.	.	.	.	.
222	CARV	CARVER	82-0166	880906	935	7.0	8.6	1.00	.	.	.	.	.	.	.	.	.	.
223	CARV	CARVER	82-0166	880906	935	7.5	7.6	.	.	.	.	.	.	.	.	.	.	.
224	CARV	CARVER	82-0166	880906	935	8.0	7.1	1.00	.	.	.	.	.	.	.	.	.	.
225	CARV	CARVER	82-0166	880906	935	8.5	6.8	.	.	.	.	.	.	.	.	.	.	.
226	CARV	CARVER	82-0166	880906	935	9.0	6.6	0.90	.	640	.	.	.	.	.	.	615	.
227	CARV	CARVER	82-0166	880921	950	0.0	16.6	5.60	156.00	55	30	8	1.390	0.100	11.0	1.50	350	.
228	CARV	CARVER	82-0166	880921	950	0.5	.	.	77.00	.	.	.	.	.	.	.	.	.
229	CARV	CARVER	82-0166	880921	950	1.0	16.6	5.60	34.50	.	.	.	.	.	.	.	.	.
230	CARV	CARVER	82-0166	880921	950	1.5	.	.	18.40	.	.	.	.	.	.	.	.	.
231	CARV	CARVER	82-0166	880921	950	2.0	16.6	5.60	9.40	.	.	.	.	.	.	.	.	.
232	CARV	CARVER	82-0166	880921	950	2.5	.	.	5.40	.	.	.	.	.	.	.	.	.
233	CARV	CARVER	82-0166	880921	950	3.0	16.6	5.60	3.10	70	.	.	.	.	.	.	350	.
234	CARV	CARVER	82-0166	880921	950	3.5	.	.	1.65	.	.	.	.	.	.	.	.	.
235	CARV	CARVER	82-0166	880921	950	4.0	16.6	5.60	0.99	.	.	.	.	.	.	.	.	.
236	CARV	CARVER	82-0166	880921	950	5.0	16.6	5.30	.	.	.	.	.	.	.	.	.	.
237	CARV	CARVER	82-0166	880921	950	6.0	16.0	2.70	.	70	.	.	.	.	.	.	350	.
238	CARV	CARVER	82-0166	880921	950	6.5	12.2	.	.	.	.	.	.	.	.	.	.	.
239	CARV	CARVER	82-0166	880921	950	7.0	9.7	0.70	.	.	.	.	.	.	.	.	.	.
240	CARV	CARVER	82-0166	880921	950	7.5	8.3	.	.	.	.	.	.	.	.	.	.	.
241	CARV	CARVER	82-0166	880921	950	8.0	7.6	1.00	.	.	.	.	.	.	.	.	.	.
242	CARV	CARVER	82-0166	880921	950	9.0	7.1	1.10	.	670	.	.	.	.	.	.	585	.
243	CARV	CARVER	82-0166	881004	940	0.0	13.8	8.80	850.00	65	30	12	1.460	0.100	44.0	1.30	360	8.26
244	CARV	CARVER	82-0166	881004	940	0.5	.	.	265.00	.	.	.	.	.	.	.	.	.
245	CARV	CARVER	82-0166	881004	940	1.0	13.9	8.70	83.00	.	.	.	.	.	.	.	.	.
246	CARV	CARVER	82-0166	881004	940	1.5	.	.	33.00	.	.	.	.	.	.	.	.	.
247	CARV	CARVER	82-0166	881004	940	2.0	13.9	8.60	15.00	.	.	.	.	.	.	.	.	.
248	CARV	CARVER	82-0166	881004	940	2.5	.	.	7.10	.	.	.	.	.	.	.	.	.
249	CARV	CARVER	82-0166	881004	940	3.0	13.9	8.60	3.40	70	.	.	.	.	.	.	355	8.28
250	CARV	CARVER	82-0166	881004	940	3.5	.	.	1.60	.	.	.	.	.	.	.	.	.
251	CARV	CARVER	82-0166	881004	940	4.0	13.9	8.60	.	.	.	.	.	.	.	.	.	.
252	CARV	CARVER	82-0166	881004	940	5.0	13.8	8.50	.	.	.	.	.	.	.	.	.	.
253	CARV	CARVER	82-0166	881004	940	6.0	13.7	8.40	.	60	.	.	.	.	.	.	360	8.28
254	CARV	CARVER	82-0166	881004	940	6.5	13.5	.	.	.	.	.	.	.	.	.	.	.
255	CARV	CARVER	82-0166	881004	940	7.0	12.8	3.20	.	.	.	.	.	.	.	.	.	.
256	CARV	CARVER	82-0166	881004	940	7.5	8.9	.	.	.	.	.	.	.	.	.	.	.
257	CARV	CARVER	82-0166	881004	940	8.0	7.6	1.10	.	.	.	.	.	.	.	.	.	.
258	CARV	CARVER	82-0166	881004	940	8.5	7.4	.	.	.	.	.	.	.	.	.	.	.
259	CARV	CARVER	82-0166	881004	940	9.0	7.1	1.00	.	740	.	.	.	.	.	.	565	7.10
260	CARV	CARVER	82-0166	881018	930	0.0	11.6	8.90	218.00	80	30	12	1.290	0.150	34.0	1.30	360	8.66
261	CARV	CARVER	82-0166	881018	930	0.5	.	.	72.00	.	.	.	.	.	.	.	.	.
262	CARV	CARVER	82-0166	881018	930	1.0	11.6	8.90	25.40	.	.	.	.	.	.	.	.	.
263	CARV	CARVER	82-0166	881018	930	1.5	.	.	12.00	.	.	.	.	.	.	.	.	.
264	CARV	CARVER	82-0166	881018	930	2.0	11.6	8.80	5.50	.	.	.	.	.	.	.	.	.
265	CARV	CARVER	82-0166	881018	930	2.5	.	.	2.80	.	.	.	.	.	.	.	.	.
266	CARV	CARVER	82-0166	881018	930	3.0	11.6	8.70	1.36	40	.	.	.	.	.	.	360	8.66
267	CARV	CARVER	82-0166	881018	930	4.0	11.6	8.90	.	.	.	.	.	.	.	.	.	.
268	CARV	CARVER	82-0166	881018	930	5.0	11.6	8.60	.	.	.	.	.	.	.	.	.	.
269	CARV	CARVER	82-0166	881018	930	6.0	11.5	8.70	.	.	.	.	.	.	.	.	355	8.67
270	CARV	CARVER	82-0166	881018	930	7.0	11.2	7.90	.	50	.	.	.	.	.	.	.	.
271	CARV	CARVER	82-0166	881018	930	7.5	9.6	.	.	.	.	.	.	.	.	.	.	.
272	CARV	CARVER	82-0166	881018	930	8.0	8.4	0.80	.	.	.	.	.	.	.	.	.	.
273	CARV	CARVER	82-0166	881018	930	8.5	7.2	.	.	.	.	.	.	.	.	.	.	.
274	CARV	CARVER	82-0166	881018	930	9.0	6.8	0.80	.	1180	.	.	.	.	.	.	595	7.02
275	CRSR	CRYSTAL(ROBINSDALE)	27-0034	871028	840	0.0	6.5	10.00	.	85	20	2	1.050	0.100	56.0	0.65	310	8.22

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
276	CRSR	CRYSTAL(ROBINSDALE)	27-0034	871028	840	1.0	6.5	9.40	.	.	.	.	.	.	.	.	.	.
277	CRSR	CRYSTAL(ROBINSDALE)	27-0034	871028	840	2.0	6.5	8.90	.	.	.	.	.	.	.	.	.	.
278	CRSR	CRYSTAL(ROBINSDALE)	27-0034	871028	840	3.0	6.5	8.90	.	.	.	.	.	.	.	.	.	.
279	CRSR	CRYSTAL(ROBINSDALE)	27-0034	871028	840	4.0	6.5	8.80	.	90	.	.	.	.	.	.	310	8.20
280	CRSR	CRYSTAL(ROBINSDALE)	27-0034	871028	840	5.0	6.5	8.90	.	.	.	.	.	.	.	.	.	.
281	CRSR	CRYSTAL(ROBINSDALE)	27-0034	871028	840	6.0	6.5	8.90	.	.	.	.	.	.	.	.	.	.
282	CRSR	CRYSTAL(ROBINSDALE)	27-0034	871028	840	7.0	6.5	8.90	.	90	.	.	.	.	.	.	310	8.23
283	CRSR	CRYSTAL(ROBINSDALE)	27-0034	871028	840	8.0	6.5	8.80	.	.	.	.	.	.	.	.	.	.
284	CRSR	CRYSTAL(ROBINSDALE)	27-0034	871028	840	9.0	6.5	8.80	.	.	.	.	.	.	.	.	.	.
285	CRSR	CRYSTAL(ROBINSDALE)	27-0034	871028	840	10.0	6.5	8.80	.	100	.	.	.	.	.	.	315	8.22
286	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880121	850	0.0	.	.	.	70	30	10	1.450	0.250	28.0	0.90	.	.
287	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880121	850	1.0	.	10.35	.	.	.	.	.	.	.	.	.	.
288	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880121	850	3.0	.	10.40	.	60	.	.	.	.	.	.	.	.
289	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880121	850	5.0	.	10.25	.	60	.	.	.	.	.	.	.	.
290	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880121	850	7.0	.	9.50	.	70	.	.	.	.	.	.	.	.
291	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880218	840	0.0	.	.	.	70	60	72	1.350	0.040	10.0	1.20	.	.
292	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880218	840	1.0	0.5	7.50	.	.	.	.	.	.	.	.	.	.
293	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880218	840	3.0	0.5	7.35	.	60	.	.	.	.	.	.	.	.
294	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880218	840	6.0	0.5	7.45	.	60	.	.	.	.	.	.	.	.
295	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880218	840	9.0	0.5	7.30	.	80	.	.	.	.	.	.	.	.
296	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880324	840	0.0	.	.	.	95	90	4	1.500	0.140	52.0	0.80	.	.
297	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880324	840	1.0	2.5	8.85	.	.	.	.	.	.	.	.	.	.
298	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880324	840	3.0	2.5	8.50	.	100	.	.	.	.	.	.	.	.
299	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880324	840	5.0	2.5	8.35	.	100	.	.	.	.	.	.	.	.
300	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880411	820	0.0	9.1	11.60	525.00	100	60	20	1.520	0.190	42.0	0.70	470	8.04
301	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880411	820	0.5	.	.	122.00	.	.	.	.	.	.	.	.	.
302	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880411	820	1.0	9.1	11.40	38.50	.	.	.	.	.	.	.	.	.
303	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880411	820	1.5	.	.	13.00	.	.	.	.	.	.	.	.	.
304	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880411	820	2.0	9.1	11.10	4.90	.	.	.	.	.	.	.	.	.
305	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880411	820	2.5	.	.	1.70	.	.	.	.	.	.	.	.	.
306	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880411	820	3.0	9.0	10.90	0.60	.	.	.	.	.	.	.	.	.
307	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880411	820	4.0	9.0	10.80	.	70	.	.	.	.	.	.	480	8.07
308	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880411	820	5.0	9.0	10.80	.	.	.	.	.	.	.	.	.	.
309	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880411	820	6.0	8.7	9.80	.	.	.	.	.	.	.	.	.	.
310	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880411	820	7.0	8.4	9.60	.	80	.	.	.	.	.	.	490	8.04
311	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880411	820	8.0	8.4	9.50	.	.	.	.	.	.	.	.	.	.
312	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880411	820	9.0	8.3	9.60	.	.	.	.	.	.	.	.	.	.
313	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880411	820	10.0	8.3	9.50	.	70	.	.	.	.	.	.	495	7.91
314	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880421	825	0.0	10.0	12.10	281.00	85	30	26	1.450	0.150	61.0	0.90	490	8.63
315	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880421	825	0.5	.	.	80.00	.	.	.	.	.	.	.	.	.
316	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880421	825	1.0	10.0	.	24.00	.	.	.	.	.	.	.	.	.
317	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880421	825	1.5	.	.	9.10	.	.	.	.	.	.	.	.	.
318	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880421	825	2.0	10.0	11.90	3.70	.	.	.	.	.	.	.	.	.
319	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880421	825	2.5	.	.	1.55	.	.	.	.	.	.	.	.	.
320	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880421	825	3.0	10.0	.	0.65	.	.	.	.	.	.	.	.	.
321	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880421	825	4.0	10.0	11.50	.	80	.	.	.	.	.	.	480	8.71
322	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880421	825	5.0	10.0	.	.	.	.	.	.	.	.	.	.	.
323	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880421	825	6.0	9.9	11.50	.	.	.	.	.	.	.	.	.	.
324	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880421	825	7.0	9.9	11.40	.	80	.	.	.	.	.	.	490	8.73
325	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880421	825	8.0	9.9	11.20	.	.	.	.	.	.	.	.	.	.
326	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880421	825	9.0	9.7	10.90	.	.	.	.	.	.	.	.	.	.
327	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880421	825	10.0	9.5	10.50	.	70	.	.	.	.	.	.	500	8.67
328	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880504	850	0.0	14.8	10.20	795.00	105	55	13	1.380	0.100	34.0	1.00	495	8.57
329	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880504	850	0.5	.	.	265.00	.	.	.	.	.	.	.	.	.
330	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880504	850	1.0	14.8	10.00	84.00	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
331	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880504	850	1.5	.	.	33.00	.	.	.	.	.	.	.	.	.
332	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880504	850	2.0	14.6	9.40	14.80	.	.	.	.	.	.	.	.	.
333	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880504	850	2.5	.	.	6.35	.	.	.	.	.	.	.	.	.
334	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880504	850	3.0	14.6	9.40	2.70	.	.	.	.	.	.	.	.	.
335	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880504	850	4.0	14.5	9.10	.	90	.	.	.	.	.	.	495	8.57
336	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880504	850	5.0	14.2	8.70	.	.	.	.	.	.	.	.	.	.
337	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880504	850	6.0	13.7	8.20	.	.	.	.	.	.	.	.	.	.
338	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880504	850	7.0	13.6	7.50	.	80	.	.	.	.	.	.	500	8.47
339	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880504	850	8.0	13.3	7.10	.	.	.	.	.	.	.	.	.	.
340	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880504	850	9.0	12.8	6.20	.	.	.	.	.	.	.	.	.	.
341	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880504	850	9.5	11.9	.	.	.	.	.	.	.	.	.	.	.
342	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880504	850	10.0	10.9	3.60	.	80	.	.	.	.	.	.	510	8.19
343	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880504	850	10.5	10.3	0.60	.	.	.	.	.	.	.	.	.	.
344	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880518	825	0.0	16.0	7.50	890.00	120	60	17	1.450	0.150	34.0	0.90	475	8.12
345	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880518	825	0.5	.	.	230.00	.	.	.	.	.	.	.	.	.
346	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880518	825	1.0	16.0	.	74.00	.	.	.	.	.	.	.	.	.
347	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880518	825	1.5	.	.	24.50	.	.	.	.	.	.	.	.	.
348	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880518	825	2.0	16.0	7.30	7.50	.	.	.	.	.	.	.	.	.
349	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880518	825	2.5	.	.	2.48	.	.	.	.	.	.	.	.	.
350	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880518	825	3.0	16.0	.	.	.	.	.	.	.	.	.	.	.
351	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880518	825	4.0	16.0	7.30	.	120	.	.	.	.	.	.	475	8.10
352	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880518	825	5.0	16.0	.	.	.	.	.	.	.	.	.	.	.
353	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880518	825	6.0	16.0	7.30	.	.	.	.	.	.	.	.	.	.
354	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880518	825	7.0	16.0	.	.	110	.	.	.	.	.	.	480	8.13
355	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880518	825	8.0	15.5	5.80	.	.	.	.	.	.	.	.	.	.
356	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880518	825	9.0	15.5	.	.	.	.	.	.	.	.	.	.	.
357	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880518	825	10.0	15.3	3.40	.	110	.	.	.	.	.	.	485	7.86
358	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880603	845	0.0	23.1	9.20	930.00	165	95	29	1.600	0.150	83.0	0.60	415	9.00
359	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880603	845	0.5	.	.	108.00	.	.	.	.	.	.	.	.	.
360	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880603	845	1.0	23.0	7.30	16.50	.	.	.	.	.	.	.	.	.
361	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880603	845	1.5	.	.	3.40	.	.	.	.	.	.	.	.	.
362	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880603	845	2.0	22.9	6.60	0.70	.	.	.	.	.	.	.	.	.
363	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880603	845	3.0	22.9	6.10	.	.	.	.	.	.	.	.	.	.
364	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880603	845	4.0	22.8	6.00	.	150	.	.	.	.	.	.	425	8.91
365	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880603	845	5.0	22.6	5.50	.	.	.	.	.	.	.	.	.	.
366	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880603	845	6.0	22.2	2.60	.	.	.	.	.	.	.	.	.	.
367	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880603	845	7.0	21.8	1.80	.	150	.	.	.	.	.	.	425	8.26
368	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880603	845	8.0	21.3	0.20	.	.	.	.	.	.	.	.	.	.
369	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880603	845	9.0	20.5	0.10	.	.	.	.	.	.	.	.	.	.
370	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880603	845	10.0	.	.	.	200	.	.	.	.	.	.	435	7.53
371	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880615	845	0.0	23.6	8.40	1150.00	290	200	106	1.680	0.050	120.0	0.30	.	9.15
372	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880615	845	0.5	.	.	32.00	.	.	.	.	.	.	.	.	.
373	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880615	845	1.0	23.6	8.00	1.35	.	.	.	.	.	.	.	.	.
374	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880615	845	2.0	23.6	7.40	.	.	.	.	.	.	.	.	.	.
375	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880615	845	3.0	23.7	7.60	.	.	.	.	.	.	.	.	.	.
376	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880615	845	4.0	23.6	7.30	.	290	.	.	.	.	.	.	.	.
377	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880615	845	5.0	23.6	5.60	.	.	.	.	.	.	.	.	.	.
378	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880615	845	6.0	23.3	3.40	.	.	.	.	.	.	.	.	.	.
379	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880615	845	7.0	23.0	2.20	.	280	.	.	.	.	.	.	.	.
380	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880615	845	8.0	22.9	1.50	.	.	.	.	.	.	.	.	.	.
381	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880615	845	9.0	22.6	0.10	.	.	.	.	.	.	.	.	.	.
382	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880615	845	10.0	22.0	0.10	.	320	.	.	.	.	.	.	.	.
383	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880629	815	0.0	24.1	6.80	70.00	460	15	83	3.780	0.050	170.0	0.20	.	9.49
384	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880629	815	0.5	.	.	0.30	.	.	.	.	.	.	.	.	.
385	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880629	815	1.0	24.2	6.60	.	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
386	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880629	815	2.0	24.2	6.50	.	.	.	.	.	.	.	.	.	.
387	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880629	815	3.0	24.2	6.40	.	.	.	.	.	.	.	.	.	.
388	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880629	815	4.0	24.2	6.40	.	460	.	.	.	.	.	.	.	.
389	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880629	815	5.0	24.2	6.20	.	.	.	.	.	.	.	.	.	.
390	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880629	815	6.0	24.1	6.20	.	.	.	.	.	.	.	.	.	.
391	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880629	815	7.0	24.1	6.20	.	460	.	.	.	.	.	.	.	.
392	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880629	815	8.0	24.1	6.10	.	.	.	.	.	.	.	.	.	.
393	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880629	815	9.0	24.1	5.80	.	480	.	.	.	.	.	.	.	.
394	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880713	900	0.0	24.9	5.90	1050.00	550	80	70	4.450	0.100	240.0	0.20	495	9.26
395	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880713	900	0.5	.	.	1.25	.	.	.	.	.	.	.	.	.
396	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880713	900	1.0	24.9	.	.	.	.	.	.	.	.	.	.	.
397	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880713	900	2.0	24.8	6.00	.	.	.	.	.	.	.	.	.	.
398	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880713	900	3.0	24.9	.	.	.	.	.	.	.	.	.	.	.
399	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880713	900	4.0	24.9	5.80	.	550	.	.	.	.	.	.	480	.
400	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880713	900	5.0	24.8	.	.	.	.	.	.	.	.	.	.	.
401	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880713	900	6.0	24.8	5.10	.	.	.	.	.	.	.	.	.	.
402	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880713	900	7.0	24.4	.	.	560	.	.	.	.	.	.	490	.
403	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880713	900	8.0	24.3	3.20	.	.	.	.	.	.	.	.	.	.
404	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880713	900	9.0	24.2	.	.	.	.	.	.	.	.	.	.	.
405	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880713	900	10.0	23.5	0.20	.	640	.	.	.	.	.	.	450	.
406	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880728	810	0.0	25.3	6.20	620.00	495	100	69	3.600	0.100	230.0	0.20	465	9.11
407	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880728	810	0.5	25.3	6.10	3.20	.	.	.	.	.	.	.	.	.
408	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880728	810	1.0	25.3	5.70	.	.	.	.	.	.	.	.	.	.
409	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880728	810	2.0	25.3	4.60	.	.	.	.	.	.	.	.	.	.
410	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880728	810	3.0	25.2	4.60	.	510	.	.	.	.	.	.	510	8.96
411	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880728	810	4.0	25.2	4.80	.	.	.	.	.	.	.	.	.	.
412	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880728	810	4.5	25.0	.	.	.	.	.	.	.	.	.	.	.
413	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880728	810	5.0	25.0	0.40	.	.	.	.	.	.	.	.	.	.
414	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880728	810	5.5	24.6	.	.	.	.	.	.	.	.	.	.	.
415	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880728	810	6.0	24.5	0.20	.	480	.	.	.	.	.	.	455	8.48
416	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880728	810	6.5	24.5	.	.	.	.	.	.	.	.	.	.	.
417	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880728	810	7.0	24.4	0.20	.	.	.	.	.	.	.	.	.	.
418	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880728	810	8.0	24.2	0.20	.	.	.	.	.	.	.	.	.	.
419	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880728	810	9.0	24.0	0.20	.	490	.	.	.	.	.	.	475	8.21
420	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880728	810	9.5	23.0	0.20	.	.	.	.	.	.	.	.	.	.
421	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880810	817	0.0	25.9	0.90	730.00	460	160	142	3.020	0.100	56.0	0.30	450	7.47
422	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880810	817	0.5	.	.	11.40	.	.	.	.	.	.	.	.	.
423	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880810	817	1.0	25.9	0.90	0.62	.	.	.	.	.	.	.	.	.
424	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880810	817	2.0	25.9	0.90	.	.	.	.	.	.	.	.	.	.
425	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880810	817	3.0	25.9	0.90	.	.	.	.	.	.	.	.	.	.
426	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880810	817	4.0	25.9	1.00	.	430	.	.	.	.	.	.	455	7.45
427	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880810	817	5.0	25.9	1.00	.	.	.	.	.	.	.	.	.	.
428	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880810	817	6.0	25.9	0.90	.	.	.	.	.	.	.	.	.	.
429	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880810	817	7.0	25.7	0.10	.	480	.	.	.	.	.	.	455	.
430	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880810	817	8.0	25.7	0.10	.	.	.	.	.	.	.	.	.	.
431	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880810	817	9.0	25.6	0.10	.	.	.	.	.	.	.	.	.	.
432	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880810	817	10.0	25.3	0.10	.	640	.	.	.	.	.	.	470	7.30
433	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880810	817	10.5	24.1	0.10	.	.	.	.	.	.	.	.	.	.
434	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880824	825	0.0	23.3	3.60	520.00	385	80	86	2.920	0.350	160.0	0.30	480	7.84
435	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880824	825	0.5	.	.	4.30	.	.	.	.	.	.	.	.	.
436	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880824	825	1.0	23.4	3.50	.	.	.	.	.	.	.	.	.	.
437	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880824	825	2.0	23.4	3.40	.	.	.	.	.	.	.	.	.	.
438	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880824	825	3.0	23.4	3.40	.	390	.	.	.	.	.	.	480	7.68
439	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880824	825	4.0	23.4	3.30	.	.	.	.	.	.	.	.	.	.
440	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880824	825	5.0	23.4	3.20	.	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
441	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880824	825	6.0	23.3	3.20	.	350	.	.	.	.	.	.	480	7.74
442	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880824	825	7.0	23.3	3.40	.	.	.	.	.	.	.	.	.	.
443	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880824	825	8.0	23.2	3.40	.	.	.	.	.	.	.	.	.	.
444	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880824	825	9.0	23.1	3.10	.	400	.	.	.	.	.	.	475	7.74
445	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880824	825	10.0	23.0	0.80	.	.	.	.	.	.	.	.	.	.
446	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880907	825	0.0	19.2	4.90	530.00	320	65	53	2.620	0.400	120.0	0.30	475	7.72
447	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880907	825	0.5	.	.	9.50	.	.	.	.	.	.	.	.	.
448	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880907	825	1.0	19.2	4.90	0.45	.	.	.	.	.	.	.	.	.
449	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880907	825	2.0	19.2	4.90	.	.	.	.	.	.	.	.	.	.
450	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880907	825	3.0	19.2	4.90	.	.	.	.	.	.	.	.	.	.
451	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880907	825	4.0	19.2	4.90	.	340	.	.	.	.	.	.	480	.
452	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880907	825	5.0	19.2	4.80	.	.	.	.	.	.	.	.	.	.
453	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880907	825	6.0	19.2	4.30	.	.	.	.	.	.	.	.	.	.
454	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880907	825	7.0	19.0	3.70	.	320	.	.	.	.	.	.	480	.
455	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880907	825	8.0	19.0	3.70	.	.	.	.	.	.	.	.	.	.
456	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880907	825	9.0	19.1	0.70	.	.	.	.	.	.	.	.	.	.
457	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880907	825	10.0	.	.	.	370	.	.	.	.	.	.	480	.
458	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880922	815	0.0	17.2	6.10	71.00	400	130	193	2.620	0.550	98.0	0.25	460	7.64
459	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880922	815	0.5	.	.	0.95	.	.	.	.	.	.	.	.	.
460	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880922	815	1.0	17.2	6.00	.	.	.	.	.	.	.	.	.	.
461	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880922	815	2.0	17.1	5.80	.	.	.	.	.	.	.	.	.	.
462	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880922	815	3.0	17.1	5.80	.	340	.	.	.	.	.	.	450	7.68
463	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880922	815	4.0	17.1	5.80	.	.	.	.	.	.	.	.	.	.
464	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880922	815	5.0	17.1	5.70	.	.	.	.	.	.	.	.	.	.
465	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880922	815	6.0	17.1	5.70	.	350	.	.	.	.	.	.	450	7.65
466	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880922	815	7.0	17.0	5.50	.	.	.	.	.	.	.	.	.	.
467	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880922	815	8.0	17.0	5.40	.	.	.	.	.	.	.	.	.	.
468	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880922	815	9.0	16.9	4.70	.	410	.	.	.	.	.	.	450	7.62
469	CRSR	CRYSTAL(ROBINSDALE)	27-0034	880922	815	9.5	16.9	3.60	.	.	.	.	.	.	.	.	.	.
470	CRSR	CRYSTAL(ROBINSDALE)	27-0034	881005	825	0.0	13.1	7.10	290.00	405	250	246	2.410	0.800	110.0	0.25	465	7.76
471	CRSR	CRYSTAL(ROBINSDALE)	27-0034	881005	825	0.5	.	.	0.85	.	.	.	.	.	.	.	.	.
472	CRSR	CRYSTAL(ROBINSDALE)	27-0034	881005	825	1.0	13.1	6.80	.	.	.	.	.	.	.	.	.	.
473	CRSR	CRYSTAL(ROBINSDALE)	27-0034	881005	825	2.0	13.1	6.80	.	.	.	.	.	.	.	.	.	.
474	CRSR	CRYSTAL(ROBINSDALE)	27-0034	881005	825	3.0	13.1	6.70	.	.	.	.	.	.	.	.	.	.
475	CRSR	CRYSTAL(ROBINSDALE)	27-0034	881005	825	4.0	13.1	6.70	.	400	.	.	.	.	.	.	440	7.78
476	CRSR	CRYSTAL(ROBINSDALE)	27-0034	881005	825	5.0	13.1	6.80	.	.	.	.	.	.	.	.	.	.
477	CRSR	CRYSTAL(ROBINSDALE)	27-0034	881005	825	6.0	13.1	6.60	.	.	.	.	.	.	.	.	.	.
478	CRSR	CRYSTAL(ROBINSDALE)	27-0034	881005	825	7.0	13.0	6.50	.	410	.	.	.	.	.	.	470	7.78
479	CRSR	CRYSTAL(ROBINSDALE)	27-0034	881005	825	8.0	12.9	6.60	.	.	.	.	.	.	.	.	.	.
480	CRSR	CRYSTAL(ROBINSDALE)	27-0034	881005	825	9.0	12.8	6.70	.	.	.	.	.	.	.	.	.	.
481	CRSR	CRYSTAL(ROBINSDALE)	27-0034	881005	825	10.0	12.7	6.50	.	440	.	.	.	.	.	.	450	7.78
482	CRSR	CRYSTAL(ROBINSDALE)	27-0034	881019	830	0.0	10.8	8.10	149.00	355	230	271	1.990	1.150	91.0	0.25	465	7.87
483	CRSR	CRYSTAL(ROBINSDALE)	27-0034	881019	830	0.5	.	.	1.58	.	.	.	.	.	.	.	.	.
484	CRSR	CRYSTAL(ROBINSDALE)	27-0034	881019	830	1.0	10.8	7.90	0.09	.	.	.	.	.	.	.	.	.
485	CRSR	CRYSTAL(ROBINSDALE)	27-0034	881019	830	2.0	10.9	7.80	.	.	.	.	.	.	.	.	.	.
486	CRSR	CRYSTAL(ROBINSDALE)	27-0034	881019	830	3.0	10.9	7.80	.	310	.	.	.	.	.	.	450	7.87
487	CRSR	CRYSTAL(ROBINSDALE)	27-0034	881019	830	4.0	10.9	7.80	.	.	.	.	.	.	.	.	.	.
488	CRSR	CRYSTAL(ROBINSDALE)	27-0034	881019	830	5.0	10.8	7.70	.	.	.	.	.	.	.	.	.	.
489	CRSR	CRYSTAL(ROBINSDALE)	27-0034	881019	830	6.0	10.8	7.70	.	350	.	.	.	.	.	.	460	7.87
490	CRSR	CRYSTAL(ROBINSDALE)	27-0034	881019	830	7.0	10.8	7.70	.	.	.	.	.	.	.	.	.	.
491	CRSR	CRYSTAL(ROBINSDALE)	27-0034	881019	830	8.0	10.8	7.70	.	.	.	.	.	.	.	.	.	.
492	CRSR	CRYSTAL(ROBINSDALE)	27-0034	881019	830	9.0	10.7	7.70	.	300	.	.	.	.	.	.	460	7.87
493	ELMO	ELMO	82-0106	871028	955	0.0	8.0	8.70	.	20	10	2	0.580	0.200	7.9	3.70	315	8.12
494	ELMO	ELMO	82-0106	871028	955	2.0	8.0	8.60	.	.	.	.	.	.	.	.	.	.
495	ELMO	ELMO	82-0106	871028	955	4.0	8.0	8.40	.	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
496	ELMO	ELMO	82-0106	871028	955	6.0	8.0	8.40	.	.	.	.	.	.	.	.	.	.
497	ELMO	ELMO	82-0106	871028	955	8.0	8.0	8.40	.	20	.	.	.	.	.	.	315	8.11
498	ELMO	ELMO	82-0106	871028	955	10.0	8.0	8.30	.	.	.	.	.	.	.	.	.	.
499	ELMO	ELMO	82-0106	871028	955	12.0	8.0	8.30	.	.	.	.	.	.	.	.	.	.
500	ELMO	ELMO	82-0106	871028	955	14.0	8.0	8.10	.	.	.	.	.	.	.	.	.	.
501	ELMO	ELMO	82-0106	871028	955	16.0	7.5	7.30	.	20	.	.	.	.	.	.	315	8.07
502	ELMO	ELMO	82-0106	871028	955	17.0	7.0	4.60	.	.	.	.	.	.	.	.	.	.
503	ELMO	ELMO	82-0106	871028	955	18.0	6.5	1.40	.	.	.	.	.	.	.	.	.	.
504	ELMO	ELMO	82-0106	871028	955	19.0	5.5	1.10	.	.	.	.	.	.	.	.	.	.
505	ELMO	ELMO	82-0106	871028	955	20.0	5.5	0.90	.	.	.	.	.	.	.	.	.	.
506	ELMO	ELMO	82-0106	871028	955	22.0	5.5	0.80	.	.	.	.	.	.	.	.	.	.
507	ELMO	ELMO	82-0106	871028	955	24.0	5.5	0.70	.	60	.	.	.	.	.	.	345	7.52
508	ELMO	ELMO	82-0106	871028	955	26.0	5.5	0.60	.	.	.	.	.	.	.	.	.	.
509	ELMO	ELMO	82-0106	871028	955	28.0	5.5	0.50	.	.	.	.	.	.	.	.	.	.
510	ELMO	ELMO	82-0106	871028	955	30.0	5.5	0.50	.	.	.	.	.	.	.	.	.	.
511	ELMO	ELMO	82-0106	871028	955	32.0	.	.	.	70	.	.	.	.	.	.	345	7.50
512	ELMO	ELMO	82-0106	880121	1000	0.0	.	.	.	20	15	5	0.500	0.250	5.2	2.80	.	.
513	ELMO	ELMO	82-0106	880121	1000	1.0	2.0	10.20	.	.	.	.	.	.	.	.	.	.
514	ELMO	ELMO	82-0106	880121	1000	8.0	2.5	9.70	.	20	.	.	.	.	.	.	.	.
515	ELMO	ELMO	82-0106	880121	1000	16.0	2.5	9.45	.	20	.	.	.	.	.	.	.	.
516	ELMO	ELMO	82-0106	880121	1000	24.0	2.5	9.15	.	20	.	.	.	.	.	.	.	.
517	ELMO	ELMO	82-0106	880121	1000	32.0	3.0	8.85	.	20	.	.	.	.	.	.	.	.
518	ELMO	ELMO	82-0106	880218	945	0.0	.	.	.	20	30	22	0.450	0.340	3.3	4.40	.	.
519	ELMO	ELMO	82-0106	880218	945	1.0	2.0	9.20	.	.	.	.	.	.	.	.	.	.
520	ELMO	ELMO	82-0106	880218	945	8.0	2.5	8.25	.	20	.	.	.	.	.	.	.	.
521	ELMO	ELMO	82-0106	880218	945	16.0	2.5	8.25	.	10	.	.	.	.	.	.	.	.
522	ELMO	ELMO	82-0106	880218	945	24.0	2.5	8.00	.	10	.	.	.	.	.	.	.	.
523	ELMO	ELMO	82-0106	880218	945	32.0	2.5	6.35	.	20	.	.	.	.	.	.	.	.
524	ELMO	ELMO	82-0106	880324	930	0.0	.	.	.	35	45	3	0.450	0.290	6.6	5.10	.	.
525	ELMO	ELMO	82-0106	880324	930	1.0	3.5	10.25	.	.	.	.	.	.	.	.	.	.
526	ELMO	ELMO	82-0106	880324	930	8.0	3.5	9.30	.	20	.	.	.	.	.	.	.	.
527	ELMO	ELMO	82-0106	880324	930	16.0	3.5	9.20	.	10	.	.	.	.	.	.	.	.
528	ELMO	ELMO	82-0106	880324	930	24.0	3.0	8.45	.	20	.	.	.	.	.	.	.	.
529	ELMO	ELMO	82-0106	880324	930	32.0	3.0	5.25	.	20	.	.	.	.	.	.	.	.
530	ELMO	ELMO	82-0106	880411	1000	0.0	6.3	10.70	1160.00	25	25	5	0.580	0.290	6.0	3.90	350	7.91
531	ELMO	ELMO	82-0106	880411	1000	0.5	.	.	830.00	.	.	.	.	.	.	.	.	.
532	ELMO	ELMO	82-0106	880411	1000	1.0	.	.	565.00	.	.	.	.	.	.	.	.	.
533	ELMO	ELMO	82-0106	880411	1000	1.5	.	.	420.00	.	.	.	.	.	.	.	.	.
534	ELMO	ELMO	82-0106	880411	1000	2.0	6.0	10.70	330.00	.	.	.	.	.	.	.	.	.
535	ELMO	ELMO	82-0106	880411	1000	2.5	.	.	243.00	.	.	.	.	.	.	.	.	.
536	ELMO	ELMO	82-0106	880411	1000	3.0	.	.	178.00	.	.	.	.	.	.	.	.	.
537	ELMO	ELMO	82-0106	880411	1000	3.5	.	.	130.00	.	.	.	.	.	.	.	.	.
538	ELMO	ELMO	82-0106	880411	1000	4.0	5.8	10.50	104.00	.	.	.	.	.	.	.	.	.
539	ELMO	ELMO	82-0106	880411	1000	4.5	.	.	76.00	.	.	.	.	.	.	.	.	.
540	ELMO	ELMO	82-0106	880411	1000	5.0	.	.	59.00	.	.	.	.	.	.	.	.	.
541	ELMO	ELMO	82-0106	880411	1000	5.5	.	.	45.00	.	.	.	.	.	.	.	.	.
542	ELMO	ELMO	82-0106	880411	1000	6.0	5.7	10.60	35.00	.	.	.	.	.	.	.	.	.
543	ELMO	ELMO	82-0106	880411	1000	6.5	.	.	26.80	.	.	.	.	.	.	.	.	.
544	ELMO	ELMO	82-0106	880411	1000	7.0	.	.	20.00	.	.	.	.	.	.	.	.	.
545	ELMO	ELMO	82-0106	880411	1000	7.5	.	.	17.50	.	.	.	.	.	.	.	.	.
546	ELMO	ELMO	82-0106	880411	1000	8.0	5.6	10.50	13.70	20	.	.	.	.	.	.	.	.
547	ELMO	ELMO	82-0106	880411	1000	10.0	5.4	10.00	.	.	.	.	.	.	.	.	.	.
548	ELMO	ELMO	82-0106	880411	1000	12.0	5.2	10.10	.	.	.	.	.	.	.	.	.	.
549	ELMO	ELMO	82-0106	880411	1000	14.0	5.1	10.10	.	.	.	.	.	.	.	.	.	.
550	ELMO	ELMO	82-0106	880411	1000	16.0	5.0	10.10	.	40	.	.	.	.	.	.	350	7.81

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
551	ELMO	ELMO	82-0106	880411	1000	18.0	5.0	9.80	.	.	.	.	.	.	.	.	.	.
552	ELMO	ELMO	82-0106	880411	1000	20.0	4.9	9.20	.	.	.	.	.	.	.	.	.	.
553	ELMO	ELMO	82-0106	880411	1000	22.0	4.8	9.10	.	.	.	.	.	.	.	.	.	.
554	ELMO	ELMO	82-0106	880411	1000	24.0	4.8	9.10	.	50	.	.	.	.	.	.	350	7.77
555	ELMO	ELMO	82-0106	880411	1000	26.0	4.7	8.80	.	.	.	.	.	.	.	.	.	.
556	ELMO	ELMO	82-0106	880411	1000	28.0	4.6	8.70	.	.	.	.	.	.	.	.	.	.
557	ELMO	ELMO	82-0106	880411	1000	30.0	4.6	8.70	.	.	.	.	.	.	.	.	.	.
558	ELMO	ELMO	82-0106	880411	1000	32.0	.	.	.	30	.	.	.	.	.	.	350	7.69
559	ELMO	ELMO	82-0106	880421	1005	0.0	7.0	11.80	665.00	25	30	10	0.650	0.300	11.0	3.00	335	8.21
560	ELMO	ELMO	82-0106	880421	1005	0.5	.	.	390.00	.	.	.	.	.	.	.	.	.
561	ELMO	ELMO	82-0106	880421	1005	1.0	.	.	224.00	.	.	.	.	.	.	.	.	.
562	ELMO	ELMO	82-0106	880421	1005	1.5	.	.	170.00	.	.	.	.	.	.	.	.	.
563	ELMO	ELMO	82-0106	880421	1005	2.0	7.0	.	132.00	.	.	.	.	.	.	.	.	.
564	ELMO	ELMO	82-0106	880421	1005	2.5	.	.	110.00	.	.	.	.	.	.	.	.	.
565	ELMO	ELMO	82-0106	880421	1005	3.0	.	.	81.50	.	.	.	.	.	.	.	.	.
566	ELMO	ELMO	82-0106	880421	1005	3.5	.	.	66.00	.	.	.	.	.	.	.	.	.
567	ELMO	ELMO	82-0106	880421	1005	4.0	6.9	11.70	51.00	.	.	.	.	.	.	.	.	.
568	ELMO	ELMO	82-0106	880421	1005	4.5	.	.	38.50	.	.	.	.	.	.	.	.	.
569	ELMO	ELMO	82-0106	880421	1005	5.0	.	.	30.50	.	.	.	.	.	.	.	.	.
570	ELMO	ELMO	82-0106	880421	1005	5.5	.	.	23.20	.	.	.	.	.	.	.	.	.
571	ELMO	ELMO	82-0106	880421	1005	6.0	6.9	.	17.50	.	.	.	.	.	.	.	.	.
572	ELMO	ELMO	82-0106	880421	1005	6.5	.	.	13.80	.	.	.	.	.	.	.	.	.
573	ELMO	ELMO	82-0106	880421	1005	7.0	.	.	10.90	.	.	.	.	.	.	.	.	.
574	ELMO	ELMO	82-0106	880421	1005	7.5	.	.	9.30	.	.	.	.	.	.	.	.	.
575	ELMO	ELMO	82-0106	880421	1005	8.0	6.8	11.20	7.00	50	.	.	.	.	.	.	345	8.14
576	ELMO	ELMO	82-0106	880421	1005	8.5	.	.	5.50	.	.	.	.	.	.	.	.	.
577	ELMO	ELMO	82-0106	880421	1005	10.0	6.8	.	.	.	.	.	.	.	.	.	.	.
578	ELMO	ELMO	82-0106	880421	1005	12.0	6.7	11.10	.	.	.	.	.	.	.	.	.	.
579	ELMO	ELMO	82-0106	880421	1005	14.0	6.7	.	.	.	.	.	.	.	.	.	.	.
580	ELMO	ELMO	82-0106	880421	1005	16.0	6.6	10.80	.	50	.	.	.	.	.	.	345	8.08
581	ELMO	ELMO	82-0106	880421	1005	18.0	6.5	.	.	.	.	.	.	.	.	.	.	.
582	ELMO	ELMO	82-0106	880421	1005	20.0	6.1	10.50	.	.	.	.	.	.	.	.	.	.
583	ELMO	ELMO	82-0106	880421	1005	22.0	5.7	9.30	.	.	.	.	.	.	.	.	.	.
584	ELMO	ELMO	82-0106	880421	1005	24.0	5.4	8.70	.	10	.	.	.	.	.	.	345	7.92
585	ELMO	ELMO	82-0106	880421	1005	26.0	5.3	.	.	.	.	.	.	.	.	.	.	.
586	ELMO	ELMO	82-0106	880421	1005	28.0	5.2	8.40	.	.	.	.	.	.	.	.	.	.
587	ELMO	ELMO	82-0106	880421	1005	30.0	5.1	8.30	.	.	.	.	.	.	.	.	.	.
588	ELMO	ELMO	82-0106	880421	1005	32.0	.	.	.	20	.	.	.	.	.	.	355	7.78
589	ELMO	ELMO	82-0106	880504	1040	0.0	13.7	11.10	1330.00	40	15	8	0.600	0.250	3.9	4.60	340	8.34
590	ELMO	ELMO	82-0106	880504	1040	0.5	.	.	920.00	.	.	.	.	.	.	.	.	.
591	ELMO	ELMO	82-0106	880504	1040	1.0	13.5	.	690.00	.	.	.	.	.	.	.	.	.
592	ELMO	ELMO	82-0106	880504	1040	1.5	.	.	490.00	.	.	.	.	.	.	.	.	.
593	ELMO	ELMO	82-0106	880504	1040	2.0	13.1	11.30	410.00	.	.	.	.	.	.	.	.	.
594	ELMO	ELMO	82-0106	880504	1040	2.5	12.8	.	315.00	.	.	.	.	.	.	.	.	.
595	ELMO	ELMO	82-0106	880504	1040	3.0	11.7	12.10	255.00	.	.	.	.	.	.	.	.	.
596	ELMO	ELMO	82-0106	880504	1040	3.5	.	.	200.00	.	.	.	.	.	.	.	.	.
597	ELMO	ELMO	82-0106	880504	1040	4.0	11.0	12.10	157.00	.	.	.	.	.	.	.	.	.
598	ELMO	ELMO	82-0106	880504	1040	4.5	.	.	125.00	.	.	.	.	.	.	.	.	.
599	ELMO	ELMO	82-0106	880504	1040	5.0	10.4	.	102.00	.	.	.	.	.	.	.	.	.
600	ELMO	ELMO	82-0106	880504	1040	5.5	.	.	81.50	.	.	.	.	.	.	.	.	.
601	ELMO	ELMO	82-0106	880504	1040	6.0	9.9	11.80	64.50	.	.	.	.	.	.	.	.	.
602	ELMO	ELMO	82-0106	880504	1040	6.5	.	.	52.50	.	.	.	.	.	.	.	.	.
603	ELMO	ELMO	82-0106	880504	1040	7.0	9.4	.	41.50	.	.	.	.	.	.	.	.	.
604	ELMO	ELMO	82-0106	880504	1040	7.5	.	.	34.00	.	.	.	.	.	.	.	.	.
605	ELMO	ELMO	82-0106	880504	1040	8.0	8.8	11.50	28.00	10	.	.	.	.	.	.	340	8.28

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
606	ELMO	ELMO	82-0106	880504	1040	8.5	.	.	22.50	.	.	.	.	.	.	.	.	.
607	ELMO	ELMO	82-0106	880504	1040	9.0	8.2	.	18.50	.	.	.	.	.	.	.	.	.
608	ELMO	ELMO	82-0106	880504	1040	9.5	.	.	15.30	.	.	.	.	.	.	.	.	.
609	ELMO	ELMO	82-0106	880504	1040	10.0	7.8	11.30	.	.	.	.	.	.	.	.	.	.
610	ELMO	ELMO	82-0106	880504	1040	11.0	7.6	.	.	.	.	.	.	.	.	.	.	.
611	ELMO	ELMO	82-0106	880504	1040	12.0	7.3	10.30	.	.	.	.	.	.	.	.	.	.
612	ELMO	ELMO	82-0106	880504	1040	14.0	7.0	.	.	.	.	.	.	.	.	.	.	.
613	ELMO	ELMO	82-0106	880504	1040	16.0	6.6	9.80	.	10	.	.	.	.	.	.	340	8.03
614	ELMO	ELMO	82-0106	880504	1040	18.0	6.4	.	.	.	.	.	.	.	.	.	.	.
615	ELMO	ELMO	82-0106	880504	1040	20.0	6.2	9.00	.	.	.	.	.	.	.	.	.	.
616	ELMO	ELMO	82-0106	880504	1040	22.0	6.1	.	.	.	.	.	.	.	.	.	.	.
617	ELMO	ELMO	82-0106	880504	1040	24.0	5.9	8.10	.	10	.	.	.	.	.	.	355	7.82
618	ELMO	ELMO	82-0106	880504	1040	26.0	5.8	.	.	.	.	.	.	.	.	.	.	.
619	ELMO	ELMO	82-0106	880504	1040	28.0	5.7	7.80	.	.	.	.	.	.	.	.	.	.
620	ELMO	ELMO	82-0106	880504	1040	30.0	5.6	7.60	.	.	.	.	.	.	.	.	.	.
621	ELMO	ELMO	82-0106	880504	1040	32.0	.	.	.	10	.	.	.	.	.	.	355	7.73
622	ELMO	ELMO	82-0106	880518	950	0.0	15.0	9.90	1380.00	20	20	10	0.580	0.300	4.9	3.80	345	8.47
623	ELMO	ELMO	82-0106	880518	950	0.5	.	.	970.00	.	.	.	.	.	.	.	.	.
624	ELMO	ELMO	82-0106	880518	950	1.0	.	.	730.00	.	.	.	.	.	.	.	.	.
625	ELMO	ELMO	82-0106	880518	950	1.5	.	.	520.00	.	.	.	.	.	.	.	.	.
626	ELMO	ELMO	82-0106	880518	950	2.0	15.0	10.00	330.00	.	.	.	.	.	.	.	.	.
627	ELMO	ELMO	82-0106	880518	950	2.5	.	.	280.00	.	.	.	.	.	.	.	.	.
628	ELMO	ELMO	82-0106	880518	950	3.0	.	.	210.00	.	.	.	.	.	.	.	.	.
629	ELMO	ELMO	82-0106	880518	950	3.5	.	.	167.00	.	.	.	.	.	.	.	.	.
630	ELMO	ELMO	82-0106	880518	950	4.0	14.8	9.90	134.00	.	.	.	.	.	.	.	.	.
631	ELMO	ELMO	82-0106	880518	950	4.5	.	.	99.00	.	.	.	.	.	.	.	.	.
632	ELMO	ELMO	82-0106	880518	950	5.0	.	.	76.00	.	.	.	.	.	.	.	.	.
633	ELMO	ELMO	82-0106	880518	950	5.5	.	.	56.00	.	.	.	.	.	.	.	.	.
634	ELMO	ELMO	82-0106	880518	950	6.0	14.0	9.40	44.50	.	.	.	.	.	.	.	.	.
635	ELMO	ELMO	82-0106	880518	950	6.5	.	.	33.00	.	.	.	.	.	.	.	.	.
636	ELMO	ELMO	82-0106	880518	950	7.0	13.6	.	24.50	.	.	.	.	.	.	.	.	.
637	ELMO	ELMO	82-0106	880518	950	7.5	12.9	.	19.00	.	.	.	.	.	.	.	.	.
638	ELMO	ELMO	82-0106	880518	950	8.0	12.0	9.10	16.00	40	.	.	.	.	.	.	345	8.42
639	ELMO	ELMO	82-0106	880518	950	8.5	10.3	.	13.50	.	.	.	.	.	.	.	.	.
640	ELMO	ELMO	82-0106	880518	950	9.0	9.5	.	10.20	.	.	.	.	.	.	.	.	.
641	ELMO	ELMO	82-0106	880518	950	9.5	8.9	.	.	.	.	.	.	.	.	.	.	.
642	ELMO	ELMO	82-0106	880518	950	10.0	8.4	9.20	.	.	.	.	.	.	.	.	.	.
643	ELMO	ELMO	82-0106	880518	950	11.0	8.0	.	.	.	.	.	.	.	.	.	.	.
644	ELMO	ELMO	82-0106	880518	950	12.0	7.4	9.30	.	.	.	.	.	.	.	.	.	.
645	ELMO	ELMO	82-0106	880518	950	14.0	7.1	.	.	.	.	.	.	.	.	.	.	.
646	ELMO	ELMO	82-0106	880518	950	16.0	6.8	8.10	.	10	.	.	.	.	.	.	355	7.98
647	ELMO	ELMO	82-0106	880518	950	18.0	6.6	.	.	.	.	.	.	.	.	.	.	.
648	ELMO	ELMO	82-0106	880518	950	20.0	6.4	7.40	.	.	.	.	.	.	.	.	.	.
649	ELMO	ELMO	82-0106	880518	950	22.0	6.2	.	.	.	.	.	.	.	.	.	.	.
650	ELMO	ELMO	82-0106	880518	950	24.0	6.0	6.00	.	10	.	.	.	.	.	.	355	7.81
651	ELMO	ELMO	82-0106	880518	950	26.0	5.9	.	.	.	.	.	.	.	.	.	.	.
652	ELMO	ELMO	82-0106	880518	950	28.0	5.9	5.40	.	.	.	.	.	.	.	.	.	.
653	ELMO	ELMO	82-0106	880518	950	30.0	5.9	4.80	.	.	.	.	.	.	.	.	.	.
654	ELMO	ELMO	82-0106	880518	950	32.0	.	.	.	40	.	.	.	.	.	.	355	7.68
655	ELMO	ELMO	82-0106	880603	1020	0.0	22.9	9.10	530.00	15	.	8	0.620	0.200	3.3	5.20	330	8.55
656	ELMO	ELMO	82-0106	880603	1020	0.5	.	.	355.00	.	.	.	.	.	.	.	.	.
657	ELMO	ELMO	82-0106	880603	1020	1.0	22.9	.	285.00	.	.	.	.	.	.	.	.	.
658	ELMO	ELMO	82-0106	880603	1020	1.5	.	.	232.00	.	.	.	.	.	.	.	.	.
659	ELMO	ELMO	82-0106	880603	1020	2.0	22.9	8.90	190.00	.	.	.	.	.	.	.	.	.
660	ELMO	ELMO	82-0106	880603	1020	2.5	.	.	152.00	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
661	ELMO	ELMO	82-0106	880603	1020	3.0	22.7	.	124.00	.	.	.	.	.	.	.	.	.
662	ELMO	ELMO	82-0106	880603	1020	3.5	.	.	98.00	.	.	.	.	.	.	.	.	.
663	ELMO	ELMO	82-0106	880603	1020	4.0	22.4	8.00	78.00	.	.	.	.	.	.	.	.	.
664	ELMO	ELMO	82-0106	880603	1020	4.5	21.1	.	62.50	.	.	.	.	.	.	.	.	.
665	ELMO	ELMO	82-0106	880603	1020	5.0	20.2	.	50.00	.	.	.	.	.	.	.	.	.
666	ELMO	ELMO	82-0106	880603	1020	5.5	19.4	.	40.50	.	.	.	.	.	.	.	.	.
667	ELMO	ELMO	82-0106	880603	1020	6.0	17.9	8.10	33.00	.	.	.	.	.	.	.	.	.
668	ELMO	ELMO	82-0106	880603	1020	6.5	15.8	.	26.00	.	.	.	.	.	.	.	.	.
669	ELMO	ELMO	82-0106	880603	1020	7.0	14.9	8.10	20.60	.	.	.	.	.	.	.	.	.
670	ELMO	ELMO	82-0106	880603	1020	7.5	13.6	.	16.60	.	.	.	.	.	.	.	.	.
671	ELMO	ELMO	82-0106	880603	1020	8.0	11.4	7.80	13.60	10	.	.	.	.	.	.	335	8.31
672	ELMO	ELMO	82-0106	880603	1020	8.5	10.0	.	11.10	.	.	.	.	.	.	.	.	.
673	ELMO	ELMO	82-0106	880603	1020	9.0	9.4	7.40	9.50	.	.	.	.	.	.	.	.	.
674	ELMO	ELMO	82-0106	880603	1020	9.5	.	.	7.95	.	.	.	.	.	.	.	.	.
675	ELMO	ELMO	82-0106	880603	1020	10.0	8.5	7.80	.	.	.	.	.	.	.	.	.	.
676	ELMO	ELMO	82-0106	880603	1020	11.0	7.8	.	.	.	.	.	.	.	.	.	.	.
677	ELMO	ELMO	82-0106	880603	1020	12.0	7.7	.	.	.	.	.	.	.	.	.	.	.
678	ELMO	ELMO	82-0106	880603	1020	14.0	7.2	7.80	.	.	.	.	.	.	.	.	.	.
679	ELMO	ELMO	82-0106	880603	1020	16.0	6.9	.	.	10	.	.	.	.	.	.	340	7.90
680	ELMO	ELMO	82-0106	880603	1020	18.0	6.7	6.70	.	.	.	.	.	.	.	.	.	.
681	ELMO	ELMO	82-0106	880603	1020	20.0	6.4	.	.	.	.	.	.	.	.	.	.	.
682	ELMO	ELMO	82-0106	880603	1020	22.0	6.1	5.00	.	.	.	.	.	.	.	.	.	.
683	ELMO	ELMO	82-0106	880603	1020	24.0	6.1	.	.	20	.	.	.	.	.	.	355	7.63
684	ELMO	ELMO	82-0106	880603	1020	26.0	6.0	4.10	.	.	.	.	.	.	.	.	.	.
685	ELMO	ELMO	82-0106	880603	1020	28.0	5.9	.	.	.	.	.	.	.	.	.	.	.
686	ELMO	ELMO	82-0106	880603	1020	30.0	5.9	3.30	.	.	.	.	.	.	.	.	.	.
687	ELMO	ELMO	82-0106	880603	1020	32.0	.	.	.	60	.	.	.	.	.	.	360	7.50
688	ELMO	ELMO	82-0106	880615	1030	0.0	23.4	9.10	2200.00	45	50	20	0.750	0.200	7.2	2.60	.	8.81
689	ELMO	ELMO	82-0106	880615	1030	0.5	.	.	1450.00	.	.	.	.	.	.	.	.	.
690	ELMO	ELMO	82-0106	880615	1030	1.0	23.4	.	1060.00	.	.	.	.	.	.	.	.	.
691	ELMO	ELMO	82-0106	880615	1030	1.5	.	.	790.00	.	.	.	.	.	.	.	.	.
692	ELMO	ELMO	82-0106	880615	1030	2.0	23.4	9.10	560.00	.	.	.	.	.	.	.	.	.
693	ELMO	ELMO	82-0106	880615	1030	2.5	.	.	390.00	.	.	.	.	.	.	.	.	.
694	ELMO	ELMO	82-0106	880615	1030	3.0	23.3	.	295.00	.	.	.	.	.	.	.	.	.
695	ELMO	ELMO	82-0106	880615	1030	3.5	.	.	214.00	.	.	.	.	.	.	.	.	.
696	ELMO	ELMO	82-0106	880615	1030	4.0	23.3	9.00	157.00	.	.	.	.	.	.	.	.	.
697	ELMO	ELMO	82-0106	880615	1030	4.5	.	.	113.00	.	.	.	.	.	.	.	.	.
698	ELMO	ELMO	82-0106	880615	1030	5.0	23.0	.	88.00	.	.	.	.	.	.	.	.	.
699	ELMO	ELMO	82-0106	880615	1030	5.5	22.5	.	68.00	.	.	.	.	.	.	.	.	.
700	ELMO	ELMO	82-0106	880615	1030	6.0	19.9	9.00	49.00	.	.	.	.	.	.	.	.	.
701	ELMO	ELMO	82-0106	880615	1030	6.5	17.4	.	36.50	.	.	.	.	.	.	.	.	.
702	ELMO	ELMO	82-0106	880615	1030	7.0	14.8	.	28.30	.	.	.	.	.	.	.	.	.
703	ELMO	ELMO	82-0106	880615	1030	7.5	13.7	.	22.00	.	.	.	.	.	.	.	.	.
704	ELMO	ELMO	82-0106	880615	1030	8.0	12.5	7.90	17.70	20	.	.	.	.	.	.	.	.
705	ELMO	ELMO	82-0106	880615	1030	8.5	11.4	.	.	.	.	.	.	.	.	.	.	.
706	ELMO	ELMO	82-0106	880615	1030	9.0	10.9	.	.	.	.	.	.	.	.	.	.	.
707	ELMO	ELMO	82-0106	880615	1030	9.5	10.1	.	.	.	.	.	.	.	.	.	.	.
708	ELMO	ELMO	82-0106	880615	1030	10.0	9.6	7.70	.	.	.	.	.	.	.	.	.	.
709	ELMO	ELMO	82-0106	880615	1030	10.5	9.1	.	.	.	.	.	.	.	.	.	.	.
710	ELMO	ELMO	82-0106	880615	1030	11.0	8.8	.	.	.	.	.	.	.	.	.	.	.
711	ELMO	ELMO	82-0106	880615	1030	12.0	8.0	.	.	.	.	.	.	.	.	.	.	.
712	ELMO	ELMO	82-0106	880615	1030	13.0	7.6	.	.	.	.	.	.	.	.	.	.	.
713	ELMO	ELMO	82-0106	880615	1030	14.0	7.2	7.70	.	.	.	.	.	.	.	.	.	.
714	ELMO	ELMO	82-0106	880615	1030	16.0	6.9	.	.	20	.	.	.	.	.	.	.	.
715	ELMO	ELMO	82-0106	880615	1030	18.0	6.5	6.40	.	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
716	ELMO	ELMO	82-0106	880615	1030	20.0	6.3	.	.	.	.	.	.	.	.	.	.	.
717	ELMO	ELMO	82-0106	880615	1030	22.0	6.2	4.60	.	.	.	.	.	.	.	.	.	.
718	ELMO	ELMO	82-0106	880615	1030	24.0	6.1	.	.	10	.	.	.	.	.	.	.	.
719	ELMO	ELMO	82-0106	880615	1030	26.0	6.1	3.50	.	.	.	.	.	.	.	.	.	.
720	ELMO	ELMO	82-0106	880615	1030	28.0	6.0	.	.	.	.	.	.	.	.	.	.	.
721	ELMO	ELMO	82-0106	880615	1030	30.0	6.0	2.90	.	.	.	.	.	.	.	.	.	.
722	ELMO	ELMO	82-0106	880615	1030	32.0	.	.	.	50	.	.	.	.	.	.	.	.
723	ELMO	ELMO	82-0106	880629	945	0.0	23.8	7.90	153.00	10	5	2	0.580	0.050	5.5	2.20	.	8.99
724	ELMO	ELMO	82-0106	880629	945	0.5	.	.	53.00	.	.	.	.	.	.	.	.	.
725	ELMO	ELMO	82-0106	880629	945	1.0	23.9	7.70	46.50	.	.	.	.	.	.	.	.	.
726	ELMO	ELMO	82-0106	880629	945	1.5	.	.	40.50	.	.	.	.	.	.	.	.	.
727	ELMO	ELMO	82-0106	880629	945	2.0	23.9	7.80	31.50	.	.	.	.	.	.	.	.	.
728	ELMO	ELMO	82-0106	880629	945	2.5	.	.	24.80	.	.	.	.	.	.	.	.	.
729	ELMO	ELMO	82-0106	880629	945	3.0	23.9	7.70	18.40	.	.	.	.	.	.	.	.	.
730	ELMO	ELMO	82-0106	880629	945	3.5	.	.	13.70	.	.	.	.	.	.	.	.	.
731	ELMO	ELMO	82-0106	880629	945	4.0	23.9	7.80	10.30	.	.	.	.	.	.	.	.	.
732	ELMO	ELMO	82-0106	880629	945	4.5	.	.	7.60	.	.	.	.	.	.	.	.	.
733	ELMO	ELMO	82-0106	880629	945	5.0	23.9	7.70	5.75	.	.	.	.	.	.	.	.	.
734	ELMO	ELMO	82-0106	880629	945	5.5	.	.	4.25	.	.	.	.	.	.	.	.	.
735	ELMO	ELMO	82-0106	880629	945	6.0	23.7	7.70	3.25	.	.	.	.	.	.	.	.	.
736	ELMO	ELMO	82-0106	880629	945	6.5	21.6	.	2.32	.	.	.	.	.	.	.	.	.
737	ELMO	ELMO	82-0106	880629	945	7.0	19.2	6.40	1.75	.	.	.	.	.	.	.	.	.
738	ELMO	ELMO	82-0106	880629	945	7.5	15.1	.	1.24	.	.	.	.	.	.	.	.	.
739	ELMO	ELMO	82-0106	880629	945	8.0	12.5	6.60	0.95	10	.	.	.	.	.	.	.	.
740	ELMO	ELMO	82-0106	880629	945	8.5	11.5	.	.	.	.	.	.	.	.	.	.	.
741	ELMO	ELMO	82-0106	880629	945	9.0	11.1	6.80	.	.	.	.	.	.	.	.	.	.
742	ELMO	ELMO	82-0106	880629	945	9.5	9.4	.	.	.	.	.	.	.	.	.	.	.
743	ELMO	ELMO	82-0106	880629	945	10.0	9.1	6.30	.	.	.	.	.	.	.	.	.	.
744	ELMO	ELMO	82-0106	880629	945	10.5	8.8	.	.	.	.	.	.	.	.	.	.	.
745	ELMO	ELMO	82-0106	880629	945	11.0	8.4	6.60	.	.	.	.	.	.	.	.	.	.
746	ELMO	ELMO	82-0106	880629	945	11.5	8.1	.	.	.	.	.	.	.	.	.	.	.
747	ELMO	ELMO	82-0106	880629	945	12.0	7.9	6.90	.	30	.	.	.	.	.	.	.	.
748	ELMO	ELMO	82-0106	880629	945	13.0	7.3	7.30	.	.	.	.	.	.	.	.	.	.
749	ELMO	ELMO	82-0106	880629	945	14.0	7.1	7.20	.	.	.	.	.	.	.	.	.	.
750	ELMO	ELMO	82-0106	880629	945	15.0	7.0	6.90	.	.	.	.	.	.	.	.	.	.
751	ELMO	ELMO	82-0106	880629	945	16.0	6.7	6.50	.	.	.	.	.	.	.	.	.	.
752	ELMO	ELMO	82-0106	880629	945	18.0	6.5	5.60	.	.	.	.	.	.	.	.	.	.
753	ELMO	ELMO	82-0106	880629	945	20.0	6.3	4.70	.	.	.	.	.	.	.	.	.	.
754	ELMO	ELMO	82-0106	880629	945	22.0	6.2	3.40	.	.	.	.	.	.	.	.	.	.
755	ELMO	ELMO	82-0106	880629	945	24.0	6.0	2.10	.	10	.	.	.	.	.	.	.	.
756	ELMO	ELMO	82-0106	880629	945	26.0	6.0	0.90	.	.	.	.	.	.	.	.	.	.
757	ELMO	ELMO	82-0106	880629	945	28.0	6.0	0.40	.	.	.	.	.	.	.	.	.	.
758	ELMO	ELMO	82-0106	880629	945	30.0	6.0	0.30	.	.	.	.	.	.	.	.	.	.
759	ELMO	ELMO	82-0106	880629	945	32.0	.	.	.	90	.	.	.	.	.	.	.	.
760	ELMO	ELMO	82-0106	880713	1035	0.0	25.2	8.10	1520.00	35	10	2	0.720	0.100	5.1	2.20	305	8.74
761	ELMO	ELMO	82-0106	880713	1035	0.5	.	.	1050.00	.	.	.	.	.	.	.	.	.
762	ELMO	ELMO	82-0106	880713	1035	1.0	25.2	.	690.00	.	.	.	.	.	.	.	.	.
763	ELMO	ELMO	82-0106	880713	1035	1.5	.	.	510.00	.	.	.	.	.	.	.	.	.
764	ELMO	ELMO	82-0106	880713	1035	2.0	25.2	7.80	340.00	.	.	.	.	.	.	.	.	.
765	ELMO	ELMO	82-0106	880713	1035	2.5	.	.	248.00	.	.	.	.	.	.	.	.	.
766	ELMO	ELMO	82-0106	880713	1035	3.0	25.1	.	179.00	.	.	.	.	.	.	.	.	.
767	ELMO	ELMO	82-0106	880713	1035	3.5	.	.	132.00	.	.	.	.	.	.	.	.	.
768	ELMO	ELMO	82-0106	880713	1035	4.0	25.0	7.80	99.00	.	.	.	.	.	.	.	.	.
769	ELMO	ELMO	82-0106	880713	1035	4.5	.	.	72.00	.	.	.	.	.	.	.	.	.
770	ELMO	ELMO	82-0106	880713	1035	5.0	24.9	.	52.50	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
771	ELMO	ELMO	82-0106	880713	1035	5.5	.	.	37.50	.	.	.	.	.	.	.	.	.
772	ELMO	ELMO	82-0106	880713	1035	6.0	24.8	7.60	29.80	.	.	.	.	.	.	.	.	.
773	ELMO	ELMO	82-0106	880713	1035	6.5	.	.	21.50	.	.	.	.	.	.	.	.	.
774	ELMO	ELMO	82-0106	880713	1035	7.0	24.5	.	15.20	.	.	.	.	.	.	.	.	.
775	ELMO	ELMO	82-0106	880713	1035	7.5	18.9	.	11.60	.	.	.	.	.	.	.	.	.
776	ELMO	ELMO	82-0106	880713	1035	8.0	16.9	4.10	8.80	20	.	.	.	.	.	.	300	.
777	ELMO	ELMO	82-0106	880713	1035	8.5	14.5	.	6.70	.	.	.	.	.	.	.	.	.
778	ELMO	ELMO	82-0106	880713	1035	9.0	12.2	.	5.25	.	.	.	.	.	.	.	.	.
779	ELMO	ELMO	82-0106	880713	1035	9.5	10.6	.	.	.	.	.	.	.	.	.	.	.
780	ELMO	ELMO	82-0106	880713	1035	10.0	10.1	5.60	.	.	.	.	.	.	.	.	.	.
781	ELMO	ELMO	82-0106	880713	1035	11.0	9.3	.	.	.	.	.	.	.	.	.	.	.
782	ELMO	ELMO	82-0106	880713	1035	12.0	8.3	6.10	.	.	.	.	.	.	.	.	.	.
783	ELMO	ELMO	82-0106	880713	1035	13.0	7.9	.	.	.	.	.	.	.	.	.	.	.
784	ELMO	ELMO	82-0106	880713	1035	14.0	7.4	6.60	.	.	.	.	.	.	.	.	.	.
785	ELMO	ELMO	82-0106	880713	1035	16.0	6.9	.	.	10	.	.	.	.	.	.	350	.
786	ELMO	ELMO	82-0106	880713	1035	18.0	6.6	5.30	.	.	.	.	.	.	.	.	.	.
787	ELMO	ELMO	82-0106	880713	1035	20.0	6.4	.	.	.	.	.	.	.	.	.	.	.
788	ELMO	ELMO	82-0106	880713	1035	22.0	6.2	3.20	.	.	.	.	.	.	.	.	.	.
789	ELMO	ELMO	82-0106	880713	1035	24.0	6.2	.	.	10	.	.	.	.	.	.	355	.
790	ELMO	ELMO	82-0106	880713	1035	26.0	6.1	1.20	.	.	.	.	.	.	.	.	.	.
791	ELMO	ELMO	82-0106	880713	1035	28.0	6.1	.	.	.	.	.	.	.	.	.	.	.
792	ELMO	ELMO	82-0106	880713	1035	30.0	6.0	0.60	.	.	.	.	.	.	.	.	.	.
793	ELMO	ELMO	82-0106	880713	1035	32.0	.	.	.	40	.	.	.	.	.	.	365	.
794	ELMO	ELMO	82-0106	880728	1000	0.0	25.7	7.80	1250.00	45	10	4	0.700	0.050	4.7	2.70	270	8.79
795	ELMO	ELMO	82-0106	880728	1000	0.5	25.7	7.70	810.00	.	.	.	.	.	.	.	.	.
796	ELMO	ELMO	82-0106	880728	1000	1.0	25.7	7.60	510.00	.	.	.	.	.	.	.	.	.
797	ELMO	ELMO	82-0106	880728	1000	1.5	.	.	405.00	.	.	.	.	.	.	.	.	.
798	ELMO	ELMO	82-0106	880728	1000	2.0	25.7	7.70	300.00	.	.	.	.	.	.	.	.	.
799	ELMO	ELMO	82-0106	880728	1000	2.5	.	.	222.00	.	.	.	.	.	.	.	.	.
800	ELMO	ELMO	82-0106	880728	1000	3.0	25.6	7.70	160.00	.	.	.	.	.	.	.	.	.
801	ELMO	ELMO	82-0106	880728	1000	3.5	.	.	118.00	.	.	.	.	.	.	.	.	.
802	ELMO	ELMO	82-0106	880728	1000	4.0	25.6	7.70	89.00	.	.	.	.	.	.	.	.	.
803	ELMO	ELMO	82-0106	880728	1000	4.5	25.3	.	63.00	.	.	.	.	.	.	.	.	.
804	ELMO	ELMO	82-0106	880728	1000	5.0	25.0	7.20	48.00	.	.	.	.	.	.	.	.	.
805	ELMO	ELMO	82-0106	880728	1000	5.5	25.0	.	37.00	.	.	.	.	.	.	.	.	.
806	ELMO	ELMO	82-0106	880728	1000	6.0	24.8	6.20	26.00	.	.	.	.	.	.	.	.	.
807	ELMO	ELMO	82-0106	880728	1000	6.5	23.7	.	17.70	.	.	.	.	.	.	.	.	.
808	ELMO	ELMO	82-0106	880728	1000	7.0	21.8	3.40	13.40	.	.	.	.	.	.	.	.	.
809	ELMO	ELMO	82-0106	880728	1000	7.5	21.5	.	10.60	.	.	.	.	.	.	.	.	.
810	ELMO	ELMO	82-0106	880728	1000	8.0	21.0	1.70	.	10	.	.	.	.	.	.	285	.
811	ELMO	ELMO	82-0106	880728	1000	8.5	14.4	.	.	.	.	.	.	.	.	.	.	.
812	ELMO	ELMO	82-0106	880728	1000	9.0	12.4	3.10	.	.	.	.	.	.	.	.	.	.
813	ELMO	ELMO	82-0106	880728	1000	9.5	10.8	.	.	.	.	.	.	.	.	.	.	.
814	ELMO	ELMO	82-0106	880728	1000	10.0	10.4	3.70	.	.	.	.	.	.	.	.	.	.
815	ELMO	ELMO	82-0106	880728	1000	11.0	8.9	4.10	.	.	.	.	.	.	.	.	.	.
816	ELMO	ELMO	82-0106	880728	1000	12.0	8.2	4.70	.	.	.	.	.	.	.	.	.	.
817	ELMO	ELMO	82-0106	880728	1000	13.0	7.8	4.80	.	.	.	.	.	.	.	.	.	.
818	ELMO	ELMO	82-0106	880728	1000	14.0	7.4	4.60	.	.	.	.	.	.	.	.	.	.
819	ELMO	ELMO	82-0106	880728	1000	15.0	7.1	5.00	.	.	.	.	.	.	.	.	.	.
820	ELMO	ELMO	82-0106	880728	1000	16.0	6.8	5.00	.	10	.	.	.	.	.	.	325	.
821	ELMO	ELMO	82-0106	880728	1000	18.0	6.5	4.60	.	.	.	.	.	.	.	.	.	.
822	ELMO	ELMO	82-0106	880728	1000	20.0	6.4	2.60	.	.	.	.	.	.	.	.	.	.
823	ELMO	ELMO	82-0106	880728	1000	22.0	6.2	1.30	.	.	.	.	.	.	.	.	.	.
824	ELMO	ELMO	82-0106	880728	1000	24.0	6.1	0.90	.	20	.	.	.	.	.	.	320	.
825	ELMO	ELMO	82-0106	880728	1000	26.0	6.1	0.20	.	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
826	ELMO	ELMO	82-0106	880728	1000	28.0	6.0	0.20	.	.	.	.	.	.	.	.	.	.
827	ELMO	ELMO	82-0106	880728	1000	30.0	6.0	0.20	.	.	.	.	.	.	.	.	.	.
828	ELMO	ELMO	82-0106	880728	1000	32.0	.	.	.	110	.	.	.	.	.	.	330	.
829	ELMO	ELMO	82-0106	880810	1015	0.0	25.7	8.00	1400.00	35	20	2	0.650	0.100	4.9	2.30	300	8.60
830	ELMO	ELMO	82-0106	880810	1015	0.5	.	.	930.00	.	.	.	.	.	.	.	.	.
831	ELMO	ELMO	82-0106	880810	1015	1.0	25.6	7.90	570.00	.	.	.	.	.	.	.	.	.
832	ELMO	ELMO	82-0106	880810	1015	1.5	.	.	435.00	.	.	.	.	.	.	.	.	.
833	ELMO	ELMO	82-0106	880810	1015	2.0	25.6	8.00	305.00	.	.	.	.	.	.	.	.	.
834	ELMO	ELMO	82-0106	880810	1015	2.5	.	.	214.00	.	.	.	.	.	.	.	.	.
835	ELMO	ELMO	82-0106	880810	1015	3.0	25.6	7.90	155.00	.	.	.	.	.	.	.	.	.
836	ELMO	ELMO	82-0106	880810	1015	3.5	.	.	106.00	.	.	.	.	.	.	.	.	.
837	ELMO	ELMO	82-0106	880810	1015	4.0	25.6	7.80	81.00	.	.	.	.	.	.	.	.	.
838	ELMO	ELMO	82-0106	880810	1015	4.5	.	.	57.50	.	.	.	.	.	.	.	.	.
839	ELMO	ELMO	82-0106	880810	1015	5.0	25.5	7.70	42.50	.	.	.	.	.	.	.	.	.
840	ELMO	ELMO	82-0106	880810	1015	5.5	.	.	31.00	.	.	.	.	.	.	.	.	.
841	ELMO	ELMO	82-0106	880810	1015	6.0	25.3	7.50	21.30	.	.	.	.	.	.	.	.	.
842	ELMO	ELMO	82-0106	880810	1015	6.5	24.9	.	15.10	.	.	.	.	.	.	.	.	.
843	ELMO	ELMO	82-0106	880810	1015	7.0	24.6	6.40	11.20	.	.	.	.	.	.	.	.	.
844	ELMO	ELMO	82-0106	880810	1015	7.5	23.6	.	8.50	.	.	.	.	.	.	.	.	.
845	ELMO	ELMO	82-0106	880810	1015	8.0	20.5	2.70	6.15	20	.	.	.	.	.	.	305	.
846	ELMO	ELMO	82-0106	880810	1015	8.5	16.1	.	.	.	.	.	.	.	.	.	.	.
847	ELMO	ELMO	82-0106	880810	1015	9.0	13.6	1.30	.	.	.	.	.	.	.	.	.	.
848	ELMO	ELMO	82-0106	880810	1015	9.5	11.6	.	.	.	.	.	.	.	.	.	.	.
849	ELMO	ELMO	82-0106	880810	1015	10.0	10.8	2.60	.	.	.	.	.	.	.	.	.	.
850	ELMO	ELMO	82-0106	880810	1015	10.5	9.9	.	.	.	.	.	.	.	.	.	.	.
851	ELMO	ELMO	82-0106	880810	1015	11.0	9.0	3.60	.	.	.	.	.	.	.	.	.	.
852	ELMO	ELMO	82-0106	880810	1015	11.5	8.6	.	.	.	.	.	.	.	.	.	.	.
853	ELMO	ELMO	82-0106	880810	1015	12.0	8.4	4.20	.	.	.	.	.	.	.	.	.	.
854	ELMO	ELMO	82-0106	880810	1015	13.0	8.2	4.40	.	.	.	.	.	.	.	.	.	.
855	ELMO	ELMO	82-0106	880810	1015	14.0	7.6	4.80	.	.	.	.	.	.	.	.	.	.
856	ELMO	ELMO	82-0106	880810	1015	15.0	7.1	5.00	.	.	.	.	.	.	.	.	.	.
857	ELMO	ELMO	82-0106	880810	1015	16.0	6.9	5.00	.	20	.	.	.	.	.	.	350	.
858	ELMO	ELMO	82-0106	880810	1015	17.0	6.8	3.80	.	.	.	.	.	.	.	.	.	.
859	ELMO	ELMO	82-0106	880810	1015	18.0	6.7	3.10	.	.	.	.	.	.	.	.	.	.
860	ELMO	ELMO	82-0106	880810	1015	20.0	6.4	2.10	.	.	.	.	.	.	.	.	.	.
861	ELMO	ELMO	82-0106	880810	1015	22.0	6.3	1.10	.	.	.	.	.	.	.	.	.	.
862	ELMO	ELMO	82-0106	880810	1015	24.0	6.2	0.30	.	30	.	.	.	.	.	.	360	.
863	ELMO	ELMO	82-0106	880810	1015	26.0	6.2	0.30	.	.	.	.	.	.	.	.	.	.
864	ELMO	ELMO	82-0106	880810	1015	28.0	6.1	0.20	.	.	.	.	.	.	.	.	.	.
865	ELMO	ELMO	82-0106	880810	1015	30.0	6.0	0.20	.	.	.	.	.	.	.	.	.	.
866	ELMO	ELMO	82-0106	880810	1015	32.0	.	.	.	120	.	.	.	.	.	.	360	.
867	ELMO	ELMO	82-0106	880824	955	0.0	23.8	8.00	1250.00	20	10	16	0.550	0.050	5.7	2.40	295	8.43
868	ELMO	ELMO	82-0106	880824	955	0.5	.	.	620.00	.	.	.	.	.	.	.	.	.
869	ELMO	ELMO	82-0106	880824	955	1.0	23.8	7.90	440.00	.	.	.	.	.	.	.	.	.
870	ELMO	ELMO	82-0106	880824	955	1.5	.	.	330.00	.	.	.	.	.	.	.	.	.
871	ELMO	ELMO	82-0106	880824	955	2.0	23.8	7.90	218.00	.	.	.	.	.	.	.	.	.
872	ELMO	ELMO	82-0106	880824	955	2.5	.	.	156.00	.	.	.	.	.	.	.	.	.
873	ELMO	ELMO	82-0106	880824	955	3.0	23.8	7.90	112.00	.	.	.	.	.	.	.	.	.
874	ELMO	ELMO	82-0106	880824	955	3.5	.	.	84.00	.	.	.	.	.	.	.	.	.
875	ELMO	ELMO	82-0106	880824	955	4.0	23.8	7.90	59.50	.	.	.	.	.	.	.	.	.
876	ELMO	ELMO	82-0106	880824	955	4.5	.	.	42.50	.	.	.	.	.	.	.	.	.
877	ELMO	ELMO	82-0106	880824	955	5.0	23.8	8.00	38.00	.	.	.	.	.	.	.	.	.
878	ELMO	ELMO	82-0106	880824	955	5.5	.	.	23.00	.	.	.	.	.	.	.	.	.
879	ELMO	ELMO	82-0106	880824	955	6.0	23.8	8.00	17.50	.	.	.	.	.	.	.	.	.
880	ELMO	ELMO	82-0106	880824	955	6.5	.	.	13.40	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
881	ELMO	ELMO	82-0106	880824	955	7.0	23.6	7.90	10.60	.	.	.	.	.	.	.	.	.
882	ELMO	ELMO	82-0106	880824	955	7.5	23.5	.	7.30	.	.	.	.	.	.	.	.	.
883	ELMO	ELMO	82-0106	880824	955	8.0	20.1	5.40	5.55	30	.	.	.	.	.	.	300	.
884	ELMO	ELMO	82-0106	880824	955	8.5	18.0	.	.	.	.	.	.	.	.	.	.	.
885	ELMO	ELMO	82-0106	880824	955	9.0	14.2	1.20	.	.	.	.	.	.	.	.	.	.
886	ELMO	ELMO	82-0106	880824	955	9.5	13.3	.	.	.	.	.	.	.	.	.	.	.
887	ELMO	ELMO	82-0106	880824	955	10.0	11.8	2.30	.	.	.	.	.	.	.	.	.	.
888	ELMO	ELMO	82-0106	880824	955	11.0	11.3	2.70	.	.	.	.	.	.	.	.	.	.
889	ELMO	ELMO	82-0106	880824	955	12.0	8.8	2.80	.	.	.	.	.	.	.	.	.	.
890	ELMO	ELMO	82-0106	880824	955	13.0	7.9	4.10	.	.	.	.	.	.	.	.	.	.
891	ELMO	ELMO	82-0106	880824	955	14.0	7.5	4.10	.	.	.	.	.	.	.	.	.	.
892	ELMO	ELMO	82-0106	880824	955	16.0	6.8	3.40	.	20	.	.	.	.	.	.	350	.
893	ELMO	ELMO	82-0106	880824	955	18.0	6.5	2.30	.	.	.	.	.	.	.	.	.	.
894	ELMO	ELMO	82-0106	880824	955	21.0	6.3	0.60	.	.	.	.	.	.	.	.	.	.
895	ELMO	ELMO	82-0106	880824	955	24.0	6.2	0.70	.	40	.	.	.	.	.	.	365	.
896	ELMO	ELMO	82-0106	880824	955	27.0	6.0	0.60	.	.	.	.	.	.	.	.	.	.
897	ELMO	ELMO	82-0106	880824	955	30.0	6.0	0.60	.	.	.	.	.	.	.	.	.	.
898	ELMO	ELMO	82-0106	880824	955	32.0	.	.	.	110	.	.	.	.	.	.	365	.
899	ELMO	ELMO	82-0106	880907	955	0.0	19.5	8.60	.	20	10	6	0.550	0.050	6.0	2.80	305	8.54
900	ELMO	ELMO	82-0106	880907	955	1.0	19.5	8.60	.	.	.	.	.	.	.	.	.	.
901	ELMO	ELMO	82-0106	880907	955	2.0	19.5	8.60	.	.	.	.	.	.	.	.	.	.
902	ELMO	ELMO	82-0106	880907	955	3.0	19.5	8.60	.	.	.	.	.	.	.	.	.	.
903	ELMO	ELMO	82-0106	880907	955	4.0	19.5	8.60	.	.	.	.	.	.	.	.	.	.
904	ELMO	ELMO	82-0106	880922	955	0.0	17.6	8.90	235.00	20	15	5	0.660	0.050	7.7	2.80	300	8.55
905	ELMO	ELMO	82-0106	880922	955	0.5	.	.	148.00	.	.	.	.	.	.	.	.	.
906	ELMO	ELMO	82-0106	880922	955	1.0	17.6	8.90	102.00	.	.	.	.	.	.	.	.	.
907	ELMO	ELMO	82-0106	880922	955	1.5	.	.	73.00	.	.	.	.	.	.	.	.	.
908	ELMO	ELMO	82-0106	880922	955	2.0	17.6	8.80	58.50	.	.	.	.	.	.	.	.	.
909	ELMO	ELMO	82-0106	880922	955	2.5	.	.	46.00	.	.	.	.	.	.	.	.	.
910	ELMO	ELMO	82-0106	880922	955	3.0	17.6	8.80	35.00	.	.	.	.	.	.	.	.	.
911	ELMO	ELMO	82-0106	880922	955	3.5	.	.	26.60	.	.	.	.	.	.	.	.	.
912	ELMO	ELMO	82-0106	880922	955	4.0	17.6	8.60	21.10	.	.	.	.	.	.	.	.	.
913	ELMO	ELMO	82-0106	880922	955	4.5	.	.	16.10	.	.	.	.	.	.	.	.	.
914	ELMO	ELMO	82-0106	880922	955	5.0	17.6	8.50	12.60	.	.	.	.	.	.	.	.	.
915	ELMO	ELMO	82-0106	880922	955	5.5	.	.	9.70	.	.	.	.	.	.	.	.	.
916	ELMO	ELMO	82-0106	880922	955	6.0	17.5	8.50	7.30	.	.	.	.	.	.	.	.	.
917	ELMO	ELMO	82-0106	880922	955	6.5	.	.	5.40	.	.	.	.	.	.	.	.	.
918	ELMO	ELMO	82-0106	880922	955	7.0	17.5	8.50	4.15	.	.	.	.	.	.	.	.	.
919	ELMO	ELMO	82-0106	880922	955	7.5	.	.	3.25	.	.	.	.	.	.	.	.	.
920	ELMO	ELMO	82-0106	880922	955	8.0	17.4	8.30	2.51	10	.	.	.	.	.	.	300	8.60
921	ELMO	ELMO	82-0106	880922	955	8.5	.	.	1.93	.	.	.	.	.	.	.	.	.
922	ELMO	ELMO	82-0106	880922	955	9.0	17.2	7.80	.	.	.	.	.	.	.	.	.	.
923	ELMO	ELMO	82-0106	880922	955	9.5	17.0	.	.	.	.	.	.	.	.	.	.	.
924	ELMO	ELMO	82-0106	880922	955	10.0	16.1	5.80	.	.	.	.	.	.	.	.	.	.
925	ELMO	ELMO	82-0106	880922	955	10.5	14.9	.	.	.	.	.	.	.	.	.	.	.
926	ELMO	ELMO	82-0106	880922	955	11.0	12.8	1.60	.	.	.	.	.	.	.	.	.	.
927	ELMO	ELMO	82-0106	880922	955	11.5	10.9	.	.	.	.	.	.	.	.	.	.	.
928	ELMO	ELMO	82-0106	880922	955	12.0	8.6	2.50	.	.	.	.	.	.	.	.	.	.
929	ELMO	ELMO	82-0106	880922	955	13.0	7.7	2.90	.	.	.	.	.	.	.	.	.	.
930	ELMO	ELMO	82-0106	880922	955	14.0	7.1	3.20	.	.	.	.	.	.	.	.	.	.
931	ELMO	ELMO	82-0106	880922	955	15.0	6.8	2.40	.	.	.	.	.	.	.	.	.	.
932	ELMO	ELMO	82-0106	880922	955	16.0	6.7	1.40	.	10	.	.	.	.	.	.	345	7.56
933	ELMO	ELMO	82-0106	880922	955	17.0	6.5	0.90	.	.	.	.	.	.	.	.	.	.
934	ELMO	ELMO	82-0106	880922	955	18.0	6.4	0.80	.	.	.	.	.	.	.	.	.	.
935	ELMO	ELMO	82-0106	880922	955	19.0	6.4	0.80	.	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
936	ELMO	ELMO	82-0106	880922	955	20.0	6.3	0.80	.	.	.	.	.	.	.	.	.	.
937	ELMO	ELMO	82-0106	880922	955	21.0	6.2	0.80	.	.	.	.	.	.	.	.	.	.
938	ELMO	ELMO	82-0106	880922	955	22.0	6.2	0.70	.	.	.	.	.	.	.	.	.	.
939	ELMO	ELMO	82-0106	880922	955	23.0	6.1	0.70	.	.	.	.	.	.	.	.	.	.
940	ELMO	ELMO	82-0106	880922	955	24.0	6.1	0.70	.	80	.	.	.	.	.	.	365	7.45
941	ELMO	ELMO	82-0106	880922	955	25.0	6.0	0.70	.	.	.	.	.	.	.	.	.	.
942	ELMO	ELMO	82-0106	880922	955	26.0	6.0	0.70	.	.	.	.	.	.	.	.	.	.
943	ELMO	ELMO	82-0106	880922	955	28.0	6.0	0.60	.	.	.	.	.	.	.	.	.	.
944	ELMO	ELMO	82-0106	880922	955	30.0	6.0	0.60	.	.	.	.	.	.	.	.	.	.
945	ELMO	ELMO	82-0106	880922	955	32.0	.	.	.	130	.	.	.	.	.	.	360	7.40
946	ELMO	ELMO	82-0106	881005	945	0.0	13.9	8.40	880.00	20	20	10	0.580	0.100	4.6	2.80	305	8.44
947	ELMO	ELMO	82-0106	881005	945	0.5	.	.	470.00	.	.	.	.	.	.	.	.	.
948	ELMO	ELMO	82-0106	881005	945	1.0	14.0	8.30	310.00	.	.	.	.	.	.	.	.	.
949	ELMO	ELMO	82-0106	881005	945	1.5	.	.	230.00	.	.	.	.	.	.	.	.	.
950	ELMO	ELMO	82-0106	881005	945	2.0	14.0	8.30	170.00	.	.	.	.	.	.	.	.	.
951	ELMO	ELMO	82-0106	881005	945	2.5	.	.	124.00	.	.	.	.	.	.	.	.	.
952	ELMO	ELMO	82-0106	881005	945	3.0	14.0	8.30	89.00	.	.	.	.	.	.	.	.	.
953	ELMO	ELMO	82-0106	881005	945	3.5	.	.	67.00	.	.	.	.	.	.	.	.	.
954	ELMO	ELMO	82-0106	881005	945	4.0	14.0	8.20	50.00	.	.	.	.	.	.	.	.	.
955	ELMO	ELMO	82-0106	881005	945	4.5	.	.	37.50	.	.	.	.	.	.	.	.	.
956	ELMO	ELMO	82-0106	881005	945	5.0	14.0	8.10	28.60	.	.	.	.	.	.	.	.	.
957	ELMO	ELMO	82-0106	881005	945	5.5	.	.	21.60	.	.	.	.	.	.	.	.	.
958	ELMO	ELMO	82-0106	881005	945	6.0	14.0	8.20	16.20	.	.	.	.	.	.	.	.	.
959	ELMO	ELMO	82-0106	881005	945	6.5	.	.	12.60	.	.	.	.	.	.	.	.	.
960	ELMO	ELMO	82-0106	881005	945	7.0	14.0	8.10	9.90	.	.	.	.	.	.	.	.	.
961	ELMO	ELMO	82-0106	881005	945	7.5	.	.	7.60	.	.	.	.	.	.	.	.	.
962	ELMO	ELMO	82-0106	881005	945	8.0	14.0	8.10	5.70	20	.	.	.	.	.	.	300	8.47
963	ELMO	ELMO	82-0106	881005	945	9.0	13.9	8.10	.	.	.	.	.	.	.	.	.	.
964	ELMO	ELMO	82-0106	881005	945	10.0	13.8	8.00	.	.	.	.	.	.	.	.	.	.
965	ELMO	ELMO	82-0106	881005	945	11.0	13.4	7.20	.	.	.	.	.	.	.	.	.	.
966	ELMO	ELMO	82-0106	881005	945	11.5	13.2	.	.	.	.	.	.	.	.	.	.	.
967	ELMO	ELMO	82-0106	881005	945	12.0	11.7	3.40	.	.	.	.	.	.	.	.	.	.
968	ELMO	ELMO	82-0106	881005	945	13.0	8.7	1.80	.	.	.	.	.	.	.	.	.	.
969	ELMO	ELMO	82-0106	881005	945	14.0	7.3	1.40	.	.	.	.	.	.	.	.	.	.
970	ELMO	ELMO	82-0106	881005	945	15.0	6.9	1.10	.	.	.	.	.	.	.	.	.	.
971	ELMO	ELMO	82-0106	881005	945	16.0	6.5	0.90	.	20	.	.	.	.	.	.	345	7.54
972	ELMO	ELMO	82-0106	881005	945	17.0	6.5	0.80	.	.	.	.	.	.	.	.	.	.
973	ELMO	ELMO	82-0106	881005	945	18.0	6.4	0.80	.	.	.	.	.	.	.	.	.	.
974	ELMO	ELMO	82-0106	881005	945	19.0	6.3	0.70	.	.	.	.	.	.	.	.	.	.
975	ELMO	ELMO	82-0106	881005	945	20.0	6.2	0.70	.	.	.	.	.	.	.	.	.	.
976	ELMO	ELMO	82-0106	881005	945	21.0	6.2	0.70	.	.	.	.	.	.	.	.	.	.
977	ELMO	ELMO	82-0106	881005	945	22.0	6.1	0.70	.	.	.	.	.	.	.	.	.	.
978	ELMO	ELMO	82-0106	881005	945	24.0	6.1	0.60	.	100	.	.	.	.	.	.	345	7.44
979	ELMO	ELMO	82-0106	881005	945	26.0	6.0	0.60	.	.	.	.	.	.	.	.	.	.
980	ELMO	ELMO	82-0106	881005	945	28.0	6.0	0.60	.	.	.	.	.	.	.	.	.	.
981	ELMO	ELMO	82-0106	881005	945	30.0	6.0	0.60	.	.	.	.	.	.	.	.	.	.
982	ELMO	ELMO	82-0106	881005	945	32.0	.	.	.	100	.	.	.	.	.	.	350	7.42
983	ELMO	ELMO	82-0106	881019	950	0.0	11.7	9.10	630.00	15	.	16	0.600	0.100	3.6	3.20	320	8.36
984	ELMO	ELMO	82-0106	881019	950	0.5	.	.	380.00	.	.	.	.	.	.	.	.	.
985	ELMO	ELMO	82-0106	881019	950	1.0	11.8	8.90	260.00	.	.	.	.	.	.	.	.	.
986	ELMO	ELMO	82-0106	881019	950	1.5	.	.	166.00	.	.	.	.	.	.	.	.	.
987	ELMO	ELMO	82-0106	881019	950	2.0	11.8	8.90	127.00	.	.	.	.	.	.	.	.	.
988	ELMO	ELMO	82-0106	881019	950	2.5	.	.	88.50	.	.	.	.	.	.	.	.	.
989	ELMO	ELMO	82-0106	881019	950	3.0	11.8	8.80	69.50	.	.	.	.	.	.	.	.	.
990	ELMO	ELMO	82-0106	881019	950	3.5	.	.	53.00	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
991	ELMO	ELMO	82-0106	881019	950	4.0	11.8	8.60	38.50	.	.	.	.	.	.	.	.	.
992	ELMO	ELMO	82-0106	881019	950	4.5	.	.	30.50	.	.	.	.	.	.	.	.	.
993	ELMO	ELMO	82-0106	881019	950	5.0	11.8	8.60	23.30	.	.	.	.	.	.	.	.	.
994	ELMO	ELMO	82-0106	881019	950	5.5	.	.	17.90	.	.	.	.	.	.	.	.	.
995	ELMO	ELMO	82-0106	881019	950	6.0	11.8	8.50	13.50	.	.	.	.	.	.	.	.	.
996	ELMO	ELMO	82-0106	881019	950	6.5	.	.	10.90	.	.	.	.	.	.	.	.	.
997	ELMO	ELMO	82-0106	881019	950	7.0	11.7	8.60	8.50	.	.	.	.	.	.	.	.	.
998	ELMO	ELMO	82-0106	881019	950	7.5	.	.	6.40	.	.	.	.	.	.	.	.	.
999	ELMO	ELMO	82-0106	881019	950	8.0	11.7	8.70	5.15	10	.	.	.	.	.	.	320	8.38
1000	ELMO	ELMO	82-0106	881019	950	8.5	.	.	4.25	.	.	.	.	.	.	.	.	.
1001	ELMO	ELMO	82-0106	881019	950	9.0	11.7	8.60	.	.	.	.	.	.	.	.	.	.
1002	ELMO	ELMO	82-0106	881019	950	10.0	11.6	8.10	.	.	.	.	.	.	.	.	.	.
1003	ELMO	ELMO	82-0106	881019	950	11.0	11.6	8.30	.	.	.	.	.	.	.	.	.	.
1004	ELMO	ELMO	82-0106	881019	950	12.0	11.5	8.20	.	.	.	.	.	.	.	.	.	.
1005	ELMO	ELMO	82-0106	881019	950	13.0	10.9	7.20	.	.	.	.	.	.	.	.	.	.
1006	ELMO	ELMO	82-0106	881019	950	14.0	9.6	3.30	.	.	.	.	.	.	.	.	.	.
1007	ELMO	ELMO	82-0106	881019	950	15.0	7.9	1.10	.	.	.	.	.	.	.	.	.	.
1008	ELMO	ELMO	82-0106	881019	950	16.0	7.1	0.80	.	30	.	.	.	.	.	.	350	7.56
1009	ELMO	ELMO	82-0106	881019	950	17.0	6.5	0.80	.	.	.	.	.	.	.	.	.	.
1010	ELMO	ELMO	82-0106	881019	950	18.0	6.3	0.70	.	.	.	.	.	.	.	.	.	.
1011	ELMO	ELMO	82-0106	881019	950	19.0	6.2	0.70	.	.	.	.	.	.	.	.	.	.
1012	ELMO	ELMO	82-0106	881019	950	20.0	6.1	0.70	.	.	.	.	.	.	.	.	.	.
1013	ELMO	ELMO	82-0106	881019	950	22.0	6.0	0.70	.	.	.	.	.	.	.	.	.	.
1014	ELMO	ELMO	82-0106	881019	950	24.0	6.0	0.60	.	90	.	.	.	.	.	.	365	7.47
1015	ELMO	ELMO	82-0106	881019	950	26.0	6.0	0.60	.	.	.	.	.	.	.	.	.	.
1016	ELMO	ELMO	82-0106	881019	950	28.0	6.0	0.60	.	.	.	.	.	.	.	.	.	.
1017	ELMO	ELMO	82-0106	881019	950	30.0	6.0	0.60	.	.	.	.	.	.	.	.	.	.
1018	ELMO	ELMO	82-0106	881019	950	32.0	.	.	.	90	.	.	.	.	.	.	360	7.47
1019	HOLL	HOLLAND	19-0065	871029	825	0.0	6.5	7.00	.	20	5	2	1.300	0.100	5.4	2.40	240	7.85
1020	HOLL	HOLLAND	19-0065	871029	825	1.0	6.5	6.80	.	.	.	.	.	.	.	.	.	.
1021	HOLL	HOLLAND	19-0065	871029	825	2.0	6.5	6.60	.	.	.	.	.	.	.	.	.	.
1022	HOLL	HOLLAND	19-0065	871029	825	3.0	6.5	6.60	.	.	.	.	.	.	.	.	.	.
1023	HOLL	HOLLAND	19-0065	871029	825	4.0	6.5	6.40	.	.	.	.	.	.	.	.	.	.
1024	HOLL	HOLLAND	19-0065	871029	825	5.0	6.5	6.40	.	10	.	.	.	.	.	.	235	7.84
1025	HOLL	HOLLAND	19-0065	871029	825	6.0	6.5	6.30	.	.	.	.	.	.	.	.	.	.
1026	HOLL	HOLLAND	19-0065	871029	825	7.0	6.5	6.30	.	.	.	.	.	.	.	.	.	.
1027	HOLL	HOLLAND	19-0065	871029	825	8.0	6.5	6.20	.	.	.	.	.	.	.	.	.	.
1028	HOLL	HOLLAND	19-0065	871029	825	9.0	6.5	6.20	.	10	.	.	.	.	.	.	235	7.83
1029	HOLL	HOLLAND	19-0065	871029	825	10.0	6.5	6.10	.	.	.	.	.	.	.	.	.	.
1030	HOLL	HOLLAND	19-0065	871029	825	11.0	6.0	1.90	.	.	.	.	.	.	.	.	.	.
1031	HOLL	HOLLAND	19-0065	871029	825	12.0	5.5	1.30	.	.	.	.	.	.	.	.	.	.
1032	HOLL	HOLLAND	19-0065	871029	825	13.0	5.0	1.00	.	.	.	.	.	.	.	.	.	.
1033	HOLL	HOLLAND	19-0065	871029	825	14.0	5.0	0.80	.	160	.	.	.	.	.	.	275	7.37
1034	HOLL	HOLLAND	19-0065	871029	825	15.0	5.0	0.80	.	.	.	.	.	.	.	.	.	.
1035	HOLL	HOLLAND	19-0065	871029	825	16.0	5.0	0.70	.	.	.	.	.	.	.	.	.	.
1036	HOLL	HOLLAND	19-0065	871029	825	17.0	5.0	0.60	.	.	.	.	.	.	.	.	.	.
1037	HOLL	HOLLAND	19-0065	871029	825	18.0	5.0	0.60	.	390	.	.	.	.	.	.	300	7.27
1038	HOLL	HOLLAND	19-0065	871029	825	19.0	5.0	0.60	.	.	.	.	.	.	.	.	.	.
1039	HOLL	HOLLAND	19-0065	871228	845	0.0	.	.	.	25	15	6	1.380	0.150	3.5	3.60	.	.
1040	HOLL	HOLLAND	19-0065	871228	845	1.0	3.0	7.40	.	.	.	.	.	.	.	.	.	.
1041	HOLL	HOLLAND	19-0065	871228	845	4.0	3.0	.	.	30	.	.	.	.	.	.	.	.
1042	HOLL	HOLLAND	19-0065	871228	845	8.0	3.5	6.35	.	20	.	.	.	.	.	.	.	.
1043	HOLL	HOLLAND	19-0065	871228	845	12.0	4.0	5.30	.	30	.	.	.	.	.	.	.	.
1044	HOLL	HOLLAND	19-0065	871228	845	16.0	4.0	0.85	.	40	.	.	.	.	.	.	.	.
1045	HOLL	HOLLAND	19-0065	880119	820	0.0	.	.	.	15	10	6	1.500	0.150	1.2	5.30	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
1046	HOLL	HOLLAND	19-0065	880119	820	1.0	3.0	6.15	.	.	.	.	.	.	.	.	.	.
1047	HOLL	HOLLAND	19-0065	880119	820	5.0	3.5	5.45	.	10	.	.	.	.	.	.	.	.
1048	HOLL	HOLLAND	19-0065	880119	820	9.0	4.0	4.90	.	10	.	.	.	.	.	.	.	.
1049	HOLL	HOLLAND	19-0065	880119	820	13.0	4.0	3.50	.	10	.	.	.	.	.	.	.	.
1050	HOLL	HOLLAND	19-0065	880119	820	17.0	4.0	0.05	.	60	.	.	.	.	.	.	.	.
1051	HOLL	HOLLAND	19-0065	880217	830	0.0	.	.	.	30	50	12	1.350	0.030	0.8	4.20	.	.
1052	HOLL	HOLLAND	19-0065	880217	830	1.0	2.0	5.15	.	.	.	.	.	.	.	.	.	.
1053	HOLL	HOLLAND	19-0065	880217	830	5.0	3.5	4.35	.	20	.	.	.	.	.	.	.	.
1054	HOLL	HOLLAND	19-0065	880217	830	9.0	4.0	2.05	.	30	.	.	.	.	.	.	.	.
1055	HOLL	HOLLAND	19-0065	880217	830	13.0	4.0	0.05	.	30	.	.	.	.	.	.	.	.
1056	HOLL	HOLLAND	19-0065	880217	830	17.0	4.0	.	.	50	.	.	.	.	.	.	.	.
1057	HOLL	HOLLAND	19-0065	880323	840	0.0	.	.	.	40	25	3	1.220	0.090	9.9	1.70	.	.
1058	HOLL	HOLLAND	19-0065	880323	840	1.0	5.0	7.70	.	.	.	.	.	.	.	.	.	.
1059	HOLL	HOLLAND	19-0065	880323	840	5.0	4.5	2.65	.	30	.	.	.	.	.	.	.	.
1060	HOLL	HOLLAND	19-0065	880323	840	9.0	4.0	2.10	.	20	.	.	.	.	.	.	.	.
1061	HOLL	HOLLAND	19-0065	880323	840	14.0	4.0	0.50	.	20	.	.	.	.	.	.	.	.
1062	HOLL	HOLLAND	19-0065	880323	840	19.0	4.0	0.00	.	950	.	.	.	.	.	.	.	.
1063	HOLL	HOLLAND	19-0065	880408	820	0.0	.	.	.	20	25	6	1.120	0.090	5.1	3.00	225	7.68
1064	HOLL	HOLLAND	19-0065	880408	820	5.0	.	.	.	20	.	.	.	.	.	.	230	7.45
1065	HOLL	HOLLAND	19-0065	880408	820	9.0	.	.	.	10	.	.	.	.	.	.	250	7.24
1066	HOLL	HOLLAND	19-0065	880408	820	13.0	.	.	.	20	.	.	.	.	.	.	255	7.20
1067	HOLL	HOLLAND	19-0065	880420	825	0.0	10.2	10.40	254.00	20	10	6	1.000	0.240	3.5	3.20	230	8.06
1068	HOLL	HOLLAND	19-0065	880420	825	0.5	.	.	150.00	.	.	.	.	.	.	.	.	.
1069	HOLL	HOLLAND	19-0065	880420	825	1.0	10.2	.	117.00	.	.	.	.	.	.	.	.	.
1070	HOLL	HOLLAND	19-0065	880420	825	1.5	.	.	89.00	.	.	.	.	.	.	.	.	.
1071	HOLL	HOLLAND	19-0065	880420	825	2.0	10.2	10.40	68.00	.	.	.	.	.	.	.	.	.
1072	HOLL	HOLLAND	19-0065	880420	825	2.5	.	.	50.50	.	.	.	.	.	.	.	.	.
1073	HOLL	HOLLAND	19-0065	880420	825	3.0	10.2	.	37.00	.	.	.	.	.	.	.	.	.
1074	HOLL	HOLLAND	19-0065	880420	825	3.5	.	.	29.50	.	.	.	.	.	.	.	.	.
1075	HOLL	HOLLAND	19-0065	880420	825	4.0	10.2	10.30	22.70	.	.	.	.	.	.	.	.	.
1076	HOLL	HOLLAND	19-0065	880420	825	4.5	.	.	17.70	.	.	.	.	.	.	.	.	.
1077	HOLL	HOLLAND	19-0065	880420	825	5.0	10.1	9.90	14.10	20	.	.	.	.	.	.	225	8.06
1078	HOLL	HOLLAND	19-0065	880420	825	5.5	8.7	.	10.60	.	.	.	.	.	.	.	.	.
1079	HOLL	HOLLAND	19-0065	880420	825	6.0	5.9	1.80	7.30	.	.	.	.	.	.	.	.	.
1080	HOLL	HOLLAND	19-0065	880420	825	6.5	5.3	.	5.10	.	.	.	.	.	.	.	.	.
1081	HOLL	HOLLAND	19-0065	880420	825	7.0	4.8	0.60	3.60	.	.	.	.	.	.	.	.	.
1082	HOLL	HOLLAND	19-0065	880420	825	7.5	4.6	.	2.70	.	.	.	.	.	.	.	.	.
1083	HOLL	HOLLAND	19-0065	880420	825	8.0	4.5	0.60	2.20	.	.	.	.	.	.	.	.	.
1084	HOLL	HOLLAND	19-0065	880420	825	9.0	4.4	.	.	10	.	.	.	.	.	.	230	7.22
1085	HOLL	HOLLAND	19-0065	880420	825	10.0	4.3	0.60	.	.	.	.	.	.	.	.	.	.
1086	HOLL	HOLLAND	19-0065	880420	825	11.0	4.2	.	.	.	.	.	.	.	.	.	.	.
1087	HOLL	HOLLAND	19-0065	880420	825	12.0	4.2	0.60	.	.	.	.	.	.	.	.	.	.
1088	HOLL	HOLLAND	19-0065	880420	825	13.0	4.2	.	.	.	.	.	.	.	.	.	.	.
1089	HOLL	HOLLAND	19-0065	880420	825	14.0	4.3	0.70	.	20	.	.	.	.	.	.	250	7.24
1090	HOLL	HOLLAND	19-0065	880420	825	15.0	4.3	.	.	.	.	.	.	.	.	.	.	.
1091	HOLL	HOLLAND	19-0065	880420	825	16.0	4.3	0.80	.	.	.	.	.	.	.	.	.	.
1092	HOLL	HOLLAND	19-0065	880420	825	17.0	4.4	0.80	.	.	.	.	.	.	.	.	.	.
1093	HOLL	HOLLAND	19-0065	880420	825	18.0	4.5	0.90	.	550	.	.	.	.	.	.	250	7.19
1094	HOLL	HOLLAND	19-0065	880503	830	0.0	14.8	10.70	795.00	30	20	2	0.880	0.150	2.7	4.70	245	8.22
1095	HOLL	HOLLAND	19-0065	880503	830	0.5	.	.	460.00	.	.	.	.	.	.	.	.	.
1096	HOLL	HOLLAND	19-0065	880503	830	1.0	14.7	10.30	330.00	.	.	.	.	.	.	.	.	.
1097	HOLL	HOLLAND	19-0065	880503	830	1.5	.	.	270.00	.	.	.	.	.	.	.	.	.
1098	HOLL	HOLLAND	19-0065	880503	830	2.0	14.6	10.60	205.00	.	.	.	.	.	.	.	.	.
1099	HOLL	HOLLAND	19-0065	880503	830	2.5	13.8	.	155.00	.	.	.	.	.	.	.	.	.
1100	HOLL	HOLLAND	19-0065	880503	830	3.0	12.7	10.50	122.00	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
1101	HOLL	HOLLAND	19-0065	880503	830	3.5	11.9	.	93.00	.	.	.	.	.	.	.	.	.
1102	HOLL	HOLLAND	19-0065	880503	830	4.0	11.3	10.60	74.00	.	.	.	.	.	.	.	.	.
1103	HOLL	HOLLAND	19-0065	880503	8304	4.5	11.0	.	58.50	.	.	.	.	.	.	.	.	.
1104	HOLL	HOLLAND	19-0065	880503	830	5.0	10.5	10.00	45.00	30	.	.	.	.	.	.	225	7.87
1105	HOLL	HOLLAND	19-0065	880503	830	5.5	9.9	.	35.50	.	.	.	.	.	.	.	.	.
1106	HOLL	HOLLAND	19-0065	880503	830	6.0	8.8	6.00	28.00	.	.	.	.	.	.	.	.	.
1107	HOLL	HOLLAND	19-0065	880503	830	6.5	8.1	.	21.20	.	.	.	.	.	.	.	.	.
1108	HOLL	HOLLAND	19-0065	880503	830	7.0	5.9	0.60	13.50	.	.	.	.	.	.	.	.	.
1109	HOLL	HOLLAND	19-0065	880503	830	7.5	4.9	.	9.20	.	.	.	.	.	.	.	.	.
1110	HOLL	HOLLAND	19-0065	880503	830	8.0	4.6	0.40	6.75	.	.	.	.	.	.	.	.	.
1111	HOLL	HOLLAND	19-0065	880503	830	8.5	.	.	5.20	.	.	.	.	.	.	.	.	.
1112	HOLL	HOLLAND	19-0065	880503	830	9.0	4.4	.	.	30	.	.	.	.	.	.	255	7.22
1113	HOLL	HOLLAND	19-0065	880503	830	10.0	4.4	0.40	.	.	.	.	.	.	.	.	.	.
1114	HOLL	HOLLAND	19-0065	880503	830	11.0	4.3	.	.	.	.	.	.	.	.	.	.	.
1115	HOLL	HOLLAND	19-0065	880503	830	12.0	4.3	0.40	.	.	.	.	.	.	.	.	.	.
1116	HOLL	HOLLAND	19-0065	880503	830	13.0	4.3	.	.	.	.	.	.	.	.	.	.	.
1117	HOLL	HOLLAND	19-0065	880503	830	14.0	4.3	0.40	.	20	.	.	.	.	.	.	265	7.22
1118	HOLL	HOLLAND	19-0065	880503	830	15.0	4.3	.	.	.	.	.	.	.	.	.	.	.
1119	HOLL	HOLLAND	19-0065	880503	830	16.0	4.4	0.40	.	.	.	.	.	.	.	.	.	.
1120	HOLL	HOLLAND	19-0065	880503	830	17.0	4.4	.	.	.	.	.	.	.	.	.	.	.
1121	HOLL	HOLLAND	19-0065	880503	830	18.0	4.5	0.40	.	480	.	.	.	.	.	.	270	7.18
1122	HOLL	HOLLAND	19-0065	880503	830	19.0	4.5	0.40	.	.	.	.	.	.	.	.	.	.
1123	HOLL	HOLLAND	19-0065	880517	840	0.0	15.9	8.90	945.00	30	20	4	0.850	0.150	6.7	2.90	240	8.42
1124	HOLL	HOLLAND	19-0065	880517	840	0.5	.	.	500.00	.	.	.	.	.	.	.	.	.
1125	HOLL	HOLLAND	19-0065	880517	840	1.0	15.9	9.20	340.00	.	.	.	.	.	.	.	.	.
1126	HOLL	HOLLAND	19-0065	880517	840	1.5	.	.	210.00	.	.	.	.	.	.	.	.	.
1127	HOLL	HOLLAND	19-0065	880517	840	2.0	15.8	9.10	138.00	.	.	.	.	.	.	.	.	.
1128	HOLL	HOLLAND	19-0065	880517	840	2.5	.	.	98.00	.	.	.	.	.	.	.	.	.
1129	HOLL	HOLLAND	19-0065	880517	840	3.0	15.8	9.00	65.00	.	.	.	.	.	.	.	.	.
1130	HOLL	HOLLAND	19-0065	880517	840	3.5	.	.	46.00	.	.	.	.	.	.	.	.	.
1131	HOLL	HOLLAND	19-0065	880517	840	4.0	15.7	8.70	33.00	.	.	.	.	.	.	.	.	.
1132	HOLL	HOLLAND	19-0065	880517	840	4.5	15.1	.	22.10	.	.	.	.	.	.	.	.	.
1133	HOLL	HOLLAND	19-0065	880517	840	5.0	11.5	9.30	17.30	20	.	.	.	.	.	.	225	8.19
1134	HOLL	HOLLAND	19-0065	880517	840	5.5	10.4	.	13.60	.	.	.	.	.	.	.	.	.
1135	HOLL	HOLLAND	19-0065	880517	840	6.0	9.3	5.50	11.20	.	.	.	.	.	.	.	.	.
1136	HOLL	HOLLAND	19-0065	880517	840	6.5	8.3	.	8.65	.	.	.	.	.	.	.	.	.
1137	HOLL	HOLLAND	19-0065	880517	840	7.0	6.8	0.30	6.65	.	.	.	.	.	.	.	.	.
1138	HOLL	HOLLAND	19-0065	880517	840	7.5	6.0	.	.	.	.	.	.	.	.	.	.	.
1139	HOLL	HOLLAND	19-0065	880517	840	8.0	5.5	0.20	.	.	.	.	.	.	.	.	.	.
1140	HOLL	HOLLAND	19-0065	880517	840	9.0	4.7	.	.	30	.	.	.	.	.	.	255	7.23
1141	HOLL	HOLLAND	19-0065	880517	840	10.0	4.4	0.10	.	.	.	.	.	.	.	.	.	.
1142	HOLL	HOLLAND	19-0065	880517	840	11.0	4.4	.	.	.	.	.	.	.	.	.	.	.
1143	HOLL	HOLLAND	19-0065	880517	840	12.0	4.4	0.10	.	.	.	.	.	.	.	.	.	.
1144	HOLL	HOLLAND	19-0065	880517	840	13.0	4.4	.	.	.	.	.	.	.	.	.	.	.
1145	HOLL	HOLLAND	19-0065	880517	840	14.0	4.4	0.10	.	30	.	.	.	.	.	.	265	7.24
1146	HOLL	HOLLAND	19-0065	880517	840	15.0	4.4	.	.	.	.	.	.	.	.	.	.	.
1147	HOLL	HOLLAND	19-0065	880517	840	16.0	4.4	0.10	.	.	.	.	.	.	.	.	.	.
1148	HOLL	HOLLAND	19-0065	880517	840	17.0	4.4	.	.	.	.	.	.	.	.	.	.	.
1149	HOLL	HOLLAND	19-0065	880517	840	18.0	4.5	0.10	.	610	.	.	.	.	.	.	305	7.15
1150	HOLL	HOLLAND	19-0065	880602	905	0.0	25.8	9.00	1000.00	25	20	5	0.900	0.100	6.4	2.60	225	8.84
1151	HOLL	HOLLAND	19-0065	880602	905	0.5	.	.	620.00	.	.	.	.	.	.	.	.	.
1152	HOLL	HOLLAND	19-0065	880602	905	1.0	25.7	8.40	360.00	.	.	.	.	.	.	.	.	.
1153	HOLL	HOLLAND	19-0065	880602	905	1.5	.	.	265.00	.	.	.	.	.	.	.	.	.
1154	HOLL	HOLLAND	19-0065	880602	905	2.0	24.8	9.20	173.00	.	.	.	.	.	.	.	.	.
1155	HOLL	HOLLAND	19-0065	880602	905	2.5	23.1	.	115.00	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
1156	HOLL	HOLLAND	19-0065	880602	905	3.0	21.5	11.90	73.00	.	.	.	.	.	.	.	.	.
1157	HOLL	HOLLAND	19-0065	880602	905	3.5	19.3	.	45.00	.	.	.	.	.	.	.	.	.
1158	HOLL	HOLLAND	19-0065	880602	905	4.0	16.6	12.70	27.80	20	.	.	.	.	.	.	220	8.85
1159	HOLL	HOLLAND	19-0065	880602	905	4.5	14.7	.	18.20	.	.	.	.	.	.	.	.	.
1160	HOLL	HOLLAND	19-0065	880602	905	5.0	12.7	9.20	12.70	.	.	.	.	.	.	.	.	.
1161	HOLL	HOLLAND	19-0065	880602	905	5.5	11.0	.	9.30	.	.	.	.	.	.	.	.	.
1162	HOLL	HOLLAND	19-0065	880602	905	6.0	9.5	2.50	6.70	.	.	.	.	.	.	.	.	.
1163	HOLL	HOLLAND	19-0065	880602	905	6.5	7.9	.	5.10	.	.	.	.	.	.	.	.	.
1164	HOLL	HOLLAND	19-0065	880602	905	7.0	7.3	0.20	.	.	.	.	.	.	.	.	.	.
1165	HOLL	HOLLAND	19-0065	880602	905	7.5	6.2	.	.	.	.	.	.	.	.	.	.	.
1166	HOLL	HOLLAND	19-0065	880602	905	8.0	5.6	0.10	.	.	.	.	.	.	.	.	.	.
1167	HOLL	HOLLAND	19-0065	880602	905	9.0	4.9	.	.	30	.	.	.	.	.	.	260	7.25
1168	HOLL	HOLLAND	19-0065	880602	905	10.0	4.5	0.10	.	.	.	.	.	.	.	.	.	.
1169	HOLL	HOLLAND	19-0065	880602	905	11.0	4.4	.	.	.	.	.	.	.	.	.	.	.
1170	HOLL	HOLLAND	19-0065	880602	905	12.0	4.4	0.10	.	.	.	.	.	.	.	.	.	.
1171	HOLL	HOLLAND	19-0065	880602	905	13.0	4.4	.	.	.	.	.	.	.	.	.	.	.
1172	HOLL	HOLLAND	19-0065	880602	905	14.0	4.4	.	.	30	.	.	.	.	.	.	275	7.16
1173	HOLL	HOLLAND	19-0065	880602	905	15.0	4.4	.	.	.	.	.	.	.	.	.	.	.
1174	HOLL	HOLLAND	19-0065	880602	905	16.0	4.5	0.10	.	.	.	.	.	.	.	.	.	.
1175	HOLL	HOLLAND	19-0065	880602	905	17.0	4.5	.	.	.	.	.	.	.	.	.	.	.
1176	HOLL	HOLLAND	19-0065	880602	905	18.0	4.5	.	.	620	.	.	.	.	.	.	310	7.00
1177	HOLL	HOLLAND	19-0065	880602	905	19.0	4.5	0.10	.	.	.	.	.	.	.	.	.	.
1178	HOLL	HOLLAND	19-0065	880614	835	0.0	25.0	7.50	890.00	10	20	7	0.820	0.050	6.0	2.25	.	8.74
1179	HOLL	HOLLAND	19-0065	880614	835	0.5	.	.	470.00	.	.	.	.	.	.	.	.	.
1180	HOLL	HOLLAND	19-0065	880614	835	1.0	25.0	.	255.00	.	.	.	.	.	.	.	.	.
1181	HOLL	HOLLAND	19-0065	880614	835	1.5	.	.	151.00	.	.	.	.	.	.	.	.	.
1182	HOLL	HOLLAND	19-0065	880614	835	2.0	25.0	7.60	96.00	.	.	.	.	.	.	.	.	.
1183	HOLL	HOLLAND	19-0065	880614	835	2.5	24.8	.	62.00	.	.	.	.	.	.	.	.	.
1184	HOLL	HOLLAND	19-0065	880614	835	3.0	23.8	.	34.50	.	.	.	.	.	.	.	.	.
1185	HOLL	HOLLAND	19-0065	880614	835	3.5	21.5	.	18.80	.	.	.	.	.	.	.	.	.
1186	HOLL	HOLLAND	19-0065	880614	835	4.0	18.3	.	10.80	.	.	.	.	.	.	.	.	.
1187	HOLL	HOLLAND	19-0065	880614	835	4.5	15.5	.	5.95	.	.	.	.	.	.	.	.	.
1188	HOLL	HOLLAND	19-0065	880614	835	5.0	13.6	.	3.45	20	.	.	.	.	.	.	.	.
1189	HOLL	HOLLAND	19-0065	880614	835	5.5	11.5	.	.	.	.	.	.	.	.	.	.	.
1190	HOLL	HOLLAND	19-0065	880614	835	6.0	9.4	0.20	.	.	.	.	.	.	.	.	.	.
1191	HOLL	HOLLAND	19-0065	880614	835	6.5	8.9	.	.	.	.	.	.	.	.	.	.	.
1192	HOLL	HOLLAND	19-0065	880614	835	7.0	8.0	0.20	.	.	.	.	.	.	.	.	.	.
1193	HOLL	HOLLAND	19-0065	880614	835	7.5	6.4	.	.	.	.	.	.	.	.	.	.	.
1194	HOLL	HOLLAND	19-0065	880614	835	8.0	5.7	0.20	.	.	.	.	.	.	.	.	.	.
1195	HOLL	HOLLAND	19-0065	880614	835	8.5	5.4	.	.	.	.	.	.	.	.	.	.	.
1196	HOLL	HOLLAND	19-0065	880614	835	9.0	5.0	0.20	.	20	.	.	.	.	.	.	.	.
1197	HOLL	HOLLAND	19-0065	880614	835	10.0	4.7	.	.	.	.	.	.	.	.	.	.	.
1198	HOLL	HOLLAND	19-0065	880614	835	11.0	4.6	0.20	.	.	.	.	.	.	.	.	.	.
1199	HOLL	HOLLAND	19-0065	880614	835	12.0	4.5	.	.	.	.	.	.	.	.	.	.	.
1200	HOLL	HOLLAND	19-0065	880614	835	13.0	4.5	0.20	.	.	.	.	.	.	.	.	.	.
1201	HOLL	HOLLAND	19-0065	880614	835	14.0	4.5	.	.	90	.	.	.	.	.	.	.	.
1202	HOLL	HOLLAND	19-0065	880614	835	15.0	4.5	0.20	.	.	.	.	.	.	.	.	.	.
1203	HOLL	HOLLAND	19-0065	880614	835	16.0	4.5	.	.	.	.	.	.	.	.	.	.	.
1204	HOLL	HOLLAND	19-0065	880614	835	17.0	4.5	0.20	.	.	.	.	.	.	.	.	.	.
1205	HOLL	HOLLAND	19-0065	880614	835	18.0	4.5	.	.	620	.	.	.	.	.	.	.	.
1206	HOLL	HOLLAND	19-0065	880614	835	19.0	4.5	2.30	.	.	.	.	.	.	.	.	.	.
1207	HOLL	HOLLAND	19-0065	880628	835	0.0	26.0	7.50	1150.00	40	20	16	0.680	0.050	5.4	2.40	.	8.83
1208	HOLL	HOLLAND	19-0065	880628	835	0.5	.	.	640.00	.	.	.	.	.	.	.	.	.
1209	HOLL	HOLLAND	19-0065	880628	835	1.0	26.0	7.40	380.00	.	.	.	.	.	.	.	.	.
1210	HOLL	HOLLAND	19-0065	880628	835	1.5	.	.	234.00	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
1211	HOLL	HOLLAND	19-0065	880628	835	2.0	26.0	7.30	155.00	.	.	.	.	.	.	.	.	.
1212	HOLL	HOLLAND	19-0065	880628	835	2.5	.	.	106.00	.	.	.	.	.	.	.	.	.
1213	HOLL	HOLLAND	19-0065	880628	835	3.0	25.9	6.70	67.00	.	.	.	.	.	.	.	.	.
1214	HOLL	HOLLAND	19-0065	880628	835	3.5	24.0	.	43.00	.	.	.	.	.	.	.	.	.
1215	HOLL	HOLLAND	19-0065	880628	835	4.0	19.2	9.20	29.10	10	.	.	.	.	.	.	.	.
1216	HOLL	HOLLAND	19-0065	880628	835	4.5	16.4	.	16.60	.	.	.	.	.	.	.	.	.
1217	HOLL	HOLLAND	19-0065	880628	835	5.0	13.6	4.10	9.60	.	.	.	.	.	.	.	.	.
1218	HOLL	HOLLAND	19-0065	880628	835	5.5	11.5	.	5.45	.	.	.	.	.	.	.	.	.
1219	HOLL	HOLLAND	19-0065	880628	835	6.0	9.7	0.70	.	.	.	.	.	.	.	.	.	.
1220	HOLL	HOLLAND	19-0065	880628	835	6.5	8.8	.	.	.	.	.	.	.	.	.	.	.
1221	HOLL	HOLLAND	19-0065	880628	835	7.0	7.4	0.50	.	.	.	.	.	.	.	.	.	.
1222	HOLL	HOLLAND	19-0065	880628	835	7.5	6.4	.	.	.	.	.	.	.	.	.	.	.
1223	HOLL	HOLLAND	19-0065	880628	835	8.0	5.7	0.50	.	.	.	.	.	.	.	.	.	.
1224	HOLL	HOLLAND	19-0065	880628	835	9.0	5.0	0.50	.	20	.	.	.	.	.	.	.	.
1225	HOLL	HOLLAND	19-0065	880628	835	10.0	4.6	.	.	.	.	.	.	.	.	.	.	.
1226	HOLL	HOLLAND	19-0065	880628	835	11.0	4.5	0.50	.	.	.	.	.	.	.	.	.	.
1227	HOLL	HOLLAND	19-0065	880628	835	12.0	4.5	.	.	.	.	.	.	.	.	.	.	.
1228	HOLL	HOLLAND	19-0065	880628	835	13.0	4.5	.	.	.	.	.	.	.	.	.	.	.
1229	HOLL	HOLLAND	19-0065	880628	835	14.0	4.5	0.50	.	90	.	.	.	.	.	.	.	.
1230	HOLL	HOLLAND	19-0065	880628	835	16.0	4.5	.	.	.	.	.	.	.	.	.	.	.
1231	HOLL	HOLLAND	19-0065	880628	835	18.0	4.6	0.50	.	700	.	.	.	.	.	.	.	.
1232	HOLL	HOLLAND	19-0065	880712	830	0.0	26.3	7.20	860.00	20	.	2	0.750	0.050	7.0	2.40	245	8.44
1233	HOLL	HOLLAND	19-0065	880712	830	0.5	.	.	510.00	.	.	.	.	.	.	.	.	.
1234	HOLL	HOLLAND	19-0065	880712	830	1.0	26.4	7.20	300.00	.	.	.	.	.	.	.	.	.
1235	HOLL	HOLLAND	19-0065	880712	830	1.5	.	.	180.00	.	.	.	.	.	.	.	.	.
1236	HOLL	HOLLAND	19-0065	880712	830	2.0	26.4	7.20	108.00	.	.	.	.	.	.	.	.	.
1237	HOLL	HOLLAND	19-0065	880712	830	2.5	.	.	68.00	.	.	.	.	.	.	.	.	.
1238	HOLL	HOLLAND	19-0065	880712	830	3.0	26.3	7.00	42.50	.	.	.	.	.	.	.	.	.
1239	HOLL	HOLLAND	19-0065	880712	830	3.5	23.3	.	27.40	.	.	.	.	.	.	.	.	.
1240	HOLL	HOLLAND	19-0065	880712	830	4.0	21.7	7.50	15.90	.	.	.	.	.	.	.	.	.
1241	HOLL	HOLLAND	19-0065	880712	830	4.5	17.8	.	9.00	.	.	.	.	.	.	.	.	.
1242	HOLL	HOLLAND	19-0065	880712	830	5.0	14.7	4.70	6.20	20	.	.	.	.	.	.	235	.
1243	HOLL	HOLLAND	19-0065	880712	830	5.5	12.2	.	4.00	.	.	.	.	.	.	.	.	.
1244	HOLL	HOLLAND	19-0065	880712	830	6.0	10.4	0.50	2.58	.	.	.	.	.	.	.	.	.
1245	HOLL	HOLLAND	19-0065	880712	830	6.5	8.2	.	.	.	.	.	.	.	.	.	.	.
1246	HOLL	HOLLAND	19-0065	880712	830	7.0	7.5	0.50	.	.	.	.	.	.	.	.	.	.
1247	HOLL	HOLLAND	19-0065	880712	830	7.5	6.6	.	.	.	.	.	.	.	.	.	.	.
1248	HOLL	HOLLAND	19-0065	880712	830	8.0	5.8	0.50	.	.	.	.	.	.	.	.	.	.
1249	HOLL	HOLLAND	19-0065	880712	830	8.5	5.2	.	.	.	.	.	.	.	.	.	.	.
1250	HOLL	HOLLAND	19-0065	880712	830	9.0	5.2	0.50	.	20	.	.	.	.	.	.	265	.
1251	HOLL	HOLLAND	19-0065	880712	830	9.5	4.9	.	.	.	.	.	.	.	.	.	.	.
1252	HOLL	HOLLAND	19-0065	880712	830	10.0	4.7	0.50	.	.	.	.	.	.	.	.	.	.
1253	HOLL	HOLLAND	19-0065	880712	830	10.5	4.6	.	.	.	.	.	.	.	.	.	.	.
1254	HOLL	HOLLAND	19-0065	880712	830	11.0	4.6	0.50	.	.	.	.	.	.	.	.	.	.
1255	HOLL	HOLLAND	19-0065	880712	830	12.0	4.6	0.60	.	.	.	.	.	.	.	.	.	.
1256	HOLL	HOLLAND	19-0065	880712	830	13.0	4.6	0.60	.	.	.	.	.	.	.	.	.	.
1257	HOLL	HOLLAND	19-0065	880712	830	14.0	4.6	0.60	.	140	.	.	.	.	.	.	290	.
1258	HOLL	HOLLAND	19-0065	880712	830	15.0	4.6	0.60	.	.	.	.	.	.	.	.	.	.
1259	HOLL	HOLLAND	19-0065	880712	830	16.0	4.6	0.50	.	.	.	.	.	.	.	.	.	.
1260	HOLL	HOLLAND	19-0065	880712	830	17.0	4.6	0.50	.	.	.	.	.	.	.	.	.	.
1261	HOLL	HOLLAND	19-0065	880712	830	18.0	4.6	0.50	.	410	.	.	.	.	.	.	300	.
1262	HOLL	HOLLAND	19-0065	880712	830	19.0	4.6	0.50	.	.	.	.	.	.	.	.	.	.
1263	HOLL	HOLLAND	19-0065	880727	815	0.0	25.9	8.20	785.00	10	10	2	0.750	0.100	10.0	2.30	230	8.52
1264	HOLL	HOLLAND	19-0065	880727	815	0.5	.	.	410.00	.	.	.	.	.	.	.	.	.
1265	HOLL	HOLLAND	19-0065	880727	815	1.0	25.9	8.00	220.00	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
1266	HOLL	HOLLAND	19-0065	880727	815	1.5	.	.	139.00	.	.	.	.	.	.	.	.	.
1267	HOLL	HOLLAND	19-0065	880727	815	2.0	25.9	7.90	83.00	.	.	.	.	.	.	.	.	.
1268	HOLL	HOLLAND	19-0065	880727	815	2.5	.	.	52.50	.	.	.	.	.	.	.	.	.
1269	HOLL	HOLLAND	19-0065	880727	815	3.0	25.8	7.30	31.00	.	.	.	.	.	.	.	.	.
1270	HOLL	HOLLAND	19-0065	880727	815	3.5	24.6	.	20.00	.	.	.	.	.	.	.	.	.
1271	HOLL	HOLLAND	19-0065	880727	815	4.0	22.2	5.40	12.70	.	.	.	.	.	.	.	.	.
1272	HOLL	HOLLAND	19-0065	880727	815	4.5	19.5	.	6.60	.	.	.	.	.	.	.	.	.
1273	HOLL	HOLLAND	19-0065	880727	815	5.0	15.3	1.20	4.50	20	.	.	.	.	.	.	220	7.87
1274	HOLL	HOLLAND	19-0065	880727	815	5.5	12.4	.	3.05	.	.	.	.	.	.	.	.	.
1275	HOLL	HOLLAND	19-0065	880727	815	6.0	10.5	0.30	1.88	.	.	.	.	.	.	.	.	.
1276	HOLL	HOLLAND	19-0065	880727	815	6.5	8.8	.	.	.	.	.	.	.	.	.	.	.
1277	HOLL	HOLLAND	19-0065	880727	815	7.0	7.8	0.20	.	.	.	.	.	.	.	.	.	.
1278	HOLL	HOLLAND	19-0065	880727	815	7.5	6.6	.	.	.	.	.	.	.	.	.	.	.
1279	HOLL	HOLLAND	19-0065	880727	815	8.0	6.0	0.20	.	.	.	.	.	.	.	.	.	.
1280	HOLL	HOLLAND	19-0065	880727	815	8.5	5.3	.	.	.	.	.	.	.	.	.	.	.
1281	HOLL	HOLLAND	19-0065	880727	815	9.0	5.1	0.20	.	20	.	.	.	.	.	.	250	7.41
1282	HOLL	HOLLAND	19-0065	880727	815	9.5	4.9	.	.	.	.	.	.	.	.	.	.	.
1283	HOLL	HOLLAND	19-0065	880727	815	10.0	4.8	0.20	.	.	.	.	.	.	.	.	.	.
1284	HOLL	HOLLAND	19-0065	880727	815	11.0	4.7	0.20	.	.	.	.	.	.	.	.	.	.
1285	HOLL	HOLLAND	19-0065	880727	815	12.0	4.6	0.20	.	.	.	.	.	.	.	.	.	.
1286	HOLL	HOLLAND	19-0065	880727	815	13.0	4.6	0.20	.	.	.	.	.	.	.	.	.	.
1287	HOLL	HOLLAND	19-0065	880727	815	14.0	4.6	0.20	.	120	.	.	.	.	.	.	280	7.05
1288	HOLL	HOLLAND	19-0065	880727	815	15.0	4.6	0.20	.	.	.	.	.	.	.	.	.	.
1289	HOLL	HOLLAND	19-0065	880727	815	16.0	4.6	0.20	.	.	.	.	.	.	.	.	.	.
1290	HOLL	HOLLAND	19-0065	880727	815	17.0	4.6	0.20	.	.	.	.	.	.	.	.	.	.
1291	HOLL	HOLLAND	19-0065	880727	815	18.0	.	.	.	580	.	.	.	.	.	.	310	7.01
1292	HOLL	HOLLAND	19-0065	880809	840	0.0	26.6	7.00	880.00	35	25	2	0.800	0.050	7.8	2.00	215	8.89
1293	HOLL	HOLLAND	19-0065	880809	840	0.5	26.7	7.10	395.00	.	.	.	.	.	.	.	.	.
1294	HOLL	HOLLAND	19-0065	880809	840	1.0	26.7	7.00	248.00	.	.	.	.	.	.	.	.	.
1295	HOLL	HOLLAND	19-0065	880809	840	1.5	.	.	158.00	.	.	.	.	.	.	.	.	.
1296	HOLL	HOLLAND	19-0065	880809	840	2.0	26.6	6.80	92.00	.	.	.	.	.	.	.	.	.
1297	HOLL	HOLLAND	19-0065	880809	840	2.5	.	.	65.00	.	.	.	.	.	.	.	.	.
1298	HOLL	HOLLAND	19-0065	880809	840	3.0	26.6	6.50	43.00	.	.	.	.	.	.	.	.	.
1299	HOLL	HOLLAND	19-0065	880809	840	3.5	26.2	.	24.60	.	.	.	.	.	.	.	.	.
1300	HOLL	HOLLAND	19-0065	880809	840	4.0	23.6	3.70	13.20	50	.	.	.	.	.	.	230	.
1301	HOLL	HOLLAND	19-0065	880809	840	4.5	20.1	.	6.75	.	.	.	.	.	.	.	.	.
1302	HOLL	HOLLAND	19-0065	880809	840	5.0	15.8	0.20	4.00	.	.	.	.	.	.	.	.	.
1303	HOLL	HOLLAND	19-0065	880809	840	5.5	12.9	.	.	.	.	.	.	.	.	.	.	.
1304	HOLL	HOLLAND	19-0065	880809	840	6.0	11.3	0.20	.	.	.	.	.	.	.	.	.	.
1305	HOLL	HOLLAND	19-0065	880809	840	6.5	10.0	.	.	.	.	.	.	.	.	.	.	.
1306	HOLL	HOLLAND	19-0065	880809	840	7.0	8.2	0.20	.	.	.	.	.	.	.	.	.	.
1307	HOLL	HOLLAND	19-0065	880809	840	7.5	7.2	.	.	.	.	.	.	.	.	.	.	.
1308	HOLL	HOLLAND	19-0065	880809	840	8.0	6.3	0.20	.	.	.	.	.	.	.	.	.	.
1309	HOLL	HOLLAND	19-0065	880809	840	8.5	5.6	.	.	.	.	.	.	.	.	.	.	.
1310	HOLL	HOLLAND	19-0065	880809	840	9.0	5.3	0.20	.	30	.	.	.	.	.	.	260	.
1311	HOLL	HOLLAND	19-0065	880809	840	9.5	5.0	.	.	.	.	.	.	.	.	.	.	.
1312	HOLL	HOLLAND	19-0065	880809	840	10.0	5.0	0.20	.	.	.	.	.	.	.	.	.	.
1313	HOLL	HOLLAND	19-0065	880809	840	11.0	4.7	0.20	.	.	.	.	.	.	.	.	.	.
1314	HOLL	HOLLAND	19-0065	880809	840	12.0	4.7	0.20	.	.	.	.	.	.	.	.	.	.
1315	HOLL	HOLLAND	19-0065	880809	840	13.0	4.6	0.20	.	.	.	.	.	.	.	.	.	.
1316	HOLL	HOLLAND	19-0065	880809	840	14.0	4.6	0.20	.	270	.	.	.	.	.	.	290	.
1317	HOLL	HOLLAND	19-0065	880809	840	15.0	4.6	0.20	.	.	.	.	.	.	.	.	.	.
1318	HOLL	HOLLAND	19-0065	880809	840	16.0	4.6	0.20	.	.	.	.	.	.	.	.	.	.
1319	HOLL	HOLLAND	19-0065	880809	840	17.0	4.6	0.20	.	.	.	.	.	.	.	.	.	.
1320	HOLL	HOLLAND	19-0065	880809	840	18.0	4.6	0.20	.	590	.	.	.	.	.	.	325	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
1321	HOLL	HOLLAND	19-0065	880823	845	0.0	24.1	6.50	745.00	35	15	2	0.850	0.050	26.0	1.80	225	8.60
1322	HOLL	HOLLAND	19-0065	880823	845	0.5	.	.	330.00	.	.	.	.	.	.	.	.	.
1323	HOLL	HOLLAND	19-0065	880823	845	1.0	24.2	6.40	155.00	.	.	.	.	.	.	.	.	.
1324	HOLL	HOLLAND	19-0065	880823	845	1.5	.	.	92.00	.	.	.	.	.	.	.	.	.
1325	HOLL	HOLLAND	19-0065	880823	845	2.0	24.2	6.30	54.00	.	.	.	.	.	.	.	.	.
1326	HOLL	HOLLAND	19-0065	880823	845	2.5	.	.	32.00	.	.	.	.	.	.	.	.	.
1327	HOLL	HOLLAND	19-0065	880823	845	3.0	24.1	6.10	18.90	.	.	.	.	.	.	.	.	.
1328	HOLL	HOLLAND	19-0065	880823	845	3.5	.	.	11.50	.	.	.	.	.	.	.	.	.
1329	HOLL	HOLLAND	19-0065	880823	845	4.0	23.9	4.50	6.60	.	.	.	.	.	.	.	.	.
1330	HOLL	HOLLAND	19-0065	880823	845	4.5	22.3	.	4.20	.	.	.	.	.	.	.	.	.
1331	HOLL	HOLLAND	19-0065	880823	845	5.0	16.8	0.90	2.97	30	.	.	.	.	.	.	230	7.75
1332	HOLL	HOLLAND	19-0065	880823	845	5.5	13.6	.	.	.	.	.	.	.	.	.	.	.
1333	HOLL	HOLLAND	19-0065	880823	845	6.0	10.7	1.00	.	.	.	.	.	.	.	.	.	.
1334	HOLL	HOLLAND	19-0065	880823	845	6.5	9.4	.	.	.	.	.	.	.	.	.	.	.
1335	HOLL	HOLLAND	19-0065	880823	845	7.0	8.1	1.10	.	.	.	.	.	.	.	.	.	.
1336	HOLL	HOLLAND	19-0065	880823	845	7.5	6.9	.	.	.	.	.	.	.	.	.	.	.
1337	HOLL	HOLLAND	19-0065	880823	845	8.0	6.3	1.20	.	.	.	.	.	.	.	.	.	.
1338	HOLL	HOLLAND	19-0065	880823	845	8.5	5.6	.	.	.	.	.	.	.	.	.	.	.
1339	HOLL	HOLLAND	19-0065	880823	845	9.0	5.3	1.20	.	20	.	.	.	.	.	.	250	7.20
1340	HOLL	HOLLAND	19-0065	880823	845	10.0	4.9	1.20	.	.	.	.	.	.	.	.	.	.
1341	HOLL	HOLLAND	19-0065	880823	845	11.0	4.8	1.20	.	.	.	.	.	.	.	.	.	.
1342	HOLL	HOLLAND	19-0065	880823	845	12.0	4.7	1.20	.	.	.	.	.	.	.	.	.	.
1343	HOLL	HOLLAND	19-0065	880823	845	13.0	4.6	1.20	.	.	.	.	.	.	.	.	.	.
1344	HOLL	HOLLAND	19-0065	880823	845	14.0	4.6	1.20	.	230	.	.	.	.	.	.	280	7.00
1345	HOLL	HOLLAND	19-0065	880823	845	15.0	4.6	1.20	.	.	.	.	.	.	.	.	.	.
1346	HOLL	HOLLAND	19-0065	880823	845	16.0	4.6	1.20	.	.	.	.	.	.	.	.	.	.
1347	HOLL	HOLLAND	19-0065	880823	845	17.0	4.6	1.30	.	520	.	.	.	.	.	.	300	6.94
1348	HOLL	HOLLAND	19-0065	880906	830	0.0	19.7	8.40	520.00	30	10	4	0.850	0.050	16.0	1.70	235	8.88
1349	HOLL	HOLLAND	19-0065	880906	830	0.5	.	.	274.00	.	.	.	.	.	.	.	.	.
1350	HOLL	HOLLAND	19-0065	880906	830	1.0	19.7	8.40	130.00	.	.	.	.	.	.	.	.	.
1351	HOLL	HOLLAND	19-0065	880906	830	1.5	.	.	74.00	.	.	.	.	.	.	.	.	.
1352	HOLL	HOLLAND	19-0065	880906	830	2.0	19.7	8.40	42.50	.	.	.	.	.	.	.	.	.
1353	HOLL	HOLLAND	19-0065	880906	830	2.5	.	.	26.60	.	.	.	.	.	.	.	.	.
1354	HOLL	HOLLAND	19-0065	880906	830	3.0	19.7	8.30	16.30	.	.	.	.	.	.	.	.	.
1355	HOLL	HOLLAND	19-0065	880906	830	3.5	.	.	10.20	.	.	.	.	.	.	.	.	.
1356	HOLL	HOLLAND	19-0065	880906	830	4.0	19.6	8.20	6.55	.	.	.	.	.	.	.	.	.
1357	HOLL	HOLLAND	19-0065	880906	830	4.5	19.4	.	4.10	.	.	.	.	.	.	.	.	.
1358	HOLL	HOLLAND	19-0065	880906	830	5.0	19.1	5.90	2.73	30	.	.	.	.	.	.	220	8.83
1359	HOLL	HOLLAND	19-0065	880906	830	5.5	16.2	.	.	.	.	.	.	.	.	.	.	.
1360	HOLL	HOLLAND	19-0065	880906	830	6.0	11.8	1.40	.	.	.	.	.	.	.	.	.	.
1361	HOLL	HOLLAND	19-0065	880906	830	6.5	9.7	.	.	.	.	.	.	.	.	.	.	.
1362	HOLL	HOLLAND	19-0065	880906	830	7.0	8.0	1.30	.	.	.	.	.	.	.	.	.	.
1363	HOLL	HOLLAND	19-0065	880906	830	7.5	7.2	.	.	.	.	.	.	.	.	.	.	.
1364	HOLL	HOLLAND	19-0065	880906	830	8.0	6.3	1.30	.	.	.	.	.	.	.	.	.	.
1365	HOLL	HOLLAND	19-0065	880906	830	8.5	5.8	.	.	.	.	.	.	.	.	.	.	.
1366	HOLL	HOLLAND	19-0065	880906	830	9.0	5.3	1.20	.	20	.	.	.	.	.	.	265	.
1367	HOLL	HOLLAND	19-0065	880906	830	9.5	5.0	.	.	.	.	.	.	.	.	.	.	.
1368	HOLL	HOLLAND	19-0065	880906	830	10.0	4.9	1.20	.	.	.	.	.	.	.	.	.	.
1369	HOLL	HOLLAND	19-0065	880906	830	11.0	4.7	1.10	.	.	.	.	.	.	.	.	.	.
1370	HOLL	HOLLAND	19-0065	880906	830	12.0	4.7	1.00	.	.	.	.	.	.	.	.	.	.
1371	HOLL	HOLLAND	19-0065	880906	830	13.0	4.6	1.00	.	140	.	.	.	.	.	.	295	.
1372	HOLL	HOLLAND	19-0065	880906	830	14.0	4.6	1.00	.	.	.	.	.	.	.	.	.	.
1373	HOLL	HOLLAND	19-0065	880906	830	15.0	4.6	0.90	.	.	.	.	.	.	.	.	.	.
1374	HOLL	HOLLAND	19-0065	880906	830	16.0	4.6	0.90	.	.	.	.	.	.	.	.	.	.
1375	HOLL	HOLLAND	19-0065	880906	830	17.0	4.6	0.90	.	470	.	.	.	.	.	.	325	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
1376	HOLL	HOLLAND	19-0065	880906	830	18.0	4.6	0.90	.	.	.	.	.	.	.	.	.	.
1377	HOLL	HOLLAND	19-0065	880921	825	0.0	17.3	8.10	76.00	30	20	2	0.880	0.050	15.0	1.60	220	.
1378	HOLL	HOLLAND	19-0065	880921	825	0.5	.	.	30.00	.	.	.	.	.	.	.	.	.
1379	HOLL	HOLLAND	19-0065	880921	825	1.0	17.3	8.00	19.10	.	.	.	.	.	.	.	.	.
1380	HOLL	HOLLAND	19-0065	880921	825	1.5	.	.	10.80	.	.	.	.	.	.	.	.	.
1381	HOLL	HOLLAND	19-0065	880921	825	2.0	17.3	8.00	6.90	.	.	.	.	.	.	.	.	.
1382	HOLL	HOLLAND	19-0065	880921	825	2.5	.	.	4.40	.	.	.	.	.	.	.	.	.
1383	HOLL	HOLLAND	19-0065	880921	825	3.0	17.3	7.80	2.74	.	.	.	.	.	.	.	.	.
1384	HOLL	HOLLAND	19-0065	880921	825	3.5	.	.	1.69	.	.	.	.	.	.	.	.	.
1385	HOLL	HOLLAND	19-0065	880921	825	4.0	17.3	7.80	1.08	.	.	.	.	.	.	.	.	.
1386	HOLL	HOLLAND	19-0065	880921	825	4.5	.	.	0.71	.	.	.	.	.	.	.	.	.
1387	HOLL	HOLLAND	19-0065	880921	825	5.0	17.2	7.50	.	.	.	.	.	.	.	.	.	.
1388	HOLL	HOLLAND	19-0065	880921	825	5.5	16.2	4.10	.	.	.	.	.	.	.	.	.	.
1389	HOLL	HOLLAND	19-0065	880921	825	6.0	12.7	0.60	.	40	.	.	.	.	.	.	235	.
1390	HOLL	HOLLAND	19-0065	880921	825	6.5	9.9	.	.	.	.	.	.	.	.	.	.	.
1391	HOLL	HOLLAND	19-0065	880921	825	7.0	8.5	.	.	.	.	.	.	.	.	.	.	.
1392	HOLL	HOLLAND	19-0065	880921	825	7.5	7.2	.	.	.	.	.	.	.	.	.	.	.
1393	HOLL	HOLLAND	19-0065	880921	825	8.0	6.2	0.60	.	.	.	.	.	.	.	.	.	.
1394	HOLL	HOLLAND	19-0065	880921	825	8.5	5.8	.	.	.	.	.	.	.	.	.	.	.
1395	HOLL	HOLLAND	19-0065	880921	825	9.0	5.4	.	.	.	.	.	.	.	.	.	.	.
1396	HOLL	HOLLAND	19-0065	880921	825	10.0	5.1	0.70	.	30	.	.	.	.	.	.	260	.
1397	HOLL	HOLLAND	19-0065	880921	825	11.0	4.8	.	.	.	.	.	.	.	.	.	.	.
1398	HOLL	HOLLAND	19-0065	880921	825	12.0	4.7	0.80	.	.	.	.	.	.	.	.	.	.
1399	HOLL	HOLLAND	19-0065	880921	825	13.0	4.6	.	.	.	.	.	.	.	.	.	.	.
1400	HOLL	HOLLAND	19-0065	880921	825	14.0	4.6	0.90	.	210	.	.	.	.	.	.	290	.
1401	HOLL	HOLLAND	19-0065	880921	825	15.0	4.5	.	.	.	.	.	.	.	.	.	.	.
1402	HOLL	HOLLAND	19-0065	880921	825	16.0	4.5	0.90	.	.	.	.	.	.	.	.	.	.
1403	HOLL	HOLLAND	19-0065	880921	825	17.0	4.5	.	.	.	.	.	.	.	.	.	.	.
1404	HOLL	HOLLAND	19-0065	880921	825	18.0	4.5	0.90	.	500	.	.	.	.	.	.	320	.
1405	HOLL	HOLLAND	19-0065	881004	830	0.0	14.1	8.80	515.00	40	25	6	0.850	0.050	10.0	1.70	225	8.44
1406	HOLL	HOLLAND	19-0065	881004	830	0.5	.	.	200.00	.	.	.	.	.	.	.	.	.
1407	HOLL	HOLLAND	19-0065	881004	830	1.0	14.1	8.60	104.00	.	.	.	.	.	.	.	.	.
1408	HOLL	HOLLAND	19-0065	881004	830	1.5	.	.	59.00	.	.	.	.	.	.	.	.	.
1409	HOLL	HOLLAND	19-0065	881004	830	2.0	14.1	8.60	34.00	.	.	.	.	.	.	.	.	.
1410	HOLL	HOLLAND	19-0065	881004	830	2.5	.	.	20.50	.	.	.	.	.	.	.	.	.
1411	HOLL	HOLLAND	19-0065	881004	830	3.0	14.1	8.60	12.10	.	.	.	.	.	.	.	.	.
1412	HOLL	HOLLAND	19-0065	881004	830	3.5	.	.	7.60	.	.	.	.	.	.	.	.	.
1413	HOLL	HOLLAND	19-0065	881004	830	4.0	14.1	8.50	4.65	.	.	.	.	.	.	.	.	.
1414	HOLL	HOLLAND	19-0065	881004	830	4.5	.	.	2.90	.	.	.	.	.	.	.	.	.
1415	HOLL	HOLLAND	19-0065	881004	830	5.0	14.1	8.50	.	20	.	.	.	.	.	.	220	8.36
1416	HOLL	HOLLAND	19-0065	881004	830	6.0	14.0	8.20	.	.	.	.	.	.	.	.	.	.
1417	HOLL	HOLLAND	19-0065	881004	830	6.5	12.5	.	.	.	.	.	.	.	.	.	.	.
1418	HOLL	HOLLAND	19-0065	881004	830	7.0	9.6	1.40	.	.	.	.	.	.	.	.	.	.
1419	HOLL	HOLLAND	19-0065	881004	830	7.5	7.6	.	.	.	.	.	.	.	.	.	.	.
1420	HOLL	HOLLAND	19-0065	881004	830	8.0	6.5	1.20	.	.	.	.	.	.	.	.	.	.
1421	HOLL	HOLLAND	19-0065	881004	830	8.5	6.3	.	.	.	.	.	.	.	.	.	.	.
1422	HOLL	HOLLAND	19-0065	881004	830	9.0	5.4	1.20	.	20	.	.	.	.	.	.	255	7.28
1423	HOLL	HOLLAND	19-0065	881004	830	9.5	5.2	.	.	.	.	.	.	.	.	.	.	.
1424	HOLL	HOLLAND	19-0065	881004	830	10.0	5.1	.	.	.	.	.	.	.	.	.	.	.
1425	HOLL	HOLLAND	19-0065	881004	830	11.0	4.8	1.10	.	.	.	.	.	.	.	.	.	.
1426	HOLL	HOLLAND	19-0065	881004	830	12.0	4.7	1.00	.	.	.	.	.	.	.	.	.	.
1427	HOLL	HOLLAND	19-0065	881004	830	13.0	4.6	1.00	.	120	.	.	.	.	.	.	275	7.18
1428	HOLL	HOLLAND	19-0065	881004	830	14.0	4.5	1.00	.	.	.	.	.	.	.	.	.	.
1429	HOLL	HOLLAND	19-0065	881004	830	15.0	4.5	0.90	.	.	.	.	.	.	.	.	.	.
1430	HOLL	HOLLAND	19-0065	881004	830	16.0	4.5	0.90	.	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
1431	HOLL	HOLLAND	19-0065	881004	830	17.0	4.5	0.90	.	440	.	.	.	.	.	.	305	7.06
1432	HOLL	HOLLAND	19-0065	881004	830	18.0	4.5	0.90	.	.	.	.	.	.	.	.	.	.
1433	HOLL	HOLLAND	19-0065	881018	810	0.0	11.5	8.70	42.00	30	25	8	0.800	0.150	6.1	2.40	220	8.21
1434	HOLL	HOLLAND	19-0065	881018	810	0.5	.	.	15.80	.	.	.	.	.	.	.	.	.
1435	HOLL	HOLLAND	19-0065	881018	810	1.0	11.6	8.80	10.20	.	.	.	.	.	.	.	.	.
1436	HOLL	HOLLAND	19-0065	881018	810	1.5	.	.	7.75	.	.	.	.	.	.	.	.	.
1437	HOLL	HOLLAND	19-0065	881018	810	2.0	11.6	8.80	5.80	.	.	.	.	.	.	.	.	.
1438	HOLL	HOLLAND	19-0065	881018	810	2.5	.	.	4.10	.	.	.	.	.	.	.	.	.
1439	HOLL	HOLLAND	19-0065	881018	810	3.0	11.6	8.80	2.98	.	.	.	.	.	.	.	.	.
1440	HOLL	HOLLAND	19-0065	881018	810	3.5	.	.	2.16	.	.	.	.	.	.	.	.	.
1441	HOLL	HOLLAND	19-0065	881018	810	4.0	11.6	8.50	1.51	.	.	.	.	.	.	.	.	.
1442	HOLL	HOLLAND	19-0065	881018	810	4.5	.	.	1.10	.	.	.	.	.	.	.	.	.
1443	HOLL	HOLLAND	19-0065	881018	810	5.0	11.5	8.30	0.67	.	.	.	.	.	.	.	.	.
1444	HOLL	HOLLAND	19-0065	881018	810	5.5	.	.	0.55	.	.	.	.	.	.	.	.	.
1445	HOLL	HOLLAND	19-0065	881018	810	6.0	11.5	7.80	0.40	20	.	.	.	.	.	.	220	8.16
1446	HOLL	HOLLAND	19-0065	881018	810	6.5	11.0	.	.	.	.	.	.	.	.	.	.	.
1447	HOLL	HOLLAND	19-0065	881018	810	7.0	10.5	2.60	.	.	.	.	.	.	.	.	.	.
1448	HOLL	HOLLAND	19-0065	881018	810	7.5	8.6	.	.	.	.	.	.	.	.	.	.	.
1449	HOLL	HOLLAND	19-0065	881018	810	8.0	6.6	1.20	.	.	.	.	.	.	.	.	.	.
1450	HOLL	HOLLAND	19-0065	881018	810	8.5	5.8	.	.	.	.	.	.	.	.	.	.	.
1451	HOLL	HOLLAND	19-0065	881018	810	9.0	5.3	1.10	.	.	.	.	.	.	.	.	.	.
1452	HOLL	HOLLAND	19-0065	881018	810	10.0	5.0	1.00	.	10	.	.	.	.	.	.	260	7.28
1453	HOLL	HOLLAND	19-0065	881018	810	11.0	4.9	1.00	.	.	.	.	.	.	.	.	.	.
1454	HOLL	HOLLAND	19-0065	881018	810	12.0	4.7	1.00	.	.	.	.	.	.	.	.	.	.
1455	HOLL	HOLLAND	19-0065	881018	810	13.0	4.6	0.90	.	.	.	.	.	.	.	.	.	.
1456	HOLL	HOLLAND	19-0065	881018	810	14.0	4.5	0.90	.	220	.	.	.	.	.	.	290	7.12
1457	HOLL	HOLLAND	19-0065	881018	810	15.0	4.5	0.90	.	.	.	.	.	.	.	.	.	.
1458	HOLL	HOLLAND	19-0065	881018	810	16.0	4.5	0.90	.	.	.	.	.	.	.	.	.	.
1459	HOLL	HOLLAND	19-0065	881018	810	17.0	4.5	0.90	.	.	.	.	.	.	.	.	.	.
1460	HOLL	HOLLAND	19-0065	881018	810	18.0	4.5	0.80	.	490	.	.	.	.	.	.	305	7.08
1461	MCCR	MCCARRONS	62-0054	871028	1055	0.0	7.5	8.30	.	75	30	14	1.100	0.100	27.0	1.50	400	7.94
1462	MCCR	MCCARRONS	62-0054	871028	1055	1.0	7.5	8.10	.	.	.	.	.	.	.	.	.	.
1463	MCCR	MCCARRONS	62-0054	871028	1055	2.0	7.5	7.80	.	.	.	.	.	.	.	.	.	.
1464	MCCR	MCCARRONS	62-0054	871028	1055	3.0	7.5	7.60	.	.	.	.	.	.	.	.	.	.
1465	MCCR	MCCARRONS	62-0054	871028	1055	4.0	7.5	7.60	.	80	.	.	1.100	.	26.0	.	400	7.93
1466	MCCR	MCCARRONS	62-0054	871028	1055	5.0	7.5	7.60	.	.	.	.	.	.	.	.	.	.
1467	MCCR	MCCARRONS	62-0054	871028	1055	6.0	7.5	7.50	.	.	.	.	.	.	.	.	.	.
1468	MCCR	MCCARRONS	62-0054	871028	1055	7.0	7.5	7.50	.	.	.	.	.	.	.	.	.	.
1469	MCCR	MCCARRONS	62-0054	871028	1055	8.0	7.5	7.10	.	80	.	.	1.050	.	.	.	405	7.91
1470	MCCR	MCCARRONS	62-0054	871028	1055	9.0	7.0	6.70	.	.	.	.	.	.	.	.	.	.
1471	MCCR	MCCARRONS	62-0054	871028	1055	10.0	7.0	4.10	.	.	.	.	.	.	.	.	.	.
1472	MCCR	MCCARRONS	62-0054	871028	1055	11.0	6.5	2.80	.	.	.	.	.	.	.	.	.	.
1473	MCCR	MCCARRONS	62-0054	871028	1055	12.0	5.5	1.30	.	300	.	.	2.250	.	.	.	445	7.44
1474	MCCR	MCCARRONS	62-0054	871028	1055	13.0	5.0	1.10	.	.	.	.	.	.	.	.	.	.
1475	MCCR	MCCARRONS	62-0054	871028	1055	14.0	5.0	1.00	.	.	.	.	.	.	.	.	.	.
1476	MCCR	MCCARRONS	62-0054	871028	1055	15.0	5.0	0.90	.	.	.	.	.	.	.	.	.	.
1477	MCCR	MCCARRONS	62-0054	871028	1055	16.0	5.0	0.80	.	900	.	.	7.000	.	.	.	510	7.13
1478	MCCR	MCCARRONS	62-0054	880121	1110	0.0	.	.	.	160	115	92	1.880	0.150	22.0	1.30	.	.
1479	MCCR	MCCARRONS	62-0054	880121	1110	1.0	1.5	8.10	.	.	.	.	.	.	.	.	.	.
1480	MCCR	MCCARRONS	62-0054	880121	1110	4.0	2.0	7.55	.	160	.	.	1.750	.	17.0	.	.	.
1481	MCCR	MCCARRONS	62-0054	880121	1110	8.0	2.0	6.85	.	160	.	.	1.700	.	.	.	.	.
1482	MCCR	MCCARRONS	62-0054	880121	1110	12.0	2.0	5.40	.	160	.	.	1.800	.	.	.	.	.
1483	MCCR	MCCARRONS	62-0054	880121	1110	15.0	2.5	0.25	.	280	.	.	2.650	.	.	.	.	.
1484	MCCR	MCCARRONS	62-0054	880218	1055	0.0	.	.	.	155	125	60	1.350	0.230	12.0	1.60	.	.
1485	MCCR	MCCARRONS	62-0054	880218	1055	1.0	1.5	5.50	.	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
1486	MCCR	MCCARRONS	62-0054	880218	1055	4.0	2.0	4.40	.	140	.	.	1.250	.	8.6	.	.	.
1487	MCCR	MCCARRONS	62-0054	880218	1055	8.0	2.0	3.30	.	150	.	.	1.350	.	.	.	.	.
1488	MCCR	MCCARRONS	62-0054	880218	1055	12.0	2.0	1.40	.	160	.	.	1.500	.	.	.	.	.
1489	MCCR	MCCARRONS	62-0054	880218	1055	16.0	2.5	0.00	.	360	.	.	2.850	.	.	.	.	.
1490	MCCR	MCCARRONS	62-0054	880324	1055	0.0	.	.	.	145	100	79	0.950	0.690	30.0	2.30	.	.
1491	MCCR	MCCARRONS	62-0054	880324	1055	1.0	3.5	4.25	.	.	.	.	.	.	.	.	.	.
1492	MCCR	MCCARRONS	62-0054	880324	1055	4.0	3.5	3.15	.	140	.	.	0.900	.	28.0	.	.	.
1493	MCCR	MCCARRONS	62-0054	880324	1055	8.0	3.5	3.00	.	130	.	.	0.850	.	.	.	.	.
1494	MCCR	MCCARRONS	62-0054	880324	1055	12.0	3.5	0.50	.	190	.	.	1.100	.	.	.	.	.
1495	MCCR	MCCARRONS	62-0054	880324	1055	16.0	3.0	0.00	.	520	.	.	3.100	.	.	.	.	.
1496	MCCR	MCCARRONS	62-0054	880411	1155	0.0	8.9	16.10	1620.00	130	70	10	1.650	0.090	99.0	1.00	430	8.55
1497	MCCR	MCCARRONS	62-0054	880411	1155	0.5	8.4	.	715.00	.	.	.	.	.	.	.	.	.
1498	MCCR	MCCARRONS	62-0054	880411	1155	1.0	7.7	15.80	210.00	.	.	.	.	.	.	.	.	.
1499	MCCR	MCCARRONS	62-0054	880411	1155	1.5	.	.	67.00	.	.	.	.	.	.	.	.	.
1500	MCCR	MCCARRONS	62-0054	880411	1155	2.0	7.5	12.80	31.00	.	.	.	.	.	.	.	.	.
1501	MCCR	MCCARRONS	62-0054	880411	1155	2.5	.	.	11.20	.	.	.	.	.	.	.	.	.
1502	MCCR	MCCARRONS	62-0054	880411	1155	3.0	7.4	12.50	5.60	.	.	.	.	.	.	.	.	.
1503	MCCR	MCCARRONS	62-0054	880411	1155	4.0	7.5	11.40	.	110	.	.	1.300	.	72.0	.	430	8.33
1504	MCCR	MCCARRONS	62-0054	880411	1155	5.0	7.1	10.90	.	.	.	.	.	.	.	.	.	.
1505	MCCR	MCCARRONS	62-0054	880411	1155	6.0	6.8	10.20	.	.	.	.	.	.	.	.	.	.
1506	MCCR	MCCARRONS	62-0054	880411	1155	7.0	6.6	9.60	.	.	.	.	.	.	.	.	.	.
1507	MCCR	MCCARRONS	62-0054	880411	1155	8.0	6.3	7.50	.	90	.	.	1.100	.	.	.	440	7.79
1508	MCCR	MCCARRONS	62-0054	880411	1155	9.0	5.5	5.90	.	.	.	.	.	.	.	.	.	.
1509	MCCR	MCCARRONS	62-0054	880411	1155	10.0	5.1	5.10	.	.	.	.	.	.	.	.	.	.
1510	MCCR	MCCARRONS	62-0054	880411	1155	11.0	4.9	3.80	.	.	.	.	.	.	.	.	.	.
1511	MCCR	MCCARRONS	62-0054	880411	1155	12.0	4.2	0.30	.	100	.	.	1.100	.	.	.	465	7.45
1512	MCCR	MCCARRONS	62-0054	880411	1155	13.0	3.9	0.30	.	.	.	.	.	.	.	.	.	.
1513	MCCR	MCCARRONS	62-0054	880411	1155	14.0	3.7	0.30	.	.	.	.	.	.	.	.	.	.
1514	MCCR	MCCARRONS	62-0054	880411	1155	15.0	3.6	0.30	.	.	.	.	.	.	.	.	.	.
1515	MCCR	MCCARRONS	62-0054	880411	1155	16.0	3.5	0.30	.	240	.	.	2.000	.	.	.	515	7.24
1516	MCCR	MCCARRONS	62-0054	880422	810	0.0	9.2	14.90	116.00	120	60	24	1.620	0.050	72.0	0.80	390	8.89
1517	MCCR	MCCARRONS	62-0054	880422	810	0.5	.	.	41.00	.	.	.	.	.	.	.	.	.
1518	MCCR	MCCARRONS	62-0054	880422	810	1.0	9.2	14.60	15.40	.	.	.	.	.	.	.	.	.
1519	MCCR	MCCARRONS	62-0054	880422	810	1.5	.	.	7.60	.	.	.	.	.	.	.	.	.
1520	MCCR	MCCARRONS	62-0054	880422	810	2.0	9.1	13.30	3.20	.	.	.	.	.	.	.	.	.
1521	MCCR	MCCARRONS	62-0054	880422	810	2.5	.	.	1.60	.	.	.	.	.	.	.	.	.
1522	MCCR	MCCARRONS	62-0054	880422	810	3.0	8.9	12.20	0.67	.	.	.	.	.	.	.	.	.
1523	MCCR	MCCARRONS	62-0054	880422	810	4.0	8.8	12.10	.	110	.	.	1.500	.	55.0	.	410	8.80
1524	MCCR	MCCARRONS	62-0054	880422	810	5.0	8.7	11.00	.	.	.	.	.	.	.	.	.	.
1525	MCCR	MCCARRONS	62-0054	880422	810	6.0	8.5	10.40	.	.	.	.	.	.	.	.	.	.
1526	MCCR	MCCARRONS	62-0054	880422	810	7.0	8.3	10.10	.	.	.	.	.	.	.	.	.	.
1527	MCCR	MCCARRONS	62-0054	880422	810	7.5	7.8	.	.	.	.	.	.	.	.	.	.	.
1528	MCCR	MCCARRONS	62-0054	880422	810	8.0	7.2	7.30	.	90	.	.	1.150	.	.	.	425	8.55
1529	MCCR	MCCARRONS	62-0054	880422	810	8.5	6.7	.	.	.	.	.	.	.	.	.	.	.
1530	MCCR	MCCARRONS	62-0054	880422	810	9.0	6.0	4.90	.	.	.	.	.	.	.	.	.	.
1531	MCCR	MCCARRONS	62-0054	880422	810	10.0	5.4	3.10	.	.	.	.	.	.	.	.	.	.
1532	MCCR	MCCARRONS	62-0054	880422	810	11.0	4.5	0.30	.	.	.	.	.	.	.	.	.	.
1533	MCCR	MCCARRONS	62-0054	880422	810	12.0	4.1	0.30	.	150	.	.	1.300	.	.	.	455	7.35
1534	MCCR	MCCARRONS	62-0054	880422	810	13.0	4.0	0.30	.	.	.	.	.	.	.	.	.	.
1535	MCCR	MCCARRONS	62-0054	880422	810	14.0	3.9	0.30	.	.	.	.	.	.	.	.	.	.
1536	MCCR	MCCARRONS	62-0054	880422	810	15.0	3.8	0.30	.	.	.	.	.	.	.	.	.	.
1537	MCCR	MCCARRONS	62-0054	880422	810	16.0	3.8	0.30	.	330	.	.	2.300	.	.	.	520	7.27
1538	MCCR	MCCARRONS	62-0054	880504	1200	0.0	15.8	13.70	1620.00	160	30	10	1.750	0.050	45.0	0.90	425	9.03
1539	MCCR	MCCARRONS	62-0054	880504	1200	0.5	.	.	650.00	.	.	.	.	.	.	.	.	.
1540	MCCR	MCCARRONS	62-0054	880504	1200	1.0	15.7	13.70	232.00	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
1541	MCCR	MCCARRONS	62-0054	880504	1200	1.5	.	.	86.00	.	.	.	.	.	.	.	.	.
1542	MCCR	MCCARRONS	62-0054	880504	1200	2.0	15.0	13.00	33.00	.	.	.	.	.	.	.	.	.
1543	MCCR	MCCARRONS	62-0054	880504	1200	2.5	14.8	.	14.50	.	.	.	.	.	.	.	.	.
1544	MCCR	MCCARRONS	62-0054	880504	1200	3.0	13.5	10.10	6.60	.	.	.	.	.	.	.	.	.
1545	MCCR	MCCARRONS	62-0054	880504	1200	3.5	11.5	.	2.92	.	.	.	.	.	.	.	.	.
1546	MCCR	MCCARRONS	62-0054	880504	1200	4.0	9.5	9.00	1.51	110	.	.	1.500	.	45.0	.	440	8.57
1547	MCCR	MCCARRONS	62-0054	880504	1200	5.0	9.0	8.80	.	.	.	.	.	.	.	.	.	.
1548	MCCR	MCCARRONS	62-0054	880504	1200	6.0	8.6	7.90	.	.	.	.	.	.	.	.	.	.
1549	MCCR	MCCARRONS	62-0054	880504	1200	7.0	8.3	6.30	.	.	.	.	.	.	.	.	.	.
1550	MCCR	MCCARRONS	62-0054	880504	1200	8.0	7.6	4.80	.	70	.	.	1.000	.	.	.	460	7.95
1551	MCCR	MCCARRONS	62-0054	880504	1200	9.0	6.6	2.30	.	.	.	.	.	.	.	.	.	.
1552	MCCR	MCCARRONS	62-0054	880504	1200	9.5	6.1	.	.	.	.	.	.	.	.	.	.	.
1553	MCCR	MCCARRONS	62-0054	880504	1200	10.0	5.3	0.40	.	.	.	.	.	.	.	.	.	.
1554	MCCR	MCCARRONS	62-0054	880504	1200	11.0	4.8	.	.	.	.	.	.	.	.	.	.	.
1555	MCCR	MCCARRONS	62-0054	880504	1200	12.0	4.3	0.40	.	160	.	.	1.250	.	.	.	480	7.30
1556	MCCR	MCCARRONS	62-0054	880504	1200	13.0	4.2	.	.	.	.	.	.	.	.	.	.	.
1557	MCCR	MCCARRONS	62-0054	880504	1200	14.0	4.0	0.40	.	.	.	.	.	.	.	.	.	.
1558	MCCR	MCCARRONS	62-0054	880504	1200	15.0	4.0	.	.	.	.	.	.	.	.	.	.	.
1559	MCCR	MCCARRONS	62-0054	880504	1200	16.0	4.0	0.40	.	360	.	.	2.300	.	.	.	530	7.21
1560	MCCR	MCCARRONS	62-0054	880518	1135	0.0	15.9	9.60	770.00	95	20	18	1.380	0.100	37.0	1.00	425	8.84
1561	MCCR	MCCARRONS	62-0054	880518	1135	0.5	.	.	290.00	.	.	.	.	.	.	.	.	.
1562	MCCR	MCCARRONS	62-0054	880518	1135	1.0	15.9	.	110.00	.	.	.	.	.	.	.	.	.
1563	MCCR	MCCARRONS	62-0054	880518	1135	1.5	.	.	47.00	.	.	.	.	.	.	.	.	.
1564	MCCR	MCCARRONS	62-0054	880518	1135	2.0	15.8	9.30	19.50	.	.	.	.	.	.	.	.	.
1565	MCCR	MCCARRONS	62-0054	880518	1135	2.5	.	.	9.00	.	.	.	.	.	.	.	.	.
1566	MCCR	MCCARRONS	62-0054	880518	1135	3.0	15.3	8.20	3.90	.	.	.	.	.	.	.	.	.
1567	MCCR	MCCARRONS	62-0054	880518	1135	4.0	14.6	6.10	.	90	.	.	1.350	.	36.0	.	430	8.74
1568	MCCR	MCCARRONS	62-0054	880518	1135	4.5	14.1	.	.	.	.	.	.	.	.	.	.	.
1569	MCCR	MCCARRONS	62-0054	880518	1135	5.0	11.8	4.10	.	.	.	.	.	.	.	.	.	.
1570	MCCR	MCCARRONS	62-0054	880518	1135	5.5	10.5	.	.	.	.	.	.	.	.	.	.	.
1571	MCCR	MCCARRONS	62-0054	880518	1135	6.0	9.4	3.90	.	.	.	.	.	.	.	.	.	.
1572	MCCR	MCCARRONS	62-0054	880518	1135	6.5	8.9	.	.	.	.	.	.	.	.	.	.	.
1573	MCCR	MCCARRONS	62-0054	880518	1135	7.0	8.5	.	.	.	.	.	.	.	.	.	.	.
1574	MCCR	MCCARRONS	62-0054	880518	1135	8.0	8.0	2.30	.	60	.	.	0.850	.	.	.	430	7.68
1575	MCCR	MCCARRONS	62-0054	880518	1135	8.5	7.3	.	.	.	.	.	.	.	.	.	.	.
1576	MCCR	MCCARRONS	62-0054	880518	1135	9.0	6.7	.	.	.	.	.	.	.	.	.	.	.
1577	MCCR	MCCARRONS	62-0054	880518	1135	9.5	5.8	.	.	.	.	.	.	.	.	.	.	.
1578	MCCR	MCCARRONS	62-0054	880518	1135	10.0	5.4	0.20	.	.	.	.	.	.	.	.	.	.
1579	MCCR	MCCARRONS	62-0054	880518	1135	11.0	5.0	.	.	.	.	.	.	.	.	.	.	.
1580	MCCR	MCCARRONS	62-0054	880518	1135	12.0	4.6	0.20	.	180	.	.	1.400	.	.	.	480	7.32
1581	MCCR	MCCARRONS	62-0054	880518	1135	13.0	4.4	.	.	.	.	.	.	.	.	.	.	.
1582	MCCR	MCCARRONS	62-0054	880518	1135	14.0	4.3	0.20	.	.	.	.	.	.	.	.	.	.
1583	MCCR	MCCARRONS	62-0054	880518	1135	15.0	4.2	.	.	.	.	.	.	.	.	.	.	.
1584	MCCR	MCCARRONS	62-0054	880518	1135	16.0	4.2	0.20	.	370	.	.	2.550	.	.	.	520	7.26
1585	MCCR	MCCARRONS	62-0054	880603	1200	0.0	24.6	8.00	1200.00	60	75	6	1.220	0.150	10.0	3.70	410	8.58
1586	MCCR	MCCARRONS	62-0054	880603	1200	0.5	.	.	810.00	.	.	.	.	.	.	.	.	.
1587	MCCR	MCCARRONS	62-0054	880603	1200	1.0	24.6	8.10	490.00	.	.	.	.	.	.	.	.	.
1588	MCCR	MCCARRONS	62-0054	880603	1200	1.5	.	.	260.00	.	.	.	.	.	.	.	.	.
1589	MCCR	MCCARRONS	62-0054	880603	1200	2.0	24.3	7.30	185.00	.	.	.	.	.	.	.	.	.
1590	MCCR	MCCARRONS	62-0054	880603	1200	2.5	23.4	.	130.00	.	.	.	.	.	.	.	.	.
1591	MCCR	MCCARRONS	62-0054	880603	1200	3.0	21.0	11.90	105.00	.	.	.	.	.	.	.	.	.
1592	MCCR	MCCARRONS	62-0054	880603	1200	3.5	18.3	.	76.00	.	.	.	.	.	.	.	.	.
1593	MCCR	MCCARRONS	62-0054	880603	1200	4.0	16.2	7.10	49.00	50	.	.	.	.	.	.	425	9.05
1594	MCCR	MCCARRONS	62-0054	880603	1200	4.5	14.1	.	17.00	.	.	.	.	.	.	.	.	.
1595	MCCR	MCCARRONS	62-0054	880603	1200	5.0	12.6	0.20	4.50	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
1596	MCCR	MCCARRONS	62-0054	880603	1200	5.5	11.6	.	.	.	.	.	.	.	.	.	.	.
1597	MCCR	MCCARRONS	62-0054	880603	1200	6.0	10.5	0.70	.	.	.	.	.	.	.	.	.	.
1598	MCCR	MCCARRONS	62-0054	880603	1200	6.5	9.5	.	.	.	.	.	.	.	.	.	.	.
1599	MCCR	MCCARRONS	62-0054	880603	1200	7.0	8.4	.	.	.	.	.	.	.	.	.	.	.
1600	MCCR	MCCARRONS	62-0054	880603	1200	7.5	8.0	.	.	.	.	.	.	.	.	.	.	.
1601	MCCR	MCCARRONS	62-0054	880603	1200	8.0	7.3	0.10	.	150	.	.	.	.	.	.	455	7.53
1602	MCCR	MCCARRONS	62-0054	880603	1200	8.5	6.7	.	.	.	.	.	.	.	.	.	.	.
1603	MCCR	MCCARRONS	62-0054	880603	1200	9.0	6.1	.	.	.	.	.	.	.	.	.	.	.
1604	MCCR	MCCARRONS	62-0054	880603	1200	10.0	5.6	0.20	.	.	.	.	.	.	.	.	.	.
1605	MCCR	MCCARRONS	62-0054	880603	1200	11.0	5.1	.	.	.	.	.	.	.	.	.	.	.
1606	MCCR	MCCARRONS	62-0054	880603	1200	12.0	4.8	0.20	.	220	.	.	.	.	.	.	495	7.29
1607	MCCR	MCCARRONS	62-0054	880603	1200	13.0	4.6	.	.	.	.	.	.	.	.	.	.	.
1608	MCCR	MCCARRONS	62-0054	880603	1200	14.0	4.4	0.20	.	.	.	.	.	.	.	.	.	.
1609	MCCR	MCCARRONS	62-0054	880603	1200	15.0	4.3	.	.	.	.	.	.	.	.	.	.	.
1610	MCCR	MCCARRONS	62-0054	880603	1200	16.0	4.3	0.20	.	450	.	.	.	.	.	.	525	7.13
1611	MCCR	MCCARRONS	62-0054	880615	1155	0.0	24.7	10.00	1980.00	55	50	6	1.250	0.200	23.0	1.60	.	.
1612	MCCR	MCCARRONS	62-0054	880615	1155	0.5	.	.	1140.00	.	.	.	.	.	.	.	.	.
1613	MCCR	MCCARRONS	62-0054	880615	1155	1.0	24.5	10.00	640.00	.	.	.	.	.	.	.	.	.
1614	MCCR	MCCARRONS	62-0054	880615	1155	1.5	.	.	350.00	.	.	.	.	.	.	.	.	.
1615	MCCR	MCCARRONS	62-0054	880615	1155	2.0	24.4	10.10	197.00	.	.	.	.	.	.	.	.	.
1616	MCCR	MCCARRONS	62-0054	880615	1155	2.5	.	.	110.00	.	.	.	.	.	.	.	.	.
1617	MCCR	MCCARRONS	62-0054	880615	1155	3.0	24.2	9.20	65.50	.	.	.	.	.	.	.	.	.
1618	MCCR	MCCARRONS	62-0054	880615	1155	3.5	20.8	.	27.50	.	.	.	.	.	.	.	.	.
1619	MCCR	MCCARRONS	62-0054	880615	1155	4.0	17.0	2.50	14.00	40	.	.	.	.	.	.	.	.
1620	MCCR	MCCARRONS	62-0054	880615	1155	4.5	15.6	.	8.25	.	.	.	.	.	.	.	.	.
1621	MCCR	MCCARRONS	62-0054	880615	1155	5.0	13.1	0.10	5.15	.	.	.	.	.	.	.	.	.
1622	MCCR	MCCARRONS	62-0054	880615	1155	5.5	11.8	.	.	.	.	.	.	.	.	.	.	.
1623	MCCR	MCCARRONS	62-0054	880615	1155	6.0	10.5	0.10	.	.	.	.	.	.	.	.	.	.
1624	MCCR	MCCARRONS	62-0054	880615	1155	6.5	9.5	.	.	.	.	.	.	.	.	.	.	.
1625	MCCR	MCCARRONS	62-0054	880615	1155	7.0	8.6	.	.	.	.	.	.	.	.	.	.	.
1626	MCCR	MCCARRONS	62-0054	880615	1155	7.5	8.0	.	.	.	.	.	.	.	.	.	.	.
1627	MCCR	MCCARRONS	62-0054	880615	1155	8.0	7.5	0.20	.	170	.	.	.	.	.	.	.	.
1628	MCCR	MCCARRONS	62-0054	880615	1155	9.0	6.4	.	.	.	.	.	.	.	.	.	.	.
1629	MCCR	MCCARRONS	62-0054	880615	1155	10.0	5.7	0.20	.	.	.	.	.	.	.	.	.	.
1630	MCCR	MCCARRONS	62-0054	880615	1155	11.0	5.2	.	.	.	.	.	.	.	.	.	.	.
1631	MCCR	MCCARRONS	62-0054	880615	1155	12.0	4.9	0.30	.	270	.	.	.	.	.	.	.	.
1632	MCCR	MCCARRONS	62-0054	880615	1155	13.0	4.6	.	.	.	.	.	.	.	.	.	.	.
1633	MCCR	MCCARRONS	62-0054	880615	1155	14.0	4.5	.	.	.	.	.	.	.	.	.	.	.
1634	MCCR	MCCARRONS	62-0054	880615	1155	15.0	4.5	.	.	.	.	.	.	.	.	.	.	.
1635	MCCR	MCCARRONS	62-0054	880615	1155	16.0	4.5	0.30	.	530	.	.	.	.	.	.	.	.
1636	MCCR	MCCARRONS	62-0054	880629	1127	0.0	23.8	8.40	1100.00	50	.	2	1.150	0.050	28.0	1.20	.	8.74
1637	MCCR	MCCARRONS	62-0054	880629	1127	0.5	.	.	480.00	.	.	.	.	.	.	.	.	.
1638	MCCR	MCCARRONS	62-0054	880629	1127	1.0	23.8	8.40	192.00	.	.	.	.	.	.	.	.	.
1639	MCCR	MCCARRONS	62-0054	880629	1127	1.5	.	.	116.00	.	.	.	.	.	.	.	.	.
1640	MCCR	MCCARRONS	62-0054	880629	1127	2.0	23.8	8.30	58.00	.	.	.	.	.	.	.	.	.
1641	MCCR	MCCARRONS	62-0054	880629	1127	2.5	.	.	32.00	.	.	.	.	.	.	.	.	.
1642	MCCR	MCCARRONS	62-0054	880629	1127	3.0	23.8	8.10	16.00	.	.	.	.	.	.	.	.	.
1643	MCCR	MCCARRONS	62-0054	880629	1127	3.5	20.7	4.00	7.30	.	.	.	.	.	.	.	.	.
1644	MCCR	MCCARRONS	62-0054	880629	1127	4.0	19.2	1.40	3.30	50	.	.	.	.	.	.	.	.
1645	MCCR	MCCARRONS	62-0054	880629	1127	4.5	15.8	.	.	.	.	.	.	.	.	.	.	.
1646	MCCR	MCCARRONS	62-0054	880629	1127	5.0	13.9	0.20	.	.	.	.	.	.	.	.	.	.
1647	MCCR	MCCARRONS	62-0054	880629	1127	5.5	12.1	.	.	.	.	.	.	.	.	.	.	.
1648	MCCR	MCCARRONS	62-0054	880629	1127	6.0	11.2	0.20	.	.	.	.	.	.	.	.	.	.
1649	MCCR	MCCARRONS	62-0054	880629	1127	6.5	9.7	.	.	.	.	.	.	.	.	.	.	.
1650	MCCR	MCCARRONS	62-0054	880629	1127	7.0	8.8	.	.	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
1651	MCCR	MCCARRONS	62-0054	880629	1127	7.5	8.1	.	.	.	.	.	.	.	.	.	.	.
1652	MCCR	MCCARRONS	62-0054	880629	1127	8.0	7.4	0.20	.	120	.	.	.	.	.	.	.	.
1653	MCCR	MCCARRONS	62-0054	880629	1127	9.0	6.7	.	.	.	.	.	.	.	.	.	.	.
1654	MCCR	MCCARRONS	62-0054	880629	1127	10.0	6.2	.	.	.	.	.	.	.	.	.	.	.
1655	MCCR	MCCARRONS	62-0054	880629	1127	11.0	5.4	.	.	.	.	.	.	.	.	.	.	.
1656	MCCR	MCCARRONS	62-0054	880629	1127	12.0	5.1	0.20	.	240	.	.	.	.	.	.	.	.
1657	MCCR	MCCARRONS	62-0054	880629	1127	13.0	4.8	.	.	.	.	.	.	.	.	.	.	.
1658	MCCR	MCCARRONS	62-0054	880629	1127	14.0	4.6	.	.	.	.	.	.	.	.	.	.	.
1659	MCCR	MCCARRONS	62-0054	880629	1127	15.0	4.6	.	.	.	.	.	.	.	.	.	.	.
1660	MCCR	MCCARRONS	62-0054	880629	1127	16.0	4.5	0.20	.	530	.	.	.	.	.	.	.	.
1661	MCCR	MCCARRONS	62-0054	880713	1225	0.0	26.2	9.30	1850.00	50	10	2	1.550	0.050	38.0	0.80	385	9.11
1662	MCCR	MCCARRONS	62-0054	880713	1225	0.5	.	.	820.00	.	.	.	.	.	.	.	.	.
1663	MCCR	MCCARRONS	62-0054	880713	1225	1.0	26.0	9.40	315.00	.	.	.	.	.	.	.	.	.
1664	MCCR	MCCARRONS	62-0054	880713	1225	1.5	.	.	123.00	.	.	.	.	.	.	.	.	.
1665	MCCR	MCCARRONS	62-0054	880713	1225	2.0	25.9	8.80	46.00	.	.	.	.	.	.	.	.	.
1666	MCCR	MCCARRONS	62-0054	880713	1225	2.5	.	.	21.80	.	.	.	.	.	.	.	.	.
1667	MCCR	MCCARRONS	62-0054	880713	1225	3.0	25.0	3.50	9.80	.	.	.	.	.	.	.	.	.
1668	MCCR	MCCARRONS	62-0054	880713	1225	3.5	23.0	.	5.65	.	.	.	.	.	.	.	.	.
1669	MCCR	MCCARRONS	62-0054	880713	1225	4.0	20.5	0.20	3.30	40	.	.	1.200	.	.	.	410	.
1670	MCCR	MCCARRONS	62-0054	880713	1225	4.5	16.5	.	.	.	.	.	.	.	.	.	.	.
1671	MCCR	MCCARRONS	62-0054	880713	1225	5.0	14.5	0.30	.	.	.	.	.	.	.	.	.	.
1672	MCCR	MCCARRONS	62-0054	880713	1225	5.5	11.6	.	.	.	.	.	.	.	.	.	.	.
1673	MCCR	MCCARRONS	62-0054	880713	1225	6.0	10.1	0.30	.	.	.	.	.	.	.	.	.	.
1674	MCCR	MCCARRONS	62-0054	880713	1225	6.5	9.4	.	.	.	.	.	.	.	.	.	.	.
1675	MCCR	MCCARRONS	62-0054	880713	1225	7.0	8.1	.	.	.	.	.	.	.	.	.	.	.
1676	MCCR	MCCARRONS	62-0054	880713	1225	7.5	7.7	.	.	.	.	.	.	.	.	.	.	.
1677	MCCR	MCCARRONS	62-0054	880713	1225	8.0	7.2	0.40	.	130	.	.	1.250	.	.	.	460	.
1678	MCCR	MCCARRONS	62-0054	880713	1225	9.0	6.4	.	.	.	.	.	.	.	.	.	.	.
1679	MCCR	MCCARRONS	62-0054	880713	1225	10.0	5.9	0.40	.	.	.	.	.	.	.	.	.	.
1680	MCCR	MCCARRONS	62-0054	880713	1225	11.0	5.4	.	.	.	.	.	.	.	.	.	.	.
1681	MCCR	MCCARRONS	62-0054	880713	1225	12.0	5.1	0.50	.	270	.	.	2.000	.	.	.	505	.
1682	MCCR	MCCARRONS	62-0054	880713	1225	13.0	5.0	.	.	.	.	.	.	.	.	.	.	.
1683	MCCR	MCCARRONS	62-0054	880713	1225	14.0	4.8	0.50	.	.	.	.	.	.	.	.	.	.
1684	MCCR	MCCARRONS	62-0054	880713	1225	15.0	4.7	.	.	.	.	.	.	.	.	.	.	.
1685	MCCR	MCCARRONS	62-0054	880713	1225	16.0	4.7	0.40	.	520	.	.	3.600	.	.	.	550	.
1686	MCCR	MCCARRONS	62-0054	880728	1118	0.0	27.0	10.20	1540.00	45	20	3	1.650	0.050	53.0	0.70	390	9.26
1687	MCCR	MCCARRONS	62-0054	880728	1118	0.5	27.0	9.80	485.00	.	.	.	.	.	.	.	.	.
1688	MCCR	MCCARRONS	62-0054	880728	1118	1.0	26.9	9.80	172.00	.	.	.	.	.	.	.	.	.
1689	MCCR	MCCARRONS	62-0054	880728	1118	1.5	.	.	54.50	.	.	.	.	.	.	.	.	.
1690	MCCR	MCCARRONS	62-0054	880728	1118	2.0	26.8	9.70	22.50	.	.	.	.	.	.	.	.	.
1691	MCCR	MCCARRONS	62-0054	880728	1118	2.5	25.7	6.40	9.60	.	.	.	.	.	.	.	.	.
1692	MCCR	MCCARRONS	62-0054	880728	1118	3.0	23.9	0.70	4.45	.	.	.	.	.	.	.	.	.
1693	MCCR	MCCARRONS	62-0054	880728	1118	3.5	22.1	.	3.20	.	.	.	.	.	.	.	.	.
1694	MCCR	MCCARRONS	62-0054	880728	1118	4.0	20.0	0.10	1.59	50	.	.	.	.	.	.	410	.
1695	MCCR	MCCARRONS	62-0054	880728	1118	4.5	16.9	.	.	.	.	.	.	.	.	.	.	.
1696	MCCR	MCCARRONS	62-0054	880728	1118	5.0	14.1	0.10	.	.	.	.	.	.	.	.	.	.
1697	MCCR	MCCARRONS	62-0054	880728	1118	5.5	12.8	.	.	.	.	.	.	.	.	.	.	.
1698	MCCR	MCCARRONS	62-0054	880728	1118	6.0	10.6	0.10	.	.	.	.	.	.	.	.	.	.
1699	MCCR	MCCARRONS	62-0054	880728	1118	6.5	9.6	.	.	.	.	.	.	.	.	.	.	.
1700	MCCR	MCCARRONS	62-0054	880728	1118	7.0	8.6	0.20	.	.	.	.	.	.	.	.	.	.
1701	MCCR	MCCARRONS	62-0054	880728	1118	7.5	8.0	.	.	.	.	.	.	.	.	.	.	.
1702	MCCR	MCCARRONS	62-0054	880728	1118	8.0	7.3	0.20	.	200	.	.	.	.	.	.	470	.
1703	MCCR	MCCARRONS	62-0054	880728	1118	9.0	6.6	.	.	.	.	.	.	.	.	.	.	.
1704	MCCR	MCCARRONS	62-0054	880728	1118	10.0	6.3	.	.	.	.	.	.	.	.	.	.	.
1705	MCCR	MCCARRONS	62-0054	880728	1118	11.0	5.7	.	.	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
1706	MCCR	MCCARRONS	62-0054	880728	1118	12.0	5.3	0.20	.	350	.	.	.	.	.	.	500	.
1707	MCCR	MCCARRONS	62-0054	880728	1118	13.0	5.0	.	.	.	.	.	.	.	.	.	.	.
1708	MCCR	MCCARRONS	62-0054	880728	1118	14.0	5.0	.	.	.	.	.	.	.	.	.	.	.
1709	MCCR	MCCARRONS	62-0054	880728	1118	15.0	4.9	0.20	.	.	.	.	.	.	.	.	.	.
1710	MCCR	MCCARRONS	62-0054	880728	1118	16.0	.	.	.	660	.	.	.	.	.	.	535	.
1711	MCCR	MCCARRONS	62-0054	880810	1145	0.0	26.7	8.30	2050.00	50	30	6	1.400	0.050	31.0	1.10	370	8.97
1712	MCCR	MCCARRONS	62-0054	880810	1145	0.5	.	.	980.00	.	.	.	.	.	.	.	.	.
1713	MCCR	MCCARRONS	62-0054	880810	1145	1.0	26.6	8.40	410.00	.	.	.	.	.	.	.	.	.
1714	MCCR	MCCARRONS	62-0054	880810	1145	1.5	.	.	205.00	.	.	.	.	.	.	.	.	.
1715	MCCR	MCCARRONS	62-0054	880810	1145	2.0	26.4	8.40	114.00	.	.	.	.	.	.	.	.	.
1716	MCCR	MCCARRONS	62-0054	880810	1145	2.5	25.8	.	59.00	.	.	.	.	.	.	.	.	.
1717	MCCR	MCCARRONS	62-0054	880810	1145	3.0	25.1	2.90	36.50	.	.	.	.	.	.	.	.	.
1718	MCCR	MCCARRONS	62-0054	880810	1145	3.5	23.8	.	18.00	.	.	.	.	.	.	.	.	.
1719	MCCR	MCCARRONS	62-0054	880810	1145	4.0	21.7	0.20	10.50	50	.	.	.	.	.	.	390	.
1720	MCCR	MCCARRONS	62-0054	880810	1145	4.5	19.3	.	6.00	.	.	.	.	.	.	.	.	.
1721	MCCR	MCCARRONS	62-0054	880810	1145	5.0	16.5	0.20	3.80	.	.	.	.	.	.	.	.	.
1722	MCCR	MCCARRONS	62-0054	880810	1145	5.5	13.4	.	.	.	.	.	.	.	.	.	.	.
1723	MCCR	MCCARRONS	62-0054	880810	1145	6.0	11.7	0.20	.	.	.	.	.	.	.	.	.	.
1724	MCCR	MCCARRONS	62-0054	880810	1145	6.5	10.3	.	.	.	.	.	.	.	.	.	.	.
1725	MCCR	MCCARRONS	62-0054	880810	1145	7.0	9.4	0.20	.	.	.	.	.	.	.	.	.	.
1726	MCCR	MCCARRONS	62-0054	880810	1145	7.5	8.6	.	.	.	.	.	.	.	.	.	.	.
1727	MCCR	MCCARRONS	62-0054	880810	1145	8.0	8.0	0.20	.	220	.	.	.	.	.	.	475	.
1728	MCCR	MCCARRONS	62-0054	880810	1145	8.5	7.2	.	.	.	.	.	.	.	.	.	.	.
1729	MCCR	MCCARRONS	62-0054	880810	1145	9.0	6.9	0.20	.	.	.	.	.	.	.	.	.	.
1730	MCCR	MCCARRONS	62-0054	880810	1145	9.5	6.5	.	.	.	.	.	.	.	.	.	.	.
1731	MCCR	MCCARRONS	62-0054	880810	1145	10.0	6.1	0.20	.	.	.	.	.	.	.	.	.	.
1732	MCCR	MCCARRONS	62-0054	880810	1145	11.0	5.5	0.20	.	.	.	.	.	.	.	.	.	.
1733	MCCR	MCCARRONS	62-0054	880810	1145	12.0	5.3	0.20	.	450	.	.	.	.	.	.	510	.
1734	MCCR	MCCARRONS	62-0054	880810	1145	13.0	5.1	0.20	.	.	.	.	.	.	.	.	.	.
1735	MCCR	MCCARRONS	62-0054	880810	1145	14.0	5.0	0.20	.	.	.	.	.	.	.	.	.	.
1736	MCCR	MCCARRONS	62-0054	880810	1145	15.0	5.0	0.20	.	.	.	.	.	.	.	.	.	.
1737	MCCR	MCCARRONS	62-0054	880810	1145	16.0	4.9	0.20	.	670	.	.	.	.	.	.	520	.
1738	MCCR	MCCARRONS	62-0054	880824	1140	0.0	23.1	8.00	.	40	30	3	1.380	0.050	32.0	1.30	375	8.98
1739	MCCR	MCCARRONS	62-0054	880824	1140	1.0	23.1	7.90	.	.	.	.	.	.	.	.	.	.
1740	MCCR	MCCARRONS	62-0054	880824	1140	2.0	23.1	7.80	.	.	.	.	.	.	.	.	.	.
1741	MCCR	MCCARRONS	62-0054	880824	1140	3.0	23.1	7.80	.	.	.	.	.	.	.	.	.	.
1742	MCCR	MCCARRONS	62-0054	880824	1140	4.0	23.1	7.80	.	40	.	.	.	.	.	.	380	.
1743	MCCR	MCCARRONS	62-0054	880824	1140	4.5	22.9	.	.	.	.	.	.	.	.	.	.	.
1744	MCCR	MCCARRONS	62-0054	880824	1140	5.0	16.2	0.70	.	.	.	.	.	.	.	.	.	.
1745	MCCR	MCCARRONS	62-0054	880824	1140	5.5	14.7	.	.	.	.	.	.	.	.	.	.	.
1746	MCCR	MCCARRONS	62-0054	880824	1140	6.0	12.6	0.80	.	.	.	.	.	.	.	.	.	.
1747	MCCR	MCCARRONS	62-0054	880824	1140	7.0	11.3	.	.	.	.	.	.	.	.	.	.	.
1748	MCCR	MCCARRONS	62-0054	880824	1140	8.0	7.6	.	.	140	.	.	.	.	.	.	460	.
1749	MCCR	MCCARRONS	62-0054	880824	1140	9.0	7.1	.	.	.	.	.	.	.	.	.	.	.
1750	MCCR	MCCARRONS	62-0054	880824	1140	10.0	5.7	0.40	.	.	.	.	.	.	.	.	.	.
1751	MCCR	MCCARRONS	62-0054	880824	1140	11.0	5.5	.	.	.	.	.	.	.	.	.	.	.
1752	MCCR	MCCARRONS	62-0054	880824	1140	12.0	5.2	.	.	420	.	.	.	.	.	.	510	.
1753	MCCR	MCCARRONS	62-0054	880824	1140	14.0	5.0	0.50	.	.	.	.	.	.	.	.	.	.
1754	MCCR	MCCARRONS	62-0054	880824	1140	15.0	5.0	.	.	.	.	.	.	.	.	.	.	.
1755	MCCR	MCCARRONS	62-0054	880824	1140	16.0	.	.	.	630	.	.	.	.	.	.	545	.
1756	MCCR	MCCARRONS	62-0054	880907	1055	0.0	19.6	8.70	.	30	15	8	1.180	0.050	19.0	1.50	385	8.75
1757	MCCR	MCCARRONS	62-0054	880907	1055	1.0	19.6	8.70	.	.	.	.	.	.	.	.	.	.
1758	MCCR	MCCARRONS	62-0054	880907	1055	2.0	19.6	8.60	.	.	.	.	.	.	.	.	.	.
1759	MCCR	MCCARRONS	62-0054	880907	1055	3.0	19.6	8.60	.	.	.	.	.	.	.	.	.	.
1760	MCCR	MCCARRONS	62-0054	880907	1055	4.0	19.5	8.50	.	30	.	.	.	.	.	.	390	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
1761	MCCR	MCCARRONS	62-0054	880907	1055	4.5	18.8	.	.	.	.	.	.	.	.	.	.	.
1762	MCCR	MCCARRONS	62-0054	880907	1055	5.0	18.3	1.20	.	.	.	.	.	.	.	.	.	.
1763	MCCR	MCCARRONS	62-0054	880907	1055	5.5	16.0	.	.	.	.	.	.	.	.	.	.	.
1764	MCCR	MCCARRONS	62-0054	880907	1055	6.0	13.2	0.90	.	.	.	.	.	.	.	.	.	.
1765	MCCR	MCCARRONS	62-0054	880907	1055	6.5	11.3	.	.	.	.	.	.	.	.	.	.	.
1766	MCCR	MCCARRONS	62-0054	880907	1055	7.0	9.6	0.90	.	.	.	.	.	.	.	.	.	.
1767	MCCR	MCCARRONS	62-0054	880907	1055	7.5	9.1	.	.	.	.	.	.	.	.	.	.	.
1768	MCCR	MCCARRONS	62-0054	880907	1055	8.0	7.7	0.90	.	170	.	.	.	.	.	.	455	.
1769	MCCR	MCCARRONS	62-0054	880907	1055	8.5	7.1	.	.	.	.	.	.	.	.	.	.	.
1770	MCCR	MCCARRONS	62-0054	880907	1055	9.0	6.7	0.90	.	.	.	.	.	.	.	.	.	.
1771	MCCR	MCCARRONS	62-0054	880907	1055	9.5	6.3	.	.	.	.	.	.	.	.	.	.	.
1772	MCCR	MCCARRONS	62-0054	880907	1055	10.0	6.0	0.90	.	.	.	.	.	.	.	.	.	.
1773	MCCR	MCCARRONS	62-0054	880907	1055	10.5	5.8	.	.	.	.	.	.	.	.	.	.	.
1774	MCCR	MCCARRONS	62-0054	880907	1055	11.0	5.5	0.90	.	.	.	.	.	.	.	.	.	.
1775	MCCR	MCCARRONS	62-0054	880907	1055	12.0	5.2	0.90	.	430	.	.	.	.	.	.	500	.
1776	MCCR	MCCARRONS	62-0054	880907	1055	13.0	5.1	0.90	.	.	.	.	.	.	.	.	.	.
1777	MCCR	MCCARRONS	62-0054	880907	1055	14.0	5.0	0.90	.	.	.	.	.	.	.	.	.	.
1778	MCCR	MCCARRONS	62-0054	880907	1055	15.0	5.0	0.90	.	.	.	.	.	.	.	.	.	.
1779	MCCR	MCCARRONS	62-0054	880907	1055	16.0	4.9	0.90	.	670	.	.	.	.	.	.	.	.
1780	MCCR	MCCARRONS	62-0054	880922	1105	0.0	17.1	8.30	245.00	40	25	2	1.220	0.050	17.0	1.90	390	8.56
1781	MCCR	MCCARRONS	62-0054	880922	1105	0.5	.	.	124.00	.	.	.	.	.	.	.	.	.
1782	MCCR	MCCARRONS	62-0054	880922	1105	1.0	17.0	8.00	52.00	.	.	.	.	.	.	.	.	.
1783	MCCR	MCCARRONS	62-0054	880922	1105	1.5	.	.	39.00	.	.	.	.	.	.	.	.	.
1784	MCCR	MCCARRONS	62-0054	880922	1105	2.0	17.0	7.70	27.40	.	.	.	.	.	.	.	.	.
1785	MCCR	MCCARRONS	62-0054	880922	1105	2.5	.	.	19.10	.	.	.	.	.	.	.	.	.
1786	MCCR	MCCARRONS	62-0054	880922	1105	3.0	17.0	7.60	13.30	.	.	.	.	.	.	.	.	.
1787	MCCR	MCCARRONS	62-0054	880922	1105	3.5	.	.	9.10	.	.	.	.	.	.	.	.	.
1788	MCCR	MCCARRONS	62-0054	880922	1105	4.0	16.9	7.30	5.80	40	.	.	.	.	.	.	395	8.60
1789	MCCR	MCCARRONS	62-0054	880922	1105	4.5	.	.	4.00	.	.	.	.	.	.	.	.	.
1790	MCCR	MCCARRONS	62-0054	880922	1105	5.0	16.8	6.40	2.65	.	.	.	.	.	.	.	.	.
1791	MCCR	MCCARRONS	62-0054	880922	1105	5.5	16.7	.	1.74	.	.	.	.	.	.	.	.	.
1792	MCCR	MCCARRONS	62-0054	880922	1105	6.0	16.2	4.00	1.25	.	.	.	.	.	.	.	.	.
1793	MCCR	MCCARRONS	62-0054	880922	1105	6.5	13.9	.	.	.	.	.	.	.	.	.	.	.
1794	MCCR	MCCARRONS	62-0054	880922	1105	7.0	10.9	0.90	.	.	.	.	.	.	.	.	.	.
1795	MCCR	MCCARRONS	62-0054	880922	1105	7.5	8.8	.	.	.	.	.	.	.	.	.	.	.
1796	MCCR	MCCARRONS	62-0054	880922	1105	8.0	8.1	0.90	.	190	.	.	.	.	.	.	470	7.53
1797	MCCR	MCCARRONS	62-0054	880922	1105	8.5	7.4	.	.	.	.	.	.	.	.	.	.	.
1798	MCCR	MCCARRONS	62-0054	880922	1105	9.0	6.6	0.90	.	.	.	.	.	.	.	.	.	.
1799	MCCR	MCCARRONS	62-0054	880922	1105	9.5	6.2	.	.	.	.	.	.	.	.	.	.	.
1800	MCCR	MCCARRONS	62-0054	880922	1105	10.0	5.9	0.80	.	.	.	.	.	.	.	.	.	.
1801	MCCR	MCCARRONS	62-0054	880922	1105	10.5	5.7	.	.	.	.	.	.	.	.	.	.	.
1802	MCCR	MCCARRONS	62-0054	880922	1105	11.0	5.4	0.80	.	.	.	.	.	.	.	.	.	.
1803	MCCR	MCCARRONS	62-0054	880922	1105	11.5	5.3	.	.	.	.	.	.	.	.	.	.	.
1804	MCCR	MCCARRONS	62-0054	880922	1105	12.0	5.2	0.80	.	480	.	.	.	.	.	.	500	7.25
1805	MCCR	MCCARRONS	62-0054	880922	1105	13.0	5.1	.	.	.	.	.	.	.	.	.	.	.
1806	MCCR	MCCARRONS	62-0054	880922	1105	14.0	5.0	0.80	.	.	.	.	.	.	.	.	.	.
1807	MCCR	MCCARRONS	62-0054	880922	1105	15.0	5.0	.	.	.	.	.	.	.	.	.	.	.
1808	MCCR	MCCARRONS	62-0054	880922	1105	16.0	5.0	0.80	.	750	.	.	.	.	.	.	530	7.11
1809	MCCR	MCCARRONS	62-0054	881005	1115	0.0	13.7	7.90	1090.00	40	25	10	1.310	0.050	14.0	2.40	395	8.42
1810	MCCR	MCCARRONS	62-0054	881005	1115	0.5	.	.	570.00	.	.	.	.	.	.	.	.	.
1811	MCCR	MCCARRONS	62-0054	881005	1115	1.0	13.7	7.80	340.00	.	.	.	.	.	.	.	.	.
1812	MCCR	MCCARRONS	62-0054	881005	1115	1.5	.	.	212.00	.	.	.	.	.	.	.	.	.
1813	MCCR	MCCARRONS	62-0054	881005	1115	2.0	13.5	7.60	119.00	.	.	.	.	.	.	.	.	.
1814	MCCR	MCCARRONS	62-0054	881005	1115	2.5	.	.	73.50	.	.	.	.	.	.	.	.	.
1815	MCCR	MCCARRONS	62-0054	881005	1115	3.0	13.5	7.50	46.00	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
1816	MCCR	MCCARRONS	62-0054	881005	1115	3.5	.	.	28.60	.	.	.	.	.	.	.	.	.
1817	MCCR	MCCARRONS	62-0054	881005	1115	4.0	13.5	7.40	17.60	40	.	.	.	.	.	.	395	8.42
1818	MCCR	MCCARRONS	62-0054	881005	1115	4.5	.	.	11.50	.	.	.	.	.	.	.	.	.
1819	MCCR	MCCARRONS	62-0054	881005	1115	5.0	13.5	7.40	7.90	.	.	.	.	.	.	.	.	.
1820	MCCR	MCCARRONS	62-0054	881005	1115	5.5	.	.	5.10	.	.	.	.	.	.	.	.	.
1821	MCCR	MCCARRONS	62-0054	881005	1115	6.0	13.4	7.30	3.45	.	.	.	.	.	.	.	.	.
1822	MCCR	MCCARRONS	62-0054	881005	1115	7.0	13.0	7.60	.	.	.	.	.	.	.	.	.	.
1823	MCCR	MCCARRONS	62-0054	881005	1115	7.5	11.0	.	.	.	.	.	.	.	.	.	.	.
1824	MCCR	MCCARRONS	62-0054	881005	1115	8.0	8.7	1.00	.	170	.	.	.	.	.	.	430	7.65
1825	MCCR	MCCARRONS	62-0054	881005	1115	8.5	7.6	.	.	.	.	.	.	.	.	.	.	.
1826	MCCR	MCCARRONS	62-0054	881005	1115	9.0	7.0	0.70	.	.	.	.	.	.	.	.	.	.
1827	MCCR	MCCARRONS	62-0054	881005	1115	9.5	6.4	.	.	.	.	.	.	.	.	.	.	.
1828	MCCR	MCCARRONS	62-0054	881005	1115	10.0	6.1	0.70	.	.	.	.	.	.	.	.	.	.
1829	MCCR	MCCARRONS	62-0054	881005	1115	11.0	5.6	0.70	.	.	.	.	.	.	.	.	.	.
1830	MCCR	MCCARRONS	62-0054	881005	1115	12.0	5.3	0.70	.	490	.	.	.	.	.	.	495	7.25
1831	MCCR	MCCARRONS	62-0054	881005	1115	13.0	5.1	0.70	.	.	.	.	.	.	.	.	.	.
1832	MCCR	MCCARRONS	62-0054	881005	1115	14.0	5.0	0.70	.	.	.	.	.	.	.	.	.	.
1833	MCCR	MCCARRONS	62-0054	881005	1115	15.0	5.0	0.70	.	.	.	.	.	.	.	.	.	.
1834	MCCR	MCCARRONS	62-0054	881005	1115	16.0	5.0	0.70	.	770	.	.	.	.	.	.	540	7.11
1835	MCCR	MCCARRONS	62-0054	881019	1115	0.0	11.6	8.40	925.00	60	30	10	1.220	0.100	20.0	1.90	410	8.40
1836	MCCR	MCCARRONS	62-0054	881019	1115	0.5	.	.	485.00	.	.	.	.	.	.	.	.	.
1837	MCCR	MCCARRONS	62-0054	881019	1115	1.0	11.5	8.40	233.00	.	.	.	.	.	.	.	.	.
1838	MCCR	MCCARRONS	62-0054	881019	1115	1.5	.	.	136.00	.	.	.	.	.	.	.	.	.
1839	MCCR	MCCARRONS	62-0054	881019	1115	2.0	11.4	8.40	65.50	.	.	.	.	.	.	.	.	.
1840	MCCR	MCCARRONS	62-0054	881019	1115	2.5	.	.	40.50	.	.	.	.	.	.	.	.	.
1841	MCCR	MCCARRONS	62-0054	881019	1115	3.0	11.4	8.30	22.20	.	.	.	.	.	.	.	.	.
1842	MCCR	MCCARRONS	62-0054	881019	1115	3.5	.	.	11.80	.	.	.	.	.	.	.	.	.
1843	MCCR	MCCARRONS	62-0054	881019	1115	4.0	11.4	8.30	6.90	50	.	.	.	.	.	.	410	8.41
1844	MCCR	MCCARRONS	62-0054	881019	1115	4.5	.	.	4.35	.	.	.	.	.	.	.	.	.
1845	MCCR	MCCARRONS	62-0054	881019	1115	5.0	11.4	8.30	2.50	.	.	.	.	.	.	.	.	.
1846	MCCR	MCCARRONS	62-0054	881019	1116	6.0	11.3	8.20	.	.	.	.	.	.	.	.	.	.
1847	MCCR	MCCARRONS	62-0054	881019	1115	7.0	11.2	8.10	.	.	.	.	.	.	.	.	.	.
1848	MCCR	MCCARRONS	62-0054	881019	1115	7.5	11.1	.	.	.	.	.	.	.	.	.	.	.
1849	MCCR	MCCARRONS	62-0054	881019	1115	8.0	10.4	5.20	.	60	.	.	.	.	.	.	410	8.38
1850	MCCR	MCCARRONS	62-0054	881019	1115	8.5	8.4	.	.	.	.	.	.	.	.	.	.	.
1851	MCCR	MCCARRONS	62-0054	881019	1115	9.0	7.2	0.90	.	.	.	.	.	.	.	.	.	.
1852	MCCR	MCCARRONS	62-0054	881019	1115	9.5	6.7	.	.	.	.	.	.	.	.	.	.	.
1853	MCCR	MCCARRONS	62-0054	881019	1115	10.0	6.2	0.80	.	.	.	.	.	.	.	.	.	.
1854	MCCR	MCCARRONS	62-0054	881019	1115	11.0	5.5	.	.	.	.	.	.	.	.	.	.	.
1855	MCCR	MCCARRONS	62-0054	881019	1115	12.0	5.3	0.80	.	570	.	.	.	.	.	.	515	7.22
1856	MCCR	MCCARRONS	62-0054	881019	1115	13.0	5.1	.	.	.	.	.	.	.	.	.	.	.
1857	MCCR	MCCARRONS	62-0054	881019	1115	14.0	5.0	.	.	.	.	.	.	.	.	.	.	.
1858	MCCR	MCCARRONS	62-0054	881019	1115	15.0	4.9	.	.	.	.	.	.	.	.	.	.	.
1859	MCCR	MCCARRONS	62-0054	881019	1115	16.0	4.9	0.70	.	870	.	.	.	.	.	.	555	7.11
1860	TANN	TANNERS	82-0015	871029	1035	0.0	7.5	7.30	.	120	100	106	1.520	0.100	13.0	3.70	360	8.00
1861	TANN	TANNERS	82-0015	871029	1035	1.0	7.5	7.20	.	.	.	.	.	.	.	.	.	.
1862	TANN	TANNERS	82-0015	871029	1035	2.0	7.5	7.10	.	.	.	.	.	.	.	.	.	.
1863	TANN	TANNERS	82-0015	871029	1035	3.0	7.5	7.10	.	120	.	.	.	.	.	.	360	8.00
1864	TANN	TANNERS	82-0015	871029	1035	4.0	7.5	7.00	.	.	.	.	.	.	.	.	.	.
1865	TANN	TANNERS	82-0015	871029	1035	5.0	7.5	7.00	.	.	.	.	.	.	.	.	.	.
1866	TANN	TANNERS	82-0015	871029	1035	6.0	7.5	6.90	.	120	.	.	.	.	.	.	365	8.00
1867	TANN	TANNERS	82-0015	871029	1035	7.0	7.5	6.90	.	.	.	.	.	.	.	.	.	.
1868	TANN	TANNERS	82-0015	871029	1035	8.0	7.0	6.90	.	.	.	.	.	.	.	.	.	.
1869	TANN	TANNERS	82-0015	871029	1035	9.0	7.0	6.90	.	160	.	.	.	.	.	.	360	8.00
1870	TANN	TANNERS	82-0015	871029	1035	10.0	7.0	6.90	.	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
1871	TANN	TANNERS	82-0015	871029	1035	11.0	7.0	6.90	.	.	.	.	.	.	.	.	.	.
1872	TANN	TANNERS	82-0015	871029	1035	12.0	.	.	.	150	.	.	.	.	.	.	355	8.00
1873	TANN	TANNERS	82-0015	871228	1030	0.0	.	.	.	125	80	64	1.450	0.250	23.0	2.00	.	.
1874	TANN	TANNERS	82-0015	871228	1030	1.0	1.0	10.30	.	.	.	.	.	.	.	.	.	.
1875	TANN	TANNERS	82-0015	871228	1030	3.0	1.5	10.65	.	80	.	.	.	.	.	.	.	.
1876	TANN	TANNERS	82-0015	871228	1030	6.0	1.5	10.50	.	70	.	.	.	.	.	.	.	.
1877	TANN	TANNERS	82-0015	871228	1030	9.0	2.0	9.20	.	70	.	.	.	.	.	.	.	.
1878	TANN	TANNERS	82-0015	871228	1030	12.0	2.5	5.65	.	110	.	.	.	.	.	.	.	.
1879	TANN	TANNERS	82-0015	880119	1025	0.0	.	.	.	65	50	53	1.280	0.150	9.2	3.60	.	.
1880	TANN	TANNERS	82-0015	880119	1025	1.0	1.0	10.70	.	.	.	.	.	.	.	.	.	.
1881	TANN	TANNERS	82-0015	880119	1025	3.0	1.5	10.40	.	70	.	.	.	.	.	.	.	.
1882	TANN	TANNERS	82-0015	880119	1025	6.0	2.0	8.10	.	60	.	.	.	.	.	.	.	.
1883	TANN	TANNERS	82-0015	880119	1025	9.0	3.0	5.80	.	100	.	.	.	.	.	.	.	.
1884	TANN	TANNERS	82-0015	880119	1025	12.0	3.0	6.25	.	120	.	.	.	.	.	.	.	.
1885	TANN	TANNERS	82-0015	880217	1015	0.0	.	.	.	70	85	105	1.050	0.120	3.1	3.40	.	.
1886	TANN	TANNERS	82-0015	880217	1015	1.0	1.0	10.90	.	.	.	.	.	.	.	.	.	.
1887	TANN	TANNERS	82-0015	880217	1015	3.0	1.5	.	.	70	.	.	.	.	.	.	.	.
1888	TANN	TANNERS	82-0015	880217	1015	6.0	2.0	.	.	60	.	.	.	.	.	.	.	.
1889	TANN	TANNERS	82-0015	880217	1015	9.0	2.5	3.30	.	110	.	.	.	.	.	.	.	.
1890	TANN	TANNERS	82-0015	880217	1015	12.0	3.0	.	.	270	.	.	.	.	.	.	.	.
1891	TANN	TANNERS	82-0015	880323	1045	0.0	.	.	.	95	70	54	1.020	0.240	1.6	6.20	.	.
1892	TANN	TANNERS	82-0015	880323	1045	1.0	3.5	8.65	.	.	.	.	.	.	.	.	.	.
1893	TANN	TANNERS	82-0015	880323	1045	3.0	3.5	7.95	.	70	.	.	.	.	.	.	.	.
1894	TANN	TANNERS	82-0015	880323	1045	6.0	3.5	7.45	.	90	.	.	.	.	.	.	.	.
1895	TANN	TANNERS	82-0015	880323	1045	9.0	3.0	1.05	.	170	.	.	.	.	.	.	.	.
1896	TANN	TANNERS	82-0015	880323	1045	12.0	3.0	0.15	.	330	.	.	.	.	.	.	.	.
1897	TANN	TANNERS	82-0015	880408	1025	0.0	7.0	.	.	85	50	66	1.100	0.180	15.0	2.30	370	7.72
1898	TANN	TANNERS	82-0015	880408	1025	1.0	7.0	.	.	.	.	.	.	.	.	.	.	.
1899	TANN	TANNERS	82-0015	880408	1025	2.0	7.0	.	.	.	.	.	.	.	.	.	.	.
1900	TANN	TANNERS	82-0015	880408	1025	5.0	6.0	.	.	90	.	.	.	.	.	.	390	7.78
1901	TANN	TANNERS	82-0015	880408	1025	10.0	5.0	.	.	100	.	.	.	.	.	.	415	7.66
1902	TANN	TANNERS	82-0015	880421	1130	0.0	8.6	13.60	620.00	65	35	26	1.180	0.100	37.0	1.90	410	8.56
1903	TANN	TANNERS	82-0015	880421	1130	0.5	.	.	310.00	.	.	.	.	.	.	.	.	.
1904	TANN	TANNERS	82-0015	880421	1130	1.0	8.6	.	160.00	.	.	.	.	.	.	.	.	.
1905	TANN	TANNERS	82-0015	880421	1130	1.5	.	.	102.00	.	.	.	.	.	.	.	.	.
1906	TANN	TANNERS	82-0015	880421	1130	2.0	8.5	13.20	72.00	.	.	.	.	.	.	.	.	.
1907	TANN	TANNERS	82-0015	880421	1130	2.5	.	.	40.00	.	.	.	.	.	.	.	.	.
1908	TANN	TANNERS	82-0015	880421	1130	3.0	8.5	.	24.00	60	.	.	.	.	.	.	410	8.61
1909	TANN	TANNERS	82-0015	880421	1130	3.5	.	.	15.60	.	.	.	.	.	.	.	.	.
1910	TANN	TANNERS	82-0015	880421	1130	4.0	8.4	12.90	10.50	.	.	.	.	.	.	.	.	.
1911	TANN	TANNERS	82-0015	880421	1130	4.5	.	.	6.95	.	.	.	.	.	.	.	.	.
1912	TANN	TANNERS	82-0015	880421	1130	5.0	8.4	.	4.75	.	.	.	.	.	.	.	.	.
1913	TANN	TANNERS	82-0015	880421	1130	5.5	.	.	3.25	.	.	.	.	.	.	.	.	.
1914	TANN	TANNERS	82-0015	880421	1130	6.0	8.4	12.70	.	60	.	.	.	.	.	.	410	8.61
1915	TANN	TANNERS	82-0015	880421	1130	7.0	8.3	.	.	.	.	.	.	.	.	.	.	.
1916	TANN	TANNERS	82-0015	880421	1130	8.0	8.1	12.40	.	.	.	.	.	.	.	.	.	.
1917	TANN	TANNERS	82-0015	880421	1130	9.0	8.0	11.80	.	40	.	.	.	.	.	.	410	8.56
1918	TANN	TANNERS	82-0015	880421	1130	10.0	7.9	7.50	.	.	.	.	.	.	.	.	.	.
1919	TANN	TANNERS	82-0015	880421	1130	10.5	6.1	.	.	.	.	.	.	.	.	.	.	.
1920	TANN	TANNERS	82-0015	880421	1130	11.0	4.8	0.40	.	60	.	.	.	.	.	.	420	8.29
1921	TANN	TANNERS	82-0015	880421	1130	12.0	4.4	.	.	.	.	.	.	.	.	.	.	.
1922	TANN	TANNERS	82-0015	880503	1115	0.0	13.7	11.90	1700.00	90	35	9	1.380	0.050	5.4	4.30	400	8.72
1923	TANN	TANNERS	82-0015	880503	1115	0.5	.	.	1050.00	.	.	.	.	.	.	.	.	.
1924	TANN	TANNERS	82-0015	880503	1115	1.0	13.5	.	730.00	.	.	.	.	.	.	.	.	.
1925	TANN	TANNERS	82-0015	880503	1115	1.5	.	.	460.00	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
1926	TANN	TANNERS	82-0015	880503	1115	2.0	13.3	11.80	340.00	.	.	.	.	.	.	.	.	.
1927	TANN	TANNERS	82-0015	880503	1115	2.5	13.2	.	275.00	.	.	.	.	.	.	.	.	.
1928	TANN	TANNERS	82-0015	880503	1115	3.0	12.0	.	190.00	70	.	.	.	.	.	.	405	8.82
1929	TANN	TANNERS	82-0015	880503	1115	3.5	11.7	.	145.00	.	.	.	.	.	.	.	.	.
1930	TANN	TANNERS	82-0015	880503	1115	4.0	10.7	12.80	110.00	.	.	.	.	.	.	.	.	.
1931	TANN	TANNERS	82-0015	880503	1115	4.5	9.2	.	76.00	.	.	.	.	.	.	.	.	.
1932	TANN	TANNERS	82-0015	880503	1115	5.0	9.0	.	54.00	.	.	.	.	.	.	.	.	.
1933	TANN	TANNERS	82-0015	880503	1115	5.5	.	.	39.00	.	.	.	.	.	.	.	.	.
1934	TANN	TANNERS	82-0015	880503	1115	6.0	8.8	11.10	28.00	100	.	.	.	.	.	.	410	8.70
1935	TANN	TANNERS	82-0015	880503	1115	6.5	.	.	20.50	.	.	.	.	.	.	.	.	.
1936	TANN	TANNERS	82-0015	880503	1115	7.0	8.6	.	15.70	.	.	.	.	.	.	.	.	.
1937	TANN	TANNERS	82-0015	880503	1115	7.5	.	.	11.80	.	.	.	.	.	.	.	.	.
1938	TANN	TANNERS	82-0015	880503	1115	8.0	8.4	10.30	.	.	.	.	.	.	.	.	.	.
1939	TANN	TANNERS	82-0015	880503	1115	9.0	8.2	.	.	120	.	.	.	.	.	.	400	8.53
1940	TANN	TANNERS	82-0015	880503	1115	10.0	8.0	8.10	.	.	.	.	.	.	.	.	.	.
1941	TANN	TANNERS	82-0015	880503	1115	10.5	7.9	.	.	.	.	.	.	.	.	.	.	.
1942	TANN	TANNERS	82-0015	880503	1115	11.0	6.3	.	.	.	.	.	.	.	.	.	.	.
1943	TANN	TANNERS	82-0015	880503	1115	11.5	5.5	.	.	.	.	.	.	.	.	.	.	.
1944	TANN	TANNERS	82-0015	880503	1115	12.0	5.2	0.40	.	170	.	.	.	.	.	.	345	7.83
1945	TANN	TANNERS	82-0015	880517	1115	0.0	15.2	9.00	1530.00	50	40	16	0.900	0.100	9.5	4.30	385	8.54
1946	TANN	TANNERS	82-0015	880517	1115	0.5	.	.	1100.00	.	.	.	.	.	.	.	.	.
1947	TANN	TANNERS	82-0015	880517	1115	1.0	14.8	8.90	720.00	.	.	.	.	.	.	.	.	.
1948	TANN	TANNERS	82-0015	880517	1115	1.5	.	.	510.00	.	.	.	.	.	.	.	.	.
1949	TANN	TANNERS	82-0015	880517	1115	2.0	14.7	9.00	330.00	.	.	.	.	.	.	.	.	.
1950	TANN	TANNERS	82-0015	880517	1115	2.5	.	.	240.00	.	.	.	.	.	.	.	.	.
1951	TANN	TANNERS	82-0015	880517	1115	3.0	14.7	8.80	175.00	40	.	.	.	.	.	.	390	8.61
1952	TANN	TANNERS	82-0015	880517	1115	3.5	.	.	105.00	.	.	.	.	.	.	.	.	.
1953	TANN	TANNERS	82-0015	880517	1115	4.0	14.7	8.80	82.00	.	.	.	.	.	.	.	.	.
1954	TANN	TANNERS	82-0015	880517	1115	4.5	.	.	59.00	.	.	.	.	.	.	.	.	.
1955	TANN	TANNERS	82-0015	880517	1115	5.0	14.5	8.40	45.00	.	.	.	.	.	.	.	.	.
1956	TANN	TANNERS	82-0015	880517	1115	5.5	13.9	.	34.00	.	.	.	.	.	.	.	.	.
1957	TANN	TANNERS	82-0015	880517	1115	6.0	10.6	7.70	25.00	30	.	.	.	.	.	.	395	8.58
1958	TANN	TANNERS	82-0015	880517	1115	6.5	9.4	.	19.30	.	.	.	.	.	.	.	.	.
1959	TANN	TANNERS	82-0015	880517	1115	7.0	8.9	8.00	15.00	.	.	.	.	.	.	.	.	.
1960	TANN	TANNERS	82-0015	880517	1115	7.5	.	.	12.40	.	.	.	.	.	.	.	.	.
1961	TANN	TANNERS	82-0015	880517	1115	8.0	8.5	6.20	.	.	.	.	.	.	.	.	.	.
1962	TANN	TANNERS	82-0015	880517	1115	9.0	8.1	2.80	.	70	.	.	.	.	.	.	420	8.22
1963	TANN	TANNERS	82-0015	880517	1115	10.0	7.6	0.30	.	.	.	.	.	.	.	.	.	.
1964	TANN	TANNERS	82-0015	880517	1115	11.0	6.9	0.20	.	.	.	.	.	.	.	.	.	.
1965	TANN	TANNERS	82-0015	880517	1115	12.0	6.4	0.30	.	300	.	.	.	.	.	.	475	7.48
1966	TANN	TANNERS	82-0015	880602	1215	0.0	24.9	10.90	650.00	50	50	6	1.080	0.100	25.0	2.00	385	9.02
1967	TANN	TANNERS	82-0015	880602	1215	0.5	.	.	218.00	.	.	.	.	.	.	.	.	.
1968	TANN	TANNERS	82-0015	880602	1215	1.0	24.9	10.30	104.00	.	.	.	.	.	.	.	.	.
1969	TANN	TANNERS	82-0015	880602	1215	1.5	.	.	70.00	.	.	.	.	.	.	.	.	.
1970	TANN	TANNERS	82-0015	880602	1215	2.0	23.9	10.60	41.00	.	.	.	.	.	.	.	.	.
1971	TANN	TANNERS	82-0015	880602	1215	2.5	23.3	.	24.20	.	.	.	.	.	.	.	.	.
1972	TANN	TANNERS	82-0015	880602	1215	3.0	22.7	6.90	14.30	40	.	.	.	.	.	.	375	8.89
1973	TANN	TANNERS	82-0015	880602	1215	3.5	20.3	.	10.10	.	.	.	.	.	.	.	.	.
1974	TANN	TANNERS	82-0015	880602	1215	4.0	17.9	6.80	7.25	.	.	.	.	.	.	.	.	.
1975	TANN	TANNERS	82-0015	880602	1215	4.5	15.5	.	5.25	.	.	.	.	.	.	.	.	.
1976	TANN	TANNERS	82-0015	880602	1215	5.0	14.1	5.40	3.85	.	.	.	.	.	.	.	.	.
1977	TANN	TANNERS	82-0015	880602	1215	5.5	12.7	.	.	.	.	.	.	.	.	.	.	.
1978	TANN	TANNERS	82-0015	880602	1215	6.0	11.8	4.80	.	40	.	.	.	.	.	.	405	7.94
1979	TANN	TANNERS	82-0015	880602	1215	6.5	10.4	.	.	.	.	.	.	.	.	.	.	.
1980	TANN	TANNERS	82-0015	880602	1215	7.0	9.9	5.10	.	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
1981	TANN	TANNERS	82-0015	880602	1215	7.5	9.1	.	.	.	.	.	.	.	.	.	.	.
1982	TANN	TANNERS	82-0015	880602	1215	8.0	8.7	0.20	.	.	.	.	.	.	.	.	.	.
1983	TANN	TANNERS	82-0015	880602	1215	9.0	8.2	.	.	160	.	.	.	.	.	.	430	7.49
1984	TANN	TANNERS	82-0015	880602	1215	10.0	7.8	0.20	.	.	.	.	.	.	.	.	.	.
1985	TANN	TANNERS	82-0015	880602	1215	11.0	7.2	.	.	.	.	.	.	.	.	.	.	.
1986	TANN	TANNERS	82-0015	880602	1215	12.0	6.8	0.30	.	410	.	.	.	.	.	.	480	7.27
1987	TANN	TANNERS	82-0015	880614	1055	0.0	23.8	8.40	.	155	100	84	1.200	0.750	15.0	2.40	.	8.76
1988	TANN	TANNERS	82-0015	880614	1055	2.0	23.7	7.70	.	.	.	.	.	.	.	.	.	.
1989	TANN	TANNERS	82-0015	880614	1055	3.0	22.8	.	.	40	.	.	.	.	.	.	.	.
1990	TANN	TANNERS	82-0015	880614	1055	4.0	20.2	2.30	.	.	.	.	.	.	.	.	.	.
1991	TANN	TANNERS	82-0015	880614	1055	5.0	14.5	.	.	.	.	.	.	.	.	.	.	.
1992	TANN	TANNERS	82-0015	880614	1055	6.0	11.2	3.10	.	20	.	.	.	.	.	.	.	.
1993	TANN	TANNERS	82-0015	880614	1055	7.0	9.1	.	.	.	.	.	.	.	.	.	.	.
1994	TANN	TANNERS	82-0015	880614	1055	8.0	8.5	0.20	.	.	.	.	.	.	.	.	.	.
1995	TANN	TANNERS	82-0015	880614	1055	9.0	8.0	.	.	200	.	.	.	.	.	.	.	.
1996	TANN	TANNERS	82-0015	880614	1055	10.0	7.6	0.20	.	.	.	.	.	.	.	.	.	.
1997	TANN	TANNERS	82-0015	880614	1055	11.0	7.2	.	.	.	.	.	.	.	.	.	.	.
1998	TANN	TANNERS	82-0015	880614	1055	12.0	.	.	.	470	.	.	.	.	.	.	.	.
1999	TANN	TANNERS	82-0015	880628	1120	0.0	25.0	9.30	1760.00	50	20	12	1.020	0.050	13.0	2.40	.	8.98
2000	TANN	TANNERS	82-0015	880628	1120	0.5	.	.	1050.00	.	.	.	.	.	.	.	.	.
2001	TANN	TANNERS	82-0015	880628	1120	1.0	25.0	9.10	560.00	.	.	.	.	.	.	.	.	.
2002	TANN	TANNERS	82-0015	880628	1120	1.5	.	.	330.00	.	.	.	.	.	.	.	.	.
2003	TANN	TANNERS	82-0015	880628	1120	2.0	24.9	9.10	205.00	.	.	.	.	.	.	.	.	.
2004	TANN	TANNERS	82-0015	880628	1120	2.5	.	.	126.00	.	.	.	.	.	.	.	.	.
2005	TANN	TANNERS	82-0015	880628	1120	3.0	24.5	8.20	88.00	20	.	.	.	.	.	.	.	9.04
2006	TANN	TANNERS	82-0015	880628	1120	3.5	24.2	.	56.50	.	.	.	.	.	.	.	.	.
2007	TANN	TANNERS	82-0015	880628	1120	4.0	23.8	4.40	36.00	.	.	.	.	.	.	.	.	.
2008	TANN	TANNERS	82-0015	880628	1120	4.5	20.8	.	22.80	.	.	.	.	.	.	.	.	.
2009	TANN	TANNERS	82-0015	880628	1120	5.0	16.1	0.50	15.40	.	.	.	.	.	.	.	.	.
2010	TANN	TANNERS	82-0015	880628	1120	5.5	13.3	.	11.50	.	.	.	.	.	.	.	.	.
2011	TANN	TANNERS	82-0015	880628	1120	6.0	11.7	0.30	8.80	20	.	.	.	.	.	.	.	7.78
2012	TANN	TANNERS	82-0015	880628	1120	6.5	10.4	.	.	.	.	.	.	.	.	.	.	.
2013	TANN	TANNERS	82-0015	880628	1120	7.0	9.5	0.20	.	.	.	.	.	.	.	.	.	.
2014	TANN	TANNERS	82-0015	880628	1120	7.5	9.0	.	.	.	.	.	.	.	.	.	.	.
2015	TANN	TANNERS	82-0015	880628	1120	8.0	8.5	0.20	.	.	.	.	.	.	.	.	.	.
2016	TANN	TANNERS	82-0015	880628	1120	8.5	8.2	.	.	.	.	.	.	.	.	.	.	.
2017	TANN	TANNERS	82-0015	880628	1120	9.0	7.9	0.20	.	240	.	.	.	.	.	.	.	7.54
2018	TANN	TANNERS	82-0015	880628	1120	10.0	7.6	.	.	.	.	.	.	.	.	.	.	.
2019	TANN	TANNERS	82-0015	880628	1120	11.0	7.2	.	.	.	.	.	.	.	.	.	.	.
2020	TANN	TANNERS	82-0015	880628	1120	12.0	7.2	0.20	.	710	.	.	.	.	.	.	.	7.33
2021	TANN	TANNERS	82-0015	880712	1105	0.0	25.5	8.20	1650.00	30	20	2	0.850	0.100	9.8	1.90	390	8.92
2022	TANN	TANNERS	82-0015	880712	1105	0.5	.	.	870.00	.	.	.	.	.	.	.	.	.
2023	TANN	TANNERS	82-0015	880712	1105	1.0	25.5	8.10	510.00	.	.	.	.	.	.	.	.	.
2024	TANN	TANNERS	82-0015	880712	1105	1.5	.	.	340.00	.	.	.	.	.	.	.	.	.
2025	TANN	TANNERS	82-0015	880712	1105	2.0	25.3	8.00	190.00	.	.	.	.	.	.	.	.	.
2026	TANN	TANNERS	82-0015	880712	1105	2.5	.	.	120.00	.	.	.	.	.	.	.	.	.
2027	TANN	TANNERS	82-0015	880712	1105	3.0	25.0	7.50	79.00	40	.	.	.	.	.	.	390	.
2028	TANN	TANNERS	82-0015	880712	1105	3.5	24.5	.	45.50	.	.	.	.	.	.	.	.	.
2029	TANN	TANNERS	82-0015	880712	1105	4.0	24.1	3.10	32.00	.	.	.	.	.	.	.	.	.
2030	TANN	TANNERS	82-0015	880712	1105	4.5	21.8	.	19.70	.	.	.	.	.	.	.	.	.
2031	TANN	TANNERS	82-0015	880712	1105	5.0	17.7	0.20	11.50	.	.	.	.	.	.	.	.	.
2032	TANN	TANNERS	82-0015	880712	1105	5.5	13.9	.	7.40	.	.	.	.	.	.	.	.	.
2033	TANN	TANNERS	82-0015	880712	1105	6.0	12.3	0.20	5.40	40	.	.	.	.	.	.	420	.
2034	TANN	TANNERS	82-0015	880712	1105	6.5	10.8	.	.	.	.	.	.	.	.	.	.	.
2035	TANN	TANNERS	82-0015	880712	1105	7.0	9.6	0.20	.	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
2036	TANN	TANNERS	82-0015	880712	1105	7.5	8.9	.	.	.	.	.	.	.	.	.	.	.
2037	TANN	TANNERS	82-0015	880712	1105	8.0	8.6	0.20	.	.	.	.	.	.	.	.	.	.
2038	TANN	TANNERS	82-0015	880712	1105	8.5	8.1	.	.	.	.	.	.	.	.	.	.	.
2039	TANN	TANNERS	82-0015	880712	1105	9.0	7.8	0.20	.	420	.	.	.	.	.	.	460	.
2040	TANN	TANNERS	82-0015	880712	1105	9.5	7.7	.	.	.	.	.	.	.	.	.	.	.
2041	TANN	TANNERS	82-0015	880712	1105	10.0	7.6	0.20	.	.	.	.	.	.	.	.	.	.
2042	TANN	TANNERS	82-0015	880712	1105	10.5	7.3	.	.	.	.	.	.	.	.	.	.	.
2043	TANN	TANNERS	82-0015	880712	1105	11.0	.	.	.	750	.	.	.	.	.	.	490	.
2044	TANN	TANNERS	82-0015	880727	1105	0.0	25.4	7.30	1700.00	20	10	2	0.880	0.050	6.4	2.70	400	8.77
2045	TANN	TANNERS	82-0015	880727	1105	0.5	25.4	7.30	1060.00	.	.	.	.	.	.	.	.	.
2046	TANN	TANNERS	82-0015	880727	1105	1.0	25.3	7.30	590.00	.	.	.	.	.	.	.	.	.
2047	TANN	TANNERS	82-0015	880727	1105	1.5	.	.	420.00	.	.	.	.	.	.	.	.	.
2048	TANN	TANNERS	82-0015	880727	1105	2.0	25.2	7.30	272.00	.	.	.	.	.	.	.	.	.
2049	TANN	TANNERS	82-0015	880727	1105	2.5	25.1	.	190.00	.	.	.	.	.	.	.	.	.
2050	TANN	TANNERS	82-0015	880727	1105	3.0	24.9	6.70	130.00	20	.	.	.	.	.	.	390	.
2051	TANN	TANNERS	82-0015	880727	1105	3.5	24.8	.	91.00	.	.	.	.	.	.	.	.	.
2052	TANN	TANNERS	82-0015	880727	1105	4.0	24.3	4.70	61.50	.	.	.	.	.	.	.	.	.
2053	TANN	TANNERS	82-0015	880727	1105	4.5	21.4	.	39.50	.	.	.	.	.	.	.	.	.
2054	TANN	TANNERS	82-0015	880727	1105	5.0	18.4	0.30	23.10	.	.	.	.	.	.	.	.	.
2055	TANN	TANNERS	82-0015	880727	1105	5.5	15.3	.	11.20	.	.	.	.	.	.	.	.	.
2056	TANN	TANNERS	82-0015	880727	1105	6.0	13.1	0.30	5.20	20	.	.	.	.	.	.	410	.
2057	TANN	TANNERS	82-0015	880727	1105	6.5	11.6	.	2.96	.	.	.	.	.	.	.	.	.
2058	TANN	TANNERS	82-0015	880727	1105	7.0	10.3	.	1.51	.	.	.	.	.	.	.	.	.
2059	TANN	TANNERS	82-0015	880727	1105	7.5	9.6	.	.	.	.	.	.	.	.	.	.	.
2060	TANN	TANNERS	82-0015	880727	1105	8.0	8.8	0.30	.	.	.	.	.	.	.	.	.	.
2061	TANN	TANNERS	82-0015	880727	1105	8.5	8.3	.	.	.	.	.	.	.	.	.	.	.
2062	TANN	TANNERS	82-0015	880727	1105	9.0	8.1	0.30	.	330	.	.	.	.	.	.	440	.
2063	TANN	TANNERS	82-0015	880727	1105	9.5	7.8	.	.	.	.	.	.	.	.	.	.	.
2064	TANN	TANNERS	82-0015	880727	1105	10.0	7.6	0.30	.	.	.	.	.	.	.	.	.	.
2065	TANN	TANNERS	82-0015	880727	1105	10.5	7.5	.	.	.	.	.	.	.	.	.	.	.
2066	TANN	TANNERS	82-0015	880727	1105	11.0	7.3	0.30	.	.	.	.	.	.	.	.	.	.
2067	TANN	TANNERS	82-0015	880727	1105	11.5	7.2	.	.	.	.	.	.	.	.	.	.	.
2068	TANN	TANNERS	82-0015	880727	1105	12.0	7.1	0.30	.	870	.	.	.	.	.	.	500	.
2069	TANN	TANNERS	82-0015	880809	1100	0.0	25.6	7.70	1850.00	45	35	2	0.950	0.050	15.0	2.10	375	8.89
2070	TANN	TANNERS	82-0015	880809	1100	0.5	.	.	930.00	.	.	.	.	.	.	.	.	.
2071	TANN	TANNERS	82-0015	880809	1100	1.0	25.6	7.50	470.00	.	.	.	.	.	.	.	.	.
2072	TANN	TANNERS	82-0015	880809	1100	1.5	.	.	290.00	.	.	.	.	.	.	.	.	.
2073	TANN	TANNERS	82-0015	880809	1100	2.0	25.5	7.50	170.00	.	.	.	.	.	.	.	.	.
2074	TANN	TANNERS	82-0015	880809	1100	2.5	.	.	108.00	.	.	.	.	.	.	.	.	.
2075	TANN	TANNERS	82-0015	880809	1100	3.0	25.3	7.30	67.00	40	.	.	.	.	.	.	380	.
2076	TANN	TANNERS	82-0015	880809	1100	3.5	.	.	41.50	.	.	.	.	.	.	.	.	.
2077	TANN	TANNERS	82-0015	880809	1100	4.0	25.2	6.60	25.80	.	.	.	.	.	.	.	.	.
2078	TANN	TANNERS	82-0015	880809	1100	4.5	24.8	.	16.00	.	.	.	.	.	.	.	.	.
2079	TANN	TANNERS	82-0015	880809	1100	5.0	22.2	2.50	10.90	.	.	.	.	.	.	.	.	.
2080	TANN	TANNERS	82-0015	880809	1100	5.5	17.4	.	7.30	.	.	.	.	.	.	.	.	.
2081	TANN	TANNERS	82-0015	880809	1100	6.0	14.4	0.20	3.70	40	.	.	.	.	.	.	.	.
2082	TANN	TANNERS	82-0015	880809	1100	6.5	12.3	.	.	.	.	.	.	.	.	.	.	.
2083	TANN	TANNERS	82-0015	880809	1100	7.0	10.9	0.20	.	.	.	.	.	.	.	.	.	.
2084	TANN	TANNERS	82-0015	880809	1100	7.5	9.6	.	.	.	.	.	.	.	.	.	.	.
2085	TANN	TANNERS	82-0015	880809	1100	8.0	8.8	0.20	.	.	.	.	.	.	.	.	.	.
2086	TANN	TANNERS	82-0015	880809	1100	8.5	8.5	.	.	.	.	.	.	.	.	.	.	.
2087	TANN	TANNERS	82-0015	880809	1100	9.0	8.2	0.20	.	470	.	.	.	.	.	.	450	.
2088	TANN	TANNERS	82-0015	880809	1100	9.5	8.0	.	.	.	.	.	.	.	.	.	.	.
2089	TANN	TANNERS	82-0015	880809	1100	10.0	7.8	0.20	.	.	.	.	.	.	.	.	.	.
2090	TANN	TANNERS	82-0015	880809	1100	10.5	7.7	.	.	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
2091	TANN	TANNERS	82-0015	880809	1100	11.0	7.5	0.20	.	.	.	.	.	.	.	.	.	.
2092	TANN	TANNERS	82-0015	880809	1100	12.0	7.3	0.20	.	1120	.	.	.	.	.	.	510	.
2093	TANN	TANNERS	82-0015	880823	1045	0.0	23.8	8.30	1640.00	40	20	2	1.100	0.050	34.0	1.60	385	8.92
2094	TANN	TANNERS	82-0015	880823	1045	0.5	.	.	630.00	.	.	.	.	.	.	.	.	.
2095	TANN	TANNERS	82-0015	880823	1045	1.0	23.7	8.00	310.00	.	.	.	.	.	.	.	.	.
2096	TANN	TANNERS	82-0015	880823	1045	1.5	.	.	118.00	.	.	.	.	.	.	.	.	.
2097	TANN	TANNERS	82-0015	880823	1045	2.0	23.6	7.70	77.00	.	.	.	.	.	.	.	.	.
2098	TANN	TANNERS	82-0015	880823	1045	2.5	.	.	43.00	.	.	.	.	.	.	.	.	.
2099	TANN	TANNERS	82-0015	880823	1045	3.0	23.6	7.40	22.30	10	.	.	.	.	.	.	375	.
2100	TANN	TANNERS	82-0015	880823	1045	3.5	.	.	13.80	.	.	.	.	.	.	.	.	.
2101	TANN	TANNERS	82-0015	880823	1045	4.0	23.5	7.10	8.60	.	.	.	.	.	.	.	.	.
2102	TANN	TANNERS	82-0015	880823	1045	4.5	23.3	.	5.20	.	.	.	.	.	.	.	.	.
2103	TANN	TANNERS	82-0015	880823	1045	5.0	22.2	1.00	3.40	.	.	.	.	.	.	.	.	.
2104	TANN	TANNERS	82-0015	880823	1045	5.5	18.7	.	.	.	.	.	.	.	.	.	.	.
2105	TANN	TANNERS	82-0015	880823	1045	6.0	16.2	0.70	.	50	.	.	.	.	.	.	390	.
2106	TANN	TANNERS	82-0015	880823	1045	6.5	12.9	.	.	.	.	.	.	.	.	.	.	.
2107	TANN	TANNERS	82-0015	880823	1045	7.0	11.2	0.80	.	.	.	.	.	.	.	.	.	.
2108	TANN	TANNERS	82-0015	880823	1045	7.5	10.0	.	.	.	.	.	.	.	.	.	.	.
2109	TANN	TANNERS	82-0015	880823	1045	8.0	9.3	0.80	.	.	.	.	.	.	.	.	.	.
2110	TANN	TANNERS	82-0015	880823	1045	8.5	8.5	.	.	.	.	.	.	.	.	.	.	.
2111	TANN	TANNERS	82-0015	880823	1045	9.0	8.3	0.90	.	500	.	.	.	.	.	.	460	.
2112	TANN	TANNERS	82-0015	880823	1045	10.0	7.9	0.90	.	.	.	.	.	.	.	.	.	.
2113	TANN	TANNERS	82-0015	880823	1045	11.0	7.6	0.90	.	.	.	.	.	.	.	.	.	.
2114	TANN	TANNERS	82-0015	880823	1045	12.0	7.5	0.90	.	1180	.	.	.	.	.	.	505	.
2115	TANN	TANNERS	82-0015	880906	1025	0.0	19.5	8.40	1300.00	30	10	4	1.000	0.050	23.0	1.80	385	8.58
2116	TANN	TANNERS	82-0015	880906	1025	0.5	.	.	640.00	.	.	.	.	.	.	.	.	.
2117	TANN	TANNERS	82-0015	880906	1025	1.0	19.3	8.20	340.00	.	.	.	.	.	.	.	.	.
2118	TANN	TANNERS	82-0015	880906	1025	1.5	.	.	187.00	.	.	.	.	.	.	.	.	.
2119	TANN	TANNERS	82-0015	880906	1025	2.0	19.3	8.20	102.00	.	.	.	.	.	.	.	.	.
2120	TANN	TANNERS	82-0015	880906	1025	2.5	.	.	57.50	.	.	.	.	.	.	.	.	.
2121	TANN	TANNERS	82-0015	880906	1025	3.0	19.2	7.90	33.00	40	.	.	.	.	.	.	385	.
2122	TANN	TANNERS	82-0015	880906	1025	3.5	.	.	20.00	.	.	.	.	.	.	.	.	.
2123	TANN	TANNERS	82-0015	880906	1025	4.0	19.2	7.90	12.30	.	.	.	.	.	.	.	.	.
2124	TANN	TANNERS	82-0015	880906	1025	4.5	.	.	6.95	.	.	.	.	.	.	.	.	.
2125	TANN	TANNERS	82-0015	880906	1025	5.0	19.1	7.50	4.25	.	.	.	.	.	.	.	.	.
2126	TANN	TANNERS	82-0015	880906	1025	5.5	18.9	.	.	.	.	.	.	.	.	.	.	.
2127	TANN	TANNERS	82-0015	880906	1025	6.0	18.7	4.70	.	30	.	.	.	.	.	.	390	.
2128	TANN	TANNERS	82-0015	880906	1025	6.5	14.7	.	.	.	.	.	.	.	.	.	.	.
2129	TANN	TANNERS	82-0015	880906	1025	7.0	11.8	0.90	.	.	.	.	.	.	.	.	.	.
2130	TANN	TANNERS	82-0015	880906	1025	7.5	10.4	.	.	.	.	.	.	.	.	.	.	.
2131	TANN	TANNERS	82-0015	880906	1025	8.0	9.3	0.90	.	.	.	.	.	.	.	.	.	.
2132	TANN	TANNERS	82-0015	880906	1025	8.5	8.7	.	.	.	.	.	.	.	.	.	.	.
2133	TANN	TANNERS	82-0015	880906	1025	9.0	8.3	0.90	.	520	.	.	.	.	.	.	465	.
2134	TANN	TANNERS	82-0015	880906	1025	9.5	8.1	.	.	.	.	.	.	.	.	.	.	.
2135	TANN	TANNERS	82-0015	880906	1025	10.0	7.9	0.80	.	.	.	.	.	.	.	.	.	.
2136	TANN	TANNERS	82-0015	880906	1025	11.0	7.5	0.80	.	1030	.	.	.	.	.	.	505	.
2137	TANN	TANNERS	82-0015	880906	1025	11.5	7.4	0.80	.	.	.	.	.	.	.	.	.	.
2138	TANN	TANNERS	82-0015	880921	1050	0.0	16.8	7.90	380.00	45	30	8	1.170	0.050	20.0	1.40	385	.
2139	TANN	TANNERS	82-0015	880921	1050	0.5	.	.	140.00	.	.	.	.	.	.	.	.	.
2140	TANN	TANNERS	82-0015	880921	1050	1.0	16.8	7.70	70.00	.	.	.	.	.	.	.	.	.
2141	TANN	TANNERS	82-0015	880921	1050	1.5	.	.	32.50	.	.	.	.	.	.	.	.	.
2142	TANN	TANNERS	82-0015	880921	1050	2.0	16.8	7.80	18.90	.	.	.	.	.	.	.	.	.
2143	TANN	TANNERS	82-0015	880921	1050	2.5	.	.	10.60	.	.	.	.	.	.	.	.	.
2144	TANN	TANNERS	82-0015	880921	1050	3.0	16.8	7.50	5.40	40	.	.	.	.	.	.	380	.
2145	TANN	TANNERS	82-0015	880921	1050	3.5	.	.	3.00	.	.	.	.	.	.	.	.	.

OBS	LAKE	LAKENAME	LAKEID	DATE	TIME	DM	TC	DO	LIGHT	TP	TDP	OP	TKN	N23	CLA	SDM	COND	PHL
2146	TANN	TANNERS	82-0015	880921	1050	4.0	16.8	7.60	1.50	.	.	.	.	.	.	.	.	.
2147	TANN	TANNERS	82-0015	880921	1050	5.0	16.8	7.60	.	.	.	.	.	.	.	.	.	.
2148	TANN	TANNERS	82-0015	880921	1050	6.0	16.8	7.40	.	50	.	.	.	.	.	.	385	.
2149	TANN	TANNERS	82-0015	880921	1050	6.5	16.7	.	.	.	.	.	.	.	.	.	.	.
2150	TANN	TANNERS	82-0015	880921	1050	7.0	14.3	3.50	.	.	.	.	.	.	.	.	.	.
2151	TANN	TANNERS	82-0015	880921	1050	7.5	11.7	.	.	.	.	.	.	.	.	.	.	.
2152	TANN	TANNERS	82-0015	880921	1050	8.0	9.9	.	.	.	.	.	.	.	.	.	.	.
2153	TANN	TANNERS	82-0015	880921	1050	8.5	8.9	.	.	.	.	.	.	.	.	.	.	.
2154	TANN	TANNERS	82-0015	880921	1050	9.0	8.5	0.80	.	620	.	.	.	.	.	.	475	.
2155	TANN	TANNERS	82-0015	880921	1050	10.0	8.1	.	.	.	.	.	.	.	.	.	.	.
2156	TANN	TANNERS	82-0015	880921	1050	11.0	7.8	1.00	.	1100	.	.	.	.	.	.	510	.
2157	TANN	TANNERS	82-0015	881004	1030	0.0	13.9	8.00	1020.00	60	45	20	1.090	0.050	17.0	2.20	375	8.28
2158	TANN	TANNERS	82-0015	881004	1030	0.5	.	.	530.00	.	.	.	.	.	.	.	.	.
2159	TANN	TANNERS	82-0015	881004	1030	1.0	13.9	7.90	260.00	.	.	.	.	.	.	.	.	.
2160	TANN	TANNERS	82-0015	881004	1030	1.5	.	.	135.00	.	.	.	.	.	.	.	.	.
2161	TANN	TANNERS	82-0015	881004	1030	2.0	13.9	7.90	83.00	.	.	.	.	.	.	.	.	.
2162	TANN	TANNERS	82-0015	881004	1030	2.5	.	.	47.00	.	.	.	.	.	.	.	.	.
2163	TANN	TANNERS	82-0015	881004	1030	3.0	13.9	7.80	26.50	60	.	.	.	.	.	.	380	8.31
2164	TANN	TANNERS	82-0015	881004	1030	3.5	.	.	15.80	.	.	.	.	.	.	.	.	.
2165	TANN	TANNERS	82-0015	881004	1030	4.0	13.9	7.90	10.10	.	.	.	.	.	.	.	.	.
2166	TANN	TANNERS	82-0015	881004	1030	4.5	.	.	6.50	.	.	.	.	.	.	.	.	.
2167	TANN	TANNERS	82-0015	881004	1030	5.0	13.9	7.90	4.00	.	.	.	.	.	.	.	.	.
2168	TANN	TANNERS	82-0015	881004	1030	6.0	13.9	7.80	.	50	.	.	.	.	.	.	380	8.30
2169	TANN	TANNERS	82-0015	881004	1030	7.0	13.9	7.80	.	.	.	.	.	.	.	.	.	.
2170	TANN	TANNERS	82-0015	881004	1030	8.0	13.9	7.80	.	.	.	.	.	.	.	.	.	.
2171	TANN	TANNERS	82-0015	881004	1030	8.5	10.5	.	.	.	.	.	.	.	.	.	.	.
2172	TANN	TANNERS	82-0015	881004	1030	9.0	8.9	1.00	.	300	.	.	.	.	.	.	415	7.66
2173	TANN	TANNERS	82-0015	881004	1030	9.5	8.5	.	.	.	.	.	.	.	.	.	.	.
2174	TANN	TANNERS	82-0015	881004	1030	10.0	8.0	0.90	.	.	.	.	.	.	.	.	.	.
2175	TANN	TANNERS	82-0015	881004	1030	10.5	7.8	.	.	.	.	.	.	.	.	.	.	.
2176	TANN	TANNERS	82-0015	881004	1030	11.0	7.6	0.80	.	.	.	.	.	.	.	.	.	.
2177	TANN	TANNERS	82-0015	881004	1030	12.0	7.5	0.80	.	1410	.	.	.	.	.	.	520	7.14
2178	TANN	TANNERS	82-0015	881004	1030	13.0	7.3	0.80	.	.	.	.	.	.	.	.	.	.
2179	TANN	TANNERS	82-0015	881018	1020	0.0	11.8	8.70	355.00	85	50	29	1.340	0.150	42.0	1.90	375	8.50
2180	TANN	TANNERS	82-0015	881018	1020	0.5	.	.	107.00	.	.	.	.	.	.	.	.	.
2181	TANN	TANNERS	82-0015	881018	1020	1.0	11.8	8.90	59.00	.	.	.	.	.	.	.	.	.
2182	TANN	TANNERS	82-0015	881018	1020	1.5	.	.	35.50	.	.	.	.	.	.	.	.	.
2183	TANN	TANNERS	82-0015	881018	1020	2.0	11.8	8.80	22.00	.	.	.	.	.	.	.	.	.
2184	TANN	TANNERS	82-0015	881018	1020	2.5	.	.	12.20	.	.	.	.	.	.	.	.	.
2185	TANN	TANNERS	82-0015	881018	1020	3.0	11.8	8.80	7.35	100	.	.	.	.	.	.	385	8.51
2186	TANN	TANNERS	82-0015	881018	1020	3.5	.	.	4.65	.	.	.	.	.	.	.	.	.
2187	TANN	TANNERS	82-0015	881018	1020	4.0	11.8	8.60	2.94	.	.	.	.	.	.	.	.	.
2188	TANN	TANNERS	82-0015	881018	1020	5.0	11.8	8.40	.	.	.	.	.	.	.	.	.	.
2189	TANN	TANNERS	82-0015	881018	1020	6.0	11.8	7.60	.	80	.	.	.	.	.	.	380	8.38
2190	TANN	TANNERS	82-0015	881018	1020	7.0	11.7	4.70	.	.	.	.	.	.	.	.	.	.
2191	TANN	TANNERS	82-0015	881018	1020	8.0	11.4	3.20	.	.	.	.	.	.	.	.	.	.
2192	TANN	TANNERS	82-0015	881018	1020	8.5	11.1	.	.	.	.	.	.	.	.	.	.	.
2193	TANN	TANNERS	82-0015	881018	1020	9.0	10.6	0.80	.	220	.	.	.	.	.	.	405	7.60
2194	TANN	TANNERS	82-0015	881018	1020	9.5	9.3	.	.	.	.	.	.	.	.	.	.	.
2195	TANN	TANNERS	82-0015	881018	1020	10.0	8.3	0.70	.	.	.	.	.	.	.	.	.	.
2196	TANN	TANNERS	82-0015	881018	1020	10.5	8.0	.	.	.	.	.	.	.	.	.	.	.
2197	TANN	TANNERS	82-0015	881018	1020	11.0	7.8	0.70	.	.	.	.	.	.	.	.	.	.
2198	TANN	TANNERS	82-0015	881018	1020	12.0	7.4	0.70	.	1460	.	.	.	.	.	.	505	7.12