CLEAR TECHNICAL REPORT NO. 317

1986 OPEN LAKE WATER QUALITY CONDITIONS FOR LAKE ERIE'S WESTERN, CENTRAL AND EASTERN BASINS

PREPARED BY

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
GREAT LAKES NATIONAL PROGRAM OFFICE
230 S. DEARBORN
CHICAGO, ILLINOIS
GRANT NO.: R005892-01

DAVID ROCKWELL
PROJECT OFFICER

JANUARY 1988

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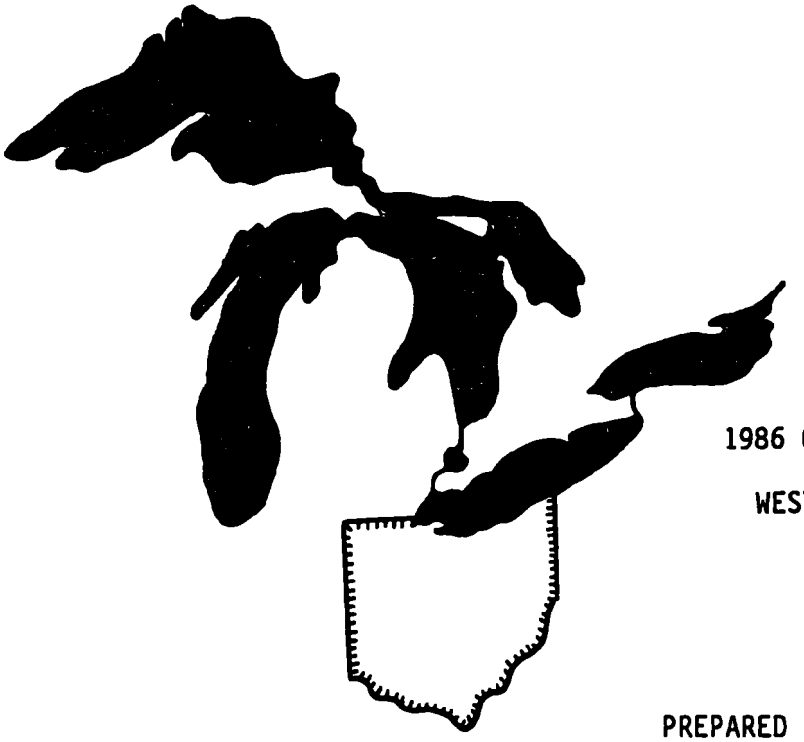

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DISCLAIMER

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We would also like to acknowledge the financial support provided by the U.S. Environmental Protection Agency - Great Lakes National Program Office under grant R-005892-01 and especially our Project Officer, Mr. David C. Rockwell.

EXECUTIVE SUMMARY

The 1986 Lake Erie open lake surveillance/monitoring program followed the recommended study plan sanctioned by the Water Quality Board of the International Joint Commission, Great Lakes Regional Office. A portion of the required surveys were conducted by USEPA-GLNPO and this data will be reported elsewhere. This study included twelve surveys in the western basin, six surveys in the central basin and three surveys in the eastern basin. Concentrations of oxygen, phosphorus, nitrogen, silica, chloride, chlorophyll, suspended solids and several additional parameters were determined and are presented in this report. Samples collected for kjeldahl nitrogen, phytoplankton and zooplankton collected during these surveys were analyzed by USEPA-GLNPO. The kjeldahl nitrogen data is presented in this report, however, results of the plankton analysis can be derived from USEPA-GLNPO reports.

The 1986 western basin data set has the most expansive seasonal coverage of the three basins studied. Since 1986 was the first year of implementation for the new western basin surveillance program, it was appropriate to determine if the stations selected represented the open lake conditions. By comparing the individual station means with the overall station means, it was found that all the stations are similar within $\pm$ one standard deviation. This satisfied the criteria established when the initial station selection was made.

The 1986 central basin mean annual total phosphorus concentration was slightly greater (0.5 ug/l) than the 1985 value, while the mean 1986 chlorophyll concentration was somewhat lower (0.7 ug/l) than 1985. The 1986 corrected oxygen depletion rate was calculated to be 4.7 mg/l/month, which was greater than rates recorded in recent years. During early August, the central basin hypolimnion waters contained approximately 2 mg/l of dissolved oxygen. By the September survey, the basin remained weakly stratified. In contrast to the 1985 field season, anoxic conditions were not detected in the central basin hypolimnion, consequently internal phosphorus loading via anoxic regeneration was not a major phosphorus source as was the case in 1985.

The eastern basin maintained an oxygen rich hypolimnion through the entire stratified period. Epilimnion and hypolimnion nutrient concentrations were similar and did not fluctuate significantly during the field season.

The poorest water quality was found to exist in the western basin. Comparisons between the western and central basins showed that the concentrations of most nutrients, chlorophyll and suspended material were significantly greater in the western basin. Comparisons between the central and eastern basins indicated a strong similarity in concentrations of many constituents. The difference between central and eastern basin concentrations of phosphorus and chlorophyll is becoming less due to improvements in central basin water quality.

INTRODUCTION AND METHODS

PROGRAM OBJECTIVES

The open lake surveillance/monitoring program implemented during 1986 was designed specifically to comply with the Great Lakes Water Quality Agreement of 1978. The plan was developed in 1984 by the Lake Erie Task Force under the direction of the Surveillance Work Group and subsequently endorsed by the Water Quality Board of the International Joint Commission. The 1986 field program was similar in structure to the 1985 program, however, with some notable exceptions. First, the western basin was incorporated into the 1986 field season, providing the first basin wide coverage since 1982. Second, in order to accommodate the field program implemented by USEPA-GLNPO, the 1986 sampling frequency in the central and eastern basins was reduced from the 1985 program. Consequently, central and eastern basin comparisons were limited and interpretation of the eastern basin data set was restricted.

Lake Erie has one of the most complete open lake data bases of all the Great Lakes. Consistency in program design and implementation has been the primary reason for the success of the monitoring program. Since 1973, the open lake surveillance/monitoring program has developed a data set which has defined seasonal and annual trends for total phosphorus, corrected chlorophyll and dissolved oxygen. Total phosphorus and chlorophyll concentrations have been tracked as eutrophication indices for long term trend analysis and to evaluate the effectiveness of remedial actions designed to curb the eutrophication of the Great Lakes. Since one of the most serious results of eutrophication on Lake Erie is the depletion of oxygen in the bottom waters, oxygen data is utilized to track trends in central basin hypolimnetic conditions.

Results from the 1985 open lake surveillance programs (Fay and Rathke, 1986a) confirmed the decrease in central basin phosphorus and chlorophyll concentrations as reported in earlier studies (Rathke 1984). However, the oxygen depletion rate reported for 1985 was unexpectedly high, resulting in extensive anoxia and regeneration of sediment bound phosphorus. It is apparent that internal processes associated with sediment water interactions are buffering the expected reduction in oxygen depletion rates anticipated in response to remedial actions.

Annex 11 of the 1978 Water Quality Agreement specifies the purpose of surveillance/monitoring activities, calling for a program designed to identify non-achievement of the Agreement objectives, evaluation of trends, and a program to provide baseline open lake data collection, sample analysis and evaluation. In order to comply with Annex 11 and the 1978 Agreement's special supplement to Annex 3, a program which is compatible with the previous data bases is necessary. In addition, both U.S. and Canada have issued a revised phosphorus initiative specifying phosphorus control strategies for Lakes Erie and Ontario plus Saginaw Bay. The success of implementing additional remedial actions to reduce phosphorus imputs can only be evaluated through a well designed monitoring program. If trends in total phosphorus, chlorophyll and depletion rates are to be continued, then a consistant reliable monitoring program must be maintained.

SAMPLING PROGRAM DESCRIPTION

Sampling strategies and parameters used for the 1986 open lake study conformed to the revised Great Lakes International Surveillance Plan (GLISP) developed by the Lake Erie Task Force (1986) under the Surveillance Work Group of the International Joint Commission.

In order to adequately deal with the large temporal variability associated with the western basin, twelve surveys were conducted from April 10 through November 17. Six open lake surveys were conducted in the central basin from June 6 through November 1 and three surveys were conducted in the eastern basin. Survey dates and durations are presented in Table 1. Six sampling locations were used to define the western basin representative area while ten sampling sites were located in the central and four sites in the eastern basin (Figure 1). A listing of the geographic coordinates, bottom depths and basin designations are presented in Table 2. Additional survey requirements defined under GLISP for the central and eastern basins were conducted by the USEPA-GLNPO.

METHODS

A complete listing of the variables measured and summary of the methods employed for the 1986 season is provided in Table 3. A detailed description of the methods are presented in Letterhos, 1982. A copy of this methods manual is on file with the IJC Great Lakes Regional Office, Windsor, Ontario and with US-EPA Region V, Chicago, Illinois as well as with the Center for Lake Erie Area Research, Columbus, Ohio.

During the 1986 field season, three phosphorus fractions were directly measured (total phosphorus, total dissolved (filtered) phosphorus and soluble reactive (ortho) phosphorus) and two forms were determined by calculation (particulate and soluble organic phosphorus). In addition, two forms of nitrogen (nitrate + nitrite and ammonia) and dissolved silica were measured completing the list of nutrients examined. The soluble nutrients were examined within 12 hours of filtration while the remaining forms were analyzed after returning to the land based laboratory. Total suspended solids and residual inorganic solids were measured and volitle solids concentrations were calculated. Both chlorophyll a and pheopigment were also determined to provide an indication of algal standing crop. Samples for all variables were taken at all stations and depths within the western, central and eastern basin representative areas. Kjeldahl nitrogen, phytoplankton and zooplankton samples were preserved in the field and shipped to the USEPA-GLNPO for analysis.

DATA ANALYSIS

Data analysis was aided by utilizing Biomedical Computer Programs (BMDP) to calculate limnion means and medians with the appropriate variance statistics. Analyisis of data over the last few years has indicated that medians are a useful indicator of the actual conditions in Lake Erie. Generally, mean and median values are very similar, however, when extremely high or low values are encountered (i.e. during anoxic conditions) and account for only a small

percent of the data set (< 10%), the median value best illustrates the overall data being presented. A data base summary table by basin is provide for each variable within the text. Values presented in these table as 25% and 75% represent quartiles. Appendices A, B and C present detailed summary statistics and a histogram for each data base by basin. In addition, Tables 4, 5 and 6 present similar information for select variables by basin and limnion. On these tables the quartile information is labeled Q1 for 25% and Q3 for 75%.

Comparisons were made for each variable to determine if statistically significant concentrations exist between basins, limnions and for stations within each basin. Basin comparisons were made testing the western basin against the central and the central against the eastern. Considering the obvious differences between the western and eastern basins, it was considered inappropriate to make this comparison. BMDP programs were used to make the statistical comparisons using the mean statistic to determine the T-test limits ($< \alpha = 0.05$). The detailed statistical information is provided in Appendix D. On occasion a difference was found to be statistically different, however, the absolute difference was small making a limnological interpretation difficult. In these cases, it was pointed out in the text that limnologically the difference may not be significant.

A modified version of the notched block plot (Reckhow, 1980), as explained in Figure 2, is used to present seasonal concentrations. The median point is not generally in the center of the box indicating that several high values are skewing the mean upward. Tables for the western, central and eastern basins are presented with both the limnion means and medians (Tables 4, 5 and 6).

The volume weighted data for temperature, dissolved oxygen, nutrients, and chlorophyll presented in Tables 7-12, is derived from the Survey 8 volume weighting program (Hanson et al., 1978). Dissolved oxygen depletion rate calculations were made by adjusting (Adjusted Rates) for vertical mixing (Rosa and Burns, 1987). Additional rate calculations, correcting (Corrected Rates) for temperature, hypolimnion thickness, and initial dissolved oxygen concentrations were provided by F. Rosa (CCIW-NWRI).

The complete 1985 and 1986 data base developed for Lake Erie by CLEAR has been entered into STORET. To access these data files, use agency access code 115GLRES or contact Mr. David Rockwell USEPA-GLNPO (312-353-1373).

QUALITY CONTROL

A quality assurance/quality control (QA/QC) program as recommended by the International Joint Commission, was routinely followed for all parameters. The QA/QC program constitutes approximately ten percent of the total sampling effort and utilizes a series of known standards, duplicates and spikes. The program enables the monitoring of accuracy and precision and also provides an estimate of standard deviation for each parameter.

A detailed description of the quality control program (Quality Assurance Project Plan - Open Lake Surveillance Monitoring Program; May 1, 1986 to June 30, 1987) is on file with the U.S. Environmental Protection Agency - Great Lakes National Program Office and Quality Assurance Office.

PHYSICAL DATA

The uniqueness which characterizes the three basins of Lake Erie can largely be explained by their individual physical make up. Differences in individual basin morphology, depth, and circulation patterns manifest themselves in differences in warming rates, and forms of stratification. These in turn strongly influence the stability of stratification and the oxygen depletion rates.

HYDROLOGIC AND MORPHOMETRIC DATA FOR LAKE ERIE*

	Total Lake	Western Basin	Central Basin	Eastern Basin
Volume (km3)	468	28	274	166
% of Total Volume	100	6	58.5	35.5
Mean Depth (m)	18.6	7.6	17.8	27.0
Maximum Depth (m)	64	14	26	64
Mean Residence Time (yr)	2.4	0.2	1.4	0.8

* = Taken from Burns,1976

Many of the differences in nutrient concentrations between basins can also be explained by the distribution of major inputs. For instance, the phosphorus budget prepared for the 1987 Water Quality Board Report indicates that 68.5 % (7187 metric tons) of the phosphorus loaded to Lake Erie in 1985 entered through the Detroit River (36.5 % or 3826 t) or through western basin rivers and municipal discharges (32%). The percentage of phosphorus loading contributed by the rivers and municipal discharges of the central (23%) and eastern (8.5%) basins is small in comparison to the volume of the lake receiving the load (58.5 % and 35.5 %, respectively). The heavy loading to the small volume western basin (256.7 tons/km 3) contrasts greatly to the low load-large volume eastern basin (5.4 tons/km 3).

SUMMARY OF THE 1985 PHOSPHORUS BUDGET FOR LAKE ERIE (METRIC TONS OF P) *

SOURCE	TONNAGE	% OF TOTAL	TONS / VOLUME (KM3)
Detroit River	3,826.4	36.5	
West Basin Rivers + Mun Discharges	3,360.9	32.0	256.7
Central Basin Rivers + Mun Discharges	2,416.3	23.0	8.2
East Basin Rivers + Mun Discharges	891.7	8.5	5.4
TOTAL	10,495 **	100	

* = Taken from 1987 Water Quality Board Report

**= Estimate does not include Direct Industrial Discharges 50 t
Small Municipal Discharges 344 t
Atmospheric Loading 291 t
TOTAL 685 t

TOTAL ESTIMATED PHOSPHORUS LOAD TO LAKE ERIE = 10,495 + 685 t = 11,180 t

The importance of physical characteristics in explaining nutrient and particulate distributions is often overlooked. To rectify this situation, physical information and interpretation is presented prior to the water quality sections so that the physical information can be used in the data interpretation.

TEMPERATURE

Temperature differences between basins normally reflect differences in depth. The shallow western basin warms and cools more quickly than the central and eastern basins. The western basin data set provides the most complete seasonal temperature cycle for the 1986 field season (Figure 3). The following table provides a summary of the temperature data for the three basins. The statistical outputs are presented in Appendices A, B and C. Tables 4, 5 and 6 show the individual survey results for each basin.

TEMPERATURE (°C)

	WESTERN	CENTRAL	EASTERN
MEAN	16.2	16.3	11.6
MEAN ST. ERR.	0.5	0.3	0.6
MEDIAN	16.3	16.0	13.5
MEDIAN ST. ERR.	0.6	0.5	1.4
MAXIMUM	25.6	24.7	18.5
MINIMUM	4.7	6.2	4.3
RANGE	20.9	18.6	14.2
ST. DEV.	6.2	4.7	4.9
25%	11.6	13.1	6.8
75%	22.1	19.5	15.5
N	144	249	69

TEMPERATURE PATTERNS. The following table provides temperature comparisons by basin and limnion and the statistical outputs are in Appendix D.

TEMPERATURE (°C) - EPILIMNION - HYPOLIMNION

	WESTERN	CENTRAL		EASTERN	
	EPILIMNION	EPILIMNION	HYPOLIMNION	EPILIMNION	HYPOLIMNION
MEAN	16.2	18.3	10.6	15.8	6.4
ST. DEV.	6.2	3.3	2.3	2.0	1.4
N	144	180	69	36	28

Using a two-tailed T-test with $\alpha <$ = 0.05, there were significant differences between the western and central basin epilimnion and between the central and eastern basin for both the epilimnion and hypolimnion temperatures.

WARMING RATES. Comparison of warming rates (increases or decreases in water temperature per day) provides information on the differences between basins. Western basin survey median temperatures (Table 7) demonstrate the unimodal temperature cycle (Figure 3) that mimics air temperature (Fay, 1984). Warming trends were calculated for all survey interval-basin combinations. Data during the western basin warming period (April 10 through August 5) exhibited the highest warming rates of the three basins.

WESTERN BASIN WARMING RATES

SURVEY INTERVAL	TEMPERATURE (° C)	DAYS	TEMP/DAY
April 10 - May 5	4.43	25	+ 0.18
May 5 - May 24	4.19	19	+ 0.22
May 24 - June 6	2.07	13	+ 0.16
June 6 - June 29	4.84	23	+ 0.21
June 29 - July 15	1.00	16	+ 0.06
July 15 - Aug 5	1.53	21	+ 0.07
Aug 5 - Aug 25	- 1.19	20	- 0.06
Aug 25 - Sept 15	- 3.88	21	- 0.18
Sept 15 - Oct 13	- 3.85	28	- 0.14
Oct 13 - Nov 1	- 2.93	19	- 0.15
Nov 1 - Nov 17	- 6.43	16	- 0.40

Central basin median epilimnion temperatures (Table 8 and Figure 4) also suggest the unimodal pattern reflecting air temperature. Hypolimnion temperatures, however, increased consistently through the season; ranging from 7.8 °C (June 8th) to 17.4 °C (September 15th).

CENTRAL BASIN EPILIMNION WARMING RATES

SURVEY INTERVAL	TEMPERATURE (°C)	DAYS	TEMP/DAY
June 7 - June 27	+ 3.29	20	+ 0.16
June 27 - July 16	+ 2.91	19	+ 0.15
July 16 - August 6	+ 2.90	21	+ 0.14
Aug 6 - Sept 17	- 4.40	42	- 0.10
Sept 17 - Oct 30	- 4.20	43	- 0.10

The average eastern basin epilimnion temperature (recorded) did not exceed 20 °C as it did in the western and central basin. In contrast to the warming of the central basin hypolimnion, the average eastern basin hypolimnion temperature never exceeded 8 °C (Table 9). Survey data for epilimnion and hypolimnion temperatures is presented in Figure 5. Warming rates for the epilimnion have been calculated although the large interval between surveys (82 days) does not permit a comparison with the central basin data.

EASTERN BASIN EPILIMNION WARMING RATES

SURVEY INTERVAL	TEMPERATURE (°C)	DAYS	TEMP/DAY
June 27 - Sept 17	+ 3.16	82	+ 0.04
Sept 17 - Oct 30	- 4.37	43	- 0.10

THERMAL STRUCTURE. No thermal stratification was observed in the western basin during the twelve surveys (April 10 through November 17). Historically, short-term or ephemeral stratification has been observed in the northwest segment of the basin (Figure 6) resulting from natural warming of the surface waters or from central basin hypolimnetic water being displaced westward through Pelee Passage (Bartish, 1984). Temperature profiles from this basin are typical of unstratified water masses (Figure 7).

Thermal profiles taken at central basin station 073 during the summer months reflect an unusual progression in the stratification process (Figure 8). Stratification in the central basin was observed on the first survey (June 8th) and the thickness of the epilimnion (20 meters) suggested a very warm, windy spring, with mixing of the warm surface waters downward. The thin hypolimnion (4 meter) observed during the June survey modestly increased in thickness during each survey interval (Figure 9). Typically during the stratification process, one observes a gradual decrease in hypolimnion volume and thickness. The central basin remained stratified, but only weakly, through September 15.

Thermal profiles taken from the deepest station (station 015) in the eastern basin are representitive of eastern basin or deep basin stratification. The epilimnion is generally similiar in thickness to the central basin epilimnion. However, the eastern basin mesolimnion and hypolimnion are considerably thicker (20 meters) as demonstrated in Figure 10. At the onset of stratification, the hypolimnion thickness was 15.5 meters and decreased to 7.8 meters by late October. The minimum hypolimnion thickness was still approximately twice the central basin hypolimion thickness (Figure 9).

STRATIFICATION STABILITY. The stability of the thermal structure (the amount of energy necessary to upset an existing stratification) varied through the season. The determination of the stratified layer stability is based on the relationship between water temperature and density. To determine a precise stability value, it is necessary to calculate the difference in density based upon the temperature differential between the epilimnion and hypolimnion. Additionally, the stability calculation must include sounding depth and thermocline depth (Ruttner, 1963). The average basin stratification stability is as follows:

$$S = (Dh - De) \times (\text{TOTAL DEPTH} - \text{THERMOCLINE DEPTH}) \times \frac{(\text{THERMOCLINE DEPTH})}{2}$$

WHERE Dh = Density of the Hypolimnion Water
De = Density of the Epilimnion Water

STABILITY OF STRATIFICATION (S in kg-m)

SURVEY	SURVEY MID POINT	CENTRAL BASIN kg-m	EASTERN BASIN kg-m
4	June 7	33.95	ND
5	June 27	47.61	235.13
6	July 16	55.14	ND
7	August 6	125.66	ND
9	September 17	2.09	375.74
10	October 30	UNSTRATIFIED	139.04

A comparison of stability for cruises (5 and 9) in which both basins were sampled shows that the eastern basin ranges from five times to 180 times more stable than the central basin. Ruttner suggests that the lake volume in relation to depth should also be considered in the equation as well as the heat content. This factor could be important when comparing two basins as different morphometrically as the central and eastern basins.

DISSOLVED OXYGEN

Dissolved oxygen concentrations in the surface waters of Lake Erie generally reflect well oxygenated conditions. The primary consideration concerning oxygen concentrations is the annual decrease in central basin hypolimnion dissolved oxygen levels. The following table provides a summary of the annual data for the three basins. All stations and depths are pooled by basin. The statistical outputs are presented in Appendices A, B and C. Tables 4, 5, and 6 show the individual survey results for the western, central and eastern basins, respectively.

DISSOLVED OXYGEN (mg/l)

	WESTERN	CENTRAL	EASTERN
MEAN	9.7	8.1	9.3
MEAN ST. ERR.	0.1	0.2	0.2
MEDIAN	9.4	8.9	9.5
MEDIAN ST. ERR.	0.2	0.1	0.3
MAXIMUM	13.5	11.6	12.3
MINIMUM	6.4	1.0	4.8
RANGE	7.1	10.6	7.5
ST. DEV.	1.6	2.5	1.6
25%	8.5	7.9	8.4
75%	11.0	9.5	9.5
N	142	249	69

It is not possible to make a statement comparing the basins using this data set due to the differenence in survey frequencies and sampling times (Table 1). The following tables provide dissolved oxygen basin comparisons by limnion. Statistical outputs are presented in Appendix D.

DISSOLVED OXYGEN (mg/l) - EPILIMNION - HYPOLIMNION

	WESTERN	CENTRAL		EASTERN	
	EPILIMNION	EPILIMNION	HYPOLIMNION	EPILIMNION	HYPOLIMNION
MEAN	9.7	9.2	5.1	9.5	8.9
ST. DEV	1.6	0.9	2.9	0.7	2.3
N	142	180	69	36	28

Although, the epilimnion dissolved oxygen concentrations appear to be similar across the three basins, comparisons using the two-tailed T-test with $< \alpha = 0.05$ indicate that there is a significant difference between the western and central basins. The difference between the means is small, however, the difference in standard deviations is sufficiently large to make the western and central basins statistically different. There is NO significant difference between the central and eastern basin epilimnion concentrations.

As expected, there is a significant difference between the central and eastern basin hypolimnion concentrations. Since the central basin hypolimnion

oxygen storage capacity and depletion rate are very much different from the eastern basin's, the resulting concentrations should also differ (Figures 11 and 12).

DISSOLVED OXYGEN PERCENT SATURATION. The following table provides a summary for the three basins (all stations and all depths). The statistical outputs are presented in Appendices A, B and C while Tables 4, 5, and 6 present the individual survey results for each basin.

DISSOLVED OXYGEN PERCENT SATURATION (%)

	WESTERN	CENTRAL	EASTERN
MEAN	95.2	81.4	84.5
MEAN ST. ERR.	0.7	1.7	1.9
MEDIAN	94.2	90.0	89.9
MEDIAN ST. ERR.	0.7	1.1	0.7
MAXIMUM	120.9	115.6	106.5
MINIMUM	71.8	9.1	42.7
RANGE	49.8	106.4	63.8
ST. DEV.	8.2	26.7	15.6
25%	90.6	81.5	78.2
75%	101.1	99.4	94.5
N	142	249	69

The following table provides a comparison of the dissolved oxygen percent saturation by basin and limnion. Statistical outputs are provided in Appendix D.

DISSOLVED OXYGEN PERCENT SATURATION (%) - EPILIMNION - HYPOLIMNION

	WESTERN	CENTRAL		EASTERN	
	EPILIMNION	EPILIMNION	HYPOLIMNION	EPILIMNION	HYPOLIMNION
MEAN	95.2	95.4	44.9	92.8	72.9
ST. DEV.	8.2	7.4	24.2	5.3	17.6
N	142	180	69	36	28

Using a two-tailed T-test with $<\alpha = 0.05$, no significant difference between the western and central basin epilimnion was evident, although there was a significant difference between the central and eastern basins. As expected, a two-tailed T-test with $< \alpha = 0.05$ indicated that there was a significant difference between the central and eastern basin hypolimnion dissolved oxygen percent saturations (Figures 11 and 12). In cases where the significance of differences between basins for % saturation is opposite that found for dissolved oxygen levels, the anomoly can be explained by the differences in temperature between basins. For example, although the dissolved oxygen values betweeen the western and central basin are significantly different the percent saturation levels indicate that the basins have similar levels of DO saturation.

OXYGEN DEPLETION. When stratification does not occur in the western basin, dissovlved oxygen concentrations remain over 70% saturated. Changes in saturation reflect fluctuations in temperature and productivity. Historical occurrences of thermal stratification have been documented (Bartish,1984) in the western basin (Figure 6) and usually occurrs in the north eastern corner. Oxygen demand rates have been measured using in situ instruments and the western basin has shown the highest oxygen depletion rate of all three basins (Davis et al, 1985) as a result of the biologically active and organically rich sediments. Since stratification in this basin is both inconsistant and ephemeral, it is not possible to use the survey interval oxygen depletion method employed in calculations for the central and eastern basins.

Throughout the season, the central basin epilimnion dissolved oxygen concentration decreased from 10.8 mg/l (June 8) to a minimum of 8.2 mg/l (September 15). This decrease in concentration is attributed to a decrease in oxygen solubility as the water temperature increased throughout the summer. Although the concentration decreased by 2.6 mg/l, the percent saturation did not drop below 99% (Table 5).

The average central basin hypolimnion dissovled oxygen decreased from 9.63 mg/l on June 8th to 2.11 mg/l on August 5th (Figure 11). A corresponding decrease in the percent saturation was observed over the statified period. The minimum percent saturation was reached during the August 5th survey (19.6%). By comparison, during 1985 the central basin hypolimnion reached a minimum percent saturation (0.5%) during the late September survey. As is typical for late summer, the lake partially destratified and the hypolimnion oxygen concentration increased to 5.9 mg/l between the August 5th survey and the September 15th survey.

Dissolved oxygen depletion rates (adjusted for vertical mixing) were calculated for each stratified survey interval. The 1986 central basin ADJUSTED oxygen depletion rates are as follow:

SURVEY INTERVAL	DAYS	DAILY RATE MG O2/L/DAY	MONTHLY RATE MG O2/L/MO
JUNE 7 - JUNE 27	20	0.17	5.10
JUNE 27 - JULY 16	19	0.18	5.54
JULY 16 - AUGUST 6	21	0.10	3.04
AUGUST 6- SEPTEMBER 17	42	- 0.02	-

The annual mean ADJUSTED depletion rate was 4.56 mg/l/mo or 0.15 mg/l/day.

An additional series of calculations that corrects for seasonal variations in hypolimnion temperature and thickness were produced. The technique to calculate the CORRECTED oxygen depletion rate was developed by Rosa and Burns (1986) when they calculated the central basin representative region's depletion rates for 1929 through 1986. Using the CLEAR 1986 data base, Rosa calculated the annual mean depletion rate applying the corrections previously mentioned. The 1986 mean rate was 4.7 mg/l/mo or 0.16 mg/l/day. The 1986 rates presented in Figure 13 indicate high oxygen depletion for the first portion of the stratified period. As expected, due to the decreased oxygen in the hypolimnion as the summer progresses, the rate at which oxygen is lost also decreases (Snodgrass and Fay, 1980). This rate was included in Figure 14 along with the rates calculated for the historical record. The 1986 rate is clearly one of the highest rates calculated in recent years, even surpassing the 1985 rate of 3.73 mg/l/mo.

The 1986 central basin CORRECTED oxygen depletion rates are as follow:

SURVEY INTERVAL	DAYS	DAILY RATE MG O2/L/DAY	MONTHLY RATE MG O2/L/MO
JUNE 7 - JUNE 27	20	0.18	5.45
JUNE 27 - JULY 16	19	0.18	5.46
JULY 16 - AUGUST 6	21	0.11	3.19
AUGUST 6- SEPTEMBER 17	42	NA	NA

The eastern basin epilimnion average oxygen concentration dropped from 10.19 mg/l on June 27th to 8.56 mg/l on September 17th and then increased to 9.61 mg/l on October 29th. Percent saturation in the epilimnion did not drop below 89% during the field season.

Hypolimnion oxygen values decreased more than those in the epilimnion but never reached the severe conditions characterizing the central basin hypolimnion. The epilimnion concentration decreased by 1.63 mg/l between June 27 and September 17 (82 days) while the hypolimnion decreased 3.63 mg/l during the same period. Hypolimnion concentrations decreased from 11.23 mg/l on June 27th to a minimum of 6.48 mg/l on October 29th. A corresponding decrease in percent saturation resulted in a minimum of 54% on October 29th (Figure 12).

The 1986 eastern basin ADJUSTED oxygen depletion rates are as follow:

SURVEY INTERVAL	DAYS	DAILY RATE MG O2/L/DAY	MONTHLY RATE MG O2/L/MO
JUNE 27 - SEPTEMBER 17	82	0.044	1.33
SEPTEMBER 17 - OCTOBER 29	43	0.029	0.87

The historical record of dissolved oxygen depletion for the eastern basin is not as extensive as that of the central basin. Due to the large interval between survey midpoints it is difficult to interpret the trend (if any) in oxygen depletion rates for the eastern basin. Although the early stratified interval (June 27 - September 17) is too large (82 days) to demand any confidence, the data has been plotted along with the historical data base available since 1970 (Figure 15). The 1986 average rate of 1.10 mg/l/mo is slightly lower than most of the average rates which ranged from 1.08 to 1.86 mg/l/mo. The 1986 average rate (1.10) closely resembled the 1985 average rate of 1.08 mg/l/mo. Corrected rates for eastern basin hypolimnion oxygen depletion were not calculated due to the fact that the physical conditions determined to influence the central basin oxygen demand rate do not apply to the eastern basin.

WATER QUALITY PARAMETERS

The U.S. sponsored Lake Erie open lake surveillance/monitoring program was first implemented on a routine basis in 1973. Since that time, a nearly continuous data base has been developed for the lake. The program has focused on phosphorus and central basin hypolimnion oxygen concentrations although numerous additional parameters have also been measured. Together with Canadian supported programs, the Lake Erie data base has developed into one of the most complete records on Great Lakes water quality. The data has provided information to track the effects of programs to reduce phosphorus loading and to develop models designed to simulate open lake processes. The following text is intended to provide a summary of the 1986 open lake program and highlight some of the important characteristics which set Lake Erie apart from the other Great Lakes.

NUTRIENTS

PHOSPHORUS. Total, total dissolved and soluble reactive phosphorus forms were directly measured routinely during the open lake program. Two additional forms of phosphorus were reported which were determined by calculation. Soluble organic phosphorus was determined from the difference between total dissolved (filtered) and soluble reactive phosphorus, while particulate phosphorus was determined from the difference between total phosphorus and total dissolved phosphorus. Annex 3 of the 1978 Water Quality Agreement specifically called for tracking of total phosphorus concentrations, therefore the primary emphasis of this section has been placed on the various phosphorus fractions.

Figures 16, 17 and 18 present the seasonal patterns for total phosphorus in the western, central and eastern basins. Only the western basin data base (Figure 16) presents a fairly complete seasonal pattern. The central basin does not present a spring survey, and the eastern basin data set contains only three surveys over the field season. Seasonal patterns for the western and central basins indicate mid-summer minima with highest concentrations recorded during the fall. Tables 4, 5 and 6 present the mean and median concentrations for each basin and survey. The following table provides a summary of the annual total phosphorus data for the three basins. Additional, statistical summaries by basin are presented in Appendices A, B and C, respectively.

TOTAL PHOSPHORUS (ug/l)

	WESTERN	CENTRAL	EASTERN
MEAN	21.5	13.4	12.7
MEAN ST. ERR.	1.0	0.3	0.3
MEDIAN	19.3	13.5	12.0
MEDIAN ST. ERR.	1.2	0.4	0.3
MAXIMUM	58.7	34.2	19.4
MINIMUM	0.5	5.1	8.0
RANGE	58.2	29.1	11.4
ST. DEV.	11.6	4.3	2.7
25%	13.7	10.5	10.7
75%	25.9	15.5	14.4
N	144	249	69

Differences in annual variability which are unique to each of the three basin are clearly evident from this table. Maximum/minimum, 25%-75% and standard deviation statistics indicate that the largest variability is associated with the western basin relative to the more stable central and particularly stable eastern basin.

The epilimnion and hypolimnion total phosphorus basin/limnion comparison shows that concentration differences between the western and central basin epilimnion is the only combination exhibiting a significant difference (α=.05). Statistical summaries are provided in Appendix D.

TOTAL PHOSPHORUS (ug/l) EPILIMNION - HYPOLIMNION

	WESTERN	CENTRAL		EASTERN	
	EPILIMNION	EPILIMNION	HYPOLIMNION	EPILIMNION	HYPOLIMNION
MEAN	21.5	13.1	14.1	12.4	13.4
ST. DEV.	11.6	4.5	3.8	2.1	3.4
N	140	173	67	34	27

Figure 19 shows the central basin limnion distribution of total phosphorus in metric tonnes and percent. Since the epilimnion dominates the total basin volume during the stratified season, it contains the greatest proportion of total phosphorus (70%). Since no anoxic hypolimnion regeneration of sediment bound phosphorus occurred during the 1986 season, the fall increase was attributed to physical water/sediment interactions following turnover.

Total dissolved phosphorus represents the portion of the phosphorus pool most readily available for biological use. The dissolved fraction (that which passes through a 0.45um filter) consists of organically bound phosphorus having a broad range of molecular weights, inorganic phosphorus also of varing molecular weights (condensed or polyphosphates) and to a lesser degree soluble reactive (ortho) phosphorus. Figures 20, 21 and 22 illustrate the seasonal changes in total dissolved phosphorus. The following table provides a summary of the annual data for the three basins. Additional statistical summaries are presented in Appendix D.

TOTAL DISSOLVED PHOSPHORUS (ug/l)

	WESTERN	CENTRAL	EASTERN
MEAN	5.5	5.4	4.4
MEAN ST. ERR.	0.4	0.2	0.2
MEDIAN	4.6	5.6	4.2
MEDIAN ST. ERR.	0.6	0.1	0.2
MAXIMUM	26.4	16.6	9.8
MINIMUM	0.0	0.0	1.8
RANGE	26.4	16.6	8.0
ST. DEV.	5.0	2.5	1.9
25%	1.6	3.7	2.7
75%	7.4	6.9	5.5
N	138	231	63

Unlike total phosphorus, the total dissolved fraction has similar concentrations throughout the three basins and the variability within basins (ie. max/min) is greatly reduced. The western basin remains the most variable of the three basins; being strongly affected by resuspension and phytoplankton growth (Figure 23).

The differences between the central and eastern basin total dissolved phosphorus concentrations were statistically different ($\alpha = 0.05$) in both the epilimnion and hypolimnion (Figures 24 and 25). Considering the reduced sampling schedule for the eastern basin, this difference may not be real.

TOTAL DISSOLVED PHOSPHORUS (ug/l) - EPILIMNION - HYPOLIMNION

	WESTERN	CENTRAL		EASTERN	
	EPILIMNION	EPILIMNION	HYPOLIMNION	EPILIMNION	HYPOLIMNION
MEAN	5.5	5.4	5.6	4.5	4.3
ST. DEV.	5.0	2.3	3.0	1.8	2.0
N	138	165	66	33	26

As previously mentioned, total dissolved phosphorus consists of a mixture of inorganic and organic constituents having a wide variety of molecular weights including soluble reactive (ortho) phosphorus. For the most part, the digestable fraction termed soluble organic phosphorus (that which is determined by subtracting the soluble reactive fraction from the total dissolved phosphorus) comprises over 60% and frequently 100% of the total dissolved phosphorus pool. A comparison of the two data sets is provided in the following table:

SOLUBLE REACTIVE PHOSPHORUS (SRP) AND SOLUBLE ORGANIC PHOSPHORUS (SOP) (ug/l)

	WESTERN		CENTRAL		EASTERN	
	SRP	SOP	SRP	SOP	SRP	SOP
MEAN	1.0	4.8	0.8	4.7	1.6	2.8
MEAN ST. ERR.	0.2	0.4	0.1	0.2	0.2	0.3
MEDIAN	0.5	4.7	0.0	4.8	0.1	2.5
MEDIAN ST. ERR.	0.1	0.6	0.0	0.2	0.4	0.2
MAXIMUM	9.0	26.3	6.2	16.6	6.0	9.8
MINIMUM	0.0	0.0	0.0	0.0	0.0	0.0
RANGE	9.0	26.3	6.2	16.6	6.0	9.8
ST. DEV.	1.7	4.2	1.3	2.4	2.0	2.1
25%	0.0	1.6	0.0	3.1	0.0	1.1
75%	1.0	6.6	1.0	6.0	3.6	4.1
N	130	127	248	230	69	63

The following tables provide soluble reactive and soluble organic phosphorus basin comparisons by limnion. Only the central and eastern basin hypolimnions indicated a statistically significant difference (α = 0.05) between basins for the soluble reactive fraction and both the epilimnion and hypolimnion were found to differ for soluble organic phosphorus.

SOLUBLE REACTIVE PHOSPHORUS (ug/l) - EPILIMNION - HYPOLIMNION

	WESTERN	CENTRAL		EASTERN	
	EPILIMNION	EPILIMNION	HYPOLIMNION	EPILIMNION	HYPOLIMNION
MEAN	1.0	1.0	0.4	1.4	2.0
ST. DEV.	1.7	1.4	0.9	1.9	2.0
N	130	180	68	36	28

SOLUBLE ORGANIC PHOSPHORUS (ug/l) - EPILIMNION - HYPOLIMNION

	WESTERN	CENTRAL		EASTERN	
	EPILIMNION	EPILIMNION	HYPOLIMNION	EPILIMNION	HYPOLIMNION
MEAN	4.8	4.4	5.2	3.1	2.3
ST. DEV.	4.2	2.2	2.7	2.3	1.9
N	127	165	65	33	26

As was the case in the presentation of the soluble organic fraction, particulate phosphorus concentrations were determined by subtracting the measured concentrations of total dissolved phosphorus from the measured concentrations of total phosphorus. Since Lake Erie is considered to be greatly impacted by sediment water interactions in addition to being biologically active in terms of plankton standing crop, the particulate fraction is considered to be an important component of the phosphorus pool. The following table provides a summary of the annual particulate phosphorus data for the three basins (all stations and all depths). The statistical outputs are presented in Appendices A, B, and C. Tables 4, 5 and 6 show the individual survey results for each basin, respectively.

PARTICULATE PHOSPHORUS (ug/l)

	WESTERN	CENTRAL	EASTERN
MEAN	16.4	8.1	8.2
MEAN ST. ERR.	0.7	0.2	0.4
MEDIAN	14.8	7.6	7.8
MEDIAN ST. ERR.	0.7	0.4	0.3
MAXIMUM	41.4	27.2	15.8
MINIMUM	0.5	0.9	1.0
RANGE	40.9	26.3	14.8
ST. DEV.	8.1	3.5	3.1
25%	10.8	6.1	6.4
75%	19.8	9.8	9.9
N	135	225	60

The following table provides the particulate phosphorus basin comparison by limnion. Using a two-tailed T-test ($\alpha = 0.05$), only the western and central basin comparison was shown to be statistically different. Statistical outputs are in Appendix D.

PARTICULATE PHOSPHORUS (ug/l) EPILIMNION - HYPOLIMNION

	WESTERN	CENTRAL		EASTERN	
	EPILIMNION	EPILIMNION	HYPOLIMNION	EPILIMNION	HYPOLIMNION
MEAN	16.4	7.9	8.6	7.8	8.7
ST. DEV.	8.1	3.6	3.3	2.7	3.7
N	135	160	65	32	24

The following table provides a summary for the percentages of particulate and dissolved phosphorus forms for the three basins. Figures 26,27 and 28 present seasonal fluctuations in the percentages of particulate phosphorus and dissolved phosphorus for the western, central and eastern basins respectively. The statistical outputs are presented in Appendices A, B and C. Tables 4, 5 and 6 show the individual survey results for each basin, respectively.

PERCENT PARTICULATE PHOSPHORUS (PP) AND TOTAL DISSOLVED PHOSPHORUS (DP)

	WESTERN		CENTRAL		EASTERN	
	PP	DP	PP	DP	PP	DP
MEAN	78.3	21.7	59.6	40.4	63.7	36.3
MEAN ST. ERR.	1.3	1.3	1.1	1.1	2.0	2.0
MEDIAN	79.4	20.6	59.3	40.7	63.3	36.7
MEDIAN ST. ERR.	1.1	1.1	1.4	1.4	1.3	1.3
MAXIMUM	100.0	66.0	100.0	91.7	86.5	90.3
MINIMUM	34.0	0.0	8.3	0.0	9.7	13.5
RANGE	66.0	66.0	91.7	91.7	76.8	76.8
ST. DEV.	14.7	14.7	16.7	16.9	15.7	15.7
25%	69.2	11.5	50.3	30.4	57.2	25.0
75%	88.5	30.8	69.6	49.8	75.0	42.8
N	135	135	225	225	60	60

NITROGEN. Three forms of nitrogen were measured during the 1986 field season; nitrate + nitrite, ammonia and total kjeldahl nitrogen. The dissolved forms are readily available for plankton growth while kjeldahl nitrogen is associated with organically bound ammonia-nitrogen.

In recent years there has been an ever increasing concern over the steady rise in nitrate nitrogen concentrations throughout the Great Lakes (Hartig and Gannon 1986). Lake Erie has been particularly susceptible to increasing concentrations due to inputs from atmospheric and tributary (agricultural) sources within the basin. The following table provides a summary of the annual data for the three basins. The statistical outputs are presented in Appendices A, B and C and Tables 4, 5 and 6 present the individual survey results for each basin, respectively.

NITRATE + NITRITE (ug/l)

	WESTERN	CENTRAL	EASTERN
MEAN	350.3	239.4	245.9
MEAN ST. ERR.	14.4	6.0	8.2
MEDIAN	312.0	236.5	219.0
MEDIAN ST. ERR.	7.5	9.8	19.1
MAXIMUM	908.0	537.0	365.0
MINIMUM	0.0	69.0	130.0
RANGE	908.0	468.0	235.0
ST. DEV.	171.1	95.1	68.5
25%	256.0	155.0	194.0
75%	425.0	306.0	296.0
N	142	248	69

A distinct seasonal pattern was evident in both the western and central basins while no significant concentration shift occurred in the eastern basin (Figures 29, 30 and 31). Peak western and central basin concentrations coincided with spring tributary loading when agricultural inputs were greatest. Through the summer, concentrations decreased due to phytoplankton utilization, and the decline continued into the fall in the central basin. Fall concentrations increased in the western basin probably due to increased tributary loading. Central and eastern basin hypolimnion concentrations showed an inverse relationship to epilimnion concentrations.

The following table provides nitrate + nitrite basin comparisons by limnion. Statistical outputs are in Appendix D.

NITRATE + NITRITE (ug/l) - EPILIMNION - HYPOLIMNION

	WESTERN	CENTRAL		EASTERN	
	EPILIMNION	EPILIMNION	HYPOLIMNION	EPILIMNION	HYPOLIMNION
MEAN	350.3	219.9	290.0	189.5	317.8
ST. DEV.	171.1	94.0	78.6	17.6	39.1
N	142	179	69	36	28

Basin comparisons using a two-tailed T-test with α = 0.05 indicated a significant difference between the epilimnions for both the western and central basins and the central and the eastern basins. A significant difference was also found between the central and eastern basin hypolimnetic waters.

The highest and most variable ammonia concentrations were found in the western basin (Figure 29). Ammonia concentrations in the central and eastern basin surface waters did not show the large fluctuations evident in other variables (Figures 30 and 31). This was largely due to the fact that ammonia is the most readily assimilated nitrogen source for phytoplankton growth (Brezonik 1972). A comparable situation existed with soluble reactive phosphorus. Hypolimnion values in both the central and eastern basins were significantly greater than epilimnion concentrations during the early stratified season, but declined through the summer. By late summer (turnover), the central basin hypolimnion concentrations increased again due to decomposition of settling and resuspended organic material.

The following table provides a summary of the annual data for the three basins. The statistical outputs are presented in Appendices A, B and C. Tables 4, 5 and 6 show the individual survey results for each basin, respectively.

AMMONIA (ug/l)

	WESTERN	CENTRAL	EASTERN
MEAN	15.3	13.2	10.4
MEAN ST. ERR.	1.2	0.7	1.1
MEDIAN	10.6	8.5	7.2
MEDIAN ST. ERR.	1.2	0.4	1.0
MAXIMUM	98.1	57.8	37.7
MINIMUM	1.0	1.7	1.5
RANGE	97.1	56.1	36.2
ST. DEV.	14.3	11.7	8.9
25%	5.0	5.6	4.1
75%	21.5	16.0	12.5
N	141	249	68

The following table provides a comparison of ammonia concentrations by basin and limnion. All combinations of basin-limnion were found to be significantly different using a two-tailed T-test (α = 0.05). Additional statistical outputs are in Appendix D.

AMMONIA (ug/l) - EPILIMNION - HYPOLIMNION

	WESTERN	CENTRAL		EASTERN	
	EPILIMNION	EPILIMNION	HYPOLIMNION	EPILIMNION	HYPOLIMNION
MEAN	15.3	9.1	24.0	7.2	12.8
ST. DEV.	14.3	5.6	15.9	3.2	10.4
N	141	180	69	35	28

The following table provides a summary of the kjeldahl nitrogen data for the three basins. The statistical outputs are presented in Appendices A, B and C. Tables 4, 5 and 6 show the individual survey results for each basin, respectively. The mean values presented in Tables 4-6 represent a combination of individual depth values plus the integrated station samples (1, 5, 10 and 20 m) for kjeldahl nitrogen. All statistics were generated using the integrated station values. The sample size for this parameter is lower than for the other parameters due to the use of integrated samples.

KJELDAHL NITROGEN (ug/l)

	WESTERN	CENTRAL	EASTERN
MEAN	270	240	190
MEAN ST. ERR.	10	10	20
MEDIAN	260	203	200
MEDIAN ST. ERR.	10	10	20
MAXIMUM	560	410	300
MINIMUM	120	140	60
RANGE	440	270	240
ST. DEV.	10	70	70
25%	210	170	170
75%	330	290	230
N	60	39	8

The following table provides kjeldahl nitrogen basin comparisons by limnion. There was no significant concentration differences between the three basins using a two-tailed T-test (α = 0.05). Statistical outputs are in Appendix D.

KJELDAHL NITROGEN (ug/l) - EPILIMNION

	WESTERN	CENTRAL	EASTERN
MEAN	270	240	190
ST. DEV.	100	70	70
N	60	39	8

SILICA. Seasonal fluctuations in soluble reactive silica concentrations can be primarily attributed to tributary loading and biological uptake by diatoms. The western basin data base provides an example of how these processes effect the seasonal changes in concentration (Figure 32). Peak spring concentrations result from tributary loads which occur from late winter through early spring. As the diatom community develops during the spring, a decline in concentrations is evident through the spring and early summer growth period. During the remaining summer and fall, previously bound biological silica goes back into solution and is recycled. As the fall diatom population increases a decline in concentration results.

Epiliminon concentrations remained low (500 ug/l) throughout the summer in both the central and eastern basins. Hypolimnion concentrations showed a steady increase through the stratified period. This is a result of diatom frustule dissolution after the spring diatom pulse has settled. Concentration increases were evident in both basins following fall turnover (Figures 33).

The following table provides a summary of the annual data for the three basins. The statistical outputs are presented in Appendices A, B and C. Tables 4, 5 and 6 show the individual survey results for each basin, respectively.

SOLUBLE REACTIVE SILICA (ug/l)

	WESTERN	CENTRAL	EASTERN
MEAN	1101.0	824.6	955.2
MEAN ST. ERR.	48.9	43.7	64.1
MEDIAN	1160.0	583.0	771.0
MEDIAN ST. ERR.	63.8	31.8	33.8
MAXIMUM	2772.0	3563.0	3026.0
MINIMUM	86.0	81.0	297.0
RANGE	2686.0	3482.0	2729.0
ST. DEV.	582.5	688.3	532.1
25%	655.0	342.0	614.0
75%	1560.0	1121.0	1180.0
N	142	248	69

All combinations of basins and limnions exhibited statistically significant differences (α = 0.05). The following table shows that the highest concentrations were found in the western basin and in the hypolimnions of the central and eastern basins. Substantially lower concentrations were recorded in the epilimnion, however, they were significantly different. Statistical outputs are provided in Appendix D.

SOLUBLE REACTIVE SILICA (ug/l) - EPILIMNION - HYPOLIMNION

	WESTERN	CENTRAL		EASTERN	
	EPILIMNION	EPILIMNION	HYPOLIMNION	EPILIMNION	HYPOLIMNION
MEAN	1101.0	539.0	1565.4	741.5	1277.2
ST. DEV.	582.5	424.5	691.1	507.2	430.0
N	142	179	69	36	28

PARTICULATES

In order to determine the quantity of particulate material suspended in the water column, measurements of secchi disk depth, turbidity, total suspended solids, residual solids, volatile solids, chlorophyll a and pheophytin were made at all stations and depths. Secchi transparency and turbidity measurements provide a general indication of the particulate material and light transparency within the water column. Information from total suspended solids can be sub-divided into inorganic (residual solids) and organic (volatile solids) fractions. The chlorophyll a values represent photosynthetically active pigments while pheophytin values indicate inactive chlorophyll. Since this portion of the study did not include any direct analysis of the plankton community, a section devoted to plankton is inappropriate; therefore results from the chlorophyll analysis are included within the particulates section.

SECCHI TRANSPARENCY. The following table provides a summary of the annual secchi transparency data for the three basins. The statistical outputs are presented in Appendices A, B and C. Tables 4, 5 and 6 show the individual survey results for each basin.

SECCHI TRANSPARENCY (m)

	WESTERN	CENTRAL	EASTERN
MEAN	1.7	5.3	3.2
MEAN ST. ERR.	0.1	0.3	0.5
MEDIAN	1.6	5.0	2.8
MEDIAN ST. ERR.	0.1	0.3	0.6
MAXIMUM	3.9	10.2	4.5
MINIMUM	0.6	2.7	2.5
RANGE	3.3	7.5	2.0
ST. DEV.	0.7	1.7	0.9
25%	1.2	4.0	2.6
75%	2.0	6.7	3.7
N	72	41	4

Western basin secchi transparencies range from 0.6 m to 3.9 m, having a median of 1.6 m. The mean secchi transparency in the western basin was significantly less than for the central basin ($< \alpha = 0.05$). The central basin, was considerably less turbid, and had secchi transparencies ranging from 2.7 m to 10.2 m, with a median of 5.0 m. The eastern basin had a small secchi sample size (N=4) because most of the sampling in the eastern basin was conducted at night. The eastern basin secchi transparencies presented above were primarily from survey 11 (early November), and were similar to the central basin secchi transparencies measured during the same survey. Statistical outputs are provided in Appendix D.

TURBIDITY. The following table provides a summary of the annual turbidity data for the three basins. Tables 4, 5 and 6 show the individual survey results for each basin, while the statistical outputs are presented in Appendices A, B and C.

TURBIDITY (NTU)

	WESTERN	CENTRAL	EASTERN
MEAN	6.6	1.1	2.5
MEAN ST. ERR.	0.4	0.0	0.3
MEDIAN	5.7	0.9	1.5
MEDIAN ST. ERR.	0.4	0.1	0.5
MAXIMUM	28.0	3.1	8.8
MINIMUM	1.2	0.3	0.4
RANGE	26.8	2.8	8.4
ST. DEV.	4.2	0.7	2.2
25%	4.0	0.6	0.9
75%	8.1	1.5	3.4
N	144	248	69

The turbidity values for the western basin were variable throughout the season, ranging from 1.2 NTU (Nepholometric Turbidity Units) to 28.0 NTU. The seasonal pattern is similar to the suspended solids data shown in Figure 34. The western basin has a median turbidity value of 5.7 NTU, which is considerably higher than either the central (0.9 NTU) or eastern (1.5 NTU) basin medians. In addition, the turbidity ranges of the central and eastern basins were smaller than the western basin range. The shallow unstratified nature of the western basin together with its highly turbid tributary inputs, accounts for the dramatic difference between basins.

The following table provides turbidity basin comparisons by limnion with statistical outputs presented in Appendix D.

TURBIDITY (NTU) - EPILIMNION - HYPOLIMNION

	WESTERN	CENTRAL		EASTERN	
	EPILIMNION	EPILIMNION	HYPOLIMNION	EPILIMNION	HYPOLIMNION
MEAN	6.6	1.0	1.5	1.1	4.5
ST. DEV.	4.2	0.6	0.6	0.7	2.0
N	144	179	69	36	28

As expected, the western and central basin epilimnion turbidities differed statistically using a two-tailed T-test ($\alpha = 0.05$). No significant difference between mean epilimnion turbidity values for the central and eastern basins was apparent. The eastern basin hypolimnion turbidity was statistically greater than the central basin hypolimnion. The difference can be attributed to the November survey when eastern basin hypolimnion total suspended solid values reached peak concentrations.

CORRECTED CHLOROPHYLL A. The following table provides a summary of the annual data for the three basins. The statistical outputs are presented in Appendices A, B and C, while Tables 4, 5 and 6 present the individual survey results for each basin.

CORRECTED CHLOROPHYLL A (ug/l)

	WESTERN	CENTRAL	EASTERN
MEAN	7.0	2.6	1.9
MEAN ST. ERR.	0.4	0.2	0.2
MEDIAN	6.0	1.8	1.2
MEDIAN ST. ERR.	0.4	0.1	0.1
MAXIMUM	28.9	11.4	7.2
MINIMUM	0.7	0.0	0.2
RANGE	28.2	11.4	7.0
ST. DEV.	4.9	2.4	1.8
25%	3.7	1.1	0.7
75%	9.0	3.1	2.5
N	144	249	69

Western basin chlorophyll concentrations ranged from 0.7 ug/l to 28.9 ug/l, having a median of 6.0 ug/l. The values fluctuated throughout the season, illustrating the high degree of variability characteristic of the western basin. In general, the chlorophyll concentrations were greatest during the spring, decreased through the early part of summer, and increased again in the late summer and early fall as indicated in Figure 34. Volume-weighted data is presented in Table 10.

The central and eastern basins standing crops were smaller that that of the western basin as indicated by the lower annual chlorophyll medians (1.8 ug/l and 1.2 ug/l, respectively). Being strongly influenced by the western basin and shoreline nutrient inputs, the central basin charactistically has a larger concentration range (0.0-11.4 ug/l) than the eastern basin (0.2-7.2 ug/l). Volume-weighted data is presented in Tables 11 and 12.

Central and eastern basin epilimnion chlorophyll concentrations followed similar seasonal patterns (Figures 35 and 36). Open lake concentrations declined following a spring peak, reached minimum levels by mid-summer and increased throughout the late summer and fall. Historically, the highest concentrations have been found to be reached following fall turnover (Fay 1976).

In both basins, the hypolimnion is either below or very close to the photic zone, therefore minimal net primary production is associated with this region, particularly in the central basin. The central basin hypolimnion chlorophyll concentrations decreased to a minimum during mid-summer, followed by a slight increase over the remaining field season (Figure 35). The eastern basin hypolimnion chlorophyll concentrations remained fairly constant throughout the season (Figure 36).

The following table provides chlorophyll a basin comparisons by limnion. Statistical outputs are presented in Appendix D.

CORRECTED CHLOROPHYLL A (ug/l) - EPILIMNION - HYPOLIMNION

	WESTERN EPILIMNION	CENTRAL EPILIMNION	CENTRAL HYPOLIMNION	EASTERN EPILIMNION	EASTERN HYPOLIMNION
MEAN	7.0	3.1	1.4	2.6	0.9
ST. DEV.	4.9	2.6	0.7	2.0	0.8
N	144	180	69	36	28

The western basin and central basin epilimnion chlorophyll mean concentrations differed statistically. No significant difference in the mean epilimnion chlorophyll values was apparent between the central and eastern basins. The central basin and eastern basin hypolimnion chlorophyll means were very similar limnologically, yet they were statistically different ($< \alpha = 0.05$). The frequency distribution of concentrations may account for the statistical difference (Appendix D).

PHEOPHYTIN. The following table provides a summary of the annual data for the three basins. The statistical outputs are presented in Appendices A, B and C. Tables 4, 5 and 6 show the individual survey results for each basin.

PHEOPHYTIN (ug/l)

	WESTERN	CENTRAL	EASTERN
MEAN	4.9	1.5	1.8
MEAN ST. ERR.	0.4	0.1	0.2
MEDIAN	3.6	1.0	1.1
MEDIAN ST. ERR.	0.4	0.1	0.2
MAXIMUM	32.7	7.6	8.9
MINIMUM	0.0	0.0	0.2
RANGE	32.7	7.6	8.7
ST. DEV.	4.7	1.4	1.9
25%	1.9	0.6	0.6
75%	6.2	1.9	2.3
N	144	249	69

Western basin pheophytin concentrations ranged from 0.0 ug/l to 32.7 ug/l, primarily reflecting the strong potential for the resuspension of previously settled phytoplankton. The concentration ranges for the central (0.0-7.6 ug/l) and eastern (0.2-8.9 ug/l) basins were smaller and less variable than the western basin.

The following table provides pheophytin basin comparisons by limnion. Statistical outputs are in Appendix D.

PHEOPHYTIN (ug/l) - EPILIMNION - HYPOLIMNION

	WESTERN	CENTRAL		EASTERN	
	EPILIMNION	EPILIMNION	HYPOLIMNION	EPILIMNION	HYPOLIMNION
MEAN	4.9	1.5	1.3	2.0	1.7
ST. DEV.	4.7	1.5	1.1	2.3	1.4
N	144	180	69	36	28

The western basin and central basin epilimnion pheophytin mean concentrations differed statistically ($< \alpha = 0.05$). No significant difference in the mean epilimnion or hypolimnion pheophytin values was apparent between the central and eastern basins.

TOTAL SUSPENDED SOLIDS. The following table provides a summary of the annual data for the three basins. The statistical outputs are presented in Appendices A, B and C. and Tables 4, 5 and 6 show the individual survey results for each basin.

TOTAL SUSPENDED SOLIDS (mg/l)

	WESTERN	CENTRAL	EASTERN
MEAN	7.5	1.5	2.8
MEAN ST. ERR.	0.3	0.1	0.2
MEDIAN	6.7	1.3	1.9
MEDIAN ST. ERR.	0.2	0.1	0.2
MAXIMUM	29.6	4.0	9.5
MINIMUM	2.4	0.3	0.7
RANGE	27.2	3.7	8.8
ST. DEV.	17.1	0.9	2.0
25%	4.8	0.8	1.3
75%	9.0	2.0	3.4
N	143	240	69

Western basin total suspended solids values ranged from 2.4 mg/l to 29.6 mg/l, having the highest median of the three basins (6.7 mg/l). The seasonal pattern was primarily influenced by tributary inputs and sediment resuspension during storm events. In general, values recorded during the fall and early winter represent peak concentrations (Figure 34).

The central and eastern basin total suspended solids concentrations were similar, with the eastern basin range being larger. Epilimnion total suspended solids declined following a spring peak, reached minimum levels by mid-summer and increased to the highest concentrations at fall turnover (Figures 35 and 36). Both the central basin epilimnion and hypolimnion total suspended solids seasonal patterns followed the chlorophyll trend (Figure 35). Eastern basin epilimnion suspended solids values were lower than the hypolimnion and remained fairly constant throughout the season. The eastern basin hypolimnion suspended solids values were highest during the November survey (Figure 36).

The following table provides total suspended solids basin comparisons by limnion. Statistical outputs are in Appendix D.

TOTAL SUSPENDED SOLIDS (mg/l) - EPILIMNION - HYPOLIMNION

	WESTERN	CENTRAL		EASTERN	
	EPILIMNION	EPILIMNION	HYPOLIMNION	EPILIMNION	HYPOLIMNION
MEAN	7.5	1.4	1.7	1.5	4.5
ST. DEV.	4.2	0.9	0.6	0.6	2.1
N	143	171	69	36	28

As expected, the western and central basin epilimnion total suspended solids mean concentrations differ statistically ($< \alpha = 0.05$). However, there is

no significant difference in the mean epilimnion total suspended solids values for the central and eastern basins. A significant difference is apparent between the central and eastern basin hypolimnion, with the eastern basin exhibiting higher concentrations. Similar results are reported for turbidities.

RESIDUAL AND VOLATILE SOLIDS. Total suspended solids as measured consist of a combination of organic and inorganic (residual) suspended material. The initial total solids is a direct measurement and after combustion of the organic material the remaining inorganic material is determined. The difference between the initial weight and the residual weight is the quanity of organic material assumed to be present. The following table provides a summary of the annual data for the three basins. The statistical outputs are presented in Appendices A, B and C. Tables 4, 5 and 6 show the individual survey results for each basin.

RESIDUAL(RS), VOLATILE(VS) AND PERCENT VOLATILE(%VS) SOLIDS (mg/l AND %)

	WESTERN			CENTRAL			EASTERN		
	RS	VS	%VS	RS	VS	%VS	RS	VS	%VS
MEAN	5.6	1.9	28.6	0.7	0.8	58.4	2.0	0.8	38.0
MEAN ST. ER.	0.3	0.1	0.9	0.0	0.0	1.3	0.2	0.0	2.3
MEDIAN	4.7	1.7	26.6	0.6	0.7	54.6	1.1	0.7	35.5
MEDIAN ST. ER.	0.2	0.6	0.9	0.1	0.0	1.8	0.2	0.0	5.0
MAXIMUM	24.5	5.6	60.1	3.0	2.3	100.0	8.2	1.5	71.5
MINIMUM	1.1	0.1	1.7	0.0	0.2	22.0	0.3	0.3	13.2
RANGE	23.3	5.4	58.4	3.0	2.1	78.0	7.9	1.2	58.3
ST. DEV.	3.6	0.9	10.7	0.6	0.3	19.7	1.9	0.3	19.4
25%	3.0	1.4	21.4	0.2	0.5	42.4	0.5	0.6	17.8
75%	6.9	2.3	33.3	1.0	0.9	74.5	2.7	0.9	54.0
N	143	143	143	240	240	240	69	69	69

Residual solids dominated the total suspended material in the western basin, normally comprising over 70% (Figure 37). As previously discussed, the dominance of inorganic material in the western basin water column resulted from the strong sediment/water interactions and tributary inputs. Even though residual solid concentrations were dominant, volatile solids concentrations generally doubled those measured in the central and eastern basins. Volatile solids concentrations increased to peak values in late summer/early fall coinciding with peak chlorophyll concentrations (Figure 34).

Central and eastern basin epilimnion mean concentrations of residual and volatile solids were nearly identical. Unlike the western basin, volatile solids dominated the total particulate material in both basins, generally comprising over 60% in the eastern basin and up to 90% in the central basin (Figures 38 and 39). The central basin volatile solids seasonal pattern followed the chlorophyll trend (Figure 35), however, there was not as much similarity between the volatile solids and chlorophyll patterns in the eastern basin (Figure 36).

Hypolimnion solids concentrations are dominated by residual solids in both basins, however, the eastern basin concentrations were nearly four times central

basin values. The percent composition remained over 80% residual solids in the eastern basin while the central was closer to 60%. The strong sediment water interactions maintained the inorganic dominated suspended material in the hypolimnion of both basins.

The following tables provide residual and volatile solids basin comparisons by limnion. Statistical outputs are in Appendix D.

RESIDUAL SOLIDS (mg/l) - EPILIMNION - HYPOLIMNION

	WESTERN	CENTRAL		EASTERN	
	EPILIMNION	EPILIMNION	HYPOLIMNION	EPILIMNION	HYPOLIMNION
MEAN	5.6	0.6	1.0	0.7	3.7
ST. DEV.	3.6	0.7	0.5	0.5	1.8
N	143	171	69	36	28

VOLATILE SOLIDS (mg/l) - EPILIMNION - HYPOLIMNION

	WESTERN	CENTRAL		EASTERN	
	EPILIMNION	EPILIMNION	HYPOLIMNION	EPILIMNION	HYPOLIMNION
MEAN	1.9	0.8	0.7	0.8	0.8
ST. DEV.	0.9	0.3	0.0	0.2	0.0
N	143	171	69	36	28

As expected, the western basin and central basin epilimnion residual and volatile solids mean concentrations differed statistically (≤ 0.05). No significant difference in the mean epilimnion residual or volatile solids values was apparent between the central and eastern basins. Although there wasn't a significant difference between the central and eastern basin hypolimnion volatile solids, there was a difference between residual solids concentrations. As with turbidity, the eastern basin hypolimnion had a higher annual mean concentration of residual solids than the central basin, which can be attributed to the November survey.

PRINCIPLE IONS

Principle ion measurements were determined at all stations and sampling depths throughout the field season. Conductivity is a measure of the total ionic strength with each of the major ions contributing proportionately. Lake Erie is dominated by the carbonate ion, contributing over 50%, while chloride accounts for approximately 12% (Rathke, 1984). Chloride, carbonate, bicarbonate (alkalinity), and hydrogen (pH) ions were examined.

CONDUCTIVITY. Four major cations (calcium, magnesium, sodium and potassium) and four major anions (carbonate, bicarbonate, sulfate and chloride) are the main contributers to the total ionic strength of water. Ionized trace metals (i.e. manganese, copper and zinc) and other biologically important elements (i.e. phosphorus, nitrogen and iron) usually constitute a minor portion of the conductivity. A summary of the annual conductivity values for all three basins is presented in the table below and in Appendices A, B and C. Conductivity values for each basin are summarized by individual surveys in Tables 4, 5 and 6.

CONDUCTIVITY (umhos/cm)

	WESTERN	CENTRAL	EASTERN
MEAN	238.3	267.7	275.2
MEAN ST. ERR.	1.5	0.5	0.7
MEDIAN	233.0	268.0	274.0
MEDIAN ST. ERR.	1.7	0.6	1.2
MAXIMUM	308.0	298.0	288.0
MINIMUM	206.0	239.0	263.0
RANGE	102.0	59.0	25.0
ST. DEV.	18.2	7.5	6.1
25%	227.0	263.0	271.0
75%	248.5	273.0	280.0
N	144	249	69

Median conductivity values were lowest in the western basin (233 umhos) and increased in the central (268 umhos) and eastern (274 umhos) basins. However, the western basin had the largest range (102 umhos) compared to the central (59 umhos) and eastern (25 umhos) basins. The west to east increase can be attributed to the lower ionic content of the upper Great Lakes waters which enters the western basin via the Detroit River. As the Detroit River is diluted by other tributaries having higher ionic content as well as internal lake processes adding to the conductivity, a general west to east gradient results.

The seasonal conductivity patterns are presented in Figures 40, 41 and 42. Western basin conductivity values decreased from the initial spring high values through the last survey in November. A sharp increase occurred during the late October survey as a result of intense storm/wind activity. Strong south/southwest winds mixed the southern shoreline water mass (having higher conductivity values) into the open waters of the basin. Central basin epilimnion values decreased from spring until August and increased following turnover in late September. In general, the central basin hypolimnion values were higher than the epilimnion. Eastern basin epilimnion values did not change

appreciably over the field season whereas the hypolimnion values steadily increased.

The following table provides conductivity basin comparisons by limnion. Statistical outputs are presented in Appendix D.

CONDUCTIVITY (umhos) - EPILIMNION - HYPOLIMNION

	WESTERN	CENTRAL		EASTERN	
	EPILIMNION	EPILIMNION	HYPOLIMNION	EPILIMNION	HYPOLIMNION
MEAN	238.3	264.8	275.3	270.7	281.4
ST. DEV.	18.2	6.4	3.5	3.0	3.7
N	144	180	69	36	28

The western basin and central basin epilimnion conductivity values differ statistically based on a two-tailed T-test with $\alpha = 0.05$. The central and eastern basin epilimnion conductivity means were more similar in concentration ,yet they were statistically different. The different seasonal patterns in the central and eastern basins reflected by the standard deviations and ranges, may account for the statistical difference. The central basin epilimnion range was 59 umhos (239-298 umhos) and the eastern basin range was 12 umhos (263-275 umhos). Statistical outputs are presented in Appendix D.

As in the epilimnion, the central and eastern basin hypolimnion conductivity means were similar limnologically, however, they were statistically different. Even though the standard deviations and ranges were similar, the two basins had different frequency distributions. The statistical output in Appendix D illustrates that the eastern basin conductivity values were clumped at the higher end of the histogram.

CHLORIDE. Figures 40, 41 and 42 illustrate chloride seasonal patterns for the western, central and eastern basins. As one of the conservative ions contributing to the total ionic strength of water, chloride should undergo only minor temporal changes resulting from biotic utilization. The chloride concentrations in the eastern basin epilimnion and the central and eastern basin hypolimnion were stable throughout the field season (Figures 41 and 42). However, seasonal chloride values were not as constant in the western basin and central basin epilimnion. There appears to be a general decrease in chloride concentrations throughout the season in the western basin (Figure 40) which can be attributed to a decrease in loading following spring runoff. In the central basin epilimnion, chloride concentrations decreased until August and remained fairly stable through the fall (Figure 41). It appears that external loading, primarily during the late winter and spring, also influenced the central basin seasonal pattern.

The following table provides a detailed summary of the annual chloride data for the three basins. Appendices A, B and C contain additional statistical outputs of the annual data for each basin. In addition, chloride concentrations, summarized by individual surveys, are presented in Tables 4, 5, and 6.

CHLORIDE (mg/l)

	WESTERN	CENTRAL	EASTERN
MEAN	11.7	14.7	15.0
MEAN ST. ERR.	0.2	0.1	0.0
MEDIAN	11.5	14.7	15.1
MEDIAN ST. ERR.	0.2	0.0	0.0
MAXIMUM	26.0	18.0	16.3
MINIMUM	6.9	7.0	14.3
RANGE	19.1	11.0	2.0
ST. DEV.	2.9	0.9	0.3
25%	9.7	14.5	14.9
75%	13.2	15.0	15.2
N	144	247	69

Chloride concentrations were the lowest in the western basin. Higher chloride values in the central and eastern basins may result from the sewage treatment plant and tributary discharges along the southern shore of the lake. The eastern basin had a smaller chloride concentration range (2.0 mg/l) than the central (11.0 mg/l) and western (19.1 mg/l) basins. The differences in the annual range for each basin were a result of the seasonal changes in the chloride concentrations discussed above.

The following table provides chloride basin comparisons by limnion. Statistical outputs are presented in Appendix D.

CHLORIDE (mg/l) - EPILIMNION - HYPOLIMNION

	WESTERN	CENTRAL		EASTERN	
	EPILIMNION	EPILIMNION	HYPOLIMNION	EPILIMNION	HYPOLIMNION
MEAN	11.7	14.7	15.0	14.9	15.1
ST. DEV.	2.9	1.0	0.7	0.3	0.3
N	144	179	68	36	28

As expected, the western basin and central basin epilimnion chloride concentrations differ statistically based on a two-tailed T-test with $\alpha = 0.05$. The central and eastern basin chloride means were very similar, yet were also statistically different. The different seasonal patterns in the central and eastern basins, as reflected by the standard deviations and ranges, may account for the statistical difference. The central basin epilimnion concentration range was 10 mg/l (7-17 mg/l) and the eastern basin range was 1.2 mg/l (14.3-15.5 mg/l). Statistical outputs are presented in Appendix D. No significant difference was apparent between the hypolimnion of the central and eastern basins.

ALKALINITY. Lake Erie naturally contains a relatively high amount of carbonates and bicarbonates contributed from the limestone and dolomite drainage basin. Therefore, carbonate and bicarbonate ions comprise the majority of Lake Erie's total ionic strength. The carbonates and bicarbonates provide the water with a strong buffering capacity to resist changes in pH. Based upon a cursory examination of the pH data bases from the early 1970's, acid rain seems to have had little effect on increasing the acidity of Lake Erie.

Total alkalinity is a measure of the amount of acid necessary to neutralize the carbonate, bicarbonate and hydroxyl ions present in water. The amount of carbonate ions is represented by phenolphthalein alkalinity. The following table provides a summary of the annual alkalinity data for the three basins. Additional statistical outputs are presented in Appendices A, B and C. Alkalinity (total and phenolphthalein) values for each basin are summarized by individual surveys in Tables 4, 5 and 6.

ALKALINITY TOTAL (ALKTOT) AND PHENOLPHTHALEIN (ALKPH) (mg/l)

	WESTERN		CENTRAL		EASTERN	
	ALKTOT	ALKPH	ALKTOT	ALKPH	ALKTOT	ALKPH
MEAN	93.3	2.5	103.0	2.8	106.8	1.8
MEAN ST. ERR.	0.4	0.2	0.2	0.2	0.4	0.3
MEDIAN	93.1	2.1	103.4	2.5	107.0	1.2
MEDIAN ST. ERR.	0.8	0.2	0.4	0.2	0.3	0.7
MAXIMUM	107.3	10.5	112.3	10.8	114.4	8.9
MINIMUM	84.0	0.0	93.6	0.0	100.8	0.0
RANGE	23.3	10.5	18.7	10.8	13.6	8.9
ST. DEV.	5.0	2.5	3.9	2.5	3.1	2.2
25%	89.2	0.0	99.7	0.0	105.5	0.0
75%	96.7	3.9	106.1	4.4	108.4	3.0
N	144	144	249	249	69	69

Total alkalinity values were lowest in the western basin and increased in the central and eastern basins. The central and western basins had similar annual phenolphthalein alkalinity ranges and medians, and were higher than the eastern basin values.

Figures 43, 44 and 45 present the seasonal patterns for total and phenolphthalein alkalinity in the western, central and eastern basins. In all three basins, the total and phenolphthalein alkalinity seasonal patterns were similar, with the highest alkalinity values during the summer months. No phenolphthalein alkalinity was recorded in the hypolimnion due to pH values consistently below 8.3.

The following tables provide alkalinity basin comparisons by limnion. Statistical outputs are presented in Appendix D.

ALKALINITY TOTAL (mg/l) - EPILIMNION - HYPOLIMNION

	WESTERN	CENTRAL		EASTERN	
	EPILIMNION	EPILIMNION	HYPOLIMNION	EPILIMNION	HYPOLIMNION
MEAN	93.3	101.8	106.1	105.2	108.7
ST. DEV.	5.0	3.3	3.8	2.7	2.0
N	144	180	69	36	28

There was a statistically significant difference in the total alkalinity values between the western and central basin epilimnions based on a two-tailed T-test with $\alpha = 0.05$. In the comparison between the central and eastern basins, total alkalinity means were statistically different for both the epilimnion and hypolimnion, however, the concentration difference was not as great as between the western and central basins. The frequency distribution for each basin differed from one another. The statistical outputs in Appendix D illustrate that the eastern basin total alkalinity values were clumped at the higher end of the histogram.

ALKALINITY PHENOLPHTHALEIN (mg1/1) - EPILIMNION

	WESTERN	CENTRAL	EASTERN
MEAN	2.5	3.8	3.4
ST. DEV.	2.5	2.2	2.0
N	144	180	36

A significant difference was apparent between the western and central basin mean phenolphthalein alkalinity and there is no significant difference between the central and eastern basin mean epilimnion phenolphthalein alkalinity based on a two-tailed T-test with $\alpha = 0.05$.

pH. The following table provides a summary of the annual data for the three basins. The statistical outputs are presented in Appendices A, B and C. Tables 4, 5, and 6 show the individual survey results for pH in each basin.

pH

	WESTERN	CENTRAL	EASTERN
MEAN	8.21	8.09	8.02
MEAN ST. ERR.	0.02	0.03	0.03
MEDIAN	8.19	8.22	8.18
MEDIAN ST. ERR.	0.02	0.01	0.09
MAXIMUM	8.75	8.68	8.42
MINIMUM	7.59	7.26	7.48
RANGE	1.15	1.42	0.94
ST. DEV.	0.21	0.40	0.29
25%	8.07	7.71	7.75
75%	8.36	8.48	8.26
N	144	249	69

All three basins had an annual pH median very close to 8.2. The ranges were similar for the western (7.59-8.75) and central (7.26-8.68) basins. The eastern basin had a smaller annual pH range (7.48 to 8.42) which may be an artifact of the cruise schedule. In both the central and eastern basins, the pH was lower in the hypolimnion.

The seasonal pH trends are presented in Figures 43, 44 and 45. In the central basin, the epilimnion pH values increased throughout the summer months and reached a maximum in August. The central basin hypolimnion pH values decreased during the summer and reached a minimum in August. The pH remained stable throughout the season in the eastern basin. The same pattern was not apparent in both the central and eastern basins possibly because of the lack of sampling during the summer months in the eastern basin.

The following table provides pH basin comparisons by limnion. Statistical outputs are presented in Appendix D.

pH - EPILIMNION - HYPOLIMNION

	WESTERN	CENTRAL		EASTERN	
	EPILIMNION	EPILIMNION	HYPOLIMNION	EPILIMNION	HYPOLIMNION
MEAN	8.21	8.31	7.50	8.27	7.71
ST. DEV.	0.21	0.15	0.17	0.07	0.13
N	144	180	69	36	28

Epilimnion and hypolimnion basin comparisons indicated that all basins were

statistically different from one another based on a two-tailed T-test with α = 0.05, however, the pH means were limnologically similar. This outcome seems to be a result of differences in sample size, range, and frequency distribution (See Appendix D).

BASIN COMPARISON

Previous text within this report discusses similarities and differences in mean concentrations between basins for the individual parameters. These data comparisons are based upon epilimnion and hypolimnion annual mean values for each basin. A summary of basin comparisons using annual means is presented in Table 13. The only consistent gradients (increasing or decreasing east to west or west to east) for all basins and limnions occurred for ammonia, conductivity, alkalinity (total), and pH. The detailed t-test comparisons for each parameter are presented in Appendix D.

In addition to the annual mean comparisons, a survey by survey analysis was undertaken. This analysis should provide a detailed examination of the seasonal epilimnion changes between the western and the central basins and between the central and eastern basin. A total of six surveys were examined for the western-central comparison and three surveys for the central-eastern comparison.

The western-central comparison was the most complete, spanning from early June through late October. The results are presented in Table 14. Nutrient, chlorophyll, suspended solids and turbidity concentrations were all found to be greater in the western basin than in the central, with total filtered phosphorus as the only exception. Internal (sediments) and external (tributaries) influences account for the higher values characteristic of the western basin. In contrast, conductivity, chloride and alkalinity values were found to be greater in the central basin. This can be attributed to the lower ionic concentrations found in the upper Great Lakes waters which dominate the western basin due to the Detroit River input.

The central-eastern basin comparison consisted of summer, early fall and late fall surveys (Table 15). The clearest differences between basins were evident for conductivity, chloride and alkalinity, with eastern basin values being greater than central for all comparisons. This is consistent with a similar increasing gradient from the western to the central basin. Nutrients and suspended material were greater or equal in the eastern basin during the late June survey (5), followed by a reversal (central > eastern) for the folllowing two surveys. The one notable exception was with nitrate + nitrite, indicating higher eastern basin concentrations during the fall. It is possible this contrast was due to a greater biological demand for nitrogen in the central basin, thus keeping concentrations lower.

The water quality of the central and eastern basins is considerably more similar than the western and central basin water quality. For example, differences in total phosphorus concentrations between the western and central basins were as great as 16 ug/l while the central-eastern gradient was less than 5 ug/l. Therefore it is important to understand that even though significant differences between basins occurred for most comparisons, the magnitude of the difference between the western basin and the central basin was significantly greater than any differences between the central and eastern basin.

OPEN LAKE SAMPLING REGIONS

The open lake station pattern for both the central and eastern basins was developed from studies by F. Rosa and A. El-Shaarawi (CCIW-NWRI). These studies were reviewed by the Lake Erie Task Force under the direction of the Surveillance Work Group who subsequently recommended the current surveillance / monitoring program (GLISP) to the Water Quality Board of the International Joint Commission. The central and eastern basin sampling pattern was intended to provide a data base representitive of the open lake hypolimnetic water quality for the respective basins.

Tables 16 and 17 present the results from the central and eastern within-basin comparisons. As was indicated in the 1985 Open Lake Report (Fay and Rathke, 1986a), nearly all central and eastern epilimnion (station by variable) comparisons conform to plus or minus one standard deviation of the established basin mean criteria. In most cases, stations remained within $\pm$ 0.5 standard deviation of the basin mean for all the variables tested. This analysis indicated that the station pattern established for each basin provides representitive information both on a temporal and spatial basis. A similar comparison using hypolimnion values indicated comparable results for both basins. As expected, variability within the hypolimnion was somewhat greater, however, most comparisons remained within $\pm$ one standard deviation. It is important to point out that although the central basin hypolimnion appears to have larger variability than the epilimnion, the standard deviations, in most cases were actually smaller (Table 16).

The western basin sampling pattern was based on the results of a cluster analysis study conducted by Fay and Rathke (1986b). The study was designed to determine a representative sampling region similar in concept to the central and eastern basin areas. Since 1986 was the first year for the implementation of the new western basin surveillance plan, it was appropriate to examine the variability of the selected stations. The null hypothesis for the analysis of variance was: individual stations within the basin would have equal means for each of the variables tested.

Results from the western basin analysis demonstrated that the six stations had individual station means within $\pm$ one standard deviation of the basin mean (Table 18). However, the western basin individual station means had greater variability than either the central or eastern basins station groupings. It was also evident that the difference between stations was greatest for the western basin. In addition, due to the extreme temporal variability, the standard deviations for all variables were highest in the western basin as compared to the central or eastern basins. For example, the standard deviation of total phosphorus in the western basin was 2.5 times that of the central basin.

In seven of the eleven variables examined for the western basin, maximum values were recorded for the two southern most stations (58 and 59). Both these stations are outside the direct influence of the Detroit River. As they are located in the southern portion of the basin, stations 58 and 59 are largely influenced by the Maumee River. Even though these stations exhibited higher concentrations for many variables, this southern section requires representation in order to adequately characterize the open waters of the western basin.

TROPHIC CLASSIFICATION

Reviews of the numerous trophic classifications and trophic indices have been prepared by Rawson (1956), Zafar (1959), Dobson (1976), Carlson (1977), Rast and Lee (1978), Gregor and Rast (1979), Maloney (1979) and Steinhart et al, (1981). Dobson's index is presented because it evaluates the Great Lakes offshore summer trophic conditions. The Dobson index uses summer mean secchi reciprocals, total chlorophyll a, particulate organic carbon and total phosphorus from the offshore near-surface waters. Dobson's 1976 trophic index is as follows:

	SECCHI RECIPROCALS 30/SD (M)	TOTAL CHLOROPHYLL UG/L	PARTICULATE ORGANIC CARBON UG/L	TOTAL PHOSPHORUS UG/L
OLIGOTROPHIC	0 - 5	0 - 2.5	0 - 250	0 - 9
MESOTROPHIC	5 - 10	2.5 - 5.0	250 - 500	9 - 18
EUTROPHIC	10 - 30	5.0 - 15.0	500 - 1500	18 - 50
HYPEREUTROPHIC	> 30	> 15	> 1500	> 50

SD = SECCHI DEPTH

In developing his index, Dobson clearly defined offshore waters and the summer period. Offshore waters are considered to be those waters greater than 20 meters in depth, and the summer period begins following the disappearence of the thermal bar. Since the western basin mean depth is only 8.5 meters, it is technically not considered to be offshore water. In adddition, thermal bar conditions as encountered in the other Great Lakes do not exist in the western basin. Therefore, it was necessary to arbitrarily included the western basin and define the summer period as spanning from June 1 through September 15. The central basin summer period was considered to extend from June 15 to September 5. Since the eastern basin resembles the deeper Great Lakes, a different summer period was used (July - September).

To calculate the summer mean values, the individual survey means are plotted. The summer mean is then calculated by using values interpolated from the graph on a ten day interval. These interpolated values are then averaged to determine the summer mean. The determination of trophic classification for 1986 was based on results of Secchi Transparency, Total Phosphorus and Total Chlorophyll. Particulate Organic Carbon was not measured during this study. No secchi data was available in the eastern basin due to nightime sampling.

The 1986 summer results for the offshore near-surface waters of the western, central and eastern basins are as follows:

	SECCHI RECIPROCALS 3O/SD (METERS)	TOTAL CHLOROPHYLL UG/L	TOTAL PHOSPHORUS UG/L
WESTERN BASIN			
JUNE 6	20.27	4.52	16.6
JUNE 16 (INT)	17.0	4.6	16.0
JUNE 29	12.24	4.77	15.0
JULY 9 (INT)	12.6	5.8	16.8
JULY 15	12.88	6.40	18.1
JULY 25 (INT)	14.6	7.1	21.2
AUG 5	16.48	7.93	24.8
AUG 15 (INT)	20.3	8.5	26.8
AUG 25	23.62	9.13	28.9
SEPT 5 (INT)	24.2	10.6	31.2
SEPT 15	24.59	12.55	33.5
MEAN	18.07 (E)	7.45 (E)	22.6 (E)
CENTRAL BASIN			
JUNE 27	4.82	1.34	9.4
JULY 7 (INT)	4.88	1.50	9.6
JULY 16	4.93	1.64	9.8
JULY 26 (INT)	5.23	2.20	11.6
AUG 6	5.60	2.89	13.5
MEAN	5.09 (M)	1.91 (O)	10.8 (M)
EASTERN BASIN			
JUNE 27	NA	1.18	12.7
JULY 7 (INT)		1.26	12.6
JULY 17 (INT)		1.35	12.6
JULY 27 (INT)		1.44	12.5
AUG 7 (INT)		1.55	12.5
AUG 17 (INT)		1.64	12.4
AUG 27 (INT)		1.74	12.3
SEPT 7 (INT)		1.84	12.3
SEPT 17	NA	1.93	12.2
MEAN	NA	1.55 (O)	12.5 (M)

INT = 10 DAY INTERPOLATED VALUE
O = OLIGOTROPHIC
M = MESOTROPHIC
E = EUTROPHIC

All three parameters indicate that the western basin is a eutrophic body of water. The central basin and eastern basin appear to be on the borderline between oligotrophic and mesotrophic. For example, the eastern basin chlorophyll data indicates oligotrophic conditions while the total phosphorus concentrations indicate a mesotrophic status.

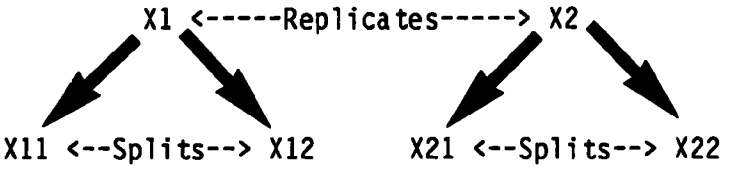
When comparing the trophic status of 1985 with 1986, the central and eastern basins remain boarderline between oligotrophic and mesotrophic. The differences between years can be attributed to the differences in the number and timing of the surveys. For instance, the 1986 eastern basin data technically should not be included in this analysis because only the September 17 survey conforms to the summer period outlined by Dobson.

	SECCHI RECIPROCALS 30/SD (METERS)	TOTAL CHLOROPHYLL UG/L	TOTAL PHOSPHORUS UG/L
WESTERN BASIN			
1985	NA	NA	NA
1986	18.07 (E)	7.45 (E)	22.6 (E)
CENTRAL BASIN			
1985	4.80 (O)	2.66 (M)	12.6 (M)
1986	5.09 (M)	1.91 (O)	10.8 (M)
EASTERN BASIN			
1985	4.50 (O)	1.90 (O)	8.8 (O)
1986	NA	1.55 (O)	12.5 (M)

O = OLIGOTROPHIC
M = MESOTROPHIC
E = EUTROPHIC

QUALITY CONTROL SUMMARY

During each day of a survey, water was collected to be used for quality control samples. Two terms are used to describe the types of quality control sample being examined. First, replicate water samples were collected as two separate samples (X1 and X2) taken from the same selected depth. The submersible pump was lowered to the designated depth for X1 and then lowered again for X2. Second, splits or sub-samples of each replicate were prepared for analysis.



The quality control program determines the PRECISION and ACCURACY of the analytical methods employed. Precision is a measure of the agreement among duplicate analysis. The standard deviation of the difference between the splits represents the precision (uncertainty) of the method. Standard deviations are estimated for each analytical method by summing the difference between duplicate analysis, calculating the mean and dividing by 1.128. An acceptable limit (3 s) for the range of the differences is determined by multiplying the standard deviation by 3.686 (Clark, 1981).

One high silica replicate value was removed before the data was analyzed. The sample bottle was obviously contaminated because the spikes were also high. Airborne ammonia contamination continued to be a problem in 1986. Ammonia quality control data for one survey was removed before analysis because all four split values were very different from one another. An additional high ammonia split value was removed before analysis.

The 1986 results for the difference between splits are presented in Table 19. All the range limits for the Auto Analyzer parameters, except ammonia, are less than 2.5% of the chart paper scale. The range limit for the difference between ammonia splits was 8.36 ug/l, which is over eight percent of the chart scale. Soluble Reactive Phosphorus, Nitrate + Nitrite, and Chloride have range limits less than one percent of the chart scale. All parameters have greater than 93% of the quality control samples within the range limits (3 s). Appendix E contains the BMDP statistical computer outputs for each parameter.

Analysis of the difference between replicates demonstrates another form of precision. In addition to the analytical variability, the difference between replicates takes the variability of the water mass into consideration. The replicates assist in determining whether a sample is representative of the body of water at a paticular station and depth. The 1986 results for the difference between replicates are presented in Table 20. Appendix E contains the BMDP statistical computer outputs for each parameter.

The mean difference between replicates was within approximately one percent of the chart scale for all Auto Analyzer parameters, except ammonia, which was over three increments. All parameters had greater than 90% of the quality control samples within the range limits. The 1986 mean differences between replicates were higher than the 1985 means for most parameters. However, the 1986 medians were comparable to the 1985 means. The larger means for 1986 can be explained by the variability in the water mass of the western basin. The western basin, which was not sampled in 1985, was much less homogeneous than the central and eastern basins.

Auto Analyzer quality control checks were performed repeatedly throughout the sampling period. Fresh standards were used in a daily linearity series. Standards similar to sample concentrations were run before and after a group of samples (n=10) as a concentration check. In addition, at each quality control station a distilled water sample was run as a blank for all Auto Analyzer and suspended solid parameters.

1986 BLANK VALUES

PARAMETER	N	MEAN	UNITS
Total Phosphorus	30	0.17	ug/l
Total Filtered Phosphorus	30	0.91	ug/l
Soluble Reactive Phosphorus	30	0.20	ug/l
Nitrate + Nitrite	30	1.30	ug/l
Ammonia	30	5.77	ug/l
Soluble Reactive Silica	30	56.73	ug/l
Chloride	30	0.34	mg/l
Total Suspended Solids	28	0.30	mg/l
Residual Solids	28	-0.04	mg/l
Volatile Solids	28	0.34	mg/l

In general, the 1986 blank values indicated that the distilled water used for making standards and rinsing filter units contained minimal organic and inorganic material. The low blank values also indicated very little sample bottle contamination. All the blank means, except ammonia, were equivalent to approximately one percent of the Auto Analyzer chart paper. The high blank values for ammonia confirmed the airborne ammonia contamination problem. The 1986 phosphorus blank means were lower than the 1985 phosphorus blank means. However, in both years the total filtered phosphorus blank was higher than the total phosphorus blank. The phosphorus blank differences may result from the increased sources of contamination due to the filtering process.

The quality control program also included the spiking of splits with a known concentration in a 1:1 ratio to determine the accuracy of the method. Accuracy is a measure of the difference between a true value and a measured value, and it is expressed using the spike difference and the percent recovery.

Spike Difference: The difference between the actual spike value and the theoretical spike value.

SPIKE DIFFERENCE = ACTUAL - THEORETICAL

Percent Recovery:

$$\text{PERCENT RECOVERY} = \frac{\text{ACTUAL} \times 100\%}{\text{THEORETICAL}}$$

Where: ACTUAL = Actual Spike Value of the Sample

$$\text{THEORETICAL} = \frac{\text{Spike Standard} + \text{Original Sample Value}}{2\ *}$$

* Division by 2 because of a 1:1 spike to sample ratio

1986 CALCULATED SPIKE DIFFERENCES

PARAMETER	UNITS	N	MEAN	MEDIAN	ST DEV	RANGE LIMIT LOWER	RANGE LIMIT UPPER	% SAMPLES WITHIN RANGE
TP	ug/l	98	0.03	-0.28	1.96	-5.85	5.91	99.0%
TFP	ug/l	95	-0.21	-0.45	1.54	-4.83	4.41	97.9%
SRP	ug/l	89	0.64	0.13	1.25	-3.11	4.39	100.0%
N+N	ug/l	95	0.64	0.50	5.73	-16.55	17.83	100.0%
NH3	ug/l	83	-0.28	-0.60	3.53	-10.87	10.31	98.8%
SRS	ug/l	97	28.44	17.50	90.84	-244.10	301.00	97.9%
CL	mg/l	95	-0.19	-0.05	0.55	-1.84	1.46	98.9%

1986 PERCENT RECOVERY RESULTS

PARAMETER	N	MEAN	MEDIAN	ST DEV	PERCENT RECOVERY RANGE
TP	98	100.63%	98.71%	9.06%	81.54% - 134.85%
TFP	95	99.13%	97.41%	8.24%	81.94% - 150.70%
SRP	89	104.34%	102.93%	8.12%	83.09% - 128.00%
N+N	95	100.21%	100.14%	2.23%	95.82% - 108.57%
NH3	83	98.97%	97.32%	18.10%	60.47% - 166.47%
SRS	97	101.71%	100.81%	5.30%	88.06% - 125.51%
CL	95	99.14%	99.74%	2.62%	86.08% - 103.43%

All the spike differences (means) were within one percent of the Auto Analyzer chart paper scale. The range limits of the spike differences were about + 5% of the chart scale for all parameters except ammonia. The wide range (-11.20 ug/l to 10.46 ug/l) in ammonia spike differences resulted in a large standard deviation. The large percent recovery range of 60.47 % to 166.47% was also indicative of the ammonia contamination problem.

Overall, the 1986 results indicated good quality control. However, the airborne ammonia contamination continued to be a problem in the 1986 ammonia data base.

REFERENCES CITED

Bartish, T. M., 1984. Thermal Stratification in the Western Basin of Lake Erie: Its Characteristics, Mechanisms of Formation, and Chemical and Biological Consequences. M.S Thesis, Ohio State University, 104 pages.

Brezonik, P. L., 1972. Nitrogen: Sources and Transformations in Natural Waters. In: Nutrients in Natural Waters. Ed. Allen H. E. and J. R. Kramer. Wiley and Sons. 457 pages.

Burns,N.M. 1976. Oxygen Depletion in the Central and Eastern Basins of Lake Erie, 1970. J.Fish. Res. Bd. Can. 33:512-519.

Carlson, R. E., 1977. A Trophic State Index for Lakes. Limnol. Oceanogr. 22 (2): 361-368.

Clark, J. L., 1981. Quidelines for Control of Analytical Procedures in an Interlaboratory Quality Control Program. International Joint Commission In-House Mimeo. 11 pages.

Davis,W.S., Herdendorf,C.E., and Fay,L.A., 1985. Evaluation of Sediment Oxygen Demand (SOD) Measurements in Lake Erie. Ohio Sea Grant Technical Bulletin 20 (revised) 133 pages.

Dobson, H. F. H., 1976. Eutrophication Status of the Great Lakes. Canada Centre for Inland Waters (Environment Canada) Unpublished Manuscript. 124 pages.

Fay, L. A., 1976. An Investigation of Corrected Chlorophyll A and Pheophytin A in Lake Erie's Western and Central Basins. M.S Thesis, Ohio State University, 177 pages.

Fay,L.A., 1984 Western Basin Nearshore Study 1978-1979; An Evaluation of the Temperature and Dissolved Oxygen Data. CLEAR Technical Report No. 204:3, 46 pages.

Fay, L. A. and Rathke, D. E., 1986a. 1985 Open Lake Water Quality Conditions for Lake Erie's Central and Eastern Basins. CLEAR Technical Report No. 306, 212 pages.

Fay, L. A. and Rathke, D. E., 1986b. Determination of Spatial Zones Within the Western Basin of Lake Erie to Establish Future Sampling Strategies. The Ohio State University, CLEAR Technical Report No. 305, 211 pages.

Great Lakes Water Quality Board, 1987. Report on Great Lakes Water Quality. Submitted to the International Joint Commission. 236 pages

Gregor, D. J. and Rast, W., 1979. Trophic Characterization of the U.S. and Canadian Nearshore Zones of the Great Lakes. International Joint Commission, PLUARG. 38 pages.

Hanson, B., Rosa, F., and Burns, N. M., 1978. Survey 8: A Budget Calculation Program for Lake Erie. Canada Centre for Inland Waters. In-House Document, Unpublished Mimeo. 54 pages.

Hartig, J. H. and Gannon,J.E., 1986. Opposing Phosphorus and Nitrogen Trends in the Great Lakes. Alternatives. 13:19-23.

Lake Erie Task Force, 1986. Lake Erie Surveillance Plan. Part 5. IN: Great Lakes Internal Surveillance Plan (GLISP), International Joint Commission, Great Lakes Program Office, Windsor, Ontario.

Letterhos, J. A., 1982. Clear Analytical Methods Manual. The Ohio State University, CLEAR Technical Report No. 205, 142 pages.

Maloney, T. E. (ed). 1979. Lake and Reservoir Classification Systems. EPA 600/3-79-074. 241 pages.

Rast, W. and Lee, G. R., 1978. Summary Analysis of the North America OFCD Eutrophication Project: Nutrient Loading-Lake Responce Relationships and Trophic State Indices. EPA 600/3-78-008. 454 pages.

Rathke, D. E., (ed) 1984. Lake Erie Intensive Study 1978-1979, Final Report, EPA 905/4-84-001. 484 pages.

Rawson, D. S., 1956. Algal Indicators of Trophic Lake Types. Limnol. and Oceanogr. 1(1):18-25.

Reckhow, K. H., 1980. Techniques for Exploring and Presenting Data Applied to Lake Phosphorus Concentrations. Can. J. Fish. Aquat. Sci. 37:290-294.

Rosa, F. and Burns, N. M., 1987. Lake Erie Central Basin Oxygen Depletion Changes from 1929-1980. J. Great Lakes Research (In Press).

Ruttner, F., 1963. Fundamentals of Limnology. University of Toronto Press. Toronto. 307 pages.

Snodgrass,W.J., and Fay,L.A., 1980. Measurement of Lake Erie Sediment Oxygen Demand and Its Oxygen Dependancy. Presented at the 23rd Conf,Great Lakes Res., Kingston, Ontario, May 19-22,1980.

Steinhart, C. E., Scheirow, L. J., and Chesters, G., 1981. An Environmental Quality Index for the Nearshore Waters of the Great Lakes.

Zafar, A. R., 1959. Taxonomy of Lakes. Hydrobiologia 13:287-299.

TABLES

TABLE 1

1986 LAKE ERIE OPEN LAKE WATER QUALITY SURVEY SCHEDULE

BASIN	SURVEY	DATE	JULIAN DATE	JULIAN MID POINT
WB	1	APRIL 10	100	100
WB	2	MAY 5	125	125
WB	3	MAY 24	144	144
WB, CB	4	JUNE 6 - JUNE 8	157-159	158
WB, CB, EB	5	JUNE 25 - JUNE 29	176-180	178
WB, CB	6	JULY 15 - JULY 17	196-198	197
WB, CB	7	AUGUST 5 - AUGUST 8	217-220	218
WB	8	AUGUST 25	237	237
WB, CB, EB	9	SEPTEMBER 15 - SEPTEMBER 19	258-262	260
WB	10	OCTOBER 13	286	286
WB, CB, EB	11	OCTOBER 27 - NOVEMBER 1	300-305	303
WB	12	NOVEMBER 17	321	321

WB = WESTERN BASIN
CB = CENTRAL BASIN
EB = EASTERN BASIN

TABLE 2

GEOGRAPHIC COORDINATES FOR THE 1986
LAKE ERIE STATIONS

STATION	BASIN	LATITUDE (N)	LONGITUDE (W)	WATER DEPTH (M)
58	WB	41 41 06	82 56 00	10.2
59	WB	41 43 36	83 09 00	9.0
60	WB	41 53 30	83 11 48	9.0
61	WB	41 56 48	83 02 42	9.7
91	WB	41 50 27	82 55 00	11.2
92	WB	41 57 00	82 41 12	12.0
30	CB	42 25 48	80 12 18	20.5
31	CB	42 15 12	81 06 24	21.3
32	CB	42 04 54	81 00 42	21.5
36	CB	41 56 06	81 28 42	22.9
37	CB	42 06 36	81 34 30	23.9
38	CB	42 16 54	81 40 18	21.6
42	CB	41 57 54	82 02 30	22.2
43	CB	41 47 18	81 56 42	22.6
73	CB	41 58 40	81 45 25	24.1
78	CB	42 07 00	81 15 00	22.5
9	EB	42 32 18	79 37 00	46.6
10	EB	42 40 48	79 41 30	31.8
15	EB	42 31 00	79 53 36	60.2
63	EB	42 25 00	79 48 00	45.3

WB = WESTERN BASIN
CB = CENTRAL BASIN
EB = EASTERN BASIN

TABLE 3
SYNOPSIS OF METHODS

PARAMETER	METHOD	RANGE	DETECTION LIMIT
Temperature	Thermistor (InterOcean) Mechanical Bathythermograph NBS Calibrated Thermometer	0-35 °C	0.2 °C
Dissolved Oxygen	Electrode (InterOcean, Titrimetric (Winkler azide modification)	0-20 mg O2/l	0.05 mg O2/l
Total Phosphorus	Persulfate Digestion, Stannous Chloride	0-100 ug P/l Expanded further by Machine or Manual Dilutions	0.2 ug/l
Total Filtered Phosphorus	Persulfate Digestion, Stannous Chloride, AAII	0-100 ug P/l Expanded further by Machine or Manual Dilutions	0.2 ug/l
Soluble Reactive Phosphorus	Stannous Chloride, AAII	0-50 ug P/l	0.2 ug/l
Nitrate + Nitrite	Cadmium Reduction, AAII	0-1 mg N/l	0.005 mg/l
Ammonia	Phenate Method, AAII	0-100 ug N/l 0-200 ug N/l 0-400 ug N/l	0.5 ug/l 1.0 ug/l 2.0 ug/l
Kjeldahl Nitrogen	Analysis performed by USEPA		
Dissolved Reactive Silicate	Molibdosilicate-Ascorbic Acid-Oxalic Acid, AAII	0-5.00 mg SiO2/l	0.03 mg/l

TABLE 3 (CONTINUED)
SYNOPSIS OF METHODS

PARAMETER	METHOD	RANGE	DETECTION LIMIT
Transparency	Secchi Disk	NA	0.01 m
Turbidity	Hach Turbidimeters (Model 2100A and Ratio)	0-1000 NTU	0.02 NTU
Chlorophyll	Acetone extinction Varian Spectrophotometer	0-50 ug/l	0.02 ug/l
Pheopigment	Acetone extinction Varian Spectrophotometer	0-50 ug/l	0.04 ug/l
Suspended Solids	Gravimetric, using Whatman GF/C glass fiber filters	0-10,000 mg/l	0.01 mg/l
Residual Solids	GF/C Glass Fiber Pad Ignited and Weighed on Electronic Balance	0- 1,000 mg/l	0.01 mg/l
Specific Conductance	In situ probe (Interocean) Electrode (Beckman, YSI)	0-1000umhos/cm	2 umhos/cm
Chloride	Ferricyanide, AAII	0-50 mg Cl/l	0.2 mg/l
Alkalinity	Titrimetric (.02N HCl)	0-250 mg/l CaCO3	0.5 mg/l
pH	Electrode (InterOcean, Martek, Orion)	0-14	0.1
Phyto-plankton	Optical examination (Collected w/ Niskin Bottle, Preserved w/ Lugols) Analysis performed by USEPA	macro + nanoplankton	species
Zooplankton	Optical examination (64 u net, CaCO3 formalin + sucrose) Analysis performed by USEPA	.075 mm	species

TABLE 4

1986 WESTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TEMPERATURE (°C)	DISSOLVED OXYGEN (MG/L)	% DO SAT. (%)	CORRECTED CONDUCTIVITY (UMHOS)
SURVEY 1 APRIL 10						
	EPI	MEAN	6.28	12.49	102.50	252.92
		STD. ERR.	0.22	0.17	1.00	6.84
		MEDIAN	6.60	12.40	102.36	255.50
		Q1	5.80	12.10	100.15	228.00
		Q3	6.80	12.80	104.22	264.00
		N	12	12	12	12
SURVEY 2 MAY 5						
	EPI	MEAN	10.71	11.52	102.37	236.75
		STD. ERR.	0.14	0.10	0.90	4.75
		MEDIAN	10.55	11.45	101.97	234.50
		Q1	10.30	11.30	100.51	224.00
		Q3	11.10	11.70	104.11	251.50
		N	12	12	12	12
SURVEY 3 MAY 24						
	EPI	MEAN	14.90	10.23	98.76	234.42
		STD. ERR.	0.36	0.21	2.24	3.32
		MEDIAN	14.90	10.30	101.51	235.50
		Q1	14.25	9.65	91.84	225.00
		Q3	15.70	10.80	104.14	242.00
		N	12	12	12	12
SURVEY 4 JUNE 6						
	EPI	MEAN	16.97	9.68	97.43	233.00
		STD. ERR.	0.18	0.14	1.32	1.10
		MEDIAN	17.00	9.50	96.90	233.50
		Q1	16.60	9.30	93.65	230.00
		Q3	17.30	10.10	100.24	236.00
		N	12	12	12	12

TABLE 4 (CONTINUED)

1986 WESTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TEMPERATURE (°C)	DISSOLVED OXYGEN (MG/L)	% DO SAT. (%)	CORRECTED CONDUCTIVITY (UMHOS)
SURVEY 5 JUNE 29						
	EPI	MEAN	21.87	7.96	89.61	245.50
		STD. ERR.	0.34	0.32	4.13	4.45
		MEDIAN	21.75	7.90	87.05	243.50
		Q1	21.35	6.90	76.44	232.50
		Q3	22.40	9.00	101.89	253.50
		N	12	12	12	12
SURVEY 6 JULY 15						
	EPI	MEAN	22.81	8.26	95.07	235.08
		STD. ERR.	0.28	0.32	4.25	1.98
		MEDIAN	22.70	8.35	94.38	236.50
		Q1	22.05	7.40	84.84	228.00
		Q3	23.10	9.05	104.51	240.50
		N	12	12	12	12
SURVEY 7 AUGUST 5						
	EPI	MEAN	24.34	8.10	96.63	230.17
		STD. ERR.	0.20	0.16	2.12	2.64
		MEDIAN	24.30	8.00	95.64	228.00
		Q1	23.90	7.65	90.10	222.50
		Q3	24.75	8.50	102.77	237.00
		N	12	12	12	12
SURVEY 8 AUGUST 25						
	EPI	MEAN	23.15	7.99	92.38	234.25
		STD. ERR.	0.08	0.08	0.91	2.30
		MEDIAN	23.20	8.00	92.06	233.50
		Q1	23.00	7.80	90.40	229.00
		Q3	23.40	8.10	93.43	238.50
		N	12	12	12	12

TABLE 4 (CONTINUED)

1986 WESTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TEMPERATURE (°C)	DISSOLVED OXYGEN (MG/L)	% DO SAT. (%)	CORRECTED CONDUCTIVITY (UMHOS)
SURVEY 9 SEPTEMBER 15						
	EPI	MEAN	19.27	8.58	90.70	227.42
		STD. ERR.	0.12	0.11	1.17	3.02
		MEDIAN	19.25	8.65	91.69	226.00
		Q1	19.00	8.50	89.38	219.00
		Q3	19.60	8.85	93.48	231.50
		N	12	12	12	12
SURVEY 10 OCTOBER 13						
	EPI	MEAN	15.43	9.17	89.33	230.75
		STD. ERR.	0.25	0.85	0.53	4.04
		MEDIAN	15.90	9.10	89.94	230.50
		Q1	14.50	8.95	88.08	223.00
		Q3	15.90	9.45	90.59	234.00
		N	12	12	12	12
SURVEY 11 OCTOBER 27						
	EPI	MEAN	12.49	10.13	93.16	257.75
		STD. ERR.	0.09	0.12	1.07	4.25
		MEDIAN	12.50	10.10	92.87	256.50
		Q1	12.25	9.90	91.04	253.50
		Q3	12.70	10.55	96.64	263.00
		N	12	12	12	12
SURVEY 12 NOVEMBER 17						
	EPI	MEAN	6.06	11.47	93.77	241.50
		STD. ERR.	0.25	0.09	0.52	10.46
		MEDIAN	5.95	11.45	93.94	220.00
		Q1	5.65	11.20	93.07	214.00
		Q3	6.80	11.80	95.18	270.00
		N	12	12	12	12

TABLE 4 (CONTINUED)

1986 WESTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TOTAL PHOSPHORUS (UG/L)	TOTAL FILTERED PHOSPHORUS (UG/L)	SOLUBLE REACTIVE PHOSPHORUS (UG/L)	TOTAL CHLORIDE (MG/L)
SURVEY 1						
APRIL 10						
	EPI	MEAN	17.0	1.3	0.6	14.6
		STD. ERR.	1.4	0.4	0.2	1.7
		MEDIAN	14.9	1.3	0.1	14.8
		Q1	13.5	0.3	0.0	9.7
		Q3	18.6	1.9	1.1	17.0
		N	11	9	10	12
SURVEY 2						
MAY 5						
	EPI	MEAN	10.8	2.3	ND	12.0
		STD. ERR.	0.9	1.5	ND	0.8
		MEDIAN	10.1	0.4	ND	12.0
		Q1	8.4	0.0	ND	9.4
		Q3	13.3	2.7	ND	15.3
		N	11	10	ND	12
SURVEY 3						
MAY 24						
	EPI	MEAN	8.5	1.0	0.9	11.9
		STD. ERR.	1.5	0.4	0.1	0.8
		MEDIAN	6.5	0.0	0.8	12.4
		Q1	4.8	0.0	0.6	9.6
		Q3	13.4	2.4	1.0	14.0
		N	12	11	12	12
SURVEY 4						
JUNE 6						
	EPI	MEAN	16.6	2.1	1.1	12.2
		STD. ERR.	2.5	0.7	0.2	0.4
		MEDIAN	14.5	1.5	1.0	11.9
		Q1	9.8	0.3	0.8	11.7
		Q3	20.7	2.6	1.4	12.6
		N	10	12	12	12

TABLE 4 (CONTINUED)

1986 WESTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TOTAL PHOSPHORUS (UG/L)	TOTAL FILTERED PHOSPHORUS (UG/L)	SOLUBLE REACTIVE PHOSPHORUS (UG/L)	TOTAL CHLORIDE (MG/L)
SURVEY 5 JUNE 29						
	EPI	MEAN	15.0	3.1	0.9	12.7
		STD. ERR.	1.9	0.7	0.4	0.7
		MEDIAN	14.4	3.0	0.0	12.2
		Q1	10.0	1.0	0.0	11.3
		Q3	20.8	5.1	1.6	13.8
		N	12	12	12	12
SURVEY 6 JULY 15						
	EPI	MEAN	18.1	7.5	1.1	10.7
		STD. ERR.	0.9	0.5	0.2	0.3
		MEDIAN	17.7	8.2	0.9	11.1
		Q1	16.3	6.1	0.5	10.2
		Q3	20.6	9.0	1.8	11.4
		N	12	12	12	12
SURVEY 7 AUGUST 5						
	EPI	MEAN	24.8	6.7	0.3	9.9
		STD. ERR.	2.0	0.8	0.1	0.4
		MEDIAN	23.4	6.8	0.0	9.6
		Q1	21.2	4.6	0.0	8.9
		Q3	30.1	7.3	0.9	11.3
		N	12	12	12	12
SURVEY 8 AUGUST 25						
	EPI	MEAN	28.9	5.5	0.0	11.1
		STD. ERR.	3.3	0.8	0.0	0.5
		MEDIAN	23.1	5.3	0.0	10.7
		Q1	20.0	3.2	0.0	9.7
		Q3	42.4	6.3	0.0	12.1
		N	12	12	12	12

TABLE 4 (CONTINUED)

1986 WESTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TOTAL PHOSPHORUS (UG/L)	TOTAL FILTERED PHOSPHORUS (UG/L)	SOLUBLE REACTIVE PHOSPHORUS (UG/L)	TOTAL CHLORIDE (MG/L)
SURVEY 9 SEPTEMBER 15						
	EPI	MEAN	33.5	9.2	0.1	10.3
		STD. ERR.	3.8	1.8	0.1	0.5
		MEDIAN	27.9	6.4	0.0	10.6
		Q1	25.4	5.5	0.0	8.7
		Q3	43.3	11.8	0.1	11.4
		N	12	12	12	12
SURVEY 10 OCTOBER 13						
	EPI	MEAN	27.7	10.0	2.6	11.5
		STD. ERR.	2.5	1.3	0.9	0.7
		MEDIAN	24.3	9.5	1.9	12.8
		Q1	21.4	6.1	0.0	8.6
		Q3	31.7	13.8	3.7	13.3
		N	12	12	12	12
SURVEY 11 OCTOBER 27						
	EPI	MEAN	28.1	9.6	1.7	13.3
		STD. ERR.	2.8	2.0	0.9	0.4
		MEDIAN	26.8	6.9	0.0	13.0
		Q1	21.8	5.0	0.0	12.2
		Q3	32.6	14.1	2.1	14.6
		N	12	12	12	12
SURVEY 12 NOVEMBER 17						
	EPI	MEAN	26.5	5.3	1.6	9.8
		STD. ERR.	4.7	1.5	0.6	1.0
		MEDIAN	19.1	2.8	0.8	8.1
		Q1	15.0	2.3	0.4	7.2
		Q3	38.9	6.4	1.3	13.0
		N	12	12	12	12

TABLE 4 (CONTINUED)

1986 WESTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	NITRATE NITRITE (UG/L)	AMMONIA NITROGEN (UG/L)	KJELDAHL NITROGEN (MG/L)	SOLUBLE SILICA (UG/L)
SURVEY 1 APRIL 10						
	EPI	MEAN	583.6	32.2	0.22	1133.9
		STD. ERR.	45.1	9.8	0.04	147.9
		MEDIAN	590.5	19.2	0.25	1266.5
		Q1	480.0	6.8	0.10	1226.0
		Q3	609.0	56.3	0.30	1392.0
		N	10	10	6	10
SURVEY 2 MAY 5						
	EPI	MEAN	429.8	12.7	0.20	845.0
		STD. ERR.	40.3	1.8	0.04	217.6
		MEDIAN	382.0	12.9	0.20	652.5
		Q1	323.0	7.9	0.10	268.5
		Q3	502.0	18.1	0.20	1189.5
		N	12	11	6	12
SURVEY 3 MAY 24						
	EPI	MEAN	330.6	15.0	0.23	305.4
		STD. ERR.	10.9	3.1	0.02	85.4
		MEDIAN	328.5	10.7	0.20	187.5
		Q1	298.0	7.9	0.20	134.5
		Q3	359.5	18.7	0.30	317.5
		N	12	12	6	12
SURVEY 4 JUNE 6						
	EPI	MEAN	282.9	18.7	0.25	489.6
		STD. ERR.	7.8	3.0	0.02	100.7
		MEDIAN	282.0	16.6	0.25	332.5
		Q1	268.5	11.0	0.20	257.5
		Q3	306.5	25.4	0.30	692.5
		N	12	12	6	12

TABLE 4 (CONTINUED)

1986 WESTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	NITRATE NITRITE (UG/L)	AMMONIA NITROGEN (UG/L)	KJELDAHL NITROGEN (MG/L)	SOLUBLE SILICA (UG/L)
SURVEY 5						
JUNE 29						
	EPI	MEAN	408.3	26.4	0.18	1122.8
		STD. ERR.	53.8	5.5	0.04	81.8
		MEDIAN	362.0	23.6	0.15	1092.5
		Q1	307.5	11.7	0.10	1025.0
		Q3	469.5	29.3	0.30	1317.0
		N	12	12	6	12
SURVEY 6						
JULY 15						
	EPI	MEAN	362.8	18.5	0.18	836.9
		STD. ERR.	27.0	3.8	0.03	130.3
		MEDIAN	332.0	18.7	0.20	802.5
		Q1	311.0	4.7	0.10	567.0
		Q3	443.0	30.5	0.20	949.0
		N	12	12	6	12
SURVEY 7						
AUGUST 5						
	EPI	MEAN	277.4	12.9	0.20	1468.9
		STD. ERR.	11.1	1.6	0.03	136.6
		MEDIAN	272.5	10.9	0.20	1340.5
		Q1	256.0	9.5	0.20	1229.5
		Q3	303.5	17.1	0.20	1642.0
		N	12	12	6	12
SURVEY 8						
AUGUST 25						
	EPI	MEAN	172.7	14.2	0.25	1345.3
		STD. ERR.	16.7	2.3	0.06	130.4
		MEDIAN	165.0	13.8	0.20	1579.0
		Q1	131.5	6.8	0.20	786.0
		Q3	234.5	19.4	0.30	1688.0
		N	12	12	6	12

TABLE 4 (CONTINUED)

1986 WESTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	NITRATE NITRITE (UG/L)	AMMONIA NITROGEN (UG/L)	KJELDAHL NITROGEN (MG/L)	SOLUBLE SILICA (UG/L)
SURVEY 9 SEPTEMBER 15						
	EPI	MEAN	132.8	7.5	0.29	1173.0
		STD. ERR.	21.2	2.5	0.05	139.6
		MEDIAN	151.5	3.8	0.20	1236.5
		Q1	102.0	2.0	0.20	1029.0
		Q3	190.0	7.9	0.45	1482.0
		N	12	12	12	12
SURVEY 10 OCTOBER 13						
	EPI	MEAN	297.5	14.6	0.23	1582.5
		STD. ERR.	28.1	3.3	0.02	69.2
		MEDIAN	302.0	13.2	0.20	1650.0
		Q1	268.5	4.8	0.20	1500.0
		Q3	321.0	21.7	0.20	1695.0
		N	12	12	12	12
SURVEY 11 OCTOBER 27						
	EPI	MEAN	522.3	8.9	0.30	1676.0
		STD. ERR.	35.9	2.4	0.05	62.0
		MEDIAN	503.0	5.5	0.25	1612.5
		Q1	413.0	4.5	0.20	1526.0
		Q3	588.0	9.5	0.40	1815.0
		N	12	12	6	12
SURVEY 12 NOVEMBER 17						
	EPI	MEAN	442.2	5.2	0.25	1238.8
		STD. ERR.	68.7	0.7	0.07	142.2
		MEDIAN	309.0	4.5	0.20	1107.5
		Q1	291.0	3.5	0.10	910.0
		Q3	562.0	6.3	0.40	1737.5
		N	12	12	6	12

TABLE 4 (CONTINUED)

1986 WESTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY	DEPTH	STATISTICS	CORRECTED CHLOROPHYLL A (UG/L)	PHEOPHYTIN (UG/L)	TURBIDITY (NTU)	SECCHI (M)
SURVEY 1 APRIL 10						
	EPI	MEAN	5.89	6.89	7.94	1.50
		STD. ERR.	0.63	1.35	2.02	0.22
		MEDIAN	6.69	5.56	5.80	1.35
		Q1	4.22	4.37	4.00	1.10
		Q3	7.92	7.87	8.65	2.00
		N	12	12	12	6
SURVEY 2 MAY 5						
	EPI	MEAN	5.16	4.10	4.54	1.70
		STD. ERR.	0.38	0.40	0.26	0.11
		MEDIAN	5.34	3.94	4.45	1.80
		Q1	5.02	3.26	4.05	1.60
		Q3	6.09	5.17	5.45	1.90
		N	12	12	12	6
SURVEY 3 MAY 24						
	EPI	MEAN	7.19	3.47	3.58	2.67
		STD. ERR.	1.01	1.28	0.78	0.23
		MEDIAN	6.45	2.27	2.35	2.60
		Q1	4.59	1.38	1.90	2.20
		Q3	9.31	3.17	4.20	3.30
		N	12	12	12	6
SURVEY 4 JUNE 6						
	EPI	MEAN	4.52	5.45	8.12	1.48
		STD. ERR.	0.72	0.73	1.48	0.20
		MEDIAN	4.21	5.28	8.35	1.50
		Q1	2.20	3.60	3.60	1.10
		Q3	6.43	6.39	9.70	2.00
		N	12	12	12	6

TABLE 4 (CONTINUED)

1986 WESTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY	DEPTH	STATISTICS	CORRECTED CHLOROPHYLL A (UG/L)	PHEOPHYTIN (UG/L)	TURBIDITY (NTU)	SECCHI (M)
SURVEY 5 JUNE 29						
	EPI	MEAN	4.77	2.02	6.28	2.45
		STD. ERR.	1.07	0.50	1.08	0.31
		MEDIAN	4.12	1.72	5.60	2.20
		Q1	2.32	0.55	3.40	2.00
		Q3	5.50	3.47	8.55	2.50
		N	12	12	12	6
SURVEY 6 JULY 15						
	EPI	MEAN	6.40	1.60	4.14	2.33
		STD. ERR.	1.02	0.57	0.44	0.24
		MEDIAN	6.14	0.98	3.75	2.25
		Q1	4.27	0.71	3.10	1.90
		Q3	8.87	1.44	4.80	2.90
		N	12	12	12	6
SURVEY 7 AUGUST 5						
	EPI	MEAN	7.93	3.23	4.67	1.82
		STD. ERR.	1.09	0.90	0.61	0.21
		MEDIAN	8.72	2.23	3.90	1.95
		Q1	4.44	1.60	3.10	1.30
		Q3	10.75	3.14	5.35	2.20
		N	12	12	12	6
SURVEY 8 AUGUST 25						
	EPI	MEAN	9.13	10.29	6.84	1.27
		STD. ERR.	2.68	2.61	0.58	0.09
		MEDIAN	5.70	6.74	6.25	1.35
		Q1	2.63	4.32	5.25	1.00
		Q3	11.01	11.97	8.25	1.40
		N	12	12	12	6

TABLE 4 (CONTINUED)

1986 WESTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY	DEPTH	STATISTICS	CORRECTED CHLOROPHYLL A (UG/L)	PHEOPHYTIN (UG/L)	TURBIDITY (NTU)	SECCHI (M)
SURVEY 9 SEPTEMBER 15						
	EPI	MEAN	12.55	2.91	6.84	1.22
		STD. ERR.	1.95	0.81	0.41	0.07
		MEDIAN	11.40	1.83	7.10	1.25
		Q1	8.27	1.65	5.50	1.20
		Q3	15.89	2.72	7.95	1.30
		N	12	12	12	6
SURVEY 10 OCTOBER 13						
	EPI	MEAN	5.23	5.96	8.98	1.18
		STD. ERR.	0.54	0.83	0.68	0.09
		MEDIAN	5.30	6.18	8.35	1.20
		Q1	3.52	3.13	6.95	1.00
		Q3	6.52	7.54	10.30	1.30
		N	12	12	12	6
SURVEY 11 OCTOBER 27						
	EPI	MEAN	7.32	8.71	6.75	1.50
		STD. ERR.	1.35	1.62	0.53	0.14
		MEDIAN	7.31	7.76	6.30	1.55
		Q1	3.09	4.93	5.60	1.10
		Q3	10.22	11.50	7.40	1.70
		N	12	12	12	6
SURVEY 12 NOVEMBER 17						
	EPI	MEAN	8.11	4.11	11.05	1.17
		STD. ERR.	1.37	3.80	2.10	0.22
		MEDIAN	8.01	0.51	7.90	1.20
		Q1	2.76	2.68	6.80	0.60
		Q3	12.22	5.78	17.00	1.40
		N	12	12	12	6

TABLE 4 (CONTINUED)

1986 WESTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TOTAL SUSPENDED SOLIDS (MG/L)	RESIDUAL SOLIDS (MG/L)	VOLATILE SOLIDS (MG/L)	%VOLATILE SOLIDS (%)
SURVEY 1 APRIL 10						
	EPI	MEAN	8.36	6.41	1.95	28.29
		STD. ERR.	2.35	2.01	0.37	4.05
		MEDIAN	5.90	4.28	1.62	21.73
		Q1	4.38	2.99	1.40	20.31
		Q3	7.24	5.67	1.91	37.70
		N	11	11	11	11
SURVEY 2 MAY 5						
	EPI	MEAN	5.50	4.07	1.43	26.42
		STD. ERR.	0.29	0.26	0.05	1.18
		MEDIAN	5.59	3.99	1.39	25.93
		Q1	4.94	3.63	1.28	23.16
		Q3	6.31	4.93	1.58	29.98
		N	12	12	12	12
SURVEY 3 MAY 24						
	EPI	MEAN	5.01	3.47	1.54	35.80
		STD. ERR.	0.88	0.78	0.12	3.29
		MEDIAN	3.39	2.02	1.50	34.64
		Q1	2.87	1.61	1.38	27.55
		Q3	6.35	4.51	1.84	44.89
		N	12	12	12	12
SURVEY 4 JUNE 6						
	EPI	MEAN	7.92	6.05	1.87	25.54
		STD. ERR.	1.38	1.16	0.25	1.84
		MEDIAN	5.96	4.00	1.58	24.15
		Q1	4.24	2.96	1.33	20.30
		Q3	9.80	7.96	2.23	29.95
		N	12	12	12	12

TABLE 4 (CONTINUED)

1986 WESTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TOTAL SUSPENDED SOLIDS (MG/L)	RESIDUAL SOLIDS (MG/L)	VOLATILE SOLIDS (MG/L)	%VOLATILE SOLIDS (%)
SURVEY 5 JUNE 29						
	EPI	MEAN	6.55	4.73	1.83	32.84
		STD. ERR.	1.03	0.94	0.19	3.95
		MEDIAN	6.34	3.96	1.84	29.24
		Q1	3.24	2.13	1.20	22.76
		Q3	8.66	7.00	2.39	48.25
		N	12	12	12	12
SURVEY 6 JULY 15						
	EPI	MEAN	4.84	3.20	1.64	35.43
		STD. ERR.	0.44	0.43	0.17	3.81
		MEDIAN	4.72	2.82	1.55	32.44
		Q1	3.73	2.17	1.26	23.72
		Q3	5.46	3.84	1.76	44.74
		N	12	12	12	12
SURVEY 7 AUGUST 5						
	EPI	MEAN	5.48	3.63	1.84	34.44
		STD. ERR.	0.74	0.54	0.26	2.61
		MEDIAN	5.00	2.99	1.63	34.01
		Q1	3.59	2.40	1.19	27.69
		Q3	6.10	4.63	2.12	42.35
		N	12	12	12	12
SURVEY 8 AUGUST 25						
	EPI	MEAN	8.82	5.90	2.91	32.64
		STD. ERR.	0.90	0.59	0.36	1.41
		MEDIAN	7.22	5.04	2.70	31.55
		Q1	6.52	4.37	2.00	29.78
		Q3	11.60	7.00	4.30	36.60
		N	12	12	12	12

TABLE 4 (CONTINUED)

1986 WESTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TOTAL SUSPENDED SOLIDS (MG/L)	RESIDUAL SOLIDS (MG/L)	VOLATILE SOLIDS (MG/L)	%VOLATILE SOLIDS (%)
SURVEY 9 SEPTEMBER 15						
	EPI	MEAN	9.45	6.43	3.01	32.09
		STD. ERR.	0.55	0.51	0.33	3.00
		MEDIAN	9.68	6.88	2.64	28.00
		Q1	7.97	4.76	2.37	24.58
		Q3	10.45	7.43	3.27	35.66
		N	12	12	12	12
SURVEY 10 OCTOBER 13						
	EPI	MEAN	9.40	7.46	1.94	20.73
		STD. ERR.	0.55	0.49	0.20	2.17
		MEDIAN	8.77	7.44	2.07	22.68
		Q1	8.04	5.83	1.82	17.80
		Q3	10.50	8.52	2.31	25.15
		N	12	12	12	12
SURVEY 11 OCTOBER 27						
	EPI	MEAN	7.30	5.79	1.52	21.17
		STD. ERR.	0.30	0.31	0.05	1.10
		MEDIAN	7.27	5.78	1.47	21.02
		Q1	6.49	5.03	1.41	19.00
		Q3	7.82	6.20	1.68	23.77
		N	12	12	12	12
SURVEY 12 NOVEMBER 17						
	EPI	MEAN	11.48	9.66	1.83	17.76
		STD. ERR.	1.81	1.61	0.21	1.49
		MEDIAN	9.40	7.73	1.64	16.31
		Q1	7.13	5.96	1.19	14.27
		Q3	17.11	14.55	2.56	17.72
		N	12	12	12	12

TABLE 4 (CONTINUED)

1986 WESTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	PH (SU)	ALKALINITY PHENOLPHTHALEIN (MG/L)	ALKALINITY TOTAL (MG/L)
SURVEY 1 APRIL 10					
	EPI	MEAN	7.92	0.0	89.72
		STD. ERR.	0.03	0.0	0.50
		MEDIAN	7.90	0.0	89.85
		Q1	7.87	0.0	88.30
		Q3	7.94	0.0	91.40
		N	12	12	12
SURVEY 2 MAY 5					
	EPI	MEAN	8.27	2.78	89.26
		STD. ERR.	0.02	0.35	0.84
		MEDIAN	8.28	3.10	88.95
		Q1	8.20	1.85	87.15
		Q3	8.35	3.55	91.55
		N	12	12	12
SURVEY 3 MAY 24					
	EPI	MEAN	8.12	2.42	90.44
		STD. ERR.	0.04	0.45	0.65
		MEDIAN	8.14	2.15	90.60
		Q1	8.02	2.00	88.20
		Q3	8.27	3.45	92.35
		N	12	12	12
SURVEY 4 JUNE 6					
	EPI	MEAN	8.19	3.22	89.23
		STD. ERR.	0.03	0.33	0.36
		MEDIAN	8.17	3.40	89.55
		Q1	8.11	2.00	88.60
		Q3	8.19	4.00	90.15
		N	12	12	12

TABLE 4 (CONTINUED)

1986 WESTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	PH (SU)	ALKALINITY PHENOLPHTHALEIN (MG/L)	ALKALINITY TOTAL (MG/L)
SURVEY 5 JUNE 29					
	EPI	MEAN	8.11	1.55	98.57
		STD. ERR.	0.06	0.62	1.43
		MEDIAN	8.05	0.00	96.40
		Q1	7.94	0.00	94.55
		Q3	8.29	2.85	103.20
		N	12	12	12
SURVEY 6 JULY 15					
	EPI	MEAN	8.21	2.32	97.54
		STD. ERR.	0.07	0.76	0.88
		MEDIAN	8.23	1.90	97.90
		Q1	8.04	0.00	96.10
		Q3	8.30	3.85	99.55
		N	12	12	12
SURVEY 7 AUGUST 5					
	EPI	MEAN	8.43	5.89	97.08
		STD. ERR.	0.04	0.80	0.57
		MEDIAN	8.47	5.50	96.95
		Q1	8.27	3.95	95.55
		Q3	8.52	7.65	99.05
		N	12	12	12
SURVEY 8 AUGUST 25					
	EPI	MEAN	8.50	5.82	96.60
		STD. ERR.	0.04	0.66	0.46
		MEDIAN	8.44	5.65	96.35
		Q1	8.41	4.10	95.70
		Q3	8.63	7.30	97.70
		N	12	12	12

TABLE 4 (CONTINUED)

1986 WESTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	PH (SU)	ALKALINITY PHENOLPHTHALEIN (MG/L)	ALKALINITY TOTAL (MG/L)
SURVEY 9 SEPTEMBER 15					
	EPI	MEAN	8.38	4.03	94.64
		STD. ERR.	0.06	0.60	0.78
		MEDIAN	8.34	3.30	93.80
		Q1	8.26	2.40	92.90
		Q3	8.48	5.40	96.40
		N	12	12	12
SURVEY 10 OCTOBER 13					
	EPI	MEAN	8.13	0.00	88.22
		STD. ERR.	0.02	0.00	0.65
		MEDIAN	8.14	0.00	87.75
		Q1	8.07	0.00	86.50
		Q3	8.19	0.00	90.00
		N	12	12	12
SURVEY 11 OCTOBER 27					
	EPI	MEAN	8.23	1.81	96.23
		STD. ERR.	0.03	0.40	1.01
		MEDIAN	8.24	1.50	96.40
		Q1	8.16	1.10	95.15
		Q3	8.33	2.60	98.15
		N	12	12	12
SURVEY 12 NOVEMBER 17					
	EPI	MEAN	8.06	0.36	92.24
		STD. ERR.	0.05	0.20	2.39
		MEDIAN	8.10	0.00	87.35
		Q1	8.05	0.00	86.30
		Q3	8.13	0.70	98.60
		N	12	12	12

TABLE 5

1986 CENTRAL BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TEMPERATURE (°C)	DISSOLVED OXYGEN (MG/L)	% DO SAT. (%)	CORRECTED CONDUCTIVITY (UMHOS)
SURVEY 4 JUNE 6 - JUNE 8						
	EPI	MEAN	14.52	10.82	103.56	268.9
		STD. ERR.	0.31	0.01	0.93	0.6
		MEDIAN	14.35	10.85	103.47	296.5
		Q1	13.60	10.40	100.53	267.0
		Q3	15.60	11.30	107.10	271.0
		N	30	30	30	30
	HYPO	MEAN	7.86	9.63	81.26	274.9
		STD. ERR.	0.16	0.12	1.04	1.0
		MEDIAN	7.85	9.65	81.43	273.5
		Q1	7.70	9.30	78.68	273.0
		Q3	8.20	10.00	84.15	277.0
		N	14	14	14	14
SURVEY 5 JUNE 25 - JUNE 29						
	EPI	MEAN	17.81	9.46	96.89	266.6
		STD. ERR.	0.19	0.07	0.58	0.6
		MEDIAN	17.65	9.50	97.20	266.0
		Q1	17.00	9.10	95.48	265.0
		Q3	18.90	9.80	98.86	270.0
		N	30	30	30	30
	HYPO	MEAN	9.46	6.59	57.21	275.6
		STD. ERR.	0.17	0.17	1.44	0.7
		MEDIAN	9.40	6.50	56.92	275.0
		Q1	8.90	6.10	53.31	274.5
		Q3	10.00	7.15	61.49	277.5
		N	16	16	16	16

TABLE 5 (CONTINUED)

1986 CENTRAL BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TEMPERATURE (°C)	DISSOLVED OXYGEN (MG/L)	% DO SAT. (%)	CORRECTED CONDUCTIVITY (UMHOS)
SURVEY 6 JULY 15 - JULY 17						
	EPI	MEAN	20.72	8.85	96.94	262.5
		STD. ERR.	0.25	0.09	1.38	0.8
		MEDIAN	20.90	8.45	99.51	263.0
		Q1	19.60	8.50	90.99	261.0
		Q3	22.00	9.10	101.84	266.0
		N	30	30	30	30
	HYPO	MEAN	10.88	3.71	33.01	275.9
		STD. ERR.	0.25	0.28	2.43	0.6
		MEDIAN	10.85	3.55	31.84	276.0
		Q1	10.10	3.10	27.65	274.0
		Q3	11.30	4.00	34.77	278.0
		N	18	18	18	18
SURVEY 7 AUGUST 5 - AUGUST 8						
	EPI	MEAN	23.62	8.46	99.08	258.9
		STD. ERR.	0.07	0.08	0.94	1.9
		MEDIAN	23.50	8.50	99.22	259.0
		Q1	23.30	8.20	95.27	256.0
		Q3	23.80	8.70	102.67	260.0
		N	30	30	30	30
	HYPO	MEAN	12.90	2.11	19.63	274.7
		STD. ERR.	0.33	0.14	1.40	1.1
		MEDIAN	12.80	2.40	22.40	274.5
		Q1	11.80	1.60	14.69	272.0
		Q3	13.75	2.60	23.94	278.0
		N	20	20	20	20

TABLE 5 (CONTINUED)

1986 CENTRAL BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TEMPERATURE (°C)	DISSOLVED OXYGEN (MG/L)	% DO SAT. (%)	CORRECTED CONDUCTIVITY (UMHOS)
SURVEY 9 SEPTEMBER 15 - SEPTEMBER 19						
	EPI	MEAN	19.22	8.19	86.55	264.7
		STD. ERR.	0.07	0.05	0.61	1.0
		MEDIAN	19.15	8.20	86.32	265.5
		Q1	19.00	8.00	84.19	263.0
		Q3	19.50	8.30	88.25	269.0
		N	30	30	30	30
	HYPO	MEAN	17.30	5.90	59.80	275.0
		STD. ERR.	0.00	0.00	0.00	0.0
		MEDIAN	17.30	5.90	59.80	275.0
		Q1	17.30	5.90	59.80	275.0
		Q3	17.30	5.90	59.80	275.0
		N	1	1	1	1
SURVEY 11 OCTOBER 27 - NOVEMBER 1						
	EPI	MEAN	15.02	9.24	89.33	266.9
		STD. ERR.	0.08	0.05	0.39	0.7
		MEDIAN	14.90	9.20	88.97	267.5
		Q1	14.60	9.10	88.74	265.0
		Q3	15.50	9.30	90.96	270.0
		N	30	30	30	30

TABLE 5 (CONTINUED)

1986 CENTRAL BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TOTAL PHOSPHORUS (UG/L)	TOTAL FILTERED PHOSPHORUS (UG/L)	SOLUBLE REACTIVE PHOSPHORUS (UG/L)	TOTAL CHLORIDE (MG/L)
SURVEY 4 JUNE 6 - JUNE 8						
	EPI	MEAN	12.4	5.1	0.4	15.2
		STD. ERR.	1.0	0.6	0.1	0.1
		MEDIAN	11.2	4.7	0.1	15.2
		Q1	9.3	2.6	0.0	14.7
		Q3	13.9	7.3	0.9	15.4
		N	25	20	30	30
	HYPO	MEAN	14.1	4.7	0.7	15.3
		STD. ERR.	0.9	0.9	0.2	0.3
		MEDIAN	13.9	5.0	0.6	14.8
		Q1	12.3	2.4	0.0	14.6
		Q3	15.0	5.8	1.1	15.4
		N	12	12	14	14
SURVEY 5 JUNE 25 - JUNE 29						
	EPI	MEAN	9.4	2.8	0.1	15.0
		STD. ERR.	0.7	0.3	0.1	0.1
		MEDIAN	8.7	2.6	0.0	15.0
		Q1	7.0	1.6	0.0	14.7
		Q3	10.7	3.5	0.0	15.1
		N	29	26	30	30
	HYPO	MEAN	16.4	5.6	0.2	14.8
		STD. ERR.	1.3	1.0	0.1	0.1
		MEDIAN	14.8	3.9	0.0	14.7
		Q1	13.6	3.3	0.0	14.6
		Q3	16.4	5.6	0.2	15.0
		N	16	16	15	16

TABLE 5 (CONTINUED)

1986 CENTRAL BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TOTAL PHOSPHORUS (UG/L)	TOTAL FILTERED PHOSPHORUS (UG/L)	SOLUBLE REACTIVE PHOSPHORUS (UG/L)	TOTAL CHLORIDE (MG/L)
SURVEY 6 JULY 15 - JULY 17						
	EPI	MEAN	9.8	4.1	0.0	14.1
		STD. ERR.	0.4	0.5	0.0	0.4
		MEDIAN	9.5	4.1	0.0	14.7
		Q1	8.4	2.5	0.0	14.3
		Q3	11.6	5.5	0.0	15.0
		N	29	29	30	29
	HYPO	MEAN	12.1	5.0	0.0	15.0
		STD. ERR.	0.6	0.6	0.0	0.1
		MEDIAN	11.6	5.5	0.0	14.8
		Q1	10.1	3.3	0.0	14.8
		Q3	13.1	6.8	0.0	15.3
		N	18	18	18	17
SURVEY 7 AUGUST 5 - AUGUST 8						
	EPI	MEAN	13.5	6.1	0.5	14.4
		STD. ERR.	0.5	0.2	0.2	0.1
		MEDIAN	13.2	5.8	0.0	14.5
		Q1	12.3	5.3	0.0	14.1
		Q3	14.4	6.3	0.6	14.7
		N	30	30	30	30
	HYPO	MEAN	13.8	6.2	0.5	14.9
		STD. ERR.	0.5	0.3	0.1	0.1
		MEDIAN	14.2	6.3	0.3	14.9
		Q1	11.5	5.0	0.0	14.5
		Q3	15.7	7.0	0.9	15.0
		N	20	19	20	20

TABLE 5 (CONTINUED)

1986 CENTRAL BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TOTAL PHOSPHORUS (UG/L)	TOTAL FILTERED PHOSPHORUS (UG/L)	SOLUBLE REACTIVE PHOSPHORUS (UG/L)	TOTAL CHLORIDE (MG/L)
SURVEY 9						
SEPTEMBER 15 - SEPTEMBER 19						
	EPI	MEAN	17.4	7.1	3.7	14.6
		STD. ERR.	0.9	0.3	0.1	0.1
		MEDIAN	17.1	7.3	3.8	14.7
		Q1	14.9	6.0	3.4	14.4
		Q3	19.3	7.9	4.0	15.0
		N	30	30	30	30
	HYPO	MEAN	20.1	13.0	6.2	14.9
		STD. ERR.	0.0	0.0	0.0	0.0
		MEDIAN	20.1	13.0	6.2	14.9
		Q1	20.1	13.0	6.2	14.9
		Q3	20.1	13.0	6.2	14.9
		N	1	1	1	1
SURVEY 11						
OCTOBER 27 - NOVEMBER 1						
	EPI	MEAN	15.7	6.6	0.6	14.6
		STD. ERR.	0.3	0.2	0.1	0.1
		MEDIAN	15.3	6.5	0.2	14.6
		Q1	14.5	5.7	0.0	14.4
		Q3	16.3	7.4	1.3	14.8
		N	30	30	30	30

TABLE 5 (CONTINUED)

1986 CENTRAL BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	NITRATE NITRITE (UG/L)	AMMONIA NITROGEN (UG/L)	KJELDAHL NITROGEN (MG/L)	SOLUBLE SILICA (UG/L)
SURVEY 4 JUNE 6 - JUNE 8						
	EPI	MEAN	285.0	9.6	0.34	478.5
		STD. ERR.	23.0	0.9	0.02	138.6
		MEDIAN	309.5	8.3	0.33	265.0
		Q1	155.0	5.5	0.32	213.0
		Q3	407.0	12.8	0.35	328.0
		N	30	30	9	29
	HYPO	MEAN	260.9	30.3	NA	643.2
		STD. ERR.	37.9	2.7	NA	46.0
		MEDIAN	198.0	29.7	NA	663.5
		Q1	182.0	23.8	NA	583.0
		Q3	242.0	36.2	NA	744.0
		N	14	14	NA	14
SURVEY 5 JUNE 25 - JUNE 29						
	EPI	MEAN	261.6	10.4	0.21	482.2
		STD. ERR.	22.6	1.5	0.02	77.1
		MEDIAN	257.0	7.5	0.19	371.0
		Q1	140.0	4.8	0.17	263.0
		Q3	350.0	15.4	0.24	557.0
		N	30	30	10	30
	HYPO	MEAN	264.0	41.4	NA	1201.9
		STD. ERR.	13.5	2.3	NA	47.2
		MEDIAN	250.0	39.8	NA	1200.0
		Q1	222.0	35.5	NA	1081.5
		Q3	308.0	47.2	NA	1337.0
		N	16	16	NA	16

TABLE 5 (CONTINUED)

1986 CENTRAL BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	NITRATE NITRITE (UG/L)	AMMONIA NITROGEN (UG/L)	KJELDAHL NITROGEN (MG/L)	SOLUBLE SILICA (UG/L)
SURVEY 6 JULY 15 - JULY 17						
	EPI	MEAN	240.7	8.2	0.19	495.0
		STD. ERR.	11.8	0.8	0.01	31.6
		MEDIAN	263.5	6.8	0.20	455.0
		Q1	190.0	4.9	0.16	370.0
		Q3	290.0	10.0	0.20	650.0
		N	30	30	10	30
	HYPO	MEAN	298.2	17.3	NA	1791.6
		STD. ERR.	7.9	3.7	NA	109.8
		MEDIAN	308.5	10.3	NA	1845.5
		Q1	281.0	6.4	NA	1544.0
		Q3	322.0	23.2	NA	2026.0
		N	18	18	NA	18
SURVEY 7 AUGUST 5 - AUGUST 8						
	EPI	MEAN	223.8	10.2	ND	332.5
		STD. ERR.	6.1	1.0	ND	33.7
		MEDIAN	231.5	8.2	ND	312.5
		Q1	205.0	6.0	ND	162.0
		Q3	247.0	15.8	ND	492.0
		N	30	30	ND	30
	HYPO	MEAN	329.7	11.4	ND	2232.8
		STD. ERR.	8.4	1.7	ND	78.0
		MEDIAN	345.0	8.5	ND	2129.5
		Q1	296.0	6.6	ND	1988.0
		Q3	362.0	14.4	ND	2443.0
		N	20	20	ND	20

TABLE 5 (CONTINUED)

1986 CENTRAL BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	NITRATE NITRITE (UG/L)	AMMONIA NITROGEN (UG/L)	KJELDAHL NITROGEN (MG/L)	SOLUBLE SILICA (UG/L)
SURVEY 9 SEPTEMBER 15 - SEPTEMBER 19						
	EPI	MEAN	163.6	10.4	0.20	963.7
		STD. ERR.	7.6	1.0	0.01	43.2
		MEDIAN	172.0	8.0	0.20	963.0
		Q1	152.0	6.0	0.20	894.0
		Q3	193.0	14.0	0.20	1174.0
		N	30	30	31	30
	HYPO	MEAN	173.0	30.8	NA	2874.0
		STD. ERR.	0.0	0.0	NA	0.0
		MEDIAN	173.0	30.8	NA	2874.0
		Q1	173.0	30.8	NA	2874.0
		Q3	173.0	30.8	NA	2874.0
		N	1	1	NA	1
SURVEY 11 OCTOBER 27 - NOVEMBER 1						
	EPI	MEAN	142.2	5.8	0.23	480.3
		STD. ERR.	2.4	0.5	0.02	29.6
		MEDIAN	145.0	5.0	0.25	535.5
		Q1	139.0	3.6	0.17	414.0
		Q3	154.0	6.4	0.28	589.0
		N	29	30	10	30

TABLE 5 (CONTINUED)

1986 CENTRAL BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY	DEPTH	STATISTICS	CORRECTED CHLOROPHYLL A (UG/L)	PHEOPHYTIN (UG/L)	TURBIDITY (NTU)	SECCHI (M)
SURVEY 4 JUNE 4 - JUNE 8						
	EPI	MEAN	1.87	1.46	0.73	5.10
		STD. ERR.	0.15	0.18	0.06	0.47
		MEDIAN	2.04	1.21	0.60	4.95
		Q1	1.09	0.71	0.50	4.40
		Q3	2.39	2.16	0.70	5.00
		N	30	30	30	6
	HYPO	MEAN	2.06	2.53	1.22	NA
		STD. ERR.	0.23	0.39	0.08	NA
		MEDIAN	2.40	2.24	1.15	NA
		Q1	1.21	1.61	1.10	NA
		Q3	2.63	3.46	1.50	NA
		N	14	14	14	NA
SURVEY 5 JUNE 25 - JUNE 29						
	EPI	MEAN	1.34	0.32	0.64	6.23
		STD. ERR.	0.12	0.05	0.07	0.67
		MEDIAN	1.11	0.27	0.60	6.70
		Q1	0.89	0.13	0.40	4.70
		Q3	1.70	0.40	0.70	7.20
		N	30	30	30	9
	HYPO	MEAN	1.36	0.80	1.90	NA
		STD. ERR.	0.12	0.12	0.14	NA
		MEDIAN	1.52	0.62	1.55	NA
		Q1	1.09	0.53	1.45	NA
		Q3	1.71	0.86	2.35	NA
		N	16	16	16	NA

TABLE 5 (CONTINUED)

1986 CENTRAL BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY	DEPTH	STATISTICS	CORRECTED CHLOROPHYLL A (UG/L)	PHEOPHYTIN (UG/L)	TURBIDITY (NTU)	SECCHI (M)
SURVEY 6 JULY 15 - JULY 17						
	EPI	MEAN	1.64	0.86	0.55	6.08
		STD. ERR.	0.15	0.21	0.06	0.46
		MEDIAN	1.69	0.43	0.50	6.40
		Q1	0.95	0.33	0.40	4.70
		Q3	2.16	0.84	0.50	7.00
		N	30	30	30	10
	HYPO	MEAN	1.05	0.72	1.41	NA
		STD. ERR.	0.14	0.11	0.15	NA
		MEDIAN	1.08	0.60	1.25	NA
		Q1	0.67	0.43	1.00	NA
		Q3	1.44	0.93	1.90	NA
		N	18	18	18	NA
SURVEY 7 AUGUST 5 - AUGUST 8						
	EPI	MEAN	2.89	1.59	0.55	5.36
		STD. ERR.	0.30	0.24	0.03	0.22
		MEDIAN	2.83	1.05	0.55	5.20
		Q1	1.76	0.68	0.50	4.90
		Q3	3.72	1.89	0.70	5.90
		N	30	30	30	9
	HYPO	MEAN	1.14	1.42	1.26	NA
		STD. ERR.	0.12	0.17	0.11	NA
		MEDIAN	1.20	1.19	1.15	NA
		Q1	0.63	0.87	0.90	NA
		Q3	1.47	1.79	1.55	NA
		N	20	20	20	NA

TABLE 5 (CONTINUED)

1986 CENTRAL BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY	DEPTH	STATISTICS	CORRECTED CHLOROPHYLL A (UG/L)	PHEOPHYTIN (UG/L)	TURBIDITY (NTU)	SECCHI (M)
SURVEY 9 SEPTEMBER 15 - SEPTEMBER 19						
	EPI	MEAN	4.09	2.58	1.57	3.07
		STD. ERR.	0.46	0.29	0.08	0.03
		MEDIAN	3.47	2.02	1.50	3.10
		Q1	2.25	1.15	1.30	3.00
		Q3	4.82	4.16	1.80	3.10
		N	30	30	29	3
	HYPO	MEAN	1.71	1.26	2.40	NA
		STD. ERR.	0.00	0.00	0.00	NA
		MEDIAN	1.71	1.26	2.40	NA
		Q1	1.71	1.26	2.40	NA
		Q3	1.71	1.26	2.40	NA
		N	1	1	1	NA
SURVEY 11 OCTOBER 27 - NOVEMBER 1						
	EPI	MEAN	6.70	2.34	1.84	2.78
		STD. ERR.	0.59	0.35	0.10	0.05
		MEDIAN	6.35	1.45	1.90	2.75
		Q1	5.36	0.94	1.50	2.70
		Q3	9.68	2.94	2.20	2.85
		N	30	30	30	4

TABLE 5 (CONTINUED)

1986 CENTRAL BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TOTAL SUSPENDED SOLIDS (MG/L)	RESIDUAL SOLIDS (MG/L)	VOLATILE SOLIDS (MG/L)	%VOLATILE SOLIDS (%)
SURVEY 4						
JUNE 6 - JUNE 8						
	EPI	MEAN	0.98	0.30	0.69	71.34
		STD. ERR.	0.05	0.40	0.30	2.38
		MEDIAN	0.90	0.23	0.68	72.25
		Q1	0.83	0.17	0.55	62.96
		Q3	1.19	0.38	0.78	80.12
		N	30	30	30	30
	HYPO	MEAN	1.68	0.92	0.76	46.80
		STD. ERR.	0.10	0.08	0.02	2.80
		MEDIAN	1.63	0.89	0.75	44.89
		Q1	1.51	0.77	0.69	43.50
		Q3	1.85	1.11	0.80	48.68
		N	14	14	14	14
SURVEY 5						
JUNE 25 - JUNE 29						
	EPI	MEAN	0.85	0.29	0.56	67.00
		STD. ERR.	0.07	0.05	0.04	2.69
		MEDIAN	0.73	0.21	0.49	65.22
		Q1	0.62	0.14	0.39	57.08
		Q3	1.01	0.34	0.66	76.62
		N	29	29	29	29
	HYPO	MEAN	2.08	1.25	0.83	41.92
		STD. ERR.	0.15	0.14	0.03	2.29
		MEDIAN	1.91	0.99	0.79	44.74
		Q1	1.55	0.82	0.74	33.79
		Q3	2.53	1.63	0.88	48.79
		N	16	16	16	16

TABLE 5 (CONTINUED)

1986 CENTRAL BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TOTAL SUSPENDED SOLIDS (MG/L)	RESIDUAL SOLIDS (MG/L)	VOLATILE SOLIDS (MG/L)	%VOLATILE SOLIDS (%)
SURVEY 6 JULY 15 - JULY 17						
	EPI	MEAN	0.69	0.23	0.46	71.04
		STD. ERR.	0.06	0.04	0.03	2.90
		MEDIAN	0.60	0.13	0.43	71.06
		Q1	0.42	0.10	0.34	64.43
		Q3	0.92	0.31	0.60	80.80
		N	26	26	26	26
	HYPO	MEAN	1.43	0.87	0.57	42.87
		STD. ERR.	0.14	0.11	0.04	3.23
		MEDIAN	1.37	0.78	0.54	38.74
		Q1	0.97	0.57	0.40	32.38
		Q3	1.81	1.26	0.70	50.16
		N	18	18	18	18
SURVEY 7 AUGUST 5 - AUGUST 8						
	EPI	MEAN	0.88	0.14	0.74	83.53
		STD. ERR.	0.03	0.03	0.04	3.15
		MEDIAN	0.82	0.11	0.75	86.83
		Q1	0.75	0.05	0.58	76.79
		Q3	1.02	0.18	0.95	94.41
		N	27	27	27	27
	HYPO	MEAN	1.53	0.81	0.72	49.77
		STD. ERR.	0.14	0.10	0.07	4.17
		MEDIAN	1.53	0.80	0.65	51.53
		Q1	1.06	0.43	0.57	36.51
		Q3	1.96	1.15	0.85	60.13
		N	20	20	20	20

TABLE 5 (CONTINUED)

1986 CENTRAL BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TOTAL SUSPENDED SOLIDS (MG/L)	RESIDUAL SOLIDS (MG/L)	VOLATILE SOLIDS (MG/L)	%VOLATILE SOLIDS (%)
SURVEY 9 SEPTEMBER 15 - SEPTEMBER 19						
	EPI	MEAN	2.27	1.14	1.13	51.57
		STD. ERR.	0.12	0.10	0.06	2.05
		MEDIAN	2.02	1.01	1.06	52.47
		Q1	1.86	0.77	0.94	45.91
		Q3	2.35	1.34	1.25	57.89
		N	29	29	29	29
	HYPO	MEAN	2.56	1.63	0.93	36.33
		STD. ERR.	0.00	0.00	0.00	0.00
		MEDIAN	2.56	1.63	0.93	36.33
		Q1	2.56	1.63	0.93	36.33
		Q3	2.56	1.63	0.93	36.33
		N	1	1	1	1
SURVEY 11 OCTOBER 27 - NOVEMBER 1						
	EPI	MEAN	2.67	1.62	1.05	39.97
		STD. ERR.	0.15	0.11	0.06	1.20
		MEDIAN	2.67	1.52	1.15	40.19
		Q1	1.91	1.14	0.73	35.15
		Q3	3.50	2.32	1.28	44.93
		N	30	30	30	30

TABLE 5 (CONTINUED)

1986 CENTRAL BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	PH (SU)	ALKALINITY PHENOLPHTHALEIN (MG/L)	ALKALINITY TOTAL (MG/L)
SURVEY 4 JUNE 6 - JUNE 8					
	EPI	MEAN	8.28	3.38	96.87
		STD. ERR.	0.02	0.39	0.31
		MEDIAN	8.28	2.85	97.40
		Q1	8.22	1.90	95.60
		Q3	8.36	5.30	98.20
		N	30	30	30
	HYPO	MEAN	7.69	0.19	99.24
		STD. ERR.	0.04	0.19	0.46
		MEDIAN	7.67	0.00	99.50
		Q1	7.61	0.00	97.80
		Q3	7.72	0.00	100.10
		N	14	14	14
SURVEY 5 JUNE 25 - JUNE 29					
	EPI	MEAN	8.26	4.25	103.65
		STD. ERR.	0.01	0.29	0.42
		MEDIAN	8.26	4.20	104.05
		Q1	8.23	3.60	102.50
		Q3	8.32	5.00	105.10
		N	30	30	30
	HYPO	MEAN	7.55	0.00	108.25
		STD. ERR.	0.02	0.00	0.44
		MEDIAN	7.56	0.00	107.80
		Q1	7.49	0.00	107.25
		Q3	7.60	0.00	109.20
		N	16	16	16

TABLE 5 (CONTINUED)

1986 CENTRAL BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	PH (SU)	ALKALINITY PHENOLPHTHALEIN (MG/L)	ALKALINITY TOTAL (MG/L)
SURVEY 6 JULY 15 - JULY 17					
	EPI	MEAN	8.35	3.89	103.21
		STD. ERR.	0.02	0.32	0.38
		MEDIAN	8.39	4.00	103.20
		Q1	8.22	2.70	102.00
		Q3	8.45	5.60	103.90
		N	30	30	30
	HYPO	MEAN	7.41	0.00	107.12
		STD. ERR.	0.04	0.00	0.35
		MEDIAN	7.37	0.00	107.25
		Q1	7.35	0.00	106.60
		Q3	7.42	0.00	107.70
		N	18	18	18
SURVEY 7 AUGUST 5 - AUGUST 8					
	EPI	MEAN	8.53	6.79	102.98
		STD. ERR.	0.02	0.31	0.25
		MEDIAN	8.53	6.95	102.80
		Q1	8.48	5.70	101.80
		Q3	8.59	7.40	103.80
		N	30	30	30
	HYPO	MEAN	7.40	0.00	108.32
		STD. ERR.	0.03	0.00	0.29
		MEDIAN	7.37	0.00	108.20
		Q1	7.32	0.00	107.25
		Q3	7.49	0.00	109.25
		N	20	20	20

TABLE 5 (CONTINUED)

1986 CENTRAL BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	PH (SU)	ALKALINITY PHENOLPHTHALEIN (MG/L)	ALKALINITY TOTAL (MG/L)
SURVEY 9 SEPTEMBER 15 - SEPTEMBER 19					
	EPI	MEAN	8.21	2.37	104.93
		STD. ERR.	0.02	0.19	0.15
		MEDIAN	8.21	2.15	104.85
		Q1	8.14	1.70	104.30
		Q3	8.27	3.20	105.70
		N	30	30	30
	HYPO	MEAN	7.56	0.00	108.20
		STD. ERR.	0.00	0.00	0.00
		MEDIAN	7.56	0.00	108.20
		Q1	7.56	0.00	108.20
		Q3	7.56	0.00	108.20
		N	1	1	1
SURVEY 11 OCTOBER 27 - NOVEMBER 1					
	EPI	MEAN	8.25	2.13	99.22
		STD. ERR.	0.02	0.18	0.15
		MEDIAN	8.22	1.95	99.40
		Q1	8.19	1.30	98.50
		Q3	8.27	2.80	99.80
		N	30	30	30

TABLE 6

1986 EASTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TEMPERATURE (°C)	DISSOLVED OXYGEN (MG/L)	% DO SAT. (%)	CORRECTED CONDUCTIVITY (UMHOS)
SURVEY 5 JUNE 25 - JUNE 29						
	EPI	MEAN	15.14	10.19	98.81	270.3
		STD. ERR.	0.34	0.11	1.30	0.6
		MEDIAN	15.50	10.30	99.77	270.5
		Q1	14.65	10.10	96.04	269.0
		Q3	16.05	10.35	100.54	271.5
		N	12	12	12	12
	MESO	MEAN	9.60	11.17	97.23	273.3
		STD.ERR.	0.35	0.26	2.00	1.3
		MEDIAN	9.60	11.20	96.47	272.0
		Q1	9.00	10.70	94.21	272.0
		Q3	10.20	11.60	101.01	276.0
		N	3	3	3	3
	HYPO	MEAN	5.40	11.23	90.76	278.3
		STD. ERR.	0.21	0.31	2.25	0.6
		MEDIAN	5.30	11.60	93.65	278.0
		Q1	5.05	10.35	84.44	277.0
		Q3	5.95	12.05	96.45	280.0
		N	12	12	12	12

TABLE 6 (CONTINUED)

1986 EASTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TEMPERATURE (°C)	DISSOLVED OXYGEN (MG/L)	% DO SAT. (%)	CORRECTED CONDUCTIVITY (UMHOS)
SURVEY 9 SEPTEMBER 15 - SEPTEMBER 19						
	EPI	MEAN	18.31	8.56	88.64	270.0
		STD. ERR.	0.04	0.05	0.52	0.9
		MEDIAN	18.30	8.55	88.73	270.5
		Q1	18.25	8.45	87.22	268.0
		Q3	18.40	8.65	89.77	272.0
		N	12	12	12	12
	MESO	MEAN	11.90	6.90	62.72	272.0
		STD. ERR.	0.00	0.00	0.00	0.0
		MEDIAN	11.90	6.90	62.72	272.0
		Q1	11.90	6.90	62.72	272.0
		Q3	11.90	6.90	62.72	272.0
		N	1	1	1	1
	HYPO	MEAN	6.87	7.60	62.76	282.6
		STD. ERR.	0.50	0.38	2.80	0.9
		MEDIAN	6.80	8.00	65.58	282.5
		Q1	5.70	7.70	63.78	280.0
		Q3	7.50	8.30	68.39	286.0
		N	10	10	10	10

TABLE 6 (CONTINUED)

1986 EASTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TEMPERATURE (°C)	DISSOLVED OXYGEN (MG/L)	% DO SAT. (%)	CORRECTED CONDUCTIVITY (UMHOS)
SURVEY 11 OCTOBER 27 - NOVEMBER 1						
	EPI	MEAN	13.93	9.61	90.87	271.7
		STD. ERR.	0.07	0.06	0.64	1.0
		MEDIAN	13.95	9.60	90.64	273.0
		Q1	13.85	9.50	89.78	269.0
		Q3	14.10	9.75	92.51	274.5
		N	12	12	12	12
	MESO	MEAN	13.50	9.70	90.95	277.0
		STD. ERR.	0.00	0.00	0.00	0.0
		MEDIAN	13.50	9.70	90.95	277.0
		Q1	13.50	9.70	90.95	277.0
		Q3	13.50	9.70	90.95	277.0
		N	1	1	1	1
	HYPO	MEAN	7.38	6.48	54.27	285.3
		STD. ERR.	0.24	0.14	1.32	1.1
		MEDIAN	7.35	6.55	54.50	286.5
		Q1	7.10	6.10	51.06	282.0
		Q3	7.50	6.60	55.15	287.0
		N	6	6	6	6

TABLE 6 (CONTINUED)

1986 EASTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TOTAL PHOSPHORUS (UG/L)	TOTAL FILTERED PHOSPHORUS (UG/L)	SOLUBLE REACTIVE PHOSPHORUS (UG/L)	TOTAL CHLORIDE (MG/L)
SURVEY 5 JUNE 25 - JUNE 29						
	EPI	MEAN	12.7	3.7	0.0	14.7
		STD. ERR.	0.9	0.7	0.0	0.0
		MEDIAN	13.3	2.6	0.0	14.7
		Q1	10.0	2.4	0.0	14.6
		Q3	15.0	4.3	0.0	14.7
		N	10	10	12	12
	MESO	MEAN	11.4	3.3	0.0	15.0
		STD. ERR.	0.8	1.1	0.0	0.2
		MEDIAN	11.5	3.3	0.0	15.1
		Q1	10.0	2.2	0.0	14.7
		Q3	12.7	4.4	0.0	15.2
		N	3	2	3	3
	HYPO	MEAN	13.0	2.9	0.0	15.2
		STD. ERR.	1.0	0.4	0.0	0.1
		MEDIAN	12.4	2.5	0.0	15.0
		Q1	10.2	2.1	0.0	14.5
		Q3	14.9	2.9	0.0	15.2
		N	10	10	12	12

TABLE 6 (CONTINUED)

1986 EASTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY	DEPTH	STATISTICS	TOTAL PHOSPHORUS (UG/L)	TOTAL FILTERED PHOSPHORUS (UG/L)	SOLUBLE REACTIVE PHOSPHORUS (UG/L)	TOTAL CHLORIDE (MG/L)
SURVEY 9 SEPTEMBER 15 - SEPTEMBER 19						
	EPI	MEAN	12.2	5.0	4.0	15.2
		STD. ERR.	0.5	0.3	0.3	0.1
		MEDIAN	11.4	4.8	3.8	15.2
		Q1	11.2	4.3	3.4	15.1
		Q3	12.8	5.3	4.3	15.4
		N	12	12	12	12
	MESO	MEAN	14.5	6.6	4.0	15.2
		STD. ERR.	0.0	0.0	0.0	0.0
		MEDIAN	14.5	6.6	4.0	15.2
		Q1	14.5	6.6	4.0	15.2
		Q3	14.5	6.6	4.0	15.2
		N	1	1	1	1
	HYPO	MEAN	11.1	5.2	4.4	15.2
		STD. ERR.	0.6	0.6	0.1	0.0
		MEDIAN	10.6	4.5	4.5	15.2
		Q1	10.0	4.1	4.3	15.1
		Q3	11.9	6.4	4.6	15.3
		N	10	10	10	10

TABLE 6 (CONTINUED)

1986 EASTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TOTAL PHOSPHORUS (UG/L)	TOTAL FILTERED PHOSPHORUS (UG/L)	SOLUBLE REACTIVE PHOSPHORUS (UG/L)	TOTAL CHLORIDE (MG/L)
SURVEY 11 OCTOBER 27 - NOVEMBER 1						
	EPI	MEAN	12.4	4.7	0.1	14.9
		STD. ERR.	0.6	0.6	0.1	0.1
		MEDIAN	11.9	4.2	0.1	15.0
		Q1	11.3	3.7	0.0	14.9
		Q3	12.9	4.8	0.2	15.2
		N	12	11	12	12
	MESO	MEAN	10.4	2.6	0.0	15.2
		STD. ERR.	0.0	0.0	0.0	0.0
		MEDIAN	10.4	2.6	0.0	15.2
		Q1	10.4	2.6	0.0	15.2
		Q3	10.4	2.6	0.0	15.2
		N	1	1	1	1
	HYPO	MEAN	17.8	5.3	1.8	15.1
		STD. ERR.	0.5	0.7	0.3	0.0
		MEDIAN	17.7	5.9	1.7	15.1
		Q1	16.8	4.0	1.3	15.0
		Q3	18.4	6.2	1.9	15.1
		N	6	6	6	6

TABLE 6 (CONTINUED)

1986 EASTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	NITRATE NITRITE (UG/L)	AMMONIA NITROGEN (UG/L)	KJELDAHL NITROGEN (MG/L)	SOLUBLE SILICA (UG/L)
SURVEY 5 JUNE 25 - JUNE 29						
	EPI	MEAN	178.9	9.0	0.15	862.3
		STD. ERR.	6.5	0.8	0.03	254.0
		MEDIAN	173.0	9.0	0.18	513.0
		Q1	170.0	6.7	0.11	471.0
		Q3	197.0	11.2	0.20	648.0
		N	12	12	4	12
	MESO	MEAN	226.7	30.5	NA	471.7
		STD. ERR.	5.7	5.6	NA	5.6
		MEDIAN	222.0	34.4	NA	474.0
		Q1	220.0	19.5	NA	461.0
		Q3	238.0	37.7	NA	480.0
		N	3	3	NA	3
	HYPO	MEAN	278.5	23.3	NA	926.5
		STD. ERR.	3.0	1.9	NA	92.5
		MEDIAN	275.0	22.3	NA	836.0
		Q1	270.5	19.9	NA	786.5
		Q3	285.0	27.1	NA	914.0
		N	12	12	NA	12

TABLE 6 (CONTINUED)

1986 EASTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	NITRATE NITRITE (UG/L)	AMMONIA NITROGEN (UG/L)	KJELDAHL NITROGEN (MG/L)	SOLUBLE SILICA (UG/L)
SURVEY 9						
SEPTEMBER 15 - SEPTEMBER 19						
	EPI	MEAN	194.3	7.2	0.16	627.2
		STD. ERR.	2.9	1.0	0.01	23.6
		MEDIAN	194.5	6.5	0.20	651.5
		Q1	186.0	4.2	0.10	558.0
		Q3	198.0	9.2	0.20	690.0
		N	12	11	23	12
	MESO	MEAN	327.0	1.5	NA	966.0
		STD. ERR.	0.0	0.0	NA	0.0
		MEDIAN	327.0	1.5	NA	966.0
		Q1	327.0	1.5	NA	966.0
		Q3	327.0	1.5	NA	966.0
		N	1	1	NA	1
	HYPO	MEAN	352.1	5.0	NA	1413.7
		STD. ERR.	1.3	1.2	NA	91.2
		MEDIAN	351.0	3.3	NA	1314.5
		Q1	350.0	2.5	NA	1205.0
		Q3	352.0	6.9	NA	1590.0
		N	10	10	NA	10

TABLE 6 (CONTINUED)

1986 EASTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	NITRATE NITRITE (UG/L)	AMMONIA NITROGEN (UG/L)	KJELDAHL NITROGEN (MG/L)	SOLUBLE SILICA (UG/L)
SURVEY 11 OCTOBER 27 - NOVEMBER 1						
	EPI	MEAN	195.3	5.3	0.23	735.0
		STD. ERR.	4.0	0.7	0.03	24.5
		MEDIAN	202.0	5.1	0.23	731.5
		Q1	185.0	3.4	0.20	694.5
		Q3	204.5	7.3	0.27	792.5
		N	12	12	4	12
	MESO	MEAN	244.0	2.7	NA	1073.0
		STD. ERR.	0.0	0.0	NA	0.0
		MEDIAN	244.0	2.7	NA	1073.0
		Q1	244.0	2.7	NA	1073.0
		Q3	244.0	2.7	NA	1073.0
		N	1	1	NA	1
	HYPO	MEAN	339.0	4.8	NA	1751.0
		STD. ERR.	15.3	0.8	NA	59.1
		MEDIAN	352.0	4.9	NA	1800.0
		Q1	339.0	4.0	NA	1770.0
		Q3	361.0	6.3	NA	1805.0
		N	6	6	NA	6

TABLE 6 (CONTINUED)

1986 EASTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	CORRECTED CHLOROPHYLL A (UG/L)	PHEOPHYTIN (UG/L)	TURBIDITY (NTU)	SECCHI (M)
SURVEY 5 JUNE 25 - JUNE 29						
	EPI	MEAN	1.18	0.82	1.57	4.50
		STD. ERR.	0.10	0.18	0.32	0.00
		MEDIAN	1.16	0.59	1.20	4.50
		Q1	0.98	0.32	0.70	4.50
		Q3	1.36	1.27	2.70	4.50
		N	12	12	12	1
	MESO	MEAN	0.83	1.43	1.23	NA
		STD. ERR.	0.17	0.21	0.09	NA
		MEDIAN	0.70	1.25	1.20	NA
		Q1	0.63	1.19	1.10	NA
		Q3	1.16	1.85	1.40	NA
		N	3	3	3	NA
	HYPO	MEAN	1.24	2.36	4.18	NA
		STD. ERR.	0.28	0.44	0.49	NA
		MEDIAN	0.77	2.12	3.85	NA
		Q1	0.71	1.28	3.05	NA
		Q3	1.30	2.55	5.75	NA
		N	12	12	12	NA

TABLE 6 (CONTINUED)

1986 EASTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	CORRECTED CHLOROPHYLL A (UG/L)	PHEOPHYTIN (UG/L)	TURBIDITY (NTU)	SECCHI (M)
SURVEY 9 SEPTEMBER 15 - SEPTEMBER 19						
	EPI	MEAN	1.93	1.76	0.78	ND
		STD. ERR.	0.20	0.43	0.05	ND
		MEDIAN	2.12	0.99	0.75	ND
		Q1	1.25	0.58	0.65	ND
		Q3	2.49	3.24	0.90	ND
		N	12	12	12	ND
	MESO	MEAN	0.67	0.73	4.30	NA
		STD. ERR.	0.00	0.00	0.00	NA
		MEDIAN	0.67	0.73	4.30	NA
		Q1	0.67	0.73	4.30	NA
		Q3	0.67	0.73	4.30	NA
		N	1	1	1	NA
	HYPO	MEAN	0.42	0.66	3.13	NA
		STD. ERR.	0.06	0.06	0.20	NA
		MEDIAN	0.39	0.61	3.01	NA
		Q1	0.28	0.53	2.90	NA
		Q3	0.60	0.73	3.80	NA
		N	10	10	10	NA

TABLE 6 (CONTINUED)

1986 EASTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	CORRECTED CHLOROPHYLL A (UG/L)	PHEOPHYTIN (UG/L)	TURBIDITY (NTU)	SECCHI (M)
SURVEY 11 OCTOBER 27 - NOVEMBER 1						
	EPI	MEAN	5.05	3.36	0.97	2.70
		STD. ERR.	0.52	0.92	0.05	0.12
		MEDIAN	5.29	1.73	0.95	2.70
		Q1	3.25	0.70	0.90	2.50
		Q3	6.65	6.53	1.00	2.90
		N	12	12	12	3
	MESO	MEAN	3.34	2.75	2.00	NA
		STD. ERR.	0.00	0.00	0.00	NA
		MEDIAN	3.34	2.75	2.00	NA
		Q1	3.34	2.75	2.00	NA
		Q3	3.34	2.75	2.00	NA
		N	1	1	1	NA
	HYPO	MEAN	0.98	2.24	7.33	NA
		STD. ERR.	0.17	0.49	0.53	NA
		MEDIAN	1.01	1.91	7.65	NA
		Q1	0.72	1.36	6.00	NA
		Q3	1.35	2.59	8.30	NA
		N	6	6	6	NA

TABLE 6 (CONTINUED)

1986 EASTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TOTAL SUSPENDED SOLIDS (MG/L)	RESIDUAL SOLIDS (MG/L)	VOLATILE SOLIDS (MG/L)	%VOLATILE SOLIDS (%)
SURVEY 5 JUNE 25 - JUNE 29						
	EPI	MEAN	1.74	1.04	0.70	43.65
		STD. ERR.	0.26	0.19	0.07	2.87
		MEDIAN	1.47	0.86	0.64	39.55
		Q1	1.07	0.51	0.47	35.89
		Q3	2.61	1.66	0.89	52.99
		N	12	12	12	12
	MESO	MEAN	1.77	1.16	0.60	34.03
		STD. ERR.	0.19	0.12	0.54	0.72
		MEDIAN	1.58	1.06	0.08	34.71
		Q1	1.57	1.03	0.51	32.57
		Q3	2.15	1.40	0.75	34.80
		N	3	3	3	3
	HYPO	MEAN	4.19	3.98	0.93	20.43
		STD. ERR.	0.68	0.59	0.10	1.70
		MEDIAN	4.51	3.79	0.79	19.47
		Q1	2.94	2.29	0.65	16.09
		Q3	6.54	5.38	1.29	21.89
		N	12	12	12	12

TABLE 6 (CONTINUED)

1986 EASTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TOTAL SUSPENDED SOLIDS (MG/L)	RESIDUAL SOLIDS (MG/L)	VOLATILE SOLIDS (MG/L)	%VOLATILE SOLIDS (%)
SURVEY 9 SEPTEMBER 15 - SEPTEMBER 19						
	EPI	MEAN	1.14	0.43	0.71	62.16
		STD. ERR.	0.04	0.03	0.03	2.07
		MEDIAN	1.13	0.41	0.72	65.29
		Q1	1.02	0.38	0.67	59.92
		Q3	1.23	0.49	0.78	67.14
		N	12	12	12	12
	MESO	MEAN	3.58	2.85	0.72	20.28
		STD. ERR.	0.00	0.00	0.00	0.00
		MEDIAN	3.58	2.85	0.72	20.28
		Q1	3.58	2.85	0.72	20.28
		Q3	3.58	2.85	0.72	20.28
		N	1	1	1	1
	HYPO	MEAN	2.84	2.32	0.52	18.27
		STD. ERR.	0.21	0.17	0.04	0.74
		MEDIAN	2.83	2.33	0.50	17.64
		Q1	2.71	2.22	0.43	16.77
		Q3	3.24	2.72	0.60	20.18
		N	10	10	10	10

TABLE 6 (CONTINUED)

1986 EASTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	TOTAL SUSPENDED SOLIDS (MG/L)	RESIDUAL SOLIDS (MG/L)	VOLATILE SOLIDS (MG/L)	%VOLATILE SOLIDS (%)
SURVEY 11 OCTOBER 27 - NOVEMBER 1						
	EPI	MEAN	1.60	0.71	0.89	55.91
		STD. ERR.	0.11	0.06	0.07	2.07
		MEDIAN	1.57	0.71	0.89	56.32
		Q1	1.35	0.51	0.74	52.36
		Q3	1.76	0.92	0.99	59.58
		N	12	12	12	12
	MESO	MEAN	1.83	1.08	0.75	40.98
		STD. ERR.	0.00	0.00	0.00	0.00
		MEDIAN	1.83	1.08	0.75	40.98
		Q1	1.83	1.08	0.75	40.98
		Q3	1.83	1.08	0.75	40.98
		N	1	1	1	1
	HYPO	MEAN	6.39	5.48	0.92	14.35
		STD. ERR.	0.45	0.39	0.06	0.03
		MEDIAN	6.80	5.86	0.94	14.30
		Q1	5.18	4.39	0.79	14.15
		Q3	7.09	6.03	1.06	14.95
		N	6	6	6	6

TABLE 6 (CONTINUED)

1986 EASTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	PH (SU)	ALKALINITY PHENOLPHTHALEIN (MG/L)	ALKALINITY TOTAL (MG/L)
SURVEY 5 JUNE 25 - JUNE 29					
	EPI	MEAN	8.29	4.79	107.73
		STD. ERR.	0.02	0.66	0.50
		MEDIAN	8.30	4.35	108.10
		Q1	8.22	2.95	106.45
		Q3	8.26	6.35	108.60
		N	12	12	12
	MESO	MEAN	8.04	1.80	108.40
		STD. ERR.	0.04	1.14	0.70
		MEDIAN	8.06	1.50	108.20
		Q1	7.96	0.00	107.30
		Q3	8.09	3.90	109.70
		N	3	3	3
	HYPO	MEAN	7.85	0.0	107.87
		STD. ERR.	0.02	0.0	0.36
		MEDIAN	7.86	0.0	107.75
		Q1	7.83	0.0	107.00
		Q3	7.87	0.0	108.35
		N	12	12	12

TABLE 6 (CONTINUED)

1986 EASTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	PH (SU)	ALKALINITY PHENOLPHTHALEIN (MG/L)	ALKALINITY TOTAL (MG/L)
SURVEY 9 SEPTEMBER 15 - SEPTEMBER 19					
	EPI	MEAN	8.26	3.54	105.99
		STD. ERR.	0.02	0.33	0.14
		MEDIAN	8.24	3.55	106.05
		Q1	8.22	2.65	105.50
		Q3	8.27	4.05	106.40
		N	12	12	12
	MESO	MEAN	7.76	0.00	112.20
		STD. ERR.	0.00	0.00	0.00
		MEDIAN	7.76	0.00	112.20
		Q1	7.76	0.00	112.20
		Q3	7.76	0.00	112.20
		N	1	1	1
	HYPO	MEAN	7.60	0.00	110.80
		STD. ERR.	0.01	0.00	0.50
		MEDIAN	7.60	0.00	110.55
		Q1	7.57	0.00	109.60
		Q3	7.63	0.00	111.30
		N	10	10	10

TABLE 6 (CONTINUED)

1986 EASTERN BASIN MEAN/MEDIAN WATER QUALITY MEASUREMENTS

SURVEY DATE	DEPTH	STATISTICS	PH (SU)	ALKALINITY PHENOLPHTHALEIN (MG/L)	ALKALINITY TOTAL (MG/L)
SURVEY 11 OCTOBER 27 - NOVEMBER 1					
	EPI	MEAN	8.27	1.81	101.79
		STD. ERR.	0.01	0.26	0.15
		MEDIAN	8.27	1.85	101.85
		Q1	8.24	1.10	101.40
		Q3	8.30	2.55	102.10
		N	12	12	12
	MESO	MEAN	8.01	0.00	102.50
		STD. ERR.	0.00	0.00	0.00
		MEDIAN	8.01	0.00	102.50
		Q1	8.01	0.00	102.50
		Q3	8.01	0.00	102.50
		N	1	1	1
	HYPO	MEAN	7.65	0.00	106.97
		STD. ERR.	0.03	0.00	0.20
		MEDIAN	7.66	0.00	107.05
		Q1	7.58	0.00	106.90
		Q3	7.67	0.00	107.10
		N	6	6	6

TABLE 7

LAKE ERIE WESTERN BASIN REPRESENTATIVE AREA
LIMNION, OXYGEN AND TEMPERATURE DATA, 1986*

DATE	SURVEY	STRAT	LIMNION	VOLUME (Km3)	HYPO AREA (km2)	THICKNESS (m)	OXYGEN (mg/l)	TEMP (°C)
4/10	1	UNSTRAT	TOTAL	12.0	0.0	9.8	12.6	6.2
5/5	2	UNSTRAT	TOTAL	12.1	0.0	9.8	11.5	10.6
5/24	3	UNSTRAT	TOTAL	12.1	0.0	9.8	10.3	14.7
6/6	4	UNSTRAT	TOTAL	12.1	0.0	9.8	9.7	16.9
6/29	5	UNSTRAT	TOTAL	12.1	0.0	9.8	7.9	21.7
7/15	6	UNSTRAT	TOTAL	12.1	0.0	9.8	8.1	22.6
8/5	7	UNSTRAT	TOTAL	12.0	0.0	9.8	8.0	24.2
8/25	8	UNSTRAT	TOTAL	12.0	0.0	9.8	8.0	23.1
9/15	9	UNSTRAT	TOTAL	11.9	0.0	9.7	8.6	19.2
10/13	10	UNSTRAT	TOTAL	12.0	0.0	9.8	9.2	15.4
10/27	11	UNSTRAT	TOTAL	12.0	0.0	9.8	10.2	12.4
11/17	12	UNSTRAT	TOTAL	12.0	0.0	9.8	11.5	6.0

* THIS DATA WAS DERIVED FROM THE SURVEY 8 VOLUME WEIGHTING PROGRAM

TABLE 8

LAKE ERIE CENTRAL BASIN REPRESENTATIVE AREA
LIMNION, OXYGEN AND TEMPERATURE DATA, 1986*

DATE	SURVEY	STRAT	LIMNION	VOLUME (Km3)	HYPO AREA (km2)	THICKNESS (m)	OXYGEN (mg/l)	TEMP (°C)
6/6-6/8	4	STRAT	EPI	89.3		18.6	10.8	14.6
			MESO	6.5		1.4	10.1	10.7
			HYPO	17.6	4631.6	3.8	9.7	7.8
			TOTAL	113.4				
6/25-6/29	5	STRAT	EPI	85.4		17.8	9.4	18.0
			MESO	8.0		1.7	8.0	13.4
			HYPO	20.1	4785.7	4.2	6.6	9.3
			TOTAL	113.5				
7/15-7/17	6	STRAT	EPI	82.9		17.3	8.8	20.8
			MESO	10.3		2.1	6.1	14.8
			HYPO	20.2	4809.5	4.2	3.7	10.8
			TOTAL	113.4				
8/5-8/8	7	STRAT	EPI	76.9		16.0	8.4	23.8
			MESO	13.3		2.8	5.0	18.0
			HYPO	22.7	4729.2	4.8	2.0	12.7
			TOTAL	112.9				
9/15-9/19	9	STRAT	EPI	112.3		23.4	8.2	19.3
			MESO	0.1		0.3	6.7	17.7
			HYPO	0.1	500.0	0.2	6.0	17.4
			TOTAL	112.5				
10/27-11/1	11	UNSTRAT	TOTAL	112.9		23.5	9.2	15.0

* THIS DATA WAS DERIVED FROM THE SURVEY 8 VOLUME WEIGHTING PROGRAM

TABLE 9

LAKE ERIE EASTERN BASIN REPRESENTATIVE AREA
LIMNION, OXYGEN AND TEMPERATURE DATA, 1986*

DATE	SURVEY	STRAT	LIMNION	VOLUME (Km3)	HYPO AREA (km2)	THICKNESS (m)	OXYGEN (mg/l)	TEMP (°C)
6/25-6/29	5	STRAT	EPI	29.1		18.5	10.2	15.3
			MESO	19.6		12.4	11.0	9.6
			HYPO	23.6	1522.6	15.5	11.7	5.0
			TOTAL	72.3				
9/15-9/19	9	STRAT	EPI	39.0		24.8	8.6	18.4
			MESO	15.2		9.7	7.4	13.0
			HYPO	17.6	1455.6	12.1	8.1	6.8
			TOTAL	71.8				
10/27-11/1	11	STRAT	EPI	58.1		36.9	9.6	14.0
			MESO	5.7		4.2	8.5	11.6
			HYPO	8.4	1076.9	7.8	6.6	7.6
			TOTAL	72.2				

* THIS DATA WAS DERIVED FROM THE SURVEY 8 VOLUME WEIGHTING PROGRAM

TABLE 10

LAKE ERIE WESTERN BASIN REPRESENTATIVE AREA
VOLUME WEIGHTED TOTAL PHOSPHORUS AND CORRECTED CHLOROPHYLL A DATA, 1986*

DATE	SURVEY	STRAT	LIMNION	VOLUME (km3)	TOTAL PHOSPHORUS metric tons	TOTAL PHOSPHORUS conc. (ug/l)	CORR CHL A metric tons	CORR CHL A conc. (ug/l)
4/10	1	UNSTRAT	TOTAL	12.0	191.3	16.0	69.1	5.8
5/5	2	UNSTRAT	TOTAL	12.1	126.0	10.4	60.6	5.0
5/24	3	UNSTRAT	TOTAL	12.1	96.7	8.0	91.4	7.5
6/6	4	UNSTRAT	TOTAL	12.1	196.2	16.3	53.4	4.4
6/29	5	UNSTRAT	TOTAL	12.1	172.2	14.2	52.1	4.3
7/15	6	UNSTRAT	TOTAL	12.1	215.3	17.7	69.5	5.7
8/5	7	UNSTRAT	TOTAL	12.0	284.1	23.6	83.5	6.9
8/25	8	UNSTRAT	TOTAL	12.0	319.0	26.6	101.8	8.5
9/15	9	UNSTRAT	TOTAL	11.9	372.3	31.3	133.1	11.2
10/13	10	UNSTRAT	TOTAL	12.0	311.6	25.9	61.9	5.2
10/27	11	UNSTRAT	TOTAL	12.0	319.7	26.6	87.9	7.3
11/17	12	UNSTRAT	TOTAL	12.0	266.4	22.2	84.0	7.0

* THIS DATA WAS DERIVED FROM THE SURVEY 8 VOLUME WEIGHTING PROGRAM

TABLE 11

LAKE ERIE CENTRAL BASIN REPRESENTATIVE AREA
VOLUME WEIGHTED TOTAL PHOSPHORUS AND CORRECTED CHLOROPHYLL A DATA, 1986*

DATE	SURVEY	STRAT	LIMNION	VOLUME (km3)	TOTAL PHOSPHORUS metric tons	TOTAL PHOSPHORUS conc. (ug/l)	CORR CHL A metric tons	CORR CHL A conc. (ug/l)
6/6-6/8	4	STRAT	EPI	89.3	1121.8	12.6	163.9	1.8
			MESO	6.5	97.6	14.9	11.7	1.8
			HYPO	17.6	306.4	17.4	32.5	1.8
			TOTAL	113.4	1525.8	13.5	208.1	1.8
6/25-6/29	5	STRAT	EPI	85.4	867.2	10.2	112.3	1.3
			MESO	8.0	109.4	13.7	9.7	1.2
			HYPO	20.1	319.4	15.9	26.8	1.3
			TOTAL	113.5	1296.0	11.4	148.8	1.3
7/15-7/17	6	STRAT	EPI	82.9	820.5	9.9	137.2	1.6
			MESO	10.3	102.4	9.9	10.1	1.0
			HYPO	20.2	243.4	12.0	24.7	1.2
			TOTAL	113.4	1166.3	10.3	172.0	1.5
8/5-8/8	7	STRAT	EPI	76.9	1034.1	13.4	230.7	3.0
			MESO	13.3	183.7	13.8	22.5	1.7
			HYPO	22.7	307.6	13.5	24.7	1.1
			TOTAL	112.9	1525.4	13.5	277.9	2.5
9/15-9/19	9	STRAT	EPI	112.3	2004.1	17.8	511.2	4.6
			MESO	0.1	0.9	19.6	0.1	2.0
			HYPO	0.1	2.2	20.2	0.2	1.9
			TOTAL	112.5	2007.2	17.8	511.5	4.6
10/27-11/1	11	UNSTRAT	TOTAL	112.9	1805.8	16.0	690.2	6.1

* THIS DATA WAS DERIVED FROM THE SURVEY 8 VOLUME WEIGHTING PROGRAM

TABLE 12

LAKE ERIE EASTERN BASIN REPRESENTATIVE AREA
VOLUME WEIGHTED TOTAL PHOSPHORUS AND CORRECTED CHLOROPHYLL A DATA, 1986*

DATE	SURVEY	STRAT	LIMNION	VOLUME (km3)	TOTAL PHOSPHORUS metric tons	TOTAL PHOSPHORUS conc. (ug/l)	CORR. CHL.A metric tons	CORR. CHL.A conc. (ug/l)
6/25-6/29	5	STRAT	EPI	29.1	379.7	13.0	32.0	1.1
			MESO	19.6	232.8	11.9	15.5	0.8
			HYPO	23.6	267.8	11.4	20.7	0.9
			TOTAL	72.3	880.3	12.2	68.2	0.9
9/15-9/19	9	STRAT	EPI	39.0	493.7	12.6	71.7	1.8
			MESO	15.2	200.2	13.1	18.7	1.2
			HYPO	17.6	197.4	11.2	8.3	0.5
			TOTAL	71.8	891.3	12.4	98.7	1.4
10/27-11/1	11	STRAT	EPI	58.1	751.7	12.9	249.2	4.3
			MESO	5.7	70.9	12.5	18.4	3.2
			HYPO	8.4	148.4	17.7	9.5	1.1
			TOTAL	72.2	971.0	13.4	277.1	3.8

* THIS DATA WAS DERIVED FROM THE SURVEY 8 VOLUME WEIGHTING PROGRAM

TABLE 13
LAKE ERIE BASIN COMPARISON
1986 ANNUAL MEANS

	EPILIMNION		HYPOLIMNION
	WB and CB	CB and EB	CB and EB
TEMPERATURE	<	>	>
DISSOLVED OXYGEN	>	=	<
DISSOLVED OXYGEN % SATURATION	=	>	<
TOTAL PHOSPHORUS	>	=	=
TOTAL FILTERED PHOSPHORUS	=	>	>
SOLUBLE REACTIVE PHOSPHORUS	=	=	<
SOLUBLE ORGANIC PHOSPHORUS	=	>	>
PARTICULATE PHOSPHORUS	>	=	=
% PARTICULATE PHOSPHORUS	>	=	=
NITRATE + NITRITE	>	>	<
AMMONIA	>	>	>
KJELDAHL NITROGEN	=	=	NT
SOLUBLE REACTIVE SILICA	>	<	>
SECCHI DISK	<	NT	NT
TURBIDITY	>	=	<
CHLOROPHYLL A	>	=	>
PHEOPHYTIN	>	=	=
TOTAL SUSPENDED SOLIDS	>	=	<
RESIDUAL SOLIDS	>	=	<
VOLATILE SOLIDS	>	=	<
% VOLATILE SOLIDS	<	>	>
CONDUCTIVITY	<	<	<
CHLORIDE	<	<	=
ALKALINITY TOTAL	<	<	<
ALKALINITY PHENOLPHTHALEIN	<	=	NT
pH	<	<	<

COMPARISON BASED ON A TWO-TAILED T-TEST WITH $\alpha = 0.05$

Result: > - SIGNIFICANTLY GREATER
< - SIGNIFICANTLY LESS
= - NOT SIGNIFICANTLY DIFFERENT
NT - NOT TESTED

TABLE 14
LAKE ERIE EPILIMNION - BASIN COMPARISON
WESTERN AND CENTRAL BASIN

	SURVEY											
	4		5		6		7		9		11	
	WB	CB	WB	CB	WB	CB	WB	CB	WB	CB	WB	CB
TEMPERATURE (°C)												
X	17.0	14.5	21.9	17.8	22.8	20.7	24.3	23.6	19.3	19.2	12.5	15.0
t	6.77		10.88		4.73		3.46		0.35		-18.79	
Result	>		>		>		>		=		<	
TOTAL PHOSPHORUS (ug/l)												
X	16.6	12.4	15.0	9.4	18.1	9.8	24.8	13.5	33.5	17.4	28.1	15.7
t	1.93		2.75		9.58		5.36		4.09		4.41	
Result	=		>		>		>		>		>	
TOTAL FILTERED PHOSPHORUS (ug/l)												
X	2.1	5.1	3.1	2.8	7.5	4.1	6.7	6.1	9.2	7.1	9.6	6.6
t	-2.97		0.33		4.87		0.68		1.10		1.53	
Result	<		=		>		=		=		=	
NITRATE + NITRITE (ug/l)												
X	282	285	408	261	362	240	277	223	132	163	522	142
t	-0.09		2.99		4.85		4.50		-1.37		10.56	
Result	=		>		>		>		<		>	
SOLUBLE REACTIVE SILICA (ug/l)												
X	499	479	1123	482	837	495	1469	332	1173	964	1676	480
t	0.06		4.82		2.55		8.08		1.43		19.65	
Result	=		>		>		>		=		>	

COMPARISON BASED ON A TWO-TAILED T-TEST WITH $\alpha = 0.05$

X = MEAN
t = T STATISTIC
Result: > - SIGNIFICANTLY GREATER
< - SIGNIFICANTLY LESS
= - NOT SIGNIFICANTLY DIFFERENT

TABLE 14 (CONTINUED)
LAKE ERIE EPILIMNION - BASIN COMPARISON
WESTERN AND CENTRAL BASIN

	SURVEY											
	4		5		6		7		9		11	
	WB	CB	WB	CB	WB	CB	WB	CB	WB	CB	WB	CB
TURBIDITY (NTU)												
X	8.1	0.7	6.3	0.6	4.1	0.5	4.5	0.5	6.8	1.6	6.8	1.8
t	4.99		5.23		8.07		6.39		12.77		9.04	
Result	>		>		>		>		>		>	
CHLOROPHYLL A (ug/l)												
X	4.5	1.9	4.8	1.3	6.4	1.6	7.9	2.9	12.6	4.1	7.3	6.7
t	3.61		3.19		4.64		4.45		4.22		0.49	
Result	>		>		>		>		>		=	
TOTAL SUSPENDED SOLIDS (mg/l)												
X	7.9	1.0	6.6	0.8	4.8	0.7	5.5	0.9	9.4	2.3	7.3	2.7
t	5.02		5.55		9.30		6.24		12.67		15.14	
Result	>		>		>		>		>		>	
CONDUCTIVITY (umhos)												
X	223	269	246	267	235	263	230	259	227	265	258	267
t	-30.69		-4.71		-15.26		-8.38		-11.72		-2.12	
Result	<		<		<		<		<		=	
CHLORIDE (mg/l)												
X	12.2	15.2	12.7	15.0	10.7	14.1	9.9	14.4	10.3	14.6	13.3	14.6
t	-7.33		-3.14		-7.25		-11.12		-8.87		-3.04	
Result	<		<		<		<		<		<	
ALKALINITY TOTAL (mg/l)												
X	89.2	96.8	98.7	103.7	97.5	103.2	97.1	103.0	94.6	104.9	96.2	99.2
t	-13.95		-3.41		-6.90		-11.01		-12.99		-2.93	
Result	<		<		<		<		<		<	

COMPARISON BASED ON A TWO-TAILED T-TEST WITH α = 0.05

X = MEAN
t = T STATISTIC
Result: > - SIGNIFICANTLY GREATER
< - SIGNIFICANTLY LESS
= - NOT SIGNIFICANTLY DIFFERENT

TABLE 15
LAKE ERIE EPILIMNION - BASIN COMPARISON
CENTRAL AND EASTERN BASIN

	SURVEY 5		9		11	
	CB	EB	CB	EB	CB	EB
TEMPERATURE (°C)						
X	17.8	15.1	19.2	18.3	15.0	13.9
t	7.08		10.93		8.29	
Result	>		>		>	
TOTAL PHOSPHORUS (ug/l)						
X	9.4	12.7	17.4	12.2	15.7	12.4
t	-2.60		5.34		5.24	
Result	<		>		>	
TOTAL FILTERED PHOSPHORUS (ug/l)						
X	2.8	3.7	7.1	5.0	6.6	4.7
t	-1.33		4.56		3.04	
Result	=		>		>	
NITRATE + NITRITE (ug/l)						
X	261	179	164	194	142	195
t	3.52		-3.80		-11.75	
Result	>		<		<	
SOLUBLE REACTIVE SILICA (ug/l)						
X	482	862	964	627	480	735
t	-1.43		6.84		-6.63	
Result	=		>		<	

COMPARISON BASED ON A TWO-TAILED T-TEST WITH $\alpha = 0.05$

X = MEAN
t = T STATISTIC
Result: > - SIGNIFICANTLY GREATER
< - SIGNIFICANTLY LESS
= - NOT SIGNIFICANTLY DIFFERENT

TABLE 15 (CONTINUED)
LAKE ERIE EPILIMNION - BASIN COMPARISON
CENTRAL AND EASTERN BASIN

	SURVEY					
	5		9		11	
	CB	EB	CB	EB	CB	EB
TURBIDITY (NTU)						
X	0.6	1.6	1.6	0.8	1.8	1 0
t	-2.83		8.32		7.54	
Result	<		>		>	
CHLOROPHYLL A (ug/1)						
X	1.3	1.2	4.1	1.9	6.7	5.0
t	1.03		4.29		2.11	
Result	=		>		>	
TOTAL SUSPENDED SOLIDS (mg/1)						
X	0.8	1.7	2.3	1.1	2 7	1 6
t	-3.37		8.70		5.68	
Result	<		>		>	
CONDUCTIVITY (umhos)						
X	267	270	265	270	267	272
t	-3.77		-3.07		-3.89	
Result	<		<		<	
CHLORIDE (mg/1)						
X	15.0	14.7	14.6	15.2	14.6	14.9
t	2.88		-5.59		-2.90	
Result	>		<		<	
ALKALINITY TOTAL (mg/1)						
X	103.7	107.7	104.9	106.0	99.2	101 8
t	-5.35		-4.20		-9.76	
Result	<		<		<	

COMPARISON BASED ON A TWO-TAILED T-TEST WITH $\alpha = 0.05$

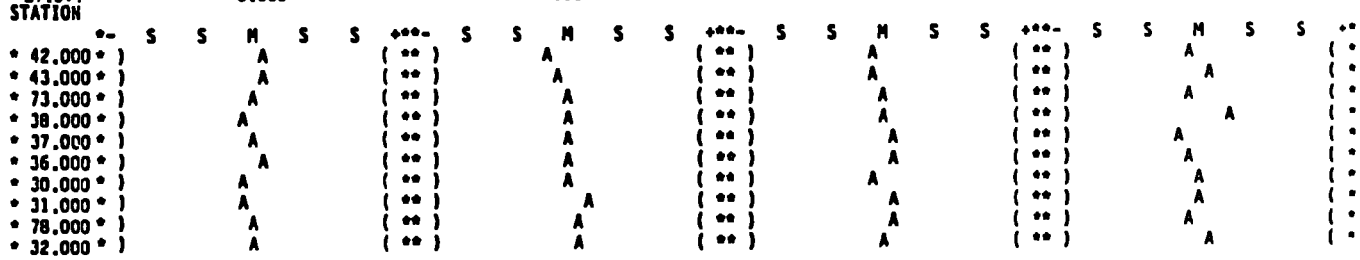
X = MEAN
t = T STATISTIC
Result: > - SIGNIFICANTLY GREATER
< - SIGNIFICANTLY LESS
= - NOT SIGNIFICANTLY DIFFERENT

TABLE 16
Central Basin Representative Area Means and Standard Deviations Compared to the Means of the Individual Stations Comprising the Area

STATION	VARIABLE TEMP FREQ.	MEAN	STD.DEV.	VARIABLE ALKTOT FREQ.	MEAN	STD.DEV.	VARIABLE CONDCORR FREQ.	MEAN	STD.DEV.	VARIABLE TURBID FREQ.	MEAN	STD.DEV.
* 42.000	18.	19.1667	3.4305	18.	100.250	3.7607	18.	263.833	6.1285	17.	0.894118	0.4968
* 43.000	18.	19.2500	2.9636	18.	101.317	3.5321	18.	263.444	4.5661	18.	1.16667	0.7639
* 73.000	18.	18.6556	3.4998	18.	102.000	3.0700	18.	264.833	5.5439	18.	0.855556	0.6327
* 38.000	18.	18.0944	3.8555	18.	101.839	3.0542	18.	264.333	6.4989	18.	1.33333	0.6704
* 37.000	18.	18.4389	3.5884	18.	101.561	2.5755	18.	265.833	4.3012	18.	0.705556	0.3811
* 36.000	18.	18.8389	2.8887	18.	101.489	3.5528	18.	265.944	5.5463	18.	0.883333	0.5458
* 30.000	18.	17.8833	3.5992	18.	102.039	2.8078	18.	263.000	7.2841	18.	1.02778	0.6614
* 31.000	18.	17.9222	3.5511	18.	102.939	2.9730	18.	266.056	10.1603	18.	0.977778	0.6339
* 78.000	18.	18.2667	3.2183	18.	102.272	3.7925	18.	266.167	4.9616	18.	0.822222	0.5264
* 32.000	18.	18.3167	3.1705	18.	102.428	3.3383	18.	264.167	8.1979	18.	1.08889	0.8751

	VARIABLE TEMP	VARIABLE ALKTOT	VARIABLE CONDCORR	VARIABLE TURBID
MEAN	18.4833	101.8133	264.7611	0.9760
ST.DV.	3.335	3.261	6.478	0.642

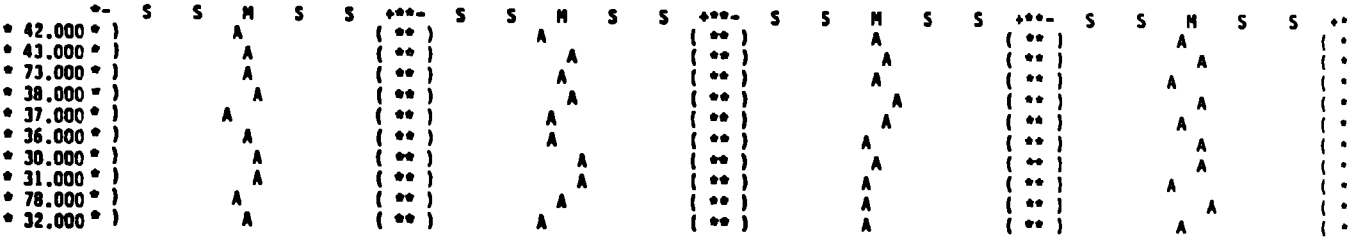
STATION



STATION	VARIABLE TSS FREQ.	MEAN	STD.DEV.	VARIABLE CHLACORR FREQ.	MEAN	STD.DEV.	VARIABLE CORRTP FREQ.	MEAN	STD.DEV.	VARIABLE CORRTFP FREQ.	MEAN	STD.DEV.
* 42.000	17.	1.15412	0.6342	18.	2.29222	1.9710	18.	13.1667	4.7027	17.	5.14706	2.4731
* 43.000	17.	1.47294	0.9613	18.	3.53889	2.5574	17.	14.0529	3.8507	18.	5.94444	2.9758
* 73.000	16.	1.46000	1.1022	18.	3.23500	3.4681	18.	12.9333	5.1592	18.	4.62778	2.5167
* 38.000	18.	1.54556	0.8185	18.	3.43556	3.0650	16.	14.5375	3.8635	17.	5.91765	1.8905
* 37.000	17.	1.08765	0.5446	18.	2.39167	1.5620	17.	14.0118	6.8875	16.	5.13125	1.8351
* 36.000	17.	1.37235	0.8493	18.	2.35833	1.9423	17.	12.5235	5.8009	16.	5.70625	3.2157
* 30.000	17.	1.63176	1.1840	18.	3.90722	3.5982	18.	13.4389	3.3083	16.	5.93125	1.5010
* 31.000	17.	1.62000	1.1423	18.	4.36722	3.2441	17.	12.3471	3.4224	16.	4.65000	1.9208
* 78.000	17.	1.30941	0.7411	18.	3.06167	1.6404	18.	12.1833	2.7279	14.	6.13571	2.3760
* 32.000	18.	1.47222	1.1488	18.	2.29333	1.8647	17.	11.9059	4.1014	17.	4.82941	2.0967

	VARIABLE TSS	VARIABLE CHLACORR	VARIABLE CORRTP	VARIABLE CORRTFP
MEAN	1.4135	3.0881	13.0977	5.3885
ST.DV.	0.929	2.632	4.496	2.346

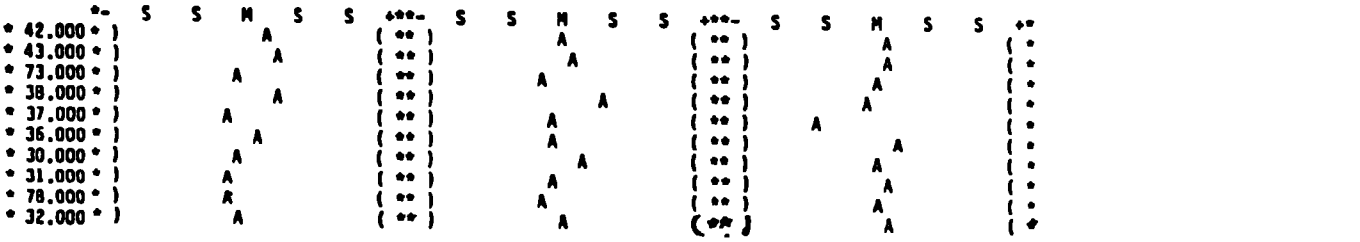
STATION



STATION	VARIABLE NITNIT FREQ.	MEAN	STD.DEV.	VARIABLE SRS FREQ.	MEAN	STD.DEV.	VARIABLE CL FREQ.	MEAN	STD.DEV.
* 42.000	18.	255.000	109.1524	18.	527.500	353.0733	18.	14.7833	0.4423
* 43.000	17.	282.706	141.4164	18.	623.889	470.8238	18.	14.9056	0.7067
* 73.000	18.	200.167	81.9377	18.	397.778	186.7350	18.	14.6722	0.6341
* 38.000	18.	270.167	102.3697	18.	857.111	590.9570	18.	14.5500	0.7221
* 37.000	18.	184.000	54.0120	18.	414.111	308.6258	18.	13.4722	2.4275
* 36.000	18.	240.778	118.8388	18.	456.333	249.5641	18.	15.1111	0.9573
* 30.000	18.	205.611	55.3366	18.	724.111	765.8403	18.	14.7556	0.5032
* 31.000	18.	179.056	61.6532	17.	472.588	251.9901	18.	14.8056	0.2209
* 78.000	18.	188.500	68.9896	18.	410.000	233.6908	17.	14.6176	0.4305
* 32.000	18.	196.722	45.8512	18.	503.111	279.7894	18.	14.9167	0.3930

	VARIABLE NITNIT	VARIABLE SRS	VARIABLE CL
MEAN	219.9218	539.0223	14.6592
ST.DV.	93.967	424.477	1.023

STATION



HYDRA86 ANOVA CENTRAL BASIN HYPO ALL SURVEYS

DESCRIPTIVE STATISTICS

STATION	VARIABLE TEMP FREQ.	MEAN	STD.DEV.	VARIABLE DO FREQ.	MEAN	STD.DEV.	VARIABLE CONDCORR FREQ.	MEAN	STD.DEV.	VARIABLE TURBID FREQ.	MEAN	STD.DEV.
* 42.000	7.	9.80000	1.4799	7.	5.91429	2.6252	7.	275.714	3.0394	7.	1.12857	0.3684
* 43.000	8.	9.27500	1.1696	8.	5.38750	3.2673	8.	274.750	2.9641	8.	1.62500	0.8172
* 73.000	7.	9.78571	1.4206	7.	5.30000	2.8449	7.	276.000	2.5166	7.	1.10000	0.3162
* 38.000	9.	10.9556	2.9172	9.	5.44444	3.3512	9.	277.111	4.4845	9.	1.94444	0.5637
* 37.000	8.	10.0000	2.3256	8.	5.22500	3.1075	8.	275.750	1.8323	8.	1.33750	0.7269
* 36.000	8.	10.9375	2.9159	8.	5.32500	3.2119	8.	275.625	3.7009	8.	1.76250	0.4596
* 30.000	6.	11.1167	1.9671	6.	4.41667	2.7140	6.	275.167	2.3166	6.	1.68333	0.3656
* 31.000	5.	12.0600	2.9913	5.	4.48000	3.0898	5.	272.600	1.3416	5.	1.14000	0.3209
* 78.000	5.	11.6800	2.6243	5.	4.40000	3.8827	5.	270.800	5.5857	5.	1.00000	0.2550
* 32.000	6.	11.6000	1.6769	6.	4.86667	2.6319	6.	276.667	3.6697	6.	1.46667	0.4179

	VARIABLE TEMP	VARIABLE DO	VARIABLE CONDCORR	VARIABLE TURBID
MEAN	10.6145	5.1464	275.2609	1.4565
ST.DV	2.266	2.917	3.534	0.578

STATION

	*-	S	S	M	S	S	+**-	S	S	M	S	S	+**-	S	S	M	S	S	+**-	S	S	M	S	S	+*
* 42.000	*)			7			(**)			7			(**)			7			(**)			7			(*
* 43.000	*)			8			(**)			8			(**)			8			(**)			8			(*
* 73.000	*)			7			(**)			7			(**)			7			(**)			7			(*
* 38.000	*)				9		(**)				9		(**)				9		(**)				9		(*
* 37.000	*)			8			(**)			8			(**)			8			(**)			8			(*
* 36.000	*)				8		(**)				8		(**)				8		(**)				8		(*
* 30.000	*)				6		(**)			6			(**)			6			(**)				6		(*
* 31.000	*)					5	(**)			5			(**)		5				(**)			5			(*
* 78.000	*)				5		(**)			5			(**)	5					(**)			5			(*
* 32.000	*)				6		(**)			6			(**)			6			(**)			6			(*

STATION	VARIABLE TSS FREQ.	MEAN	STD.DEV.	VARIABLE CORRTP FREQ.	MEAN	STD.DEV.	VARIABLE CORRTFP FREQ.	MEAN	STD.DEV.	VARIABLE SRS FREQ.	MEAN	STD.DEV.
* 42.000	7.	1.36714	0.5899	7.	13.4143	2.3255	7.	5.28571	3.7267	7.	1154.29	586.3474
* 43.000	8.	1.89625	0.9125	7.	15.4429	4.0873	7.	5.34286	2.8965	8.	1561.13	725.3353
* 73.000	7.	1.30857	0.4349	7.	14.0000	2.8971	7.	4.41429	2.0194	7.	1507.57	615.3069
* 38.000	9.	2.14444	0.4809	9.	16.9667	7.6277	9.	8.67778	4.4407	9.	1692.44	930.7275
* 37.000	8.	1.77625	0.7055	8.	12.3625	1.9508	8.	3.98750	1.6479	8.	1500.50	611.0602
* 36.000	8.	1.95125	0.3749	8.	13.6250	1.0361	7.	6.04286	1.9561	8.	1494.25	612.5256
* 30.000	6.	1.83167	0.3769	6.	14.6333	1.7096	6.	6.16667	1.4855	6.	1729.17	473.6376
* 31.000	5.	1.30200	0.3529	4.	12.2500	2.1205	5.	4.54000	0.8649	5.	1765.40	760.2436
* 78.000	5.	1.16000	0.3038	5.	12.8800	2.1822	4.	5.47500	2.6550	5.	1807.00	1130.4344
* 32.000	6.	1.54333	0.4242	6.	13.9333	3.5064	6.	4.75000	2.9818	6.	1577.17	577.7441

	VARIABLE TSS	VARIABLE CORRTP	VARIABLE CORRTFP	VARIABLE SRS
MEAN	1.6751	14.1104	5.5712	1565.3914
ST.DV.	0.604	3.754	2.956	691.131

STATION

	*-	S	S	M	S	S	+**-	S	S	M	S	S	+**-	S	S	M	S	S	+**-	S	S	M	S	S	+*
* 42.000	*)			7			(**)			7			(**)			7			(**)			7			(*
* 43.000	*)				8		(**)				7		(**)			7			(**)			8			(*
* 73.000	*)			7			(**)			7			(**)		7				(**)			7			(*
* 38.000	*)				9		(**)				9		(**)				9		(**)				9		(*
* 37.000	*)				8		(**)			8			(**)		8				(**)			8			(*
* 36.000	*)				8		(**)			8			(**)			7			(**)			8			(*
* 30.000	*)				6		(**)				6		(**)			6			(**)				6		(*
* 31.000	*)			5			(**)			4			(**)		5				(**)			5			(*
* 78.000	*)			5			(**)			5			(**)			4			(**)				5		(*
* 32.000	*)				6		(**)				6		(**)			6			(**)			6			(*

TABLE 17

Eastern Basin Representative Area Means and Standard Deviations Compared to the Means of the Individual Stations Comprising the Area

HYDRA86 ANOVA EASTERN BASIN EPI ALL SURVEYS

DESCRIPTIVE STATISTICS

STATION	VARIABLE TEMP FREQ.	MEAN	STD.DEV.	VARIABLE ALKTOT FREQ.	MEAN	STD.DEV.	VARIABLE CONDCORR FREQ.	MEAN	STD.DEV.	VARIABLE TURBID FREQ.	MEAN	STD.DEV.
* 15.000	9.	15.5667	2.0952	9.	105.589	3.0271	9.	270.333	4.2426	9.	1.17778	0.4868
* 63.000	9.	16.1333	1.8641	9.	105.067	3.0935	9.	271.222	2.7285	9.	1.63333	1.2217
* 9.0000	9.	16.0444	1.9641	9.	105.233	2.8222	9.	271.000	2.2361	9.	0.777778	0.1202
* 10.000	9.	15.4333	2.2935	9.	104.789	2.3804	9.	270.111	2.9345	9.	0.844445	0.2651

	VARIABLE TEMP	VARIABLE ALKTOT	VARIABLE CONDCORR	VARIABLE TURBID
MEAN	15.7944	105.1695	270.6667	1.1083
ST.DV.	1.994	2.736	3.024	0.730

STATION	*- S S M S S +**-	S S M S S +**-	S S M S S +**-	S S M S S +*
* 15.000	*) 9 (**)	9 (**)	9 (**)	9 (*
* 63.000	*) 9 (**)	9 (**)	9 (**)	9 (*
* 9.0000	*) 9 (**)	9 (**)	9 (**)	9 (*
* 10.000	*) 9 (**)	9 (**)	9 (**)	9 (*

STATION	VARIABLE TSS FREQ.	MEAN	STD.DEV.	VARIABLE CHLACORR FREQ.	MEAN	STD.DEV.	VARIABLE CORRTP FREQ.	MEAN	STD.DEV.	VARIABLE CORRTFP FREQ.	MEAN	STD.DEV.
* 15.000	9.	1.71556	0.4415	9.	2.24000	1.2008	8.	13.4625	1.6379	7.	5.07143	1.9576
* 63.000	9.	1.88667	0.9141	9.	2.27667	1.3799	9.	13.3222	2.1695	9.	3.82222	1 1498
* 9.0000	9.	1.20556	0.1197	9.	3.16333	2.8390	9.	10.7556	1.6272	9.	4.84444	1.7444
* 10.000	9.	1.15778	0.3392	9.	3.18556	2.3738	8.	12.1000	2.1408	8.	4.42500	2.5076

	VARIABLE TSS	VARIABLE CHLACORR	VARIABLE CORRTP	VARIABLE CORRTFP
MEAN	1.4914	2.7164	12.3882	4.5121
ST.DV.	0.607	2.028	2.142	1.849

STATION	*- S S M S S +**-	S S M S S +**-	S S M S S +**-	S S M S S +*
* 15.000	*) 9 (**)	9 (**)	8 (**)	7 (*
* 63.000	*) 9 (**)	9 (**)	9 (**)	9 (*
* 9.0000	*) 9 (**)	9 (**)	9 (**)	9 (*
* 10.000	*) 9 (**)	9 (**)	8 (**)	8 (*

STATION	VARIABLE NITNIT FREQ.	MEAN	STD.DEV.	VARIABLE SRS FREQ.	MEAN	STD.DEV.	VARIABLE CL FREQ.	MEAN	STD.DEV.
* 15.000	9.	189.444	26.2303	9.	852.444	596.4977	9.	14.8333	0.2062
* 63.000	9.	188.556	11.2151	9.	609.889	106.5838	9.	15.0333	0.2915
* 9.0000	9.	183.222	12.0185	9.	597.000	117.0085	9.	15.0333	0.2958
* 10.000	9.	196.667	17.0147	9.	906.667	810.4835	9.	14.8111	0.3296

	VARIABLE NITNIT	VARIABLE SRS	VARIABLE CL
MEAN	189.4722	741.5000	14.9278
ST.DV.	17.572	507.151	0.292

STATION	*- S S M S S +**-	S S M S S +**-	S S M S S +*
* 15.000	*) 9 (**)	9 (**)	9 (*
* 63.000	*) 9 (**)	9 (**)	9 (*
* 9.0000	*) 9 (**)	9 (**)	9 (*
* 10.000	*) 9 (**)	9 (**)	9 (*

HYDRA86 ANOVA EASTERN BASIN HYPO ALL SURVEYS

DESCRIPTIVE STATISTICS

STATION	VARIABLE TEMP FREQ.	MEAN	STD.DEV.	VARIABLE DO FREQ.	MEAN	STD.DEV.	VARIABLE CONDCORR FREQ.	MEAN	STD.DEV.	VARIABLE TURBID FREQ.	MEAN	STD.DEV.
* 15.000	9.	5.82222	1.3854	9.	9.10000	2.4388	9.	282.778	3.8333	9.	4.75556	2.7974
* 63.000	7.	6.28571	0.8971	7.	9.14286	2.1931	7.	280.429	2.9921	7.	4.38571	1.8407
* 9.0000	8.	6.82500	1.8668	8.	8.62500	2.8619	8.	281.625	3.7009	8.	3.73750	1.4362
* 10.000	4.	6.70000	0.5354	4.	8.67500	1.7173	4.	279.250	4.7170	4.	5.50000	1.2247

	VARIABLE TEMP	VARIABLE DO	VARIABLE CONDCORR	VARIABLE TURBID
MEAN	6.3500	8.9143	281.3571	4.4786
ST.DV.	1.364	2.311	3.734	2.029

STATION

	*-	S	S	M	S	S	+**-	S	S	M	S	S	+**-	S	S	M	S	S	+**-	S	S	M	S	S	+*
* 15.000	*)			9			(**)			9			(**)			9			(**)			9			(*
* 63.000	*)			7			(**)			7			(**)			7			(**)			7			(*
* 9.0000	*)			8			(**)			8			(**)			8			(**)			8			(*
* 10.000	*)			4			(**)			4			(**)			4			(**)			4			(*

STATION	VARIABLE TSS FREQ.	MEAN	STD.DEV.	VARIABLE CORRTP FREQ.	MEAN	STD.DEV.	VARIABLE CORRTFP FREQ.	MEAN	STD.DEV.	VARIABLE SRS FREQ.	MEAN	STD DEV.
* 15.000	9.	4.16444	2.3211	9.	12.8889	4.1044	9.	4.25556	1.4732	9.	1295.44	371.1314
* 63.000	7.	4.57571	2.5926	6.	13.0833	3.1160	7.	3.78571	2.4889	7	1152.86	358.6230
* 9.0000	8.	3.98375	1.6188	7.	12.6286	3.1753	8.	4.95000	2.0730	8.	1520 75	482.0657
* 10.000	4.	6.07500	1.4474	4.	16.2000	2.2015	2.	4.30000	2.9698	4.	966.500	416.2519

	VARIABLE TSS	VARIABLE CORRTP	VARIABLE CORRTFP	VARIABLE SRS
MEAN	4.4886	13.3731	4.3462	1277 1786
ST.DV.	2.118	3.446	1.986	429.986

STATION

	*-	S	S	M	S	S	+**-	S	S	M	S	S	+**-	S	S	M	S	S	+**-	S	S	M	S	S	+*
* 15.000	*)			9			(**)			9			(**)			9			(**)			9			(*
* 63.000	*)			7			(**)			6			(**)			7			(**)			7			(*
* 9.0000	*)			8			(**)			7			(**)			8			(**)			8			(*
* 10.000	*)			4			(**)			4			(**)			2			(**)			4			(*

TABLE 18

Western Basin Representative Area Means and Standard Deviations Compared to the Means of the Individual Stations Comprising the Area.

HYDRA86 ANOVA WESTERN BASIN ALL SURVEYS

DESCRIPTIVE STATISTICS

STATION	VARIABLE TEMP FREQ.	MEAN	STD.DEV.	VARIABLE ALKTOT FREQ.	MEAN	STD.DEV.	VARIABLE CONDCORR FREQ.	MEAN	STD.DEV.	VARIABLE TURBID FREQ.	MEAN	STD.DEV.
* 91.000	24.	16.0167	6.3392	24.	92.5208	3.8377	24.	239.708	14.6628	24.	5.22500	1 9479
* 92.000	24.	16.1708	6.4002	24.	93.4042	4.8300	24.	237.250	12.1127	24	4 66667	1.7687
* 61.000	24.	15.7125	6.0635	24.	91.4208	3.6303	24.	235.292	20.2688	24.	5.83750	2.2417
* 60.000	24.	15.9208	6.2410	24.	92.0750	5.4863	24.	230.417	15.4580	24.	5 16250	2.4020
* 59.000	24.	16.4708	6.1428	24.	94.1375	4.5911	24.	239.542	19.5025	24.	8.73750	4.8190
* 58.000	24.	16.8375	6.4617	24.	96.3250	6.1931	24.	247.542	22.2808	24	10 1375	6 5548

	VARIABLE TEMP	VARIABLE ALKTOT	VARIABLE CONDCORR	VARIABLE TURBID
MEAN	16.1882	93.3139	238.2917	6.6278
ST.DV.	6.177	5.024	18.187	4.213

STATION

STATION	*- S S M S S +**- S S M S S +**- S S M S S +**- S S M S S +*
* 91.000 *)	B (**) B (**) B (**) B (*
* 92.000 *)	B (**) B (**) B (**) B (*
* 61.000 *)	B (**) B (**) B (**) B (*
* 60.000 *)	B (**) B (**) B (**) B (*
* 59.000 *)	B (**) B (**) B (**) B (*
* 58.000 *)	B (**) B (**) B (**) B (*

STATION	VARIABLE TSS FREQ.	MEAN	STD.DEV.	VARIABLE CHLACORR FREQ.	MEAN	STD.DEV.	VARIABLE CORRTP FREQ.	MEAN	STD.DEV.	VARIABLE CORRTFP FREQ.	MEAN	STD DEV.
* 91.000	24.	5.97083	2.0955	24.	5.10750	2.5933	23.	17.7870	4.5925	23.	5.41304	3 9128
* 92.000	23.	5.96261	2.2156	24.	7.37250	3.6656	23.	18.7609	7.4991	22	5.04091	3.1204
* 61.000	24.	6.40125	2.2248	24.	4.54625	3.0390	23.	14.5913	6.1328	22.	2.54091	2.0344
* 60.000	24.	5.83458	2.4352	24.	6.67292	5.7615	23.	21.3000	13.9368	23.	5.17391	5.9302
* 59.000	24.	9.62708	4.4676	24.	9.54875	6.7054	24.	26.3667	13.7725	24.	6.57500	6 8663
* 58.000	24.	11.1529	6.1435	24.	8.85208	4.3247	24.	29.3750	12.7897	24.	7.69583	4 9783

	VARIABLE TSS	VARIABLE CHLACORR	VARIABLE CORRTP	VARIABLE CORRTFP
MEAN	7.5022	7.0167	21.4564	5.4551
ST.DV.	4.129	4.861	11.559	4 981

STATION

STATION	*- S S M S S +**- S S M S S +**- S S M S S +**- S S M S S +*
* 91.000 *)	B (**) B (**) B (**) B (*
* 92.000 *)	B (**) B (**) B (**) B (*
* 61.000 *)	B (**) B (**) B (**) B (*
* 60.000 *)	B (**) B (**) B (**) B (*
* 59.000 *)	B (**) B (**) B (**) B (*
* 58.000 *)	B (**) B (**) B (**) B (*

STATION	VARIABLE NITNIT FREQ.	MEAN	STD.DEV.	VARIABLE SRS FREQ.	MEAN	STD.DEV.	VARIABLE CL FREQ.	MEAN	STD.DEV.
* 91.000	24.	350.083	150.3115	24.	1301.33	704.1633	24.	12.1583	2.8503
* 92.000	24.	301.625	147.1476	24.	974.042	634.1708	24.	12.1667	2.1007
* 61.000	24.	361.292	162.2112	24.	1162.67	505.2873	24.	12.5917	4.8101
* 60.000	22.	317.273	171.9056	22.	1089.45	457.4514	24.	10.1792	2.5377
* 59.000	24.	356.542	149.6712	24.	1011.08	541.7502	24.	10.8333	1.7727
* 58.000	24.	412.375	227.8367	24.	1066.75	607.8964	24.	12.0333	1.8170

	VARIABLE NITNIT	VARIABLE SRS	VARIABLE CL
MEAN	350.3239	1101.0493	11.6604
ST.DV.	171.140	582.470	2.923

STATION

STATION	*- S S M S S +**- S S M S S +**- S S M S S +*
* 91.000 *)	B (**) B (**) B (*
* 92.000 *)	B (**) B (**) B (*
* 61.000 *)	B (**) B (**) B (*
* 60.000 *)	B (**) B (**) B (*
* 59.000 *)	B (**) B (**) B (*
* 58.000 *)	B (**) B (**) B (*

TABLE 19

1986 QUALITY CONTROL SUMMARY BY PARAMETER;
Differences Between Splits

PARAMETER	UNITS	N	MEAN	MEDIAN	STD DEV	RANGE LIMIT	PERCENT SAMPLES IN RANGE LIMIT
PHOSPHORUS:							
TOTAL PHOSPHORUS	ug/l	49	0.57	0.40	0.51	1.86	98.0%
TOTAL FILTERED	ug/l	48	0.75	0.40	0.66	2.45	95.8%
SOLUBLE REACTIVE	ug/l	47	0.09	0.00	0.08	0.29	93.6%
NITRATE + NITRITE	ug/l	50	1.12	1.00	0.99	3.66	94.0%
AMMONIA	ug/l	44	2.56	1.30	2.27	8.36	97.7%
SOLUBLE SILICA	ug/l	49	24.00	10.00	21.28	78.43	93.9%
CHLORIDE	mg/l	50	0.13	0.10	0.12	0.42	96.0%
TURBIDITY	NTU	48	0.05	0.00	0.04	0.16	97.9%
CONDUCTIVITY 25°C	umhos	49	2.65	2.00	2.35	8.66	95.9%
pH	SU	49	0.02	0.01	0.02	0.07	98.0%

TABLE 20

1986 QUALITY CONTROL SUMMARY BY PARAMETER;
Differences Between Replicates

PARAMETER	UNITS	N	MEAN	MEDIAN	STD DEV	RANGE LIMIT	PERCENT SAMPLES IN RANGE LIMIT
TEMPERATURE	°C	23	0.02	0.00	0.02	0.07	95.7%
DISSOLVED OXYGEN	mg/l	23	0.10	0.10	0.09	0.33	100.0%
PHOSPHORUS:							
TOTAL PHOSPHORUS	ug/l	24	1.42	0.90	1.26	4.64	95.8%
TOTAL FILTERED	ug/l	23	1.49	0.60	1.32	4.87	91.3%
SOLUBLE REACTIVE	ug/l	23	0.23	0.00	0.20	0.75	95.7%
NITRATE + NITRITE	ug/l	25	3.48	1.00	3.09	11.37	92.0%
AMMONIA	ug/l	20	3.22	2.85	2.85	10.52	100.0%
SOLUBLE SILICA	ug/l	24	76.83	43.50	68.11	251.06	91.7%
SECCHI	M	11	0.13	0.00	0.12	0.42	90.9%
TURBIDITY	NTU	24	0.27	0.20	0.24	0.88	100.0%
TOTAL SUSPENDED SOLIDS	mg/l	25	0.31	0.18	0.27	1.01	96.0%
RESIDUAL SOLIDS	mg/l	25	0.36	0.19	0.32	1.18	92.0%
VOLATILE SOLIDS	mg/l	25	0.30	0.15	0.27	0.98	92.0%
CORR CHLOROPHYLL A	ug/l	25	1.30	0.58	1.15	4.25	92.0%
PHEOPHYTIN	ug/l	25	2.06	1.09	1.83	6.73	92.0%
CONDUCTIVITY 25°C	umhos	24	4.17	3.00	3.70	13.63	95.8%
CHLORIDE	mg/l	25	0.32	0.30	0.28	1.05	100.0%
ALKALINITY TOTAL	mg/l	25	0.70	0.60	0.62	2.29	100.0%
ALKALINITY PHENOLPHTHALEIN	mg/l	25	0.21	0.10	0.19	0.69	92.0%
pH	SU	24	0.03	0.01	0.03	0.10	95.8%

FIGURES

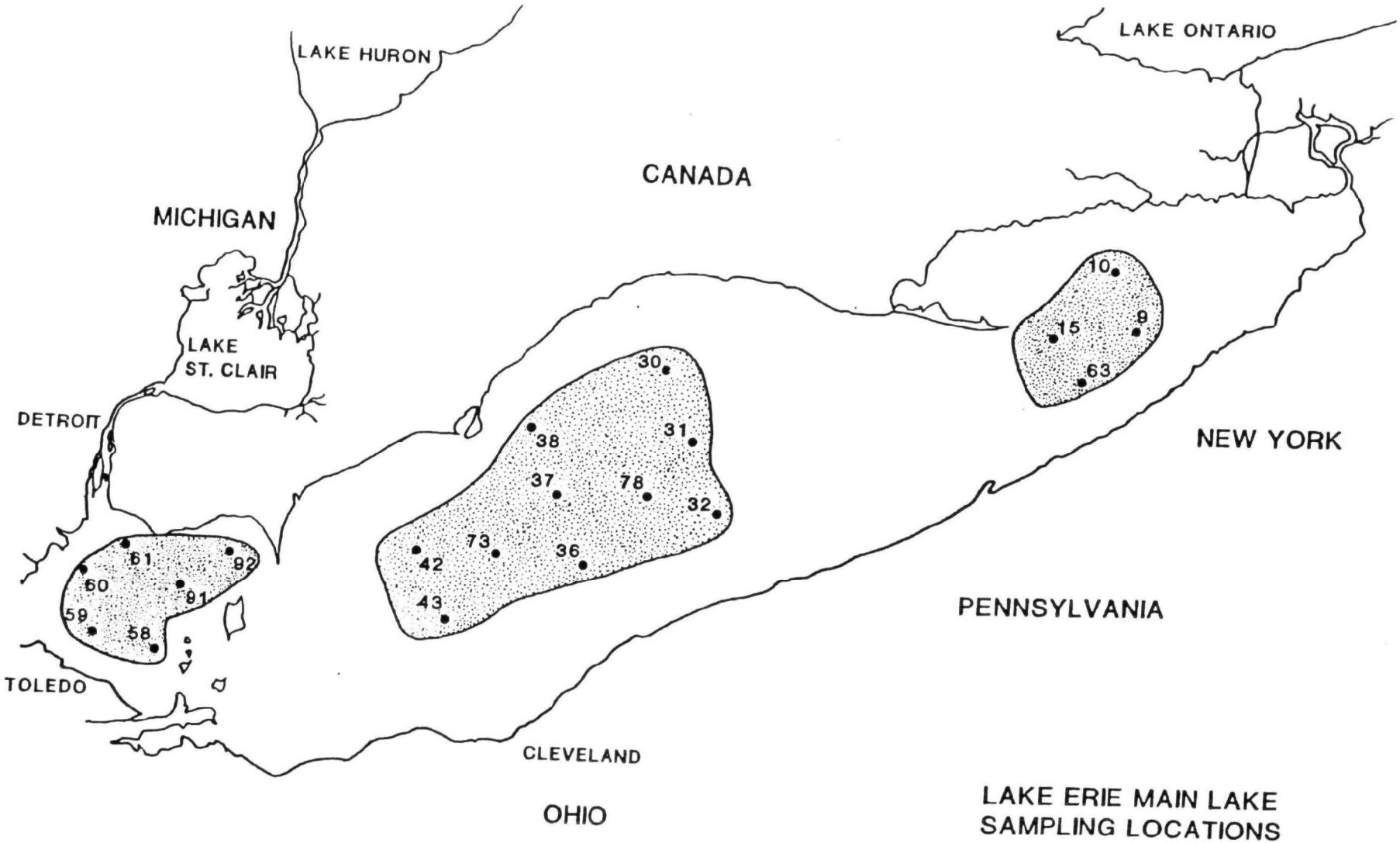
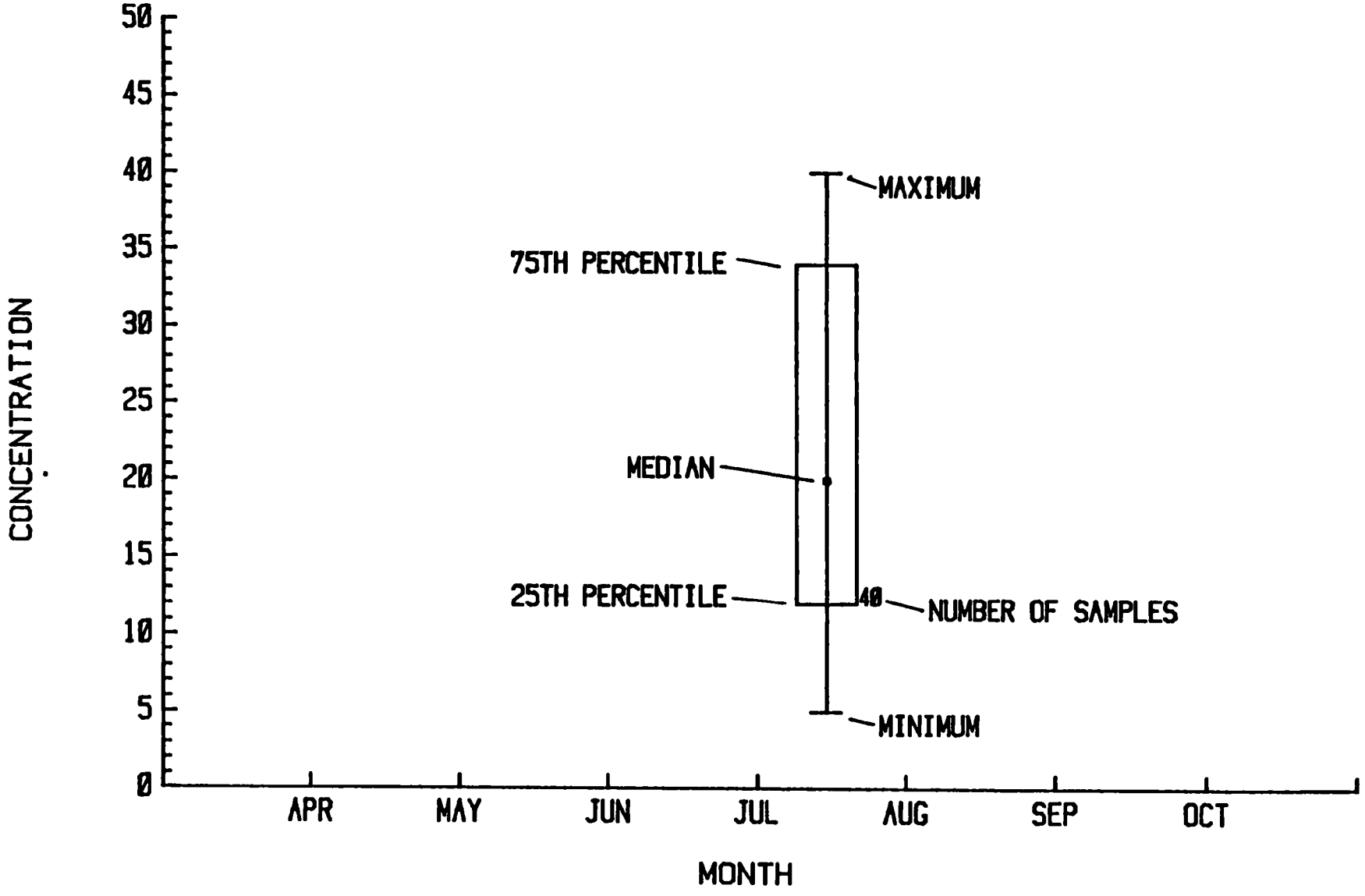


Figure 1 1986 Lake Erie Open Lake Sampling Locations



EXPLANATION OF MEDIAN PLOTS

(After Reckhow, 1980)

Figure 2

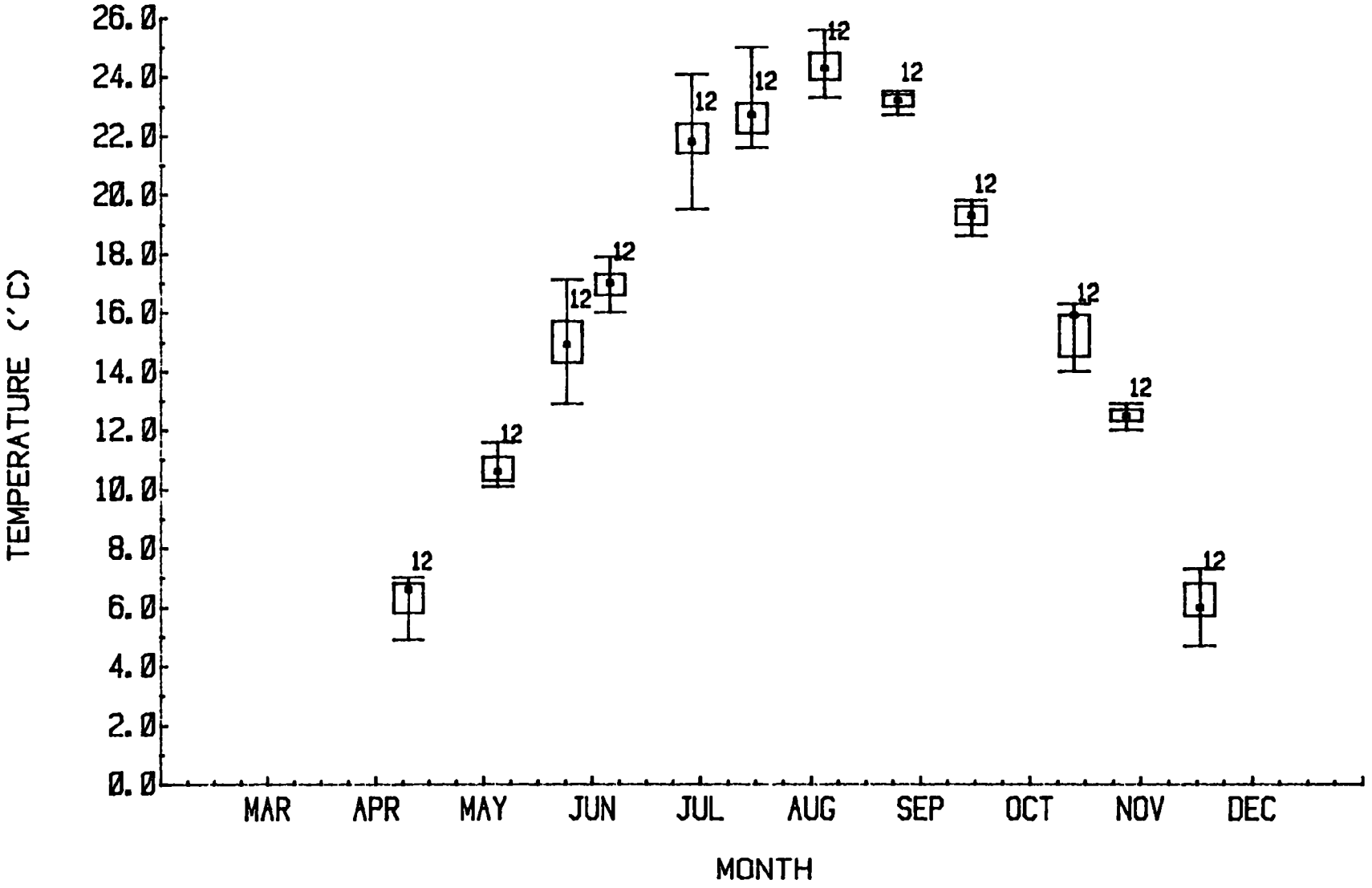


FIGURE 3 WESTERN BASIN MEDIAN TEMPERATURES, 1986

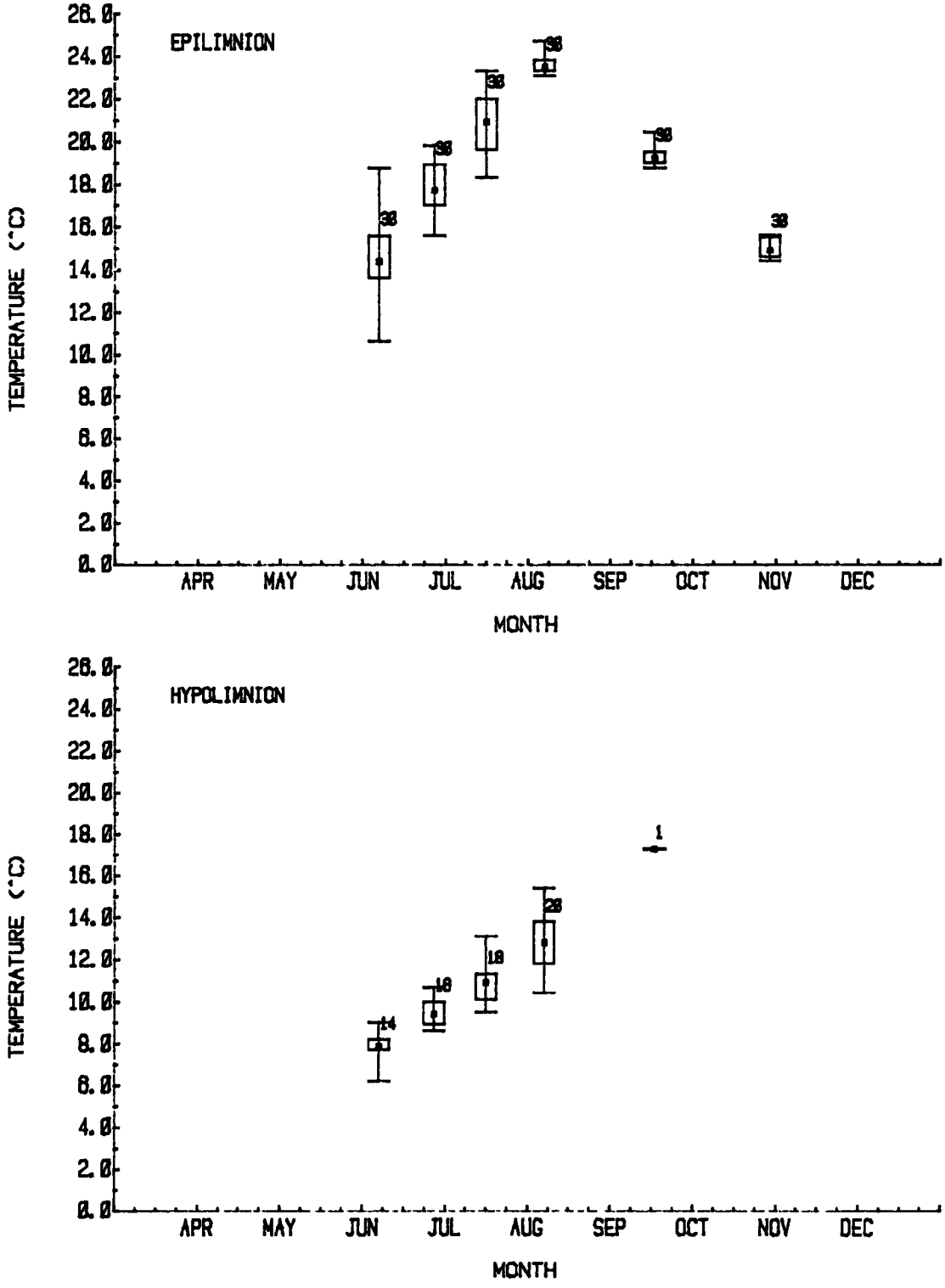


FIGURE 4 CENTRAL BASIN MEDIAN TEMPERATURES, 1986

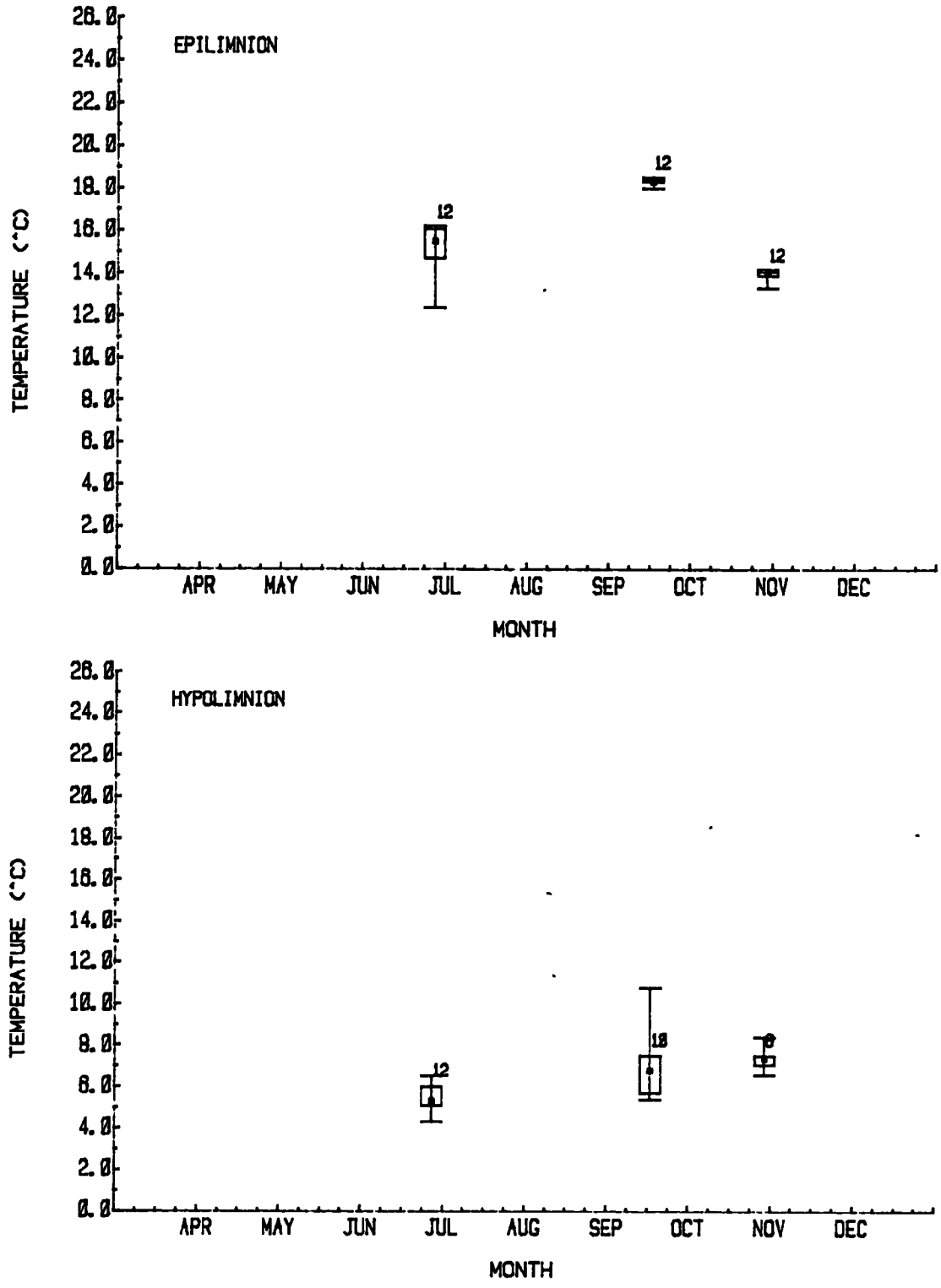


FIGURE 5 EASTERN BASIN MEDIAN TEMPERATURES, 1986

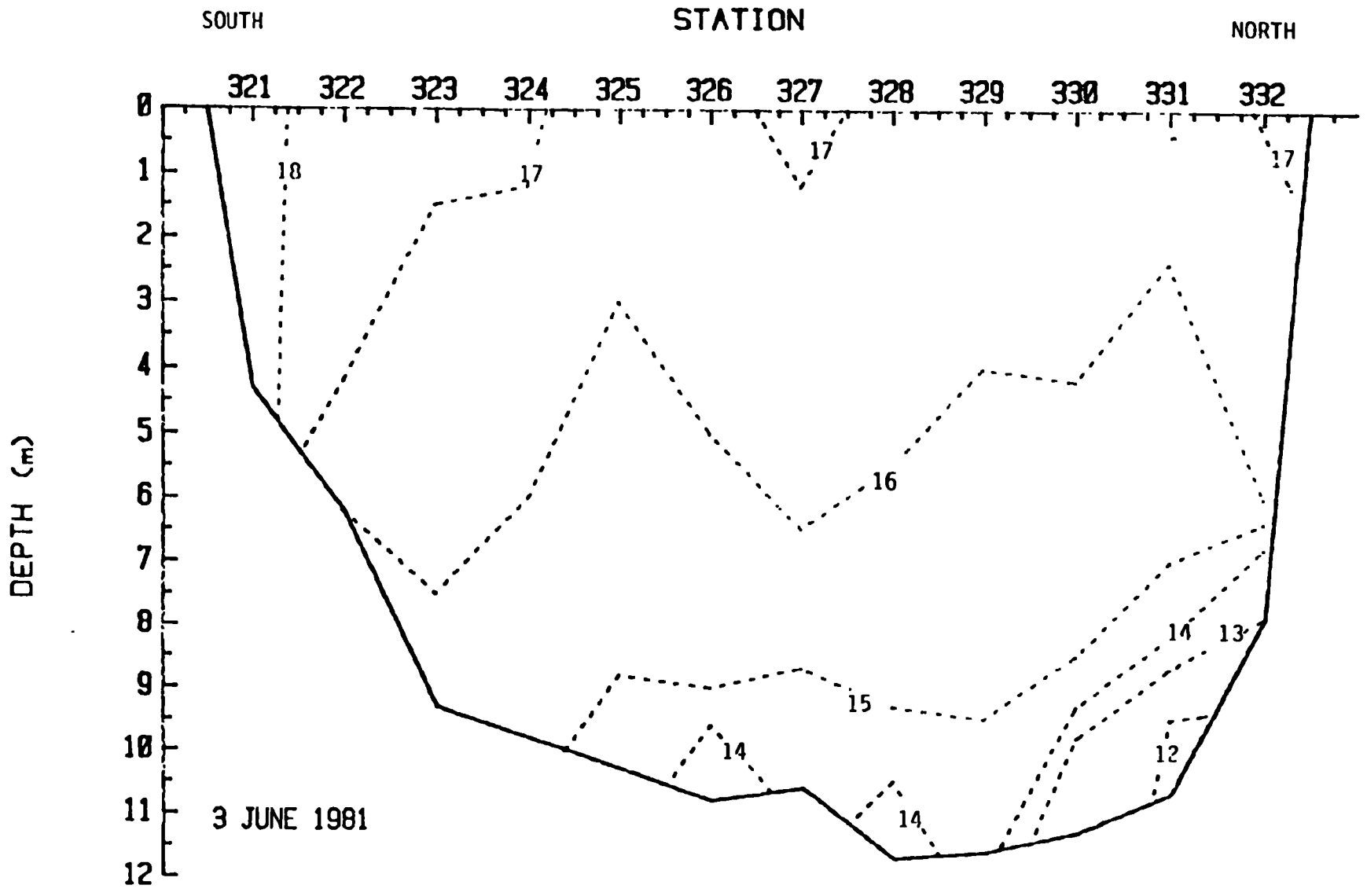


Figure 6. Stratification of the Western Basin Seen From a North-South Cross-Section on June 3, 1981 (Bartish, 1984).

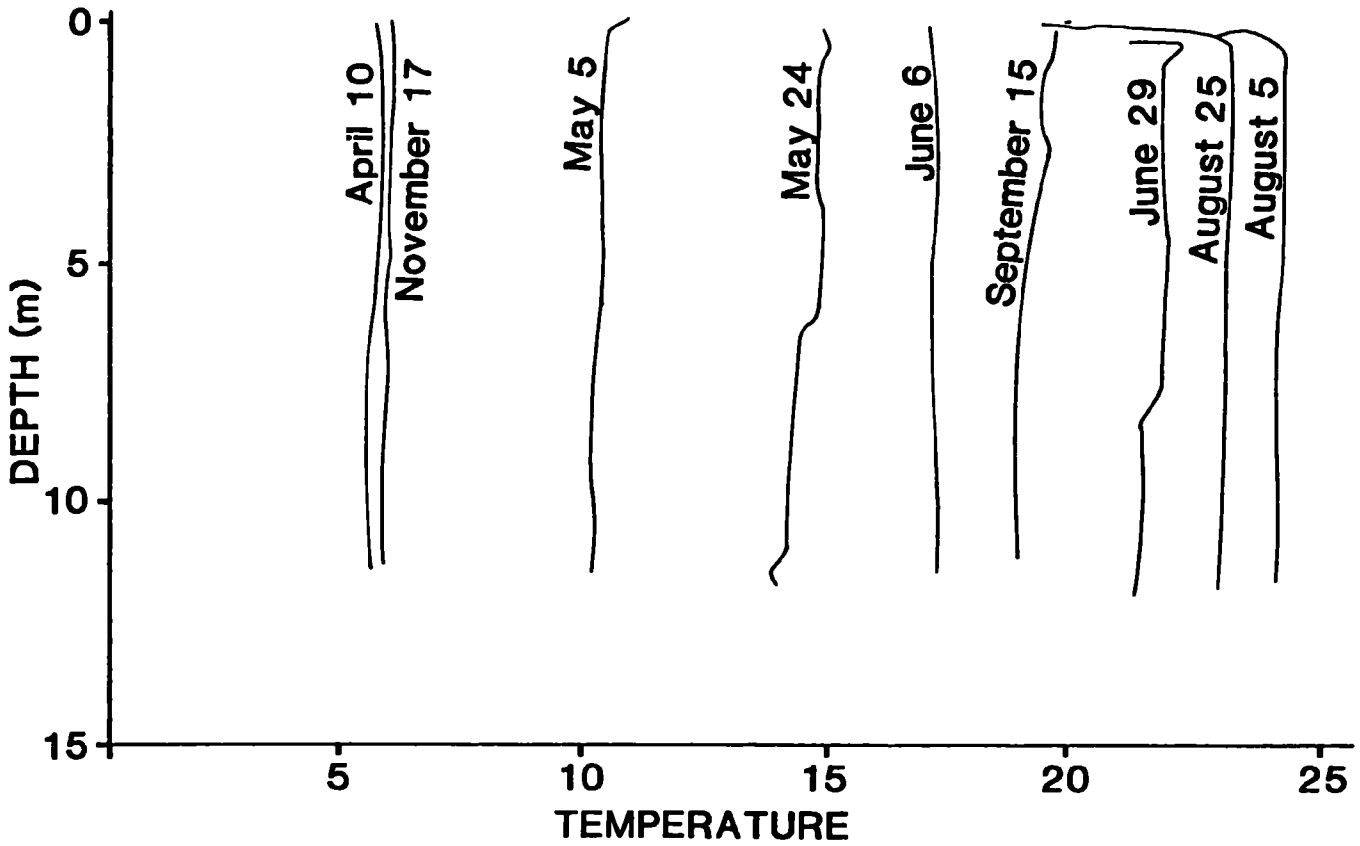


Figure 7. Temperature Profiles from Station 091 in the Western Basin, 1986.

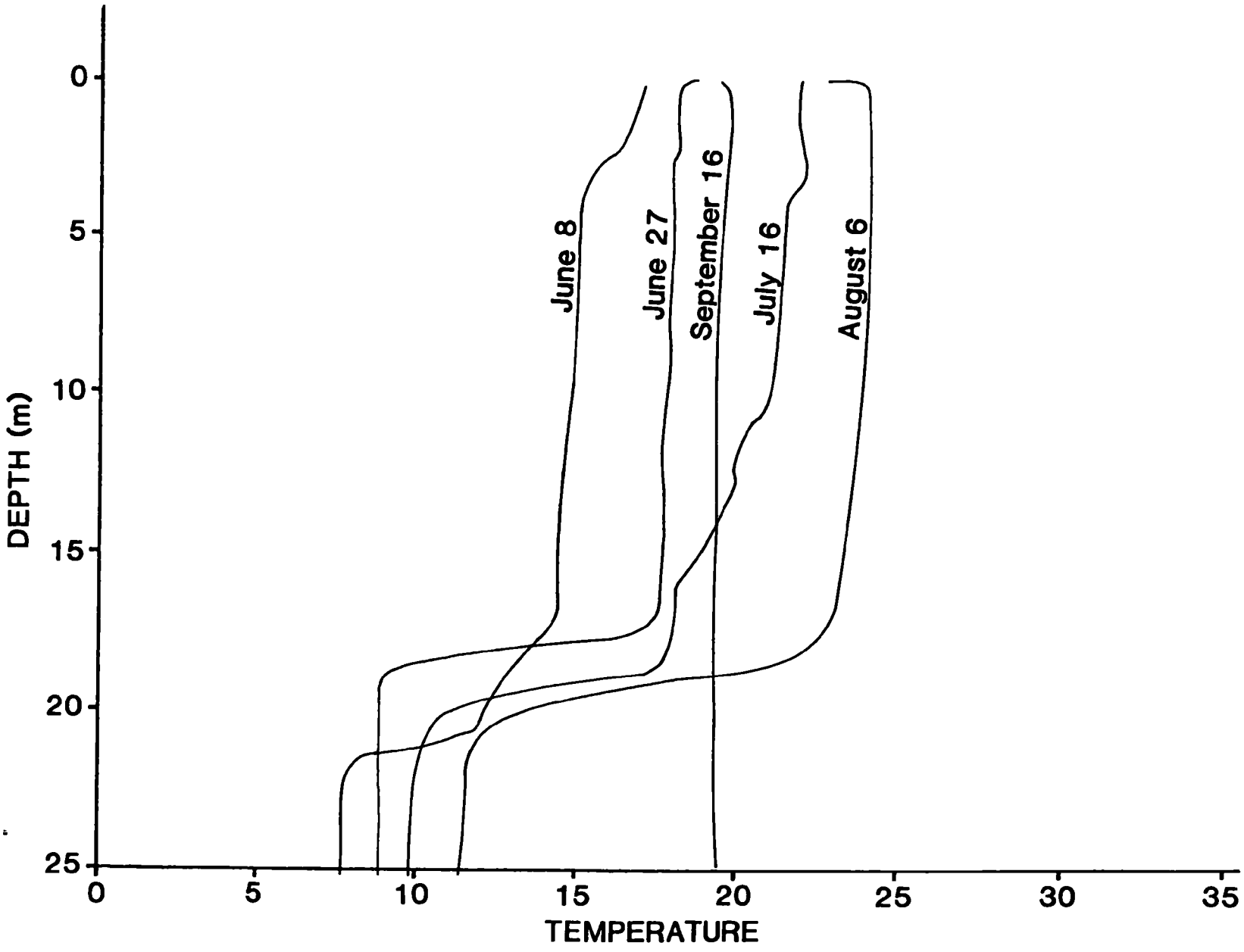


Figure 8. Thermal Profiles from Station 073 in the Central Basin, 1986.

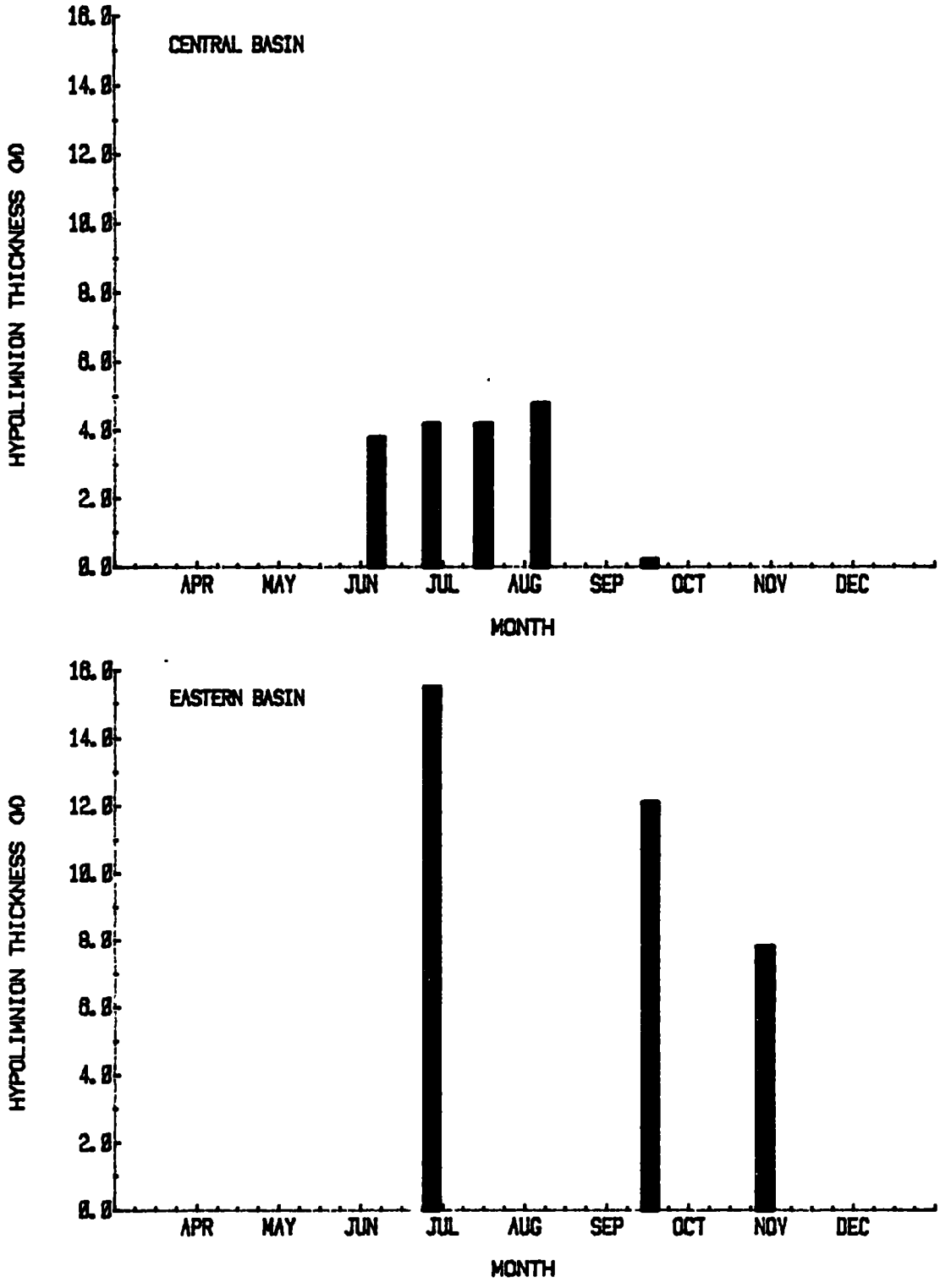


FIGURE 9 CENTRAL AND EASTERN BASIN HYPOLIMNION THICKNESS, 1986

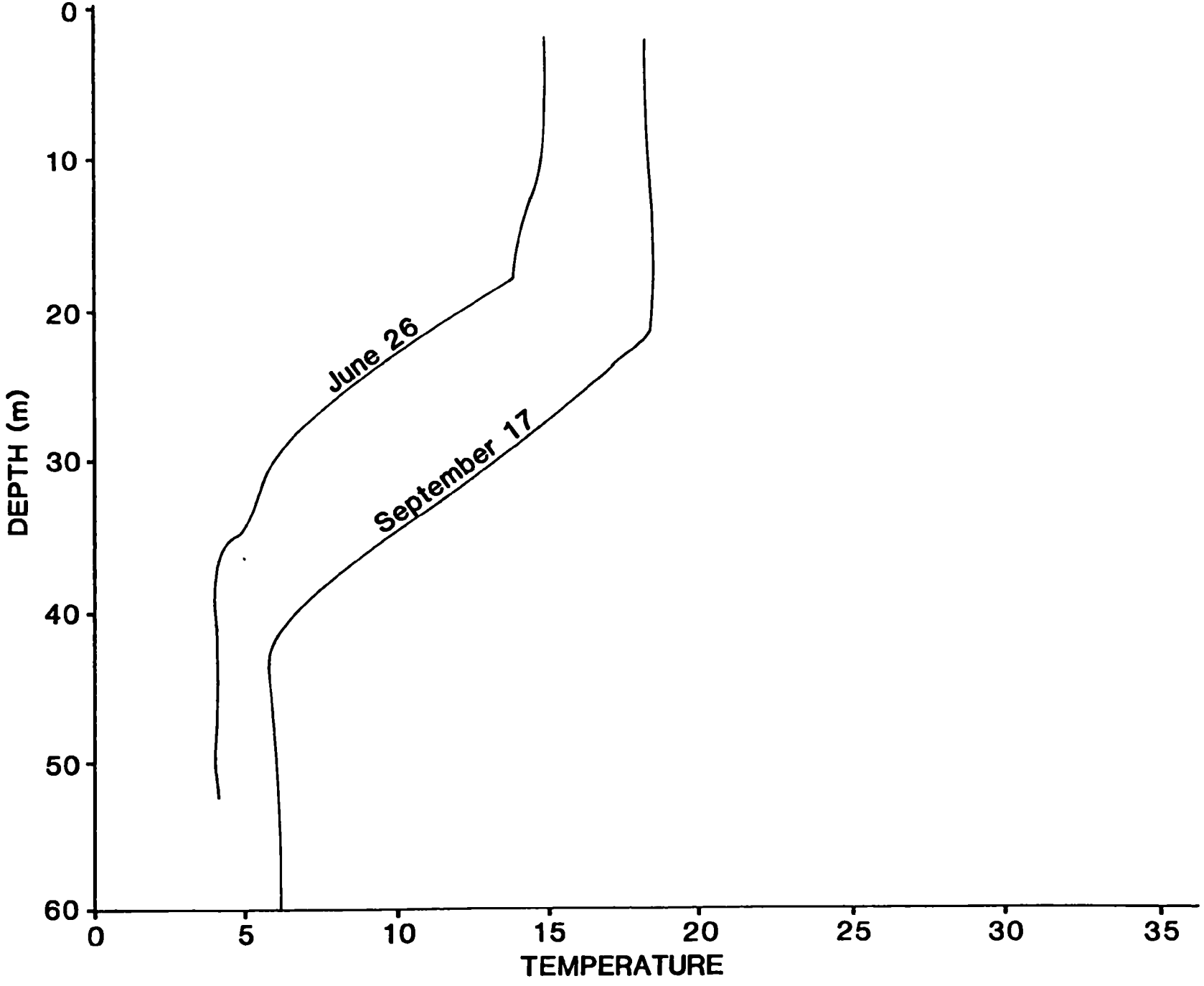


Figure 10. Thermal Profiles from Station 15 in the Eastern Basin, 1986.

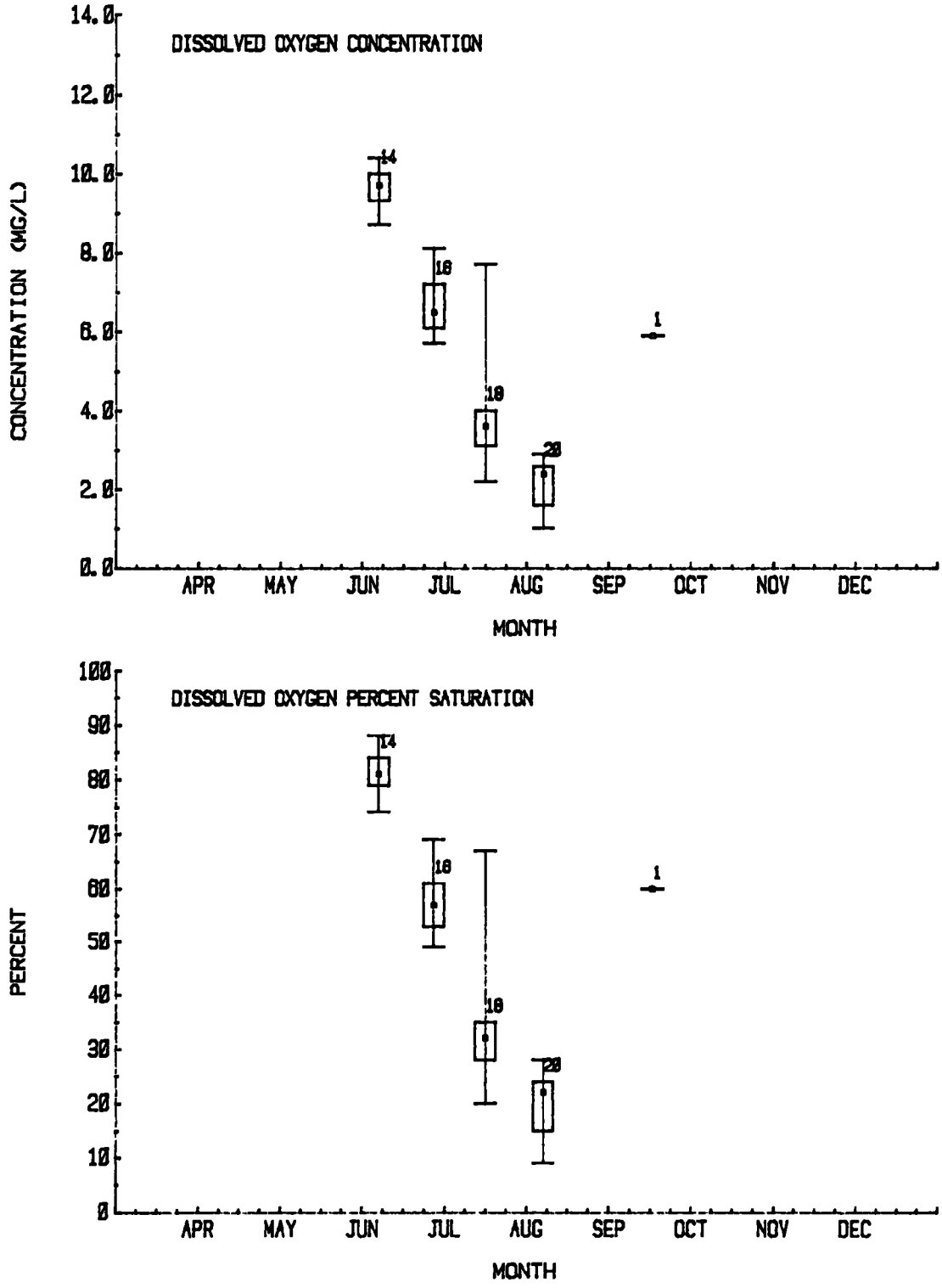


FIGURE 11 CENTRAL BASIN HYPOLIMNION MEDIAN DISSOLVED OXYGEN CONCENTRATION AND PERCENT SATURATION, 1986

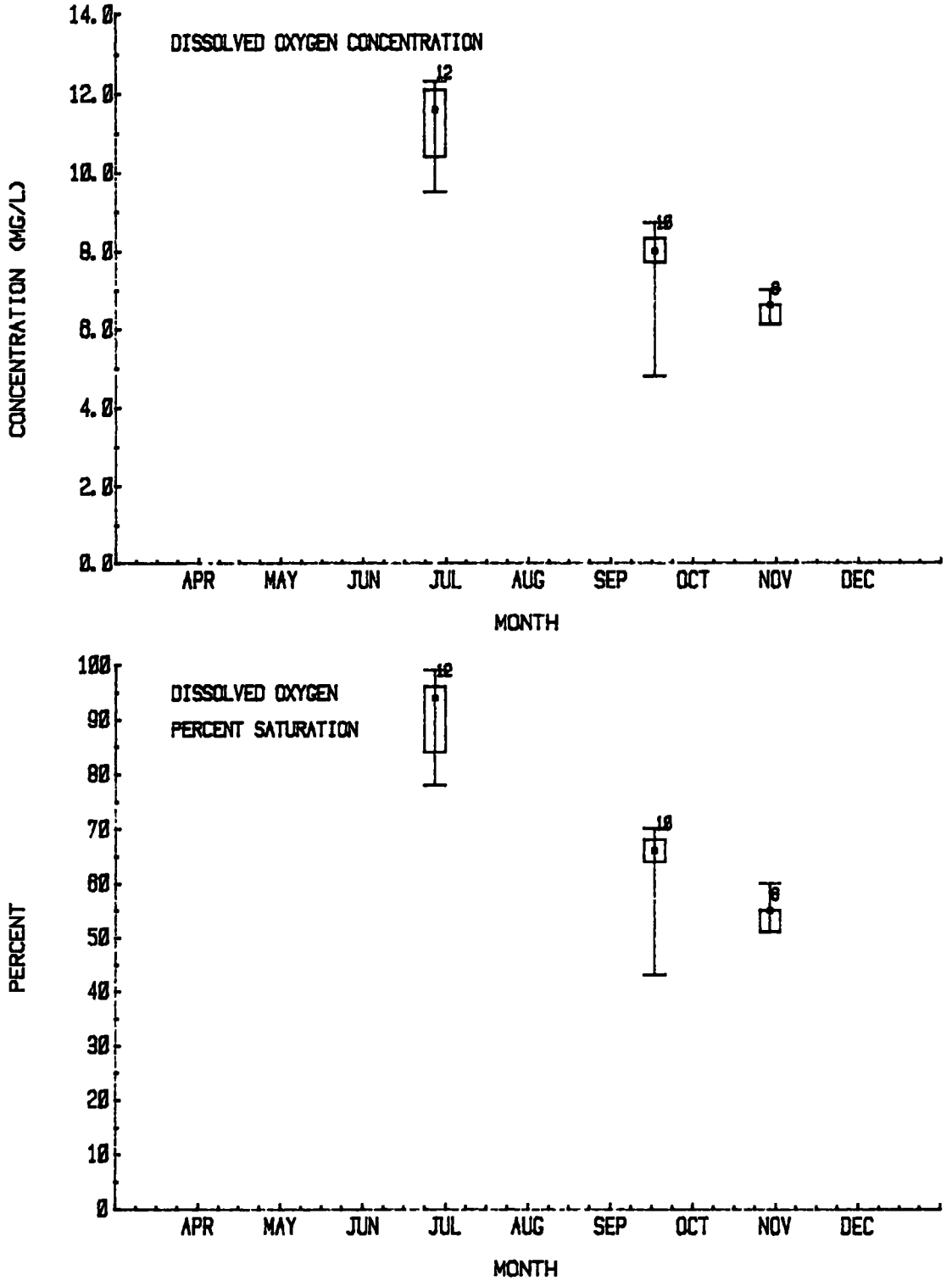


FIGURE 12 EASTERN BASIN HYPOLIMNION MEDIAN DISSOLVED OXYGEN CONCENTRATION AND PERCENT SATURATION, 1986

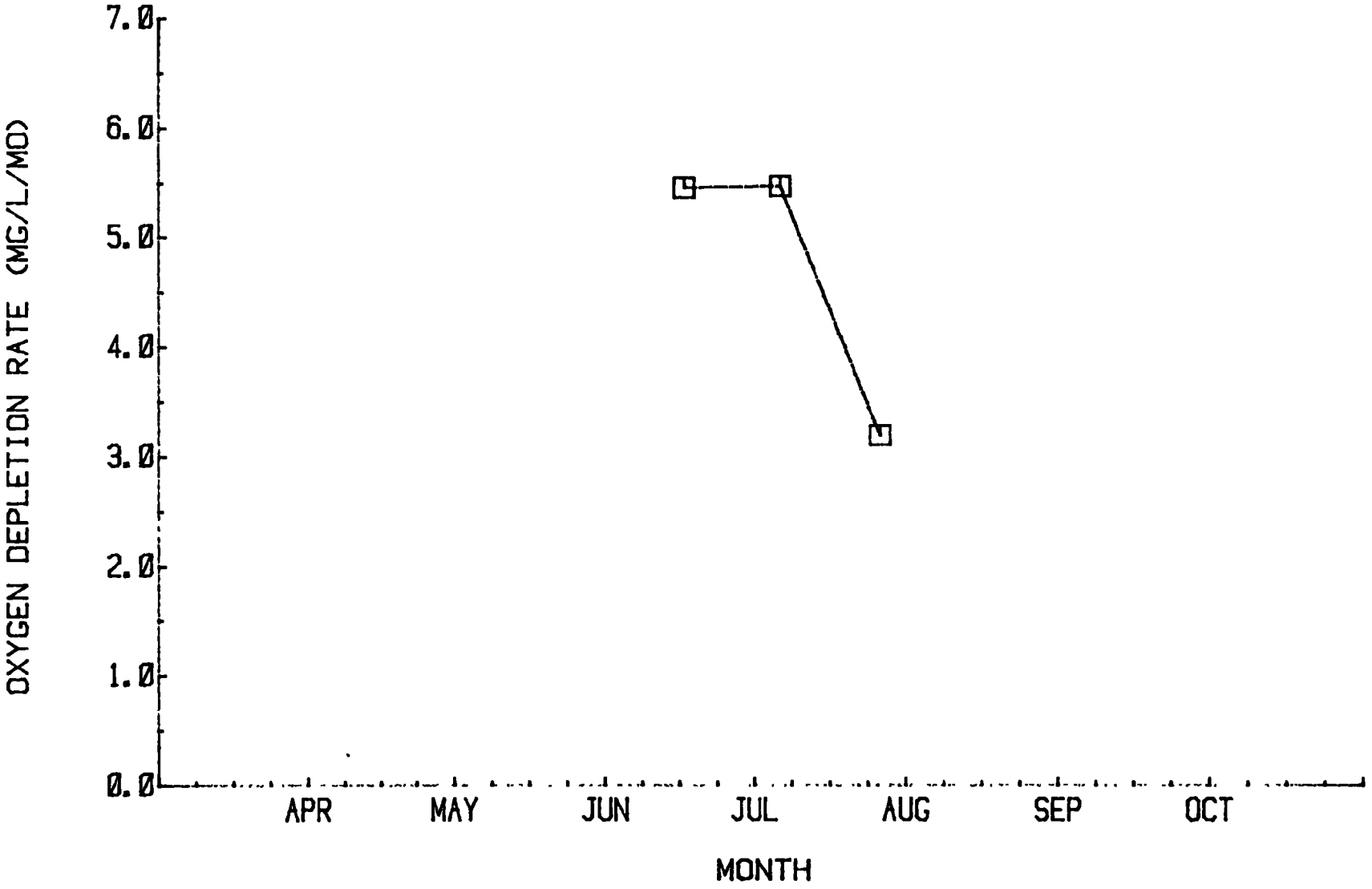


FIGURE 13 CENTRAL BASIN HYPOLIMNION CORRECTED OXYGEN DEPLETION RATES, 1986

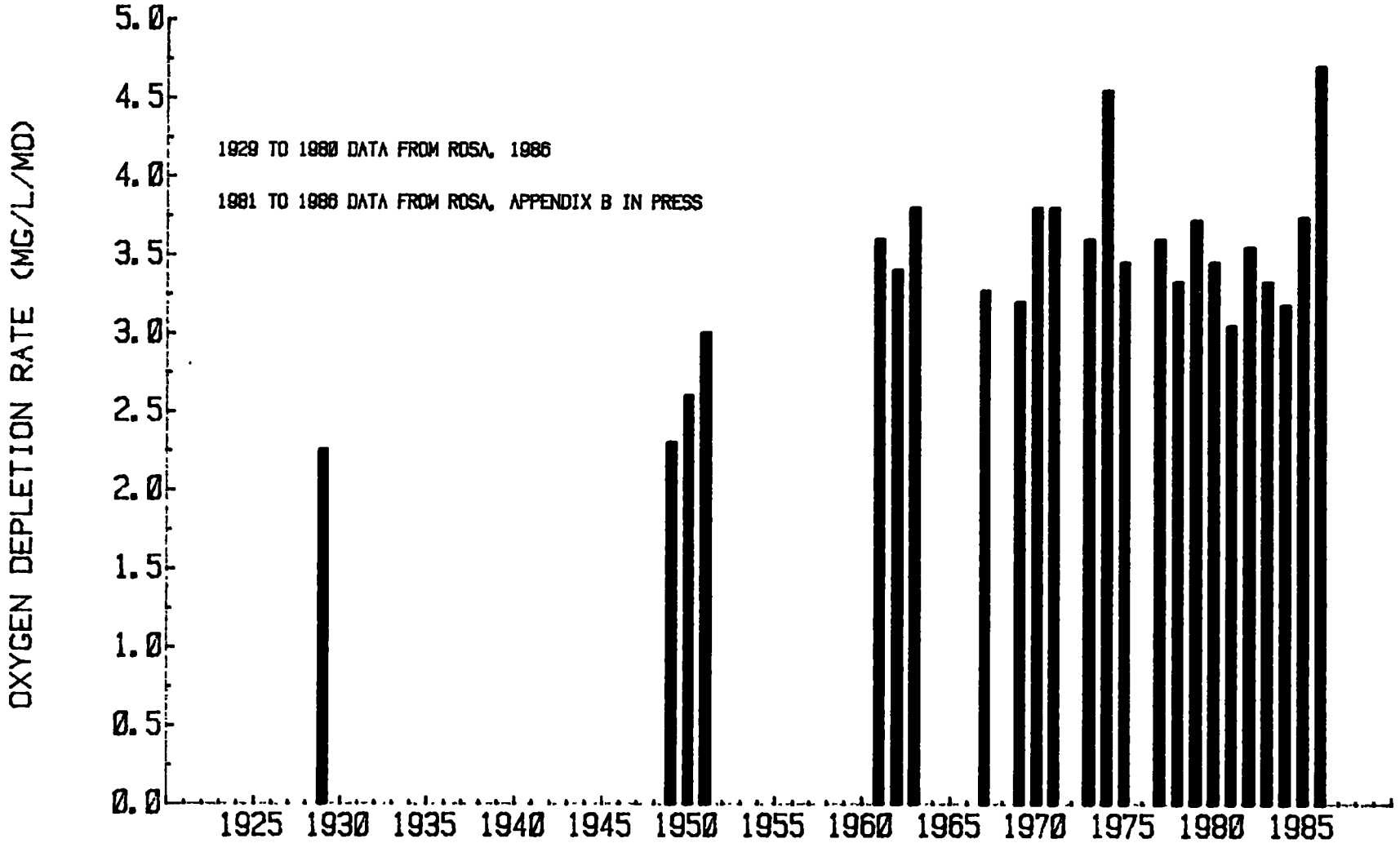


FIGURE 14 CENTRAL BASIN MEAN HYPOLIMNION CORRECTED OXYGEN DEPLETION RATES FROM 1929 THROUGH 1986

FIGURE 15 EASTERN BASIN HYPOLIMNION ADJUSTED OXYGEN DEPLETION RATES FROM 1970 THROUGH 1986

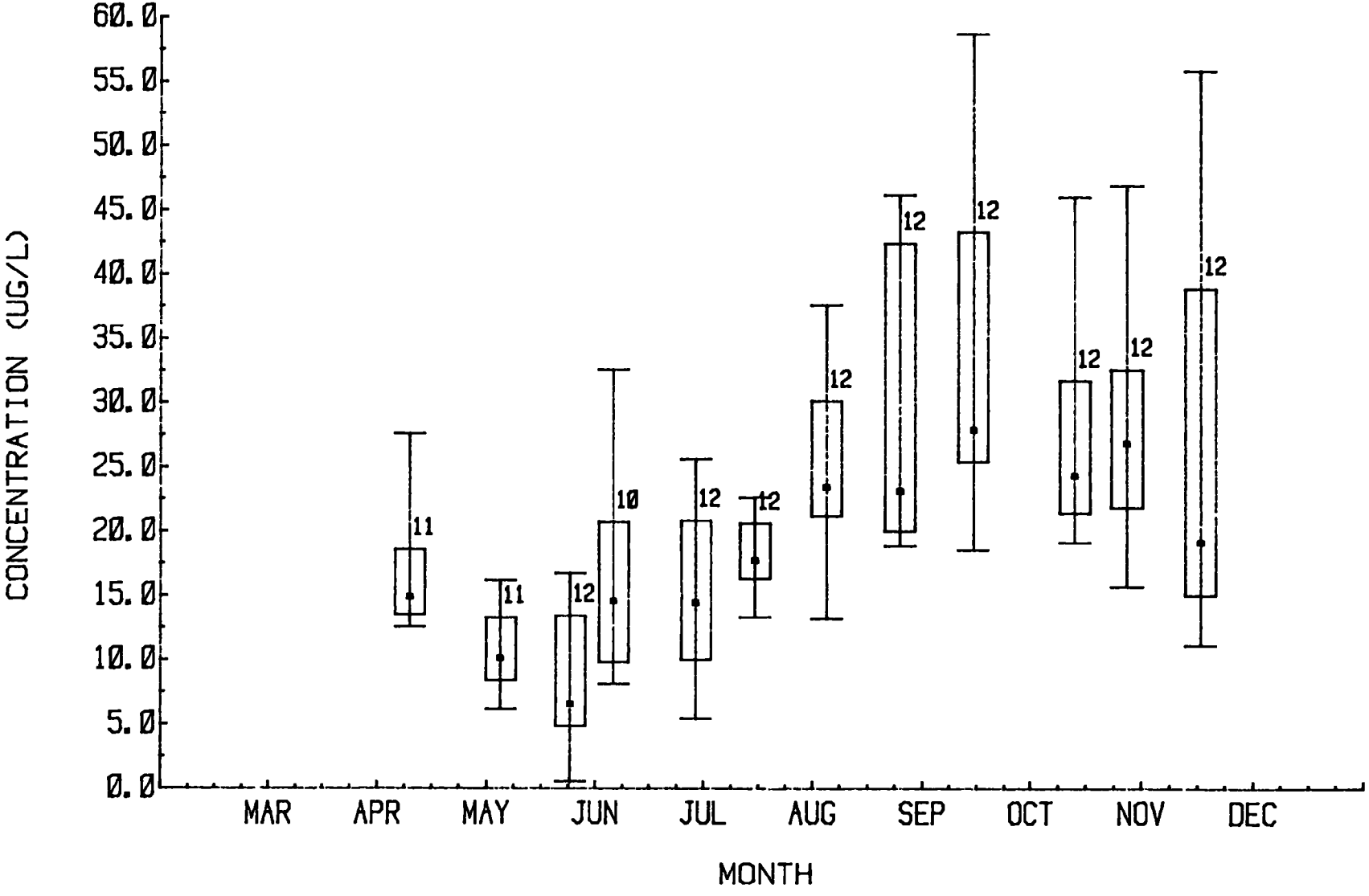


FIGURE 16 WESTERN BASIN MEDIAN TOTAL PHOSPHORUS CONCENTRATIONS, 1986

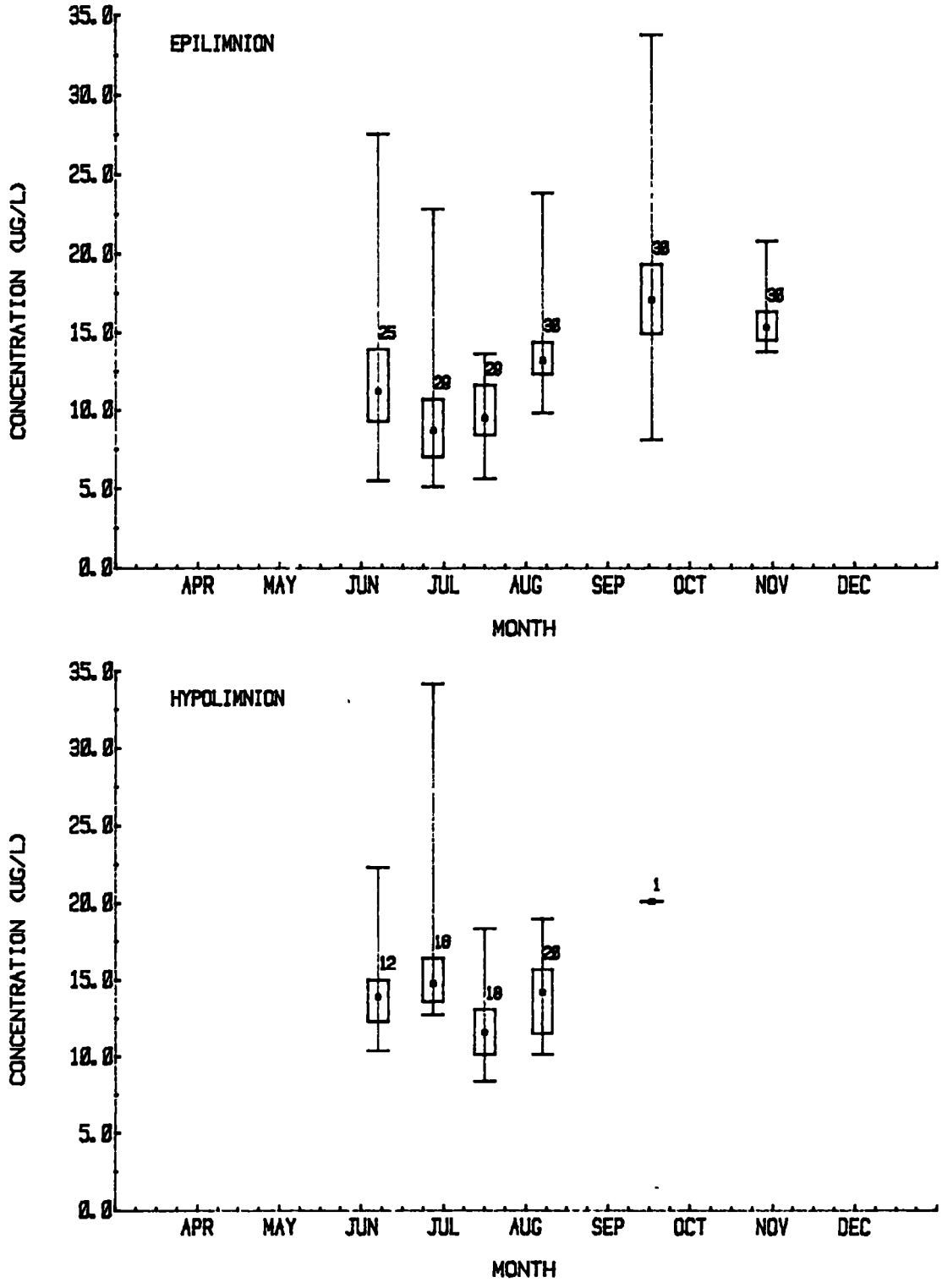


FIGURE 17 CENTRAL BASIN MEDIAN TOTAL PHOSPHORUS CONCENTRATIONS, 1986

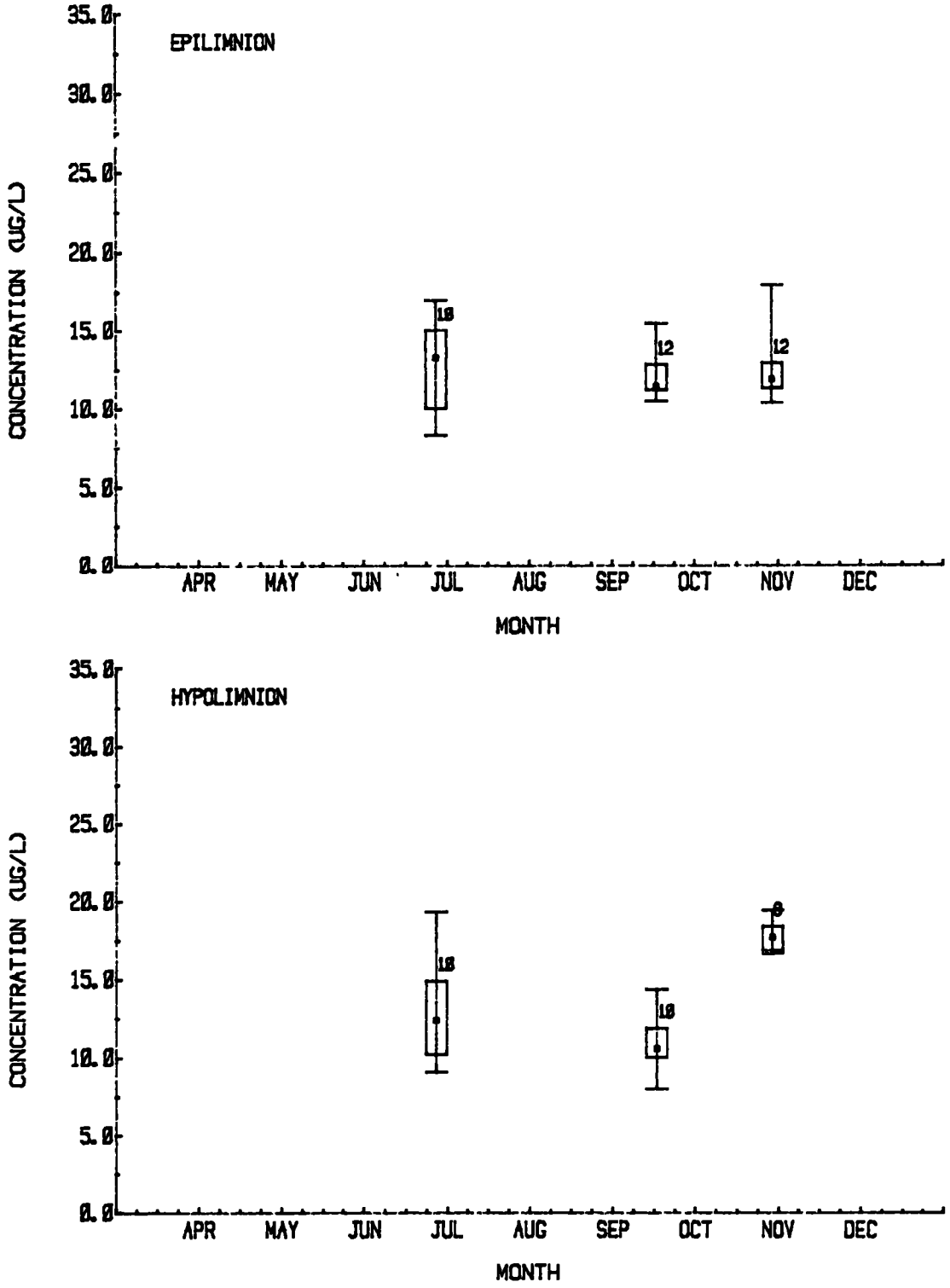


FIGURE 18 EASTERN BASIN MEDIAN TOTAL PHOSPHORUS CONCENTRATIONS, 1986

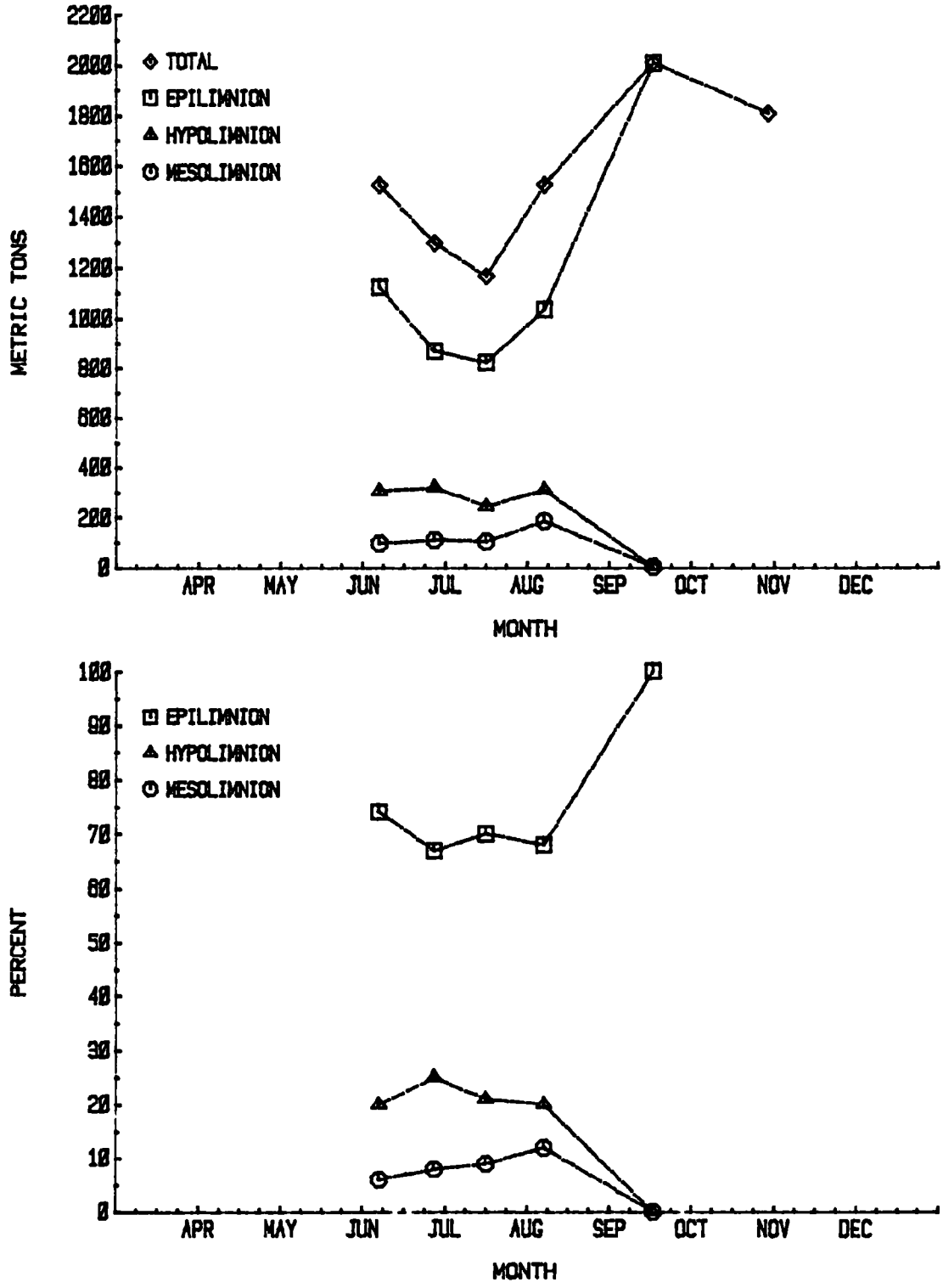


FIGURE 19 CENTRAL BASIN LIMNION DISTRIBUTION OF TOTAL PHOSPHORUS IN METRIC TONS AND PERCENT, 1986

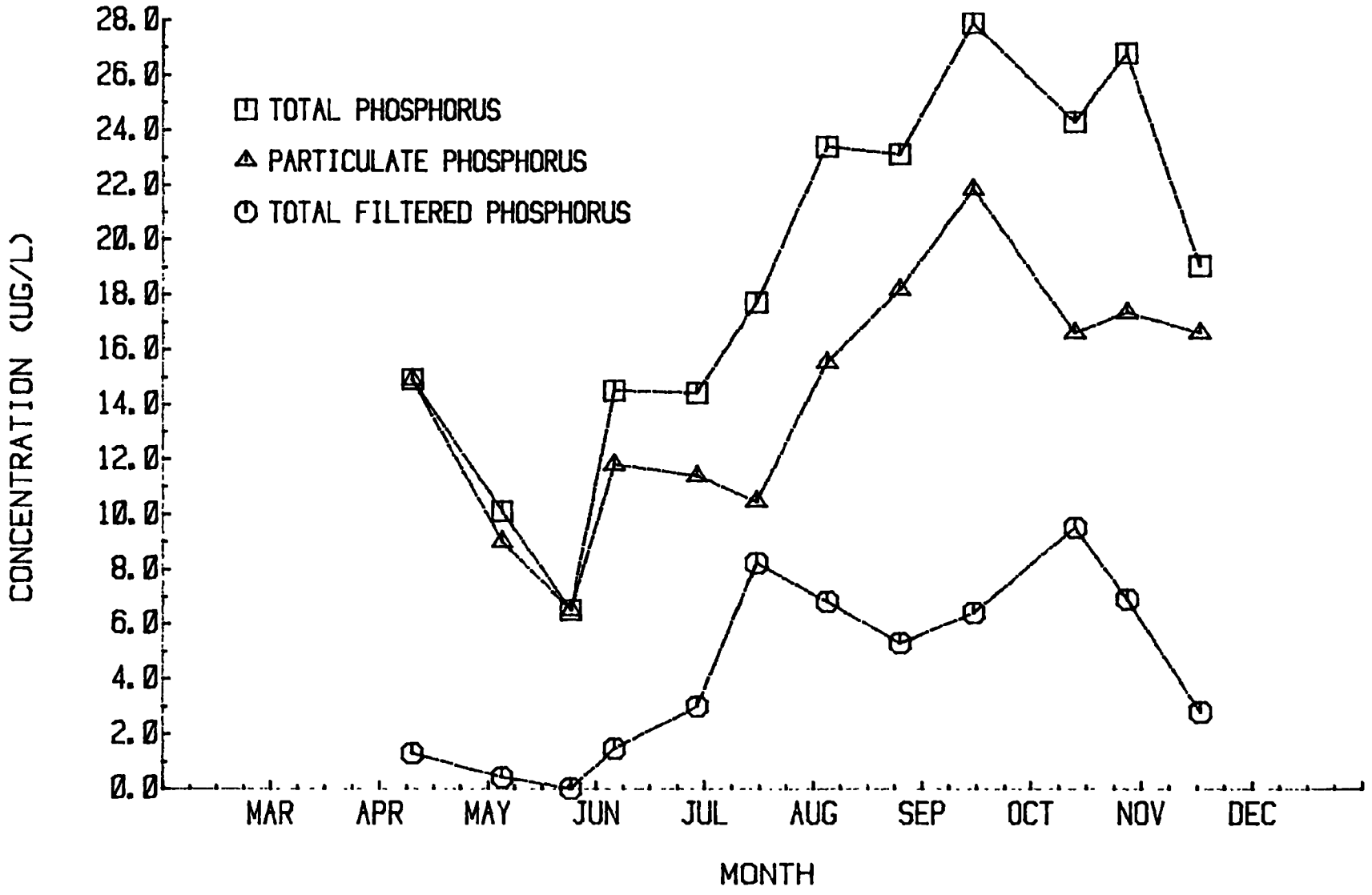


FIGURE 20 WESTERN BASIN MEDIAN TOTAL PHOSPHORUS, PARTICULATE PHOSPHORUS AND TOTAL FILTERED PHOSPHORUS CONCENTRATIONS, 1986

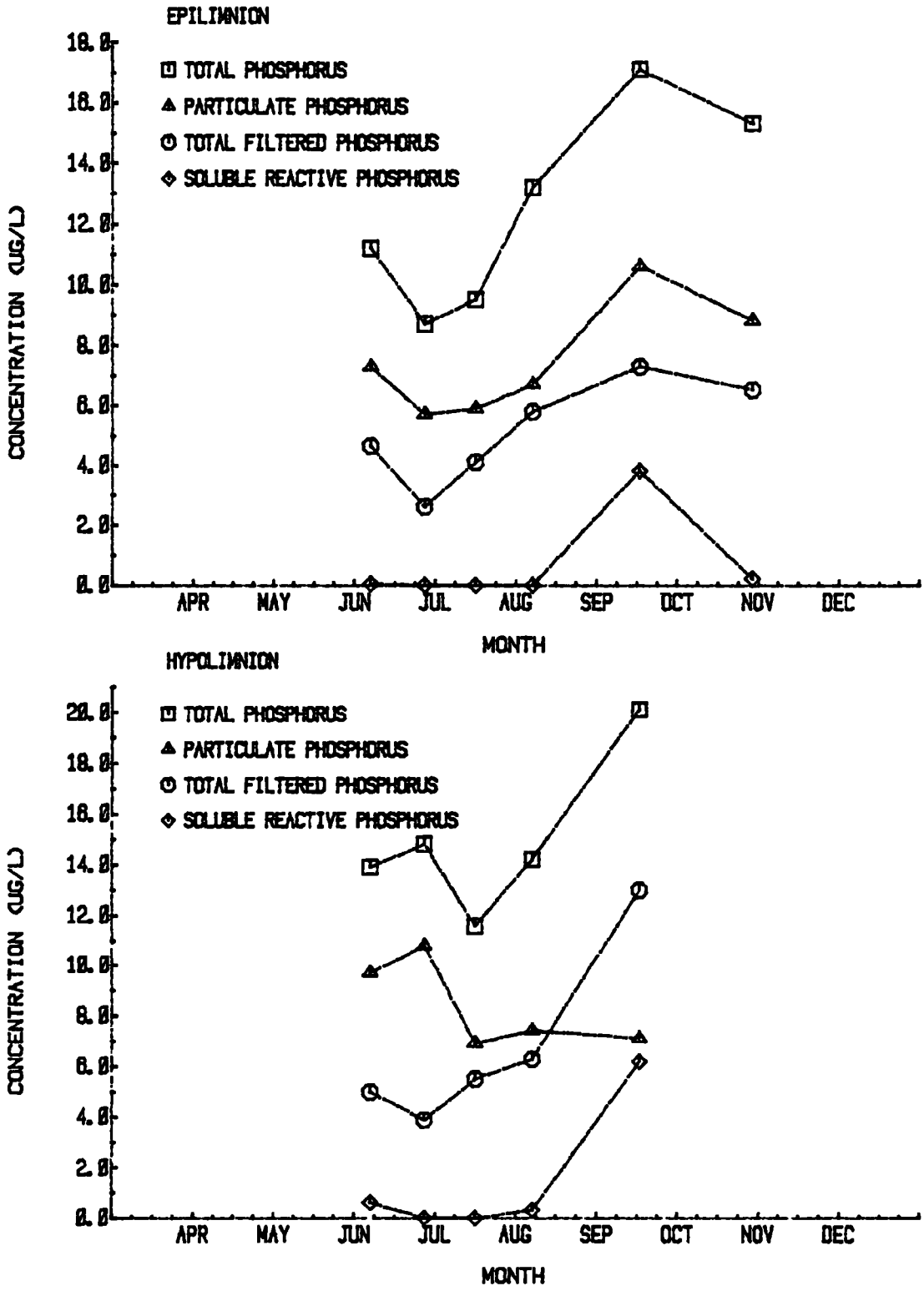


FIGURE 21 CENTRAL BASIN MEDIAN TOTAL PHOSPHORUS, PARTICULATE PHOSPHORUS, TOTAL FILTERED PHOSPHORUS AND SOLUBLE REACTIVE PHOSPHORUS CONCENTRATIONS, 1986

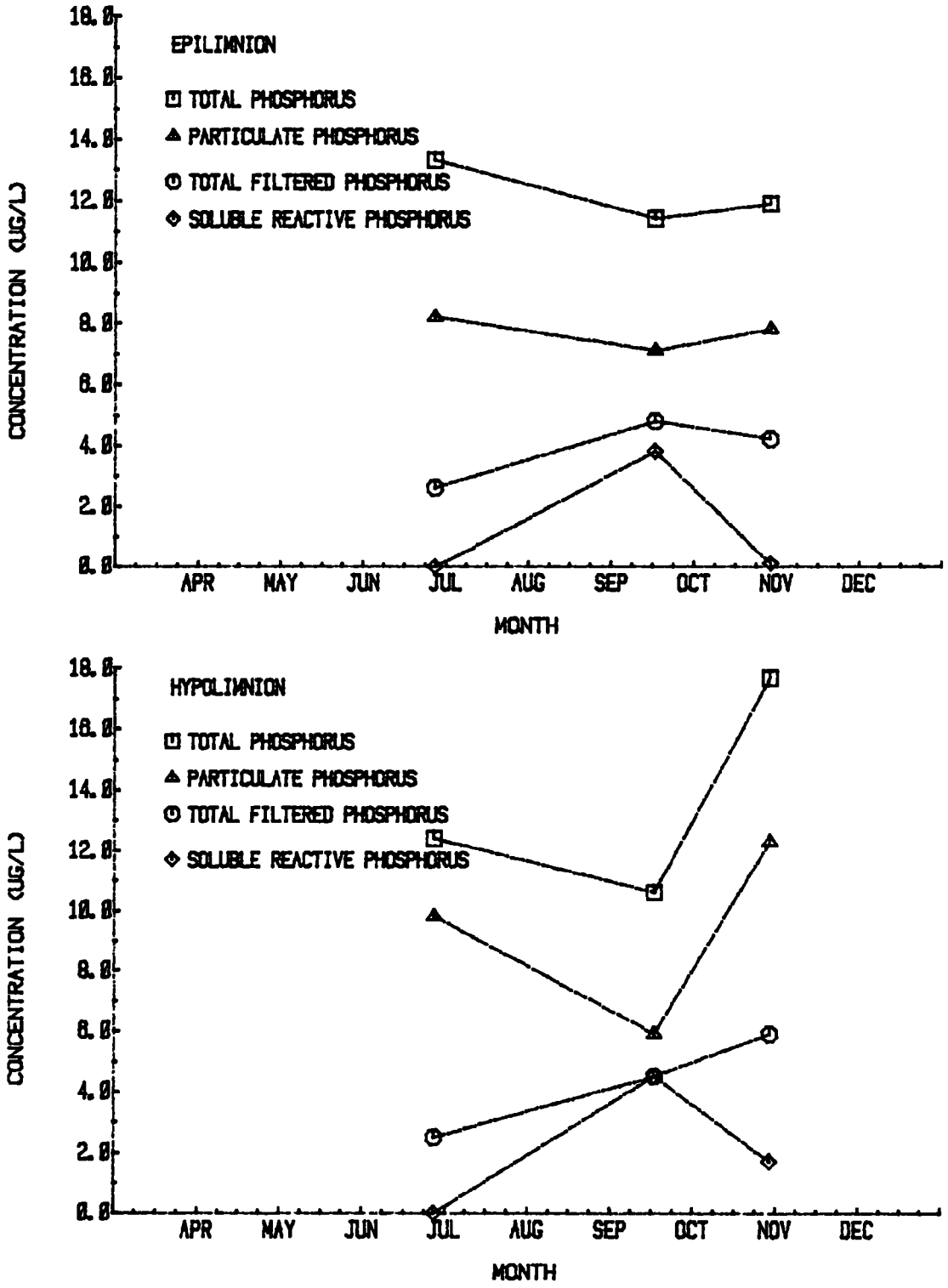


FIGURE 22. EASTERN BASIN MEDIAN TOTAL PHOSPHORUS, PARTICULATE PHOSPHORUS, TOTAL FILTERED PHOSPHORUS AND SOLUBLE REACTIVE PHOSPHORUS CONCENTRATIONS, 1986

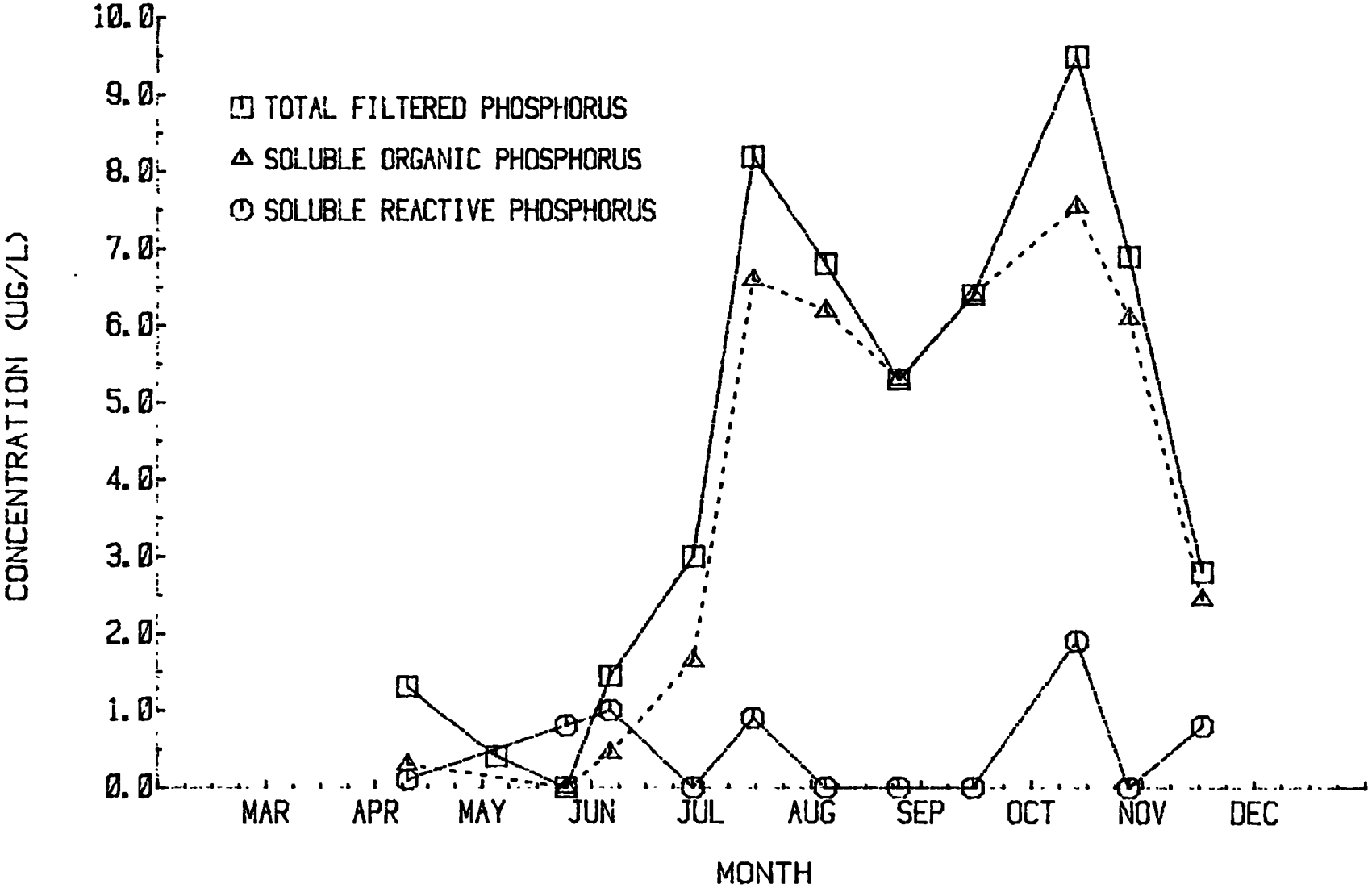


FIGURE 23 WESTERN BASIN MEDIAN TOTAL FILTERED PHOSPHORUS, SOLUBLE ORGANIC PHOSPHORUS AND SOLUBLE REACTIVE PHOSPHORUS CONCENTRATIONS, 1986

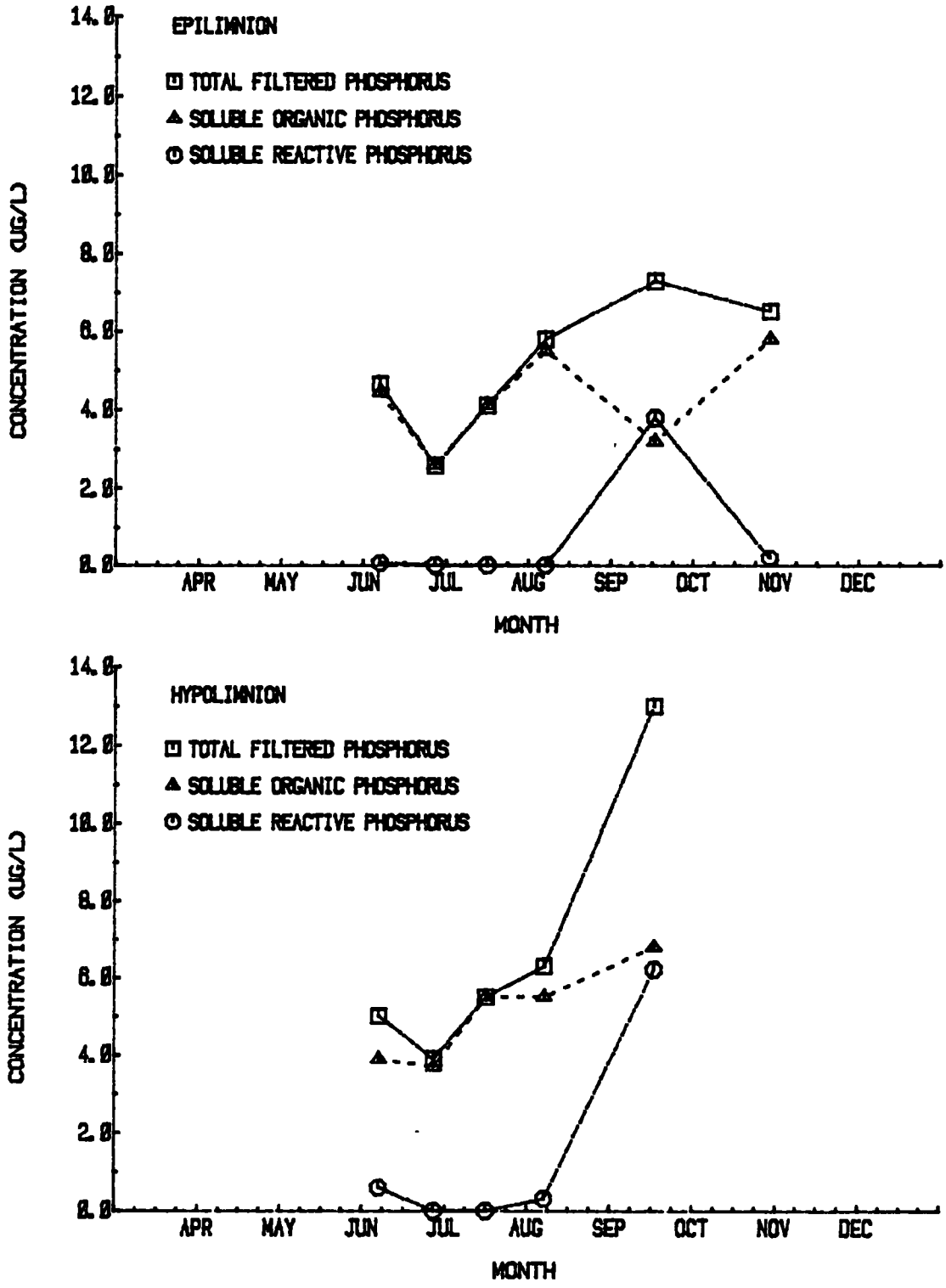


FIGURE 24 CENTRAL BASIN MEDIAN TOTAL FILTERED PHOSPHORUS, SOLUBLE ORGANIC PHOSPHORUS AND SOLUBLE REACTIVE PHOSPHORUS CONCENTRATIONS, 1986

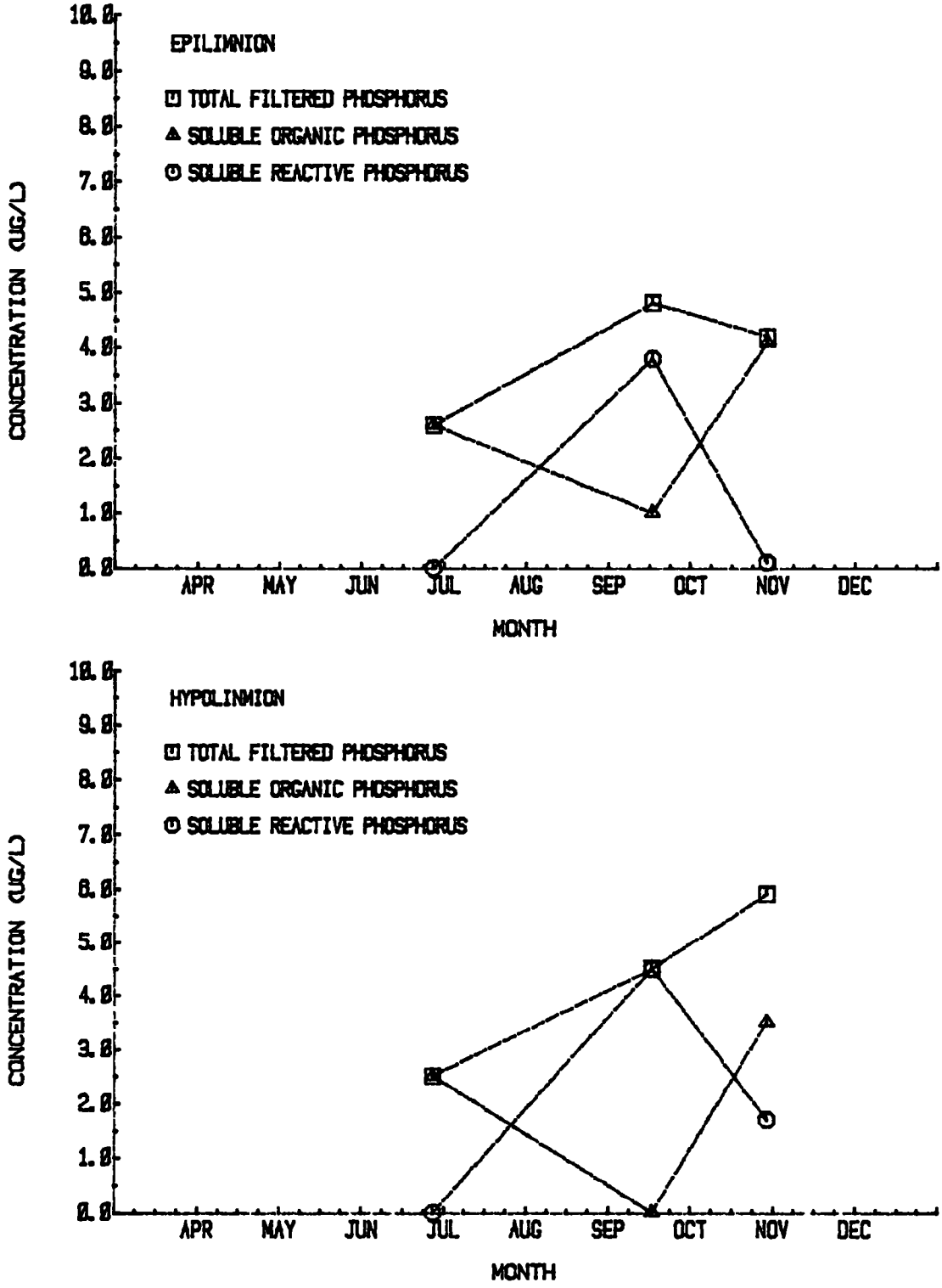


FIGURE 25 EASTERN BASIN MEDIAN TOTAL FILTERED PHOSPHORUS, SOLUBLE ORGANIC PHOSPHORUS AND SOLUBLE REACTIVE PHOSPHORUS CONCENTRATIONS, 1986

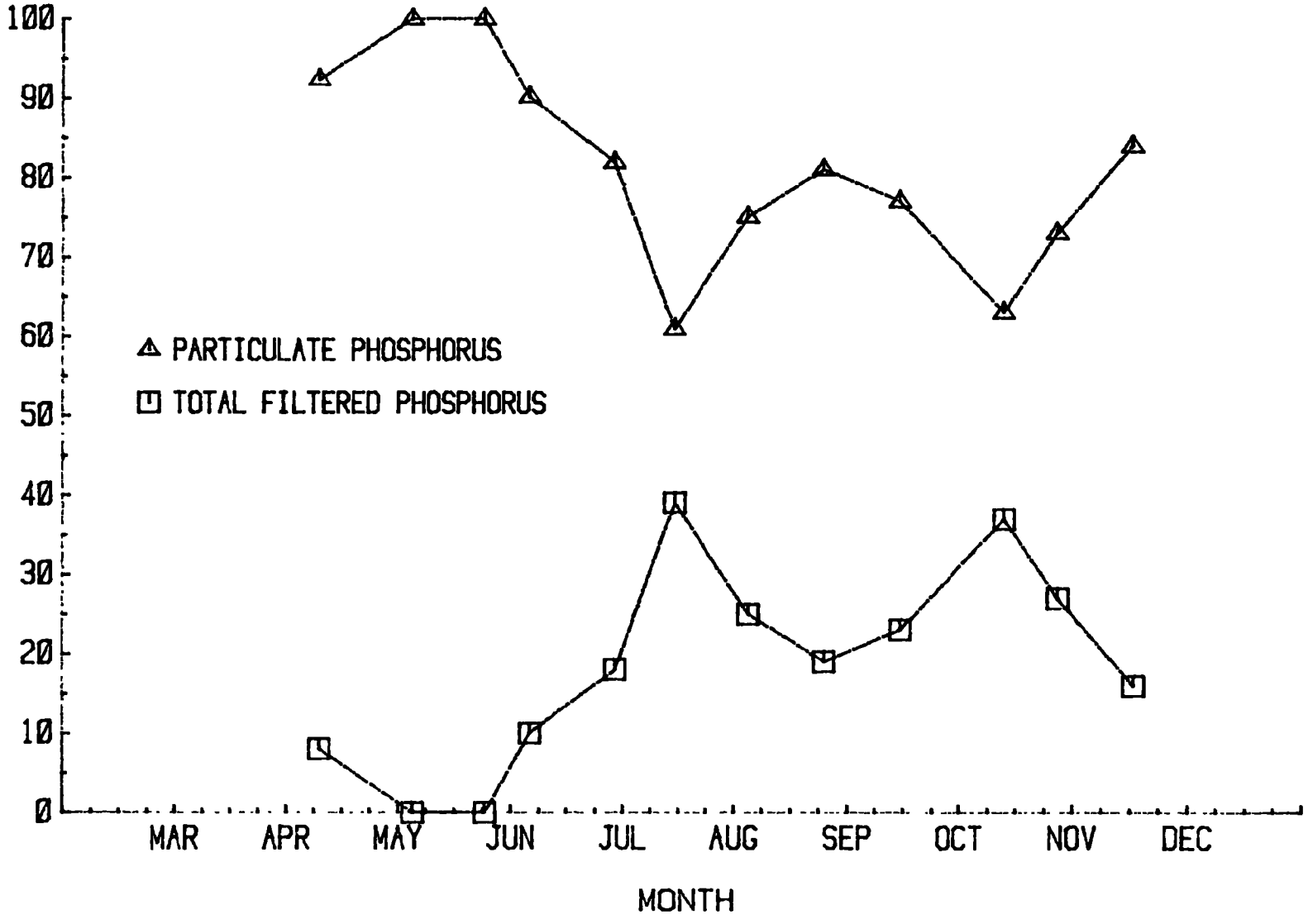


FIGURE 26 WESTERN BASIN MEDIAN PERCENT COMPOSITION OF PARTICULATE PHOSPHORUS AND TOTAL FILTERED PHOSPHORUS, 1986

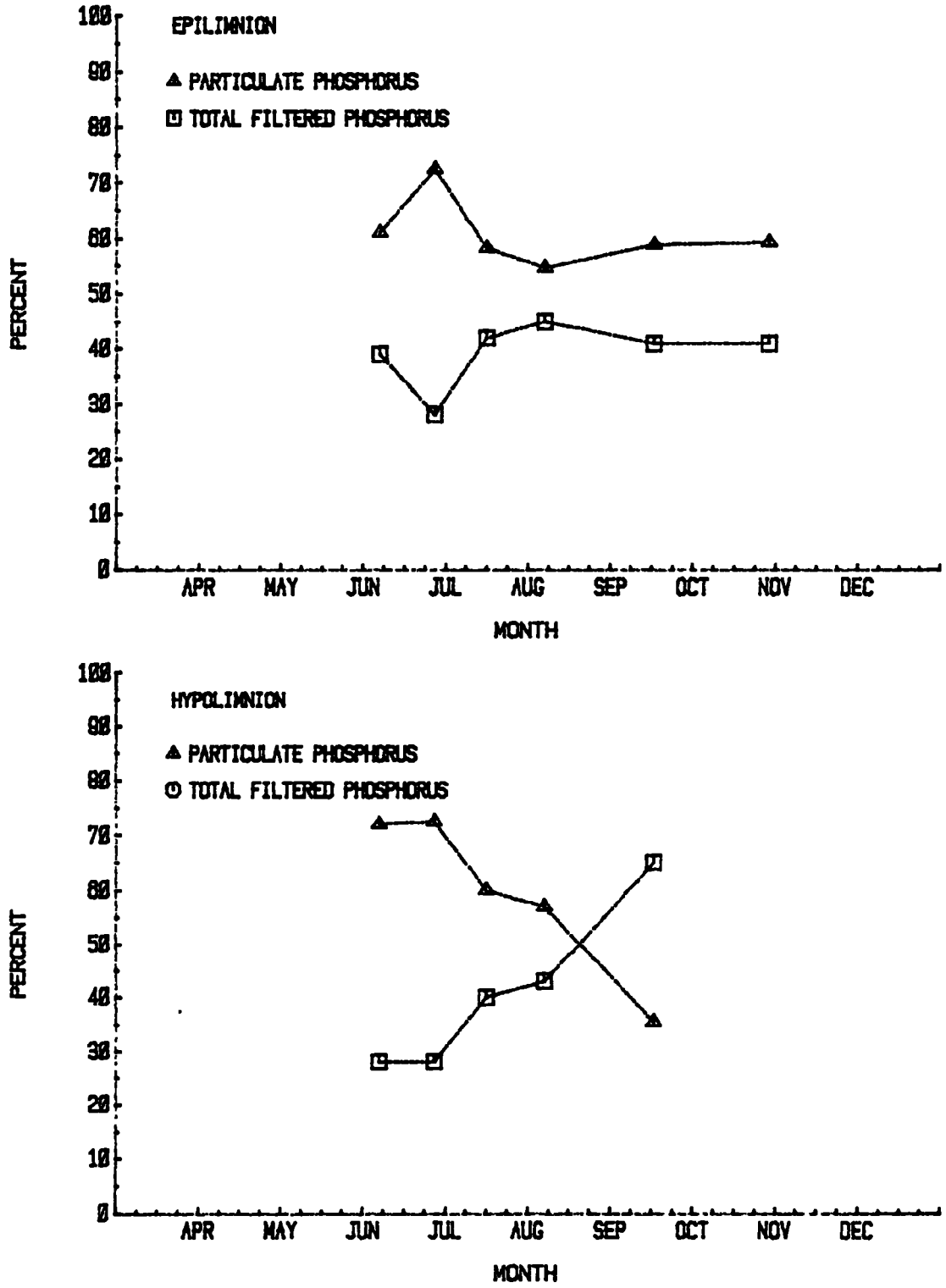


FIGURE 27 CENTRAL BASIN MEDIAN PERCENT COMPOSITION OF PARTICULATE PHOSPHORUS AND TOTAL FILTERED PHOSPHORUS, 1986

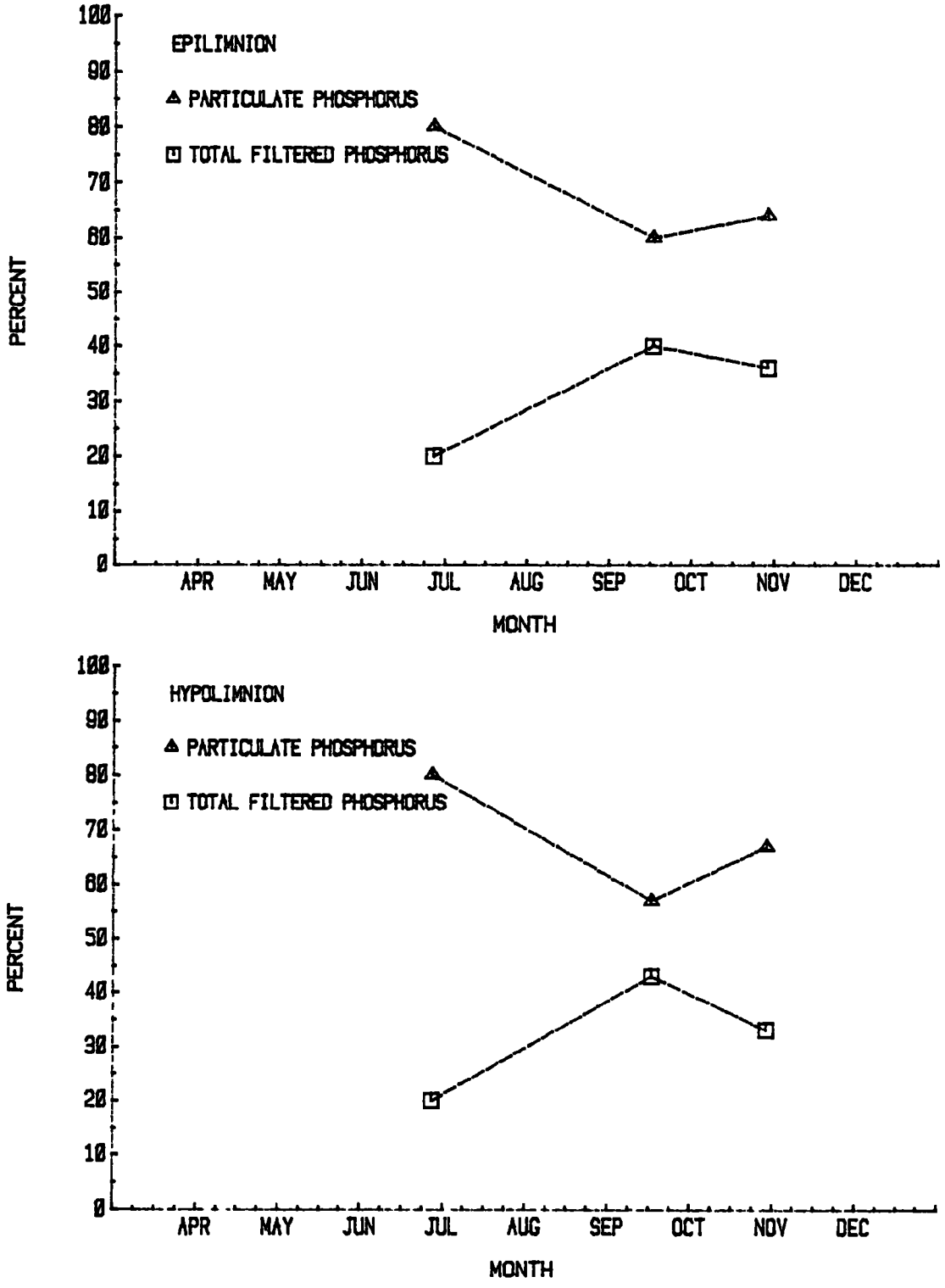


FIGURE 28 EASTERN BASIN MEDIAN PERCENT COMPOSITION OF PARTICULATE PHOSPHORUS AND TOTAL FILTERED PHOSPHORUS, 1986

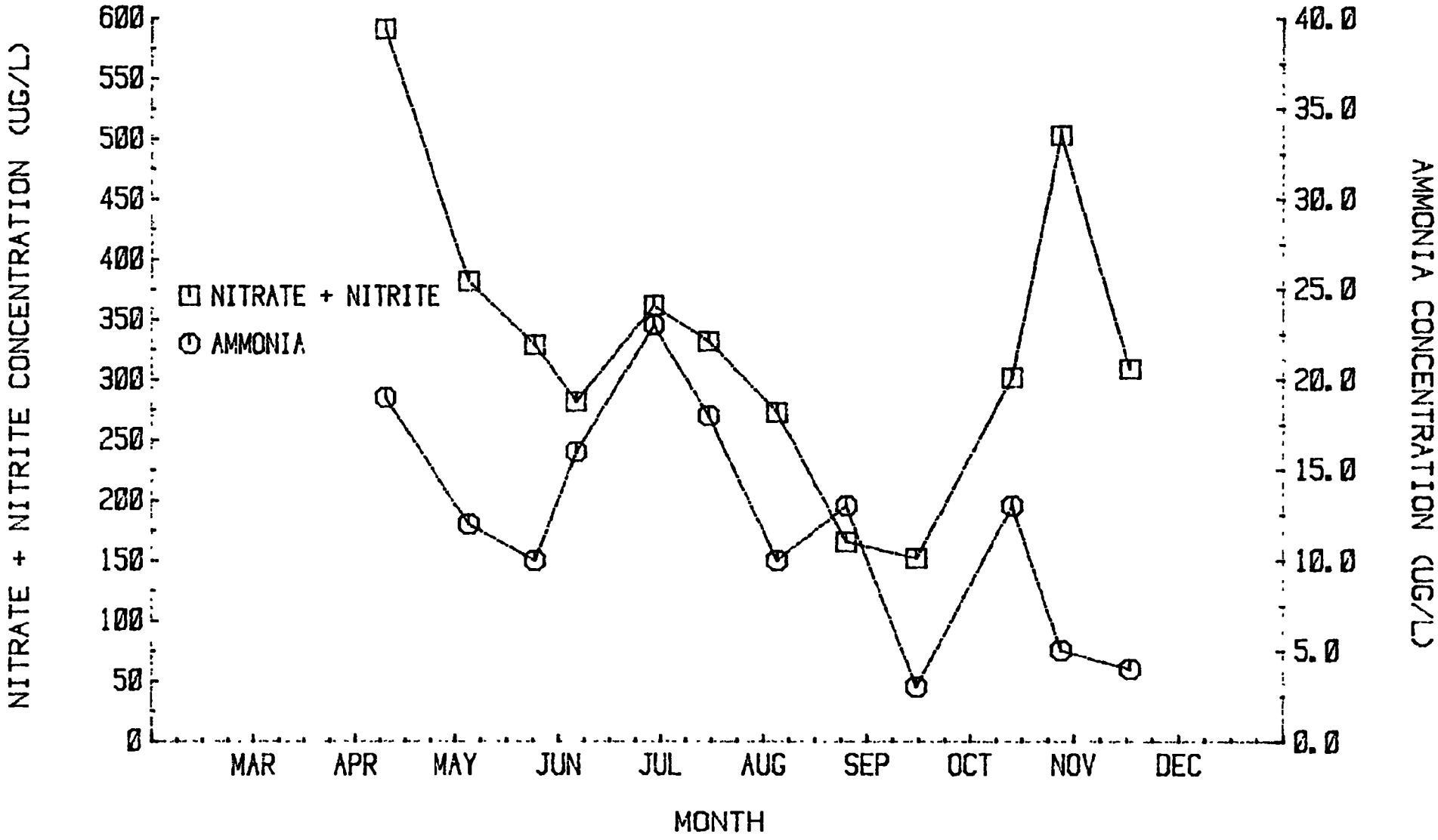


FIGURE 29 WESTERN BASIN MEDIAN NITRATE PLUS NITRITE AND AMMONIA NITROGEN CONCENTRATIONS, 1986

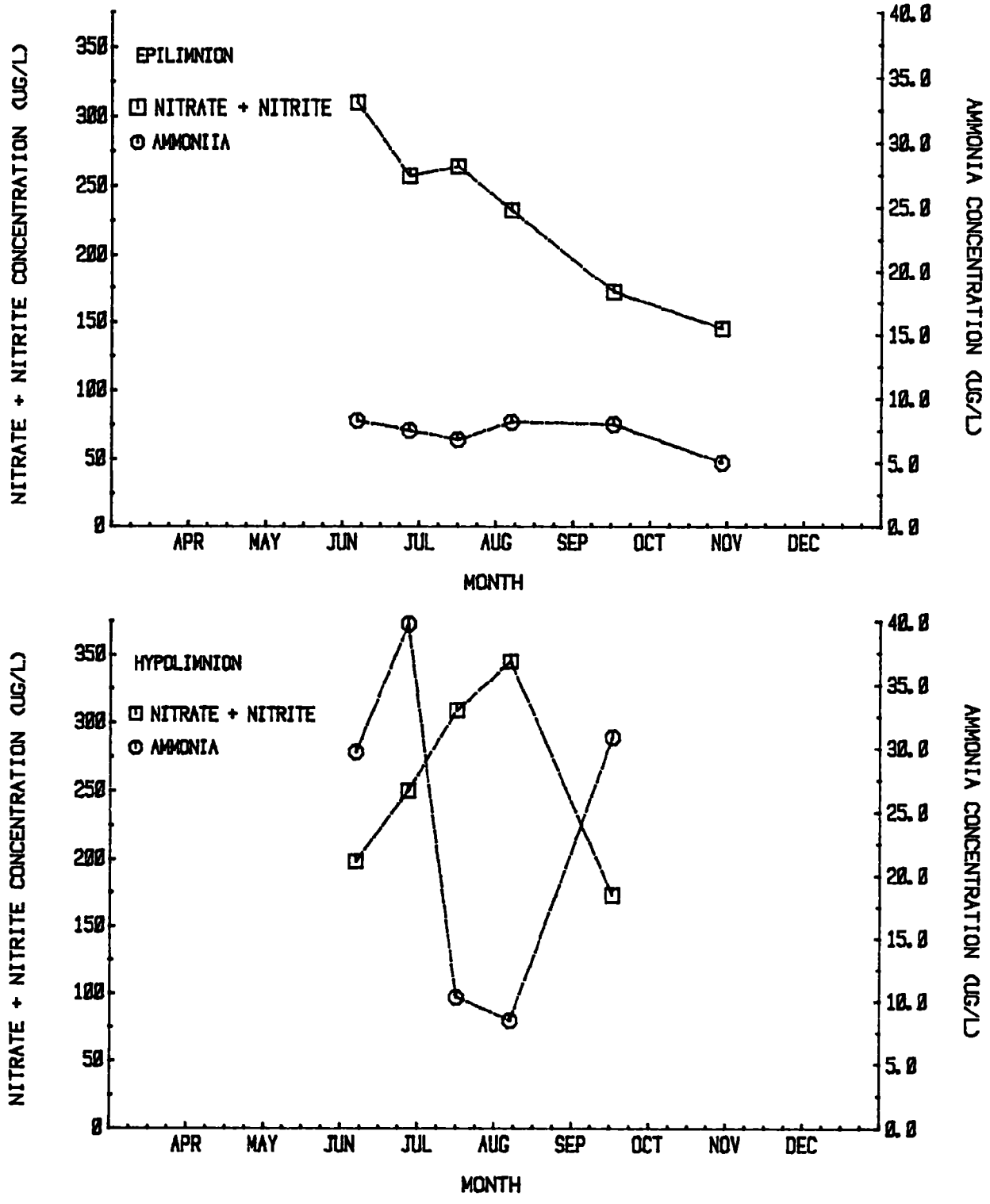


FIGURE 30 CENTRAL BASIN MEDIAN NITRATE PLUS NITRITE AND AMMONIA NITROGEN CONCENTRATIONS, 1986

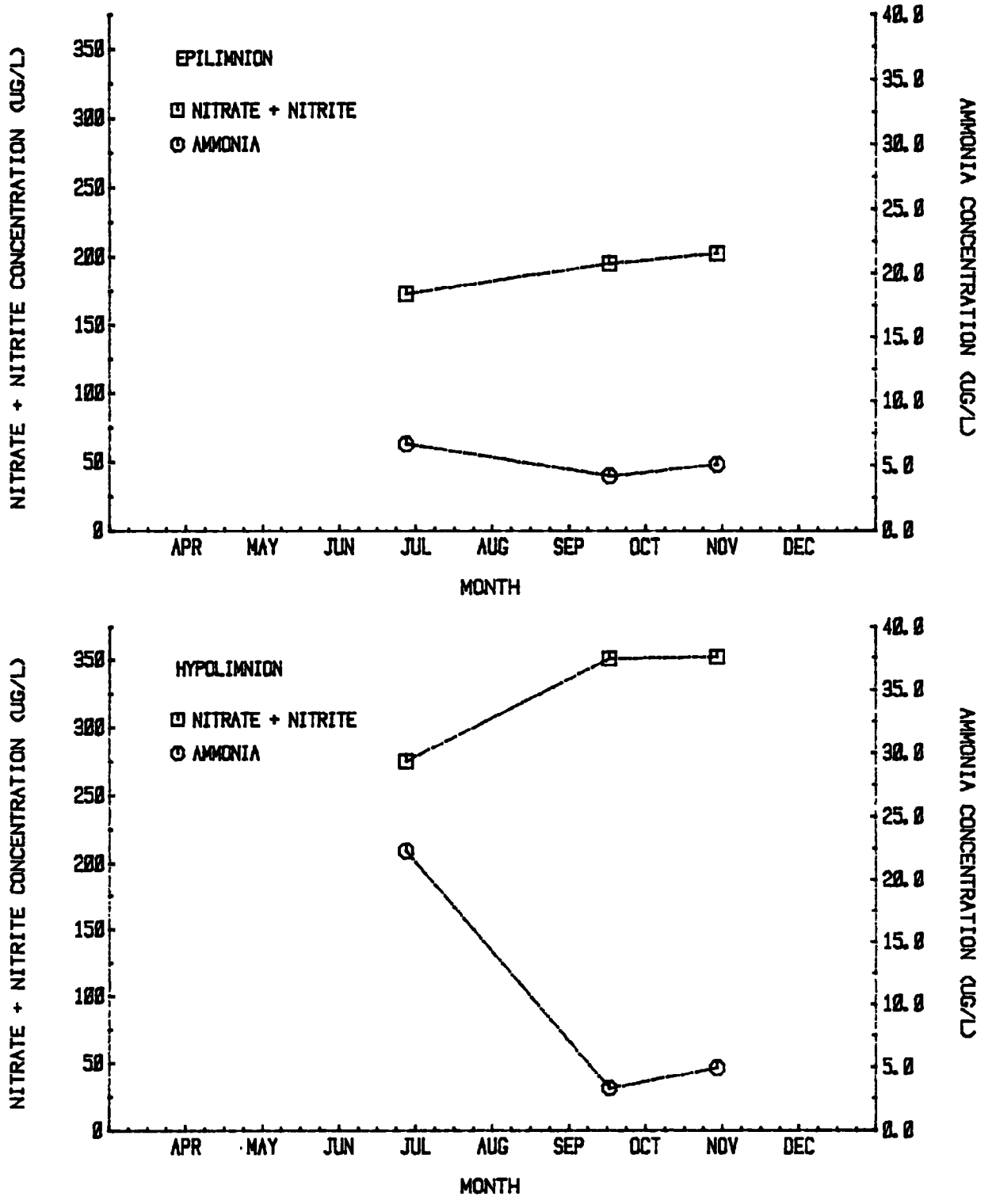


FIGURE 31 EASTERN BASIN MEDIAN NITRATE PLUS NITRITE AND AMMONIA NITROGEN CONCENTRATIONS, 1986

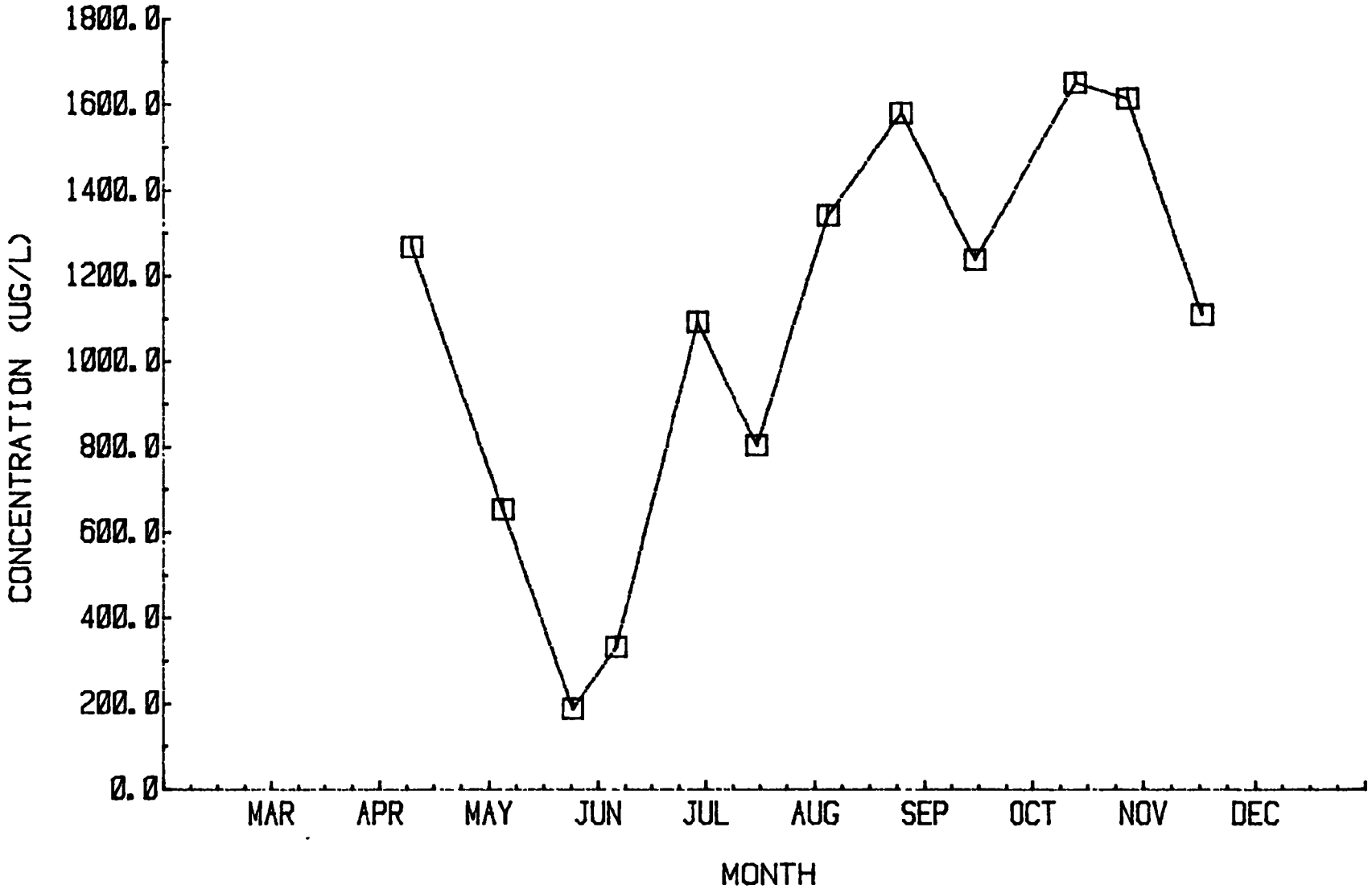


FIGURE 32 WESTERN BASIN MEDIAN SOLUBLE REACTIVE SILICA CONCENTRATIONS, 1986

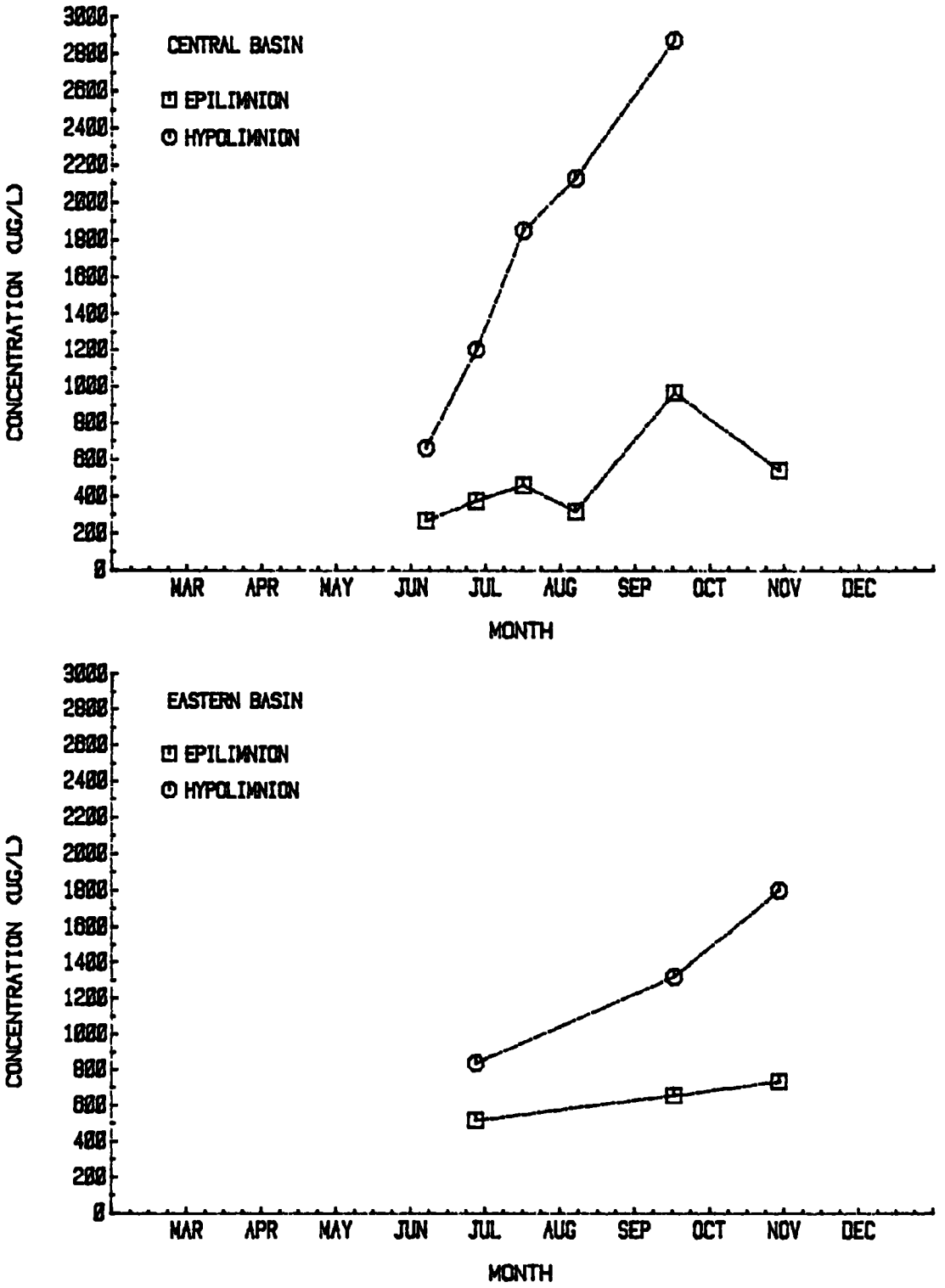


FIGURE 33 CENTRAL AND EASTERN BASIN MEDIAN SOLUBLE REACTIVE SILICA CONCENTRATIONS, 1986

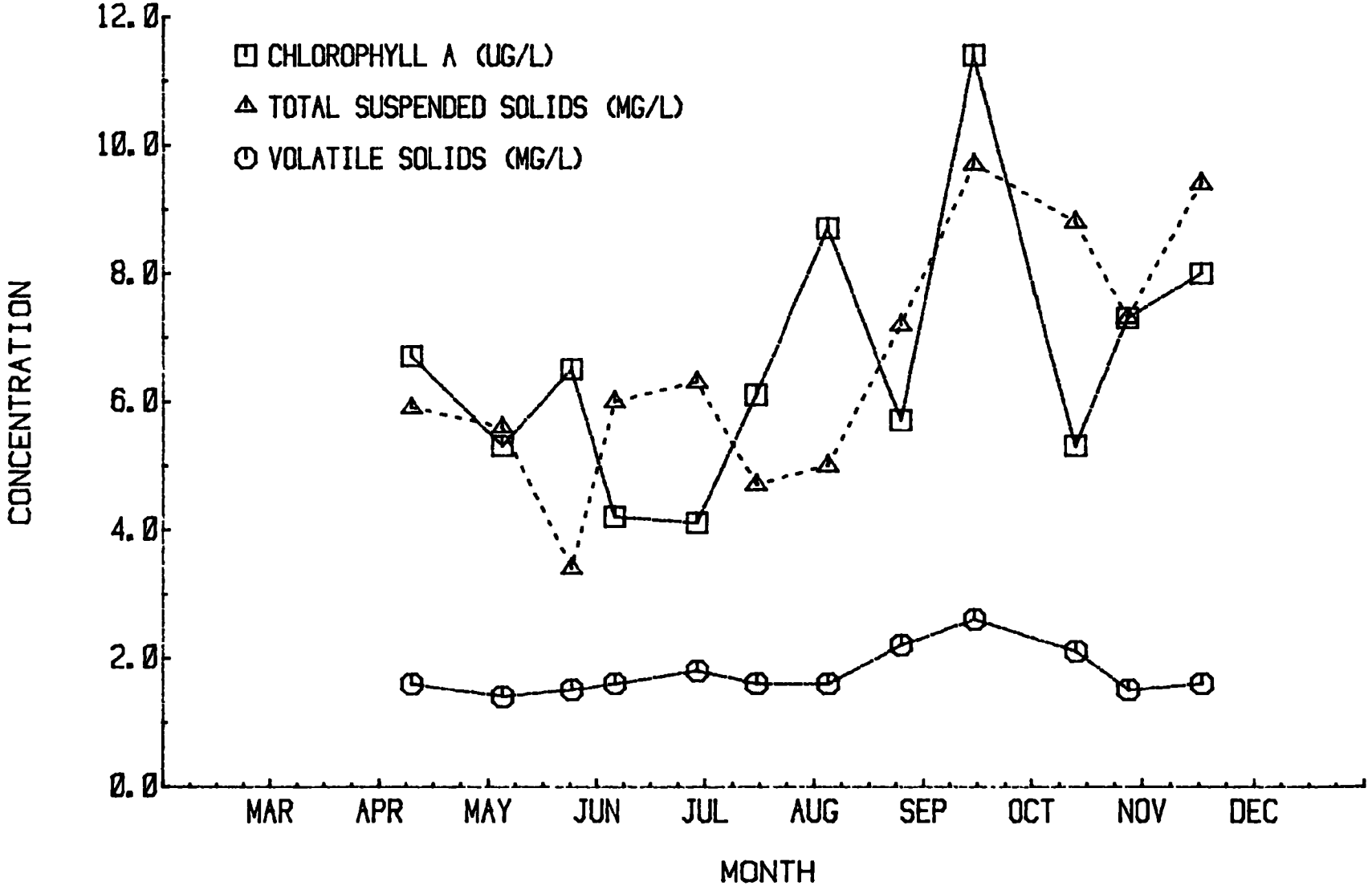


FIGURE 34 WESTERN BASIN MEDIAN CHLOROPHYLL A, TOTAL SUSPENDED SOLIDS AND VOLATILE SOLIDS CONCENTRATIONS, 1986

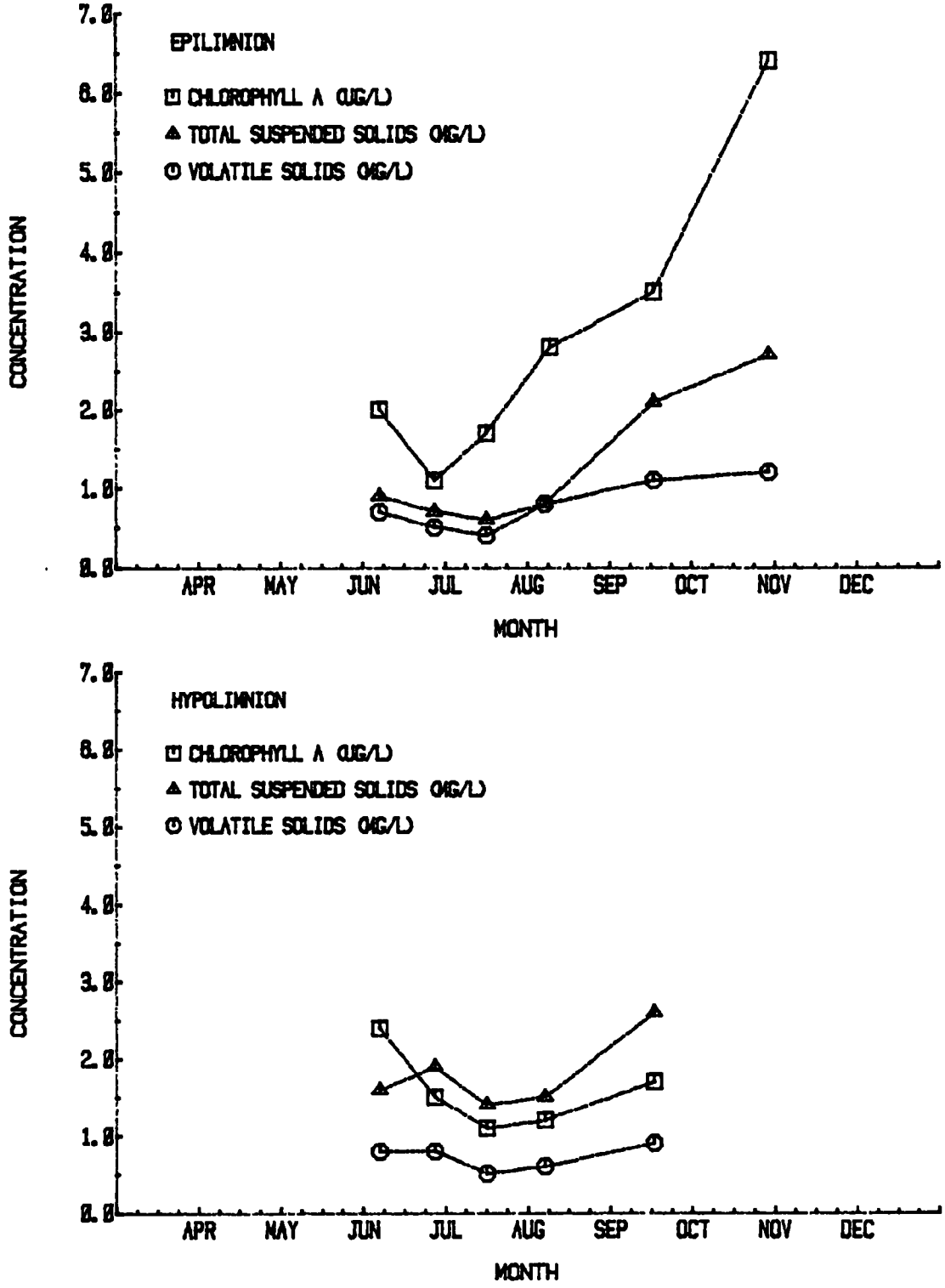


FIGURE 35 CENTRAL BASIN MEDIAN CHLOROPHYLL A, TOTAL SUSPENDED SOLIDS AND VOLATILE SOLIDS CONCENTRATIONS, 1986

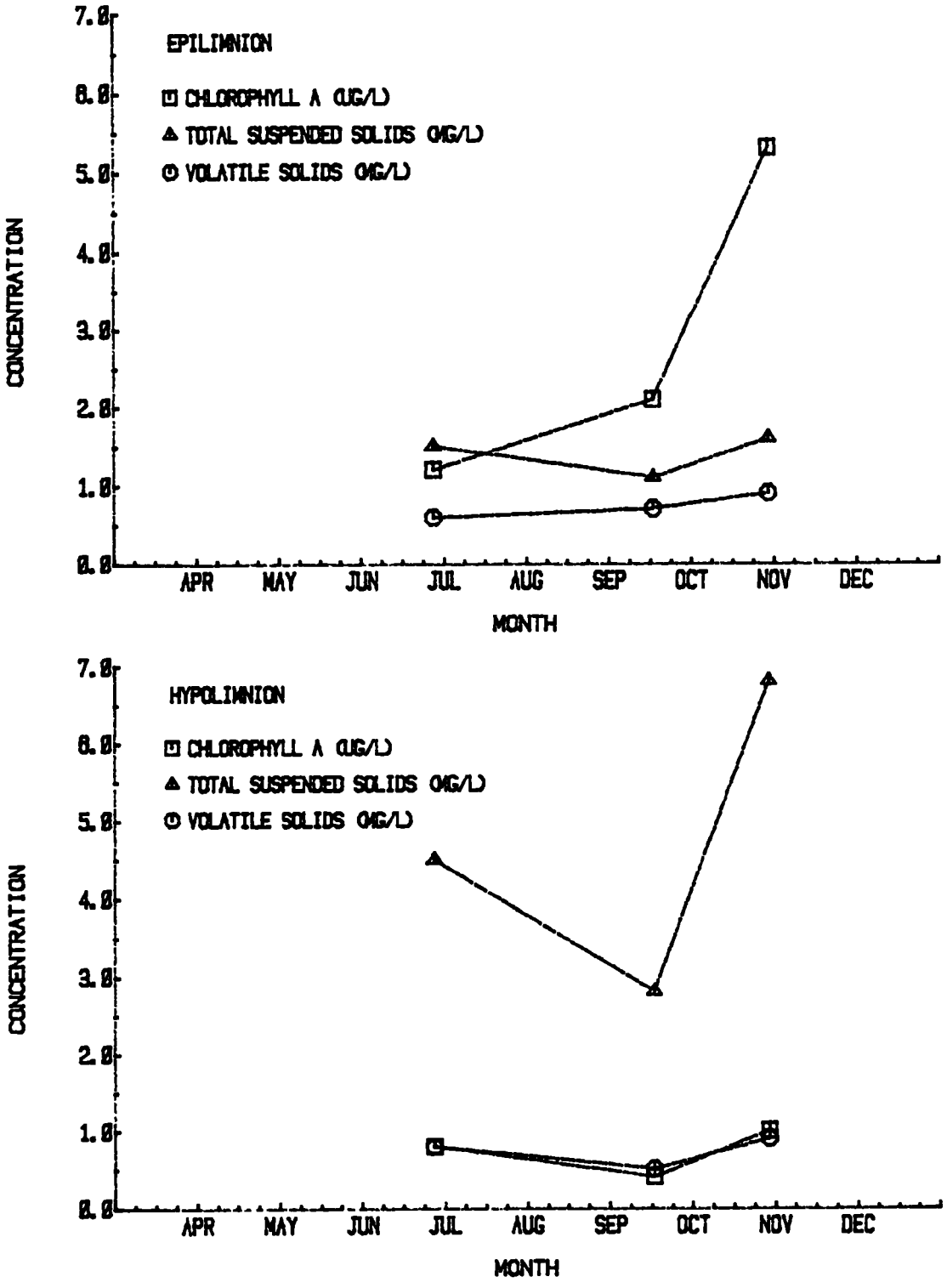


FIGURE 36 EASTERN BASIN MEDIAN CHLOROPHYLL A, TOTAL SUSPENDED SOLIDS AND VOLATILE SOLIDS CONCENTRATIONS, 1986

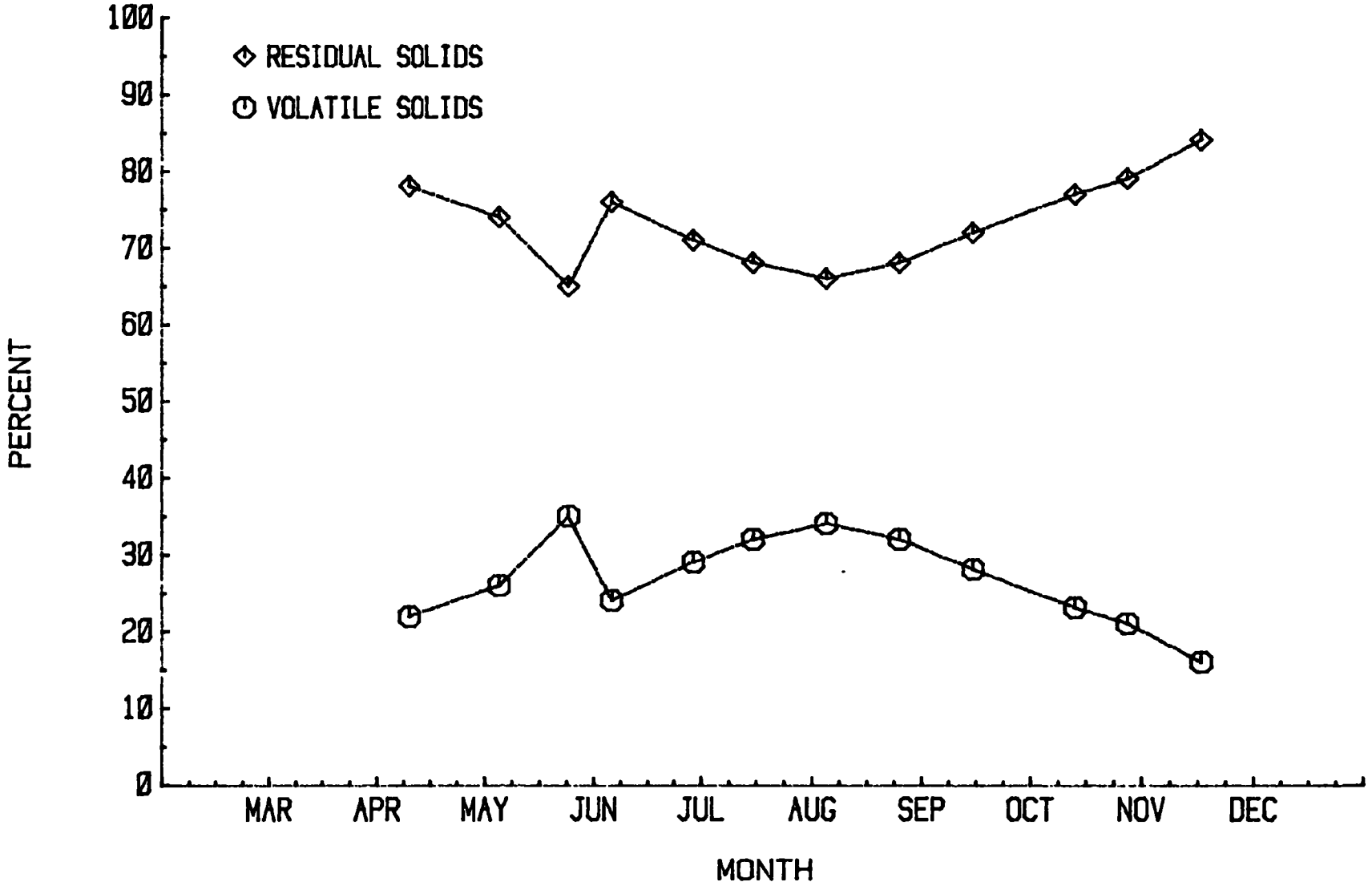


FIGURE 37 WESTERN BASIN MEDIAN PERCENT COMPOSITION OF RESIDUAL AND VOLATILE SOLIDS, 1986

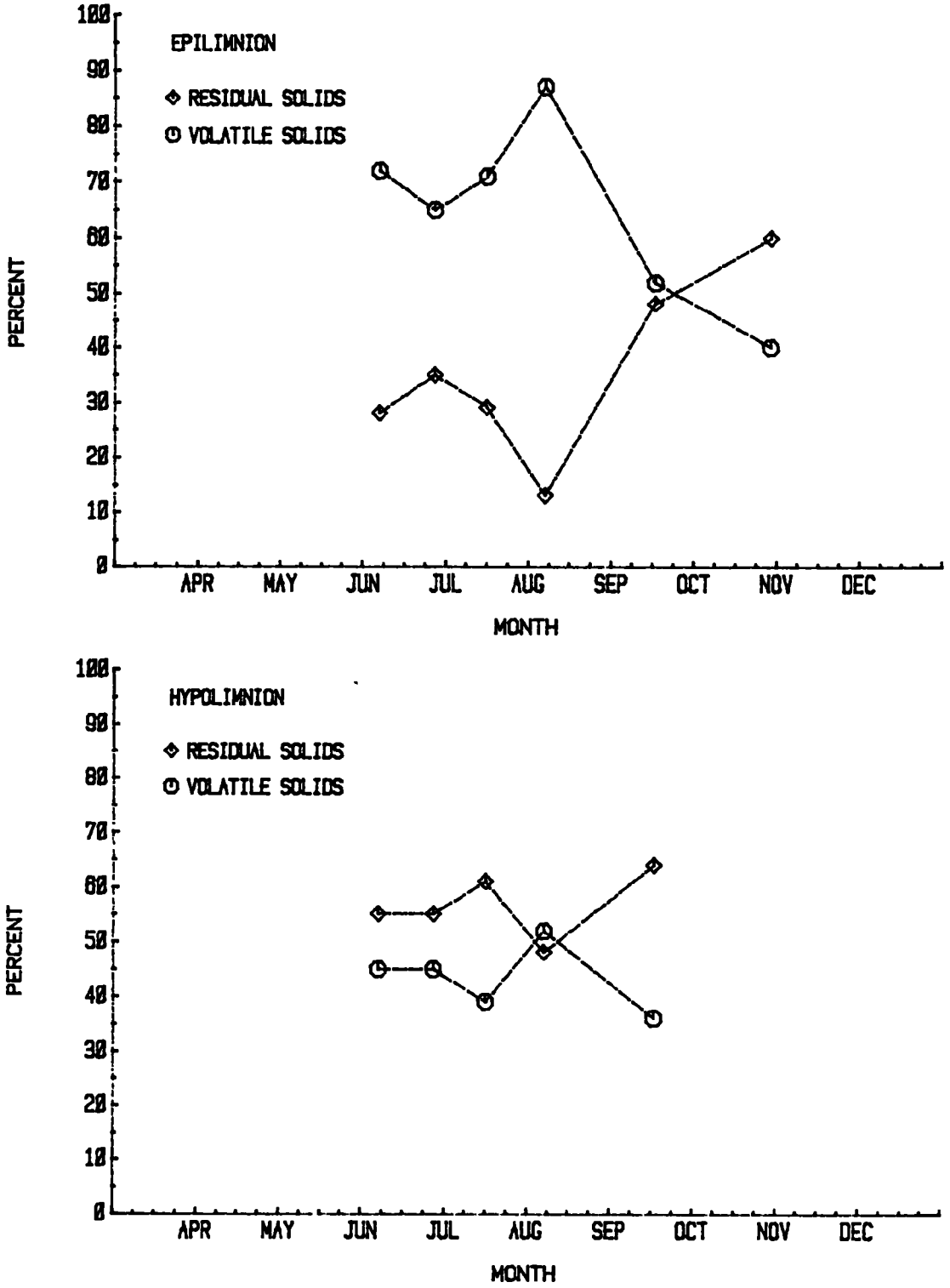


FIGURE 38 CENTRAL BASIN MEDIAN PERCENT COMPOSITION OF RESIDUAL AND VOLATILE SOLIDS, 1986

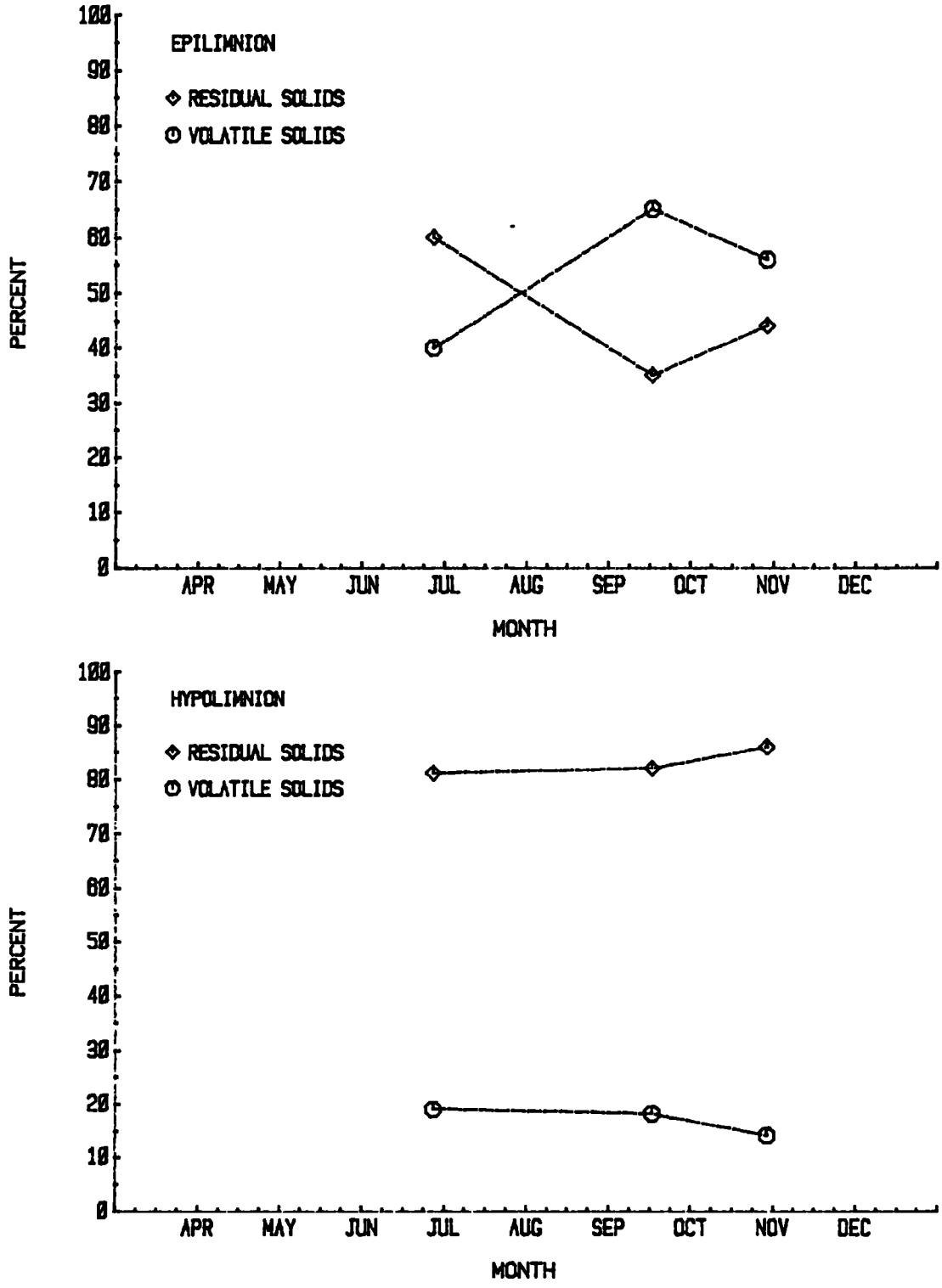


FIGURE 39 EASTERN BASIN MEDIAN PERCENT COMPOSITION OF RESIDUAL AND VOLATILE SOLIDS, 1986

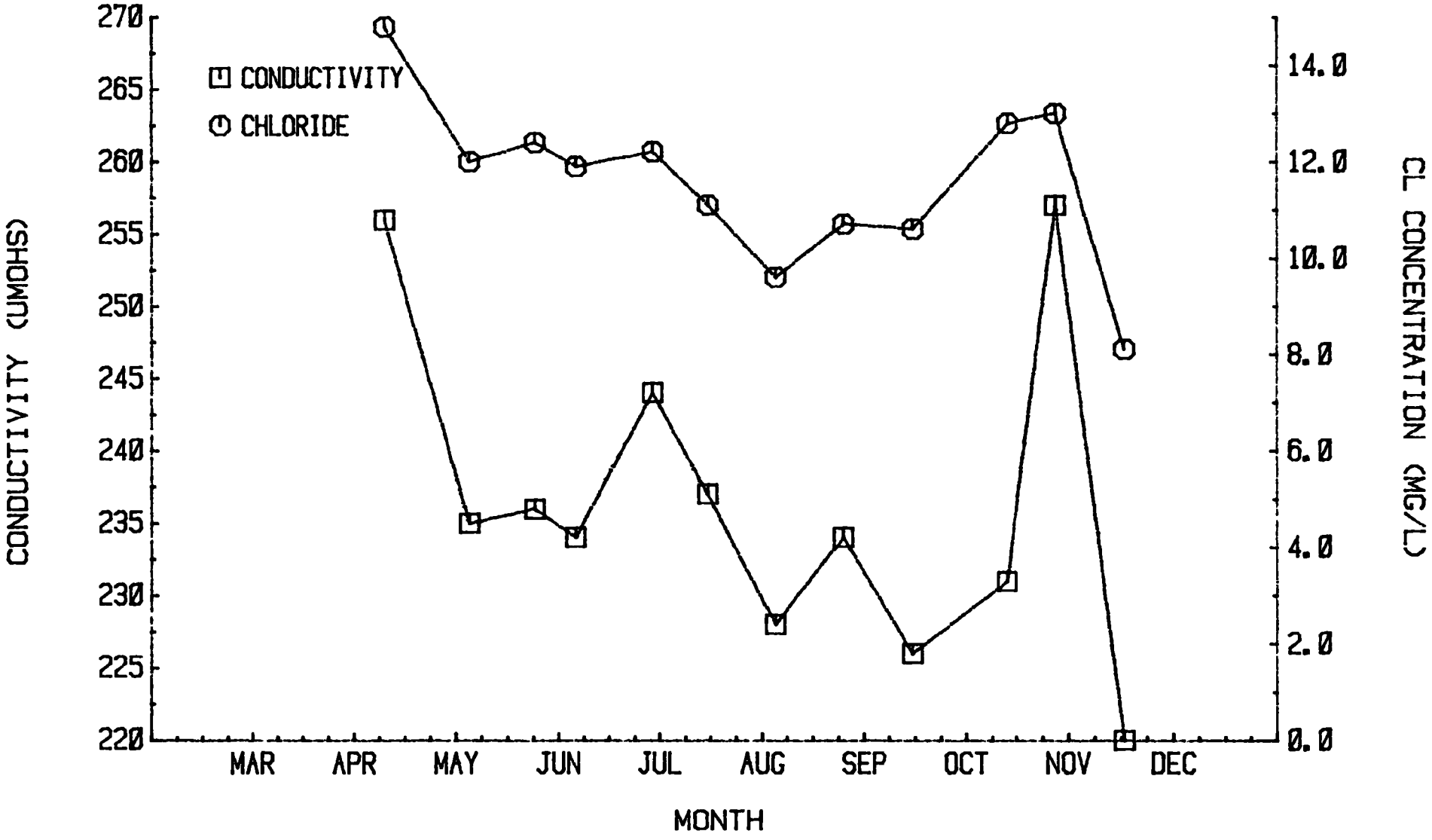


FIGURE 40 WESTERN BASIN MEDIAN CONDUCTIVITY AND CHLORIDE CONCENTRATIONS, 1986

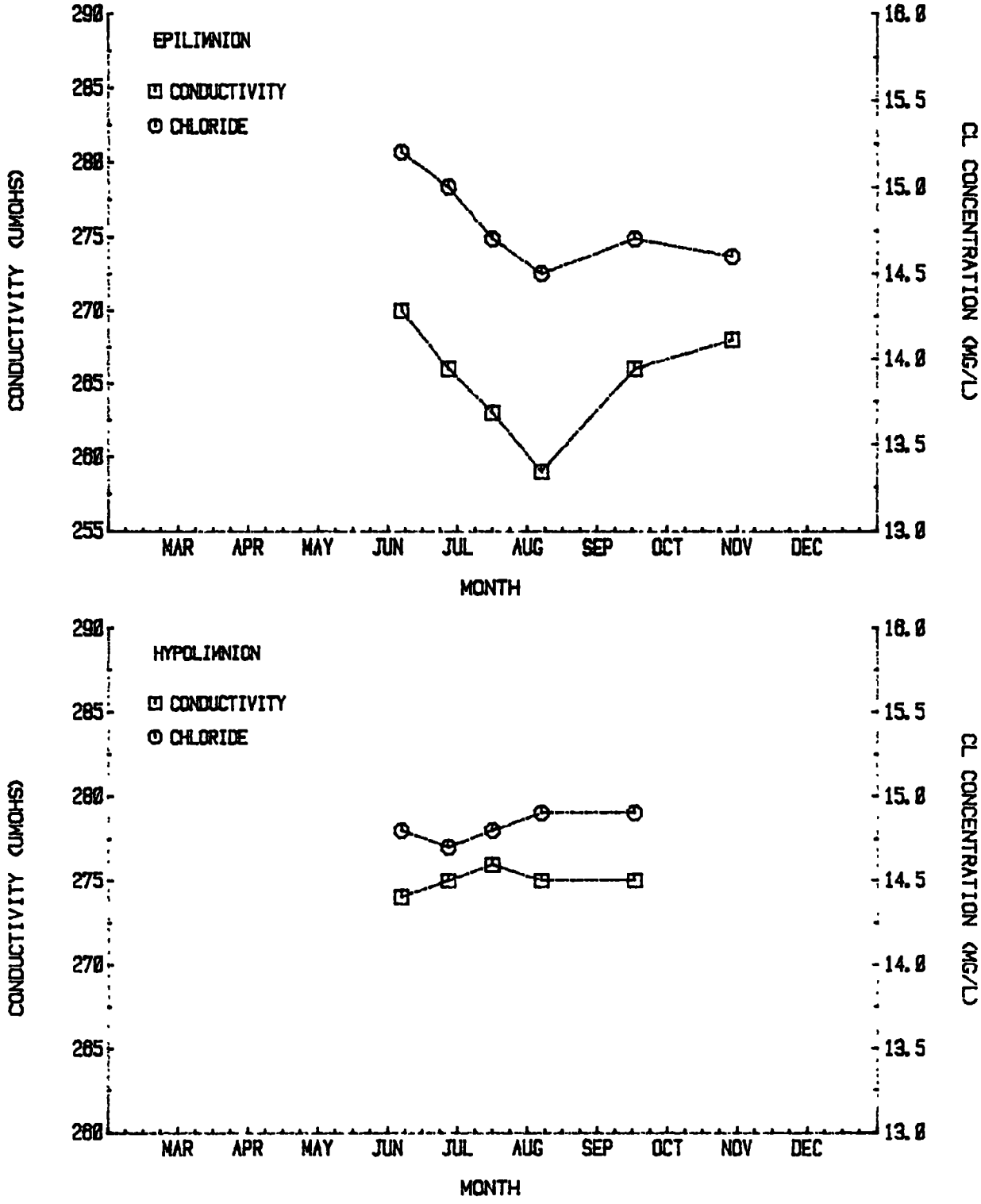


FIGURE 41 CENTRAL BASIN MEDIAN CONDUCTIVITY AND CHLORIDE CONCENTRATIONS, 1986

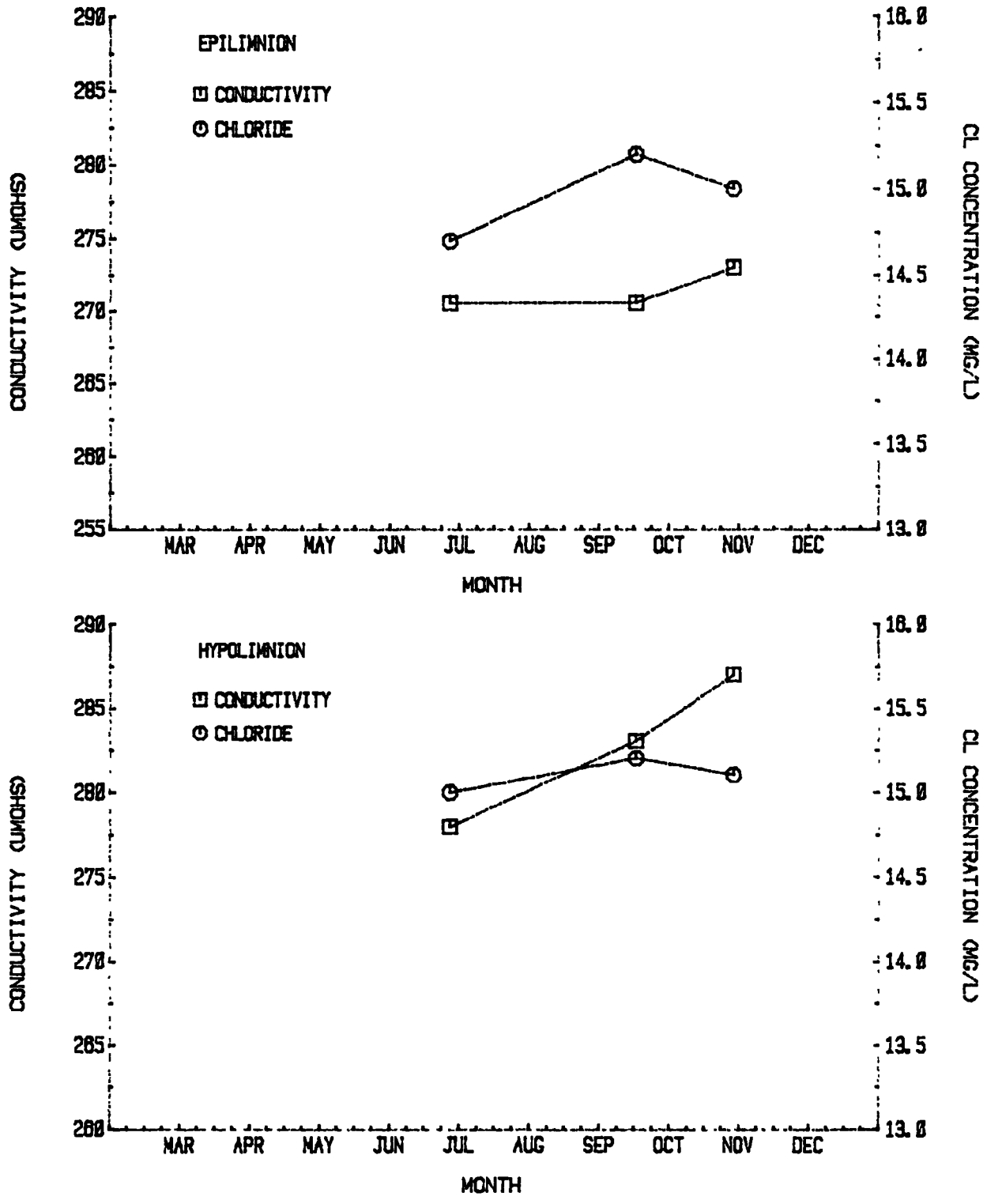


FIGURE 42 EASTERN BASIN MEDIAN CONDUCTIVITY AND CHLORIDE CONCENTRATIONS, 1986

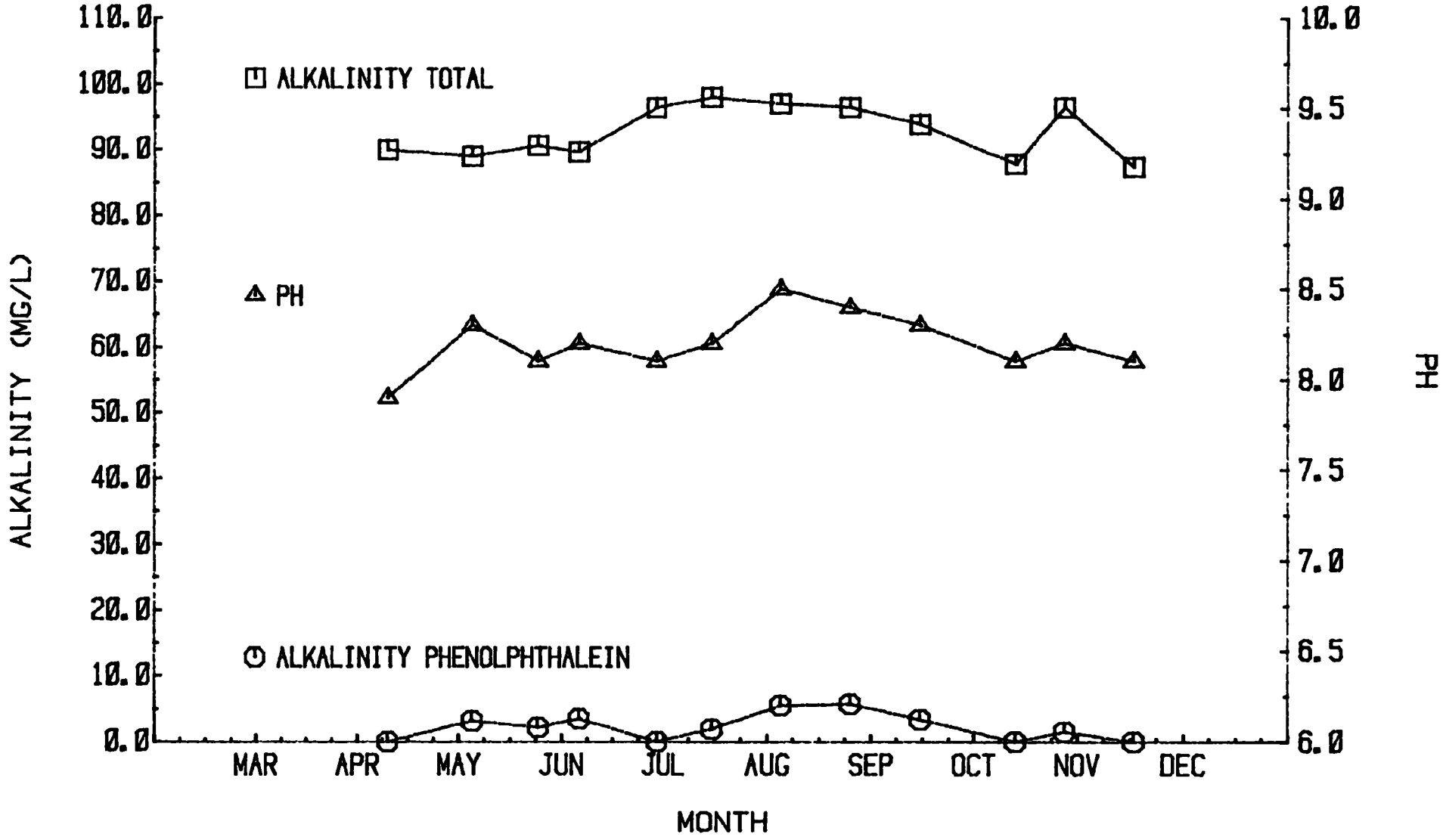


FIGURE 43 WESTERN BASIN MEDIAN ALKALINITY AND PH CONCENTRATIONS, 1986

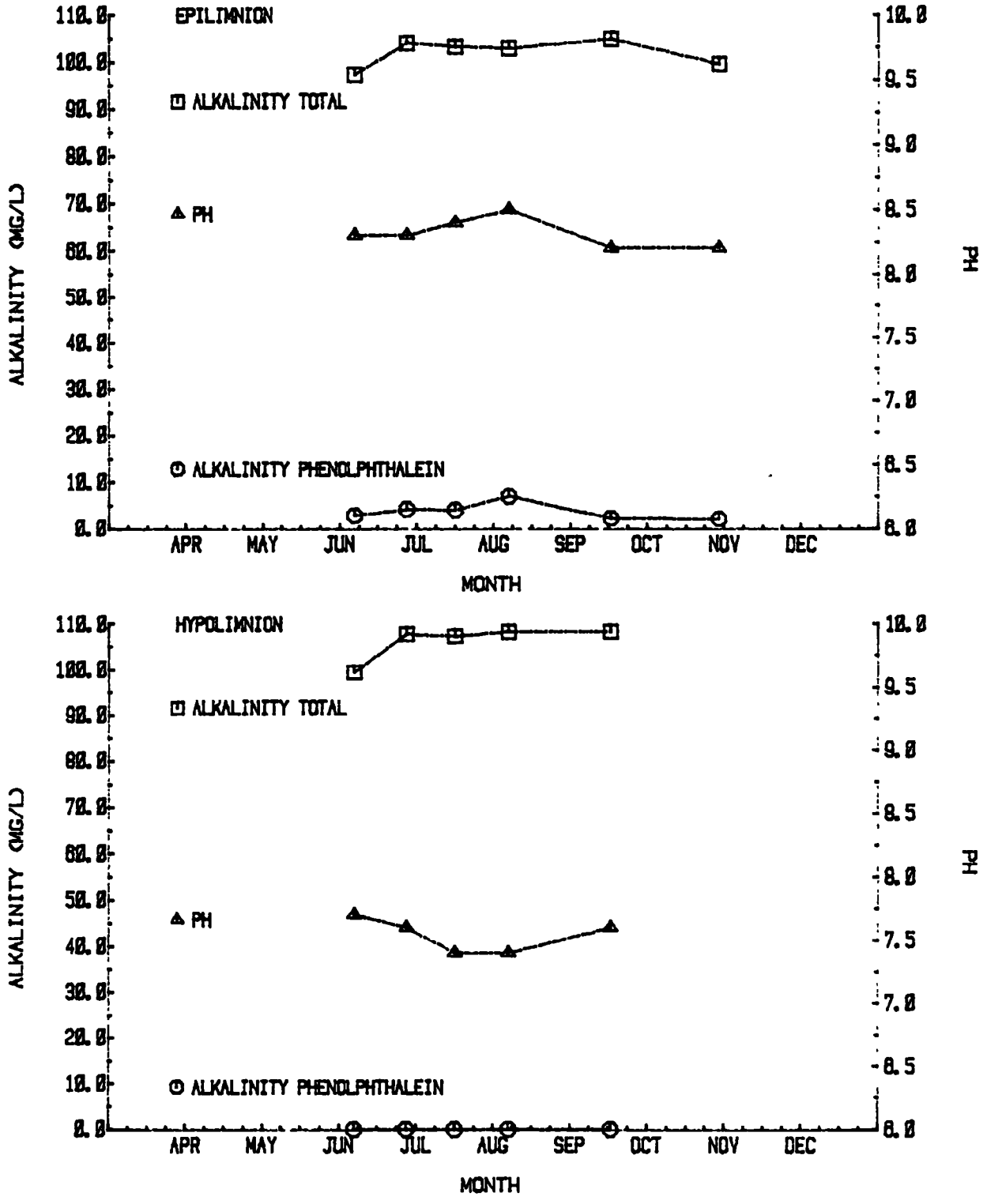


FIGURE 44 CENTRAL BASIN MEDIAN ALKALINITY AND PH CONCENTRATIONS, 1986

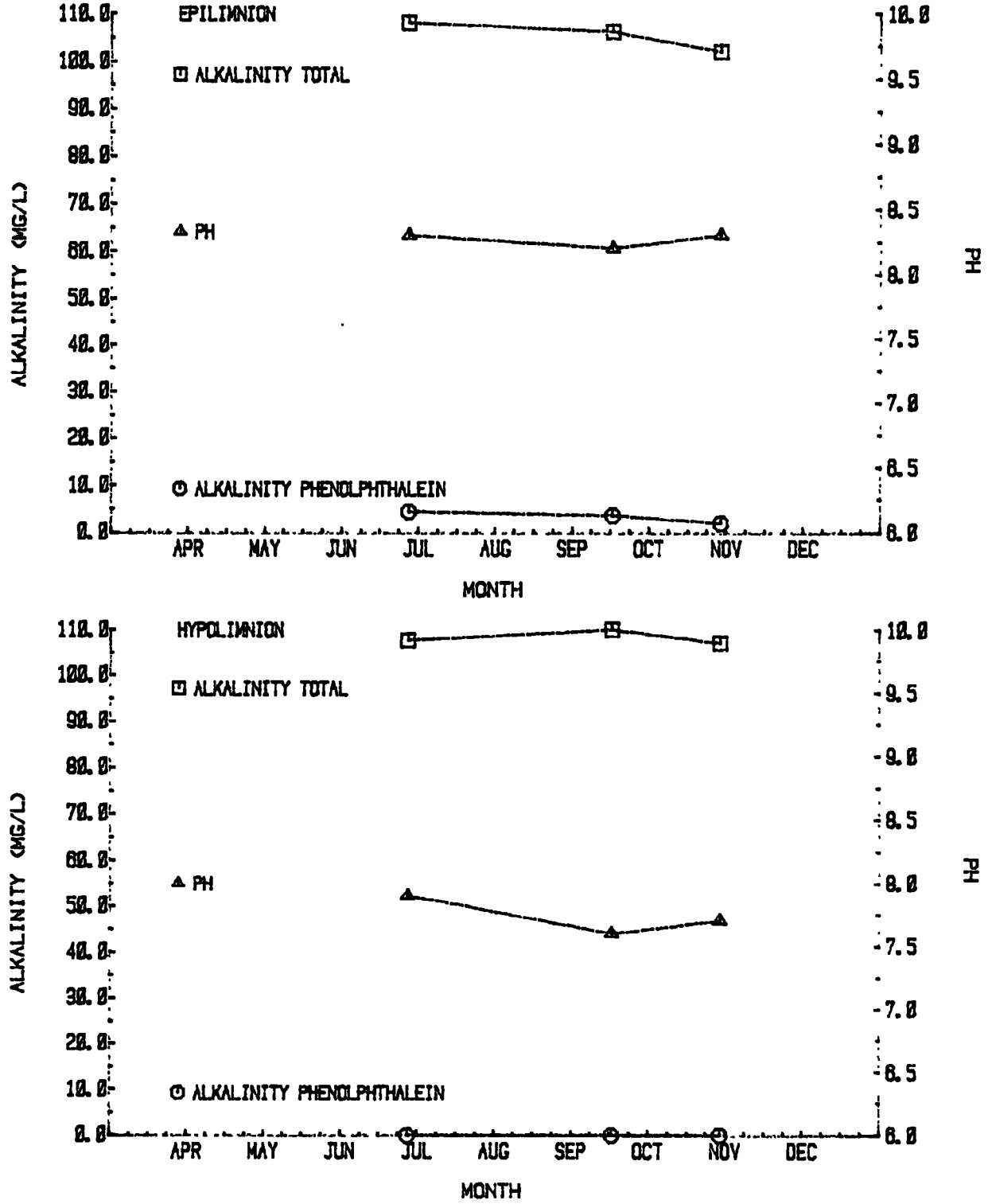


FIGURE 45 EASTERN BASIN MEDIAN ALKALINITY AND PH CONCENTRATIONS, 1986

APPENDIX A

```
************
* TEMP     *
************
                                               MAXIMUM          25.6000004
VARIABLE NUMBER . . . . . .       2            MINIMUM           4.6999998
NUMBER OF DISTINCT VALUES .      81            RANGE            20.8999996
NUMBER OF VALUES COUNTED. .     144            VARIANCE         38.1536407
NUMBER OF VALUES NOT COUNTED      0            ST.DEV.           6.1768632
                                               (Q3-Q1)/2         5.1500001

LOCATION ESTIMATES                                      ST.ERROR
                  MEAN              16.1881943          0.5147386
                  MEDIAN            16.2999992          0.5773506
                  MODE              15.8999996
```

```
                       H     EACH 'H'
 H    H               HHHH   REPRESENTS
 HH    H HH    H HHHH          2
 HH  H H HHHH H HHHH        COUNT(S)
 HH  HHH HHHH H HHHH
 HH  HHH HHHHHH HHHH
 HHH HHHHHHHHHH HHHHH
L--------------------U

EACH '-' ABOVE =        1.0000
              L=        5.0000
              U=       26.0000

                                                 Q1=   11.8000002
                        VALUE   VALUE/S.E.       Q3=   22.1000004
            SKEWNESS    -0.30        -1.47       S--   10.0113316
            KURTOSIS    -1.12        -2.74       S+=   22.3650570

                        EACH '.' BELOW =        0.2000
```

```
                           S        Q                                                 Q S
M                          -        1                  M M                            3 +               M
I......................................................O.F..............................................A
N                                                      D A                                              X
                                                       E N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
4.700	2	1.4	1.4	12.400	1	0.7	27.8	17.300	4	2.8	56.9	22.500	1	0.7	77.1
4.900	2	1.4	2.8	12.500	3	2.1	29.9	17.900	2	1.4	58.3	22.700	2	1.4	78.5
5.600	1	0.7	3.5	12.600	2	1.4	31.2	18.600	1	0.7	59.0	22.800	1	0.7	79.2
5.700	3	2.1	5.6	12.800	1	0.7	31.9	18.700	1	0.7	59.7	22.900	1	0.7	79.9
5.800	2	1.4	6.9	12.900	3	2.1	34.0	18.900	1	0.7	60.4	23.000	4	2.8	82.6
6.200	2	1.4	8.3	13.100	1	0.7	34.7	19.100	2	1.4	61.8	23.100	1	0.7	83.3
6.500	1	0.7	9.0	14.000	1	0.7	35.4	19.200	1	0.7	62.5	23.200	4	2.8	86.1
6.600	3	2.1	11.1	14.100	1	0.7	36.1	19.300	1	0.7	63.2	23.300	2	1.4	87.5
6.800	4	2.8	13.9	14.200	1	0.7	36.8	19.500	1	0.7	63.9	23.400	4	2.8	90.3
7.000	2	1.4	15.3	14.300	1	0.7	37.5	19.600	3	2.1	66.0	23.500	1	0.7	91.0
7.300	2	1.4	16.7	14.500	2	1.4	38.9	19.700	1	0.7	66.7	23.600	1	0.7	91.7
10.100	1	0.7	17.4	14.700	1	0.7	39.6	19.800	1	0.7	67.4	24.100	2	1.4	93.1
10.300	3	2.1	19.4	14.900	2	1.4	41.0	21.100	1	0.7	68.1	24.200	3	2.1	95.1
10.400	2	1.4	20.8	15.000	1	0.7	41.7	21.300	1	0.7	68.7	24.400	1	0.7	95.8
10.700	1	0.7	21.5	15.100	1	0.7	42.4	21.400	1	0.7	69.4	24.700	2	1.4	97.2
11.000	1	0.7	22.2	15.900	6	4.2	46.5	21.500	1	0.7	70.1	24.800	1	0.7	97.9
11.100	2	1.4	23.6	16.000	2	1.4	47.9	21.600	2	1.4	71.5	25.000	2	1.4	99.3
11.200	1	0.7	24.3	16.300	4	2.8	50.7	21.900	4	2.8	74.3	25.600	1	0.7	100.0
11.600	1	0.7	25.0	16.600	2	1.4	52.1	22.000	1	0.7	75.0				
12.000	1	0.7	25.7	16.700	2	1.4	53.5	22.200	1	0.7	75.7				
12.100	2	1.4	27.1	17.100	1	0.7	54.2	22.400	1	0.7	76.4				

```
************
* DO       *
************
```

VARIABLE NUMBER	3	MAXIMUM	13.5000000
NUMBER OF DISTINCT VALUES .	49	MINIMUM	6.4000001
NUMBER OF VALUES COUNTED. .	142	RANGE	7.0999999
NUMBER OF VALUES NOT COUNTED	2	VARIANCE	2.5955493
		ST.DEV.	1.6110709
		(Q3-Q1)/2	1.2500000

```
HH
HH
H HH   H
H HH   H          EACH 'H'
HHHH   H          REPRESENTS
HHHHHHHHH             2
HHHHHHHHH          COUNT(S)
HHHHHHHHHH
HHHHHHHHHHH
HHHHHHHHHHHHH
L--------------------U
```

EACH ':' ABOVE = 0.5000
L= 5.0000
U= 13.5000

LOCATION ESTIMATES

		ST.ERROR
MEAN	9.6542244	0.1351981
MEDIAN	9.4999996	0.1732050
MODE	NOT UNIQUE	

	VALUE	VALUE/S.E.
SKEWNESS	0.23	1.10
KURTOSIS	-0.74	-1.80

Q1- 8.5000000
Q3= 11.0000000
S-- 8.0431538
S+= 11.7652950

EACH '.' BELOW = 0.0750

```
      S   Q                 Q  S
M     -   1           M  M  3  +                 M
I.....................E...E.....................A
N                     D  A                       X
                      I  N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
6.400	2	1.4	1.4	8.500	6	4.2	26.8	9.800	1	0.7	78.5	11.500	4	2.8	85.9
6.700	1	0.7	2.1	8.600	2	1.4	28.2	10.000	4	2.8	81.3	11.600	2	1.4	87.3
6.900	3	2.1	4.2	8.700	5	3.5	31.7	10.100	2	1.4	82.7	11.800	4	2.8	90.1
7.400	5	3.5	7.7	8.800	4	2.8	34.5	10.200	5	3.5	86.2	11.900	1	0.7	90.8
7.600	3	2.1	9.9	8.900	5	3.5	38.0	10.300	1	0.7	86.9	12.000	3	2.1	93.0
7.700	1	0.7	10.6	9.000	3	2.1	40.1	10.400	1	0.7	87.6	12.200	3	2.1	95.1
7.800	6	4.2	14.8	9.100	4	2.8	43.0	10.500	1	0.7	88.3	12.400	2	1.4	96.5
7.900	2	1.4	16.2	9.200	5	3.5	46.5	10.600	5	3.5	91.8	12.500	1	0.7	97.2
8.000	3	2.1	18.3	9.300	2	1.4	47.9	10.800	3	2.1	93.9	12.800	2	1.4	98.6
8.100	2	1.4	19.7	9.400	5	3.5	51.4	11.000	2	1.4	95.4	13.500	2	1.4	100.0
8.200	2	1.4	21.1	9.500	4	2.8	54.2	11.100	1	0.7	96.1				
8.300	1	0.7	21.8	9.600	3	2.1	56.3	11.200	4	2.8	98.9				
8.400	1	0.7	22.5	9.700	2	1.4	57.7	11.400	6	4.2	83.1				

```
 *************
 * PERDO     *
 *************
                                               MAXIMUM        120.8700027
VARIABLE NUMBER . . . . . .          4         MINIMUM         71.0599976                         H
NUMBER OF DISTINCT VALUES .        129         RANGE           49.8100052                         H
NUMBER OF VALUES COUNTED. .        142         VARIANCE        67.5430527                         H            EACH 'H'
NUMBER OF VALUES NOT COUNTED         2         ST.DEV.          8.7184582                         HHH          REPRESENTS
                                               (Q3-Q1)/2        5.2150002                        HHHH H            3
                                                                                                 HHHHHHH       COUNT(S)
LOCATION ESTIMATES                                  ST.ERROR                                    HHHHHHHHH
                  MEAN          95.1811523     0.6896777                                        HHHHHHHHHH
                  MEDIAN        94.1850052     0.7418954                                   H HHHHHHHHHHHHHHHHH H
                  MODE          95.2699966                                                L---------------------U

                                                                                      EACH '-' ABOVE =      2.5000
                                                                                                    L=     70.0000
                                                                                                    U=    122.5000

                                                                                                          Q1-    90.6299973
                                                                                     VALUE   VALUE/S.E.   Q3=   101.0599976
                                                                    SKEWNESS         -0.11        -0.54   S-=    86.9626923
                                                                    KURTOSIS          0.69         1.69   S+=   103.3996124

                                                                                      EACH '.' BELOW -      0.5000
                                        S      Q                 Q   S
        M                               -      1      M M        3   +                                    M
        I.............................................E.E..................................................A
        N                                             D A                                                  X
                                                      I N
```

		PERCENTS				PERCENTS				PERCENTS				PERCENTS	
VALUE	COUNT	CELL	CUM	VALUE	COUNT	CELL	CUM	VALUE	COUNT	CELL	CUM	VALUE	COUNT	CELL	CUM
71.06	1	0.7	0.7	90.74	1	0.7	26.1	94.07	1	0.7	50.0	101.64	1	0.7	76.1
71.90	1	0.7	1.4	90.82	1	0.7	26.8	94.30	1	0.7	50.7	101.86	2	1.4	77.5
75.45	1	0.7	2.1	90.87	1	0.7	27.5	94.43	1	0.7	51.4	101.88	1	0.7	78.2
76.08	1	0.7	2.8	91.00	1	0.7	28.2	94.58	1	0.7	52.1	102.07	1	0.7	78.9
76.79	1	0.7	3.5	91.09	1	0.7	28.9	95.10	1	0.7	52.8	102.36	2	1.4	80.3
78.07	1	0.7	4.2	91.25	1	0.7	29.6	95.26	1	0.7	53.5	102.40	1	0.7	81.0
80.81	1	0.7	4.9	91.27	1	0.7	30.3	95.27	3	2.1	55.6	102.51	1	0.7	81.7
81.98	1	0.7	5.6	91.53	1	0.7	31.0	95.50	1	0.7	56.3	102.94	1	0.7	82.4
83.12	2	1.4	7.0	91.56	1	0.7	31.7	95.75	1	0.7	57.0	103.03	1	0.7	83.1
84.33	1	0.7	7.7	91.61	1	0.7	32.4	95.81	1	0.7	57.7	103.19	1	0.7	83.8
85.35	1	0.7	8.5	91.65	1	0.7	33.1	95.91	1	0.7	58.5	103.21	1	0.7	84.5
85.62	1	0.7	9.2	91.72	1	0.7	33.8	96.43	1	0.7	59.2	103.86	1	0.7	85.2
85.68	1	0.7	9.9	91.89	1	0.7	34.5	96.50	1	0.7	59.9	103.94	1	0.7	85.9
85.99	1	0.7	10.6	92.01	1	0.7	35.2	97.03	1	0.7	60.6	104.14	2	1.4	87.3
86.61	1	0.7	11.3	92.06	1	0.7	35.9	97.29	1	0.7	61.3	104.22	2	1.4	88.7
87.01	1	0.7	12.0	92.12	1	0.7	36.6	97.44	1	0.7	62.0	104.28	1	0.7	89.4
87.45	1	0.7	12.7	92.39	1	0.7	37.3	97.47	2	1.4	63.4	105.19	1	0.7	90.1
87.59	1	0.7	13.4	92.41	1	0.7	38.0	97.74	1	0.7	64.1	105.60	1	0.7	90.8
87.91	2	1.4	14.8	92.49	1	0.7	38.7	97.95	1	0.7	64.8	106.61	1	0.7	91.5
88.52	1	0.7	15.5	92.50	1	0.7	39.4	98.17	1	0.7	65.5	106.64	1	0.7	92.3
88.57	1	0.7	16.2	92.66	1	0.7	40.1	98.21	1	0.7	66.2	106.89	1	0.7	93.0
89.18	1	0.7	16.9	92.69	1	0.7	40.8	98.43	1	0.7	66.9	107.09	1	0.7	93.7
89.20	1	0.7	17.6	92.97	1	0.7	41.5	98.52	1	0.7	67.6	107.44	1	0.7	94.4
89.32	1	0.7	18.3	93.05	1	0.7	42.3	98.62	2	1.4	69.0	107.61	1	0.7	95.1
89.46	1	0.7	19.0	93.24	1	0.7	43.0	99.40	1	0.7	69.7	108.10	1	0.7	95.8
89.56	1	0.7	19.7	93.25	1	0.7	43.7	99.49	1	0.7	70.4	108.25	2	1.4	97.2
89.58	1	0.7	20.4	93.40	1	0.7	44.4	99.75	1	0.7	71.1	110.37	1	0.7	97.9
89.91	1	0.7	21.1	93.43	1	0.7	45.1	100.08	1	0.7	71.8	112.57	1	0.7	98.6
89.96	1	0.7	21.8	93.47	1	0.7	45.8	100.35	1	0.7	72.5	115.15	1	0.7	99.3
90.18	1	0.7	22.5	93.59	2	1.4	47.2	100.47	1	0.7	73.2	120.87	1	0.7	100.0
90.30	2	1.4	23.9	93.81	1	0.7	47.9	100.54	1	0.7	73.9				
90.40	1	0.7	24.6	93.83	1	0.7	48.6	100.56	1	0.7	74.6				
90.63	1	0.7	25.4	93.99	1	0.7	49.3	101.06	1	0.7	75.4				

CORRTP

VARIABLE NUMBER	2	MAXIMUM	58.7000008
NUMBER OF DISTINCT VALUES .	114	MINIMUM	0.5000000
NUMBER OF VALUES COUNTED. .	140	RANGE	58.2000008
NUMBER OF VALUES NOT COUNTED	4	VARIANCE	133.6088104
		ST.DEV.	11.5589275
		(Q3-Q1)/2	6.0999999

EACH 'H' REPRESENTS 2 COUNT(S)

LOCATION ESTIMATES

		ST.ERROR
MEAN	21.4564247	0.9769077
MEDIAN	19.3000011	1.1547011
MODE	22.6000004	

EACH '-' ABOVE = 3.0000
L= 0.0000
U= 63.0000

	VALUE	VALUE/S.E.
SKEWNESS	1.05	5.08
KURTOSIS	0.97	2.34

Q1- 13.6500006
Q3= 25.8500004
S-= 9.8974972
S+= 33.0153542

EACH '.' BELOW = 0.5000

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.5000	1	0.7	0.7	13.6000	1	0.7	25.0	20.2000	1	0.7	52.9	27.8000	1	0.7	79.3
3.4000	1	0.7	1.4	13.7000	2	1.4	26.4	20.6000	2	1.4	54.3	27.9000	1	0.7	80.0
4.5000	1	0.7	2.1	13.9000	1	0.7	27.1	20.7000	1	0.7	55.0	28.6000	1	0.7	80.7
5.1000	1	0.7	2.9	14.0000	1	0.7	27.9	21.0000	1	0.7	55.7	29.2000	1	0.7	81.4
5.2000	1	0.7	3.6	14.1000	2	1.4	29.3	21.3000	1	0.7	56.4	30.5000	1	0.7	82.1
5.4000	1	0.7	4.3	14.8000	1	0.7	30.0	21.4000	1	0.7	57.1	31.0000	1	0.7	84.3
6.0000	1	0.7	5.0	14.9000	1	0.7	30.7	21.7000	1	0.7	57.9	32.5000	1	0.7	85.0
6.2000	1	0.7	5.7	15.2000	2	1.4	32.1	22.0000	1	0.7	58.6	32.6000	1	0.7	85.7
6.9000	1	0.7	6.4	15.4000	1	0.7	32.9	22.1000	2	1.4	60.0	32.7000	1	0.7	86.4
7.1000	1	0.7	7.1	15.5000	2	1.4	34.3	22.2000	1	0.7	60.7	32.9000	1	0.7	87.1
8.1000	1	0.7	7.9	15.6000	1	0.7	35.0	22.3000	2	1.4	62.1	33.2000	1	0.7	87.9
8.2000	1	0.7	8.6	15.7000	2	1.4	36.4	22.5000	1	0.7	62.9	37.6000	1	0.7	88.6
8.4000	1	0.7	9.3	16.0000	1	0.7	37.1	22.6000	4	2.9	65.7	37.8000	1	0.7	89.3
9.0000	1	0.7	10.0	16.1000	1	0.7	37.9	22.7000	1	0.7	66.4	39.9000	1	0.7	90.0
9.6000	2	1.4	11.4	16.2000	1	0.7	38.6	22.9000	1	0.7	67.1	40.3000	1	0.7	90.7
9.8000	2	1.4	12.9	16.4000	1	0.7	39.3	23.1000	1	0.7	67.9	41.4000	1	0.7	91.4
10.1000	1	0.7	13.6	16.7000	1	0.7	40.0	23.4000	2	1.4	69.3	42.4000	2	1.4	92.9
10.2000	1	0.7	14.3	16.9000	2	1.4	41.4	23.5000	1	0.7	70.0	44.4000	1	0.7	91.6
10.5000	1	0.7	15.0	17.2000	1	0.7	42.1	24.3000	1	0.7	70.7	44.7000	1	0.7	94.3
11.1000	1	0.7	15.7	17.7000	2	1.4	43.6	24.4000	1	0.7	71.4	45.1000	1	0.7	95.0
11.7000	1	0.7	16.4	18.1000	1	0.7	44.3	24.7000	1	0.7	72.1	46.0000	1	0.7	95.7
12.1000	2	1.4	17.9	18.5000	1	0.7	45.0	25.0000	1	0.7	72.9	46.2000	1	0.7	96.4
12.3000	1	0.7	18.6	18.6000	1	0.7	45.7	25.6000	2	1.4	74.3	46.9000	1	0.7	97.1
12.6000	1	0.7	19.3	18.8000	2	1.4	47.1	25.7000	1	0.7	75.0	53.9000	1	0.7	97.9
12.9000	1	0.7	20.0	18.9000	1	0.7	47.9	26.0000	1	0.7	75.7	54.4000	1	0.7	98.6
13.1000	1	0.7	20.7	19.0000	1	0.7	48.6	26.1000	1	0.7	76.4	55.8000	1	0.7	99.3
13.2000	2	1.4	22.1	19.1000	2	1.4	50.0	26.3000	1	0.7	77.1	58.7000	1	0.7	100.0
13.3000	2	1.4	23.6	19.5000	2	1.4	51.4	27.3000	1	0.7	77.9				
13.5000	1	0.7	24.3	19.8000	1	0.7	52.1	27.6000	1	0.7	78.6				

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************
* CORRTFP  *
************
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VARIABLE NUMBER	3	MAXIMUM	26.3999996
NUMBER OF DISTINCT VALUES .	85	MINIMUM	0.0000000
NUMBER OF VALUES COUNTED. .	138	RANGE	26.3999996
NUMBER OF VALUES NOT COUNTED	6	VARIANCE	24.8125687
		ST.DEV.	4.9812217
		(Q3-Q1)/2	2.9000001

```
H
H
H                         EACH 'H'
HH                        REPRESENTS
HH HH                        4
HHHHH                     COUNT(S)
HHHHHH
HHHHHHH H
HHHHHHHHHHHH HH  H
L--------------------U
```

LOCATION ESTIMATES

		ST.ERROR
MEAN	5.4550724	0.4240297
MEDIAN	4.5999999	0.6062180
MODE	0.0000000	

EACH '-' ABOVE = 1.5000
L= 0.0000
U= 31.5000

	VALUE	VALUE/S.E.		
			Q1=	1.6000000
			Q3=	7.4000001
SKEWNESS	1.40	6.73	S-=	0.4738507
KURTOSIS	2.36	5.65	S+=	10.4362946

EACH '.' BELOW = 0.2500

```
   S  Q                  Q        S
M  -  1        M  M      3        +                                                      M
I..............E..E.....................................................................A
N              D  A                                                                     X
               I  N
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
0.0000	17	12.3	12.3	3.0000	2	1.4	39.9	6.2000	2	1.4	65.9	10.6000	1	0.7	87.0
0.3000	1	0.7	13.0	3.1000	1	0.7	40.6	6.3000	4	2.9	68.8	11.4000	1	0.7	87.7
0.4000	1	0.7	13.8	3.3000	2	1.4	42.0	6.4000	1	0.7	69.6	11.9000	1	0.7	88.4
0.6000	2	1.4	15.2	3.4000	1	0.7	42.8	6.5000	1	0.7	70.3	12.6000	1	0.7	89.1
0.7000	4	2.9	18.1	3.5000	2	1.4	44.2	6.8000	4	2.9	73.2	12.7000	1	0.7	89.9
0.9000	1	0.7	18.8	3.9000	3	2.2	46.4	7.1000	1	0.7	73.9	12.9000	1	0.7	90.6
1.0000	1	0.7	19.6	4.1000	1	0.7	47.1	7.3000	1	0.7	74.6	13.0000	1	0.7	91.3
1.2000	1	0.7	20.3	4.2000	1	0.7	47.8	7.4000	1	0.7	75.4	13.3000	1	0.7	92.0
1.3000	2	1.4	21.7	4.4000	1	0.7	48.6	7.7000	1	0.7	76.1	13.7000	1	0.7	92.8
1.4000	2	1.4	23.2	4.5000	2	1.4	50.0	7.8000	1	0.7	76.8	14.2000	1	0.7	93.5
1.5000	1	0.7	23.9	4.7000	1	0.7	50.7	7.9000	1	0.7	77.5	14.6000	1	0.7	94.2
1.6000	2	1.4	25.4	4.8000	2	1.4	52.2	8.2000	1	0.7	78.3	14.8000	1	0.7	94.9
1.8000	1	0.7	26.1	4.9000	1	0.7	52.9	8.3000	1	0.7	79.0	15.3000	1	0.7	95.7
1.9000	1	0.7	26.8	5.1000	1	0.7	53.6	8.5000	2	1.4	80.4	16.0000	1	0.7	96.4
2.0000	1	0.7	27.5	5.3000	1	0.7	54.3	8.7000	1	0.7	81.2	16.9000	1	0.7	97.1
2.2000	1	0.7	28.3	5.4000	3	2.2	56.5	8.8000	1	0.7	81.9	17.2000	1	0.7	97.8
2.3000	1	0.7	29.0	5.5000	5	3.6	60.1	8.9000	1	0.7	82.6	20.4000	1	0.7	98.6
2.4000	2	1.4	30.4	5.6000	1	0.7	60.9	9.1000	1	0.7	83.3	22.3000	1	0.7	99.3
2.6000	2	1.4	31.9	5.8000	1	0.7	61.6	9.3000	1	0.7	84.1	26.4000	1	0.7	100.0
2.7000	5	3.6	35.5	5.9000	1	0.7	62.3	9.4000	1	0.7	84.8				
2.8000	2	1.4	37.0	6.0000	1	0.7	63.0	10.3000	1	0.7	85.5				
2.9000	2	1.4	38.4	6.1000	2	1.4	64.5	10.4000	1	0.7	86.2				

****
* SRP *
****

VARIABLE NUMBER	8	MAXIMUM	9.0000000
NUMBER OF DISTINCT VALUES .	33	MINIMUM	0.0000000
NUMBER OF VALUES COUNTED. .	130	RANGE	9.0000000
NUMBER OF VALUES NOT COUNTED	14	VARIANCE	2.9506955
		ST.DEV.	1.7177589
		(Q3-Q1)/2	0.5000000

LOCATION ESTIMATES

		ST.ERROR
MEAN	0.9984615	0.1506574
MEDIAN	0.4500000	0.1443376
MODE	0.0000000	

```
H
H
H
H                    EACH 'H'
H                   REPRESENTS
H                        7
HH                   COUNT(S)
HH
HHHH
HHHHHHHHH  H HH HH
L--------------------U
```

EACH '-' ABOVE = 0.5000
L= 0.0000
U= 10.5000

	VALUE	VALUE/S.E.
SKEWNESS	2.91	13.52
KURTOSIS	8.93	20.79

Q1- 0.0000000
Q3= 1.0000000
S-= -0.7192973
S+= 2.7162204

EACH '.' BELOW = 0.0750

```
S       Q           Q                   S                                                                                   M
-       M     M     M                   +                                                                                   A
.........I.....F.....F...................................................................................................A
         N     D     A                                                                                                     X
               I     N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.00000	54	41.5	41.5	0.90000	1	0.8	63.8	1.90000	1	0.8	87.7	5.60000	1	0.8	96.2
0.10000	3	2.3	43.8	1.00000	15	11.5	75.4	2.20000	1	0.8	88.5	6.70000	1	0.8	96.9
0.20000	4	3.1	46.9	1.10000	1	0.8	76.2	2.30000	2	1.5	90.0	7.30000	1	0.8	97.7
0.30000	2	1.5	48.5	1.20000	1	0.8	76.9	2.70000	1	0.8	90.8	8.20000	1	0.8	98.5
0.40000	2	1.5	50.0	1.30000	2	1.5	78.5	3.00000	2	1.5	92.3	8.50000	1	0.8	99.2
0.50000	5	3.8	53.8	1.50000	4	3.1	81.5	3.20000	1	0.8	93.1	9.00000	1	0.8	100.0
0.60000	6	4.6	58.5	1.60000	2	1.5	83.1	3.40000	1	0.8	93.8				
0.70000	1	0.8	59.2	1.70000	1	0.8	83.8	4.00000	1	0.8	94.6				
0.80000	5	3.8	63.1	1.80000	4	3.1	86.9	4.30000	1	0.8	95.4				

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************
* CALCSOP  *
************
```

VARIABLE NUMBER	7	MAXIMUM	26.2999992
NUMBER OF DISTINCT VALUES .	69	MINIMUM	0.0000000
NUMBER OF VALUES COUNTED. .	127	RANGE	26.2999992
NUMBER OF VALUES NOT COUNTED	17	VARIANCE	18.0615482
		ST.DEV.	4.2498879
		(Q3-Q1)/2	2.5000000

LOCATION ESTIMATES

		ST.ERROR
MEAN	4.8062983	0.3771166
MEDIAN	4.6999998	0.5773506
MODE	0.0000000	

```
H
H
H  H
HH H
HH HH
HHHHH
HHHHH
HHHHHH
HHHHHHH H
HHHHHHHHHH   H   H
L---------------------U
```

EACH 'H' REPRESENTS 3 COUNT(S)

EACH '-' ABOVE = 1.5000
L= 0.0000
U= 31.5000

	VALUE	VALUE/S.F.		
			Q1=	1.6000000
			Q3=	6.5999999
SKEWNESS	1.62	7.45	S-=	0.5564103
KURTOSIS	4.91	11.30	S+=	9.0561867

EACH '.' BELOW = 0.2500

```
  S  Q                Q         S
M -  1           M    3         +                                                            M
I................E..........................................................................A
N                A                                                                           X
                 N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.00000	16	12.6	12.6	2.80000	1	0.8	37.8	5.70000	1	0.8	65.4	8.60000	1	0.8	88.2
0.10000	1	0.8	13.4	3.00000	2	1.6	39.4	5.80000	2	1.6	66.9	9.30000	1	0.8	89.0
0.30000	3	2.4	15.7	3.10000	2	1.6	40.9	6.00000	1	0.8	67.7	9.50000	2	1.6	90.6
0.40000	3	2.4	18.1	3.30000	1	0.8	41.7	6.10000	1	0.8	68.5	10.40000	1	0.8	91.3
0.50000	2	1.6	19.7	3.40000	1	0.8	42.5	6.20000	1	0.8	69.3	10.50000	1	0.8	92.1
0.70000	2	1.6	21.3	3.90000	4	3.1	45.7	6.30000	3	2.4	71.7	11.40000	1	0.8	92.9
1.00000	1	0.8	22.0	4.10000	1	0.8	46.5	6.40000	1	0.8	72.4	12.40000	1	0.8	93.7
1.30000	1	0.8	22.8	4.20000	1	0.8	47.2	6.60000	4	3.1	75.6	12.50000	1	0.8	94.5
1.40000	1	0.8	23.6	4.30000	1	0.8	48.0	6.70000	1	0.8	76.4	12.60000	1	0.8	95.3
1.60000	2	1.6	25.2	4.50000	2	1.6	49.6	6.80000	3	2.4	78.7	12.70000	1	0.8	96.1
1.70000	3	2.4	27.6	4.70000	1	0.8	50.4	7.10000	1	0.8	79.5	13.00000	1	0.8	96.9
1.80000	2	1.6	29.1	4.80000	1	0.8	51.2	7.30000	3	2.4	81.9	13.10000	1	0.8	97.6
1.90000	1	0.8	29.9	4.90000	1	0.8	52.0	7.80000	1	0.8	82.7	13.80000	1	0.8	98.4
2.00000	2	1.6	31.5	5.10000	3	2.4	54.3	7.90000	2	1.6	84.3	20.50000	1	0.8	99.2
2.40000	1	0.8	32.3	5.30000	1	0.8	55.1	8.20000	1	0.8	85.0	26.30000	1	0.8	100.0
2.50000	1	0.8	33.1	5.40000	4	3.1	58.3	8.30000	1	0.8	85.8				
2.60000	2	1.6	34.6	5.50000	7	5.5	63.8	8.40000	1	0.8	86.6				
2.70000	3	2.4	37.0	5.60000	1	0.8	64.6	8.50000	1	0.8	87.4				

****
* CALCPP *
****

		MAXIMUM	41.4000015
VARIABLE NUMBER	5	MINIMUM	0.5000000
NUMBER OF DISTINCT VALUES .	103	RANGE	40.9000015
NUMBER OF VALUES COUNTED. .	135	VARIANCE	66.1786499
NUMBER OF VALUES NOT COUNTED	9	ST.DEV.	8.1350260
		(Q3-Q1)/2	4.4999995

```
      HHH
      HHH
    HHHHHH              EACH 'H'
    HHHHHHH           REPRESENTS
    HHHHHHH                 2
    HHHHHHH            COUNT(S)
  HHHHHHHHH H  H
  HHHHHHHHHHH  HH  H
 HHHHHHHHHHHHHHHHH  HH
L--------------------U
```

EACH '-' ABOVE = 2.0000
L= 0.0000
U= 42.0000

LOCATION ESTIMATES

		ST.ERROR
MEAN	16.3970356	0.7001516
MEDIAN	14.8000002	0.7216882
MODE	12.8000002	

	VALUE	VALUE/S.E.
SKEWNESS	1.04	4.92
KURTOSIS	0.95	2.25

Q1- 10.8000002
Q3= 19.7999992
S-= 8.2620096
S+= 24.5320625

EACH '.' BELOW = 0.5000

```
                S   0                 0       S
M               -   1   M   M   M     3       +                       M
I.....................0...F..F.....................................A
N                       D   D   A                                   X
                        E   I   N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.5000	1	0.7	0.7	10.9000	1	0.7	27.4	15.9000	1	0.7	57.0	22.0000	1	0.7	81.5
3.4000	1	0.7	1.5	11.2000	1	0.7	28.1	16.1000	1	0.7	57.8	22.1000	1	0.7	82.2
4.5000	2	1.5	3.0	11.3000	2	1.5	29.6	16.5000	3	2.2	60.0	22.2000	1	0.7	83.0
4.8000	1	0.7	3.7	11.4000	2	1.5	31.1	16.6000	1	0.7	60.7	23.5000	1	0.7	83.7
5.0000	1	0.7	4.4	11.9000	1	0.7	31.9	16.7000	1	0.7	61.5	23.7000	1	0.7	84.4
6.0000	1	0.7	5.2	12.1000	1	0.7	32.6	16.8000	2	1.5	63.0	24.2000	1	0.7	85.2
6.2000	1	0.7	5.9	12.6000	1	0.7	33.3	17.0000	1	0.7	63.7	24.5000	2	1.5	86.7
6.4000	1	0.7	6.7	12.8000	4	3.0	36.3	17.1000	2	1.5	65.2	24.6000	1	0.7	87.4
6.9000	1	0.7	7.4	12.9000	2	1.5	37.8	17.5000	1	0.7	65.9	25.0000	1	0.7	88.1
7.5000	1	0.7	8.1	13.0000	1	0.7	38.5	17.9000	1	0.7	66.7	26.4000	1	0.7	88.9
7.7000	1	0.7	8.9	13.1000	2	1.5	40.0	18.0000	1	0.7	67.4	26.9000	1	0.7	89.6
7.8000	1	0.7	9.6	13.2000	1	0.7	40.7	18.2000	1	0.7	68.1	29.1000	1	0.7	90.4
8.1000	1	0.7	10.4	13.3000	1	0.7	41.5	18.4000	2	1.5	69.6	30.8000	1	0.7	91.1
8.2000	1	0.7	11.1	13.6000	2	1.5	43.0	18.6000	2	1.5	71.1	31.4000	1	0.7	91.9
8.3000	2	1.5	12.6	13.9000	1	0.7	43.7	18.8000	1	0.7	71.9	31.6000	1	0.7	92.6
8.4000	1	0.7	13.3	14.0000	1	0.7	44.4	19.2000	1	0.7	72.6	31.8000	1	0.7	93.3
8.9000	1	0.7	14.1	14.1000	2	1.5	45.9	19.3000	1	0.7	73.3	32.0000	1	0.7	94.1
9.0000	2	1.5	15.6	14.2000	2	1.5	47.4	19.5000	1	0.7	74.1	32.4000	1	0.7	94.8
9.4000	1	0.7	16.3	14.4000	1	0.7	48.1	19.6000	1	0.7	74.8	32.7000	1	0.7	95.6
9.5000	1	0.7	17.0	14.6000	2	1.5	49.6	19.8000	1	0.7	75.6	33.3000	1	0.7	96.3
9.6000	1	0.7	17.8	14.8000	2	1.5	51.1	20.0000	1	0.7	76.3	38.4000	1	0.7	97.0
9.8000	2	1.5	19.3	15.0000	1	0.7	51.9	20.6000	1	0.7	77.0	38.6000	1	0.7	97.8
10.1000	3	2.2	21.5	15.4000	2	1.5	53.3	20.8000	1	0.7	77.8	39.7000	1	0.7	98.5
10.4000	1	0.7	22.2	15.6000	1	0.7	54.1	21.1000	2	1.5	79.3	39.9000	1	0.7	99.3
10.7000	3	2.2	24.4	15.7000	2	1.5	55.6	21.4000	1	0.7	80.0	41.4000	1	0.7	100.0
10.8000	3	2.2	26.7	15.8000	1	0.7	56.3	21.5000	1	0.7	80.7				

```
*************
* PERPP     *
*************
```

VARIABLE NUMBER	6	MAXIMUM	100.0000000
NUMBER OF DISTINCT VALUES .	119	MINIMUM	33.9700012
NUMBER OF VALUES COUNTED. .	135	RANGE	66.0299988
NUMBER OF VALUES NOT COUNTED	9	VARIANCE	214.8197021
		ST.DEV.	14.6567287
		(Q3-Q1)/2	9.6599998

LOCATION ESTIMATES

		ST.ERROR
MEAN	78.3217239	1.2614504
MEDIAN	79.3899994	1.0796449
MODE	100.0000000	

```
                   H
                   HH  H        EACH 'H'
                   HHH H        REPRESENTS
                   HHH H            3
                 HHHHHH H        COUNT(S)
               H HHHHHHHH
               HHHHHHHHHH
           H  HHHHHHHHHHH
       L---------------------U

   EACH '-' ABOVE =       5.0000
                L=       15.0000
                U=      120.0000
```

	VALUE	VALUE/S.E.		
			Q1=	69.1600037
			Q3=	88.4800034
SKEWNESS	-0.53	-2.49	S-=	63.6649971
KURTOSIS	0.00	0.00	S+=	92.9784546

EACH '.' BELOW = 0.7500

```
                                         S    Q                         Q     S
 M                                       -    1                 MM      3     +          M
 I..............................................................FE...........................A
 N                                                              AD                         X
                                                                NI
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
33.97	1	0.7	0.7	67.50	1	0.7	23.0	78.50	1	0.7	45.2	85.71	1	0.7	68.1
34.58	1	0.7	1.5	68.22	1	0.7	23.7	78.74	1	0.7	45.9	85.80	1	0.7	68.9
45.71	1	0.7	2.2	68.66	1	0.7	24.4	78.84	1	0.7	46.7	86.26	1	0.7	69.6
47.92	1	0.7	3.0	69.16	1	0.7	25.2	78.87	1	0.7	47.4	86.41	1	0.7	70.4
51.86	1	0.7	3.7	69.54	1	0.7	25.9	78.88	1	0.7	48.1	86.64	1	0.7	71.1
51.93	1	0.7	4.4	69.79	1	0.7	26.7	78.91	1	0.7	48.9	86.80	1	0.7	71.9
52.34	1	0.7	5.2	70.09	1	0.7	27.4	78.93	1	0.7	49.6	86.85	1	0.7	72.6
52.99	1	0.7	5.9	70.56	1	0.7	28.1	79.39	1	0.7	50.4	87.52	1	0.7	73.3
53.32	1	0.7	6.7	71.62	1	0.7	28.9	79.41	1	0.7	51.1	87.69	1	0.7	74.1
53.67	1	0.7	7.4	71.91	1	0.7	29.6	79.85	1	0.7	51.9	88.20	1	0.7	74.8
54.80	1	0.7	8.1	72.20	1	0.7	30.4	80.07	1	0.7	52.6	88.48	1	0.7	75.6
55.13	1	0.7	8.9	73.64	1	0.7	31.1	80.11	1	0.7	53.3	88.86	1	0.7	76.3
57.48	1	0.7	9.6	73.93	1	0.7	31.9	80.71	1	0.7	54.1	88.99	1	0.7	77.0
57.80	1	0.7	10.4	74.02	1	0.7	32.6	80.89	1	0.7	54.8	89.49	1	0.7	77.8
59.66	1	0.7	11.1	74.09	1	0.7	33.3	81.38	2	1.5	56.3	89.65	1	0.7	78.5
59.72	1	0.7	11.9	74.27	1	0.7	34.1	81.67	1	0.7	57.0	90.36	1	0.7	79.3
60.51	1	0.7	12.6	74.47	1	0.7	34.8	81.74	1	0.7	57.8	91.09	1	0.7	80.0
60.86	1	0.7	13.3	74.50	1	0.7	35.6	81.91	1	0.7	58.5	91.27	1	0.7	80.7
61.11	1	0.7	14.1	75.56	1	0.7	36.3	82.02	1	0.7	59.3	91.70	1	0.7	81.5
61.53	1	0.7	14.8	75.59	1	0.7	37.0	82.06	1	0.7	60.0	91.99	1	0.7	82.2
62.17	1	0.7	15.6	75.62	1	0.7	37.8	82.27	1	0.7	60.7	92.36	1	0.7	83.0
62.30	1	0.7	16.3	75.70	1	0.7	38.5	82.66	1	0.7	61.5	93.16	1	0.7	83.7
63.25	1	0.7	17.0	76.11	1	0.7	39.3	83.12	1	0.7	62.2	93.19	1	0.7	84.4
64.00	1	0.7	17.8	76.49	1	0.7	40.0	83.60	1	0.7	63.0	93.89	1	0.7	85.2
64.79	1	0.7	18.5	76.55	1	0.7	40.7	83.70	1	0.7	63.7	95.31	1	0.7	85.9
64.90	1	0.7	19.3	77.37	1	0.7	41.5	84.39	1	0.7	64.4	95.53	1	0.7	86.7
65.59	1	0.7	20.0	77.96	1	0.7	42.2	84.55	1	0.7	65.2	95.83	1	0.7	87.4
65.64	1	0.7	20.7	78.00	1	0.7	43.0	84.76	1	0.7	65.9	97.99	1	0.7	88.1
66.40	1	0.7	21.5	78.09	1	0.7	43.7	85.27	1	0.7	66.7	100.00	16	11.9	100.0
67.04	1	0.7	22.2	78.15	1	0.7	44.4	85.50	1	0.7	67.4				

****
* PERTFP *
****

		MAXIMUM	66.0299988
VARIABLE NUMBER	4	MINIMUM	0.0000000
NUMBER OF DISTINCT VALUES .	119	RANGE	66.0299988
NUMBER OF VALUES COUNTED. .	135	VARIANCE	214.8197479
NUMBER OF VALUES NOT COUNTED	9	ST.DEV.	14.6567307
		(Q3-Q1)/2	9.6599998

LOCATION ESTIMATES

		ST.ERROR
MEAN	21.6782932	1.2614505
MEDIAN	20.6100006	1.0796455
MODE	0.0000000	

```
        H
  H  HH                  EACH 'H'
  H HHH                  REPRESENTS
  H HHH                      3
  H HHHHHH                COUNT(S)
  HHHHHHHH H
  HHHHHHHHHH
  HHHHHHHHHH  H
 L---------------------U
```

EACH '-' ABOVE = 5.0000
L= 0.0000
U= 105.0000

	VALUE	VALUE/S.F.
SKEWNESS	0.53	2.49
KURTOSIS	0.00	0.00

Q1- 11.5200005
Q3= 30.8400002
S-= 7.0215626
S+= 36.3350258

EACH '.' BELOW = 0.7500

```
          S    Q                Q    S
M         -    1          MM    3    +                              M
I.........................FE.....................................A
N                          DA                                       X
                           IN
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.000	16	11.9	11.9	14.730	1	0.7	34.1	21.910	1	0.7	57.0	33.600	1	0.7	79.3
2.010	1	0.7	12.6	15.240	1	0.7	34.8	22.000	1	0.7	57.8	34.360	1	0.7	80.0
4.170	1	0.7	13.3	15.450	1	0.7	35.6	22.040	1	0.7	58.5	34.410	1	0.7	80.7
4.470	1	0.7	14.1	15.610	1	0.7	36.3	22.630	1	0.7	59.3	35.100	1	0.7	81.5
4.690	1	0.7	14.8	16.300	1	0.7	37.0	23.450	1	0.7	60.0	35.210	1	0.7	82.2
6.110	1	0.7	15.6	16.400	1	0.7	37.8	23.510	1	0.7	60.7	36.000	1	0.7	83.0
6.810	1	0.7	16.3	16.880	1	0.7	38.5	23.890	1	0.7	61.5	36.750	1	0.7	83.7
6.840	1	0.7	17.0	17.340	1	0.7	39.3	24.300	1	0.7	62.2	37.700	1	0.7	84.4
7.640	1	0.7	17.8	17.730	1	0.7	40.0	24.380	1	0.7	63.0	37.830	1	0.7	85.2
8.010	1	0.7	18.5	17.940	1	0.7	40.7	24.410	1	0.7	63.7	38.470	1	0.7	85.9
8.300	1	0.7	19.3	17.980	1	0.7	41.5	24.440	1	0.7	64.4	38.890	1	0.7	86.7
8.730	1	0.7	20.0	18.090	1	0.7	42.2	25.500	1	0.7	65.2	39.140	1	0.7	87.4
8.910	1	0.7	20.7	18.260	1	0.7	43.0	25.530	1	0.7	65.9	39.490	1	0.7	88.1
9.640	1	0.7	21.5	18.330	1	0.7	43.7	25.730	1	0.7	66.7	40.280	1	0.7	88.9
10.350	1	0.7	22.2	18.620	2	1.5	45.2	25.910	1	0.7	67.4	40.340	1	0.7	89.6
10.510	1	0.7	23.0	19.110	1	0.7	45.9	25.980	1	0.7	68.1	42.200	1	0.7	90.4
11.010	1	0.7	23.7	19.290	1	0.7	46.7	26.070	1	0.7	68.9	42.520	1	0.7	91.1
11.140	1	0.7	24.4	19.890	1	0.7	47.4	26.360	1	0.7	69.6	44.870	1	0.7	91.9
11.520	1	0.7	25.2	19.930	1	0.7	48.1	27.800	1	0.7	70.4	45.200	1	0.7	92.6
11.800	1	0.7	25.9	20.150	1	0.7	48.9	28.090	1	0.7	71.1	46.330	1	0.7	93.3
12.310	1	0.7	26.7	20.590	1	0.7	49.6	28.380	1	0.7	71.9	46.680	1	0.7	94.1
12.480	1	0.7	27.4	20.610	1	0.7	50.4	29.440	1	0.7	72.6	47.010	1	0.7	94.8
13.150	1	0.7	28.1	21.070	1	0.7	51.1	29.910	1	0.7	73.3	47.660	1	0.7	95.6
13.200	1	0.7	28.9	21.090	1	0.7	51.9	30.210	1	0.7	74.1	48.070	1	0.7	96.3
13.360	1	0.7	29.6	21.120	1	0.7	52.6	30.460	1	0.7	74.8	48.140	1	0.7	97.0
13.590	1	0.7	30.4	21.130	1	0.7	53.3	30.840	1	0.7	75.6	52.080	1	0.7	97.8
13.740	1	0.7	31.1	21.160	1	0.7	54.1	31.340	1	0.7	76.3	54.290	1	0.7	98.5
14.200	1	0.7	31.9	21.260	1	0.7	54.8	31.780	1	0.7	77.0	65.420	1	0.7	99.3
14.290	1	0.7	32.6	21.500	1	0.7	55.6	32.500	1	0.7	77.8	66.030	1	0.7	100.0
14.500	1	0.7	33.3	21.850	1	0.7	56.3	42.960	1	0.7	78.5				

HYDRA86 WESTERN BASIN ALL DATA

```
************
* NITNIT   *
************
                                          MAXIMUM        908.0000000                       HH
VARIABLE NUMBER . . . . . .       4       MINIMUM          0.0000000                       HH
NUMBER OF DISTINCT VALUES .     119       RANGE          908.0000000                       HH
NUMBER OF VALUES COUNTED. .     142       VARIANCE     29289.0410156                       HH              EACH 'H'
NUMBER OF VALUES NOT COUNTED      2       ST.DEV.        171.1404114                       HH             REPRESENTS
                                          (Q3-Q1)/2       84.5000000                      HHH                  3
                                                                                        H HHHHH             COUNT(S)
LOCATION ESTIMATES                             ST.ERROR                                 H HHHHHH H
               MEAN          350.3239441    14.3617849                                  HHHHHHHHHH
               MEDIAN        312.0000000     7.5055571                                HHHHHHHHHHHHHHHHHHH
               MODE           NOT UNIQUE                                             L---------------------U

                                                                                   EACH '-' ABOVE =     50.0000
                                                                                                  L=     0.0000
                                                                                                  U=  1050.0000

                                                                                                    Q1   256.0000000
                                                                                 VALUE   VALUE/S.F.  Q3=  425.0000000
                                                              SKEWNESS            1.09        5.31   S-=  179.1835327
                                                              KURTOSIS            1.58        3.85   S+=  521.4643555

                                                                                   EACH '.' BELOW =      7.5000
                         S          Q                     Q         S
 M                       -          1      M    M         3         +                                     M
 I.........................................E....E.......................................................A
 N                                         D    A                                                         X
                                           I    N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.	2	1.4	1.4	270.	1	0.7	28.2	322.	1	0.7	55.6	467.	1	0.7	79.6
89.	1	0.7	2.1	271.	1	0.7	28.9	324.	2	1.4	57.0	476.	1	0.7	80.3
95.	1	0.7	2.8	272.	1	0.7	29.6	325.	1	0.7	57.7	480.	1	0.7	81.0
102.	2	1.4	4.2	273.	1	0.7	30.3	327.	1	0.7	58.5	481.	1	0.7	81.7
117.	1	0.7	4.9	276.	2	1.4	31.7	330.	1	0.7	59.2	483.	1	0.7	82.4
126.	1	0.7	5.6	280.	2	1.4	33.1	333.	1	0.7	59.9	487.	1	0.7	83.1
136.	1	0.7	6.3	282.	1	0.7	33.8	334.	2	1.4	61.3	496.	1	0.7	83.8
137.	1	0.7	7.0	284.	1	0.7	34.5	338.	1	0.7	62.0	498.	1	0.7	84.5
139.	1	0.7	7.7	285.	1	0.7	35.2	341.	1	0.7	62.7	519.	1	0.7	85.2
144.	1	0.7	8.5	287.	1	0.7	35.9	347.	1	0.7	63.4	520.	1	0.7	85.9
146.	2	1.4	9.9	289.	1	0.7	36.6	350.	1	0.7	64.1	521.	1	0.7	86.6
159.	2	1.4	11.3	290.	1	0.7	37.3	355.	1	0.7	64.8	530.	1	0.7	87.3
183.	1	0.7	12.0	292.	1	0.7	38.0	358.	1	0.7	65.5	532.	1	0.7	88.0
184.	1	0.7	12.7	294.	1	0.7	38.7	360.	1	0.7	66.2	578.	1	0.7	88.7
186.	1	0.7	13.4	295.	1	0.7	39.4	362.	1	0.7	66.9	585.	1	0.7	89.4
197.	1	0.7	14.1	296.	1	0.7	40.1	364.	1	0.7	67.6	590.	1	0.7	90.1
206.	1	0.7	14.8	297.	2	1.4	41.5	365.	1	0.7	68.3	591.	2	1.4	91.5
210.	1	0.7	15.5	299.	2	1.4	43.0	369.	1	0.7	69.0	594.	1	0.7	92.3
218.	1	0.7	16.2	300.	1	0.7	43.7	379.	1	0.7	69.7	598.	1	0.7	93.0
220.	2	1.4	17.6	301.	1	0.7	44.4	380.	1	0.7	70.4	609.	1	0.7	93.7
234.	2	1.4	19.0	303.	1	0.7	45.1	390.	1	0.7	71.1	680.	1	0.7	94.4
235.	1	0.7	19.7	305.	2	1.4	46.5	394.	1	0.7	71.8	699.	1	0.7	95.1
236.	1	0.7	20.4	307.	2	1.4	47.9	406.	1	0.7	72.5	722.	1	0.7	95.8
238.	2	1.4	21.8	308.	1	0.7	48.6	407.	1	0.7	73.2	760.	1	0.7	96.5
240.	1	0.7	22.5	311.	2	1.4	50.0	410.	1	0.7	73.9	817.	1	0.7	97.2
247.	2	1.4	23.9	313.	1	0.7	50.7	416.	1	0.7	74.6	820.	1	0.7	97.9
256.	2	1.4	25.4	314.	1	0.7	51.4	425.	2	1.4	76.1	895.	1	0.7	98.6
267.	1	0.7	26.1	318.	1	0.7	52.1	439.	1	0.7	76.8	900.	1	0.7	99.3
268.	1	0.7	26.8	319.	2	1.4	53.5	443.	2	1.4	78.2	908.	1	0.7	100.0
269.	1	0.7	27.5	321.	2	1.4	54.9	447.	1	0.7	78.9				

```
************
* NH3      *
************
                                                 MAXIMUM        98.0999985
VARIABLE NUMBER . . . . . .        5             MINIMUM         1.0000000
NUMBER OF DISTINCT VALUES .      104             RANGE          97.0999985
NUMBER OF VALUES COUNTED. .      141             VARIANCE      204.5528259
NUMBER OF VALUES NOT COUNTED       3             ST.DEV.        14.3021965
                                                 (Q3-Q1)/2       8.2500000

LOCATION ESTIMATES                                   ST.ERROR
                     MEAN           15.3390093       1.2044623
                     MEDIAN         10.6000004       1.1835685
                     MODE           NOT UNIQUE
```

```
H
H
HH
HH                          EACH 'H'
HH                          REPRESENTS
HH H                            4
HHHHH                       COUNT(S)
HHHHHH
HHHHHHH
HHHHHHHHHH H H     H
L----------------------U

EACH '-' ABOVE =      5.0000
             L=       0.0000
             U=     105.0000

                                                  Q1=     5.0000000
                      VALUE     VALUE/S.E.        Q3=    21.5000000
SKEWNESS               2.40        11.61          S-=     1.0368128
KURTOSIS               8.43        20.45          S+=    29.6412067

EACH '.' BELOW =      0.7500
```

```
S   Q                       Q        S                                                          M
M   1       M     M         3        +                                                          A
I...........E.....E.....................................................................................A
N           D     A                                                                             X
            I     N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
1.000	2	1.4	1.4	7.900	1	0.7	39.0	15.200	1	0.7	61.0	23.700	1	0.7	81.6
1.500	1	0.7	2.1	8.000	2	1.4	40.4	15.400	1	0.7	61.7	24.000	1	0.7	82.3
2.000	1	0.7	2.8	8.300	1	0.7	41.1	15.600	1	0.7	62.4	25.000	1	0.7	83.0
2.500	1	0.7	3.5	8.500	1	0.7	41.8	15.800	1	0.7	63.1	25.100	1	0.7	83.7
2.700	1	0.7	4.3	8.700	1	0.7	42.6	16.400	1	0.7	63.8	26.000	1	0.7	84.4
2.800	1	0.7	5.0	8.800	1	0.7	43.3	16.700	1	0.7	64.5	26.100	1	0.7	85.1
3.000	4	2.8	7.8	9.300	2	1.4	44.7	16.900	1	0.7	65.2	26.200	1	0.7	85.8
3.500	2	1.4	9.2	9.400	1	0.7	45.4	17.300	2	1.4	66.7	27.900	1	0.7	86.5
4.000	4	2.8	12.1	9.700	1	0.7	46.1	17.500	2	1.4	68.1	28.000	1	0.7	87.2
4.200	1	0.7	12.8	9.800	1	0.7	46.8	17.700	1	0.7	68.8	28.300	1	0.7	87.9
4.500	5	3.5	16.3	10.000	2	1.4	48.2	18.100	1	0.7	69.5	29.200	1	0.7	88.7
4.600	2	1.4	17.7	10.200	1	0.7	48.9	18.400	1	0.7	70.2	29.900	1	0.7	89.4
4.700	4	2.8	20.6	10.400	1	0.7	49.6	18.600	1	0.7	70.9	30.700	1	0.7	90.1
4.900	3	2.1	22.7	10.600	1	0.7	50.4	19.300	1	0.7	71.6	32.500	1	0.7	90.8
5.000	5	3.5	26.2	10.800	1	0.7	51.1	19.800	1	0.7	72.3	33.000	1	0.7	91.5
5.200	1	0.7	27.0	11.000	1	0.7	51.8	20.000	1	0.7	73.0	34.000	2	1.4	92.9
5.600	1	0.7	27.7	11.300	1	0.7	52.5	20.300	1	0.7	73.8	35.300	1	0.7	93.6
5.700	1	0.7	28.4	11.600	1	0.7	53.2	20.500	1	0.7	74.5	36.300	1	0.7	94.3
6.000	3	2.1	30.5	11.800	2	1.4	54.6	21.500	1	0.7	75.2	38.200	1	0.7	95.0
6.300	1	0.7	31.2	12.000	1	0.7	55.3	22.000	1	0.7	75.9	43.300	1	0.7	95.7
6.400	1	0.7	31.9	12.200	1	0.7	56.0	22.100	1	0.7	76.6	45.900	1	0.7	96.5
6.500	2	1.4	33.3	12.900	2	1.4	57.4	22.300	1	0.7	77.3	56.300	1	0.7	97.2
6.800	1	0.7	34.0	14.200	1	0.7	58.2	22.500	1	0.7	78.0	56.600	1	0.7	97.9
7.000	3	2.1	36.2	14.300	1	0.7	58.9	22.600	2	1.4	79.4	58.800	1	0.7	98.6
7.200	1	0.7	36.9	14.700	1	0.7	59.6	23.300	1	0.7	80.1	67.000	1	0.7	99.3
7.600	2	1.4	38.3	15.100	1	0.7	60.3	23.400	1	0.7	80.9	98.100	1	0.7	100.0

```
*************
* KJELCOMP *
*************
                                                  MAXIMUM          0.5600000
VARIABLE NUMBER . . . . . . .          2          MINIMUM          0.1200000
NUMBER OF DISTINCT VALUES .           27          RANGE            0.4400000
NUMBER OF VALUES COUNTED. .           60          VARIANCE         0.0097630
NUMBER OF VALUES NOT COUNTED          84          ST.DEV.          0.0988080
                                                  (Q3-Q1)/2        0.0600000

LOCATION ESTIMATES                                     ST.ERROR
               MEAN                0.2711667          0.0127561
               MEDIAN              0.2600000          0.0144338
               MODE               NOT UNIQUE
```

```
    HH  H
    HH  H                  EACH 'H
    HH  H                  REPRESENTS
 H  HHHH H                    1
 H HHHHHHH                 COUNT(S)
HH HHHHHHH H
HHHHHHHHHH H
HHHHHHHHHH HHH  HHH
L---------------------U

EACH '-' ABOVE =       0.0250
            L=         0.0750
            U=         0.6000
```

```
                                                   Q1      0.2100000
                            VALUE   VALUE/S.E.     Q3=     0.3300000
         SKEWNESS           0.74         2.37      S-=     0.1723587
         KURTOSIS           0.60         0.95      S+=     0.3699747

                      EACH '.' BELOW =     0.0050
```

```
              S      Q                Q     S
      M       -      1      M M       3     +                              M
      I.............................F.F.........................................A
      N                     D A                                             X
                            I N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.1200	3	5.0	5.0	0.2100	3	5.0	28.3	0.2900	5	8.3	66.7	0.4000	1	1.7	91.7
0.1300	1	1.7	6.7	0.2200	2	3.3	31.7	0.3100	3	5.0	71.7	0.4100	1	1.7	93.3
0.1400	3	5.0	11.7	0.2300	1	1.7	33.3	0.3200	1	1.7	73.3	0.4300	1	1.7	95.0
0.1500	1	1.7	13.3	0.2400	4	6.7	40.0	0.3300	3	5.0	78.3	0.5100	1	1.7	96.7
0.1600	2	3.3	16.7	0.2500	3	5.0	45.0	0.3400	3	5.0	83.3	0.5300	1	1.7	98.3
0.1800	3	5.0	21.7	0.2600	5	8.3	53.3	0.3500	2	3.3	86.7	0.5600	1	1.7	100.0
0.2000	1	1.7	23.3	0.2700	3	5.0	58.3	0.3900	2	3.3	90.0				

```
************
* SRS      *
************
                                        MAXIMUM        2772.0000000
VARIABLE NUMBER . . . . . .      6      MINIMUM          86.0000000
NUMBER OF DISTINCT VALUES .    122      RANGE          2686.0000000
NUMBER OF VALUES COUNTED. .    142      VARIANCE     339271.8437500
NUMBER OF VALUES NOT COUNTED     2      ST.DEV.         582.4704590
                                        (Q3-Q1)/2       452.5000000

LOCATION ESTIMATES                               ST.ERROR
                    MEAN      1101.0493164      48.8798370
                    MEDIAN    1160.0000000      63.7972374
                    MODE      1880.0000000
```

```
                 H
  H        H H
  H        H HH               EACH 'H'
  H   H H HHHH                REPRESENTS
  HH H HHHHHH                     2
  HH HHHHHHHH                 COUNT(S)
 HHH HHHHHHHHH
 HHH HHHHHHHHH
 HHHHHHHHHHHHHHHH  H
L---------------------U

EACH '-' ABOVE =     150.0000
              L=       0.0000
              U=    3150.0000

                                           Q1=  655.0000000
                      VALUE   VALUE/S.E.   Q3= 1560.0000000
SKEWNESS              -0.02      -0.09     S-=  518.5788574
KURTOSIS              -0.68      -1.66     S+= 1683.5197754

                      EACH '.' BELOW =      25.0000
```

```
                 S      Q                       Q     S
 M               -      1          M  M         3     +         M                        M
 I.................................F..F.........................O........................A
 N                                 A  D                         D                        X
                                   N  I                         E
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
86.	1	0.7	0.7	703.	1	0.7	26.8	1130.	2	1.4	50.0	1560.	2	1.4	75.4
100.	1	0.7	1.4	707.	1	0.7	27.5	1190.	1	0.7	50.7	1566.	1	0.7	76.1
105.	1	0.7	2.1	742.	1	0.7	28.2	1205.	2	1.4	52.1	1588.	1	0.7	76.8
126.	1	0.7	2.8	749.	1	0.7	28.9	1220.	1	0.7	52.8	1598.	1	0.7	77.5
143.	2	1.4	4.2	750.	2	1.4	30.3	1222.	1	0.7	53.5	1600.	1	0.7	78.2
175.	1	0.7	4.9	763.	1	0.7	31.0	1226.	1	0.7	54.2	1610.	1	0.7	78.9
200.	1	0.7	5.6	809.	1	0.7	31.7	1231.	1	0.7	54.9	1624.	1	0.7	79.6
221.	2	1.4	7.0	810.	1	0.7	32.4	1237.	1	0.7	55.6	1625.	2	1.4	81.0
229.	1	0.7	7.7	811.	1	0.7	33.1	1258.	1	0.7	56.3	1640.	2	1.4	82.4
245.	2	1.4	9.2	856.	1	0.7	33.8	1259.	1	0.7	57.0	1660.	1	0.7	83.1
250.	2	1.4	10.6	870.	1	0.7	34.5	1270.	1	0.7	57.7	1680.	2	1.4	84.5
259.	1	0.7	11.3	872.	1	0.7	35.2	1274.	1	0.7	58.5	1690.	1	0.7	85.2
263.	1	0.7	12.0	874.	1	0.7	35.9	1283.	1	0.7	59.2	1696.	2	1.4	86.6
265.	1	0.7	12.7	913.	1	0.7	36.6	1289.	2	1.4	60.6	1700.	1	0.7	87.3
275.	1	0.7	13.4	950.	1	0.7	37.3	1307.	1	0.7	61.3	1714.	1	0.7	88.0
292.	1	0.7	14.1	954.	1	0.7	38.0	1346.	1	0.7	62.0	1725.	1	0.7	88.7
300.	1	0.7	14.8	970.	1	0.7	38.7	1364.	1	0.7	62.7	1742.	1	0.7	89.4
307.	1	0.7	15.5	973.	1	0.7	39.4	1375.	1	0.7	63.4	1750.	2	1.4	90.8
316.	1	0.7	16.2	985.	1	0.7	40.1	1392.	2	1.4	64.8	1753.	1	0.7	91.5
347.	1	0.7	16.9	1000.	1	0.7	40.8	1400.	1	0.7	65.5	1824.	1	0.7	92.3
349.	1	0.7	17.6	1009.	1	0.7	41.5	1410.	1	0.7	66.2	1840.	1	0.7	93.0
359.	1	0.7	18.3	1010.	1	0.7	42.3	1440.	1	0.7	66.9	1880.	3	2.1	95.1
365.	1	0.7	19.0	1049.	1	0.7	43.0	1443.	1	0.7	67.6	1935.	1	0.7	95.8
385.	2	1.4	20.4	1050.	1	0.7	43.7	1463.	1	0.7	68.3	2000.	1	0.7	96.5
431.	1	0.7	21.1	1062.	1	0.7	44.4	1474.	1	0.7	69.0	2057.	1	0.7	97.2
515.	1	0.7	21.8	1074.	1	0.7	45.1	1500.	1	0.7	69.7	2196.	1	0.7	97.9
610.	1	0.7	22.5	1075.	1	0.7	45.8	1501.	1	0.7	70.4	2303.	1	0.7	98.6
635.	2	1.4	23.9	1080.	1	0.7	46.5	1521.	1	0.7	71.1	2384.	1	0.7	99.3
637.	1	0.7	24.6	1105.	1	0.7	47.2	1526.	2	1.4	72.5	2772.	1	0.7	100.0
655.	1	0.7	25.4	1121.	1	0.7	47.9	1530.	1	0.7	73.2				
668.	1	0.7	26.1	1127.	1	0.7	48.6	1533.	1	0.7	73.9				

```
*************
* SECCHI    *
*************
                                                MAXIMUM        3.9000001
VARIABLE NUMBER . . . . . .        9            MINIMUM        0.6000000
NUMBER OF DISTINCT VALUES .       23            RANGE          3.3000000
NUMBER OF VALUES COUNTED. .       72            VARIANCE       0.4417352
NUMBER OF VALUES NOT COUNTED      72            ST.DEV.        0.6646316
                                                (Q3-Q1)/2      0.4000000

LOCATION ESTIMATES                                      ST.ERROR
                  MEAN              1.6902778           0.0783276
                  MEDIAN            1.5500001           0.1154701
                  MODE              NOT UNIQUE
```

```
     H  H                EACH 'H'
     H  H               REPRESENTS
    HH  H                   2
    HH  H                COUNT(S)
   HHHHHH
   HHHHHHHH
  HHHHHHHHHHH HHH  H
L---------------------U

EACH '-' ABOVE =      0.2000
             L=       0.2000
             U=       4.4000

                                               Q1-    1.2000000
                      VALUE    VALUE/S.F.      Q3=    2.0000000
SKEWNESS               0.96          3.34      S-=    1.0256462
KURTOSIS               0.90          1.55      S+=    2.3549094

                 EACH '.' BELOW -     0.0300
```

```
              S    Q                    Q         S
M             -    1        M   M       3         +                                            M
I.............................F....F..................................................................A
N                           D   A                                                              X
                            I   N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.6000	2	2.8	2.8	1.3000	9	12.5	38.9	1.9000	4	5.6	66.7	2.5000	2	2.8	91.7
0.8000	1	1.4	4.2	1.4000	5	6.9	45.8	2.0000	9	12.5	79.2	2.9000	2	2.8	94.4
0.9000	3	4.2	8.3	1.5000	3	4.2	50.0	2.1000	1	1.4	80.6	3.1000	1	1.4	95.8
1.0000	3	4.2	12.5	1.6000	3	4.2	54.2	2.2000	2	2.8	83.3	3.3000	2	2.8	98.6
1.1000	7	9.7	22.2	1.7000	2	2.8	56.9	2.3000	2	2.8	86.1	3.9000	1	1.4	100.0
1.2000	3	4.2	26.4	1.8000	3	4.2	61.1	2.4000	2	2.8	88.9				

****
* TURBID *
****

		MAXIMUM	28.0000000
VARIABLE NUMBER	10	MINIMUM	1.2000000
NUMBER OF DISTINCT VALUES .	71	RANGE	26.7999992
NUMBER OF VALUES COUNTED. .	144	VARIANCE	17.7504158
NUMBER OF VALUES NOT COUNTED	0	ST.DEV.	4.2131243
		(Q3-Q1)/2	2.0500002

LOCATION ESTIMATES

		ST.ERROR
MEAN	6.6277771	0.3510937
MEDIAN	5.6999998	0.4330129
MODE	3.0999999	

```
H
H
HH                    EACH 'H'
HHHH                  REPRESENTS
HHHH                      4
HHHHH                 COUNT(S)
HHHHH
HHHHHH
HHHHHHHHHHHHHH  H  H
L--------------------U
```

EACH '-' ABOVE = 1.5000
L= 0.0000
U= 31.5000

	VALUE	VALUE/S.E.		
			Q1-	3.9500000
			Q3=	8.0500002
SKEWNESS	2.24	10.95	S-=	2.4146528
KURTOSIS	6.88	16.84	S+=	10.8409014

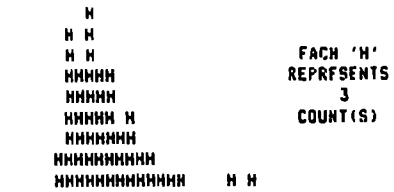
EACH '.' BELOW = 0.2500

```
     S     Q          Q       S
M    -  M  1     M    H  3    +                                                    M
I.....Q.....E...E.....................................................................A
N     D        D    A                                                             X
      E        I    N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
1.200	1	0.7	0.7	4.100	2	1.4	27.1	6.700	4	2.8	59.7	9.100	2	1.4	86.1
1.600	1	0.7	1.4	4.200	3	2.1	29.2	6.800	4	2.8	62.5	9.500	3	2.1	88.2
1.800	1	0.7	2.1	4.300	2	1.4	30.6	6.900	1	0.7	63.2	9.900	1	0.7	88.9
2.000	1	0.7	2.8	4.400	4	2.8	33.3	7.000	2	1.4	64.6	10.400	1	0.7	89.6
2.100	2	1.4	4.2	4.500	1	0.7	34.0	7.100	3	2.1	66.7	10.600	1	0.7	90.3
2.300	2	1.4	5.6	4.600	3	2.1	36.1	7.300	2	1.4	68.1	10.800	1	0.7	91.0
2.400	2	1.4	6.9	4.700	3	2.1	38.2	7.400	1	0.7	68.7	11.100	2	1.4	92.4
2.500	2	1.4	8.3	4.800	2	1.4	39.6	7.600	3	2.1	70.8	12.300	1	0.7	93.1
2.700	1	0.7	9.0	5.000	3	2.1	41.7	7.700	3	2.1	72.9	13.300	1	0.7	93.7
2.800	2	1.4	10.4	5.200	3	2.1	43.7	7.800	2	1.4	74.3	13.800	1	0.7	94.4
2.900	1	0.7	11.1	5.300	3	2.1	45.8	8.000	1	0.7	75.0	15.200	1	0.7	95.1
3.100	10	6.9	18.1	5.500	3	2.1	47.9	8.100	3	2.1	77.1	16.600	1	0.7	95.8
3.200	1	0.7	18.7	5.600	2	1.4	49.3	8.300	2	1.4	78.5	17.000	2	1.4	97.2
3.300	3	2.1	20.8	5.700	5	3.5	52.8	8.400	1	0.7	79.2	18.200	1	0.7	97.9
3.600	2	1.4	22.2	6.200	1	0.7	53.5	8.700	3	2.1	81.2	23.000	1	0.7	98.6
3.800	3	2.1	24.3	6.400	1	0.7	54.2	8.800	2	1.4	82.6	24.000	1	0.7	99.3
3.900	1	0.7	25.0	6.500	1	0.7	54.9	8.900	1	0.7	83.3	28.000	1	0.7	100.0
4.000	1	0.7	25.7	6.600	3	2.1	56.9	9.000	2	1.4	84.7				

****
* CHLACORR *
****

		MAXIMUM	28.9300003
VARIABLE NUMBER	2	MINIMUM	0.7000000
NUMBER OF DISTINCT VALUES .	137	RANGE	28.2299995
NUMBER OF VALUES COUNTED. .	144	VARIANCE	23.6256409
NUMBER OF VALUES NOT COUNTED	0	ST.DEV.	4.8606215
		(Q3-Q1)/2	2.6325004



LOCATION ESTIMATES

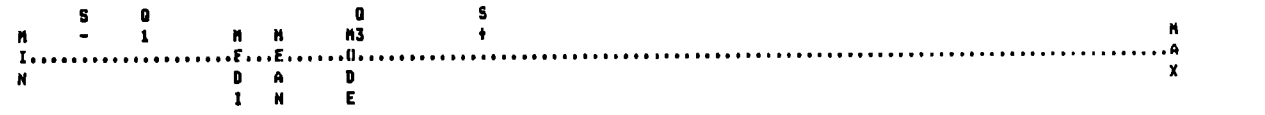
		ST.ERROR
MEAN	7.0166678	0.4050518
MEDIAN	5.9650002	0.4070321
MODE	8.8000002	

EACH '-' ABOVE = 1.5000
L= 0.0000
U= 31.5000

Q1- 3.7750001
Q3= 8.9900007
S-= 2.1560464
S+= 11.8772898

	VALUE	VALUE/S.E.
SKEWNESS	1.91	9.36
KURTOSIS	5.47	13.40

EACH '.' BELOW = 0.2500



VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
0.7000	1	0.7	0.7	3.8400	1	0.7	26.4	6.1700	1	0.7	52.1	9.6400	1	0.7	78.5
1.1600	1	0.7	1.4	4.0000	1	0.7	27.1	6.2600	1	0.7	52.8	9.8100	1	0.7	79.2
1.1900	1	0.7	2.1	4.0900	2	1.4	28.5	6.2700	1	0.7	53.5	10.1400	1	0.7	79.9
1.3000	1	0.7	2.8	4.1500	1	0.7	29.2	6.3200	1	0.7	54.2	10.3500	1	0.7	80.6
1.4300	1	0.7	3.5	4.2200	1	0.7	29.9	6.4000	1	0.7	54.9	10.6400	1	0.7	81.2
1.5200	1	0.7	4.2	4.2300	1	0.7	30.6	6.4900	1	0.7	55.6	10.8200	1	0.7	81.9
1.5400	1	0.7	4.9	4.3000	1	0.7	31.2	6.5100	1	0.7	56.2	10.9000	1	0.7	82.6
1.8100	1	0.7	5.6	4.3300	1	0.7	31.9	6.5400	1	0.7	56.9	10.9600	1	0.7	83.3
1.8900	1	0.7	6.2	4.3900	1	0.7	32.6	6.5800	1	0.7	57.6	11.1400	1	0.7	84.0
1.9300	1	0.7	6.9	4.5300	1	0.7	33.3	6.8900	1	0.7	58.3	11.3300	1	0.7	84.7
2.0200	1	0.7	7.6	4.5900	1	0.7	34.0	6.9000	2	1.4	59.7	11.3800	1	0.7	85.4
2.2700	1	0.7	8.3	4.6100	1	0.7	34.7	6.9400	1	0.7	60.4	11.4300	1	0.7	86.1
2.3400	1	0.7	9.0	4.6600	1	0.7	35.4	7.0700	1	0.7	61.1	11.4500	1	0.7	86.8
2.3600	1	0.7	9.7	4.6800	1	0.7	36.1	7.3400	1	0.7	61.8	11.4600	1	0.7	87.5
2.3700	1	0.7	10.4	4.7000	1	0.7	36.8	7.4800	1	0.7	62.5	11.7900	1	0.7	88.2
2.3900	1	0.7	11.1	4.7400	1	0.7	37.5	7.5100	1	0.7	63.2	12.0800	1	0.7	88.9
2.4100	1	0.7	11.8	4.9000	1	0.7	38.2	7.5300	1	0.7	63.9	12.1200	1	0.7	89.6
2.4300	1	0.7	12.5	4.9400	1	0.7	38.9	7.5700	1	0.7	64.6	12.3200	1	0.7	90.3
2.4800	2	1.4	13.9	4.9700	1	0.7	39.6	7.6800	1	0.7	65.3	12.8100	1	0.7	91.0
2.5100	1	0.7	14.6	5.0100	1	0.7	40.3	7.7600	1	0.7	66.0	13.0600	1	0.7	91.7
2.5600	1	0.7	15.3	5.0300	1	0.7	41.0	7.8300	1	0.7	66.7	13.1600	1	0.7	92.4
2.6200	1	0.7	16.0	5.0400	1	0.7	41.7	7.9100	1	0.7	67.4	13.9600	1	0.7	93.1
2.6900	1	0.7	16.7	5.0700	1	0.7	42.4	8.0700	1	0.7	68.1	14.5100	1	0.7	93.7
2.7000	2	1.4	18.1	5.1700	2	1.4	43.7	8.1000	1	0.7	68.7	14.7800	1	0.7	94.4
2.8400	1	0.7	18.7	5.2400	1	0.7	44.4	8.1600	1	0.7	69.4	14.7900	1	0.7	95.1
2.9000	1	0.7	19.4	5.2800	1	0.7	45.1	8.2000	1	0.7	70.1	14.8300	1	0.7	95.8
2.9800	1	0.7	20.1	5.3000	1	0.7	45.8	8.2500	1	0.7	70.8	15.3600	1	0.7	96.5
3.2000	1	0.7	20.8	5.4800	1	0.7	46.5	8.2900	1	0.7	71.5	17.8100	1	0.7	97.2
3.2200	1	0.7	21.5	5.8900	1	0.7	47.2	8.3500	1	0.7	72.2	18.6700	1	0.7	97.9
3.2400	1	0.7	22.2	5.9100	1	0.7	47.9	8.5400	1	0.7	72.9	26.1600	1	0.7	98.6
3.2600	1	0.7	22.9	5.9300	1	0.7	48.6	8.8000	3	2.1	75.0	28.7200	1	0.7	99.3
3.4400	1	0.7	23.6	5.9400	1	0.7	49.3	9.1800	1	0.7	75.7	28.9300	1	0.7	100.0
3.4800	1	0.7	24.3	5.9600	1	0.7	50.0	9.3800	1	0.7	76.4				
3.6300	1	0.7	25.0	5.9700	1	0.7	50.7	9.4800	1	0.7	77.1				
3.8200	1	0.7	25.7	6.1200	1	0.7	51.4	9.5300	1	0.7	77.8				

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* PHEO *
****

		MAXIMUM	32.7099991
VARIABLE NUMBER	3	MINIMUM	0.0000000
NUMBER OF DISTINCT VALUES .	133	RANGE	32.7099991
NUMBER OF VALUES COUNTED. .	144	VARIANCE	21.8539104
NUMBER OF VALUES NOT COUNTED	0	ST.DEV.	4.6748166
		(Q3-Q1)/2	2.1300001

LOCATION ESTIMATES

		ST.ERROR
MEAN	4.8945146	0.3895681
MEDIAN	3.5500000	0.3579574
MODE	1.7100000	

```
                                    H
                                   HH
                                   HH                    EACH 'H'
                                   HH                  REPRESENTS
                                  HHH                        5
                                 HHHH                   COUNT(S)
                                 HHHH
                                HHHHHH
                                HHHHHHH H HH    H
                               L--------------------U
```

EACH '-' ABOVE = 2.0000
L= 0.0000
U= 42.0000

	VALUE	VALUE/S.E.
SKEWNESS	2.71	13.28
KURTOSIS	10.36	25.37

Q1- 1.9400001
Q3= 6.2000003
S-= 0.2196980
S+= 9.5693312

EACH '.' BELOW - 0.3000

```
 S   Q          Q       S
M-   M    M  M  3       +                                                    M
I.....Q.....E...E.....................................................................A
N    D    D  A                                                              X
     E    I  N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.00000	1	0.7	0.7	2.27000	1	0.7	29.9	3.69000	1	0.7	54.2	6.88000	2	1.4	79.2
0.02000	1	0.7	1.4	2.29000	1	0.7	30.6	3.90000	1	0.7	54.9	6.95000	1	0.7	79.9
0.31000	1	0.7	2.1	2.32000	1	0.7	31.2	3.92000	1	0.7	55.6	7.06000	1	0.7	80.6
0.54000	2	1.4	3.5	2.38000	1	0.7	31.9	3.97000	1	0.7	56.2	7.09000	1	0.7	81.2
0.56000	2	1.4	4.9	2.39000	1	0.7	32.6	4.16000	1	0.7	56.9	7.10000	1	0.7	81.9
0.65000	1	0.7	5.6	2.48000	1	0.7	33.3	4.30000	1	0.7	57.6	7.33000	1	0.7	82.6
0.66000	1	0.7	6.2	2.53000	1	0.7	34.0	4.34000	1	0.7	58.3	7.42000	1	0.7	83.3
0.70000	1	0.7	6.9	2.59000	1	0.7	34.7	4.43000	1	0.7	59.0	7.52000	1	0.7	84.0
0.71000	1	0.7	7.6	2.61000	1	0.7	35.4	4.57000	1	0.7	59.7	7.65000	1	0.7	84.7
0.81000	1	0.7	8.3	2.67000	1	0.7	36.1	4.61000	1	0.7	60.4	7.66000	1	0.7	85.4
0.96000	2	1.4	9.7	2.73000	1	0.7	36.8	4.78000	1	0.7	61.1	8.42000	1	0.7	86.1
0.97000	1	0.7	10.4	2.74000	1	0.7	37.5	4.87000	1	0.7	61.8	8.75000	1	0.7	86.8
0.99000	1	0.7	11.1	2.82000	1	0.7	38.2	4.95000	1	0.7	62.5	8.85000	1	0.7	87.5
1.06000	1	0.7	11.8	2.86000	1	0.7	38.9	4.98000	1	0.7	63.2	8.96000	1	0.7	88.2
1.32000	1	0.7	12.5	2.91000	1	0.7	39.6	5.00000	1	0.7	63.9	9.43000	1	0.7	88.9
1.35000	1	0.7	13.2	2.92000	1	0.7	40.3	5.06000	1	0.7	64.6	9.74000	1	0.7	89.6
1.36000	2	1.4	14.6	2.96000	1	0.7	41.0	5.11000	1	0.7	65.3	10.23000	1	0.7	90.3
1.41000	2	1.4	16.0	3.03000	1	0.7	41.7	5.19000	2	1.4	66.7	10.45000	1	0.7	91.0
1.48000	1	0.7	16.7	3.04000	1	0.7	42.4	5.20000	1	0.7	67.4	10.58000	1	0.7	91.7
1.52000	1	0.7	17.4	3.06000	1	0.7	43.1	5.37000	1	0.7	68.1	11.09000	1	0.7	92.4
1.55000	1	0.7	18.1	3.24000	2	1.4	44.4	5.39000	1	0.7	68.7	11.39000	1	0.7	93.1
1.59000	1	0.7	18.7	3.27000	1	0.7	45.1	5.40000	1	0.7	69.4	11.50000	1	0.7	93.7
1.71000	3	2.1	20.8	3.29000	1	0.7	45.8	5.45000	1	0.7	70.1	11.91000	1	0.7	94.4
1.74000	2	1.4	22.2	3.34000	1	0.7	46.5	5.73000	1	0.7	70.8	12.07000	1	0.7	95.1
1.75000	1	0.7	22.9	3.43000	1	0.7	47.2	5.82000	1	0.7	71.5	12.82000	1	0.7	95.8
1.80000	1	0.7	23.6	3.48000	1	0.7	47.9	5.84000	1	0.7	72.2	13.35000	1	0.7	96.5
1.87000	1	0.7	24.3	3.50000	1	0.7	48.6	5.92000	1	0.7	72.9	16.96000	1	0.7	97.2
1.91000	1	0.7	25.0	3.53000	1	0.7	49.3	6.03000	1	0.7	73.6	20.24000	1	0.7	97.9
1.97000	1	0.7	25.7	3.54000	1	0.7	50.0	6.10000	1	0.7	74.3	22.69000	1	0.7	98.6
2.01000	1	0.7	26.4	3.56000	1	0.7	50.7	6.13000	1	0.7	75.0	22.82000	1	0.7	99.3
2.09000	1	0.7	27.1	3.57000	1	0.7	51.4	6.27000	1	0.7	75.7	32.71000	1	0.7	100.0
2.14000	1	0.7	27.8	3.58000	1	0.7	52.1	6.31000	1	0.7	76.4				
2.21000	1	0.7	28.5	3.63000	1	0.7	52.8	6.42000	1	0.7	77.1				
2.23000	1	0.7	29.2	3.64000	1	0.7	53.5	6.51000	1	0.7	77.8				

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* TSS *
****

VARIABLE NUMBER	11	MAXIMUM	29.6000004
NUMBER OF DISTINCT VALUES .	132	MINIMUM	2.3900001
NUMBER OF VALUES COUNTED. .	143	RANGE	27.2100010
NUMBER OF VALUES NOT COUNTED	1	VARIANCE	17.0509777
		ST.DEV.	4.1292830
		(Q3-Q1)/2	2.1099999

```
    H
    H
  HHH
  HHHH                    EACH 'H'
  HHHH                  REPRESENTS
  HHHHH                       3
  HHHHH                 COUNT(S)
 HHHHHHH
 HHHHHHHH
 HHHHHHHHHHH HH    H
L--------------------U
```

EACH '-' ABOVE = 1.5000
L= 1.5000
U= 33.0000

LOCATION ESTIMATES

		ST.ERROR
MEAN	7.5022364	0.3453080
MEDIAN	6.6799998	0.2251668
MODE	NOT UNIQUE	

	VALUE	VALUE/S.E.
SKEWNESS	2.01	9.83
KURTOSIS	6.23	15.21

Q1- 4.7700000
Q3= 8.9899998
S-- 3.3729534
S+= 11.6315193

EACH '.' BELOW = 0.2500

```
    S     Q           Q     S
H   -     1     M     3     +                                                  H
I.............E...E.....................................................................A
N             D   A                                                            X
              I   N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
2.390	1	0.7	0.7	4.770	1	0.7	25.2	6.810	1	0.7	52.4	9.430	1	0.7	77.6
2.400	1	0.7	1.4	4.880	2	1.4	26.6	6.870	1	0.7	53.1	9.460	1	0.7	78.3
2.630	1	0.7	2.1	5.010	1	0.7	27.3	6.890	2	1.4	54.5	9.520	1	0.7	79.0
2.750	1	0.7	2.8	5.040	1	0.7	28.0	6.900	1	0.7	55.2	9.550	1	0.7	79.7
2.800	1	0.7	3.5	5.080	1	0.7	28.7	6.970	1	0.7	55.9	9.560	1	0.7	80.4
2.860	1	0.7	4.2	5.230	1	0.7	29.4	7.010	1	0.7	56.6	9.610	1	0.7	81.1
2.900	1	0.7	4.9	5.320	2	1.4	30.8	7.030	1	0.7	57.3	9.660	1	0.7	81.8
2.930	1	0.7	5.6	5.400	1	0.7	31.5	7.050	1	0.7	58.0	9.800	1	0.7	82.5
2.940	1	0.7	6.3	5.440	1	0.7	32.2	7.240	2	1.4	59.4	10.030	1	0.7	83.2
3.140	2	1.4	7.7	5.460	2	1.4	33.6	7.260	1	0.7	60.1	10.080	1	0.7	83.9
3.180	1	0.7	8.4	5.530	1	0.7	34.3	7.490	1	0.7	60.8	10.250	1	0.7	84.6
3.270	1	0.7	9.1	5.770	1	0.7	35.0	7.520	1	0.7	61.5	10.640	1	0.7	85.3
3.310	1	0.7	9.8	5.780	1	0.7	35.7	7.560	1	0.7	62.2	10.720	1	0.7	86.0
3.330	1	0.7	10.5	5.810	2	1.4	37.1	7.680	1	0.7	62.9	11.020	1	0.7	86.7
3.470	2	1.4	11.9	5.830	1	0.7	37.8	7.750	1	0.7	63.6	11.340	1	0.7	87.4
3.550	1	0.7	12.6	5.900	1	0.7	38.5	7.820	1	0.7	64.3	11.600	1	0.7	88.1
3.700	1	0.7	13.3	5.910	1	0.7	39.2	7.890	1	0.7	65.0	11.920	1	0.7	88.8
3.710	1	0.7	14.0	5.950	1	0.7	39.9	7.900	1	0.7	65.7	11.980	1	0.7	89.5
3.820	1	0.7	14.7	6.130	1	0.7	40.6	7.980	2	1.4	67.1	12.300	1	0.7	90.2
3.860	1	0.7	15.4	6.160	1	0.7	41.3	8.100	1	0.7	67.8	12.400	1	0.7	90.9
3.910	1	0.7	16.1	6.200	2	1.4	42.7	8.120	1	0.7	68.5	13.160	1	0.7	91.6
3.920	1	0.7	16.8	6.250	1	0.7	43.4	8.270	1	0.7	69.2	13.300	1	0.7	92.3
4.040	1	0.7	17.5	6.370	2	1.4	44.8	8.330	1	0.7	69.9	13.480	1	0.7	93.0
4.090	1	0.7	18.2	6.450	1	0.7	45.5	8.390	1	0.7	70.6	13.760	1	0.7	93.7
4.100	1	0.7	18.9	6.480	1	0.7	46.2	8.560	1	0.7	71.3	14.720	1	0.7	94.4
4.130	1	0.7	19.6	6.500	1	0.7	46.9	8.600	1	0.7	72.0	14.760	1	0.7	95.1
4.170	1	0.7	20.3	6.510	1	0.7	47.6	8.680	1	0.7	72.7	15.490	1	0.7	95.8
4.370	1	0.7	21.0	6.590	1	0.7	48.3	8.940	1	0.7	73.4	16.860	1	0.7	96.5
4.380	1	0.7	21.7	6.600	1	0.7	49.0	8.960	1	0.7	74.1	17.360	1	0.7	97.2
4.460	1	0.7	22.4	6.670	1	0.7	49.7	8.980	1	0.7	74.8	19.520	1	0.7	97.9
4.490	1	0.7	23.1	6.680	1	0.7	50.3	8.990	1	0.7	75.5	21.020	1	0.7	98.6
4.510	1	0.7	23.8	6.740	1	0.7	51.0	9.110	1	0.7	76.2	21.940	1	0.7	99.3
4.670	1	0.7	24.5	6.770	1	0.7	51.7	9.180	1	0.7	76.9	29.600	1	0.7	100.0

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* RS *
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		MAXIMUM	24.4799995
VARIABLE NUMBER	12	MINIMUM	1.1400000
NUMBER OF DISTINCT VALUES .	133	RANGE	23.3400002
NUMBER OF VALUES COUNTED. .	143	VARIANCE	12.8444500
NUMBER OF VALUES NOT COUNTED	1	ST.DEV.	3.5839155
		(Q3-Q1)/2	1.9349999

LOCATION ESTIMATES

		ST.ERROR
MEAN	5.5609107	0.2997021
MEDIAN	4.7399998	0.2367138
MODE	NOT UNIQUE	

```
  H H
  HHH                    EACH 'H'
  HHHH                   REPRESENTS
  HHHH                       4
  HHHH                   COUNT(S)
  HHHHH
 HHHHHHH
 HHHHHHHHHH H   H
L-------------------U
```

EACH '-' ABOVE = 1.5000
L= 0.0000
U= 31.5000

	VALUE	VALUE/S.E.	
			Q1- 3.0400000
			Q3= 6.9099998
SKEWNESS	2.10	10.75	S-= 1.9769952
KURTOSIS	6.56	16.02	S+= 9.1448259

EACH '.' BELOW = 0.2000

```
    S     Q                 Q         S                                                                    M
H   -     1       M   M     3         +                                                                    A
I.................F...E.....................................................................................X
N                 D   A
                  I   N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
1.140	1	0.7	0.7	3.050	1	0.7	25.9	4.970	1	0.7	52.4	7.120	1	0.7	77.6
1.210	1	0.7	1.4	3.100	2	1.4	27.3	5.070	1	0.7	53.1	7.150	1	0.7	78.3
1.220	1	0.7	2.1	3.290	1	0.7	28.0	5.130	1	0.7	53.8	7.400	1	0.7	79.0
1.430	1	0.7	2.8	3.320	1	0.7	28.7	5.140	1	0.7	54.5	7.440	2	1.4	80.4
1.450	1	0.7	3.5	3.690	1	0.7	29.4	5.160	1	0.7	55.2	7.460	2	1.4	81.8
1.550	1	0.7	4.2	3.730	2	1.4	30.8	5.200	1	0.7	55.9	7.620	1	0.7	82.5
1.560	1	0.7	4.9	3.750	1	0.7	31.5	5.250	1	0.7	56.6	7.770	1	0.7	83.2
1.700	1	0.7	5.6	3.800	1	0.7	32.2	5.270	1	0.7	57.3	7.820	1	0.7	81.9
1.760	1	0.7	6.3	3.870	1	0.7	32.9	5.380	1	0.7	58.0	7.840	1	0.7	84.6
1.800	1	0.7	7.0	3.920	1	0.7	33.6	5.420	2	1.4	59.4	7.980	1	0.7	85.3
1.860	1	0.7	7.7	3.960	1	0.7	34.3	5.600	1	0.7	60.1	8.010	1	0.7	86.0
1.880	2	1.4	9.1	3.970	1	0.7	35.0	5.620	1	0.7	60.8	8.030	1	0.7	86.7
1.890	1	0.7	9.8	3.980	1	0.7	35.7	5.660	1	0.7	61.5	8.150	1	0.7	87.4
2.080	1	0.7	10.5	4.020	1	0.7	36.4	5.670	1	0.7	62.2	8.280	1	0.7	88.1
2.150	1	0.7	11.2	4.160	1	0.7	37.1	5.720	1	0.7	62.9	8.520	1	0.7	88.8
2.190	1	0.7	11.9	4.180	1	0.7	37.8	5.840	1	0.7	63.6	9.060	1	0.7	89.5
2.250	1	0.7	12.6	4.200	1	0.7	38.5	5.850	1	0.7	64.3	9.340	1	0.7	90.2
2.330	1	0.7	13.3	4.220	1	0.7	39.2	5.890	1	0.7	65.0	9.890	1	0.7	90.9
2.370	1	0.7	14.0	4.280	1	0.7	39.9	5.990	1	0.7	65.7	9.980	1	0.7	91.6
2.470	1	0.7	14.7	4.290	1	0.7	40.6	6.000	1	0.7	66.4	10.100	1	0.7	92.3
2.540	1	0.7	15.4	4.310	1	0.7	41.3	6.070	1	0.7	67.1	10.580	1	0.7	93.0
2.600	1	0.7	16.1	4.320	1	0.7	42.0	6.080	1	0.7	67.8	10.700	1	0.7	93.7
2.610	1	0.7	16.8	4.350	1	0.7	42.7	6.130	1	0.7	68.5	11.060	1	0.7	94.4
2.620	1	0.7	17.5	4.450	2	1.4	44.1	6.180	1	0.7	69.2	12.180	1	0.7	95.1
2.710	1	0.7	18.2	4.520	1	0.7	44.8	6.270	1	0.7	69.9	12.350	1	0.7	95.8
2.740	1	0.7	18.9	4.550	1	0.7	45.5	6.420	1	0.7	70.6	14.140	1	0.7	96.5
2.770	1	0.7	19.6	4.570	1	0.7	46.2	6.720	1	0.7	71.3	14.960	1	0.7	97.2
2.780	1	0.7	20.3	4.600	1	0.7	46.9	6.810	1	0.7	72.0	15.800	1	0.7	97.9
2.840	1	0.7	21.0	4.680	1	0.7	47.6	6.860	1	0.7	72.7	18.140	1	0.7	98.6
2.870	1	0.7	21.7	4.690	1	0.7	48.3	6.890	1	0.7	73.4	19.020	1	0.7	99.3
2.880	1	0.7	22.4	4.710	1	0.7	49.0	6.900	2	1.4	74.8	24.480	1	0.7	100.0
2.960	2	1.4	23.8	4.740	2	1.4	50.3	6.910	1	0.7	75.5				
2.990	1	0.7	24.5	4.890	1	0.7	51.0	7.070	1	0.7	76.2				
3.040	1	0.7	25.2	4.910	1	0.7	51.7	7.110	1	0.7	76.9				

```
  ##########
  # VS     #
  ##########
```

VARIABLE NUMBER	13	MAXIMUM	5.5999999
NUMBER OF DISTINCT VALUES .	108	MINIMUM	0.1400000
NUMBER OF VALUES COUNTED. .	143	RANGE	5.4600000
NUMBER OF VALUES NOT COUNTED	1	VARIANCE	0.8409270
		ST.DEV.	0.9170207
		(Q3-Q1)/2	0.4650000

```
                                  H
                                  H
                                 HH                    EACH 'H'
                                 HH                    REPRESENTS
                                HHH                        4
                               HHHH                    COUNT(S)
                               HHHHH
                              HHHHHHH
                            H HHHHHHHHHHH HHHH
                           L--------------------U

                    EACH '-' ABOVE =      0.3000
                                 L=       0.0000
                                 U=       6.3000
```

LOCATION ESTIMATES		ST.ERROR
MEAN	1.9413284	0.0766851
MEDIAN	1.7100000	0.0606218
MODE	1.5700001	

	VALUE	VALUE/S.E.		
SKEWNESS	1.65	8.03	Q1=	1.3600000
KURTOSIS	3.20	7.82	Q3=	2.2900000
			S-=	1.0243076
			S+=	2.8583491

```
                    EACH '.' BELOW =      0.0500

                  S   Q                 Q       S
M                 -   1   M M   M       3       +                                                    M
I.........................O.E...E.....................................................................A
N                           D D   A                                                                  X
                            E I   N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.1400	1	0.7	0.7	1.3500	1	0.7	24.5	1.7600	1	0.7	55.2	2.4300	1	0.7	79.7
0.6400	1	0.7	1.4	1.3600	3	2.1	26.6	1.7700	1	0.7	55.9	2.4500	1	0.7	80.4
0.7900	1	0.7	2.1	1.3700	2	1.4	28.0	1.7900	1	0.7	56.6	2.5400	1	0.7	81.1
0.8000	1	0.7	2.8	1.3800	1	0.7	28.7	1.8000	1	0.7	57.3	2.5800	1	0.7	81.8
0.8300	2	1.4	4.2	1.4000	1	0.7	29.4	1.8100	1	0.7	58.0	2.6100	2	1.4	83.2
0.9500	1	0.7	4.9	1.4100	3	2.1	31.5	1.8400	1	0.7	58.7	2.6200	1	0.7	83.9
0.9800	1	0.7	5.6	1.4200	1	0.7	32.2	1.8700	2	1.4	60.1	2.6500	1	0.7	84.6
1.0100	1	0.7	6.3	1.4300	1	0.7	32.9	1.8800	1	0.7	60.8	2.6900	1	0.7	85.3
1.0900	1	0.7	7.0	1.4400	1	0.7	33.6	1.9100	2	1.4	62.2	2.7200	1	0.7	86.0
1.1100	1	0.7	7.7	1.4600	1	0.7	34.3	1.9300	2	1.4	63.6	2.7900	1	0.7	86.7
1.1300	1	0.7	8.4	1.4700	2	1.4	35.7	1.9900	1	0.7	64.3	2.8800	1	0.7	87.4
1.1600	1	0.7	9.1	1.4800	3	2.1	37.8	2.0000	3	2.1	66.4	2.9200	2	1.4	88.8
1.1700	2	1.4	10.5	1.5300	1	0.7	38.5	2.0200	1	0.7	67.1	2.9400	1	0.7	89.5
1.1800	1	0.7	11.2	1.5400	1	0.7	39.2	2.0400	2	1.4	68.5	3.0300	1	0.7	90.2
1.1900	2	1.4	12.6	1.5600	1	0.7	39.9	2.0600	1	0.7	69.2	3.1500	1	0.7	90.9
1.2000	2	1.4	14.0	1.5700	4	2.8	42.7	2.0800	2	1.4	70.6	3.1800	2	1.4	92.3
1.2100	3	2.1	16.1	1.5900	1	0.7	43.4	2.1000	1	0.7	71.3	3.3600	1	0.7	93.0
1.2200	1	0.7	16.8	1.6000	1	0.7	44.1	2.1100	1	0.7	72.0	3.4000	1	0.7	93.7
1.2400	2	1.4	18.2	1.6200	1	0.7	44.8	2.1800	1	0.7	72.7	3.7200	1	0.7	94.4
1.2600	1	0.7	18.9	1.6400	2	1.4	46.2	2.2000	2	1.4	74.1	3.7500	1	0.7	95.1
1.2700	1	0.7	19.6	1.6700	3	2.1	48.3	2.2100	1	0.7	74.8	4.0600	1	0.7	95.8
1.2800	1	0.7	20.3	1.6900	1	0.7	49.0	2.2900	1	0.7	75.5	4.5300	1	0.7	96.5
1.3000	1	0.7	21.0	1.7100	3	2.1	51.0	2.3000	1	0.7	76.2	4.5800	1	0.7	97.2
1.3100	1	0.7	21.7	1.7200	1	0.7	51.7	2.3200	1	0.7	76.9	4.7600	1	0.7	97.9
1.3200	1	0.7	22.4	1.7300	1	0.7	52.4	2.3900	1	0.7	77.6	5.0200	1	0.7	98.6
1.3300	1	0.7	23.1	1.7400	2	1.4	53.8	2.4000	1	0.7	78.3	5.1200	1	0.7	99.3
1.3400	1	0.7	23.8	1.7500	1	0.7	54.5	2.4200	1	0.7	79.0	5.6000	1	0.7	100.0

```
************
* PERVS    *
************
                                                      MAXIMUM        60.1399994
VARIABLE NUMBER . . . . . .          14               MINIMUM         1.7700000
NUMBER OF DISTINCT VALUES .         142               RANGE          58.4199982
NUMBER OF VALUES COUNTED. .         143               VARIANCE      115.5050354
NUMBER OF VALUES NOT COUNTED          1               ST.DEV.        10.7473269
                                                      (Q3-Q1)/2       5.9600000

LOCATION ESTIMATES                                 ST.ERROR
                  MEAN          28.5969181         0.8987367
                  MEDIAN        26.5699997         0.9439678
                  MODE          26.5699997
```

```
                     HHH                  EACH 'H'
                     HHH                 REPRESENTS
                    HHHH                      3
                   HHHHHH                  COUNT(S)
                  HHHHHHH H H
                  HHHHHHHHH HHH
             H    HHHHHHHHHHHHHHH H
           L----------------------U

           EACH '-' ABOVE =      3.0000
                        L=       0.0000
                        U=      63.0000
```

	VALUE	VALUE/S.E.		
			Q1=	21.3500004
			Q3=	33.2700005
SKEWNESS	0.79	3.83	S-=	17.8495903
KURTOSIS	0.23	0.55	S+=	39.3442459

EACH '.' BELOW = 0.5000

```
                         S     Q                   Q       S
 M                       -     1      M   M        3       +                                  M
 I.............................................E...E.........................................A
 N                                    D   A                                                   X
                                      I   N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
1.720	1	0.7	0.7	21.450	1	0.7	25.9	26.850	1	0.7	51.7	33.570	1	0.7	76.9
13.310	1	0.7	1.4	21.540	1	0.7	26.6	26.870	1	0.7	52.4	34.940	1	0.7	77.6
13.490	1	0.7	2.1	21.690	1	0.7	27.3	27.030	1	0.7	53.1	36.270	1	0.7	78.3
13.700	1	0.7	2.8	21.730	1	0.7	28.0	27.290	1	0.7	53.8	36.730	1	0.7	79.0
13.820	1	0.7	3.5	21.810	1	0.7	28.7	27.460	1	0.7	54.5	36.940	1	0.7	79.7
14.530	1	0.7	4.2	21.890	1	0.7	29.4	27.510	1	0.7	55.2	37.700	1	0.7	80.4
14.710	1	0.7	4.9	21.980	1	0.7	30.1	27.630	1	0.7	55.9	37.740	1	0.7	81.1
14.990	1	0.7	5.6	22.160	1	0.7	30.8	27.870	1	0.7	56.6	37.880	1	0.7	81.8
16.130	1	0.7	6.3	22.200	1	0.7	31.5	28.210	1	0.7	57.3	38.050	1	0.7	82.5
16.210	1	0.7	7.0	22.310	1	0.7	32.2	28.230	1	0.7	58.0	39.090	1	0.7	83.2
16.410	1	0.7	7.7	22.390	1	0.7	32.9	28.520	1	0.7	58.7	39.580	1	0.7	83.9
16.510	1	0.7	8.4	22.430	1	0.7	33.6	28.840	1	0.7	59.4	40.760	1	0.7	84.6
16.690	1	0.7	9.1	22.590	1	0.7	34.3	28.860	1	0.7	60.1	42.300	1	0.7	85.3
16.990	1	0.7	9.8	22.770	1	0.7	35.0	29.020	1	0.7	60.8	43.200	1	0.7	86.0
17.260	1	0.7	10.5	22.820	1	0.7	35.7	29.070	1	0.7	61.5	43.340	1	0.7	86.7
17.300	1	0.7	11.2	22.990	1	0.7	36.4	29.110	1	0.7	62.2	43.580	1	0.7	87.4
17.640	1	0.7	11.9	23.110	1	0.7	37.1	29.270	1	0.7	62.9	43.610	1	0.7	88.1
17.820	1	0.7	12.6	23.140	1	0.7	37.8	29.690	1	0.7	63.6	43.940	1	0.7	88.8
17.890	1	0.7	13.3	24.150	1	0.7	38.5	29.700	1	0.7	64.3	43.950	1	0.7	89.5
17.950	1	0.7	14.0	24.160	1	0.7	39.2	29.980	1	0.7	65.0	45.320	1	0.7	90.2
18.450	1	0.7	14.7	24.370	1	0.7	39.9	30.000	1	0.7	65.7	45.820	1	0.7	90.9
18.650	1	0.7	15.4	24.520	1	0.7	40.6	30.210	1	0.7	66.4	45.890	1	0.7	91.6
18.690	1	0.7	16.1	24.560	1	0.7	41.3	30.690	1	0.7	67.1	46.920	1	0.7	92.3
18.740	1	0.7	16.8	24.590	1	0.7	42.0	30.720	1	0.7	67.8	47.920	1	0.7	93.0
18.900	1	0.7	17.5	24.680	1	0.7	42.7	30.810	1	0.7	68.5	48.930	1	0.7	93.7
19.060	1	0.7	18.2	24.940	1	0.7	43.4	30.930	1	0.7	69.2	49.580	1	0.7	94.4
19.100	1	0.7	18.9	25.190	1	0.7	44.1	31.010	1	0.7	69.9	49.940	1	0.7	95.1
19.150	1	0.7	19.6	25.230	1	0.7	44.8	31.300	1	0.7	70.6	50.820	1	0.7	95.8
19.900	1	0.7	20.3	25.300	1	0.7	45.5	31.320	1	0.7	71.3	52.200	1	0.7	96.5
20.130	1	0.7	21.0	25.330	1	0.7	46.2	32.080	1	0.7	72.0	53.010	1	0.7	97.2
20.230	1	0.7	21.7	25.470	1	0.7	46.9	32.470	1	0.7	72.7	53.610	1	0.7	97.9
20.310	1	0.7	22.4	25.560	1	0.7	47.6	32.770	1	0.7	73.4	55.400	1	0.7	98.6
20.410	1	0.7	23.1	25.600	1	0.7	48.3	33.150	1	0.7	74.1	56.380	1	0.7	99.3
20.840	1	0.7	23.8	25.930	1	0.7	49.0	33.170	1	0.7	74.8	60.140	1	0.7	100.0
21.290	1	0.7	24.5	25.990	1	0.7	49.7	33.270	1	0.7	75.5				
21.350	1	0.7	25.2	26.570	2	1.4	51.0	33.420	1	0.7	76.2				

****
* CONDCORR *
****

		MAXIMUM	308.0000000
VARIABLE NUMBER	8	MINIMUM	206.0000000
NUMBER OF DISTINCT VALUES .	58	RANGE	102.0000000
NUMBER OF VALUES COUNTED. .	144	VARIANCE	330.7674561
NUMBER OF VALUES NOT COUNTED	0	ST.DEV.	18.1870136
		(Q3-Q1)/2	10.7500000

LOCATION ESTIMATES

		ST.ERROR
MEAN	238.2916718	1.5155845
MEDIAN	233.0000000	1.7320517
MODE	230.0000000	

```
        H
       HH
      HHH                EACH 'H'
      HHH                REPRESENTS
      HHH                    3
    HHHHH  H             COUNT(S)
   HHHHHHHHH
  HHHHHHHHHH
 HHHHHHHHHHHHHH H H HH
L--------------------U
```

EACH '-' ABOVE = 5.0000
L= 205.0000
U= 310.0000

	VALUE	VALUE/S.E.
SKEWNESS	1.26	6.20
KURTOSIS	2.03	4.97

Q1- 227.0000000
Q3= 248.5000000
S-= 220.1046600
S+= 256.4786987

EACH '.' BELOW = 1.0000

```
          S     Q                 Q     S
H         -     1  M  M    M      3     +                                        H
I.....................O..E....E.....................................................A
N                     D  D    A                                                  X
                      E  I    N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
206.	1	0.7	0.7	227.	4	2.8	26.4	243.	1	0.7	69.4	260.	1	0.7	90.3
211.	1	0.7	1.4	228.	5	3.5	29.9	244.	2	1.4	70.8	263.	2	1.4	91.7
213.	2	1.4	2.8	229.	4	2.8	32.6	245.	2	1.4	72.2	265.	1	0.7	92.4
214.	3	2.1	4.9	230.	8	5.6	38.2	246.	2	1.4	73.6	268.	1	0.7	93.1
216.	1	0.7	5.6	231.	7	4.9	43.1	247.	1	0.7	74.3	269.	2	1.4	94.4
217.	4	2.8	8.3	232.	5	3.5	46.5	248.	1	0.7	75.0	271.	1	0.7	95.1
218.	1	0.7	9.0	233.	6	4.2	50.7	249.	1	0.7	75.7	275.	1	0.7	95.8
219.	3	2.1	11.1	234.	1	0.7	51.4	250.	2	1.4	77.1	281.	1	0.7	96.5
220.	3	2.1	13.2	235.	3	2.1	53.5	251.	2	1.4	78.5	284.	1	0.7	97.2
221.	3	2.1	15.3	236.	5	3.5	56.9	252.	3	2.1	80.6	291.	1	0.7	97.9
222.	1	0.7	16.0	237.	4	2.8	59.7	253.	3	2.1	82.6	292.	1	0.7	98.6
223.	2	1.4	17.4	238.	6	4.2	63.9	255.	4	2.8	85.4	302.	1	0.7	99.3
224.	2	1.4	18.7	239.	1	0.7	64.6	256.	2	1.4	86.8	308.	1	0.7	100.0
225.	3	2.1	20.8	240.	3	2.1	66.7	257.	3	2.1	88.9				
226.	4	2.8	23.6	241.	3	2.1	68.7	258.	1	0.7	89.6				

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************
* CL       *
************
                                              MAXIMUM        26.0000000
VARIABLE NUMBER . . . . . .      7            MINIMUM         6.9000001                    H
NUMBER OF DISTINCT VALUES .     73            RANGE          19.1000004                    H
NUMBER OF VALUES COUNTED. .    144            VARIANCE        8.5466032                    HH              EACH 'H'
NUMBER OF VALUES NOT COUNTED     0            ST.DEV.         2.9234574                  H HHH             REPRESENTS
                                              (Q3-Q1)/2       1.7500000                 HH HHH                 3
                                                                                       HHHHHHH H           COUNT(S)
LOCATION ESTIMATES                                ST.ERROR                             HHHHHHHHH
                    MEAN         11.6604147      0.2436215                             HHHHHHHHH
                    MEDIAN       11.5000000      0.2020726                            HHHHHHHHHHH      H H
                    MODE         11.3999996                                          L---------------------U

                                                                               EACH '-' ABOVE =       1.0000
                                                                                              L=       6.0000
                                                                                              U=      27.0000

                                                                                                   Q1=     9.6999998
                                                                            VALUE     VALUE/S.E.   Q3=    13.1999998
                                                              SKEWNESS       1.23          6.05    S-=     8.7369576
                                                              KURTOSIS       4.04          9.90    S+=    14.5838718

                                                                               EACH '.' BELOW =       0.1500

               S      Q                            Q          S
M              -      1                M M         3          +                                                      M
I......................................E.E............................................................................A
N                                      D A                                                                           X
                                       I N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
6.900	1	0.7	0.7	9.200	3	2.1	22.2	11.600	1	0.7	52.8	14.000	3	2.1	83.3
7.100	2	1.4	2.1	9.300	1	0.7	22.9	11.700	4	2.8	55.6	14.200	1	0.7	84.0
7.200	2	1.4	3.5	9.600	1	0.7	23.6	11.800	1	0.7	56.2	14.500	1	0.7	84.7
7.300	1	0.7	4.2	9.700	3	2.1	25.7	11.900	2	1.4	57.6	14.700	4	2.8	87.5
7.400	2	1.4	5.6	9.800	4	2.8	28.5	12.000	1	0.7	58.3	15.000	2	1.4	88.9
7.500	1	0.7	6.2	9.900	3	2.1	30.6	12.100	2	1.4	59.7	15.200	1	0.7	89.6
7.700	1	0.7	6.9	10.000	1	0.7	31.2	12.200	3	2.1	61.8	15.300	3	2.1	91.7
7.800	1	0.7	7.6	10.100	3	2.1	33.3	12.300	3	2.1	63.9	15.400	4	2.8	94.4
7.900	1	0.7	8.3	10.200	2	1.4	34.7	12.500	4	2.8	66.7	15.500	1	0.7	95.1
8.000	1	0.7	9.0	10.300	1	0.7	35.4	12.600	3	2.1	68.7	15.600	1	0.7	95.8
8.100	2	1.4	10.4	10.500	1	0.7	36.1	12.800	1	0.7	69.4	16.800	1	0.7	96.5
8.200	3	2.1	12.5	10.700	1	0.7	36.8	12.900	3	2.1	71.5	17.100	1	0.7	97.2
8.300	2	1.4	13.9	10.900	2	1.4	38.2	13.000	1	0.7	72.2	17.300	1	0.7	97.9
8.400	1	0.7	14.6	11.000	2	1.4	39.6	13.100	2	1.4	73.6	17.600	1	0.7	98.6
8.700	1	0.7	15.3	11.100	1	0.7	40.3	13.200	3	2.1	75.7	23.300	1	0.7	99.3
8.800	2	1.4	16.7	11.200	4	2.8	43.1	13.300	3	2.1	77.8	26.000	1	0.7	100.0
8.900	2	1.4	18.1	11.300	4	2.8	45.8	13.500	2	1.4	79.2				
9.000	2	1.4	19.4	11.400	5	3.5	49.3	13.600	2	1.4	80.6				
9.100	1	0.7	20.1	11.500	4	2.8	52.1	13.700	1	0.7	81.2				

HYDRA86 WESTERN BASIN ALL DATA

```
************
* ALKTOT   *
************
```

VARIABLE NUMBER	6	MAXIMUM	107.3000031
NUMBER OF DISTINCT VALUES .	100	MINIMUM	84.0000000
NUMBER OF VALUES COUNTED. .	144	RANGE	23.3000031
NUMBER OF VALUES NOT COUNTED	0	VARIANCE	25.2424698
		ST.DEV.	5.0241885
		(Q3-Q1)/2	3.7749977

LOCATION ESTIMATES

		ST.ERROR
MEAN	93.3138733	0.4186824
MEDIAN	93.0999985	0.7505553
MODE	93.8000031	

```
                  H
        HH  H H
        HHH H H               EACH 'H'
       HHHHHHHH              REPRESENTS
       HHHHHHHHH                 2
       HHHHHHHHHH             COUNT(S)
       HHHHHHHHHH
       HHHHHHHHHHH    H
      HHHHHHHHHHHHHHHHH
    L---------------------U

EACH '-' ABOVE =     1.5000
             L=     81.0000
             U=    112.5000
```

	VALUE	VALUE/S.F.
SKEWNESS	0.49	2.39
KURTOSIS	-0.22	-0.55

Q1= 89.1500015
Q3= 96.6999969
S-= 88.2896881
S+= 98.3380585

EACH '.' BELOW = 0.2000

```
                            S   Q                          Q      S
M                           -   1               MM M       3      +                                  M
I...............................................EE.O.................................................A
N                                               DA D                                                 X
                                                IN E
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
84.00	1	0.7	0.7	89.40	2	1.4	27.1	93.10	3	2.1	51.4	97.50	2	1.4	80.6
85.50	1	0.7	1.4	89.50	1	0.7	27.8	93.20	1	0.7	52.1	97.60	1	0.7	81.2
85.70	1	0.7	2.1	89.70	1	0.7	28.5	93.60	1	0.7	52.8	97.80	1	0.7	81.9
86.00	1	0.7	2.8	89.80	1	0.7	29.2	93.80	4	2.8	55.6	97.90	1	0.7	82.6
86.10	1	0.7	3.5	89.90	2	1.4	30.6	94.20	2	1.4	56.9	98.30	1	0.7	83.3
86.20	2	1.4	4.9	90.00	1	0.7	31.2	94.40	2	1.4	58.3	98.40	1	0.7	84.0
86.40	2	1.4	6.2	90.10	1	0.7	31.9	94.50	2	1.4	59.7	98.50	1	0.7	84.7
86.50	1	0.7	6.9	90.20	1	0.7	32.6	94.60	1	0.7	60.4	98.60	1	0.7	85.4
86.80	3	2.1	9.0	90.40	2	1.4	34.0	94.70	3	2.1	62.5	98.70	1	0.7	86.1
87.00	1	0.7	9.7	90.50	3	2.1	36.1	95.00	1	0.7	63.2	98.80	1	0.7	86.8
87.20	1	0.7	10.4	90.70	1	0.7	36.8	95.30	1	0.7	63.9	99.00	1	0.7	87.5
87.30	2	1.4	11.8	90.80	1	0.7	37.5	95.50	1	0.7	64.6	99.10	3	2.1	89.6
87.40	1	0.7	12.5	91.00	1	0.7	38.2	95.60	1	0.7	65.3	99.30	1	0.7	90.3
87.50	2	1.4	13.9	91.10	2	1.4	39.6	95.80	2	1.4	66.7	99.60	1	0.7	91.0
87.60	2	1.4	15.3	91.40	1	0.7	40.3	95.90	2	1.4	68.1	99.80	1	0.7	91.7
87.70	1	0.7	16.0	91.50	1	0.7	41.0	96.10	3	2.1	70.1	100.00	2	1.4	93.1
87.90	2	1.4	17.4	91.60	1	0.7	41.7	96.20	1	0.7	70.8	101.10	2	1.4	94.4
88.00	1	0.7	18.1	91.70	1	0.7	42.4	96.30	1	0.7	71.5	101.70	1	0.7	95.1
88.20	1	0.7	18.7	91.80	2	1.4	43.7	96.50	3	2.1	73.6	102.30	1	0.7	95.8
88.50	3	2.1	20.8	91.90	1	0.7	44.4	96.60	1	0.7	74.3	102.80	1	0.7	96.5
88.60	3	2.1	22.9	92.00	1	0.7	45.1	96.70	2	1.4	75.7	103.60	1	0.7	97.2
88.70	1	0.7	23.6	92.10	2	1.4	46.5	96.90	1	0.7	76.4	105.90	1	0.7	97.9
88.80	1	0.7	24.3	92.30	1	0.7	47.2	97.00	1	0.7	77.1	106.90	1	0.7	98.6
89.00	1	0.7	25.0	92.60	2	1.4	48.6	97.20	1	0.7	77.8	107.10	1	0.7	99.3
89.30	1	0.7	25.7	92.70	1	0.7	49.3	97.40	2	1.4	79.2	107.30	1	0.7	100.0

****
* ALKPH *
****

		MAXIMUM	10.5000000
VARIABLE NUMBER	7	MINIMUM	0.0000000
NUMBER OF DISTINCT VALUES .	54	RANGE	10.5000000
NUMBER OF VALUES COUNTED. .	144	VARIANCE	6.4670382
NUMBER OF VALUES NOT COUNTED	0	ST.DEV.	2.5430372
		(Q3-Q1)/2	1.9500000

LOCATION ESTIMATES		ST.ERROR
MEAN	2.5173614	0.2119198
MEDIAN	2.0999999	0.2020727
MODE	0.0000000	

```
H
H
H
H                    EACH 'H'
H                    REPRESENTS
H                        5
H                    COUNT(S)
H  HH
H HHH HH H H
HHHHHHHHHHHHHHH HH HH
L--------------------U
```

EACH '-' ABOVE = 0.5000
L= 0.0000
U= 10.5000

	VALUE	VALUE/S.F.
SKEWNESS	0.97	4.73
KURTOSIS	0.47	1.14

Q1= 0.0000000
Q3= 3.9000001
S-= -0.0256758
S+= 5.0603986

EACH '.' BELOW - 0.1000

```
S                   Q         S
M                   3         +                                          M
I.....................E...F.....................................................A
N                   D A                                                  X
                    I N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.0000	49	34.0	34.0	2.3000	3	2.1	56.2	4.1000	1	0.7	76.4	6.5000	1	0.7	92.4
0.8000	2	1.4	35.4	2.4000	2	1.4	57.6	4.3000	1	0.7	77.1	6.6000	1	0.7	93.1
1.0000	1	0.7	36.1	2.5000	1	0.7	58.3	4.4000	1	0.7	77.8	6.9000	1	0.7	91.7
1.2000	1	0.7	36.8	2.6000	1	0.7	59.0	4.5000	1	0.7	78.5	7.1000	1	0.7	94.4
1.3000	1	0.7	37.5	2.7000	1	0.7	59.7	4.6000	3	2.1	80.6	7.2000	1	0.7	95.1
1.4000	2	1.4	38.9	2.9000	1	0.7	60.4	4.7000	4	2.8	83.3	8.1000	1	0.7	95.8
1.5000	4	2.8	41.7	3.0000	2	1.4	61.8	4.8000	1	0.7	84.0	8.2000	1	0.7	96.5
1.6000	1	0.7	42.4	3.1000	4	2.8	64.6	4.9000	1	0.7	84.7	8.4000	1	0.7	97.2
1.7000	1	0.7	43.1	3.2000	2	1.4	66.0	5.3000	1	0.7	85.4	8.7000	1	0.7	97.9
1.8000	2	1.4	44.4	3.4000	3	2.1	68.1	5.4000	1	0.7	86.1	10.0000	1	0.7	98.6
1.9000	3	2.1	46.5	3.5000	1	0.7	68.7	5.6000	4	2.8	88.9	10.3000	1	0.7	99.3
2.0000	4	2.8	49.3	3.6000	5	3.5	72.2	5.7000	2	1.4	90.3	10.5000	1	0.7	100.0
2.1000	5	3.5	52.8	3.7000	2	1.4	73.6	6.1000	1	0.7	91.0				
2.2000	2	1.4	54.2	3.9000	3	2.1	75.7	6.4000	1	0.7	91.7				

```
************
* PH       *
************
                                                 MAXIMUM          8.7500000
VARIABLE NUMBER . . . . . .          5           MINIMUM          7.5900002
NUMBER OF DISTINCT VALUES .         67           RANGE            1.1599998
NUMBER OF VALUES COUNTED. .        144           VARIANCE         0.0452705
NUMBER OF VALUES NOT COUNTED         0           ST.DEV.          0.2127688
                                                 (Q3-Q1)/2        0.1425004

LOCATION ESTIMATES                                    ST.ERROR
                         MEAN          8.2127762      0.0177307
                         MEDIAN        8.1899996      0.0173204
                         MODE          8.1800003
```

```
            HH
            HH                EACH 'H'
           HHHH               REPRESENTS
           HHHHHH                 3
           HHHHHH              COUNT(S)
         HHHHHHHH
        HHHHHHHHH HH
     H  HHHHHHHHHHHHH
L---------------------U

EACH '-' ABOVE =      0.0750
            L=        7.4250
            U=        9.0000
```

```
                                                          Q1-    8.0699997
                                   VALUE    VALUE/S.F.    Q3=    8.3550005
              SKEWNESS              0.22        1.07      S-=    8.0000076
              KURTOSIS              0.05        0.12      S+=    8.4255447

                                   EACH '.' BELOW =       0.0100
```

```
                                       S    Q                   Q    S
M                                      -    1        M  M       3    +                         M
I....................................................F..E..............................................A
N                                                    D  A                                      X
                                                     I  N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
7.590	1	0.7	0.7	8.050	4	2.8	21.5	8.240	2	1.4	59.0	8.430	3	2.1	86.1
7.810	1	0.7	1.4	8.060	2	1.4	22.9	8.250	4	2.8	61.8	8.440	3	2.1	88.2
7.850	1	0.7	2.1	8.070	5	3.5	26.4	8.260	2	1.4	63.2	8.460	1	0.7	88.9
7.860	2	1.4	3.5	8.080	2	1.4	27.8	8.270	4	2.8	66.0	8.470	2	1.4	90.3
7.870	2	1.4	4.9	8.100	3	2.1	29.9	8.290	2	1.4	67.4	8.480	2	1.4	91.7
7.880	2	1.4	6.2	8.110	4	2.8	32.6	8.300	3	2.1	69.4	8.510	1	0.7	92.4
7.890	2	1.4	7.6	8.120	2	1.4	34.0	8.310	2	1.4	70.8	8.570	1	0.7	93.1
7.900	3	2.1	9.7	8.130	4	2.8	36.8	8.320	1	0.7	71.5	8.580	1	0.7	93.7
7.920	1	0.7	10.4	8.140	2	1.4	38.2	8.330	1	0.7	72.2	8.610	1	0.7	94.4
7.940	1	0.7	11.1	8.150	2	1.4	39.6	8.350	4	2.8	75.0	8.620	1	0.7	95.1
7.960	1	0.7	11.8	8.160	2	1.4	41.0	8.360	4	2.8	77.8	8.640	1	0.7	95.8
7.980	3	2.1	13.9	8.170	4	2.8	43.7	8.370	1	0.7	78.5	8.670	2	1.4	97.2
7.990	1	0.7	14.6	8.180	7	4.9	48.6	8.380	2	1.4	79.9	8.680	1	0.7	97.9
8.000	1	0.7	15.3	8.190	4	2.8	51.4	8.390	2	1.4	81.2	8.690	1	0.7	98.6
8.020	2	1.4	16.7	8.200	3	2.1	53.5	8.400	1	0.7	81.9	8.730	1	0.7	99.3
8.030	1	0.7	17.4	8.220	4	2.8	56.2	8.410	1	0.7	82.6	8.750	1	0.7	100.0
8.040	2	1.4	18.7	8.230	2	1.4	57.6	8.420	2	1.4	84.0				

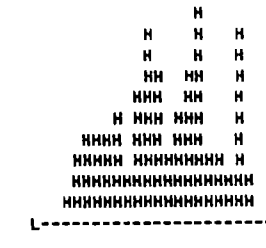
APPENDIX B

****
* TEMP *
****

VARIABLE NUMBER	2	MAXIMUM	24.7000008
NUMBER OF DISTINCT VALUES .	116	MINIMUM	6.1999998
NUMBER OF VALUES COUNTED. .	749	RANGE	18.5000000
NUMBER OF VALUES NOT COUNTED	0	VARIANCE	21.8885059
		ST.DEV.	4.6785154
		(Q3-Q1)/2	3.1999998

LOCATION ESTIMATES

		ST.ERROR
MEAN	16.3028107	0.2964889
MEDIAN	16.0000000	0.5484829
MODE	NOT UNIQUE	

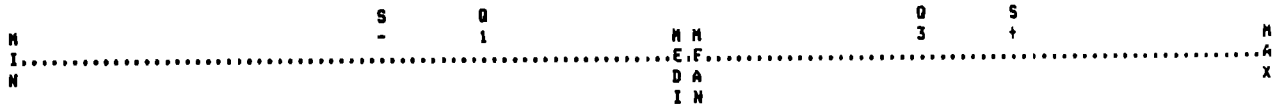


EACH '-' ABOVE = 1.0000
L= 4.0000
U= 27.0000

	VALUE	VALUE/S.E.
SKEWNESS	-0.10	-0.67
KURTOSIS	-0.93	-3.01

Q1= 13.1000004
Q3= 19.5000000
S-= 11.6242952
S+= 20.9813271

EACH '.' BELOW = 0.1500



VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
6.200	1	0.4	0.4	11.500	1	0.4	19.7	15.800	1	0.4	49.8	19.900	1	0.4	79.5
7.500	2	0.8	1.2	11.800	4	1.6	21.3	16.000	1	0.4	50.2	20.200	1	0.4	79.9
7.700	2	0.8	2.0	11.900	1	0.4	21.7	16.500	1	0.4	50.6	20.400	1	0.4	80.3
7.800	2	0.8	2.8	12.000	1	0.4	22.1	16.600	2	0.8	51.4	20.500	1	0.4	80.7
7.900	1	0.4	3.2	12.200	1	0.4	22.5	16.700	2	0.8	52.2	20.600	1	0.4	81.1
8.000	1	0.4	3.6	12.300	1	0.4	22.9	16.900	2	0.8	53.0	20.800	2	0.8	81.9
8.200	3	1.2	4.8	12.400	1	0.4	23.3	17.000	2	0.8	53.8	21.000	1	0.4	82.3
8.300	1	0.4	5.2	12.500	1	0.4	23.7	17.200	1	0.4	54.2	21.200	1	0.4	82.7
8.600	2	0.8	6.0	12.700	1	0.4	24.1	17.300	4	1.6	55.8	21.300	3	1.2	83.9
8.800	2	0.8	6.8	12.800	1	0.4	24.5	17.400	1	0.4	56.2	21.500	1	0.4	84.3
9.000	4	1.6	8.4	13.100	2	0.8	25.3	17.500	1	0.4	56.6	21.700	1	0.4	84.7
9.100	1	0.4	8.8	13.200	3	1.2	26.5	17.600	2	0.8	57.4	22.000	1	0.4	87.1
9.500	2	0.8	9.6	13.300	2	0.8	27.3	17.700	1	0.4	57.8	22.100	1	0.4	85.5
9.700	3	1.2	10.8	13.500	1	0.4	27.7	17.900	3	1.2	59.0	22.200	3	1.2	86.7
9.800	1	0.4	11.2	13.600	2	0.8	28.5	18.300	4	1.6	60.6	22.300	1	0.4	87.1
9.900	1	0.4	11.6	13.700	3	1.2	29.7	18.400	2	0.8	61.4	22.400	1	0.4	87.6
10.000	2	0.8	12.4	13.800	2	0.8	30.5	18.500	1	0.4	61.8	23.100	1	0.4	88.0
10.100	2	0.8	13.3	14.000	2	0.8	31.3	18.700	5	2.0	63.9	23.200	3	1.2	89.2
10.200	1	0.4	13.7	14.300	1	0.4	31.7	18.800	2	0.8	64.7	23.300	6	2.4	91.6
10.400	3	1.2	14.9	14.400	4	1.6	33.3	18.900	3	1.2	65.9	23.400	6	2.4	94.0
10.500	1	0.4	15.3	14.500	1	0.4	33.7	19.000	4	1.6	67.5	23.600	3	1.2	95.2
10.600	1	0.4	15.7	14.600	6	2.4	36.1	19.100	8	3.2	70.7	23.700	2	0.8	96.0
10.700	1	0.4	16.1	14.800	5	2.0	38.2	19.200	3	1.2	71.9	23.800	3	1.2	97.2
10.800	1	0.4	16.5	14.900	9	3.6	41.8	19.300	2	0.8	72.7	23.900	1	0.4	97.6
10.900	1	0.4	16.9	15.200	2	0.8	42.6	19.400	3	1.2	73.9	24.000	1	0.4	98.0
11.100	1	0.4	17.3	15.300	4	1.6	44.2	19.500	6	2.4	76.3	24.100	2	0.8	98.8
11.200	2	0.8	18.1	15.400	1	0.4	44.6	19.600	3	1.2	77.5	24.200	1	0.4	99.2
11.300	2	0.8	18.9	15.500	3	1.2	45.8	19.700	1	0.4	77.9	24.400	1	0.4	99.6
11.400	1	0.4	19.3	15.600	9	3.6	49.4	19.800	3	1.2	79.1	24.700	1	0.4	100.0

```
*************
* DO        *
*************
                                              MAXIMUM        11.6000004
VARIABLE NUMBER . . . . . .          3        MINIMUM         1.0000000
NUMBER OF DISTINCT VALUES .         72        RANGE          10.6000004
NUMBER OF VALUES COUNTED. .        249        VARIANCE        6.2285380
NUMBER OF VALUES NOT COUNTED         0        ST.DEV.         2.4957039
                                              (Q3-Q1)/2       0.8000000

LOCATION ESTIMATES                                ST.ERROR
                  MEAN          8.0546188      0.1581588
                  MEDIAN        8.8999996      0.1154700
                  MODE          9.0000000
```

```
                       H
                      HH
                      HHH        EACH 'H'
                      HHHH      REPRESENTS
                      HHHH           5
                     HHHHH       COUNT(S)
                     HHHHH H
       HH       H  HHHHHHHH
    HHHHHHHH  HHHHHHHHHHHHH
  L-----------------------U

  EACH '-' ABOVE =        0.5000
               L=         0.5000
               U=        12.0000
```

```
                                                          Q1=     7.9000001
                                   VALUE    VALUE/S.E.    Q3=     9.5000000
              SKEWNESS             -1.35        -8.71     S-=     5.5589151
              KURTOSIS              0.94         3.02     S+=    10.5503225

                                   EACH '.' BELOW =        0.1000
                           S                Q          Q        S
  M                        -                1M   MM    S        +            M
  I.........................................F....FO.......................A
  N                                         A    DD                          X
                                            N    IE
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
1.000	2	0.8	0.8	3.800	1	0.4	12.4	7.900	5	2.0	25.7	9.700	6	2.4	81.9
1.100	1	0.4	1.2	3.900	2	0.8	13.3	8.000	9	3.6	29.3	9.800	6	2.4	84.3
1.400	1	0.4	1.6	4.000	1	0.4	13.7	8.100	6	2.4	31.7	9.900	5	2.0	86.3
1.600	2	0.8	2.4	4.300	1	0.4	14.1	8.200	6	2.4	34.1	10.000	3	1.2	87.6
1.700	2	0.8	3.2	4.500	2	0.8	14.9	8.300	10	4.0	38.2	10.100	2	0.8	88.4
2.200	1	0.4	3.6	5.700	3	1.2	16.1	8.400	8	3.2	41.4	10.200	4	1.6	90.0
2.300	1	0.4	4.0	5.900	1	0.4	16.5	8.500	5	2.0	43.4	10.400	3	1.2	91.2
2.400	3	1.2	5.2	6.100	2	0.8	17.3	8.600	6	2.4	45.8	10.500	1	0.4	91.6
2.500	1	0.4	5.6	6.200	1	0.4	17.7	8.700	6	2.4	48.2	10.600	1	0.4	92.0
2.600	6	2.4	8.0	6.300	1	0.4	18.1	8.800	2	0.8	49.0	10.700	4	1.6	93.6
2.800	1	0.4	8.4	6.500	2	0.8	18.9	8.900	8	3.2	52.2	10.800	1	0.4	94.0
2.900	2	0.8	9.2	6.700	1	0.4	19.3	9.000	17	6.8	59.0	10.900	3	1.2	95.2
3.000	1	0.4	9.6	7.000	1	0.4	19.7	9.100	14	5.6	64.7	11.000	2	0.8	96.0
3.100	1	0.4	10.0	7.100	1	0.4	20.1	9.200	10	4.0	68.7	11.200	2	0.8	96.8
3.200	2	0.8	10.8	7.200	2	0.8	20.9	9.300	8	3.2	71.9	11.300	1	0.4	97.2
3.300	1	0.4	11.2	7.300	1	0.4	21.3	9.400	2	0.8	72.7	11.400	3	1.2	98.4
3.500	1	0.4	11.6	7.700	3	1.2	22.5	9.500	9	3.6	76.3	11.500	3	1.2	99.6
3.600	1	0.4	12.0	7.800	3	1.2	23.7	9.600	8	3.2	79.5	11.600	1	0.4	100.0

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************
* PERDO    *
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VARIABLE NUMBER	4	MAXIMUM	115.5699997
NUMBER OF DISTINCT VALUES .	222	MINIMUM	9.0900002
NUMBER OF VALUES COUNTED. .	249	RANGE	106.4799957
NUMBER OF VALUES NOT COUNTED	0	VARIANCE	712.4286499
		ST.DEV.	26.6913586
		(Q3-Q1)/2	8.9749985

```
                                   H
                                   H
                                   H  H
                                   H HH       EACH 'H'
                                   HHHH       REPRESENTS
                                   HHHH           5
                                 HHHHHH       COUNT(S)
                                 HHHHHH
                  HHH            HHHHHH
               HHHHHHHHHHHHHHHHHHHHHHHHHH
               L-----------------------U

               EACH '-' ABOVE =     5.0000
                             L=     5.0000
                             U=   120.0000
```

LOCATION ESTIMATES

		ST.ERROR
MEAN	81.4067535	1.6914961
MEDIAN	89.9800034	1.0940796
MODE	NOT UNIQUE	

	VALUE	VALUE/S.E.	
			Q1= 81.4800034
			Q3= 99.4300003
SKEWNESS	-1.37	-8.84	S-= 54.7153969
KURTOSIS	0.61	1.98	S+= 108.0981140

```
                                                       EACH '.' BELOW =     1.0000
                                   S                     Q          Q     S
 M                                 -                     M    M     3     +     M
 I.......................................................E....E.....................A
 N                                                       A    D                     X
                                                         N    I
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
9.090	1	0.4	0.4	78.680	1	0.4	23.7	90.960	2	0.8	52.6	100.080	1	0.4	77.1
9.180	1	0.4	0.8	79.240	1	0.4	24.1	90.990	1	0.4	53.0	100.160	2	0.8	77.9
10.020	1	0.4	1.2	79.950	1	0.4	24.5	91.150	1	0.4	53.4	100.180	1	0.4	78.3
12.820	1	0.4	1.6	81.340	1	0.4	24.9	91.280	1	0.4	53.8	100.230	1	0.4	78.7
14.350	1	0.4	2.0	81.480	1	0.4	25.3	91.370	1	0.4	54.2	100.330	2	0.8	79.5
15.020	1	0.4	2.4	81.510	1	0.4	25.7	91.640	1	0.4	54.6	100.530	1	0.4	79.9
15.150	1	0.4	2.8	81.840	1	0.4	26.1	92.010	1	0.4	55.0	100.570	1	0.4	80.3
16.360	1	0.4	3.2	81.980	1	0.4	26.5	92.060	1	0.4	55.4	100.640	1	0.4	80.7
19.730	1	0.4	3.6	82.570	1	0.4	26.9	92.250	1	0.4	55.8	100.700	2	0.8	81.5
20.670	1	0.4	4.0	82.840	2	0.8	27.7	92.590	2	0.8	56.6	100.720	1	0.4	81.9
21.610	1	0.4	4.4	83.020	1	0.4	28.1	92.650	1	0.4	57.0	100.830	2	0.8	82.7
22.370	1	0.4	4.8	83.570	1	0.4	28.5	92.690	1	0.4	57.4	101.280	1	0.4	83.1
22.420	1	0.4	5.2	83.750	1	0.4	28.9	92.710	1	0.4	57.8	101.330	1	0.4	83.5
23.300	1	0.4	5.6	83.810	1	0.4	29.3	92.780	1	0.4	58.2	101.480	1	0.4	83.9
23.460	1	0.4	6.0	84.000	1	0.4	29.7	92.950	1	0.4	58.6	101.500	1	0.4	84.3
23.590	2	0.8	6.8	84.060	1	0.4	30.1	93.550	1	0.4	59.0	101.600	1	0.4	84.7
24.280	1	0.4	7.2	84.150	1	0.4	30.5	93.630	1	0.4	59.4	101.840	1	0.4	85.1
24.380	1	0.4	7.6	84.190	1	0.4	30.9	93.920	1	0.4	59.8	101.930	1	0.4	85.5
25.330	1	0.4	8.0	84.300	1	0.4	31.3	94.100	1	0.4	60.2	102.000	1	0.4	85.9
26.050	1	0.4	8.4	84.800	1	0.4	31.7	94.340	1	0.4	60.6	102.080	1	0.4	86.3
26.710	1	0.4	8.8	84.870	1	0.4	32.1	94.640	1	0.4	61.0	102.250	1	0.4	86.7
27.650	1	0.4	9.2	85.060	1	0.4	32.5	94.670	1	0.4	61.4	102.670	1	0.4	87.1
28.130	1	0.4	9.6	85.150	1	0.4	32.9	94.680	1	0.4	61.8	102.700	1	0.4	87.6

28.190	1	0.4	10.0	85.360	1	0.4	33.3	94.850	1	0.4	62.2	102.820	1	0.4	88.0
28.280	1	0.4	10.4	85.660	2	0.8	34.1	95.270	1	0.4	62.7	102.960	1	0.4	88.4
29.220	1	0.4	10.8	85.820	2	0.8	34.9	95.480	1	0.4	63.1	103.000	1	0.4	88.8
29.600	1	0.4	11.2	86.120	1	0.4	35.3	95.670	1	0.4	63.5	103.020	1	0.4	89.2
31.340	1	0.4	11.6	86.320	1	0.4	35.7	95.690	2	0.8	64.3	103.390	1	0.4	89.6
32.350	1	0.4	12.0	86.510	1	0.4	36.1	95.870	1	0.4	64.7	103.400	1	0.4	90.0
34.270	1	0.4	12.4	86.610	1	0.4	36.5	96.070	1	0.4	65.1	103.460	1	0.4	90.4
34.340	1	0.4	12.9	86.780	2	0.8	37.3	96.430	2	0.8	65.9	103.550	1	0.4	90.8
34.480	1	0.4	13.3	86.990	1	0.4	37.8	96.670	1	0.4	66.3	103.760	1	0.4	91.2
34.770	1	0.4	13.7	87.280	1	0.4	38.2	96.950	1	0.4	66.7	104.040	1	0.4	91.6
37.380	1	0.4	14.1	87.310	1	0.4	38.6	97.110	1	0.4	67.1	104.220	1	0.4	92.0
39.260	1	0.4	14.5	87.470	2	0.8	39.4	97.290	1	0.4	67.5	105.200	1	0.4	92.4
40.830	1	0.4	14.9	87.740	3	1.2	40.6	97.360	1	0.4	67.9	105.340	1	0.4	92.8
49.100	2	0.8	15.7	87.850	1	0.4	41.0	97.410	2	0.8	68.7	105.610	1	0.4	93.2
50.090	1	0.4	16.1	87.860	1	0.4	41.4	97.530	2	0.8	69.5	105.640	1	0.4	93.6
53.210	1	0.4	16.5	88.030	1	0.4	41.8	97.760	1	0.4	69.9	105.860	1	0.4	94.0
53.410	1	0.4	16.9	88.170	1	0.4	42.2	97.830	1	0.4	70.3	106.370	1	0.4	94.4
54.090	1	0.4	17.3	88.250	1	0.4	42.6	97.880	1	0.4	70.7	106.550	1	0.4	94.8
54.260	1	0.4	17.7	88.300	1	0.4	43.0	97.920	1	0.4	71.1	106.610	1	0.4	95.2
56.090	1	0.4	18.1	88.450	1	0.4	43.4	98.100	1	0.4	71.5	106.770	1	0.4	95.6
57.760	1	0.4	18.5	88.460	3	1.2	44.6	98.370	1	0.4	71.9	107.100	1	0.4	96.0
59.210	1	0.4	18.9	88.520	3	1.2	45.8	98.440	1	0.4	72.3	107.240	1	0.4	96.4
59.800	1	0.4	19.3	88.720	2	0.8	46.6	98.520	1	0.4	72.7	107.530	1	0.4	96.8
60.930	1	0.4	19.7	88.820	1	0.4	47.0	98.590	1	0.4	73.1	107.920	1	0.4	97.2
61.400	1	0.4	20.1	89.010	1	0.4	47.4	98.700	1	0.4	73.5	108.260	1	0.4	97.6
61.570	1	0.4	20.5	89.130	1	0.4	47.8	98.860	1	0.4	73.9	108.480	1	0.4	98.0
61.790	1	0.4	20.9	89.380	1	0.4	48.2	99.000	1	0.4	74.3	109.220	1	0.4	98.4
64.040	1	0.4	21.3	89.460	1	0.4	48.6	99.370	1	0.4	74.7	110.360	1	0.4	98.8
67.300	1	0.4	21.7	89.670	2	0.8	49.4	99.430	1	0.4	75.1	110.660	1	0.4	99.2
69.270	1	0.4	22.1	89.980	3	1.2	50.6	99.650	1	0.4	75.5	111.390	1	0.4	99.6
74.000	1	0.4	22.5	90.090	1	0.4	51.0	99.700	1	0.4	75.9	115.570	1	0.4	100.0
76.010	1	0.4	22.9	90.430	1	0.4	51.4	99.750	1	0.4	76.3				
77.880	1	0.4	23.3	90.570	1	0.4	51.8	100.070	1	0.4	76.7				

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************
* CORRTP   *
************
                                             MAXIMUM        34.7000008                   H
VARIABLE NUMBER . . . . . .      2           MINIMUM         5.0999999                   H
NUMBER OF DISTINCT VALUES .    122           RANGE          29.1000023                   H
NUMBER OF VALUES COUNTED. .    240           VARIANCE       18.6434307                  HHH          EACH 'H'
NUMBER OF VALUES NOT COUNTED     9           ST.DEV.         4.3178039                HHHHH          REPRESENTS
                                             (Q3-Q1)/2       2.5000000                HHHHH              5
                                                                                     HHHHHH          COUNT(S)
LOCATION ESTIMATES                                   ST.ERROR                        HHHHHHH
                  MEAN          13.3804169   0.2787130                              HHHHHHHHHH
                  MEDIAN        13.5000000   0.3752779                             HHHHHHHHHHHHHH H   H
                  MODE          NOT UNIQUE                                        L----------------------U

                                                                                  EACH '-' ABOVE =      1.5000
                                                                                              L=       3.0000
                                                                                              U=      37.5000

                                                                                                     Q1=   10.5000000
                                                                          VALUE   VALUE/S.E.         Q3=   15.5000000
                                                           SKEWNESS        1.12         7.08         S-=    9.0626125
                                                           KURTOSIS        3.58        11.32         S+=   17.6982212

                                                                                  EACH '.' BELOW =      0.2500
               S    Q              Q      S
  M            -    1        MM    3      +                                                                    M
  I..............................EE..........................................................................A
  N                          AD                                                                              X
                             NI
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VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
5.100	1	0.4	0.4	10.000	2	0.8	22.1	13.400	1	0.4	48.8	17.000	2	0.8	86.7
5.400	1	0.4	0.8	10.100	2	0.8	22.9	13.500	4	1.7	50.4	17.100	2	0.8	87.5
5.500	1	0.4	1.2	10.200	1	0.4	23.3	13.600	3	1.2	51.7	17.200	1	0.4	87.9
5.600	1	0.4	1.7	10.300	2	0.8	24.2	13.700	4	1.7	53.3	17.500	1	0.4	88.3
5.900	1	0.4	2.1	10.400	1	0.4	24.6	13.900	5	2.1	55.4	17.600	2	0.8	89.2
6.100	1	0.4	2.5	10.500	3	1.2	25.8	14.000	2	0.8	56.2	17.800	1	0.4	89.6
6.500	1	0.4	2.9	10.600	1	0.4	26.2	14.100	7	2.9	59.2	18.100	1	0.4	90.0
6.600	1	0.4	3.3	10.700	3	1.2	27.5	14.300	2	0.8	60.0	18.300	1	0.4	90.4
6.700	1	0.4	3.7	10.800	1	0.4	27.9	14.400	2	0.8	60.8	18.400	1	0.4	90.8
6.800	1	0.4	4.2	10.900	3	1.2	29.2	14.500	4	1.7	62.5	18.500	1	0.4	91.3
6.900	1	0.4	4.6	11.100	2	0.8	30.0	14.600	5	2.1	64.6	18.600	1	0.4	91.7
7.000	3	1.2	5.8	11.200	5	2.1	32.1	14.700	3	1.2	65.8	19.000	1	0.4	92.1
7.300	1	0.4	6.2	11.300	3	1.2	33.3	14.800	5	2.1	67.9	19.300	1	0.4	92.5
7.600	3	1.2	7.5	11.400	2	0.8	34.2	14.900	3	1.2	69.2	19.500	1	0.4	92.9
7.700	3	1.2	8.7	11.500	1	0.4	34.6	15.000	3	1.2	70.4	19.600	1	0.4	93.3
7.800	2	0.8	9.6	11.600	4	1.7	36.3	15.100	4	1.7	72.1	19.700	1	0.4	93.7
8.100	2	0.8	10.4	11.700	2	0.8	37.1	15.200	2	0.8	72.9	20.100	3	1.2	95.0
8.300	2	0.8	11.3	12.000	1	0.4	37.5	15.300	3	1.2	74.2	20.600	1	0.4	95.4
8.400	2	0.8	12.1	12.100	2	0.8	38.3	15.400	1	0.4	74.6	20.800	1	0.4	95.8
8.500	1	0.4	12.5	12.200	1	0.4	38.8	15.500	7	2.9	77.5	21.200	1	0.4	96.3
8.600	2	0.8	13.3	12.300	2	0.8	39.6	15.600	1	0.4	77.9	22.300	1	0.4	96.7
8.700	1	0.4	13.7	12.400	4	1.7	41.3	15.800	2	0.8	78.8	22.700	1	0.4	97.1
9.000	2	0.8	14.6	12.500	2	0.8	42.1	15.900	2	0.8	79.6	22.800	1	0.4	97.5
9.200	2	0.8	15.4	12.600	3	1.2	43.3	16.000	2	0.8	80.4	23.800	1	0.4	97.9
9.300	2	0.8	16.3	12.700	3	1.2	44.6	16.100	1	0.4	80.8	24.000	1	0.4	98.3
9.400	2	0.8	17.1	12.800	2	0.8	45.4	16.200	1	0.4	81.2	24.200	1	0.4	98.7
9.500	1	0.4	17.5	12.900	3	1.2	46.7	16.300	5	2.1	83.3	27.500	1	0.4	99.2
9.600	2	0.8	18.3	13.000	1	0.4	47.1	16.400	1	0.4	83.8	33.700	1	0.4	99.6
9.700	2	0.8	19.2	13.100	1	0.4	47.5	16.500	2	0.8	84.6	34.200	1	0.4	100.0
9.800	2	0.8	20.0	13.200	1	0.4	47.9	16.700	2	0.8	85.4				
9.900	3	1.2	21.3	13.300	1	0.4	48.3	16.900	1	0.4	85.8				

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* COPRTFP  *
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VARIABLE NUMBER	3	MAXIMUM	16.6000004
NUMBER OF DISTINCT VALUES .	89	MINIMUM	0.0000000
NUMBER OF VALUES COUNTED. .	231	RANGE	16.6000004
NUMBER OF VALUES NOT COUNTED	18	VARIANCE	6.4004245
		ST.DEV.	2.5299060
		(Q3-Q1)/2	1.6000000

LOCATION ESTIMATES

		ST.ERROR
MEAN	5.4406929	0.1664556
MEDIAN	5.5999999	0.1443376
MODE	6.3000002	

```
          H
          H
          H                        EACH 'H'
         HHH                      REPRESENTS
         HHHH                          5
       H HHHH                      COUNT(S)
    H HHHHHHHHH
    HHHHHHHHHHH
   HHHHHHHHHHHHHH  HH    H
  L----------------------U
```

EACH '-' ABOVE = 0.7500
L= 0.0000
U= 17.2500

	VALUE	VALUE/S.E.		
			Q1=	3.7000000
			Q3=	6.9000001
SKEWNESS	0.44	2.74	S-=	2.9107869
KURTOSIS	1.59	4.94	S+=	7.9705992

EACH '.' BELOW = 0.1500

```
                     S   Q               Q    S
 M                   -   1       MM  M   3    +                                              M
 I...............................FF....O.............................................................A
 N                               AD  D                                                             X
                                 NI  E
```

VALUE	COUNT	PERCENTS CELL	CUM
0.00000	4	1.7	1.7
0.10000	1	0.4	2.2
0.80000	1	0.4	2.6
0.90000	1	0.4	3.0
1.00000	1	0.4	3.5
1.10000	2	0.9	4.3
1.20000	2	0.9	5.2
1.30000	3	1.3	6.5
1.40000	1	0.4	6.9
1.50000	1	0.4	7.4
1.60000	3	1.3	8.7
1.90000	1	0.4	9.1
2.00000	2	0.9	10.0
2.10000	1	0.4	10.4
2.20000	3	1.3	11.7
2.30000	1	0.4	12.1
2.40000	3	1.3	13.4
2.50000	2	0.9	14.3
2.60000	1	0.4	14.7
2.70000	1	0.4	15.2
2.80000	2	0.9	16.0
2.90000	1	0.4	16.5
3.00000	3	1.3	17.7
3.10000	5	2.2	19.9
3.30000	3	1.3	21.2
3.40000	1	0.4	21.6
3.50000	4	1.7	23.4
3.60000	2	0.9	24.2
3.70000	2	0.9	25.1
3.90000	1	0.4	25.5
4.10000	5	2.2	27.7
4.20000	3	1.3	29.0
4.30000	1	0.4	29.4
4.40000	1	0.4	29.9
4.50000	1	0.4	30.3
4.60000	2	0.9	31.2
4.70000	2	0.9	32.0
4.80000	7	3.0	35.1
4.90000	7	3.0	38.1
5.00000	4	1.7	39.8
5.10000	5	2.2	42.0
5.20000	1	0.4	42.4
5.30000	7	3.0	45.5
5.40000	4	1.7	47.2
5.50000	6	2.6	49.8
5.60000	5	2.2	51.9
5.70000	8	3.5	55.4
5.80000	6	2.6	58.0
5.90000	3	1.3	59.3
6.00000	3	1.3	60.6
6.10000	3	1.3	61.9
6.20000	2	0.9	62.8
6.30000	11	4.8	67.5
6.40000	8	3.5	71.0
6.50000	1	0.4	71.4
6.60000	2	0.9	72.3
6.70000	3	1.3	73.6
6.80000	2	0.9	74.5
6.90000	4	1.7	76.2
7.00000	4	1.7	77.9
7.10000	1	0.4	78.4
7.20000	1	0.4	78.8
7.30000	1	0.4	79.2
7.40000	2	0.9	80.1
7.50000	7	3.0	83.1
7.60000	2	0.9	84.0
7.70000	1	0.4	84.4
7.80000	4	1.7	86.1
7.90000	3	1.3	87.4
8.00000	2	0.9	88.3
8.10000	2	0.9	89.2
8.30000	3	1.3	90.5
8.40000	1	0.4	90.9
8.50000	3	1.3	92.2
8.60000	1	0.4	92.6
8.70000	3	1.3	93.9
8.80000	1	0.4	94.4
9.00000	1	0.4	94.8
9.10000	1	0.4	95.2
9.20000	1	0.4	95.7
9.30000	1	0.4	96.1
9.40000	2	0.9	97.0
10.00000	1	0.4	97.4
10.40000	1	0.4	97.8
12.20000	1	0.4	98.3
12.80000	1	0.4	98.7
13.00000	1	0.4	99.1
13.50000	1	0.4	99.6
16.60000	1	0.4	100.0

****
* SRP *
****

VARIABLE NUMBER	8	MAXIMUM	6.1999998
NUMBER OF DISTINCT VALUES .	34	MINIMUM	0.0000000
NUMBER OF VALUES COUNTED. .	248	RANGE	6.1999998
NUMBER OF VALUES NOT COUNTED	1	VARIANCE	1.6744281
		ST.DEV.	1.2939969
		(Q3-Q1)/2	0.5000000

LOCATION ESTIMATES

		ST.ERROR
MEAN	0.7620968	0.0821689
MEDIAN	0.0000000	0.0000000
MODE	0.0000000	

```
H
H
H
H                    EACH 'H'
H                   REPRESENTS
H                      16
H                    COUNT(S)
H
HH
HHHHHHHH HHHHHHHH    H
+----------------------U
```

EACH '-' ABOVE = 0.3000
L= 0.0000
U= 6.9000

	VALUE	VALUE/S.E.
SKEWNESS	1.80	11.57
KURTOSIS	2.20	7.06

Q1= 0.0000000
Q3= 1.0000000
S-= -0.5319002
S+= 2.0560937

EACH '.' BELOW = 0.0750

```
S     Q          Q          S
-     M          M  3       +                                          M
.....I..........E.....................................................A
     N          A                                                    X
                N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.00000	148	59.7	59.7	0.90000	4	1.6	73.4	2.00000	1	0.4	86.7	3.80000	5	2.0	94.8
0.10000	1	0.4	60.1	1.00000	7	2.8	76.2	2.60000	1	0.4	87.1	3.90000	3	1.2	96.0
0.20000	2	0.8	60.9	1.10000	2	0.8	77.0	2.70000	1	0.4	87.5	4.00000	4	1.6	97.6
0.30000	3	1.2	62.1	1.20000	2	0.8	77.8	3.00000	1	0.4	87.9	4.20000	2	0.8	98.4
0.40000	1	0.4	62.5	1.30000	8	3.2	81.0	3.20000	2	0.8	88.7	4.30000	2	0.8	99.2
0.50000	8	3.2	65.7	1.40000	2	0.8	81.9	3.30000	3	1.2	89.9	4.60000	1	0.4	99.6
0.60000	8	3.2	69.0	1.50000	5	2.0	83.9	3.40000	2	0.8	90.7	6.20000	1	0.4	100.0
0.70000	2	0.8	69.8	1.80000	5	2.0	85.9	3.60000	2	0.8	91.5				
0.80000	5	2.0	71.8	1.90000	1	0.4	86.3	3.70000	3	1.2	92.7				

```
************
* CALCSOP  *
************
                                                   MAXIMUM       16.6000004                    H
VARIABLE NUMBER . . . . . .        7               MINIMUM        0.0000000                    H
NUMBER OF DISTINCT VALUES .       77               RANGE         16.6000004                    H
NUMBER OF VALUES COUNTED. .      230               VARIANCE       5.6317496                  HHHH              EACH 'H'
NUMBER OF VALUES NOT COUNTED      19               ST.DEV.        2.3731308                  HHHHH             REPRESENTS
                                                   (Q3-Q1)/2      1.4500000                 HHHHHH                 4
                                                                                          HHHHHHHHH            COUNT(S)
LOCATION ESTIMATES                                         ST.ERROR                       HHHHHHHHH H
                    MEAN             4.6639128      0.1564796                            HHHHHHHHHH H
                    MEDIAN           4.8000002      0.2020726                            HHHHHHHHHHHHH   H     H
                    MODE             5.3000002                                          L----------------------U

                                                                                        EACH '-' ABOVE =        0.7500
                                                                                                     L=        0.0000
                                                                                                     U=       17.2500

                                                                                                          Q1=      3.0999999
                                                                                    VALUE    VALUE/S.E.   Q3=      6.0000000
                                                                     SKEWNESS        0.79        4.90     S-=      2.2907820
                                                                     KURTOSIS        2.62        8.10     S+=      7.0370436

                                                                                    EACH '.' BELOW =        0.1500

                   S    Q                 Q     S
     M             -    1       MM  M     3     +                                                                    M
     I..........................FF..O.................................................................................A
     N                          AD  D                                                                                X
                                NI  E
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.00000	5	2.2	2.2
0.10000	1	0.4	2.6
0.80000	2	0.9	3.5
0.90000	2	0.9	4.3
1.00000	1	0.4	4.8
1.10000	1	0.4	5.2
1.20000	3	1.3	6.5
1.30000	4	1.7	8.3
1.40000	2	0.9	9.1
1.50000	1	0.4	9.6
1.60000	4	1.7	11.3
1.90000	2	0.9	12.2
2.00000	2	0.9	13.0
2.10000	3	1.3	14.3
2.20000	3	1.3	15.7
2.30000	2	0.9	16.5
2.40000	4	1.7	18.3
2.50000	2	0.9	19.1
2.60000	1	0.4	19.6
2.70000	1	0.4	20.0
2.80000	4	1.7	21.7
2.90000	4	1.7	23.5
3.00000	2	0.9	24.3
3.10000	5	2.2	26.5
3.20000	3	1.3	27.8
3.30000	4	1.7	29.6
3.40000	1	0.4	30.0
3.50000	5	2.2	32.2
3.60000	4	1.7	33.9
3.70000	3	1.3	35.2
3.80000	5	2.2	37.4
3.90000	4	1.7	39.1
4.00000	1	0.4	39.6
4.10000	5	2.2	41.7
4.20000	4	1.7	43.5
4.40000	3	1.3	44.8
4.50000	4	1.7	46.5
4.60000	2	0.9	47.4
4.70000	1	0.4	47.8
4.80000	6	2.6	50.4
4.90000	6	2.6	53.0
5.00000	6	2.6	55.7
5.10000	5	2.2	57.8
5.20000	1	0.4	58.3
5.30000	9	3.9	62.2
5.40000	7	3.0	65.2
5.50000	7	3.0	68.3
5.60000	3	1.3	69.6
5.70000	3	1.3	70.9
5.80000	5	2.2	73.0
5.90000	1	0.4	73.5
6.00000	5	2.2	75.7
6.10000	5	2.2	77.8
6.20000	3	1.3	79.1
6.30000	3	1.3	80.4
6.40000	7	3.0	83.5
6.50000	1	0.4	83.9
6.70000	4	1.7	85.7
6.80000	3	1.3	87.0
6.90000	3	1.3	88.3
7.00000	2	0.9	89.1
7.10000	1	0.4	89.6
7.20000	1	0.4	90.0
7.30000	2	0.9	90.9
7.50000	2	0.9	91.7
7.60000	2	0.9	92.6
7.70000	1	0.4	93.0
8.30000	2	0.9	93.9
8.50000	2	0.9	94.8
8.70000	3	1.3	96.1
8.80000	1	0.4	96.5
9.00000	1	0.4	97.0
9.10000	2	0.9	97.8
9.40000	1	0.4	98.3
12.10000	1	0.4	98.7
12.20000	2	0.9	99.6
16.60000	1	0.4	100.0

****
* CALCPP *
****

VARIABLE NUMBER	5	MAXIMUM	27.2000008
NUMBER OF DISTINCT VALUES .	100	MINIMUM	0.9000000
NUMBER OF VALUES COUNTED. .	725	RANGE	26.3000011
NUMBER OF VALUES NOT COUNTED	24	VARIANCE	12.2935925
		ST.DEV.	3.5062220
		(Q3-Q1)/2	1.8500001

```
H
H
HH                    EACH 'H'
HHHH                  REPRESENTS
HHHH                      6
HHHHH                 COUNT(S)
HHHHHH
HHHHHHH
HHHHHHHHH
HHHHHHHHHHHHHHH     H
L---------------------U
```

LOCATION ESTIMATES

		ST.ERROR
MEAN	8.1048880	0.2337481
MEDIAN	7.5999999	0.3752778
MODE	9.8999996	

EACH '-' ABOVE = 1.5000
L= 0.0000
U= 34.5000

	VALUE	VALUE/S.E.
SKEWNESS	1.20	7.33
KURTOSIS	3.99	12.23

Q1= 6.0999999
Q3= 9.8000002
S-= 4.5986662
S+= 11.6111097

EACH '.' BELOW = 0.2500

```
                S     Q          Q     S
N               -     1    M M   M     +                                          n
I.....................F.E.....O.....................................................A
N                     D A    D                                                    X
                      I N    E
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.9000	1	0.4	0.4	5.4000	3	1.3	19.1	8.2000	3	1.3	53.8	11.2000	2	0.9	84.9
1.1000	1	0.4	0.9	5.5000	3	1.3	20.4	8.3000	4	1.8	55.6	11.3000	3	1.3	86.2
1.2000	1	0.4	1.3	5.6000	5	2.2	22.7	8.4000	6	2.7	58.2	11.4000	3	1.3	87.6
1.6000	2	0.9	2.2	5.7000	1	0.4	23.1	8.5000	4	1.8	60.0	11.5000	4	1.8	89.3
1.8000	1	0.4	2.7	5.8000	1	0.4	23.6	8.6000	2	0.9	60.9	11.8000	2	0.9	90.2
2.0000	1	0.4	3.1	6.0000	3	1.3	24.9	8.7000	3	1.3	62.2	12.1000	2	0.9	91.1
2.1000	1	0.4	3.6	6.1000	4	1.8	26.7	8.8000	2	0.9	63.1	12.2000	1	0.4	91.6
2.3000	2	0.9	4.4	6.2000	6	2.7	29.3	8.9000	2	0.9	64.0	12.3000	1	0.4	92.0
3.0000	1	0.4	4.9	6.3000	4	1.8	31.1	9.0000	2	0.9	64.9	12.5000	1	0.4	92.4
3.5000	3	1.3	6.2	6.4000	1	0.4	31.6	9.1000	4	1.8	66.7	13.2000	1	0.4	92.9
3.7000	1	0.4	6.7	6.5000	5	2.2	33.8	9.2000	4	1.8	68.4	13.3000	1	0.4	93.3
3.9000	3	1.3	8.0	6.6000	7	3.1	36.9	9.3000	4	1.8	70.2	13.6000	1	0.4	93.8
4.0000	3	1.3	9.3	6.7000	7	3.1	40.0	9.4000	2	0.9	71.1	14.0000	1	0.4	94.2
4.2000	1	0.4	9.8	6.9000	4	1.8	41.8	9.5000	4	1.8	72.9	14.3000	2	0.9	95.1
4.3000	1	0.4	10.2	7.0000	1	0.4	42.2	9.6000	2	0.9	73.8	14.6000	1	0.4	95.6
4.4000	1	0.4	10.7	7.1000	5	2.2	44.4	9.7000	2	0.9	74.7	15.0000	1	0.4	96.0
4.5000	1	0.4	11.1	7.2000	1	0.4	44.9	9.8000	2	0.9	75.6	15.1000	1	0.4	96.4
4.6000	4	1.8	12.9	7.3000	2	0.9	45.8	9.9000	8	3.6	79.1	15.3000	1	0.4	96.9
4.7000	1	0.4	13.3	7.4000	3	1.3	47.1	10.4000	1	0.4	79.6	16.0000	1	0.4	97.3
4.8000	1	0.4	13.8	7.5000	1	0.4	47.6	10.5000	3	1.3	80.9	16.5000	1	0.4	97.8
4.9000	1	0.4	14.2	7.6000	6	2.7	50.2	10.6000	1	0.4	81.3	17.3000	1	0.4	98.2
5.0000	2	0.9	15.1	7.7000	1	0.4	50.7	10.7000	2	0.9	82.2	17.6000	1	0.4	98.7
5.1000	1	0.4	15.6	7.8000	2	0.9	51.6	10.9000	2	0.9	83.1	18.3000	1	0.4	99.1
5.2000	1	1.3	16.9	7.9000	1	0.4	52.0	11.0000	1	0.4	83.6	20.6000	1	0.4	99.6
5.3000	2	0.9	17.8	8.1000	1	0.4	52.4	11.1000	1	0.4	84.0	27.2000	1	0.4	100.0

```
************
* PERPP    *
************
```

		MAXIMUM	100.0000000
VARIABLE NUMBER	6	MINIMUM	8.3100004
NUMBER OF DISTINCT VALUES .	212	RANGE	91.6900024
NUMBER OF VALUES COUNTED. .	225	VARIANCE	284.0725708
NUMBER OF VALUES NOT COUNTED	24	ST.DEV.	16.8544521
		(Q3-Q1)/2	9.6650009

LOCATION ESTIMATES

		ST.ERROR
MEAN	59.5936813	1.1236302
MEDIAN	59.2900009	1.3769801
MODE	100.0000000	

```
                     H
                    HHH
                    HHH              EACH 'H'
                    HHH              REPRESENTS
                    HHHH H               4
                   HHHHHHH           COUNT(S)
                HHHHHHHHHHH
                HHHHHHHHHHH H
         HHHHHHHHHHHHHHHHHHHH
       L-----------------------U

       EACH '-' ABOVE =        5.0000
                    L=         0.0000
                    U=       115.0000
```

	VALUE	VALUE/S.E.		
			Q1=	50.2500000
			Q3=	69.5800018
SKEWNESS	-0.20	-1.23	S-=	42.7392273
KURTOSIS	0.37	1.13	S+=	76.4481354

EACH '.' BELOW = 0.7500

```
                                                            S            Q                ME               Q           S                                        M
                                                            -            1                                 3           +                                        A
I.................................................................................................................................................................A
N                                                                                         DA                                                                      X
                                                                                          IN
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
8.310	1	0.4	0.4	49.380	1	0.4	24.0	59.290	1	0.4	50.2	69.430	1	0.4	74.7
11.560	1	0.4	0.9	50.150	1	0.4	24.4	59.320	1	0.4	50.7	69.580	1	0.4	75.1
13.210	1	0.4	1.3	50.180	1	0.4	24.9	60.100	1	0.4	51.1	70.290	1	0.4	75.6
19.150	1	0.4	1.8	50.250	1	0.4	25.3	60.150	1	0.4	51.6	70.530	1	0.4	76.0
19.270	1	0.4	2.2	50.460	1	0.4	25.8	60.280	2	0.9	52.4	71.250	1	0.4	76.4
22.330	1	0.4	2.7	51.070	1	0.4	26.2	60.790	1	0.4	52.9	71.730	1	0.4	76.9
24.570	1	0.4	3.1	51.330	1	0.4	26.7	60.820	1	0.4	53.3	71.780	1	0.4	77.3
24.750	1	0.4	3.6	51.430	1	0.4	27.1	60.900	1	0.4	53.8	71.870	2	0.9	78.2
27.630	1	0.4	4.0	51.520	1	0.4	27.6	60.990	1	0.4	54.2	71.940	1	0.4	78.7
27.850	1	0.4	4.4	52.460	1	0.4	28.0	61.010	1	0.4	54.7	72.290	1	0.4	79.1
28.420	1	0.4	4.9	52.610	1	0.4	28.4	61.440	1	0.4	55.1	73.040	1	0.4	79.6
29.500	1	0.4	5.3	52.890	1	0.4	28.9	61.530	1	0.4	55.6	73.120	1	0.4	80.0
30.150	1	0.4	5.8	52.950	1	0.4	29.3	61.670	1	0.4	56.0	73.490	1	0.4	80.4
34.270	1	0.4	6.2	53.420	1	0.4	29.8	62.140	1	0.4	56.4	74.240	1	0.4	80.9
35.180	1	0.4	6.7	53.430	1	0.4	30.2	62.190	1	0.4	56.9	74.500	1	0.4	81.3
35.490	1	0.4	7.1	53.720	1	0.4	30.7	62.480	1	0.4	57.3	75.110	1	0.4	81.8
35.540	1	0.4	7.6	53.850	1	0.4	31.1	62.550	1	0.4	57.8	75.450	1	0.4	82.2
36.230	1	0.4	8.0	53.970	3	1.3	32.4	62.590	1	0.4	58.2	75.660	1	0.4	82.7
36.410	1	0.4	8.4	54.030	1	0.4	32.9	62.860	1	0.4	58.7	76.240	1	0.4	83.1
36.640	1	0.4	8.9	54.160	2	0.9	33.8	62.880	1	0.4	59.1	76.260	1	0.4	83.6
37.360	1	0.4	9.3	54.270	1	0.4	34.2	63.360	1	0.4	59.6	76.470	1	0.4	84.0
37.420	1	0.4	9.8	54.410	1	0.4	34.7	63.530	1	0.4	60.0	76.500	1	0.4	84.4
37.440	1	0.4	10.2	54.450	1	0.4	35.1	63.600	1	0.4	60.4	76.840	1	0.4	84.9
37.530	1	0.4	10.7	54.750	2	0.9	36.0	63.650	1	0.4	60.9	77.330	1	0.4	85.3
38.390	1	0.4	11.1	54.770	1	0.4	36.4	63.690	1	0.4	61.3	77.930	1	0.4	85.8
39.680	1	0.4	11.6	54.890	2	0.9	37.3	63.840	1	0.4	61.8	78.110	1	0.4	86.2
40.650	1	0.4	12.0	55.190	1	0.4	37.8	63.960	1	0.4	62.2	78.720	1	0.4	86.7
41.310	1	0.4	12.4	55.290	1	0.4	38.2	63.980	1	0.4	62.7	78.780	1	0.4	87.1
41.680	1	0.4	12.9	55.490	1	0.4	38.7	64.100	1	0.4	63.1	78.950	2	0.9	88.0
42.110	1	0.4	13.3	55.520	1	0.4	39.1	64.110	1	0.4	63.6	79.710	1	0.4	88.4
42.480	1	0.4	13.8	55.750	1	0.4	39.6	64.190	1	0.4	64.0	79.850	1	0.4	88.9
42.560	1	0.4	14.2	55.880	1	0.4	40.0	64.280	1	0.4	64.4	80.880	1	0.4	89.3
42.580	1	0.4	14.7	56.190	1	0.4	40.4	64.420	1	0.4	64.9	81.230	1	0.4	89.8
42.760	1	0.4	15.1	56.230	2	0.9	41.3	64.470	1	0.4	65.3	81.580	1	0.4	90.2
43.190	1	0.4	15.6	56.240	1	0.4	41.8	64.490	1	0.4	65.8	81.670	1	0.4	90.7
43.230	1	0.4	16.0	56.310	1	0.4	42.2	64.730	1	0.4	66.2	82.220	1	0.4	91.1
43.610	1	0.4	16.4	56.530	1	0.4	42.7	64.820	1	0.4	66.7	82.260	1	0.4	91.6
44.540	1	0.4	16.9	56.690	1	0.4	43.1	65.530	1	0.4	67.1	82.290	1	0.4	92.0
46.180	1	0.4	17.3	56.830	1	0.4	43.6	65.600	1	0.4	67.6	83.460	1	0.4	92.4
46.310	1	0.4	17.8	56.890	1	0.4	44.0	65.610	1	0.4	68.0	84.470	1	0.4	92.9
46.500	1	0.4	18.2	56.900	1	0.4	44.4	65.750	1	0.4	68.4	84.840	1	0.4	93.3
46.960	1	0.4	18.7	56.920	1	0.4	44.9	65.760	1	0.4	68.9	85.210	1	0.4	93.8
47.190	1	0.4	19.1	56.970	1	0.4	45.3	66.040	1	0.4	69.3	85.360	1	0.4	94.2
47.370	1	0.4	19.6	57.000	1	0.4	45.8	66.110	1	0.4	69.8	86.070	1	0.4	94.7
47.400	1	0.4	20.0	57.010	1	0.4	46.2	66.230	1	0.4	70.2	86.080	1	0.4	95.1
47.500	1	0.4	20.4	57.400	1	0.4	46.7	66.590	1	0.4	70.7	87.280	1	0.4	95.6
47.710	1	0.4	20.9	57.620	1	0.4	47.1	68.000	1	0.4	71.1	88.050	1	0.4	96.0
47.750	1	0.4	21.3	58.380	1	0.4	47.6	68.150	1	0.4	71.6	88.370	1	0.4	96.4
47.800	1	0.4	21.8	58.960	1	0.4	48.0	68.670	1	0.4	72.0	88.410	1	0.4	96.9
47.820	1	0.4	22.2	59.010	1	0.4	48.4	68.830	1	0.4	72.4	89.170	1	0.4	97.3
47.880	1	0.4	22.7	59.080	1	0.4	48.9	69.010	2	0.9	73.3	90.220	1	0.4	97.8
48.310	1	0.4	23.1	59.190	1	0.4	49.3	69.280	1	0.4	73.8	98.510	1	0.4	98.2
49.080	1	0.4	23.6	59.210	1	0.4	49.8	69.310	1	0.4	74.2	100.000	4	1.8	100.0

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* PERTFP   *
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                                                  MAXIMUM        91.6900024
VARIABLE NUMBER . . . . . .            4           MINIMUM         0.0000000                          H
NUMBER OF DISTINCT VALUES .          212           RANGE          91.6900024                          HHH
NUMBER OF VALUES COUNTED. .          225           VARIANCE      284.0725708                          HHH         EACH 'H'
NUMBER OF VALUES NOT COUNTED          24           ST.DEV.        16.8544521                          HHH        REPRESENTS
                                                  (Q3-Q1)/2       9.6650000                        H HHHH            4
                                                                                                  HHHHHHH         COUNT(S)
LOCATION ESTIMATES                                  ST.ERROR                                    HHHHHHHHHHH
                 MEAN               40.4063148      1.1236302                                 H HHHHHHHHHH
                 MEDIAN             40.7099991      1.3769801                                 HHHHHHHHHHHHHHHHHHH
                 MODE                0.0000000                                               L-----------------------U

                                                                                             EACH '-' ABOVE =      5.0000
                                                                                                          L=      0.0000
                                                                                                          U=    115.0000

                                                                                                              Q1=    30.4200001
                                                                                   VALUE    VALUE/S.E.        Q3=    49.7500000
                                                               SKEWNESS             0.20          1.23        S-=    23.5518627
                                                               KURTOSIS             0.37          1.13        S+=    57.2607689

                                                                                  EACH '.' BELOW =      0.7500
                                    S       Q                         Q       S
M                                   -       1          MM             3       +                                     M
I......................................................FF.........................................................A
N                                                      AD                                                           X
                                                       NI
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VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.000	4	1.8	1.8	30.690	1	0.4	26.2	40.790	1	0.4	50.7	50.920	1	0.4	76.9
1.490	1	0.4	2.2	30.720	1	0.4	26.7	40.810	1	0.4	51.1	51.690	1	0.4	77.3
9.780	1	0.4	2.7	30.990	2	0.9	27.6	40.920	1	0.4	51.6	52.120	1	0.4	77.8
10.830	1	0.4	3.1	31.170	1	0.4	28.0	40.990	1	0.4	52.0	52.180	1	0.4	78.2
11.590	1	0.4	3.6	31.330	1	0.4	28.4	41.040	1	0.4	52.4	52.200	1	0.4	78.7
11.630	1	0.4	4.0	31.850	1	0.4	28.9	41.620	1	0.4	52.9	52.250	1	0.4	79.1
11.950	1	0.4	4.4	32.000	1	0.4	29.3	42.380	1	0.4	53.3	52.290	1	0.4	79.6
12.720	1	0.4	4.9	33.410	1	0.4	29.8	42.600	1	0.4	53.8	52.500	1	0.4	80.0
13.920	1	0.4	5.3	33.770	1	0.4	30.2	42.990	1	0.4	54.2	52.600	1	0.4	80.4
13.930	1	0.4	5.8	33.890	1	0.4	30.7	43.000	1	0.4	54.7	52.630	1	0.4	80.9
14.640	1	0.4	6.2	33.960	1	0.4	31.1	43.030	1	0.4	55.1	52.810	1	0.4	81.3
14.790	1	0.4	6.7	34.240	1	0.4	31.6	43.080	1	0.4	55.6	53.040	1	0.4	81.8
15.160	1	0.4	7.1	34.250	1	0.4	32.0	43.100	1	0.4	56.0	53.500	1	0.4	82.2
15.530	1	0.4	7.6	34.390	1	0.4	32.4	43.110	1	0.4	56.4	53.690	1	0.4	82.7
16.540	1	0.4	8.0	34.400	1	0.4	32.9	43.170	1	0.4	56.9	53.820	1	0.4	83.1
17.710	1	0.4	8.4	34.470	1	0.4	33.3	43.310	1	0.4	57.3	55.460	1	0.4	83.6
17.740	1	0.4	8.9	35.180	1	0.4	33.8	43.470	1	0.4	57.8	56.390	1	0.4	84.0
17.780	1	0.4	9.3	35.270	1	0.4	34.2	43.690	1	0.4	58.2	56.770	1	0.4	84.4
18.330	1	0.4	9.8	35.510	1	0.4	34.7	43.760	1	0.4	58.7	56.810	1	0.4	84.9
18.420	1	0.4	10.2	35.530	1	0.4	35.1	43.770	2	0.9	59.6	57.240	1	0.4	85.3
18.770	1	0.4	10.7	35.580	1	0.4	35.6	43.810	1	0.4	60.0	57.420	1	0.4	85.8
19.120	1	0.4	11.1	35.720	1	0.4	36.0	44.120	1	0.4	60.4	57.440	1	0.4	86.2
20.150	1	0.4-	11.6	35.810	1	0.4	36.4	44.250	1	0.4	60.9	57.520	1	0.4	86.7
20.290	1	0.4	12.0	35.890	1	0.4	36.9	44.480	1	0.4	61.3	57.890	1	0.4	87.1
21.050	2	0.9	12.9	35.900	1	0.4	37.3	44.510	1	0.4	61.8	58.320	1	0.4	87.6
21.220	1	0.4	13.3	36.020	1	0.4	37.8	44.710	1	0.4	62.2	58.690	1	0.4	88.0
21.280	1	0.4	13.8	36.040	1	0.4	38.2	44.810	1	0.4	62.7	59.350	1	0.4	88.4
21.890	1	0.4	14.2	36.160	1	0.4	38.7	45.110	2	0.9	63.6	60.320	1	0.4	88.9
22.070	1	0.4	14.7	36.310	1	0.4	39.1	45.230	1	0.4	64.0	61.610	1	0.4	89.3
22.670	1	0.4	15.1	36.350	1	0.4	39.6	45.250	2	0.9	64.9	62.470	1	0.4	89.8
23.160	1	0.4	15.6	36.400	1	0.4	40.0	45.550	1	0.4	65.3	62.560	1	0.4	90.2
23.500	1	0.4	16.0	36.470	1	0.4	40.4	45.590	1	0.4	65.8	62.580	1	0.4	90.7
23.530	1	0.4	16.4	36.640	1	0.4	40.9	45.730	1	0.4	66.2	62.640	1	0.4	91.1
23.740	1	0.4	16.9	37.120	1	0.4	41.3	45.840	2	0.9	67.1	63.360	1	0.4	91.6
23.760	1	0.4	17.3	37.140	1	0.4	41.8	45.970	1	0.4	67.6	63.590	1	0.4	92.0
24.340	1	0.4	17.8	37.410	1	0.4	42.2	46.030	3	1.3	68.9	63.770	1	0.4	92.4
24.550	1	0.4	18.2	37.450	1	0.4	42.7	46.150	1	0.4	69.3	64.460	1	0.4	92.9
24.890	1	0.4	18.7	37.520	1	0.4	43.1	46.280	1	0.4	69.8	64.510	1	0.4	93.3
25.500	1	0.4	19.1	37.810	1	0.4	43.6	46.570	1	0.4	70.2	64.820	1	0.4	93.8
25.760	1	0.4	19.6	37.860	1	0.4	44.0	46.580	1	0.4	70.7	65.730	1	0.4	94.2
26.510	1	0.4	20.0	38.330	1	0.4	44.4	47.050	1	0.4	71.1	69.850	1	0.4	94.7
26.880	1	0.4	20.4	38.470	1	0.4	44.9	47.110	1	0.4	71.6	70.500	1	0.4	95.1
26.960	1	0.4	20.9	38.560	1	0.4	45.3	47.390	1	0.4	72.0	71.580	1	0.4	95.6
27.710	1	0.4	21.3	38.990	1	0.4	45.8	47.540	1	0.4	72.4	72.150	1	0.4	96.0
28.070	1	0.4	21.8	39.010	1	0.4	46.2	48.480	1	0.4	72.9	72.370	1	0.4	96.4
28.130	2	0.9	22.7	39.100	1	0.4	46.7	48.570	1	0.4	73.3	75.250	1	0.4	96.9
28.220	1	0.4	23.1	39.180	1	0.4	47.1	48.670	1	0.4	73.8	75.430	1	0.4	97.3
28.270	1	0.4	23.6	39.210	1	0.4	47.6	48.930	1	0.4	74.2	77.670	1	0.4	97.8
28.750	1	0.4	24.0	39.720	2	0.9	48.4	49.540	1	0.4	74.7	80.730	1	0.4	98.2
29.470	1	0.4	24.4	39.850	1	0.4	48.9	49.750	1	0.4	75.1	80.850	1	0.4	98.7
29.710	1	0.4	24.9	39.900	1	0.4	49.3	49.820	1	0.4	75.6	86.790	1	0.4	99.1
30.420	1	0.4	25.3	40.680	1	0.4	49.8	49.850	1	0.4	76.0	88.440	1	0.4	99.6
30.570	1	0.4	25.8	40.710	1	0.4	50.2	50.620	1	0.4	76.4	91.690	1	0.4	100.0

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		MAXIMUM	537.0000000
VARIABLE NUMBER	4	MINIMUM	69.0000000
NUMBER OF DISTINCT VALUES .	157	RANGE	468.0000000
NUMBER OF VALUES COUNTED. .	248	VARIANCE	9053.3388672
NUMBER OF VALUES NOT COUNTED	1	ST.DEV.	95.1490326
		(Q3-Q1)/2	75.5000000

LOCATION ESTIMATES

		ST.ERROR
MEAN	239.4233856	6.0419698
MEDIAN	236.5000000	9.8149595
MODE	145.0000000	

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      HH
      HH                       EACH 'H'
      HH HHH                   REPRESENTS
     HHHHHHHHHH                    4
     HHHHHHHHHH                COUNT(S)
     HHHHHHHHHHH
     HHHHHHHHHHH  HH
   H HHHHHHHHHHHHHHHH H
 L-----------------------U

 EACH '-' ABOVE =      25.0000
               L=      25.0000
               U=     600.0000
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	VALUE	VALUE/S.F.	
			Q1= 155.0000000
			Q3= 306.0000000
SKEWNESS	0.66	4.24	S-= 144.2743530
KURTOSIS	-0.04	-0.14	S+= 334.5724182

EACH '.' BELOW = 5.0000

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               S Q                              Q     S
M              M 1                MM            3     +                                       M
I..............O..................FF..........................................................A
N              D                  DA                                                          X
               E                  IN
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VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
69.	1	0.4	0.4
72.	1	0.4	0.8
74.	1	0.4	1.2
109.	2	0.8	2.0
112.	1	0.4	2.4
113.	3	1.2	3.6
114.	1	0.4	4.0
115.	1	0.4	4.4
116.	1	0.4	4.8
117.	2	0.8	5.6
118.	1	0.4	6.0
119.	1	0.4	6.5
121.	1	0.4	6.9
122.	2	0.8	7.7
123.	2	0.8	8.5
130.	1	0.4	8.9
132.	1	0.4	9.3
133.	2	0.8	10.1
134.	1	0.4	10.5
135.	2	0.8	11.3
136.	2	0.8	12.1
138.	1	0.4	12.5
139.	1	0.4	12.9
140.	4	1.6	14.5
142.	3	1.2	15.7
143.	2	0.8	16.5
144.	2	0.8	17.3
145.	6	2.4	19.8
146.	3	1.2	21.0
148.	1	0.4	21.4
152.	3	1.2	22.6
154.	3	1.2	23.8
155.	4	1.6	25.4
156.	2	0.8	26.2
160.	4	1.6	27.8
161.	1	0.4	28.2
162.	1	0.4	28.6
163.	1	0.4	29.0
164.	1	0.4	29.4
169.	1	0.4	29.8
171.	3	1.2	31.0
173.	5	2.0	33.1
180.	1	0.4	33.5
181.	2	0.8	34.3
182.	1	0.4	34.7
185.	1	0.4	35.1
186.	1	0.4	35.5
187.	1	0.4	35.9
190.	3	1.2	37.1
192.	1	0.4	37.5
193.	1	0.4	37.9
194.	1	0.4	38.3
196.	1	0.4	38.7
198.	1	0.4	39.1
200.	3	1.2	40.3
202.	2	0.8	41.1
205.	2	0.8	41.9
207.	3	1.2	43.1
208.	2	0.8	44.0
210.	2	0.8	44.8
211.	2	0.8	45.6
213.	1	0.4	46.0
214.	2	0.8	46.8
218.	1	0.4	47.2
220.	1	0.4	47.6
221.	1	0.4	48.0
222.	1	0.4	48.4
223.	1	0.4	48.8
228.	1	0.4	49.2
230.	1	0.4	49.6
236.	1	0.4	50.0
237.	1	0.4	50.4
238.	1	0.4	50.8
239.	1	0.4	51.2
240.	4	1.6	52.8
241.	4	1.6	54.4
242.	1	0.4	54.8
243.	1	0.4	55.2
244.	1	0.4	55.6
245.	2	0.8	56.5
246.	1	0.4	56.9
247.	1	0.4	57.3
250.	3	1.2	58.5
251.	1	0.4	58.9
252.	1	0.4	59.3
253.	1	0.4	59.7
254.	1	0.4	60.1
256.	1	0.4	60.5
258.	1	0.4	60.9
259.	1	0.4	61.3
260.	2	0.8	62.1
261.	2	0.8	62.9
262.	1	0.4	63.3
265.	2	0.8	64.1
267.	1	0.4	64.5
270.	2	0.8	65.3
273.	1	0.4	65.7
275.	4	1.6	67.3
276.	1	0.4	67.7
280.	3	1.2	69.0
281.	1	0.4	69.4
283.	1	0.4	69.8
285.	2	0.8	70.6
290.	2	0.8	71.4
292.	1	0.4	71.8
295.	1	0.4	72.2
298.	2	0.8	73.0
299.	2	0.8	73.8
300.	2	0.8	74.6
305.	1	0.4	75.0
307.	1	0.4	75.4
309.	1	0.4	75.8
310.	1	0.4	76.2
312.	2	0.8	77.0
314.	1	0.4	77.4
315.	1	0.4	77.8
317.	1	0.4	78.2
318.	1	0.4	78.6
319.	1	0.4	79.0
320.	2	0.8	79.8
322.	3	1.2	81.0
324.	1	0.4	81.5
325.	1	0.4	81.9
326.	1	0.4	82.3
327.	1	0.4	82.7
328.	1	0.4	83.1
332.	1	0.4	83.5
334.	1	0.4	83.9
337.	1	0.4	84.3
340.	2	0.8	85.1
341.	2	0.8	85.9
342.	1	0.4	86.3
345.	1	0.4	86.7
347.	1	0.4	87.1
348.	1	0.4	87.5
349.	3	1.2	88.7
350.	1	0.4	89.1
351.	2	0.8	89.9
358.	1	0.4	90.3
366.	1	0.4	90.7
368.	2	0.8	91.5
370.	1	0.4	91.9
372.	2	0.8	92.7
384.	1	0.4	93.1
407.	1	0.4	93.5
412.	1	0.4	94.0
417.	1	0.4	94.4
420.	1	0.4	94.8
434.	1	0.4	95.2
445.	1	0.4	95.6
448.	2	0.8	96.4
449.	1	0.4	96.8
460.	2	0.8	97.6
463.	3	1.2	98.8
479.	1	0.4	99.2
534.	1	0.4	99.6
537.	1	0.4	100.0

```
************
* NH3      *
************
                                              MAXIMUM        57.7999992            H
VARIABLE NUMBER . . . . . .        5          MINIMUM         1.7000000            HH
NUMBER OF DISTINCT VALUES .      143          RANGE          56.0999985            HH
NUMBER OF VALUES COUNTED. .      249          VARIANCE      136.9626617            HHH                     EACH 'H'
NUMBER OF VALUES NOT COUNTED       0          ST.DEV.        11.7031050            HHH                    REPRESENTS
                                              (Q3-Q1)/2       5.2000003            HHH                          6
                                                                                   HHH H                   COUNT(S)
LOCATION ESTIMATES                                 ST.ERROR                        HHHHHH
                MEAN            13.2208843      0.7416542                          HHHHHHH    H
                MEDIAN           8.5000000      0.4041454                          HHHHHHHHHHHHHHHHH  H HH
                MODE             8.0000000                                        L-----------------------U

                                                                                   EACH '-' ABOVE =       2.5000
                                                                                                L=        2.5000
                                                                                                U=       60.0000

                                                                                                      Q1=     5.5999999
                                                                                VALUE   VALUE/S.E.    Q3=    16.0000000
                                                                  SKEWNESS       1.79       11.54     S-=     1.5177794
                                                                  KURTOSIS       2.84        9.14     S+=    24.9239902

                                                                                   EACH '.' BELOW =       0.5000
    S      Q                         Q               S
   -M      1     MM        M         3               +                                                          M
   .I...........OF.........F..............................................................................A
    N           DD         A                                                                                     X
                EI         N
```

		PERCENTS				PERCENTS				PERCENTS				PERCENTS	
VALUE	COUNT	CELL	CUM	VALUE	COUNT	CELL	CUM	VALUE	COUNT	CELL	CUM	VALUE	COUNT	CELL	CUM
1.700	1	0.4	0.4	6.700	2	0.8	38.2	13.100	1	0.4	65.1	23.000	2	0.8	85.1
2.100	1	0.4	0.8	6.800	1	0.4	38.6	13.400	1	0.4	65.5	23.200	1	0.4	85.5
2.500	4	1.6	2.4	7.000	3	1.2	39.8	13.500	1	0.4	65.9	23.800	1	0.4	85.9
2.800	1	0.4	2.8	7.100	4	1.6	41.4	13.700	1	0.4	66.3	24.600	1	0.4	86.3
3.000	3	1.2	4.0	7.200	1	0.4	41.8	13.800	1	0.4	66.7	25.800	1	0.4	86.7
3.100	1	0.4	4.4	7.300	3	1.2	43.0	13.900	1	0.4	67.1	26.500	2	0.8	87.6
3.200	1	0.4	4.8	7.600	1	0.4	43.4	14.000	4	1.6	68.7	28.600	1	0.4	88.0
3.300	4	1.6	6.4	7.800	1	0.4	43.8	14.200	1	0.4	69.1	30.500	1	0.4	88.4
3.400	1	0.4	6.8	7.900	3	1.2	45.0	14.300	2	0.8	69.9	30.800	2	0.8	89.2
3.500	3	1.2	8.0	8.000	7	2.8	47.8	14.700	2	0.8	70.7	30.900	1	0.4	89.6
3.600	3	1.2	9.2	8.100	2	0.8	48.6	14.800	2	0.8	71.5	31.400	1	0.4	90.0
3.800	4	1.6	10.8	8.200	1	0.4	49.0	15.000	1	0.4	71.9	32.100	1	0.4	90.4
4.000	5	2.0	12.9	8.400	2	0.8	49.8	15.200	2	0.8	72.7	32.500	1	0.4	90.8
4.100	2	0.8	13.7	8.500	2	0.8	50.6	15.400	2	0.8	73.5	33.000	1	0.4	91.2
4.400	2	0.8	14.5	8.600	1	0.4	51.0	15.600	1	0.4	73.9	34.700	1	0.4	91.6
4.500	4	1.6	16.1	8.700	1	0.4	51.4	15.700	1	0.4	74.3	34.800	1	0.4	92.0
4.600	2	0.8	16.9	8.800	3	1.2	52.6	15.800	1	0.4	74.7	36.100	2	0.8	92.8
4.800	3	1.2	18.1	8.900	2	0.8	53.4	16.000	3	1.2	75.9	36.200	1	0.4	93.2
4.900	2	0.8	18.9	9.000	3	1.2	54.6	16.100	1	0.4	76.3	36.800	1	0.4	93.6
5.000	2	0.8	19.7	9.200	2	0.8	55.4	16.300	1	0.4	76.7	37.200	1	0.4	94.0
5.100	3	1.2	20.9	9.300	1	0.4	55.8	16.500	1	0.4	77.1	38.900	1	0.4	94.4
5.200	1	0.4	21.3	9.500	2	0.8	56.6	16.900	1	0.4	77.5	39.100	1	0.4	94.8
5.300	3	1.2	22.5	9.600	1	0.4	57.0	17.600	1	0.4	77.9	39.500	1	0.4	95.2
5.400	1	0.4	22.9	9.700	1	0.4	57.4	17.800	2	0.8	78.7	40.200	1	0.4	95.6
5.500	5	2.0	24.9	10.000	2	0.8	58.2	18.100	1	0.4	79.1	40.500	1	0.4	96.0
5.600	1	0.4	25.3	10.200	1	0.4	58.6	18.400	2	0.8	79.9	41.000	1	0.4	96.4
5.700	3	1.2	26.5	10.300	1	0.4	59.0	19.000	1	0.4	80.3	42.800	1	0.4	96.8
5.800	4	1.6	28.1	10.500	1	0.4	59.4	19.200	2	0.8	81.1	44.000	1	0.4	97.2
5.900	1	0.4	28.5	10.900	1	0.4	59.8	19.500	1	0.4	81.5	44.100	1	0.4	97.6
6.000	5	2.0	30.5	11.000	3	1.2	61.0	19.800	1	0.4	81.9	50.400	1	0.4	98.0
6.100	1	0.4	30.9	11.200	1	0.4	61.4	20.000	1	0.4	82.3	51.800	1	0.4	98.4
6.200	2	0.8	31.7	11.800	2	0.8	62.2	20.400	1	0.4	82.7	52.000	1	0.4	98.8
6.300	1	0.4	32.1	12.200	2	0.8	63.1	22.000	1	0.4	83.1	57.300	1	0.4	99.2
6.400	5	2.0	34.1	12.500	1	0.4	63.5	22.300	1	0.4	83.5	57.400	1	0.4	99.6
6.500	4	1.6	35.7	12.800	2	0.8	64.3	22.500	1	0.4	83.9	57.800	1	0.4	100.0
6.600	4	1.6	37.3	12.900	1	0.4	64.7	22.700	1	0.4	84.3				

```
**************
* KJELCOMP *
**************
                                                   MAXIMUM          0.4100000
VARIABLE NUMBER . . . . . .        2               MINIMUM          0.1400000
NUMBER OF DISTINCT VALUES .       20               RANGE            0.2700000
NUMBER OF VALUES COUNTED. .       39               VARIANCE         0.0052134
NUMBER OF VALUES NOT COUNTED     210               ST.DEV.          0.0722036
                                                   (Q3-Q1)/2        0.0600000

LOCATION ESTIMATES                                       ST.ERROR
                MEAN                 0.2384615          0.0115618
                MEDIAN               0.2300000          0.0144338
                MODE                 0.1700000
```

```
                                                          EACH 'H'
      H                                                  REPRESENTS
      H H                                                    1
    H H H HH                                             COUNT(S)
    H H H HH  H H
    H HHH HH  H H H
    HHHHH HHHHHHH H  HH
  L------------------------U

  EACH '-' ABOVE =        0.0150
                L=        0.1050
                U=        0.4500

                                                Q1-     0.1700000
                      VALUE   VALUE/S.E.        Q3=     0.2900000
      SKEWNESS         0.61        1.55         S-=     0.1662579
      KURTOSIS        -0.52       -0.67         S+=     0.3106651

  EACH '.' BELOW =        0.0025
```

```
           SQ                                         Q        S
 M         -M                  M  M                   3        +                                  M
 I..........O..................E..E...........................................................A
 N          D                  D  A                                                            X
            E                  I  N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.1400	2	5.1	5.1	0.1900	2	5.1	33.3	0.2500	4	10.3	66.7	0.3200	2	5.1	87.2
0.1500	2	5.1	10.3	0.2000	4	10.3	43.6	0.2700	1	2.6	69.2	0.3300	1	2.6	89.7
0.1600	1	2.6	12.8	0.2100	1	2.6	46.2	0.2800	1	2.6	71.8	0.3500	2	5.1	94.9
0.1700	5	12.8	25.6	0.2300	3	7.7	53.8	0.2900	3	7.7	79.5	0.4000	1	2.6	97.4
0.1800	1	2.6	28.2	0.2400	1	2.6	56.4	0.3100	1	2.6	82.1	0.4100	1	2.6	100.0

```
************
* SRS      *
************
                                                    MAXIMUM       3563.0000000
VARIABLE NUMBER . . . . . .          2              MINIMUM         81.0000000
NUMBER OF DISTINCT VALUES .        204              RANGE         3482.0000000
NUMBER OF VALUES COUNTED. .        248              VARIANCE    473752.0000000
NUMBER OF VALUES NOT COUNTED         1              ST.DEV.        688.2964478
                                                    (Q3-Q1)/2      389.5000000

LOCATION ESTIMATES                                      ST.ERROR
                MEAN             824.5846558        43.7068710
                MEDIAN           583.0000000        41.7542801
                MODE             135.0000000
```

```
 H
 HH
 HH                            EACH 'H'
 HHH                           REPRESENTS
HHHH                               5
HHHH                           COUNT(S)
HHHHHH
HHHHHHHH HH
HHHHHHHHHHHHHHH  H
L---------------------------U

EACH '-' ABOVE =     200.0000
             L=        0.0000
             U-     4600.0000

                                 Q1-  342.0000000
          VALUE   VALUE/S.E.     Q3= 1171.0000000
SKEWNESS   1.40        9.00      S--  136.2832060
KURTOSIS   1.34        4.32      S+= 1512.8811035

EACH '.' BELOW -      30.0000
```

```
  S    Q                     Q         S
M M    1      M     M        3         +                                                              M
I.O...........F.....F.....................................................................................A
N D           D     A                                                                                 X
  E           I     N
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
81.	1	0.4	0.4	358.	1	0.4	27.4	619.	1	0.4	53.6	1200.	2	0.8	79.0
108.	1	0.4	0.8	360.	1	0.4	27.8	622.	2	0.8	54.4	1211.	1	0.4	79.4
116.	2	0.8	1.6	363.	1	0.4	28.2	625.	1	0.4	54.8	1216.	1	0.4	79.8
124.	1	0.4	2.0	370.	1	0.4	28.6	635.	1	0.4	55.2	1267.	1	0.4	80.2
132.	1	0.4	2.4	374.	1	0.4	29.0	640.	1	0.4	55.6	1295.	1	0.4	80.6
135.	4	1.6	4.0	378.	1	0.4	29.4	645.	1	0.4	56.0	1316.	1	0.4	81.0
147.	1	0.4	4.4	379.	1	0.4	29.8	646.	1	0.4	56.5	1324.	1	0.4	91.5
149.	1	0.4	4.8	380.	2	0.8	30.6	648.	1	0.4	56.9	1358.	1	0.4	81.9
161.	2	0.8	5.6	384.	1	0.4	31.0	650.	1	0.4	57.3	1434.	1	0.4	82.3
162.	3	1.2	6.9	389.	2	0.8	31.9	656.	1	0.4	57.7	1451.	1	0.4	82.7
177.	1	0.4	7.3	410.	3	1.2	33.1	658.	1	0.4	58.1	1463.	1	0.4	83.1
185.	1	0.4	7.7	412.	1	0.4	33.5	669.	1	0.4	58.5	1470.	1	0.4	83.5
188.	1	0.4	8.1	413.	1	0.4	33.9	682.	3	1.2	59.7	1495.	1	0.4	83.9
189.	2	0.8	8.9	414.	1	0.4	34.3	684.	1	0.4	60.1	1540.	1	0.4	84.3
192.	2	0.8	9.7	415.	1	0.4	34.7	686.	1	0.4	60.5	1544.	1	0.4	84.7
200.	1	0.4	10.1	417.	1	0.4	35.1	693.	1	0.4	60.9	1627.	1	0.4	85.1
202.	1	0.4	10.5	420.	1	0.4	35.5	697.	1	0.4	61.3	1740.	1	0.4	85.5
210.	1	0.4	10.9	424.	3	1.2	36.7	710.	1	0.4	61.7	1747.	1	0.4	85.9
211.	1	0.4	11.3	455.	2	0.8	37.5	713.	1	0.4	62.1	1769.	1	0.4	86.3
213.	1	0.4	11.7	458.	1	0.4	37.9	714.	1	0.4	62.5	1800.	1	0.4	86.7
216.	2	0.8	12.5	460.	1	0.4	38.3	737.	1	0.4	62.9	1838.	1	0.4	87.1
217.	1	0.4	12.9	466.	1	0.4	38.7	744.	1	0.4	63.3	1853.	1	0.4	87.5
221.	1	0.4	13.3	470.	1	0.4	39.1	763.	1	0.4	63.7	1865.	2	0.8	88.3
226.	1	0.4	13.7	474.	2	0.8	39.9	775.	1	0.4	64.1	1870.	1	0.4	88.7
227.	1	0.4	14.1	476.	1	0.4	40.3	789.	3	1.2	65.3	1911.	1	0.4	89.1
232.	1	0.4	14.5	479.	3	1.2	41.5	800.	1	0.4	65.7	1916.	1	0.4	89.5
234.	1	0.4	14.9	480.	1	0.4	41.9	821.	1	0.4	66.1	1947.	1	0.4	89.9
241.	1	0.4	15.3	487.	1	0.4	42.3	848.	1	0.4	66.5	1974.	1	0.4	90.3
242.	1	0.4	15.7	492.	1	0.4	42.7	885.	1	0.4	66.9	1976.	1	0.4	90.7
247.	1	0.4	16.1	495.	1	0.4	43.1	894.	1	0.4	67.3	2000.	1	0.4	91.1
250.	1	0.4	16.5	500.	1	0.4	43.5	897.	1	0.4	67.7	2009.	1	0.4	91.5
253.	1	0.4	16.9	513.	1	0.4	44.0	900.	1	0.4	68.1	2010.	1	0.4	91.9
263.	2	0.8	17.7	525.	1	0.4	44.4	916.	1	0.4	68.5	2026.	1	0.4	92.3
265.	2	0.8	18.5	530.	1	0.4	44.8	921.	2	0.8	69.4	2097.	2	0.8	93.1
269.	1	0.4	19.0	533.	2	0.8	45.6	924.	1	0.4	69.8	2154.	1	0.4	93.5
274.	1	0.4	19.4	535.	1	0.4	46.0	933.	1	0.4	70.2	2162.	1	0.4	94.0
275.	1	0.4	19.8	538.	1	0.4	46.4	937.	1	0.4	70.6	2189.	1	0.4	94.4
292.	1	0.4	20.2	540.	1	0.4	46.8	947.	2	0.8	71.4	2200.	1	0.4	94.8
295.	1	0.4	20.6	554.	1	0.4	47.2	949.	1	0.4	71.8	2324.	1	0.4	95.2
296.	1	0.4	21.0	557.	1	0.4	47.6	979.	1	0.4	72.2	2357.	1	0.4	95.6
297.	1	0.4	21.4	559.	1	0.4	48.0	995.	1	0.4	72.6	2400.	1	0.4	96.0
299.	1	0.4	21.8	562.	1	0.4	48.4	1031.	1	0.4	73.0	2432.	1	0.4	96.4
300.	3	1.2	23.0	564.	1	0.4	48.8	1044.	1	0.4	73.4	2454.	1	0.4	96.8
321.	1	0.4	23.4	571.	1	0.4	49.2	1053.	3	1.2	74.6	2609.	1	0.4	97.2
325.	1	0.4	23.8	579.	1	0.4	49.6	1110.	1	0.4	75.0	2640.	1	0.4	97.6
328.	1	0.4	24.2	583.	2	0.8	50.4	1132.	1	0.4	75.4	2648.	1	0.4	98.0
333.	1	0.4	24.6	589.	2	0.8	51.2	1156.	1	0.4	75.8	2732.	1	0.4	98.4
342.	3	1.2	25.8	605.	1	0.4	51.6	1174.	2	0.8	76.6	2750.	1	0.4	98.8
345.	1	0.4	26.2	606.	1	0.4	52.0	1189.	1	0.4	77.0	2874.	1	0.4	99.2
348.	1	0.4	26.6	609.	1	0.4	52.4	1195.	2	0.8	77.8	2976.	1	0.4	99.6
350.	1	0.4	27.0	613.	2	0.8	53.2	1196.	1	0.4	78.2	3563.	1	0.4	100.0

```
************
* SECCHI   *
************
                                          MAXIMUM         10.1999998
VARIABLE NUMBER . . . . . .       9       MINIMUM          2.7000000
NUMBER OF DISTINCT VALUES .      28       RANGE            7.5000000
NUMBER OF VALUES COUNTED. .      41       VARIANCE         2.9357195
NUMBER OF VALUES NOT COUNTED    208       ST.DEV.          1.7133942
                                          (Q3-Q1)/2        1.3499999

LOCATION ESTIMATES                            ST.ERROR
                MEAN            5.2682929    0.2675872
                MEDIAN          5.0000000    0.3175428
                MODE            4.9000001
```

```
             H
             H                     EACH 'H'
             H                    REPRESENTS
         H   H   H                     1
         HH  H H H                  COUNT(S)
         HH  HHH HH
         HHHHHHHHHHH
         HHHHHHHHHHH    H
L-----------------------U

EACH '-' ABOVE =        0.5000
             L=         0.5000
             U=        12.0000

                                          Q1=     4.0000000
               VALUE   VALUE/S.F.         Q3=     6.6999998
SKEWNESS        0.42         1.10         S-=     3.5549987
KURTOSIS       -0.06        -0.08         S+=     6.9816871

EACH '.' BELOW =        0.0750
```

```
                S   Q                 Q  S
  M             -   1         MM  M         3  +                                M
  I............................ME...E.............................................A
  N                            DD  A                                              X
                               EI  N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
2.700	2	4.9	4.9	4.200	1	2.4	29.3	5.200	1	2.4	56.1	6.700	2	4.9	78.0
2.800	1	2.4	7.3	4.400	1	2.4	31.7	5.300	1	2.4	58.5	6.800	1	2.4	80.5
2.900	1	2.4	9.8	4.700	1	2.4	34.1	5.800	2	4.9	63.4	7.000	2	4.9	85.4
3.000	1	2.4	12.2	4.800	1	2.4	36.6	5.900	1	2.4	65.9	7.200	1	2.4	87.8
3.100	2	4.9	17.1	4.900	4	9.8	46.3	6.000	1	2.4	68.3	7.300	2	4.9	92.7
3.400	2	4.9	22.0	5.000	2	4.9	51.2	6.100	1	2.4	70.7	7.800	2	4.9	97.6
4.000	2	4.9	26.8	5.100	1	2.4	53.7	6.200	1	2.4	73.2	10.200	1	2.4	100.0

HYDRA86 CENTRAL BASIN ALL DATA

```
************
* TURBID   *
************
                                          MAXIMUM          3.0999999
VARIABLE NUMBER . . . . . . .    10       MINIMUM          0.3000000
NUMBER OF DISTINCT VALUES .      26       RANGE            2.8000000
NUMBER OF VALUES COUNTED. .     248       VARIANCE         0.4356144
NUMBER OF VALUES NOT COUNTED      1       ST.DEV.          0.6600109
                                          (Q3-Q1)/2        0.4500000

LOCATION ESTIMATES                            ST.ERROR
                MEAN            1.1096774    0.0419107
                MEDIAN          0.9000000    0.0866026
                MODE           NOT UNIQUE
```

```
      H
      H
      H
      H                            EACH 'H'
      HH    H                     REPRESENTS
      HH    H                          5
     HHHH H H                       COUNT(S)
    HHHHH H H H   H
    HHHHHHHHHHHHH H
    HHHHHHHHHHHHHHH  HHH
L-----------------------U

EACH '-' ABOVE =        0.1500
             L=         0.0000
             U=         3.4500

                                          Q1-     0.6000000
               VALUE   VALUE/S.F.         Q3=     1.5000000
SKEWNESS        0.87         5.58         S-=     0.4496665
KURTOSIS        0.00         0.01         S+=     1.7696884

EACH '.' BELOW =        0.0250
```

```
          S     Q                      Q            S
  M       -     1          M       M           3            +                          M
  I........................E.......E.........................................................A
  N                        D       A                                                     X
                           I       N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.3000	11	4.4	4.4	1.0000	8	3.2	54.8	1.7000	8	3.2	82.7	2.4000	5	2.0	97.6
0.4000	20	8.1	12.5	1.1000	8	3.2	58.1	1.8000	5	2.0	84.7	2.8000	1	0.4	98.0
0.5000	28	11.3	23.8	1.2000	12	4.8	62.9	1.9000	7	2.8	87.5	2.9000	1	0.4	98.4
0.6000	22	8.9	32.7	1.3000	9	3.6	66.5	2.0000	3	1.2	88.7	3.0000	2	0.8	99.2
0.7000	28	11.3	44.0	1.4000	8	3.2	69.8	2.1000	3	1.2	89.9	3.1000	2	0.8	100.0
0.8000	5	2.0	46.0	1.5000	18	7.3	77.0	2.2000	5	2.0	91.9				
0.9000	14	5.6	51.6	1.6000	6	2.4	79.4	2.3000	9	3.6	95.6				

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************
* CHLACORR *
************
                                                  MAXIMUM          11.3999996
VARIABLE NUMBER . . . . . .        2              MINIMUM           0.0300000
NUMBER OF DISTINCT VALUES .      186              RANGE            11.3699999
NUMBER OF VALUES COUNTED. .      249              VARIANCE          5.7361116
NUMBER OF VALUES NOT COUNTED       0              ST.DEV.           2.3950181
                                                  (Q3-Q1)/2         1.0100000

LOCATION ESTIMATES                                    ST.ERROR
                  MEAN               2.6096389    0.1517781
                  MEDIAN             1.7900000    0.0952629
                  MODE               1.1200000
```

```
  H
 HH
 HHH
 HHH                          EACH 'H'
 HHHH                         REPRESENTS
 HHHH                              5
 HHHHHH                       COUNT(S)
HHHHHHH
HHHHHHHH H H        H
HHHHHHHHHHHHHHH H HHHHH
L-----------------------U

EACH '-' ABOVE =        0.5000
              L=        0.0000
              U=       11.5000

                                           Q1=    1.1200000
                    VALUE   VALUE/S.E.     Q3=    3.1400001
SKEWNESS             2.04        13.12     S-=    0.2146208
KURTOSIS             4.00        12.88     S+=    5.0046573

                    EACH '.' BELOW =        0.1000
```

```
S         Q                 Q              S
M-        M    M      M     3              +                                                         M
I.........Q....E......E..........................................................................A
N         D    D      A                                                                          X
          E    I      N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.03000	1	0.4	0.4	1.15000	1	0.4	28.5	2.03000	2	0.8	56.6	3.60000	1	0.4	81.1
0.15000	1	0.4	0.8	1.17000	1	0.4	28.9	2.04000	2	0.8	57.4	3.69000	1	0.4	81.5
0.16000	1	0.4	1.2	1.18000	1	0.4	29.3	2.05000	1	0.4	57.8	3.72000	2	0.8	82.3
0.27000	1	0.4	1.6	1.21000	2	0.8	30.1	2.06000	1	0.4	58.2	3.85000	1	0.4	82.7
0.29000	1	0.4	2.0	1.23000	1	0.4	30.5	2.07000	2	0.8	59.0	3.86000	1	0.4	83.1
0.36000	1	0.4	2.4	1.27000	3	1.2	31.7	2.11000	2	0.8	59.8	4.03000	1	0.4	83.5
0.37000	1	0.4	2.8	1.29000	1	0.4	32.1	2.12000	3	1.2	61.0	4.10000	1	0.4	83.9
0.44000	1	0.4	3.2	1.30000	3	1.2	33.3	2.16000	1	0.4	61.4	4.42000	1	0.4	84.3
0.45000	1	0.4	3.6	1.33000	2	0.8	34.1	2.18000	1	0.4	61.8	4.59000	1	0.4	84.7
0.48000	1	0.4	4.0	1.37000	2	0.8	34.9	2.20000	1	0.4	62.2	4.69000	1	0.4	85.1
0.49000	1	0.4	4.4	1.38000	1	0.4	35.3	2.21000	1	0.4	62.7	4.70000	1	0.4	85.5
0.51000	1	0.4	4.8	1.39000	1	0.4	35.7	2.25000	1	0.4	63.1	4.73000	1	0.4	85.9
0.54000	1	0.4	5.2	1.41000	2	0.8	36.5	2.31000	1	0.4	63.5	4.78000	1	0.4	86.3
0.56000	1	0.4	5.6	1.42000	1	0.4	36.9	2.34000	1	0.4	63.9	4.82000	1	0.4	86.7
0.62000	2	0.8	6.4	1.44000	1	0.4	37.3	2.35000	1	0.4	64.3	4.83000	1	0.4	87.1
0.63000	3	1.2	7.6	1.45000	2	0.8	38.2	2.39000	2	0.8	65.1	5.06000	1	0.4	87.6
0.64000	1	0.4	8.0	1.46000	1	0.4	38.6	2.40000	2	0.8	65.9	5.18000	1	0.4	88.0
0.66000	1	0.4	8.4	1.47000	1	0.4	39.0	2.44000	1	0.4	66.3	5.36000	1	0.4	88.4
0.67000	2	0.8	9.2	1.48000	1	0.4	39.4	2.56000	1	0.4	66.7	5.54000	1	0.4	88.8
0.68000	1	0.4	9.6	1.49000	2	0.8	40.2	2.58000	1	0.4	67.1	5.61000	1	0.4	89.2
0.69000	1	0.4	10.0	1.51000	1	0.4	40.6	2.62000	1	0.4	67.5	5.62000	1	0.4	89.6
0.71000	1	0.4	10.4	1.52000	1	0.4	41.0	2.63000	1	0.4	67.9	5.77000	1	0.4	90.0
0.73000	1	0.4	10.8	1.53000	1	0.4	41.4	2.64000	1	0.4	68.3	5.81000	1	0.4	90.4
0.74000	1	0.4	11.2	1.55000	1	0.4	41.8	2.69000	2	0.8	69.1	5.86000	1	0.4	90.8
0.79000	1	0.4	11.6	1.59000	1	0.4	42.2	2.72000	2	0.8	69.9	6.07000	1	0.4	91.2
0.80000	1	0.4	12.0	1.61000	2	0.8	43.0	2.73000	1	0.4	70.3	6.29000	1	0.4	91.6
0.81000	1	0.4	12.4	1.62000	1	0.4	43.4	2.75000	1	0.4	70.7	6.32000	2	0.8	92.4
0.82000	1	0.4	12.9	1.64000	1	0.4	43.8	2.82000	1	0.4	71.1	6.37000	1	0.4	92.8
0.84000	1	0.4	13.3	1.67000	1	0.4	44.2	2.83000	3	1.2	72.3	6.59000	1	0.4	93.2
0.85000	1	0.4	13.7	1.68000	1	0.4	44.6	2.95000	1	0.4	72.7	6.80000	1	0.4	93.6
0.88000	2	0.8	14.5	1.70000	3	1.2	45.8	2.97000	1	0.4	73.1	6.88000	1	0.4	94.0
0.89000	2	0.8	15.3	1.71000	3	1.2	47.0	2.98000	1	0.4	73.5	7.44000	2	0.8	94.8
0.90000	3	1.2	16.5	1.72000	1	0.4	47.4	3.01000	1	0.4	73.9	8.42000	1	0.4	95.2
0.92000	2	0.8	17.3	1.73000	2	0.8	48.2	3.06000	1	0.4	74.3	9.40000	1	0.4	95.6
0.93000	1	0.4	17.7	1.76000	2	0.8	49.0	3.13000	1	0.4	74.7	9.52000	1	0.4	96.0
0.94000	1	0.4	18.1	1.77000	1	0.4	49.4	3.14000	1	0.4	75.1	9.68000	1	0.4	96.4
0.95000	3	1.2	19.3	1.78000	1	0.4	49.8	3.17000	1	0.4	75.5	10.27000	1	0.4	96.8
0.97000	2	0.8	20.1	1.79000	2	0.8	50.6	3.21000	1	0.4	75.9	10.33000	1	0.4	97.2
0.99000	2	0.8	20.9	1.82000	1	0.4	51.0	3.22000	2	0.8	76.7	10.51000	1	0.4	97.6
1.03000	3	1.2	22.1	1.88000	2	0.8	51.8	3.24000	1	0.4	77.1	11.07000	1	0.4	98.0
1.04000	1	0.4	22.5	1.89000	1	0.4	52.2	3.27000	1	0.4	77.5	11.18000	1	0.4	98.4
1.05000	1	0.4	22.9	1.90000	1	0.4	52.6	3.28000	2	0.8	78.3	11.22000	1	0.4	98.8
1.08000	2	0.8	23.7	1.92000	3	1.2	53.8	3.30000	1	0.4	78.7	11.23000	1	0.4	99.2
1.09000	1	0.4	24.1	1.94000	1	0.4	54.2	3.37000	1	0.4	79.1	11.39000	1	0.4	99.6
1.10000	2	0.8	24.9	1.96000	1	0.4	54.6	3.38000	2	0.8	79.9	11.40000	1	0.4	100.0
1.12000	5	2.0	26.9	2.00000	2	0.8	55.4	3.44000	1	0.4	80.3				
1.13000	3	1.2	28.1	2.01000	1	0.4	55.8	3.50000	1	0.4	80.7				

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* PHEO *
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VARIABLE NUMBER	3	MAXIMUM	7.6399999
NUMBER OF DISTINCT VALUES .	171	MINIMUM	0.0000000
NUMBER OF VALUES COUNTED. .	249	RANGE	7.6399999
NUMBER OF VALUES NOT COUNTED	0	VARIANCE	1.9737499
		ST.DEV.	1.4049021
		(Q3-Q1)/2	0.6899999

LOCATION ESTIMATES

		ST.ERROR
MEAN	1.4677110	0.0890321
MEDIAN	0.9700000	0.0548483
MODE	NOT UNIQUE	

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H
H
H
HH                    EACH 'H'
HHH                   REPRESENTS
HHH                       8
HHH                   COUNT(S)
HHHH
HHHHHH  H
HHHHHHHHHHH H HH
|---------------------U
```

EACH '-' ABOVE = 0.5000
L= 0.0000
U= 11.5000

	VALUE	VALUE/S.E.
SKEWNESS	1.80	11.60
KURTOSIS	3.24	10.45

Q1= 0.5500000
Q3= 1.9299999
S-= 0.0628089
S+= 2.8726132

EACH '.' BELOW = 0.0750

```
S     Q           Q     S
M     1     M     M     3     +                                                 M
|.....E.....E.....................................................................A
N           D     A                                                           X
            I     N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.00000	1	0.4	0.4	0.60000	4	1.6	30.1	1.21000	2	0.8	60.2	2.43000	1	0.4	82.3
0.03000	2	0.8	1.2	0.61000	2	0.8	30.9	1.22000	2	0.8	61.0	2.45000	1	0.4	82.7
0.05000	3	1.2	2.4	0.63000	1	0.4	31.3	1.23000	1	0.4	61.4	2.49000	1	0.4	83.1
0.10000	2	0.8	3.2	0.64000	2	0.8	32.1	1.25000	1	0.4	61.8	2.52000	1	0.4	83.5
0.11000	2	0.8	4.0	0.65000	1	0.4	32.5	1.26000	2	0.8	62.7	2.58000	1	0.4	83.9
0.13000	1	0.4	4.4	0.67000	1	0.4	32.9	1.28000	1	0.4	63.1	2.59000	1	0.4	84.3
0.14000	1	0.4	4.8	0.68000	3	1.2	34.1	1.29000	2	0.8	63.9	2.62000	1	0.4	84.7
0.15000	1	0.4	5.2	0.69000	1	0.4	34.5	1.31000	1	0.4	64.3	2.63000	1	0.4	85.1
0.16000	1	0.4	5.6	0.70000	2	0.8	35.3	1.32000	2	0.8	65.1	2.88000	1	0.4	85.5
0.18000	1	0.4	6.0	0.71000	3	1.2	36.5	1.33000	1	0.4	65.5	2.92000	1	0.4	85.9
0.19000	1	0.4	6.4	0.72000	1	0.4	36.9	1.34000	1	0.4	65.9	2.94000	1	0.4	86.3
0.20000	1	0.4	6.8	0.75000	2	0.8	37.8	1.39000	2	0.8	66.7	2.96000	1	0.4	86.7
0.21000	1	0.4	7.2	0.79000	2	0.8	38.6	1.41000	2	0.8	67.5	2.97000	1	0.4	87.1
0.24000	1	0.4	7.6	0.80000	3	1.2	39.8	1.42000	1	0.4	67.9	3.02000	1	0.4	87.6
0.25000	2	0.8	8.4	0.81000	2	0.8	40.6	1.47000	2	0.8	68.7	3.09000	1	0.4	88.0
0.26000	1	0.4	8.8	0.83000	2	0.8	41.4	1.51000	1	0.4	69.1	3.11000	1	0.4	88.4
0.27000	2	0.8	9.6	0.84000	2	0.8	42.2	1.55000	1	0.4	69.5	3.14000	1	0.4	88.8
0.28000	3	1.2	10.8	0.85000	1	0.4	42.6	1.57000	1	0.4	69.9	3.40000	1	0.4	89.2
0.29000	1	0.4	11.2	0.86000	2	0.8	43.4	1.61000	2	0.8	70.7	3.46000	2	0.8	90.0
0.30000	1	0.4	11.6	0.87000	1	0.4	43.8	1.62000	2	0.8	71.5	3.82000	1	0.4	90.4
0.31000	1	0.4	12.0	0.90000	3	1.2	45.0	1.70000	1	0.4	71.9	3.99000	1	0.4	90.8
0.33000	1	0.4	12.4	0.91000	2	0.8	45.8	1.71000	1	0.4	72.3	4.03000	1	0.4	91.2
0.35000	1	0.4	12.9	0.92000	2	0.8	46.6	1.75000	1	0.4	72.7	4.04000	1	0.4	91.6
0.36000	4	1.6	14.5	0.93000	2	0.8	47.4	1.76000	1	0.4	73.1	4.08000	1	0.4	92.0
0.37000	3	1.2	15.7	0.94000	3	1.2	48.6	1.79000	1	0.4	73.5	4.09000	1	0.4	92.4
0.38000	2	0.8	16.5	0.95000	2	0.8	49.4	1.80000	1	0.4	73.9	4.16000	1	0.4	92.8
0.39000	1	0.4	16.9	0.97000	3	1.2	50.6	1.84000	1	0.4	74.3	4.17000	3	1.2	94.0
0.40000	2	0.8	17.7	0.98000	1	0.4	51.0	1.89000	1	0.4	74.7	4.34000	1	0.4	94.4
0.41000	3	1.2	18.9	1.01000	2	0.8	51.8	1.93000	2	0.8	75.5	4.36000	1	0.4	94.8
0.43000	1	0.4	19.3	1.03000	2	0.8	52.6	1.96000	2	0.8	76.3	4.39000	1	0.4	95.2
0.45000	1	0.4	19.7	1.05000	2	0.8	53.4	1.98000	1	0.4	76.7	4.43000	1	0.4	95.6
0.46000	1	0.4	20.1	1.06000	2	0.8	54.2	2.07000	1	0.4	77.1	4.48000	1	0.4	96.0
0.48000	1	0.4	20.5	1.07000	2	0.8	55.0	2.08000	1	0.4	77.5	4.53000	1	0.4	96.4
0.49000	2	0.8	21.3	1.08000	1	0.4	55.4	2.10000	1	0.4	77.9	4.78000	1	0.4	96.8
0.51000	1	0.4	21.7	1.09000	1	0.4	55.8	2.11000	1	0.4	78.3	5.21000	1	0.4	97.2
0.52000	1	0.4	22.1	1.12000	1	0.4	56.2	2.15000	1	0.4	78.7	5.43000	1	0.4	97.6
0.53000	3	1.2	23.3	1.13000	1	0.4	56.6	2.16000	2	0.8	79.5	6.08000	1	0.4	98.0
0.54000	2	0.8	24.1	1.14000	1	0.4	57.0	2.18000	1	0.4	79.9	6.10000	1	0.4	98.4
0.55000	3	1.2	25.3	1.15000	1	0.4	57.4	2.21000	1	0.4	80.3	6.13000	1	0.4	98.8
0.56000	4	1.6	26.9	1.16000	1	0.4	57.8	2.26000	1	0.4	80.7	6.14000	1	0.4	99.2
0.57000	1	0.4	27.3	1.17000	1	0.4	58.2	2.32000	1	0.4	81.1	7.06000	1	0.4	99.6
0.58000	1	0.4	27.7	1.19000	1	0.4	58.6	2.37000	1	0.4	81.5	7.64000	1	0.4	100.0
0.59000	2	0.8	28.5	1.20000	2	0.8	59.4	2.41000	1	0.4	81.9				

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* TSS *
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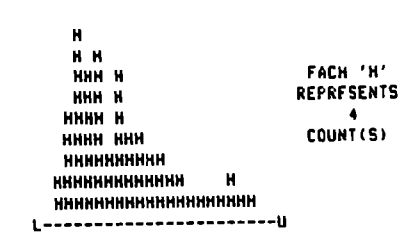
VARIABLE NUMBER	11	MAXIMUM	4.0400000
NUMBER OF DISTINCT VALUES .	154	MINIMUM	0.2900000
NUMBER OF VALUES COUNTED. .	240	RANGE	3.7500000
NUMBER OF VALUES NOT COUNTED	9	VARIANCE	0.7320945
		ST.DEV.	0.8556252
		(Q3-Q1)/2	0.5750000



EACH '-' ABOVE = 0.2000
L= 0.0000
U= 4.6000

Q1= 0.8150000
Q3= 1.9650000

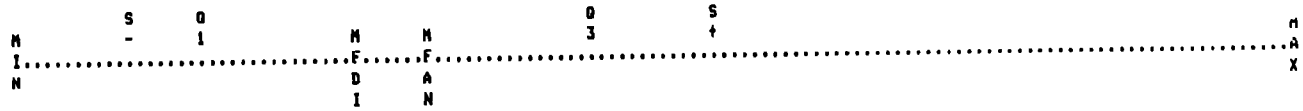
LOCATION ESTIMATES

		ST.ERROR
MEAN	1.4886670	0.0552304
MEDIAN	1.2900000	0.1096966
MODE	NOT UNIQUE	

	VALUE	VALUE/S.E.
SKEWNESS	0.98	6.18
KURTOSIS	0.31	0.99

S-= 0.6330418
S+= 2.3442922

EACH '.' BELOW = 0.0300



VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.2900	1	0.4	0.4	0.9000	1	0.4	31.2	1.5300	1	0.4	59.6	2.2600	1	0.4	82.5
0.3200	1	0.4	0.8	0.9200	1	0.4	31.7	1.5400	1	0.4	60.0	2.2700	2	0.8	83.3
0.3600	1	0.4	1.2	0.9400	1	0.4	32.1	1.5500	2	0.8	60.8	2.2800	1	0.4	83.8
0.3800	3	1.2	2.5	0.9500	2	0.8	32.9	1.5600	2	0.8	61.7	2.3000	1	0.4	84.2
0.4100	1	0.4	2.9	0.9600	1	0.4	33.3	1.5800	3	1.2	62.9	2.3500	2	0.8	85.0
0.4200	2	0.8	3.7	0.9700	4	1.7	35.0	1.5900	1	0.4	63.3	2.3700	1	0.4	85.4
0.4600	1	0.4	4.2	0.9800	1	0.4	35.4	1.6000	1	0.4	63.7	2.4100	1	0.4	85.8
0.4700	1	0.4	4.6	1.0000	1	0.4	35.8	1.6100	1	0.4	64.2	2.4800	1	0.4	86.3
0.5000	1	0.4	5.0	1.0100	5	2.1	37.9	1.6200	1	0.4	64.6	2.4900	2	0.8	87.1
0.5100	2	0.8	5.8	1.0200	3	1.2	39.2	1.6300	2	0.8	65.4	2.5600	2	0.8	87.9
0.5200	1	0.4	6.2	1.0300	1	0.4	39.6	1.6400	2	0.8	66.3	2.5700	1	0.4	88.3
0.5500	1	0.4	6.7	1.0400	1	0.4	40.0	1.6500	1	0.4	66.7	2.5800	1	0.4	88.8
0.5600	3	1.2	7.9	1.0600	1	0.4	40.4	1.6600	1	0.4	67.1	2.6400	1	0.4	89.2
0.5700	2	0.8	8.7	1.0700	3	1.2	41.7	1.6900	2	0.8	67.9	2.6700	1	0.4	89.6
0.5800	2	0.8	9.6	1.0800	1	0.4	42.1	1.7400	2	0.8	68.7	2.6900	1	0.4	90.0
0.5900	1	0.4	10.0	1.1000	4	1.7	43.7	1.7800	1	0.4	69.2	2.7500	1	0.4	90.4
0.6100	1	0.4	10.4	1.1100	2	0.8	44.6	1.7900	1	0.4	69.6	2.7600	1	0.4	90.8
0.6200	2	0.8	11.3	1.1200	1	0.4	45.0	1.8100	1	0.4	70.0	2.7900	1	0.4	91.3
0.6300	3	1.2	12.5	1.1300	3	1.2	46.3	1.8400	1	0.4	70.4	2.9000	1	0.4	91.7
0.6500	4	1.7	14.2	1.1500	1	0.4	46.7	1.8500	3	1.2	71.7	2.9100	1	0.4	92.1
0.6800	2	0.8	15.0	1.1600	1	0.4	47.1	1.8600	2	0.8	72.5	2.9200	1	0.4	92.5
0.6900	4	1.7	16.7	1.1700	1	0.4	47.5	1.9000	2	0.8	73.3	2.9400	1	0.4	92.9
0.7000	2	0.8	17.5	1.1900	2	0.8	48.3	1.9100	2	0.8	74.2	3.1000	1	0.4	93.3
0.7100	1	0.4	17.9	1.2000	1	0.4	48.8	1.9300	1	0.4	74.6	3.1600	1	0.4	93.7
0.7200	1	0.4	18.3	1.2200	1	0.4	49.2	1.9600	1	0.4	75.0	3.2100	1	0.4	94.2
0.7300	3	1.2	19.6	1.2800	1	0.4	49.6	1.9700	1	0.4	75.4	3.3600	1	0.4	94.6
0.7400	1	0.4	20.0	1.2900	3	1.2	50.8	1.9900	1	0.4	75.8	3.4200	1	0.4	95.0
0.7500	2	0.8	20.8	1.3300	3	1.2	52.1	2.0100	2	0.8	76.7	3.4500	1	0.4	95.4
0.7600	1	0.4	21.3	1.3600	1	0.4	52.5	2.0200	1	0.4	77.1	3.5000	1	0.4	95.8
0.7800	1	0.4	21.7	1.3800	1	0.4	52.9	2.0600	1	0.4	77.5	3.5100	1	0.4	96.3
0.7900	3	1.2	22.9	1.4100	1	0.4	53.3	2.0700	1	0.4	77.9	3.6100	2	0.8	97.1
0.8000	3	1.2	24.2	1.4200	2	0.8	54.2	2.0800	2	0.8	78.8	3.6200	1	0.4	97.5
0.8100	2	0.8	25.0	1.4400	1	0.4	54.6	2.0900	1	0.4	79.2	3.6400	1	0.4	97.9
0.8200	4	1.7	26.7	1.4500	1	0.4	55.0	2.1700	1	0.4	79.6	3.7300	1	0.4	98.3
0.8300	1	0.4	27.1	1.4600	1	0.4	55.4	2.1900	2	0.8	80.4	3.7900	2	0.8	99.2
0.8400	2	0.8	27.9	1.4900	5	2.1	57.5	2.2100	1	0.4	80.8	3.8300	1	0.4	99.6
0.8500	3	1.2	29.2	1.5000	1	0.4	57.9	2.2200	1	0.4	81.2	4.0400	1	0.4	100.0
0.8700	3	1.2	30.4	1.5100	1	0.4	58.3	2.2400	1	0.4	81.7				
0.8900	1	0.4	30.8	1.5200	2	0.8	59.2	2.2500	1	0.4	82.1				

```
************
* RS       *
************
```

VARIABLE NUMBER	12	MAXIMUM	3.0300000
NUMBER OF DISTINCT VALUES .	132	MINIMUM	0.0000000
NUMBER OF VALUES COUNTED. .	240	RANGE	3.0300000
NUMBER OF VALUES NOT COUNTED	9	VARIANCE	0.4174765
		ST.DEV.	0.6461242
		(Q3-Q1)/2	0.4150000

```
H
HH
HH
HH                          EACH 'H'
HH   H                      REPRESENTS
HH   H                          5
HHH HHH                      COUNT(S)
HHHHHHH H H
HHHHHHHHH H
HHHHHHHHHHHHHHHHHH  H
L----------------------U
```

EACH '-' ABOVE = 0.1500
L= 0.0000
U= 3.4500

LOCATION ESTIMATES

		ST.ERROR
MEAN	0.7287083	0.0417071
MEDIAN	0.5900000	0.0779423
MODE	NOT UNIQUE	

	VALUE	VALUE/S.E.
SKEWNESS	1.08	6.83
KURTOSIS	0.59	1.88

Q1= 0.1950000
Q3= 1.0250000
S-= 0.0825841
S+= 1.3748326

EACH '.' BELOW = 0.0250

```
   S   Q                                          Q            S
M  -   1                   M   M                  3            +                                          M
I......................M....E................................................................................A
N                          D   A                                                                          X
                           I   N
```

		PERCENTS				PERCENTS				PERCENTS				PERCENTS	
VALUE	COUNT	CELL	CUM	VALUE	COUNT	CELL	CUM	VALUE	COUNT	CELL	CUM	VALUE	COUNT	CELL	CUM
0.000000	1	0.4	0.4	0.350000	2	0.8	40.4	0.810000	2	0.8	62.9	1.350000	2	0.8	84.2
0.010000	1	0.4	0.8	0.360000	3	1.2	41.7	0.820000	1	0.4	63.3	1.390000	1	0.4	84.6
0.020000	2	0.8	1.7	0.380000	2	0.8	42.5	0.830000	2	0.8	64.2	1.440000	1	0.4	85.0
0.030000	3	1.2	2.9	0.390000	1	0.4	42.9	0.850000	2	0.8	65.0	1.470000	1	0.4	85.4
0.040000	1	0.4	3.3	0.400000	1	0.4	43.3	0.860000	2	0.8	65.8	1.520000	3	1.2	86.7
0.050000	6	2.5	5.8	0.420000	1	0.4	43.7	0.870000	1	0.4	66.3	1.530000	3	1.2	87.9
0.060000	3	1.2	7.1	0.430000	1	0.4	44.2	0.880000	1	0.4	66.7	1.590000	1	0.4	88.3
0.070000	2	0.8	7.9	0.450000	1	0.4	44.6	0.890000	3	1.2	67.9	1.600000	1	0.4	88.8
0.080000	3	1.2	9.2	0.460000	2	0.8	45.4	0.900000	2	0.8	68.7	1.630000	3	1.2	90.0
0.090000	3	1.2	10.4	0.470000	2	0.8	46.3	0.910000	1	0.4	69.2	1.640000	1	0.4	90.4
0.100000	2	0.8	11.3	0.480000	2	0.8	47.1	0.930000	1	0.4	69.6	1.660000	1	0.4	90.8
0.110000	4	1.7	12.9	0.500000	1	0.4	47.5	0.940000	1	0.4	70.0	1.690000	1	0.4	91.3
0.120000	8	3.3	16.3	0.530000	1	0.4	47.9	0.950000	2	0.8	70.8	1.720000	1	0.4	91.7
0.130000	4	1.7	17.9	0.540000	2	0.8	48.8	0.960000	1	0.4	71.3	1.750000	1	0.4	92.1
0.140000	3	1.2	19.2	0.570000	2	0.8	49.6	0.970000	2	0.8	72.1	1.790000	1	0.4	92.5
0.150000	2	0.8	20.0	0.590000	2	0.8	50.4	1.000000	1	0.4	72.5	1.810000	1	0.4	92.9
0.160000	4	1.7	21.7	0.600000	1	0.4	50.8	1.010000	3	1.2	73.8	1.840000	1	0.4	93.3
0.170000	4	1.7	23.3	0.610000	1	0.4	51.2	1.020000	3	1.2	75.0	1.880000	1	0.4	93.7
0.180000	2	0.8	24.2	0.630000	1	0.4	51.7	1.030000	1	0.4	75.4	1.920000	1	0.4	94.2
0.190000	2	0.8	25.0	0.660000	2	0.8	52.5	1.060000	1	0.4	75.8	2.030000	1	0.4	94.6
0.200000	8	3.3	28.3	0.670000	1	0.4	52.9	1.110000	1	0.4	76.3	2.060000	1	0.4	95.0
0.210000	4	1.7	30.0	0.680000	1	0.4	53.3	1.120000	1	0.4	76.7	2.120000	1	0.4	95.4
0.220000	4	1.7	31.7	0.690000	4	1.7	55.0	1.130000	2	0.8	77.5	2.170000	1	0.4	95.8
0.230000	1	0.4	32.1	0.700000	1	0.4	55.4	1.140000	1	0.4	77.9	2.320000	1	0.4	96.3
0.250000	2	0.8	32.9	0.720000	2	0.8	56.2	1.170000	2	0.8	78.8	2.340000	1	0.4	96.7
0.260000	4	1.7	34.6	0.730000	1	0.4	56.7	1.210000	1	0.4	79.2	2.360000	1	0.4	97.1
0.270000	2	0.8	35.4	0.740000	1	0.4	57.1	1.240000	1	0.4	79.6	2.390000	1	0.4	97.5
0.280000	2	0.8	36.3	0.750000	2	0.8	57.9	1.260000	1	0.4	80.0	2.410000	1	0.4	97.9
0.290000	1	0.4	36.7	0.760000	2	0.8	58.7	1.290000	1	0.4	80.4	2.460000	1	0.4	98.3
0.300000	1	0.4	37.1	0.770000	3	1.2	60.0	1.310000	2	0.8	81.2	2.490000	1	0.4	98.7
0.310000	3	1.2	38.3	0.780000	2	0.8	60.8	1.320000	1	0.4	81.7	2.500000	1	0.4	99.2
0.330000	1	0.4	38.8	0.790000	2	0.8	61.7	1.330000	1	0.4	82.1	2.560000	1	0.4	99.6
0.340000	2	0.8	39.6	0.800000	1	0.4	62.1	1.340000	3	1.2	83.3	3.030000	1	0.4	100.0

HYDRA86 CENTRAL BASIN ALL DATA

```
**********
* VS     *
**********
```

		MAXIMUM	2.2600000
VARIABLE NUMBER	13	MINIMUM	0.1900000
NUMBER OF DISTINCT VALUES .	103	RANGE	2.0699999
NUMBER OF VALUES COUNTED. .	240	VARIANCE	0.0995674
NUMBER OF VALUES NOT COUNTED	9	ST.DEV.	0.3155430
		(Q3-Q1)/2	0.1950000

LOCATION ESTIMATES

		ST.ERROR
MEAN	0.7598337	0.0203687
MEDIAN	0.7300000	0.0202073
MODE	0.7400000	

```
      HH
      HH
      HHH
  H   HHH                    EACH 'H'
  H   HHH                    REPRESENTS
  HHHHHH                         4
  HHHHHHHH                   COUNT(S)
  HHHHHHHHHH
 HHHHHHHHHHHH
HHHHHHHHHHHHHH H    H
L----------------------U

EACH '-' ABOVE =      0.1000
              L=      0.1000
              U=      2.4000
```

	VALUE	VALUE/S.E.	
			Q1= 0.5300000
			Q3= 0.9200000
SKEWNESS	0.91	5.75	S-= 0.4442902
KURTOSIS	1.76	5.56	S+= 1.0753762

EACH '.' BELOW = 0.0200

```
          S   Q              Q     S
M         -   1        MM    3     +                                        M
I.....................FE.....................................................A
N                      DA                                                  X
                       IN
```

		PERCENTS				PERCENTS				PERCENTS				PERCENTS		
VALUE	COUNT	CELL	CUM	VALUE	COUNT	CELL	CUM	VALUE	COUNT	CELL	CUM	VALUE	COUNT	CELL	CUM
0.1900	1	0.4	0.4	0.5200	1	0.4	23.8	0.7900	1	0.4	60.8	1.1100	1	0.4	87.1
0.2100	1	0.4	0.8	0.5300	4	1.7	25.4	0.8000	2	0.8	61.7	1.1300	2	0.8	87.9
0.2400	1	0.4	1.2	0.5400	3	1.2	26.7	0.8100	3	1.2	62.9	1.1400	1	0.4	88.3
0.2500	1	0.4	1.7	0.5500	2	0.8	27.5	0.8200	1	0.4	63.3	1.1500	1	0.4	88.8
0.2600	1	0.4	2.1	0.5600	1	0.4	27.9	0.8300	5	2.1	65.4	1.1600	1	0.4	89.2
0.2700	2	0.8	2.9	0.5800	2	0.8	28.7	0.8400	1	0.4	65.8	1.1700	1	0.4	89.6
0.2900	1	0.4	3.3	0.5900	1	0.4	29.2	0.8500	4	1.7	67.5	1.1800	1	0.4	90.0
0.3000	1	0.4	3.7	0.6000	3	1.2	30.4	0.8600	2	0.8	68.3	1.2000	1	0.4	90.4
0.3200	1	0.4	4.2	0.6100	3	1.2	31.7	0.8700	1	0.4	68.7	1.2300	2	0.8	91.3
0.3300	3	1.2	5.4	0.6200	2	0.8	32.5	0.8800	4	1.7	70.4	1.2400	1	0.4	91.7
0.3400	2	0.8	6.2	0.6300	5	2.1	34.6	0.8900	4	1.7	72.1	1.2500	3	1.2	92.9
0.3500	1	0.4	6.7	0.6400	5	2.1	36.7	0.9000	5	2.1	74.2	1.2600	1	0.4	93.3
0.3600	1	0.4	7.1	0.6500	6	2.5	39.2	0.9100	2	0.8	75.0	1.2800	2	0.8	94.2
0.3700	5	2.1	9.2	0.6600	2	0.8	40.0	0.9300	1	0.4	75.4	1.2900	1	0.4	94.6
0.3800	5	2.1	11.3	0.6700	3	1.2	41.3	0.9400	2	0.8	76.3	1.3100	1	0.4	95.0
0.3900	7	2.9	14.2	0.6800	2	0.8	42.1	0.9500	2	0.8	77.1	1.3200	1	0.4	95.4
0.4000	1	0.4	14.6	0.6900	6	2.5	44.6	0.9600	2	0.8	77.9	1.3300	1	0.4	95.8
0.4100	1	0.4	15.0	0.7000	4	1.7	46.3	0.9900	4	1.7	79.6	1.3500	2	0.8	96.7
0.4200	4	1.7	16.7	0.7100	2	0.8	47.1	1.0000	1	0.4	80.0	1.3600	1	0.4	97.1
0.4400	1	0.4	17.1	0.7200	5	2.1	49.2	1.0100	3	1.2	81.2	1.4400	1	0.4	97.5
0.4500	5	2.1	19.2	0.7300	3	1.2	50.4	1.0300	1	0.4	81.7	1.4500	2	0.8	98.3
0.4700	1	0.4	19.6	0.7400	8	3.3	53.7	1.0400	1	0.4	82.1	1.5600	1	0.4	98.7
0.4800	1	0.4	20.0	0.7500	4	1.7	55.4	1.0500	4	1.7	83.8	1.7600	1	0.4	99.2
0.4900	6	2.5	22.5	0.7600	4	1.7	57.1	1.0600	4	1.7	85.4	1.7700	1	0.4	99.6
0.5000	1	0.4	22.9	0.7700	3	1.2	58.3	1.0700	2	0.8	86.3	2.2600	1	0.4	100.0
0.5100	1	0.4	23.3	0.7800	5	2.1	60.4	1.0900	1	0.4	86.7				

****
* PERVS *
****

		MAXIMUM	100.0000000
VARIABLE NUMBER	14	MINIMUM	21.9599991
NUMBER OF DISTINCT VALUES .	234	RANGE	78.0400009
NUMBER OF VALUES COUNTED. .	240	VARIANCE	388.4278259
NUMBER OF VALUES NOT COUNTED	9	ST.DEV.	19.7085724
		(Q3-Q1)/2	16.0400009

```
          H HH
          H HH
          H HH                    EACH 'H'
        HHHHH   HHH               REPRESENTS
        HHHHHHH HHH                  3
        HHHHHHHHHHH H              COUNT(S)
       HHHHHHHHHHHHHHH
       HHHHHHHHHHHHHHH
      HHHHHHHHHHHHHHHH
      L----------------------U
```

LOCATION ESTIMATES

		ST.ERROR
MEAN	58.3724747	1.2721828
MEDIAN	54.5649986	1.8099941
MODE	NOT UNIQUE	

EACH '-' ABOVE = 3.0000
L= 5.0000
U= 120.0000

Q1= 42.4300003
Q3= 74.5100021
S-= 38.6639023
S+= 78.0810471

	VALUE	VALUE/S.E.
SKEWNESS	0.30	1.90
KURTOSIS	-0.98	-3.11

EACH '.' BELOW = 0.7500

```
          S   Q                                   Q   S
M         -   1                   M   M           3   +                       M
I.....................................F...E.....................................A
N                                     D   A                                   X
                                      I   N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
21.96	1	0.4	0.4	43.49	1	0.4	25.8	55.51	1	0.4	51.2	75.35	1	0.4	76.7
25.00	1	0.4	0.8	43.64	1	0.4	26.2	55.83	1	0.4	51.7	75.86	1	0.4	77.1
25.08	1	0.4	1.2	43.90	1	0.4	26.7	56.12	2	0.8	52.5	76.05	1	0.4	77.5
25.71	1	0.4	1.7	43.98	1	0.4	27.1	56.72	1	0.4	52.9	76.21	1	0.4	77.9
26.52	1	0.4	2.1	44.11	1	0.4	27.5	57.04	1	0.4	53.3	76.40	1	0.4	78.3
27.32	1	0.4	2.5	44.18	1	0.4	27.9	57.08	1	0.4	53.7	76.61	1	0.4	78.8
27.80	1	0.4	2.9	44.37	1	0.4	28.3	57.47	1	0.4	54.2	76.62	1	0.4	79.2
29.14	1	0.4	3.3	44.38	1	0.4	28.7	57.89	1	0.4	54.6	76.79	1	0.4	79.6
29.71	1	0.4	3.7	44.93	1	0.4	29.2	57.99	1	0.4	55.0	77.11	1	0.4	80.0
30.11	1	0.4	4.2	45.11	2	0.8	30.0	58.13	1	0.4	55.4	78.31	1	0.4	80.4
31.12	1	0.4	4.6	45.13	1	0.4	30.4	58.57	1	0.4	55.8	78.36	1	0.4	80.8
31.20	1	0.4	5.0	45.27	1	0.4	30.8	58.60	1	0.4	56.2	79.00	1	0.4	81.2
31.32	1	0.4	5.4	45.40	1	0.4	31.2	59.24	1	0.4	56.7	79.02	1	0.4	81.7
31.59	1	0.4	5.8	45.50	1	0.4	31.7	60.00	1	0.4	57.1	79.59	1	0.4	82.1
31.92	1	0.4	6.2	45.85	1	0.4	32.1	60.29	1	0.4	57.5	80.00	1	0.4	82.5
32.00	1	0.4	6.7	45.92	1	0.4	32.5	60.31	1	0.4	57.9	80.12	1	0.4	82.9
32.19	1	0.4	7.1	46.01	1	0.4	32.9	60.63	1	0.4	58.3	80.77	1	0.4	83.3
32.38	1	0.4	7.5	46.52	1	0.4	33.3	60.97	1	0.4	58.7	81.74	1	0.4	83.8
32.51	2	0.8	8.3	46.64	1	0.4	33.8	61.72	1	0.4	59.2	82.43	1	0.4	84.2
32.57	1	0.4	8.7	47.02	1	0.4	34.2	61.76	1	0.4	59.6	82.47	1	0.4	84.6
32.90	1	0.4	9.2	47.30	1	0.4	34.6	62.50	1	0.4	60.0	82.49	1	0.4	85.0
33.08	1	0.4	9.6	47.35	2	0.8	35.4	62.60	1	0.4	60.4	83.15	1	0.4	85.4
33.40	1	0.4	10.0	47.74	1	0.4	35.8	62.96	1	0.4	60.8	83.24	1	0.4	85.8
33.53	1	0.4	10.4	47.77	1	0.4	36.3	63.07	1	0.4	61.2	83.33	1	0.4	86.3
34.40	1	0.4	10.8	48.06	1	0.4	36.7	64.04	1	0.4	61.7	83.72	1	0.4	86.7
34.47	1	0.4	11.3	48.19	1	0.4	37.1	64.43	1	0.4	62.1	84.07	1	0.4	87.1
35.15	1	0.4	11.7	48.42	1	0.4	37.5	64.52	1	0.4	62.5	84.11	1	0.4	87.5
35.25	1	0.4	12.1	48.68	1	0.4	37.9	64.74	1	0.4	62.9	84.18	1	0.4	87.9
35.32	1	0.4	12.5	48.83	1	0.4	38.3	64.90	1	0.4	63.3	84.24	1	0.4	88.3
35.39	1	0.4	12.9	49.03	1	0.4	38.8	65.14	1	0.4	63.7	84.33	1	0.4	88.8
35.58	1	0.4	13.3	49.48	1	0.4	39.2	65.22	1	0.4	64.2	84.40	1	0.4	89.2
35.59	1	0.4	13.7	49.83	1	0.4	39.6	66.67	1	0.4	64.6	86.34	1	0.4	89.6
35.89	1	0.4	14.2	50.16	1	0.4	40.0	67.08	1	0.4	65.0	86.84	1	0.4	90.0
36.21	1	0.4	14.6	50.26	1	0.4	40.4	67.24	1	0.4	65.4	86.98	1	0.4	90.4
36.32	1	0.4	15.0	50.50	1	0.4	40.8	67.54	1	0.4	65.8	87.43	1	0.4	90.8
36.33	1	0.4	15.4	50.66	1	0.4	41.3	67.58	1	0.4	66.3	87.63	1	0.4	91.3
37.10	1	0.4	15.8	50.78	1	0.4	41.7	68.28	2	0.8	67.1	89.27	1	0.4	91.7
37.36	1	0.4	16.3	50.88	1	0.4	42.1	68.97	1	0.4	67.5	89.96	1	0.4	92.1
37.70	1	0.4	16.7	50.96	1	0.4	42.5	69.16	1	0.4	67.9	90.75	1	0.4	92.5
37.74	1	0.4	17.1	51.34	1	0.4	42.9	69.47	1	0.4	68.3	91.40	1	0.4	92.9
38.06	1	0.4	17.5	51.41	1	0.4	43.3	70.40	1	0.4	68.7	91.70	1	0.4	93.3
38.14	2	0.8	18.3	51.44	1	0.4	43.7	70.47	1	0.4	69.2	91.72	1	0.4	93.7
38.68	1	0.4	18.7	51.61	1	0.4	44.2	70.73	1	0.4	69.6	92.31	1	0.4	94.2
38.81	1	0.4	19.2	52.30	1	0.4	44.6	70.81	1	0.4	70.0	92.98	1	0.4	94.6
39.02	1	0.4	19.6	52.34	1	0.4	45.0	71.14	1	0.4	70.4	93.33	1	0.4	95.0
39.03	1	0.4	20.0	52.35	1	0.4	45.4	71.50	1	0.4	70.8	93.75	1	0.4	95.4
39.34	1	0.4	20.4	52.47	1	0.4	45.8	71.72	1	0.4	71.3	93.90	1	0.4	95.8
39.86	1	0.4	20.8	52.49	1	0.4	46.3	71.87	1	0.4	71.7	94.29	1	0.4	96.3
39.88	1	0.4	21.3	52.74	1	0.4	46.7	72.14	1	0.4	72.1	94.41	1	0.4	96.7
39.90	1	0.4	21.7	53.00	1	0.4	47.1	72.28	1	0.4	72.5	95.02	1	0.4	97.1
40.32	1	0.4	22.1	53.14	1	0.4	47.5	72.35	1	0.4	72.9	95.09	1	0.4	97.5
40.50	1	0.4	22.5	53.66	1	0.4	47.9	72.86	1	0.4	73.3	96.79	1	0.4	97.9
40.51	1	0.4	22.9	53.88	1	0.4	48.3	72.95	1	0.4	73.8	97.04	1	0.4	98.3
40.56	1	0.4	23.3	54.20	1	0.4	48.8	73.77	1	0.4	74.2	97.06	1	0.4	98.7
40.59	1	0.4	23.8	54.22	1	0.4	49.2	73.83	1	0.4	74.6	97.77	1	0.4	99.2
40.86	1	0.4	24.2	54.44	1	0.4	49.6	74.45	1	0.4	75.0	98.73	1	0.4	99.6
41.21	1	0.4	24.6	54.51	1	0.4	50.0	74.57	1	0.4	75.4	100.00	1	0.4	100.0
41.77	1	0.4	25.0	54.62	1	0.4	50.4	75.18	1	0.4	75.8				
43.09	1	0.4	25.4	54.66	1	0.4	50.8	75.30	1	0.4	76.3				

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************
* CONDCORR *
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                                              MAXIMUM        298.0000000            H
VARIABLE NUMBER . . . . . . .      8          MINIMUM        239.0000000            H
NUMBER OF DISTINCT VALUES .       36          RANGE           59.0000000           HHH
NUMBER OF VALUES COUNTED. .      249          VARIANCE        55.8911095           HHHH          EACH 'H'
NUMBER OF VALUES NOT COUNTED       0          ST.DEV.          7.4760356          HHHHH          REPRESENTS
                                              (Q3-Q1)/2        5.0000000          HHHHHH             5
                                                                                 HHHHHHH         COUNT(S)
LOCATION ESTIMATES                               ST.ERROR                         HHHHHHH
                MEAN         267.6706848     0.4737745                         HHHHHHHHH
                MEDIAN       268.0000000     0.5773506                  H HHHHHHHHHHHHHH    H
                MODE         265.0000000                                L-----------------------U

                                                                         EACH '-' ABOVE =      3.0000
                                                                                     L=      234.0000
                                                                                     U=      303.0000

                                                                                      Q1=  263.0000000
                                                                VALUE   VALUE/S.E.    Q3=  271.0000000
                                                SKEWNESS        -0.31        -1.99    S-=  260.1946411
                                                KURTOSIS         1.57         5.04    S+=  275.1167285

                                                                         EACH '.' BELOW -      0.5000
                                   S    Q           Q   S
  M                                -    1   M  MN   3   +                                       M
  I.......................................O....EE...........................................A
  N                                         D  AD                                               X
                                            E  NI
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		PERCENTS				PERCENTS				PERCENTS				PERCENTS	
VALUE	COUNT	CELL	CUM	VALUE	COUNT	CELL	CUM	VALUE	COUNT	CELL	CUM	VALUE	COUNT	CELL	CUM
239.	1	0.4	0.4	258.	3	1.2	8.4	267.	15	6.0	49.0	276.	9	3.6	90.0
244.	1	0.4	0.8	259.	5	2.0	10.4	268.	11	4.4	53.4	277.	2	0.8	90.8
245.	1	0.4	1.2	260.	12	4.8	15.3	269.	11	4.4	57.8	278.	10	4.0	94.8
247.	1	0.4	1.6	261.	4	1.6	16.9	270.	16	6.4	64.3	279.	5	2.0	96.8
251.	4	1.6	3.2	262.	10	4.0	20.9	271.	16	6.4	70.7	280.	2	0.8	97.6
252.	1	0.4	3.6	263.	13	5.2	26.1	272.	10	4.0	74.7	281.	2	0.8	98.4
254.	3	1.2	4.8	264.	11	4.4	30.5	273.	10	4.0	78.7	282.	2	0.8	99.2
256.	3	1.2	6.0	265.	19	7.6	38.2	274.	8	3.2	81.9	283.	1	0.4	99.6
257.	3	1.2	7.2	266.	12	4.8	43.0	275.	11	4.4	86.3	298.	1	0.4	100.0

HYDRA86 CENTRAL BASIN ALL DATA

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************
* CL       *
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                                              MAXIMUM        18.0000000               H
VARIABLE NUMBER . . . . . . .      3          MINIMUM         7.0000000               H
NUMBER OF DISTINCT VALUES .       36          RANGE          11.0000000               H
NUMBER OF VALUES COUNTED. .      247          VARIANCE        0.8925967               H          EACH 'H'
NUMBER OF VALUES NOT COUNTED       2          ST.DEV.         0.9447734               H          REPRESENTS
                                              (Q3-Q1)/2       0.2500000              HH              12
                                                                                     HHH          COUNT(S)
LOCATION ESTIMATES                               ST.ERROR                            HHH
                MEAN          14.7412958     0.0601145                               HHH
                MEDIAN        14.6999998     0.0288676                  H  HH      HHHHHHHHH H
                MODE          14.6999998                                L-----------------------U

                                                                         EACH '-' ABOVE =      0.5000
                                                                                     L=        7.0000
                                                                                     U=       18.5000

                                                                                      Q1     14.5000000
                                                                VALUE   VALUE/S.E.    Q3=    15.0000000
                                                SKEWNESS        -3.70       -23.74    S-=    13.7965221
                                                KURTOSIS        28.65        91.92    S+=    15.6860695

                                                                         EACH '.' BELOW =      0.1000
                                                               S     Q    Q      S
  M                                                            -     1 MM 3      +                  M
  I...............................................................EE.........................  ......A
  N                                                                  DA                             X
                                                                     IN
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		PERCENTS				PERCENTS				PERCENTS				PERCENTS	
VALUE	COUNT	CELL	CUM	VALUE	COUNT	CELL	CUM	VALUE	COUNT	CELL	CUM	VALUE	COUNT	CELL	CUM
7.000	1	0.4	0.4	14.100	9	3.6	10.1	15.000	25	10.1	75.3	15.900	2	0.8	95.1
8.600	1	0.4	0.8	14.200	7	2.8	13.0	15.100	12	4.9	80.2	16.000	3	1.2	96.4
9.300	1	0.4	1.2	14.300	7	2.8	15.8	15.200	12	4.9	85.0	16.100	2	0.8	97.2
12.900	1	0.4	1.6	14.400	14	5.7	21.5	15.300	10	4.0	89.1	16.200	1	0.4	97.6
13.200	2	0.8	2.4	14.500	17	6.9	28.3	15.400	4	1.6	90.7	16.300	2	0.8	98.4
13.300	1	0.4	2.8	14.600	26	10.5	38.9	15.500	3	1.2	91.9	16.400	1	0.4	98.8
13.700	2	0.8	3.6	14.700	29	11.7	50.6	15.600	1	0.4	92.3	17.000	1	0.4	99.2
13.900	6	2.4	6.1	14.800	22	8.9	59.5	15.700	1	0.4	92.7	17.800	1	0.4	99.6
14.000	1	0.4	6.5	14.900	14	5.7	65.2	15.800	4	1.6	94.3	18.000	1	0.4	100.0

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************
* ALKTOT   *
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                                                  MAXIMUM        112.3000031
VARIABLE NUMBER . . . . . .       6              MINIMUM         93.5999985                        HH
NUMBER OF DISTINCT VALUES .     124              RANGE           18.7000046                        HH  H
NUMBER OF VALUES COUNTED. .     249              VARIANCE        15.5088749                     HH HHHH  H        EACH 'H'
NUMBER OF VALUES NOT COUNTED      0              ST.DEV.          3.9381309                     HH HHHHHHH        REPRESENTS
                                                  (Q3-Q1)/2        3.2000008                     HH HHHHHHH             3
                                                                                                HHHHHHHHHHHH         COUNT(S)
LOCATION ESTIMATES                                     ST.ERROR                                  HHHHHHHHHHHHH
                    MEAN          103.0140533     0.2495689                                   HHHHHHHHHHHHHHHH
                    MEDIAN        103.4000015     0.3752787                                  HHHHHHHHHHHHHHHHHHHH
                    MODE          103.8000031                                               L-----------------------U

                                                                                            EACH '-' ABOVE =        1.0000
                                                                                                           L=      92.0000
                                                                                                           U=     115.0000

                                                                                                                  Q1=    99.6999969
                                                                                VALUE    VALUE/S.E.             Q3=   106.0999985
                                                                  SKEWNESS      -0.17        -1.13              S-=    99.0759201
                                                                  KURTOSIS      -0.70        -2.26              S+=   106.9521866

                                                                                            EACH '.' BELOW =        0.1500
                                   S  Q                                          Q     S
M                                  -  1                  M  M M                  3     +                                    M
I........................................................E..E.U..............................................................A
N                                                        A  D D                                                              X
                                                         N  I E
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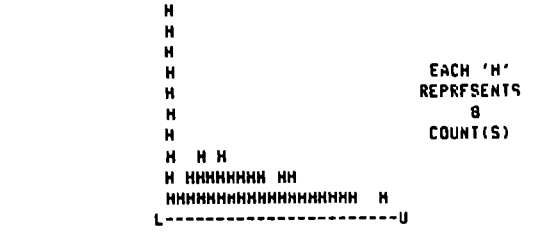
VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
93.60	1	0.4	0.4	99.20	1	0.4	20.1	102.80	1	0.4	45.8	106.40	3	1.2	77.1
93.90	1	0.4	0.8	99.40	5	2.0	22.1	103.00	2	0.8	46.6	106.50	2	0.8	77.9
94.30	1	0.4	1.2	99.50	3	1.2	23.3	103.10	2	0.8	47.4	106.60	1	0.4	78.3
94.50	2	0.8	2.0	99.60	2	0.8	24.1	103.20	3	1.2	48.6	106.70	1	0.4	78.7
94.90	1	0.4	2.4	99.70	3	1.2	25.3	103.30	2	0.8	49.4	106.80	3	1.2	79.9
95.10	1	0.4	2.8	99.80	2	0.8	26.1	103.40	3	1.2	50.6	106.90	2	0.8	80.7
95.60	1	0.4	3.2	99.90	1	0.4	26.5	103.50	1	0.4	51.0	107.00	3	1.2	81.9
95.90	1	0.4	3.6	100.00	2	0.8	27.3	103.60	2	0.8	51.8	107.10	5	2.0	83.9
96.00	1	0.4	4.0	100.10	1	0.4	27.7	103.70	1	0.4	52.2	107.20	2	0.8	84.7
96.10	1	0.4	4.4	100.20	1	0.4	28.1	103.80	7	2.8	55.0	107.30	5	2.0	86.7
96.30	1	0.4	4.8	100.30	3	1.2	29.3	103.90	4	1.6	56.6	107.40	1	0.4	87.1
96.40	2	0.8	5.6	100.40	1	0.4	29.7	104.00	2	0.8	57.4	107.50	3	1.2	88.4
96.80	1	0.4	6.0	100.50	1	0.4	30.1	104.10	1	0.4	57.8	107.60	2	0.8	89.2
97.00	1	0.4	6.4	100.60	1	0.4	30.5	104.20	2	0.8	58.6	107.70	2	0.8	90.0
97.30	2	0.8	7.2	100.70	1	0.4	30.9	104.30	5	2.0	60.6	107.80	1	0.4	90.4
97.40	2	0.8	8.0	100.90	1	0.4	31.3	104.40	5	2.0	62.7	107.90	1	0.4	90.8
97.50	1	0.4	8.4	101.10	2	0.8	32.1	104.50	2	0.8	63.5	108.20	4	1.6	92.4
97.60	2	0.8	9.2	101.20	2	0.8	32.9	104.60	1	0.4	63.9	108.60	1	0.4	92.8
97.70	1	0.4	9.6	101.40	2	0.8	33.7	104.80	3	1.2	65.1	108.80	2	0.8	93.6
97.80	1	0.4	10.0	101.50	1	0.4	34.1	104.90	4	1.6	66.7	108.90	1	0.4	94.0
97.90	1	0.4	10.4	101.60	2	0.8	34.9	105.00	3	1.2	67.9	109.00	2	0.8	94.8
98.00	2	0.8	11.2	101.70	2	0.8	35.7	105.10	1	0.4	68.3	109.10	2	0.8	95.6
98.10	4	1.6	12.9	101.80	3	1.2	36.9	105.20	1	0.4	68.7	109.40	1	0.4	96.0
98.20	4	1.6	14.5	101.90	3	1.2	38.2	105.30	5	2.0	70.7	109.50	3	1.2	97.2
98.40	2	0.8	15.3	102.00	2	0.8	39.0	105.50	1	0.4	71.1	109.60	1	0.4	97.6
98.50	1	0.4	15.7	102.20	3	1.2	40.2	105.70	3	1.2	72.3	109.70	1	0.4	98.0
98.60	4	1.6	17.3	102.30	1	0.4	40.6	105.80	3	1.2	73.5	109.80	1	0.4	98.4
98.70	1	0.4	17.7	102.40	3	1.2	41.8	105.90	3	1.2	74.7	110.40	1	0.4	98.8
98.80	2	0.8	18.5	102.50	4	1.6	43.4	106.10	1	0.4	75.1	110.70	1	0.4	99.2
99.00	2	0.8	19.3	102.60	3	1.2	44.6	106.20	1	0.4	75.5	111.20	1	0.4	99.6
99.10	1	0.4	19.7	102.70	2	0.8	45.4	106.30	1	0.4	75.9	112.30	1	0.4	100.0

ALAPH

VARIABLE NUMBER	7	MAXIMUM	10.8000002
NUMBER OF DISTINCT VALUES .	69	MINIMUM	0.0000000
NUMBER OF VALUES COUNTED. .	249	RANGE	10.8000002
NUMBER OF VALUES NOT COUNTED	0	VARIANCE	6.3353453
		ST.DEV.	2.5170112
		(Q3-Q1)/2	2.2000000

LOCATION ESTIMATES

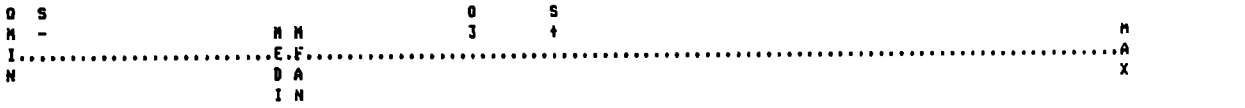
		ST.ERROR
MEAN	2.7582326	0.1595091
MEDIAN	2.5000000	0.2309402
MODE	0.0000000	



	VALUE	VALUE/S.E.
SKEWNESS	0.66	4.24
KURTOSIS	-0.30	-0.96

Q1= 0.0000000
Q3= 4.4000001
S-= 0.2412214
S+= 5.2752438

EACH '.' BELOW = 0.1000



VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.0000	73	29.3	29.3	2.5000	2	0.8	50.6	4.4000	3	1.2	75.1	6.6000	1	0.4	92.0
0.7000	3	1.2	30.5	2.6000	9	3.6	54.2	4.6000	2	0.8	75.9	6.9000	1	0.4	92.4
0.8000	2	0.8	31.3	2.7000	3	1.2	55.4	4.7000	4	1.6	77.5	7.0000	3	1.2	93.6
1.0000	2	0.8	32.1	2.8000	2	0.8	56.2	4.8000	3	1.2	78.7	7.1000	3	1.2	94.8
1.1000	2	0.8	32.9	3.0000	5	2.0	58.2	4.9000	2	0.8	79.5	7.2000	1	0.4	95.2
1.2000	1	0.4	33.3	3.1000	2	0.8	59.0	5.0000	1	0.4	79.9	7.4000	2	0.8	96.0
1.3000	6	2.4	35.7	3.2000	4	1.6	60.6	5.2000	3	1.2	81.1	7.5000	1	0.4	96.4
1.4000	2	0.8	36.5	3.3000	4	1.6	62.2	5.3000	3	1.2	82.3	7.6000	1	0.4	96.8
1.5000	4	1.6	38.2	3.4000	5	2.0	64.3	5.5000	1	0.4	82.7	7.7000	1	0.4	97.2
1.6000	2	0.8	39.0	3.5000	1	0.4	64.7	5.6000	3	1.2	83.9	8.3000	2	0.8	98.0
1.7000	5	2.0	41.0	3.6000	1	0.4	65.1	5.7000	4	1.6	85.5	8.6000	1	0.4	98.4
1.8000	3	1.2	42.2	3.7000	5	2.0	67.1	5.8000	3	1.2	86.7	8.7000	1	0.4	98.8
1.9000	4	1.6	43.8	3.8000	2	0.8	67.9	5.9000	2	0.8	87.6	9.1000	1	0.4	99.2
2.0000	3	1.2	45.0	3.9000	4	1.6	69.5	6.0000	1	0.4	88.0	10.7000	1	0.4	99.6
2.1000	5	2.0	47.0	4.0000	3	1.2	70.7	6.1000	4	1.6	89.6	10.8000	1	0.4	100.0
2.2000	3	1.2	48.2	4.1000	1	0.4	71.1	6.2000	3	1.2	90.8				
2.3000	2	0.8	49.0	4.2000	5	2.0	73.1	6.3000	1	0.4	91.2				
2.4000	2	0.8	49.8	4.3000	2	0.8	73.9	6.5000	1	0.4	91.6				

```
************
* PH       *
************
```

VARIABLE NUMBER	5	MAXIMUM	8.6800003
NUMBER OF DISTINCT VALUES .	93	MINIMUM	7.2600002
NUMBER OF VALUES COUNTED. .	249	RANGE	1.4200001
NUMBER OF VALUES NOT COUNTED	0	VARIANCE	0.1564887
		ST.DEV.	0.3958392
		(Q3-Q1)/2	0.3299999

LOCATION ESTIMATES

		ST.ERROR
MEAN	8.0877113	0.0250853
MEDIAN	8.2200003	0.0144338
MODE	8.2500000	

```
                  HH
                  HH
                  HH
                  HH            EACH 'H'
                 HHHHH          REPRESENTS
    H            HHHHH              4
    H            HHHHHH          COUNT(S)
   HHH HH        HHHHHHH
   HHHHHH        HHHHHHHH
  HHHHHHHH HHHHHHHHHHH
L-----------------------U
```

EACH '-' ABOVE = 0.0750
L= 7.1250
U= 8.8500

	VALUE	VALUE/S.E.		
			Q1=	7.7100000
			Q3=	8.3699999
SKEWNESS	-0.79	-5.11	S-=	7.6918721
KURTOSIS	-0.75	-2.43	S+=	8.4835510

EACH '.' BELOW = 0.0150

```
                                     SQ                                      Q       S
 M                                   -1                      M       M M     3       +            M
 I...................................................E.......E.O........................A
 N                                                           A       D D                          X
                                                             N       I E
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
7.260	2	0.8	0.8
7.280	1	0.4	1.2
7.300	1	0.4	1.6
7.320	4	1.6	3.2
7.330	1	0.4	3.6
7.340	3	1.2	4.8
7.350	1	0.4	5.2
7.360	3	1.2	6.4
7.370	4	1.6	8.0
7.380	3	1.2	9.2
7.400	1	0.4	9.6
7.410	1	0.4	10.0
7.420	5	2.0	12.0
7.430	1	0.4	12.4
7.440	1	0.4	12.9
7.450	1	0.4	13.3
7.460	2	0.8	14.1
7.490	2	0.8	14.9
7.500	2	0.8	15.7
7.510	2	0.8	16.5
7.540	3	1.2	17.7
7.550	1	0.4	18.1
7.560	1	0.4	18.5
7.570	1	0.4	18.9
7.580	4	1.6	20.5
7.590	1	0.4	20.9
7.610	2	0.8	21.7
7.620	1	0.4	22.1
7.640	1	0.4	22.5
7.660	3	1.2	23.7
7.670	1	0.4	24.1
7.680	1	0.4	24.5
7.700	1	0.4	24.9
7.710	2	0.8	25.7
7.720	1	0.4	26.1
7.740	1	0.4	26.5
7.750	1	0.4	26.9
7.910	1	0.4	27.3
7.960	1	0.4	27.7
7.980	1	0.4	28.1
7.990	1	0.4	28.5
8.050	1	0.4	28.9
8.060	1	0.4	29.3
8.100	2	0.8	30.1
8.120	4	1.6	31.7
8.130	1	0.4	32.1
8.140	5	2.0	34.1
8.150	2	0.8	34.9
8.160	1	0.4	35.3
8.170	8	3.2	38.6
8.180	3	1.2	39.8
8.190	7	2.8	42.6
8.200	6	2.4	45.0
8.210	7	2.8	47.8
8.220	7	2.8	50.6
8.230	8	3.2	53.8
8.240	2	0.8	54.6
8.250	10	4.0	58.6
8.260	3	1.2	59.8
8.270	8	3.2	63.1
8.280	6	2.4	65.5
8.290	4	1.6	67.1
8.300	1	0.4	67.5
8.310	2	0.8	68.3
8.320	4	1.6	69.9
8.330	2	0.8	70.7
8.340	4	1.6	72.3
8.360	2	0.8	73.1
8.370	5	2.0	75.1
8.380	5	2.0	77.1
8.390	6	2.4	79.5
8.400	3	1.2	80.7
8.420	6	2.4	83.1
8.430	4	1.6	84.7
8.440	2	0.8	85.5
8.450	2	0.8	86.3
8.460	4	1.6	88.0
8.470	2	0.8	88.8
8.480	2	0.8	89.6
8.490	2	0.8	90.4
8.500	2	0.8	91.2
8.510	2	0.8	92.0
8.520	3	1.2	93.2
8.530	2	0.8	94.0
8.540	1	0.4	94.4
8.550	3	1.2	95.6
8.560	1	0.4	96.0
8.580	2	0.8	96.8
8.590	1	0.4	97.2
8.600	2	0.8	98.0
8.650	3	1.2	99.2
8.660	1	0.4	99.6
8.680	1	0.4	100.0

APPENDIX C

```
$$$$$$$$$$$$
$ TEMP     $
$$$$$$$$$$$$
```

VARIABLE NUMBER	2	MAXIMUM	18.5000000
NUMBER OF DISTINCT VALUES .	43	MINIMUM	4.3000002
NUMBER OF VALUES COUNTED. .	69	RANGE	14.1999998
NUMBER OF VALUES NOT COUNTED	0	VARIANCE	23.6896954
		ST.DEV.	4.8672061
		(Q3-Q1)/2	4.3499999

LOCATION ESTIMATES

		ST.ERROR
MEAN	11.6028996	0.5859428
MEDIAN	13.5000000	1.4433764
MODE	NOT UNIQUE	

```
                   H  H     EACH 'H'
      H            H  H     REPRESENTS
      HH           H  H         2
      HHH        HHH  H      COUNT(S)
     HHHH       HHHH  H
     HHHHHHHHHHHHHHHHHH
   L-----------------U
```

EACH '-' ABOVE =	1.0000
L=	3.0000
U=	21.0000

	VALUE	VALUE/S.E.		
			Q1=	6.8000002
			Q3=	15.5000000
SKEWNESS	-0.04	-0.15	S-=	6.7356935
KURTOSIS	-1.53	-2.59	S+=	16.4701061

EACH '.' BELOW = 0.1500

```
                      SQ                                   Q   S
     M                -1                  M      M         3   +          M
     I....................................E......E........................A
     N                                    A      D                        X
                                          N      I
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
4.300	2	2.9	2.9	6.800	3	4.3	29.0	12.400	1	1.4	47.8	15.900	1	1.4	76.8
4.800	1	1.4	4.3	7.100	1	1.4	30.4	13.300	1	1.4	49.3	16.000	1	1.4	78.3
5.300	4	5.8	10.1	7.300	1	1.4	31.9	13.500	2	2.9	52.2	16.100	1	1.4	79.7
5.400	2	2.9	13.0	7.400	1	1.4	33.3	13.800	2	2.9	55.1	16.200	2	2.9	82.6
5.500	1	1.4	14.5	7.500	3	4.3	37.7	13.900	3	4.3	59.4	18.000	1	1.4	84.1
5.600	1	1.4	15.9	8.400	1	1.4	39.1	14.000	3	4.3	63.8	18.100	1	1.4	85.5
5.700	1	1.4	17.4	9.000	1	1.4	40.6	14.200	3	4.3	68.1	18.200	1	1.4	87.0
5.800	1	1.4	18.8	9.600	1	1.4	42.0	14.300	1	1.4	69.6	18.300	4	5.8	92.8
6.400	2	2.9	21.7	10.200	1	1.4	43.5	15.000	1	1.4	71.0	18.400	3	4.3	97.1
6.500	1	1.4	23.2	10.800	1	1.4	44.9	15.100	1	1.4	72.5	18.500	2	2.9	100.0
6.600	1	1.4	24.6	11.900	1	1.4	46.4	15.500	2	2.9	75.4				

```
$$$$$$$$$$$$
$ [illegible] $
$$$$$$$$$$$$
```

VARIABLE NUMBER	3	MAXIMUM	12.3000002
NUMBER OF DISTINCT VALUES .	37	MINIMUM	4.8000002
NUMBER OF VALUES COUNTED. .	69	RANGE	7.5000000
NUMBER OF VALUES NOT COUNTED	0	VARIANCE	2.7180612
		ST.DEV.	1.6486543
		(Q3-Q1)/2	0.9500003

LOCATION ESTIMATES

		ST.ERROR
MEAN	9.2753620	0.1984747
MEDIAN	9.5000000	0.2598076
MODE	9.6000004	

```
              H              EACH 'H'
          H  HH              REPRESENTS
          HHHHH                  2
          HHHHH  H            COUNT(S)
       HH HHHHHH HHH
     H HH HHHHHHHHHH
   L-----------------U
```

EACH '-' ABOVE =	0.5000
L=	4.5000
U=	13.5000

	VALUE	VALUE/S.E.		
			Q1=	8.3999996
			Q3=	10.3000002
SKEWNESS	-0.33	-1.11	S-=	7.6267080
KURTOSIS	-0.15	-0.26	S+=	10.9240160

EACH '.' BELOW = 0.0750

```
                                        S         Q                     Q       S
     M                                  -         1           M  M M    3       +          M
     I............................................................E..F.O..........................A
     N                                                        A  D D                       X
                                                              N  I E
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
4.800	1	1.4	1.4	8.400	3	4.3	27.5	9.800	3	4.3	66.7	11.200	1	1.4	87.0
6.100	3	4.3	5.8	8.500	3	4.3	31.9	10.000	1	1.4	68.1	11.500	1	1.4	88.4
6.500	1	1.4	7.2	8.600	3	4.3	36.2	10.100	2	2.9	71.0	11.600	3	4.3	92.8
6.600	2	2.9	10.1	8.700	2	2.9	39.1	10.200	1	1.4	72.5	11.700	1	1.4	94.2
6.900	1	1.4	11.6	8.800	2	2.9	42.0	10.300	4	5.8	78.3	12.000	1	1.4	95.7
7.000	1	1.4	13.0	9.200	2	2.9	44.9	10.400	1	1.4	79.7	12.100	1	1.4	97.1
7.700	2	2.9	15.9	9.400	1	1.4	46.4	10.500	1	1.4	81.2	12.300	2	2.9	100.0
7.800	1	1.4	17.4	9.500	4	5.8	52.2	10.700	1	1.4	82.6				
8.200	2	2.9	20.3	9.600	5	7.2	59.4	10.800	1	1.4	84.1				
8.300	2	2.9	23.2	9.700	2	2.9	62.3	11.100	1	1.4	85.5				

```
*************
* PERDO     *
*************
                                        MAXIMUM        106.5100021
VARIABLE NUMBER . . . . . .        4    MINIMUM         47.7400017
NUMBER OF DISTINCT VALUES .       59    RANGE           63.7700005
NUMBER OF VALUES COUNTED. .       69    VARIANCE       243.9649658
NUMBER OF VALUES NOT COUNTED       0    ST.DEV.         15.6193781
                                        (Q3-Q1)/2        8.1899986

LOCATION ESTIMATES                           ST.ERROR
               MEAN            84.4575500    1.8803523
               MEDIAN          89.9100037    0.6552919
               MODE            89.0500031
```

```
                 H
                HH
                HH        EACH 'H'
                HH        REPRESENTS
               HHH            2
               HHH         COUNT(S)
         H     HHHH
         H HH H HHHH
        H HHHHHH HHHHH
      L-------------------U

   EACH '-' ABOVE =       5.0000
                L=       30.0000
                U=      120.0000

                                         Q1=   78.1500015
                   VALUE   VALUE/S.F.    Q3=   94.5299988
SKEWNESS           -1.03        -3.50    S-=   68.8381729
KURTOSIS           -0.11        -0.19    S+=  100.0769272

                   EACH '.' BELOW =       0.5000
```

```
                           S            Q                           Q        S
M                          -            1        M       M M        3        +          M
I.............................................................E.......O.F............................A
N                                                A       D D                            X
                                                 N       E I
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
42.74	1	1.4	1.4	70.35	1	1.4	24.6	89.91	1	1.4	50.7	95.26	1	1.4	78.3
50.80	1	1.4	2.9	78.15	1	1.4	26.1	90.48	1	1.4	52.2	95.64	1	1.4	79.7
51.06	1	1.4	4.3	78.29	1	1.4	27.5	90.55	2	2.9	55.1	96.45	1	1.4	81.2
51.15	1	1.4	5.8	78.97	1	1.4	29.0	90.73	1	1.4	56.5	96.47	1	1.4	82.6
54.48	1	1.4	7.2	85.58	1	1.4	30.4	90.95	1	1.4	58.0	97.64	1	1.4	84.1
54.51	1	1.4	8.7	85.93	1	1.4	31.9	91.27	1	1.4	59.4	97.85	1	1.4	85.5
55.15	1	1.4	10.1	86.79	1	1.4	33.3	91.32	2	2.9	62.3	98.46	1	1.4	87.0
59.65	1	1.4	11.6	86.98	1	1.4	34.8	92.22	1	1.4	63.8	99.08	1	1.4	88.4
62.72	1	1.4	13.0	87.45	1	1.4	36.2	92.80	2	2.9	66.7	99.52	1	1.4	89.9
63.78	2	2.9	15.9	88.21	1	1.4	37.7	92.84	1	1.4	68.1	100.02	2	2.9	92.8
64.61	1	1.4	17.4	88.40	1	1.4	39.1	93.65	2	2.9	71.0	100.54	2	2.9	95.7
66.54	1	1.4	18.8	89.05	3	4.3	43.5	94.21	1	1.4	72.5	101.01	1	1.4	97.1
66.65	1	1.4	20.3	89.07	1	1.4	44.9	94.45	1	1.4	73.9	103.77	1	1.4	98.6
68.39	1	1.4	21.7	89.37	1	1.4	46.4	94.53	1	1.4	75.4	106.51	1	1.4	100.0
69.60	1	1.4	23.2	89.78	2	2.9	49.3	94.70	1	1.4	76.8				

```
************
* CORSTP   *
************
```

VARIABLE NUMBER	2	MAXIMUM	19.3999996
NUMBER OF DISTINCT VALUES .	45	MINIMUM	8.0000000
NUMBER OF VALUES COUNTED. .	65	RANGE	11.3999996
NUMBER OF VALUES NOT COUNTED	4	VARIANCE	7.5077162
		ST.DEV.	2.7400212
		(Q3-Q1)/2	1.8499999

```
H H                EACH  H
H H                REPRESENTS
H HH                  2
HHHH               COUNT(S)
HHHHHHHH H
HHHHHHHHHHHHHHHH
L-----------------U
```

LOCATION ESTIMATES

		ST.ERROR
MEAN	12.7384634	0.3398578
MEDIAN	12.0000000	0.3464103
MODE	NOT UNIQUF	

EACH '-' ABOVE = 0.7500
L= 7.5000
U= 21.0000

	VALUE	VALUE/S.E.		
			Q1-	10.6999998
			Q3=	14.3999996
SKEWNESS	0.71	2.34	S-=	9.9984417
KURTOSIS	-0.25	-0.42	S+=	15.4784851

EACH '.' BELOW = 0.1000

```
                S      Q                   M      M                      Q         S                                     M
M               -      1                   E      E                      3         +                                     A
I........................................ D.....A...........................................................................X
N                                          I      N
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
8.000	1	1.5	1.5	11.200	3	4.6	32.3	12.800	1	1.5	64.6	16.200	1	1.5	86.2
8.300	1	1.5	3.1	11.300	2	3.1	35.4	13.100	1	1.5	66.2	16.600	1	1.5	87.7
8.900	1	1.5	4.6	11.400	2	3.1	38.5	13.500	1	1.5	67.7	16.800	1	1.5	89.2
9.100	1	1.5	6.2	11.500	3	4.6	43.1	13.700	1	1.5	69.2	17.000	2	3.1	92.3
9.800	1	1.5	7.7	11.600	1	1.5	44.6	14.000	1	1.5	70.8	17.900	1	1.5	93.8
10.000	4	6.2	13.8	11.700	1	1.5	46.2	14.200	2	3.1	73.8	18.300	1	1.5	95.4
10.200	1	1.5	15.4	11.900	2	3.1	49.2	14.400	1	1.5	75.4	18.400	1	1.5	96.9
10.300	1	1.5	16.9	12.000	1	1.5	50.8	14.500	1	1.5	76.9	19.300	1	1.5	98.5
10.400	4	6.2	23.1	12.100	2	3.1	53.8	14.900	1	1.5	78.5	19.400	1	1.5	100.0
10.500	1	1.5	24.6	12.300	1	1.5	55.4	15.000	1	1.5	80.0				
10.700	1	1.5	26.2	12.600	1	1.5	56.9	15.200	1	1.5	81.5				
10.900	1	1.5	27.7	12.700	4	6.2	63.1	15.400	2	3.1	84.6				

```
************
* CORRTFP  *
************
```

VARIABLE NUMBER	3	MAXIMUM	9.8000002
NUMBER OF DISTINCT VALUES .	38	MINIMUM	1.8000000
NUMBER OF VALUES COUNTED. .	63	RANGE	8.0000000
NUMBER OF VALUES NOT COUNTED	6	VARIANCE	3.5723560
		ST.DEV.	1.8900677
		(Q3-Q1)/2	1.4000000

```
   H               EACH 'H
   H               REPRESENTS
   H                  2
 H  HH             COUNT(S)
 HH HHH  H
HHHHHHH  H
HHHHHHHHHHHHHH HH
L-----------------U
```

LOCATION ESTIMATES

		ST.ERROR
MEAN	4.4079366	0.2381261
MEDIAN	4.1999998	0.2020727
MODE	4.0999999	

EACH '-' ABOVE = 0.5000
L= 1.5000
U= 10.5000

	VALUE	VALUE/S.E.		
			Q1-	2.7000000
			Q3=	5.5000000
SKEWNESS	0.93	3.00	S--	2.5178690
KURTOSIS	0.51	0.83	S+=	6.2980042

EACH '.' BELOW = 0.0750

```
          S Q                    M M                Q          S                                 M
M         - 1                    MM M               3          +                                 A
I.................................OE..E.............................................................X
N                                DD A
                                 EI N
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
1.800	1	1.6	1.6	3.300	1	1.6	30.2	4.500	3	4.8	63.5	6.400	1	1.6	88.9
2.000	3	4.8	6.3	3.500	2	3.2	33.3	4.600	1	1.6	65.1	6.600	1	1.6	90.5
2.100	1	1.6	7.9	3.700	2	3.2	36.5	4.700	2	3.2	68.3	7.500	1	1.6	92.1
2.200	2	3.2	11.1	3.800	2	3.2	39.7	4.800	2	3.2	71.4	7.800	1	1.6	93.7
2.300	1	1.6	12.7	3.900	1	1.6	41.3	4.900	2	3.2	74.6	8.200	1	1.6	95.2
2.400	1	1.6	14.3	4.000	1	1.6	42.9	5.500	1	1.6	76.2	9.100	1	1.6	96.8
2.500	3	4.8	19.0	4.100	4	6.3	49.2	5.600	2	3.2	79.4	9.300	1	1.6	98.4
2.600	2	3.2	22.2	4.200	2	3.2	52.4	6.100	1	1.6	81.0	9.800	1	1.6	100.0
2.700	2	3.2	25.4	4.300	1	1.6	54.0	6.200	3	4.8	85.7				
2.900	2	3.2	28.6	4.400	3	4.8	58.7	6.300	1	1.6	87.3				

HYDRA86 EASTERN BASIN ALL DATA

```
************
* SKP      *
************
                                         MAXIMUM         6.0000000
VARIABLE NUMBER . . . . . .      8       MINIMUM         0.0000000
NUMBER OF DISTINCT VALUES .     21       RANGE           6.0000000
NUMBER OF VALUES COUNTED. .     69       VARIANCE        3.8392117
NUMBER OF VALUES NOT COUNTED     0       ST.DEV.         1.9593906
                                         (Q3-Q1)/2       1.8000000

LOCATION ESTIMATES                            ST.ERROR
                  MEAN          1.5594202     0.2358829
                  MEDIAN        0.1000000     0.3752778
                  MODE          0.0000000
```

```
H
H
H
H                         EACH 'H'
H                        REPRESENTS
H                            4
H                         COUNT(S)
H
H     HHH
HHHH HHHHHHH
L-----------------U

EACH '-' ABOVE =        0.5000
            L=          0.0000
            U=          9.0000

                                          Q1=      0.0000000
               VALUE    VALUE/S.E.        Q3=      3.5999999
SKEWNESS        0.68          2.30        S-=     -0.3999704
KURTOSIS       -1.25         -2.13        S+=      3.5188110

EACH '.' BELOW -        0.0500
```

```
S      Q                                                        SQ
-      M M                       M                              +3                                   M
.......I.E.......................E.............................................................................M
       N D                       A                                                                    X
         I                       N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.00000	33	47.8	47.8	1.50000	1	1.4	62.3	3.60000	1	1.4	75.4	4.80000	1	1.4	97.1
0.10000	4	5.8	53.6	1.90000	2	2.9	65.2	3.80000	3	4.3	79.7	5.20000	1	1.4	98.6
0.20000	2	2.9	56.5	3.00000	1	1.4	66.7	4.00000	3	4.3	84.1	6.00000	1	1.4	100.0
0.60000	1	1.4	58.0	3.10000	1	1.4	68.1	4.30000	1	1.4	85.5				
1.10000	1	1.4	59.4	3.20000	2	2.9	71.0	4.50000	5	7.2	92.8				
1.30000	1	1.4	60.9	3.50000	2	2.9	73.9	4.60000	2	2.9	95.7				

HYDRA86 EASTERN BASIN ALL DATA

```
************
* CALCSOP  *
************
                                         MAXIMUM         9.8000002
VARIABLE NUMBER . . . . . .      7       MINIMUM         0.0000000
NUMBER OF DISTINCT VALUES .     34       RANGE           9.8000002
NUMBER OF VALUES COUNTED. .     63       VARIANCE        4.3754387
NUMBER OF VALUES NOT COUNTED     6       ST.DEV.         2.0917549
                                         (Q3-Q1)/2       1.5000000

LOCATION ESTIMATES                            ST.ERROR
                  MEAN          2.7857144     0.2635363
                  MEDIAN        2.5000000     0.1732052
                  MODE          0.0000000
```

```
    H                     EACH 'H'
   HH                    REPRESENTS
H HH H                       2
H HH H                    COUNT(S)
HHHHHH
HHHHHH  H
HHHHHHH H   HH
L-----------------U

EACH '-' ABOVE =        0.7500
            L=          0.0000
            U=         13.5000

                                          Q1-      1.1000000
               VALUE    VALUE/S.E.        Q3=      4.0999999
SKEWNESS        1.07          3.45        S--      0.6939595
KURTOSIS        1.61          2.61        S+=      4.8774695

EACH '.' BELOW =        0.1000
```

```
         S     Q                   Q       S
M        -     1          M M      3       +                              M
I.........................E..F...................................................M
N                         D A                                                 X
                          I N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.0000	8	12.7	12.7	2.1000	1	1.6	39.7	3.3000	2	3.2	68.3	4.7000	1	1.6	88.9
0.7000	2	3.2	15.9	2.2000	2	3.2	42.9	3.4000	1	1.6	69.8	5.1000	1	1.6	90.5
0.8000	1	1.6	17.5	2.3000	2	3.2	46.0	3.6000	1	1.6	71.4	6.1000	1	1.6	92.1
0.9000	2	3.2	20.6	2.4000	1	1.6	47.6	3.8000	1	1.6	73.0	6.2000	2	3.2	95.2
1.0000	1	1.6	22.2	2.5000	2	3.2	50.8	4.0000	1	1.6	74.6	6.4000	1	1.6	96.8
1.1000	2	3.2	25.4	2.6000	3	4.8	55.6	4.1000	1	1.6	76.2	9.1000	1	1.6	98.4
1.8000	4	6.3	31.7	2.7000	4	6.3	61.9	4.3000	3	4.8	81.0	9.8000	1	1.6	100.0
1.9000	1	1.6	33.3	2.9000	1	1.6	63.5	4.4000	2	3.2	84.1				
2.0000	3	4.8	38.1	3.2000	1	1.6	65.1	4.5000	2	3.2	87.3				

```
*************
* CALCPP    *
*************
                                              MAXIMUM        15.8000002
VARIABLE NUMBER . . . . . .       5           MINIMUM         1.0000000
NUMBER OF DISTINCT VALUES .      47           RANGE          14.8000002
NUMBER OF VALUES COUNTED. .      60           VARIANCE        9.3341103
NUMBER OF VALUES NOT COUNTED      9           ST.DEV.         3.0551777
                                              (Q3-Q1)/2       1.7749996

LOCATION ESTIMATES                                 ST.ERROR
                   MEAN              8.1750002    0.3944217
                   MEDIAN            7.8000002    0.2598078
                   MODE              7.8000002
```

```
             H
             H          EACH 'H'
             H          REPRESENTS
            HH             2
            HH          COUNT(S)
           HHH HH
          HHHHHHH  H
        HH HHHHHHHH HHHH
       L------------------U

EACH '-' ABOVE =      1.0000
             L=       0.0000
             U=      18.0000
```

```
                                                   Q1=    6.3500004
                       VALUE   VALUE/S.F.          Q3=    9.8999996
SKEWNESS                0.43        1.35           S-=    5.1198225
KURTOSIS                0.20        0.31           S+=   11.2301779

                       EACH '.' BELOW =      0.1500
```

```
                          S       Q               Q        S
      M                   -       1       M M     3        +                      M
      I...........................................E.E.................................A
      N                                           D A                                 X
                                                  I N
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
1.000	1	1.7	1.7	6.400	2	3.3	28.3	8.000	3	5.0	61.7	10.700	1	1.7	83.3
1.800	1	1.7	3.3	6.500	2	3.3	31.7	8.100	1	1.7	63.3	10.800	1	1.7	85.0
3.400	1	1.7	5.0	6.600	1	1.7	33.3	8.200	1	1.7	65.0	10.900	1	1.7	86.7
4.100	2	3.3	8.3	6.800	1	1.7	35.0	8.400	1	1.7	66.7	12.400	1	1.7	88.3
4.600	1	1.7	10.0	7.000	1	1.7	36.7	8.500	1	1.7	68.3	13.100	1	1.7	90.0
5.600	1	1.7	11.7	7.100	2	3.3	40.0	9.600	1	1.7	70.0	13.700	1	1.7	91.7
5.700	1	1.7	13.3	7.300	1	1.7	41.7	9.700	1	1.7	71.7	13.900	1	1.7	93.3
5.900	3	5.0	18.3	7.400	1	1.7	43.3	9.800	1	1.7	73.3	14.000	1	1.7	95.0
6.000	1	1.7	20.0	7.500	2	3.3	46.7	9.900	2	3.3	76.7	14.200	1	1.7	96.7
6.100	1	1.7	21.7	7.600	1	1.7	48.3	10.000	1	1.7	78.3	14.500	1	1.7	98.3
6.200	1	1.7	23.3	7.800	4	6.7	55.0	10.400	1	1.7	80.0	15.800	1	1.7	100.0
6.300	1	1.7	25.0	7.900	1	1.7	56.7	10.600	1	1.7	81.7				

```
************
* PERPP    *
************
                                                    MAXIMUM        86.5100021
VARIABLE NUMBER . . . . . .        6                MINIMUM         9.6899996
NUMBER OF DISTINCT VALUES .       59                RANGE          76.8199997
NUMBER OF VALUES COUNTED. .       60                VARIANCE      245.3113861
NUMBER OF VALUES NOT COUNTED       9                ST.DEV.        15.6624193
                                                    (Q3-Q1)/2       8.9225025

LOCATION ESTIMATES                                        ST.ERROR
                MEAN                63.7443390            2.0220096
                MEDIAN              63.3150024            1.3394531
                MODE                56.9599991
```

```
                     H          EACH 'H'
                    HH         REPRESENTS
                    HH              2
                    HH  H        COUNT(S)
                    HH HH H
                   HHHHHHHH
           H H  H HHHHHHHHHH
          L-------------------U

EACH '-' ABOVE =        5.0000
             L=         5.0000
             U=        95.0000
```

```
                                                                   Q1=    57.1749992
                                   VALUE    VALUE/S.E.             Q3=    75.0200043
SKEWNESS                           -1.09        -3.46              S-=    48.0819206
KURTOSIS                            2.06         3.26              S+=    79.4067612

                                          EACH '.' BELOW =          0.7500
```

```
                                                     S         Q                    Q   S
M                                                    -         M1       M           3   +           M
I......................................................................Q........E.................................A
N                                                              D        A                           X
                                                               E        N
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
9.690	1	1.7	1.7	57.480	1	1.7	28.3	63.520	1	1.7	53.3	76.530	1	1.7	78.3
15.610	1	1.7	3.3	58.170	1	1.7	30.0	63.540	1	1.7	55.0	77.730	1	1.7	80.0
33.090	1	1.7	5.0	58.240	1	1.7	31.7	63.720	1	1.7	56.7	78.030	1	1.7	81.7
34.090	1	1.7	6.7	58.310	1	1.7	33.3	64.100	1	1.7	58.3	78.880	1	1.7	83.3
42.670	1	1.7	8.3	59.200	1	1.7	35.0	66.020	1	1.7	60.0	79.590	1	1.7	85.0
46.500	1	1.7	10.0	60.560	1	1.7	36.7	66.280	1	1.7	61.7	79.970	1	1.7	86.7
48.600	1	1.7	11.7	61.590	1	1.7	38.3	66.550	1	1.7	63.3	80.590	1	1.7	88.3
50.180	1	1.7	13.3	61.640	1	1.7	40.0	68.160	1	1.7	65.0	82.600	1	1.7	90.0
53.670	1	1.7	15.0	61.880	1	1.7	41.7	70.300	1	1.7	66.7	83.580	1	1.7	91.7
54.350	1	1.7	16.7	61.960	1	1.7	43.3	71.590	1	1.7	68.3	85.710	1	1.7	93.3
55.350	1	1.7	18.3	62.680	1	1.7	45.0	73.560	1	1.7	70.0	86.030	1	1.7	95.0
55.370	1	1.7	20.0	62.830	1	1.7	46.7	73.740	1	1.7	71.7	86.210	1	1.7	96.7
56.170	1	1.7	21.7	62.930	1	1.7	48.3	74.530	1	1.7	73.3	86.300	1	1.7	98.3
56.960	2	3.3	25.0	63.250	1	1.7	50.0	74.930	1	1.7	75.0	86.510	1	1.7	100.0
57.390	1	1.7	26.7	63.380	1	1.7	51.7	75.110	1	1.7	76.7				

```
************
* PERTFP   *
************
                                             MAXIMUM       90.3099976
VARIABLE NUMBER . . . . . .          4       MINIMUM       13.4899998
NUMBER OF DISTINCT VALUES .         59       RANGE         76.8199997
NUMBER OF VALUES COUNTED. .         60       VARIANCE     245.3113251
NUMBER OF VALUES NOT COUNTED         9       ST.DEV.       15.6624174
                                             (Q3-Q1)/2      8.9225006

LOCATION ESTIMATES                                 ST.ERROR
                     MEAN            36.2556648   2.0220094
                     MEDIAN          36.6850014   1.3394531
                     MODE            43.0400009
```

```
                H                   EACH 'H'
                HH                  REPRESENTS
                HH                      2
              H HH                  COUNT(S)
            H HH HH
            HHHHHHHH
            HHHHHHHHHH H  H H
           L-----------------U

      EACH '-' ABOVE =      5.0000
                  L=       10.0000
                  U=      100.0000
```

```
                                                          Q1=   24.9799995
                                 VALUE    VALUE/S.F.      Q3=   42.8750008
              SKEWNESS           1.09         3.46        S-=   20.5932484
              KURTOSIS           2.06         3.26        S+=   51.9180832

                                 EACH '.' BELOW =         0.7500
```

```
          S     Q              Q        S
   M      -     1         M    3M       +                                                        M
   I..........................E........O.........................................................A
   N                          A        D                                                          X
                              N        E
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
13.49	1	1.7	1.7	25.07	1	1.7	26.7	36.75	1	1.7	51.7	43.04	2	3.3	78.3
13.70	1	1.7	3.3	25.47	1	1.7	28.3	37.07	1	1.7	53.3	43.83	1	1.7	80.0
13.79	1	1.7	5.0	26.26	1	1.7	30.0	37.17	1	1.7	55.0	44.63	1	1.7	81.7
13.97	1	1.7	6.7	26.44	1	1.7	31.7	37.32	1	1.7	56.7	44.65	1	1.7	83.3
14.29	1	1.7	8.3	28.41	1	1.7	33.3	38.04	1	1.7	58.3	45.65	1	1.7	85.0
16.42	1	1.7	10.0	29.70	1	1.7	35.0	38.12	1	1.7	60.0	46.33	1	1.7	86.7
17.40	1	1.7	11.7	31.84	1	1.7	36.7	38.36	1	1.7	61.7	49.82	1	1.7	88.3
19.41	1	1.7	13.3	33.45	1	1.7	38.3	38.41	1	1.7	63.3	51.40	1	1.7	90.0
20.03	1	1.7	15.0	33.72	1	1.7	40.0	39.44	1	1.7	65.0	53.50	1	1.7	91.7
20.41	1	1.7	16.7	33.98	1	1.7	41.7	40.80	1	1.7	66.7	57.33	1	1.7	93.3
21.12	1	1.7	18.3	35.90	1	1.7	43.3	41.69	1	1.7	68.3	65.91	1	1.7	95.0
21.97	1	1.7	20.0	36.28	1	1.7	45.0	41.76	1	1.7	70.0	66.91	1	1.7	96.7
22.27	1	1.7	21.7	36.46	1	1.7	46.7	41.83	1	1.7	71.7	84.39	1	1.7	98.3
23.47	1	1.7	23.3	36.48	1	1.7	48.3	42.52	1	1.7	73.3	90.31	1	1.7	100.0
24.89	1	1.7	25.0	36.62	1	1.7	50.0	42.61	1	1.7	75.0				

```
************
* NITNIT   *
************
```

VARIABLE NUMBER	4	MAXIMUM	365.0000000
NUMBER OF DISTINCT VALUES .	51	MINIMUM	130.0000000
NUMBER OF VALUES COUNTED. .	69	RANGE	235.0000000
NUMBER OF VALUES NOT COUNTED	0	VARIANCE	4694.1274414
		ST.DEV.	68.5137024
		(Q3-Q1)/2	51.0000000

```
          H                    EACH 'H'
          H         H         REPRESENTS
        H H         H             2
        HHH    H    H          COUNT(S)
        HHHH   H    H
        HHHH  HH    HH
     H  HHHHHHHHH HHHH
    L-------------------U
```

EACH '-' ABOVE = 15.0000
L= 120.0000
U= 390.0000

LOCATION ESTIMATES

		ST.ERROR
MEAN	245.9275360	8.2480812
MEDIAN	219.0000000	19.0525684
MODE	350.0000000	

	VALUE	VALUE/S.E.
SKEWNESS	0.50	1.71
KURTOSIS	-1.21	-2.05

Q1= 194.0000000
Q3= 296.0000000
S-= 177.4138336
S+= 314.4412537

EACH '.' BELOW = 2.0000

```
                         S        Q                                                    Q        S
M                        -        1          M              M                          3        +                   M      M
I........................................... E..............E.............................................................O......A
N                                            D              A                                                           D      X
                                             I              N                                                           E
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
130.	1	1.4	1.4	193.	1	1.4	24.6	220.	1	1.4	52.2	297.	1	1.4	76.8
168.	1	1.4	2.9	194.	1	1.4	26.1	221.	1	1.4	53.6	327.	1	1.4	78.3
169.	1	1.4	4.3	195.	1	1.4	27.5	222.	1	1.4	55.1	339.	1	1.4	79.7
171.	2	2.9	7.2	196.	2	2.9	30.4	238.	1	1.4	56.5	346.	1	1.4	81.2
172.	2	2.9	10.1	197.	1	1.4	31.9	244.	1	1.4	58.0	350.	4	5.8	87.0
173.	1	1.4	11.6	198.	3	4.3	36.2	265.	1	1.4	59.4	351.	3	4.3	91.3
174.	1	1.4	13.0	199.	2	2.9	39.1	268.	1	1.4	60.9	352.	1	1.4	92.8
177.	1	1.4	14.5	202.	3	4.3	43.5	269.	2	2.9	63.8	353.	1	1.4	94.2
178.	1	1.4	15.9	204.	1	1.4	44.9	272.	3	4.3	68.1	358.	1	1.4	95.7
182.	1	1.4	17.4	205.	1	1.4	46.4	278.	1	1.4	69.6	361.	1	1.4	97.1
184.	2	2.9	20.3	206.	1	1.4	47.8	279.	1	1.4	71.0	363.	1	1.4	98.6
188.	1	1.4	21.7	212.	1	1.4	49.3	285.	2	2.9	73.9	365.	1	1.4	100.0
192.	1	1.4	23.2	219.	1	1.4	50.7	296.	1	1.4	75.4				

HYDRA86 EASTERN BASIN ALL DATA

```
************
* NH3      *
************
```

VARIABLE NUMBER	5	MAXIMUM	37.7000008
NUMBER OF DISTINCT VALUES .	55	MINIMUM	1.5000000
NUMBER OF VALUES COUNTED. .	68	RANGE	36.2000008
NUMBER OF VALUES NOT COUNTED	1	VARIANCE	79.9485397
		ST.DEV.	8.9413948
		(Q3-Q1)/2	4.2249999

LOCATION ESTIMATES

		ST.ERROR
MEAN	10.3838243	1.0843034
MEDIAN	7.1999998	0.9814959
MODE	3.5000000	

```
H
H
H                     EACH 'H'
H H                   REPRESENTS
HHH                       2
HHH H                  COUNT(S)
HHHHH
HHHHHH  HH
HHHHHH  HHHH H HHH
L-----------------U
```

EACH '-' ABOVE = 2.0000
L= 2.0000
U= 38.0000

	VALUE	VALUE/S.E.		
			Q1=	4.0500002
			Q3=	12.5000000
SKEWNESS	1.44	4.85	S-=	1.4424295
KURTOSIS	1.24	2.09	S+=	19.3252201

EACH '.' BELOW = 0.3000

```
S     Q           Q            S                                        M
M   M 1     M      M    3            +                                        A
I.....D.........F.........F.....................................................A
N     D     D      A                                                           X
      E     I      N
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
1.500	3	4.4	4.4	5.200	1	1.5	33.8	8.100	1	1.5	57.4	19.500	1	1.5	82.4
1.800	1	1.5	5.9	5.300	1	1.5	35.3	8.300	2	2.9	60.3	19.600	1	1.5	83.8
2.400	1	1.5	7.4	5.400	1	1.5	36.8	9.200	1	1.5	61.8	20.100	1	1.5	85.3
2.500	3	4.4	11.8	5.700	1	1.5	38.2	9.600	1	1.5	63.2	21.700	1	1.5	86.8
2.700	1	1.5	13.2	5.800	1	1.5	39.7	10.000	1	1.5	64.7	21.800	1	1.5	88.2
3.000	1	1.5	14.7	6.100	1	1.5	41.2	10.100	1	1.5	66.2	22.800	1	1.5	89.7
3.300	1	1.5	16.2	6.200	1	1.5	42.6	10.800	2	2.9	69.1	23.800	1	1.5	91.2
3.500	4	5.9	22.1	6.300	1	1.5	44.1	11.100	1	1.5	70.6	25.000	1	1.5	92.6
4.000	2	2.9	25.0	6.500	2	2.9	47.1	11.300	1	1.5	72.1	29.200	1	1.5	94.1
4.100	1	1.5	26.5	6.900	1	1.5	48.5	11.900	1	1.5	73.5	33.100	1	1.5	95.6
4.200	1	1.5	27.9	7.200	2	2.9	51.5	12.000	1	1.5	75.0	33.800	1	1.5	97.1
4.500	1	1.5	29.4	7.300	1	1.5	52.9	13.000	1	1.5	76.5	34.400	1	1.5	98.5
4.800	1	1.5	30.9	7.500	1	1.5	54.4	14.000	2	2.9	79.4	37.700	1	1.5	100.0
4.900	1	1.5	32.4	8.000	1	1.5	55.9	18.300	1	1.5	80.9				

HYDRA86 EASTERN BASIN ALL DATA

```
************
* NKJELCOMP *
************
```

VARIABLE NUMBER	2	MAXIMUM	0.3000000
NUMBER OF DISTINCT VALUES .	8	MINIMUM	0.0600000
NUMBER OF VALUES COUNTED. .	8	RANGE	0.2400000
NUMBER OF VALUES NOT COUNTED	61	VARIANCE	0.0046982
		ST.DEV.	0.0685435
		(Q3-Q1)/2	0.0300000

LOCATION ESTIMATES

		ST.ERROR
MEAN	0.1912500	0.0242338
MEDIAN	0.1950000	0.0202071
MODE	NOT UNIQUE	

```
                      EACH 'H'
                      REPRESENTS
                          1
                       COUNT(S)
H      HHHHHH   H
L-----------------U
```

EACH '-' ABOVE = 0.0150
L= 0.0450
U= 0.3150

	VALUE	VALUE/S.E.		
			Q1=	0.1550000
			Q3=	0.2250000
SKEWNESS	-0.41	-0.48	S-=	0.1227065
KURTOSIS	-0.15	-0.09	S+=	0.2597935

EACH '.' BELOW = 0.0020

```
                          S          Q              Q     S
M                         -          1         M M    3     +                M
I..............................................F.F..........................A
N                                              A D                          X
                                               N I
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
0.06000	1	12.5	12.5	0.17000	1	12.5	37.5	0.20000	1	12.5	62.5	0.23000	1	12.5	87.5
0.16000	1	12.5	25.0	0.19000	1	12.5	50.0	0.22000	1	12.5	75.0	0.30000	1	12.5	100.0

```
************
* SRS      *
************
                                                MAXIMUM      3026.0000000
VARIABLF NUMBER . . . . . .         6           MINIMUM       297.0000000
NUMBER OF DISTINCT VALUES .        63           RANGE        2779.0000000
NUMBER OF VALUES COUNTED. .        69           VARIANCF   283182.9375000
NUMBER OF VALUES NOT COUNTED        0           ST.DEV.       532.1493530
                                                (Q3-Q1)/2     283.0000000

LOCATION ESTIMATES                                  ST.ERROR
                    MEAN            955.2028809     64.0632553
                    MEDIAN          771.0000000     33.7750092
                    MODE            NOT UNIQUF
```

```
     H
     H                      EACH 'H'
     H                      REPRFSENTS
    HH                          3
    HHH                     COUNT(S)
    HHH
    HHH H  H
   HHHHHHHHH H   H
  L------------------U

EACH '-' ABOVF -     200.0000
             L=        0.0000
             U=     3600.0000

                                          Q1-   614.0000000
                  VALUF    VALUE/S.F.     Q3= 1180.0000000
SKEWNESS           1.56        5.27       S-=  423.0535278
KURTOSIS           2.34        3.97       S+= 1487.3522949

EACH '.' BELOW =       25.0000
```

```
       S        Q                         Q           S
  M    -        1    M    M               3           +                                           M
  I.....................E.....F.......................................................................A
  N                      D    A                                                                   X
                         I    N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
297.	1	1.4	1.4	614.	1	1.4	26.1	771.	2	2.9	52.2	1205.	2	2.9	78.3
354.	1	1.4	2.9	624.	1	1.4	27.5	779.	1	1.4	53.6	1278.	1	1.4	79.7
455.	1	1.4	4.3	649.	1	1.4	29.0	794.	1	1.4	55.1	1351.	1	1.4	81.2
461.	1	1.4	5.8	654.	1	1.4	30.4	800.	1	1.4	56.5	1415.	1	1.4	82.6
463.	1	1.4	7.2	659.	1	1.4	31.9	814.	1	1.4	58.0	1463.	1	1.4	84.1
474.	1	1.4	8.7	683.	1	1.4	33.3	826.	1	1.4	59.4	1590.	1	1.4	85.5
480.	1	1.4	10.1	692.	1	1.4	34.8	829.	1	1.4	60.9	1770.	1	1.4	87.0
487.	1	1.4	11.6	697.	2	2.9	37.7	846.	1	1.4	62.3	1795.	1	1.4	88.4
503.	1	1.4	13.0	707.	1	1.4	39.1	878.	1	1.4	63.8	1805.	2	2.9	91.3
513.	2	2.9	15.9	712.	1	1.4	40.6	900.	1	1.4	65.2	1854.	1	1.4	92.8
514.	1	1.4	17.4	722.	1	1.4	42.0	914.	2	2.9	68.1	1868.	1	1.4	94.2
525.	1	1.4	18.8	728.	1	1.4	43.5	975.	1	1.4	69.6	1923.	1	1.4	95.7
537.	1	1.4	20.3	732.	1	1.4	44.9	966.	1	1.4	71.0	1937.	1	1.4	97.1
546.	1	1.4	21.7	741.	1	1.4	46.4	1073.	1	1.4	72.5	2390.	1	1.4	98.6
570.	1	1.4	23.2	769.	1	1.4	47.8	1122.	1	1.4	73.9	3026.	1	1.4	100.0
585.	1	1.4	24.6	770.	1	1.4	49.3	1180.	1	1.4	75.4				

```
************
* SECCHI   *
************
```

VARIABLE NUMBER	9	MAXIMUM	4.5000000
NUMBER OF DISTINCT VALUES .	4	MINIMUM	2.5000000
NUMBER OF VALUES COUNTED. .	4	RANGE	2.0000000
NUMBER OF VALUES NOT COUNTED	65	VARIANCE	0.8366666
		ST.DEV.	0.9146948
		(Q3-Q1)/2	0.5500000

EACH 'H' REPRESENTS 1 COUNT(S)

LOCATION ESTIMATES

		ST.ERROR
MEAN	3.1500001	0.4573474
MEDIAN	2.8000002	0.5773506
MODE	NOT UNIQUE	

```
 HH H          H
L-----------------U
```

EACH '-' ABOVE = 0.1500
L= 2.7500
U= 4.9500

	VALUE	VALUE/S.E.		
			Q1=	2.6000001
			Q3=	3.7000000
SKEWNESS	0.91	0.74	S-=	2.2353053
KURTOSIS	-1.31	-0.54	S+=	4.0646949

EACH '.' BELOW = 0.0200

```
S          Q                                                     Q         S
-    M     1       M         M                                   3         +                    M
.............I...............E.................F.....................................................A
             N               D                 A                                                X
                             I                 N
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
2.500	1	25.0	25.0	2.700	1	25.0	50.0	2.900	1	25.0	75.0	4.500	1	25.0	100.0

```
************
* TURBID   *
************
```

VARIABLE NUMBER	10	MAXIMUM	8.8000002
NUMBER OF DISTINCT VALUES .	38	MINIMUM	0.4000000
NUMBER OF VALUES COUNTED. .	69	RANGE	8.4000006
NUMBER OF VALUES NOT COUNTED	0	VARIANCE	4.6677408
		ST.DEV.	2.1604955
		(Q3-Q1)/2	1.2500000

EACH 'H' REPRESENTS 3 COUNT(S)

LOCATION ESTIMATES

		ST.ERROR
MEAN	2.5405800	0.2600931
MEDIAN	1.5000000	0.4618804
MODE	0.9000000	

```
 H
 H
 H
 H
 H
 H
 HH   H
 HH   HH
 HHHHHHHH HHHHHHHH
L-----------------U
```

EACH '-' ABOVE = 0.5000
L= 0.5000
U= 9.5000

	VALUE	VALUE/S.E.		
			Q1-	0.9000000
			Q3=	3.4000001
SKEWNESS	1.23	4.18	S-=	0.3800845
KURTOSIS	0.65	1.11	S+=	4.7010756

EACH '.' BELOW = 0.0750

```
S     Q                            Q                S
-M    M       M            M       3                +                                   M
.I.....O.......F.............F...............................................................A
 N    D       D            A                                                            X
      E       I            N
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
0.4000	1	1.4	1.4	1.4000	1	1.4	47.8	3.2000	2	2.9	69.6	6.0000	1	1.4	89.9
0.5000	1	1.4	2.9	1.5000	2	2.9	50.7	3.3000	1	1.4	71.0	6.3000	1	1.4	91.3
0.6000	4	5.8	8.7	1.8000	1	1.4	52.2	3.4000	3	4.3	75.4	6.6000	1	1.4	92.8
0.7000	5	7.2	15.9	2.0000	2	2.9	55.1	3.6000	1	1.4	76.8	6.7000	1	1.4	94.2
0.8000	4	5.8	21.7	2.2000	2	2.9	58.0	3.8000	2	2.9	79.7	7.3000	1	1.4	95.7
0.9000	8	11.6	33.3	2.3000	1	1.4	59.4	3.9000	1	1.4	81.2	8.0000	1	1.4	97.1
1.0000	4	5.8	39.1	2.7000	1	1.4	60.9	4.1000	2	2.9	84.1	8.3000	1	1.4	98.6
1.1000	1	1.4	40.6	2.9000	1	1.4	62.3	4.3000	1	1.4	85.5	8.8000	1	1.4	100.0
1.2000	2	2.9	43.5	3.0000	1	1.4	63.8	5.2000	1	1.4	87.0				
1.3000	2	2.9	46.4	3.1000	2	2.9	66.7	5.6000	1	1.4	88.4				

```
************
* CHLACORR *
************
                                               MAXIMUM          7.1599998
VARIABLE NUMBER . . . . . . .        2         MINIMUM          0.1900000
NUMBER OF DISTINCT VALUES .         61         RANGE            6.9699998
NUMBER OF VALUES COUNTED. .         69         VARIANCE         3.2189572
NUMBER OF VALUES NOT COUNTED         0         ST.DEV.          1.7941452
                                               (Q3-Q1)/2        0.8800001

LOCATION ESTIMATES                                        ST.ERROR
                          MEAN             1.8730435      0.2159897
                          MEDIAN           1.1600000      0.1241304
                          MODE             NOT UNIQUE
```

```
  H                    EACH 'H'
  H                    REPRESENTS
   HH                     3
   HH                  COUNT(S)
  HHH
  HHH HH
  HHHHHHHH H HHHH
L-----------------U

EACH '-' ABOVE =      0.5000
             L=       0.0000
             U=       9.0000
```

```
                                                        Q1=    0.7000000
                             VALUE   VALUE/S.E.         Q3=    2.4600000
              SKEWNESS        1.66        5.64          S-=    0.0788983
              KURTOSIS        1.86        3.16          S+=    3.6671889

                             EACH '.' BELOW =               0.0750
```

```
S        Q              Q           S
- M      1    M    M    3           +                                       M
..I...........E........E..........................................................A
  N           D    A                                                        X
              I    N
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
0.1900	1	1.4	1.4	0.7300	1	1.4	30.4	1.3500	3	4.3	58.0	2.9600	1	1.4	82.6
0.2400	1	1.4	2.9	0.7400	1	1.4	31.9	1.3600	1	1.4	59.4	3.2300	1	1.4	84.1
0.2800	1	1.4	4.3	0.7700	2	2.9	34.8	1.3800	2	2.9	62.3	3.2700	1	1.4	85.5
0.3100	1	1.4	5.8	0.7900	1	1.4	36.2	1.3900	1	1.4	63.8	3.3400	1	1.4	87.0
0.3500	1	1.4	7.2	0.8300	1	1.4	37.7	1.5700	1	1.4	65.2	3.5400	1	1.4	88.4
0.4000	1	1.4	8.7	0.9100	1	1.4	39.1	1.5900	1	1.4	66.7	4.6500	1	1.4	89.9
0.4300	1	1.4	10.1	0.9500	1	1.4	40.6	1.9000	1	1.4	68.1	4.9700	1	1.4	91.3
0.4600	1	1.4	11.6	0.9900	1	1.4	42.0	2.0700	1	1.4	69.6	5.6100	1	1.4	92.8
0.6000	1	1.4	13.0	1.0100	1	1.4	43.5	2.0900	1	1.4	71.0	6.4400	1	1.4	94.2
0.6100	1	1.4	14.5	1.0300	1	1.4	44.9	2.1500	1	1.4	72.5	6.4600	1	1.4	95.7
0.6200	1	1.4	15.9	1.0500	1	1.4	46.4	2.3600	1	1.4	73.9	6.8400	1	1.4	97.1
0.6300	1	1.4	17.4	1.1000	1	1.4	47.8	2.4600	1	1.4	75.4	7.0200	1	1.4	98.6
0.6700	3	4.3	21.7	1.1100	1	1.4	49.3	2.5100	1	1.4	76.8	7.1600	1	1.4	100.0
0.6900	1	1.4	23.2	1.1600	1	1.4	50.7	2.6700	1	1.4	78.3				
0.7000	2	2.9	26.1	1.2200	1	1.4	52.2	2.8400	1	1.4	79.7				
0.7200	2	2.9	29.0	1.2700	1	1.4	53.6	2.9000	1	1.4	81.2				

****
* PHEO *
****

		MAXIMUM	8.9300003
VARIABLE NUMBER	3	MINIMUM	0.2000000
NUMBER OF DISTINCT VALUES .	58	RANGE	8.7300005
NUMBER OF VALUES COUNTED. .	69	VARIANCE	3.4697511
NUMBER OF VALUES NOT COUNTED	0	ST.DEV.	1.8627268
		(Q3-Q1)/2	0.8550000

H
H EACH 'H'
H REPRESENTS
H 3
HH COUNT(S)
HHH
HHHHHH H
HHHHHH HH HH H H
L----------U

LOCATION ESTIMATES

		ST.ERROR
MEAN	1.8469567	0.2242460
MEDIAN	1.1400000	0.1818634
MODE	NOT UNIQUE	

EACH '-' ABOVE = 0.5000
L= 0.0000
U= 9.0000

Q1= 0.6200000
Q3= 2.3299999

	VALUE	VALUE/S.E.
SKEWNESS	1.89	6.39
KURTOSIS	3.23	5.48

S= -0.0157701
S+= 3.7096837

EACH '.' BELOW = 0.0750

```
S       Q                       Q                       S
- M     1       M       M       3                       +                                                               M
...I.....F.....E.....................................................................................A
   N            D       A                                                                           X
                I       N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.2000	1	1.4	1.4	0.6800	2	2.9	30.4	1.3900	1	1.4	60.9	2.7700	1	1.4	82.6
0.2600	1	1.4	2.9	0.7100	2	2.9	33.3	1.5100	1	1.4	62.3	2.7900	1	1.4	84.1
0.3000	1	1.4	4.3	0.7200	1	1.4	34.8	1.5200	1	1.4	63.8	3.6900	1	1.4	85.5
0.3300	1	1.4	5.8	0.7300	3	4.3	39.1	1.7900	1	1.4	65.2	4.0100	1	1.4	87.0
0.3800	1	1.4	7.2	0.7600	1	1.4	40.6	1.8500	1	1.4	66.7	4.0900	1	1.4	88.4
0.4600	3	4.3	11.6	0.8300	1	1.4	42.0	1.9600	1	1.4	68.1	4.2400	1	1.4	89.9
0.4900	1	1.4	13.0	0.8800	2	2.9	44.9	1.9900	1	1.4	69.6	4.3700	1	1.4	91.3
0.5100	1	1.4	14.5	1.0200	1	1.4	46.4	2.0300	1	1.4	71.0	4.4300	1	1.4	92.8
0.5200	1	1.4	15.9	1.0300	1	1.4	47.8	2.2000	1	1.4	72.5	5.9400	1	1.4	94.2
0.5300	1	1.4	17.4	1.0800	1	1.4	49.3	2.2900	1	1.4	73.9	6.3300	1	1.4	95.7
0.5700	2	2.9	20.3	1.1400	1	1.4	50.7	2.3300	1	1.4	75.4	7.1200	1	1.4	97.1
0.5800	2	2.9	23.2	1.1900	1	1.4	52.2	2.4600	1	1.4	76.8	7.2600	1	1.4	98.6
0.6000	1	1.4	24.6	1.2500	2	2.9	55.1	2.5900	1	1.4	78.3	8.9300	1	1.4	100.0
0.6200	1	1.4	26.1	1.3200	1	1.4	56.5	2.7000	1	1.4	79.7				
0.6500	1	1.4	27.5	1.3600	2	2.9	59.4	2.7500	1	1.4	81.2				

****
* TSS *
****

		MAXIMUM	9.5299997
VARIABLE NUMBER	11	MINIMUM	0.7400000
NUMBER OF DISTINCT VALUES .	66	RANGE	8.7900000
NUMBER OF VALUES COUNTED. .	69	VARIANCE	4.1278313
NUMBER OF VALUES NOT COUNTED	0	ST.DEV.	2.0304756
		(Q3-Q1)/2	1.0450000

```
H
H
H                    EACH 'H'
HH                   REPRESENTS
HH                       2
HHH                  COUNT(S)
HHHHHH
HHHHHH      H
HHHHHHHHHH HHHH  H
L------------------U
```

EACH '-' ABOVE = 0.5000
L= 0.5000
U= 9.5000

LOCATION ESTIMATES

		ST.ERROR
MEAN	2.7547824	0.2444406
MEDIAN	1.8900000	0.2338270
MODE	NOT UNIQUE	

	VALUE	VALUE/S.E.
SKEWNESS	1.42	4.80
KURTOSIS	1.16	1.97

Q1= 1.3300000
Q3= 3.4200001
S-= 0.7243068
S+= 4.7852583

EACH '.' BELOW = 0.0750

```
S       Q                       Q               S
M       1       M       M       3               +                                                       M
I.............E...........E.....................................................................................A
N               D       A                                                                               X
                I       N
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
0.7400	1	1.4	1.4	1.3300	1	1.4	26.1	2.1700	1	1.4	53.6	3.8100	1	1.4	79.7
0.7800	1	1.4	2.9	1.3700	1	1.4	27.5	2.1500	1	1.4	55.1	4.0100	1	1.4	81.2
0.9100	1	1.4	4.3	1.3800	1	1.4	29.0	2.2000	1	1.4	56.5	4.2500	1	1.4	82.6
0.9400	1	1.4	5.8	1.4100	2	2.9	31.9	2.2300	1	1.4	58.0	4.7700	1	1.4	84.1
0.9700	1	1.4	7.2	1.4400	1	1.4	33.3	2.2800	1	1.4	59.4	4.8500	1	1.4	85.5
0.9900	1	1.4	8.7	1.5200	1	1.4	34.8	2.4000	1	1.4	60.9	5.1800	1	1.4	87.0
1.0100	1	1.4	10.1	1.5500	1	1.4	36.2	2.7100	2	2.9	63.8	6.1900	1	1.4	88.4
1.0200	1	1.4	11.6	1.5700	1	1.4	37.7	2.8200	1	1.4	65.2	6.2600	1	1.4	89.9
1.0800	1	1.4	13.0	1.5800	1	1.4	39.1	2.8300	1	1.4	66.7	6.7500	1	1.4	91.3
1.1200	1	1.4	14.5	1.5900	1	1.4	40.6	2.9200	1	1.4	68.1	6.8200	1	1.4	92.8
1.1300	1	1.4	15.9	1.6500	1	1.4	42.0	3.0200	1	1.4	69.6	6.8400	1	1.4	94.2
1.1400	1	1.4	17.4	1.7000	2	2.9	44.9	3.0600	1	1.4	71.0	7.0900	1	1.4	95.7
1.1500	1	1.4	18.8	1.8200	1	1.4	46.4	3.0700	1	1.4	72.5	7.2800	1	1.4	97.1
1.2100	1	1.4	20.3	1.8300	1	1.4	47.8	3.2400	1	1.4	73.9	7.6300	1	1.4	98.6
1.2400	1	1.4	21.7	1.8500	1	1.4	49.3	3.4200	1	1.4	75.4	9.5300	1	1.4	100.0
1.2600	1	1.4	23.2	1.8900	1	1.4	50.7	3.4800	1	1.4	76.8				
1.2700	1	1.4	24.6	2.0300	1	1.4	52.2	3.5800	1	1.4	78.3				

```
 ************
 * RS       *
 ************
                                           MAXIMUM        8.2100000
VARIABLE NUMBER . . . . . .        12      MINIMUM        0.2700000
NUMBER OF DISTINCT VALUES .        62      RANGE          7.9400001          HH
NUMBER OF VALUES COUNTED. .        69      VARIANCE       3.5828588          HH                  EACH 'H'
NUMBER OF VALUES NOT COUNTED        0      ST.DEV.        1.8928441          HH                  REPRESENTS
                                           (Q3-Q1)/2      1.1050000          HH                      2
                                                                             HHH                 COUNT(S)
LOCATION ESTIMATES                             ST.ERROR                      HHHHH
             MEAN           1.9921743      0.2278717                         HHHHHH    H
             MEDIAN         1.0800000      0.2107329                         HHHHHHHHHHHHHH  H
             MODE           0.4000000                                        L-----------------U

                                                                   EACH '-' ABOVE =       0.5000
                                                                               L=         0.0000
                                                                               U=         9.0000

                                                                                          Q1-    0.5200000
                                                                     VALUE  VALUE/S.F.    Q3=    2.7300000
                                                      SKEWNESS        1.33       4.52     S-=    0.0993302
                                                      KURTOSIS        0.90       1.53     S+=    3.8850183

                                                                   EACH '.' BELOW =       0.0750
       S    Q                          Q         S
       -  MM 1      M       M          3         +                                                     M
       ...IO.........E..........E..........................................................................A
          ND        D       A                                                                          X
           E        I       N
```

		PERCENTS				PERCENTS				PERCENTS				PERCENTS	
VALUE	COUNT	CELL	CUM	VALUE	COUNT	CELL	CUM	VALUE	COUNT	CELL	CUM	VALUE	COUNT	CELL	CUM
0.2700	1	1.4	1.4	0.6800	1	1.4	31.9	1.4600	1	1.4	56.5	3.3000	1	1.4	81.2
0.2800	1	1.4	2.9	0.6900	1	1.4	33.3	1.5300	1	1.4	58.0	3.6000	1	1.4	82.6
0.3100	1	1.4	4.3	0.7300	1	1.4	34.8	1.6400	2	2.9	60.9	3.9700	1	1.4	84.1
0.3600	2	2.9	7.2	0.7500	1	1.4	36.2	1.9500	1	1.4	62.3	4.1600	1	1.4	85.5
0.4000	3	4.3	11.6	0.8100	1	1.4	37.7	1.9900	1	1.4	63.8	4.3900	1	1.4	87.0
0.4100	1	1.4	13.0	0.8500	1	1.4	39.1	2.1300	1	1.4	65.2	4.8700	1	1.4	88.4
0.4200	1	1.4	14.5	0.9100	1	1.4	40.6	2.2200	1	1.4	66.7	5.2000	1	1.4	89.9
0.4300	1	1.4	15.9	0.9800	2	2.9	43.5	2.2300	1	1.4	68.1	5.5600	1.	1.4	91.3
0.4400	1	1.4	17.4	0.9900	1	1.4	44.9	2.3000	1	1.4	69.6	5.7600	1	1.4	92.8
0.4500	1	1.4	18.8	1.0100	1	1.4	46.4	2.3500	1	1.4	71.0	5.7800	1	1.4	94.2
0.4700	1	1.4	20.3	1.0300	1	1.4	47.8	2.4100	1	1.4	72.5	5.9400	1	1.4	95.7
0.5000	2	2.9	23.2	1.0600	1	1.4	49.3	2.7200	1	1.4	73.9	6.0300	1	1.4	97.1
0.5200	2	2.9	26.1	1.0800	1	1.4	50.7	2.7300	1	1.4	75.4	6.5500	1	1.4	98.6
0.5700	1	1.4	27.5	1.3700	1	1.4	52.2	2.8500	1	1.4	76.8	8.2100	1	1.4	100.0
0.6400	1	1.4	29.0	1.3800	1	1.4	53.6	2.9400	1	1.4	78.3				
0.6700	1	1.4	30.4	1.4000	1	1.4	55.1	3.0300	1	1.4	79.7				

```
************
* VS       *
************
```

VARIABLE NUMBER	13	MAXIMUM	1.5200000
NUMBER OF DISTINCT VALUES .	44	MINIMUM	0.3300000
NUMBER OF VALUES COUNTED. .	69	RANGE	1.1899999
NUMBER OF VALUES NOT COUNTED	0	VARIANCE	0.0653333
		ST.DEV.	0.2556037
		(Q3-Q1)/2	0.1800000

LOCATION ESTIMATES

		ST.ERROR
MEAN	0.7630435	0.0307711
MEDIAN	0.7200000	0.0707073
MODE	0.6900000	

```
        H                  EACH 'H'
        H                  REPRESENTS
        HH                     2
      H HH                 COUNT(S)
     HHHHHH H
     HHHHHHHH H  H
    HHHHHHHHHHH HH  H
  L------------------U
```

EACH '-' ABOVE = 0.0750
L= 0.2250
U= 1.5750

	VALUE	VALUE/S.E.		
			Q1-	0.5500000
			Q3=	0.9100000
SKEWNESS	0.77	2.61	S-=	0.5074397
KURTOSIS	0.20	0.34	S+=	1.0186472

EACH '.' BELOW - 0.0100

```
                    S   Q                                       Q          S
 M                  -   1                M  M   M               3          +                                          M
 I.......................................O..E...E.................................................................A
 N                                       D  D   A                                                                  X
                                         E  I   N
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
0.3300	1	1.4	1.4	0.5500	1	1.4	26.1	0.7600	3	4.3	60.9	0.9700	2	2.9	82.6
0.4100	1	1.4	2.9	0.6000	1	1.4	27.5	0.7800	1	1.4	62.3	1.0100	1	1.4	84.1
0.4200	1	1.4	4.3	0.6100	1	1.4	29.0	0.7900	2	2.9	65.2	1.0200	1	1.4	85.5
0.4300	1	1.4	5.8	0.6200	1	1.4	30.4	0.8000	1	1.4	66.7	1.0600	2	2.9	88.4
0.4500	2	2.9	8.7	0.6400	1	1.4	31.9	0.8200	2	2.9	69.6	1.0800	1	1.4	89.9
0.4700	2	2.9	11.6	0.6500	3	4.3	36.2	0.8300	1	1.4	71.0	1.1200	1	1.4	91.3
0.4800	2	2.9	14.5	0.6900	5	7.2	43.5	0.8500	1	1.4	72.5	1.2500	1	1.4	92.8
0.4900	2	2.9	17.4	0.7100	1	1.4	44.9	0.9000	1	1.4	73.9	1.2600	1	1.4	94.2
0.5100	2	2.9	20.3	0.7200	4	5.8	50.7	0.9100	1	1.4	75.4	1.2900	1	1.4	95.7
0.5300	1	1.4	21.7	0.7400	2	2.9	53.6	0.9400	1	1.4	76.8	1.3200	2	2.9	98.6
0.5400	2	2.9	24.6	0.7500	2	2.9	56.5	0.9500	2	2.9	79.7	1.5200	1	1.4	100.0

HYDRA86 EASTERN BASIN ALL DATA


```
************
* PERVS    *
************
```

VARIABLE NUMBER	14	MAXIMUM	71.5000000
NUMBER OF DISTINCT VALUES .	69	MINIMUM	13.1599998
NUMBER OF VALUES COUNTED. .	69	RANGE	58.3400002
NUMBER OF VALUES NOT COUNTED	0	VARIANCE	374.7427791
		ST.DEV.	19.3582611
		(Q3-Q1)/2	18.0949993

LOCATION ESTIMATES

		ST.ERROR
MEAN	38.0204353	2.3304608
MEDIAN	35.4599991	5.0258360
MODE	NOT UNIQUE	

```
H                  EACH 'H'
H                  REPRESENTS
H                      2
HH H   H           COUNT(S)
HHH H   HHHH
HHH HHHHHHHH
HHH HHHHHHHHH
L-----------------U
```

EACH '-' ABOVE =	5.0000
L=	0.0000
U=	90.0000

	VALUE	VALUE/S.E.		
			Q1-	17.7600002
			Q3=	53.9500008
SKEWNESS	0.19	0.63	S-=	18.6621742
KURTOSIS	-1.49	-2.53	S+=	57.3786964

EACH '.' BELOW = 0.5000

```
         Q S                                           Q      S
M        1 -                       M   M               3      +                            M
I.................................E....E...........................................A
N                                  D   A                                                     X
                                   I   N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
13.16	1	1.4	1.4
13.85	1	1.4	2.9
14.15	1	1.4	4.3
14.23	1	1.4	5.8
14.37	1	1.4	7.2
14.95	1	1.4	8.7
15.13	1	1.4	10.1
15.25	1	1.4	11.6
15.29	1	1.4	13.0
15.54	1	1.4	14.5
16.33	1	1.4	15.9
16.64	1	1.4	17.4
16.77	1	1.4	18.8
16.93	1	1.4	20.3
17.32	1	1.4	21.7
17.57	1	1.4	23.2
17.71	1	1.4	24.6
17.76	1	1.4	26.1
18.48	1	1.4	27.5
20.18	1	1.4	29.0
20.28	1	1.4	30.4
20.45	1	1.4	31.9
20.88	1	1.4	33.3
21.28	1	1.4	34.8
21.32	1	1.4	36.2
22.46	1	1.4	37.7
22.65	1	1.4	39.1
30.51	1	1.4	40.6
31.52	1	1.4	42.0
31.77	1	1.4	43.5
32.59	1	1.4	44.9
33.95	1	1.4	46.4
34.71	1	1.4	47.8
34.80	1	1.4	49.3
35.46	1	1.4	50.7
36.32	1	1.4	52.2
37.87	1	1.4	53.6
38.97	1	1.4	55.1
40.13	1	1.4	56.5
40.98	1	1.4	58.0
42.35	1	1.4	59.4
47.92	1	1.4	60.9
48.76	1	1.4	62.3
49.19	1	1.4	63.8
51.62	1	1.4	65.2
51.82	1	1.4	66.7
52.12	1	1.4	68.1
52.90	1	1.4	69.6
53.11	1	1.4	71.0
53.85	1	1.4	72.5
53.94	1	1.4	73.9
53.95	1	1.4	75.4
56.05	1	1.4	76.8
56.58	1	1.4	78.3
57.14	1	1.4	79.7
59.41	1	1.4	81.2
59.75	1	1.4	82.6
61.54	1	1.4	84.1
61.90	1	1.4	85.5
64.57	1	1.4	87.0
64.76	1	1.4	88.4
64.77	1	1.4	89.9
65.80	1	1.4	91.3
66.12	1	1.4	92.8
66.82	1	1.4	94.2
67.45	1	1.4	95.7
67.87	1	1.4	97.1
69.34	1	1.4	98.6
71.50	1	1.4	100.0

HYDRA36 EASTERN BASIN ALL DATA

```
************
* CONDCORR *
************
                                                  MAXIMUM        288.0000000
VARIABLE NUMBER . . . . . . .       8             MINIMUM        263.0000000
NUMBER OF DISTINCT VALUES .        21             RANGE           25.0000000
NUMBER OF VALUES COUNTED. .        69             VARIANCE        37.2395554
NUMBER OF VALUES NOT COUNTED        0             ST.DEV.          6.1024222
                                                  (Q3-Q1)/2        4.5000000

LOCATION ESTIMATES                                   ST.ERROR
                    MEAN         275.2318726       0.7346454
                    MEDIAN       274.0000000       1.1547011
                    MODE         272.0000000
```

```
                 H                   EACH 'H'
                 H                   REPRESENTS
                 H                       2
               H H H                 COUNT(S)
               HHH H HHH
             HHHHHHH HHH  HH
           H HHHHHHHHHHHH HH
          L-----------------U

EACH '-' ABOVE =      1.5000
             L=     262.5000
             U=     289.5000

                                          Q1-  271.0000000
                 VALUE   VALUE/S.E.       Q3=  280.0000000
SKEWNESS          0.33        1.13        S-=  269.1294556
KURTOSIS         -0.74       -1.26        S+=  281.3342696

EACH '.' BELOW =      0.2000
```

```
                                  S       Q                                Q      S
M                                 -       1    M         M     M           3      +                                M
I.........................................O.........E.....E.......................................................A
N                                              D         D     A                                                   X
                                               E         I     N
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
263.	1	1.4	1.4	271.	5	7.2	30.4	277.	1	1.4	63.8	286.	4	5.8	95.7
264.	1	1.4	2.9	272.	7	10.1	40.6	278.	4	5.8	69.6	287.	2	2.9	98.6
267.	3	4.3	7.2	273.	4	5.8	46.4	279.	2	2.9	72.5	288.	1	1.4	100.0
268.	4	5.8	13.0	274.	3	4.3	50.7	280.	5	7.2	79.7				
269.	3	4.3	17.4	275.	6	8.7	59.4	282.	5	7.2	87.0				
270.	4	5.8	23.2	276.	2	2.9	62.3	283.	2	2.9	89.9				

HYDRA36 EASTERN BASIN ALL DATA

```
************
* CL       *
************
                                                  MAXIMUM         16.2999992
VARIABLE NUMBER . . . . . . .       7             MINIMUM         14.3000002
NUMBER OF DISTINCT VALUES . .      14             RANGE            1.9999990
NUMBER OF VALUES COUNTED. .        69             VARIANCE         0.0937894
NUMBER OF VALUES NOT COUNTED        0             ST.DEV.          0.3062506
                                                  (Q3-Q1)/2        0.1500001

LOCATION ESTIMATES                                   ST.ERROR
                    MEAN          15.0275364       0.0368687
                    MEDIAN        15.1000004       0.0288676
                    MODE          15.1999998
```

```
           H
           H                         EACH 'H'
           H                         REPRESENTS
           HH                            3
         H HH                        COUNT(S)
         HHHH
         HHHHH
       HHHHHHHHHH    H
      L-----------------U

EACH '-' ABOVE =      0.1500
             L=      13.9500
             U=      16.6500

                                          Q1-   14.8999996
                 VALUE   VALUE/S.E.       Q3=   15.1999998
SKEWNESS          0.71        2.40        S-=   14.7212858
KURTOSIS          3.17        5.38        S+=   15.3337870

EACH '.' BELOW =      0.0200
```

```
                          S       Q              Q    S
M                         -       1    M   M     M    +                              M
I......................................E...E.....O.......................................A
N                                      A   D     D                                   X
                                       N   I     E
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
14.30	1	1.4	1.4	14.70	10	14.5	23.2	15.20	14	20.3	87.0	15.70	1	1.4	98.6
14.40	1	1.4	2.9	14.90	8	11.6	34.8	15.30	3	4.3	91.3	16.30	1	1.4	100.0
14.50	1	1.4	4.3	15.00	9	13.0	47.8	15.40	3	4.3	95.7				
14.60	3	4.3	8.7	15.10	13	18.8	66.7	15.50	1	1.4	97.1				

HYDRA06 EASTERN BASIN ALL DATA

```
************
* ALKTOT   *
************
```

VARIABLE NUMBER	6	MAXIMUM	114.4000015
NUMBER OF DISTINCT VALUES .	53	MINIMUM	100.8000031
NUMBER OF VALUES COUNTED. .	69	RANGE	13.5999985
NUMBER OF VALUES NOT COUNTED	0	VARIANCE	9.3086109
		ST.DEV.	3.0510015
		(Q3-Q1)/2	1.4500008

```
                        H              EACH 'H'
                        H              REPRESENTS
                        HH                 2
        H    HHHH                      COUNT(S)
        H    HHHHHH
        HH   HHHHHH
       HHH HHHHHHHHH H
      L-----------------U
```

LOCATION ESTIMATES

		ST.ERROR
MEAN	106.8188400	0.3672974
MEDIAN	107.0000000	0.3464094
MODE	106.4000015	

EACH '-' ABOVE = 1.0000
L= 99.0000
U= 117.0000

	VALUE	VALUE/S.E.		
			Q1=	105.5000000
			Q3=	108.4000015
SKEWNESS	-0.18	-0.61	S-=	103.7678375
KURTOSIS	-0.34	-0.58	S+=	109.8698425

EACH '.' BELOW = 0.1500

```
                 S         Q             Q       S
 M               -         1    M M M    3       +                          M
 I......................................O.E.E..................................A
 N                                      D A D                                   X
                                        E N I
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
100.8	1	1.4	1.4	105.5	2	2.9	26.1	107.3	2	2.9	58.0	109.7	1	1.4	84.1
101.2	1	1.4	2.9	105.6	1	1.4	27.5	107.4	1	1.4	59.4	109.8	1	1.4	85.5
101.3	1	1.4	4.3	105.7	1	1.4	29.0	107.6	1	1.4	60.9	110.1	2	2.9	88.4
101.5	1	1.4	5.8	106.0	1	1.4	30.4	107.7	1	1.4	62.3	110.4	1	1.4	89.9
101.7	1	1.4	7.2	106.1	2	2.9	33.3	107.8	1	1.4	63.8	110.7	1	1.4	91.3
101.8	1	1.4	8.7	106.2	1	1.4	34.8	108.0	1	1.4	65.2	110.9	1	1.4	92.8
101.9	1	1.4	10.1	106.3	1	1.4	36.2	108.1	1	1.4	66.7	111.1	1	1.4	94.2
102.0	2	2.9	13.0	106.4	4	5.8	42.0	108.2	3	4.3	71.0	111.3	1	1.4	95.7
102.2	1	1.4	14.5	106.5	2	2.9	44.9	108.3	2	2.9	73.9	112.2	1	1.4	97.1
102.4	1	1.4	15.9	106.8	2	2.9	47.8	108.4	1	1.4	75.4	112.4	1	1.4	98.6
102.5	1	1.4	17.4	106.9	1	1.4	49.3	108.9	1	1.4	76.8	114.4	1	1.4	100.0
102.7	1	1.4	18.8	107.0	1	1.4	50.7	109.3	1	1.4	78.3				
104.7	1	1.4	20.3	107.1	2	2.9	53.6	109.4	2	2.9	81.2				
105.4	2	2.9	23.2	107.2	1	1.4	55.1	109.6	1	1.4	82.6				

```
************
* ALKFH    *
************
```

VARIABLE NUMBER	7	MAXIMUM	8.8999996
NUMBER OF DISTINCT VALUES .	29	MINIMUM	0.0000000
NUMBER OF VALUES COUNTED. .	69	RANGE	8.8999996
NUMBER OF VALUES NOT COUNTED	0	VARIANCE	4.8395314
		ST.DEV.	2.1998935
		(Q3-Q1)/2	1.5000000

```
   H
   H                          EACH 'H'
   H                          REPRESENTS
   H                              4
   H                          COUNT(S)
   H
   H   HH H
   HHHHHHHHHH H  H HH
  L-----------------U
```

LOCATION ESTIMATES

		ST.ERROR
MEAN	1.8420290	0.2648361
MEDIAN	1.7000000	0.4639531
MODE	0.0000000	

EACH '-' ABOVE = 0.5000
L= 0.0000
U= 9.0000

	VALUE	VALUE/S.E.		
			Q1=	0.0000000
			Q3=	3.0000000
SKEWNESS	1.16	3.94	S-=	-0.3578645
KURTOSIS	0.90	1.53	S+=	4.0419226

EACH '.' BELOW = 0.0750

```
S  Q                                 Q         S
-  M            M     M              3         +                                              M
.....I..............F.......F.........................................................................A
   N            D     A                                                                               X
                I     N
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
0.000	32	46.4	46.4	2.300	1	1.4	60.9	3.500	1	1.4	78.3	5.600	1	1.4	94.2
1.000	2	2.9	49.3	2.400	2	2.9	63.8	3.600	1	1.4	79.7	6.000	1	1.4	95.7
1.200	1	1.4	50.7	2.500	2	2.9	66.7	3.800	1	1.4	81.2	7.100	1	1.4	97.1
1.500	2	2.9	53.6	2.600	2	2.9	69.6	3.900	3	4.3	85.5	8.300	1	1.4	98.6
1.700	1	1.4	55.1	2.700	1	1.4	71.0	4.100	1	1.4	87.0	8.900	1	1.4	100.0
1.900	1	1.4	56.5	2.800	1	1.4	72.5	4.200	1	1.4	88.4				
2.000	1	1.4	58.0	3.000	2	2.9	75.4	4.600	1	1.4	89.9				
2.100	1	1.4	59.4	3.400	1	1.4	76.8	4.800	2	2.9	92.8				

```
************
* PH       *
************
                                        MAXIMUM        8.4200001
VARIABLE NUMBER . . . . . .      5      MINIMUM        7.4800000
NUMBER OF DISTINCT VALUES .     40      RANGE          0.9400001
NUMBER OF VALUES COUNTED. .     69      VARIANCE       0.0823852
NUMBER OF VALUES NOT COUNTED     0      ST.DEV.        0.2870283
                                        (Q3-Q1)/2      0.2550001

LOCATION ESTIMATES                             ST.ERROR
                  MEAN          8.0736225      0.0345541
                  MEDIAN        8.1800003      0.0894895
                  MODE          NOT UNIQUE
```

```
                  H
                 HH         EACH 'H'
                 HH        REPRESENTS
        H        HH             2
        H  H     HH         COUNT(S)
        H  H     HH
       HH HH     HHHH
      HHHHHHHHHHHHHH
   L-------------------U

EACH '-' ABOVE =      0.0750
            L=        7.2750
            U=        8.6250

                                              Q1=   7.7500000
                          VALUE  VALUE/S.E.   Q3=   8.2600002
            SKEWNESS      -0.38       -1.78   S-=   7.7365947
            KURTOSIS      -1.41       -2.40   S+=   8.3106508

                                EACH '.' BELOW =    0.0075
```

```
                                  S Q                                              Q      S
M                                 - 1                        M            M        3      +                  M
I............................................................F............F.................................A
N                                                            A            D                                  X
                                                             N            I
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
7.480	1	1.4	1.4	7.750	1	1.4	26.1	8.060	1	1.4	46.4	8.260	2	2.9	75.4
7.570	3	4.3	5.8	7.760	1	1.4	27.5	8.090	1	1.4	47.8	8.270	3	4.3	79.7
7.580	1	1.4	7.2	7.810	1	1.4	29.0	8.160	1	1.4	49.3	8.280	3	4.3	84.1
7.590	2	2.9	10.1	7.850	3	4.3	33.3	8.180	1	1.4	50.7	8.300	1	1.4	85.5
7.610	2	2.9	13.0	7.860	1	1.4	34.8	8.200	2	2.9	53.6	8.310	2	2.9	88.4
7.630	1	1.4	14.5	7.870	3	4.3	39.1	8.210	3	4.3	58.0	8.320	1	1.4	89.9
7.640	2	2.9	17.4	7.910	1	1.4	40.6	8.220	2	2.9	60.9	8.340	3	4.3	94.2
7.650	1	1.4	18.8	7.930	1	1.4	42.0	8.230	3	4.3	65.2	8.370	1	1.4	95.7
7.670	2	2.9	21.7	7.960	1	1.4	43.5	8.240	2	2.9	68.1	8.410	1	1.4	97.1
7.740	2	2.9	24.6	8.010	1	1.4	44.9	8.250	3	4.3	72.5	8.420	2	2.9	100.0

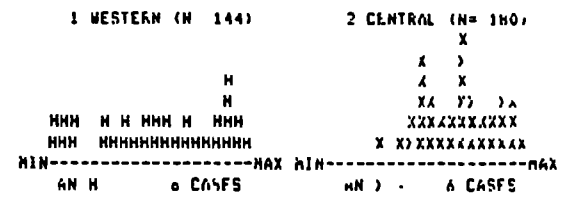
APPENDIX D

DIFFERENCES AMONG GROUP MEANS USING ALL VARIABLES
FOR THE FOLLOWING GROUPS
##########
WESTERN
CENTRAL
##########

##########
TEMP # VARIABLE NUMBER 2
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-4.07	0.000	208.4
T (POOLED)	-4.27	0.000	322
F(FOR VARIANCES)	3.43	0.000	143, 179

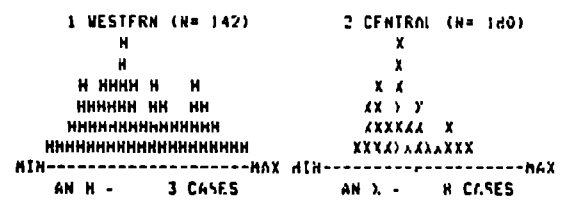
GROUP	1 WESTERN	2 CENTRAL
MEAN	16.1882	18.4833
STD DEV	6.1769	3.3548
S.E.M.	0.5147	0.2486
SAMPLE SIZE	144	180
MAXIMUM	25.6000	24.7000
MINIMUM	4.7000	10.6000



##########
DO # VARIABLE NUMBER 3
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	3.18	0.002	214.9
T (POOLED)	3.37	0.001	320
F(FOR VARIANCES)	2.93	0.000	141, 179

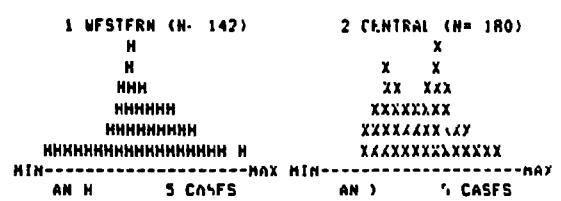
GROUP	1 WESTERN	2 CENTRAL
MEAN	9.6542	9.1694
STD DEV	1.6111	0.9413
S.E.M.	0.1352	0.0702
SAMPLE SIZE	142	180
MAXIMUM	13.5000	11.6000
MINIMUM	6.4000	7.7000



##########
PERDO # VARIABLE NUMBER 4
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-0.24	0.811	287.7
T (POOLED)	-0.24	0.809	320
F(FOR VARIANCES)	1.22	0.211	141, 179

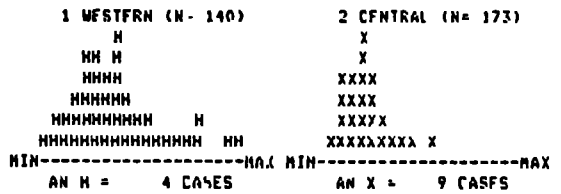
GROUP	1 WESTERN	2 CENTRAL
MEAN	93.1811	93.3978
STD DEV	8.2187	7.4442
S.E.M.	0.6897	0.5549
SAMPLE SIZE	142	180
MAXIMUM	120.8700	115.5700
MINIMUM	71.0600	81.4800



##########
CORRTP # VARIABLE NUMBER 2
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	8.08	-0.000	173.0
T (POOLED)	8.73	-0.000	311
F(FOR VARIANCES)	6.61	0.000	139, 172

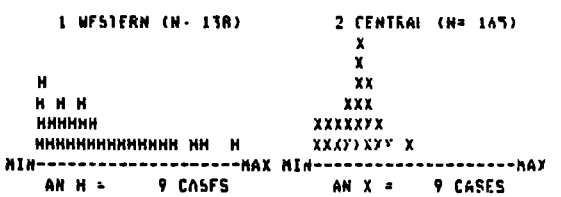
GROUP	1 WESTERN	2 CENTRAL
MEAN	21.4564	13.0977
STD DEV	11.5589	4.4955
S.E.M.	0.9769	0.3418
SAMPLE SIZE	140	173
MAXIMUM	58.7000	33.7000
MINIMUM	0.5000	5.1000



##########
CORRTP # VARIABLE NUMBER 3
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	0.14	0.885	187.2
T (POOLED)	0.15	0.879	301
F(FOR VARIANCES)	4.51	0.000	137, 164

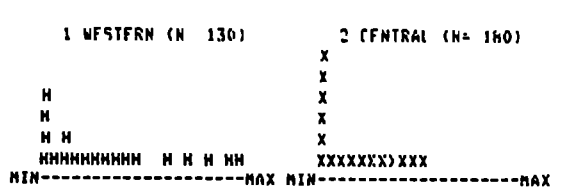
GROUP	1 WESTERN	2 CENTRAL
MEAN	5.4551	5.3885
STD DEV	4.9812	2.3462
S.E.M.	0.4240	0.1826
SAMPLE SIZE	138	165
MAXIMUM	24.4000	12.2000
MINIMUM	0.0000	0.0000



##########
SRP # VARIABLE NUMBER 8
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	0.58	0.564	241.6
T (POOLED)	0.60	0.551	308
F(FOR VARIANCES)	1.52	0.010	129, 179

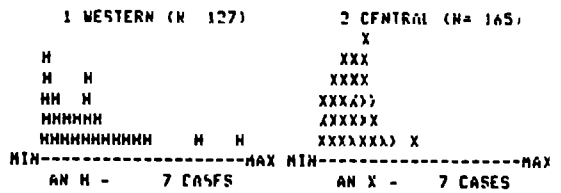
GROUP	1 WESTERN	2 CENTRAL
MEAN	0.9985	0.8928
STD DEV	1.7178	1.3949
S.E.M.	0.1507	0.1040
SAMPLE SIZE	130	180
MAXIMUM	9.0000	4.6000
MINIMUM	0.0000	0.0000



##########
CALCSOP # VARIABLE NUMBER 7
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	0.87	0.387	176.7
T (POOLED)	0.94	0.350	290
F(FOR VARIANCES)	3.80	0.000	126, 164

GROUP	1 WESTERN	2 CENTRAL
MEAN	4.8063	4.4479
STD DEV	4.2499	2.1805
S.E.M.	0.4771	0.1697
SAMPLE SIZE	127	165
MAXIMUM	26.3000	12.2000
MINIMUM	0.0000	0.0000

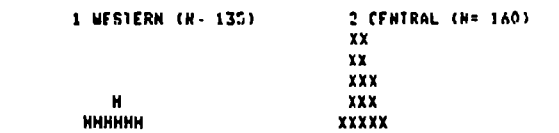


DIFFERENCES AMONG GROUP MEANS USING ALL VARIABLES
FOR THE FOLLOWING GROUPS
##########
WESTERN
CENTRAL
##########

##########
CALCPP # VARIABLE NUMBER 5
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	11.25	0.000	177.2
T (POOLED)	11.97	0.000	293
F(FOR VARIANCES)	5.18	0.000	134, 159

GROUP	1 WESTERN	2 CENTRAL
MEAN	16.3970	7.9025
STD DEV	8.1350	3.5744
S.E.M.	0.7002	0.2826
SAMPLE SIZE	135	160
MAXIMUM	41.4000	27.2000
MINIMUM	0.5000	0.9000

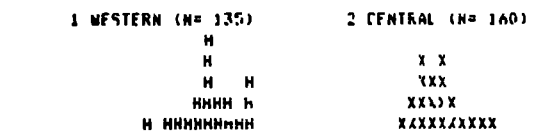


AN H = 8 CASES AN X 8 CASES

##########
PERPP # VARIABLE NUMBER 6
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	10.58	0.000	291.7
T (POOLED)	10.49	0.000	293
F(FOR VARIANCES)	1.23	0.211	159, 134

GROUP	1 WESTERN	2 CENTRAL
MEAN	78.3217	59.2600
STD DEV	14.6567	16.2737
S.E.M.	1.2615	1.2865
SAMPLE SIZE	135	160
MAXIMUM	100.0000	100.0000
MINIMUM	33.9700	11.5600

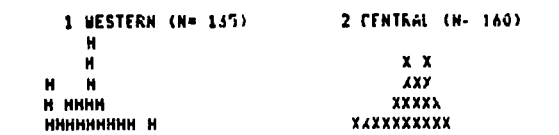


AN H = 5 CASES AN X = 5 CASES

##########
PERTFP # VARIABLE NUMBER 4
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-10.58	0.000	291.7
T (POOLED)	-10.49	0.000	293
F(FOR VARIANCES)	1.23	0.211	159, 134

GROUP	1 WESTERN	2 CENTRAL
MEAN	21.6783	40.7400
STD DEV	14.6567	16.2737
S.E.M.	1.2615	1.2865
SAMPLE SIZE	135	160
MAXIMUM	66.0300	88.4400
MINIMUM	0.0000	0.0000

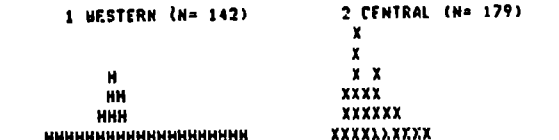


AN H = 5 CASES AN X 5 CASES

##########
NITNIT # VARIABLE NUMBER 2
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	8.16	-0.000	207.1
T (POOLED)	8.48	-0.000	319
F(FOR VARIANCES)	3.32	0.000	141, 178

GROUP	1 WESTERN	2 CENTRAL
MEAN	350.4239	219.9217
STD DEV	171.1404	93.9669
S.E.M.	14.3618	7.0234
SAMPLE SIZE	142	179
MAXIMUM	908.0000	463.0000
MINIMUM	0.0000	69.0000

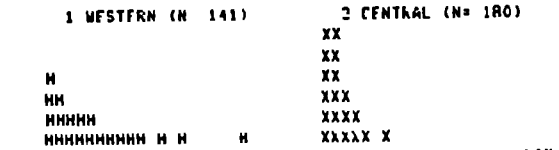


AN H = 9 CASES AN X = 9 CASES

##########
NH3 # VARIABLE NUMBER 3
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	4.90	0.000	173.8
T (POOLED)	5.36	-0.000	319
F(FOR VARIANCES)	6.50	0.000	140, 179

GROUP	1 WESTERN	2 CENTRAL
MEAN	15.3390	9.0950
STD DEV	14.3022	5.6104
S.E.M.	1.2045	0.4182
SAMPLE SIZE	141	180
MAXIMUM	98.1000	34.7000
MINIMUM	1.0000	1.7000

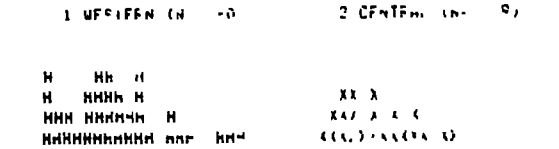


AN H = 11 CASES AN X = 11 CASES

##########
KJELCOMP # VARIABLE NUMBER 7
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	1.90	0.060	95.6
T (POOLED)	1.78	0.078	97
F(FOR VARIANCES)	1.87	0.041	59, 38

GROUP	1 WESTERN	2 CENTRAL
MEAN	0.2712	0.2185
STD DEV	0.0968	0.0722
S.E.M.	0.0125	0.0116
SAMPLE SIZE	60	39
MAXIMUM	0.5600	0.4100
MINIMUM	0.1200	0.1400

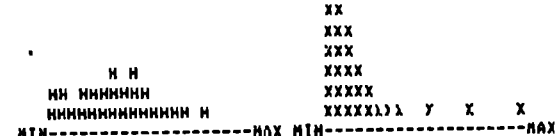


AN H = 2 CASES AN X = 2 CASES

##########
SRS # VARIABLE NUMBER 4
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	9.64	0.000	249.7
T (POOLED)	9.99	-0.000	319
F(FOR VARIANCES)	1.88	0.000	141, 178

GROUP	1 WESTERN	2 CENTRAL
MEAN	1101.0493	539.0224
STD DEV	587.4705	424.4769
S.E.M.	48.8798	31.7269
SAMPLE SIZE	142	179
MAXIMUM	2772.0000	3563.0000
MINIMUM	86.0000	81.0000



AN H = 8 CASES AN X 8 CASES

T-TEST HYDRA86 BASIN COMPARISON EPI

DIFFERENCES AMONG GROUP MEANS USING ALL VARIABLES
FOR THE FOLLOWING GROUPS
##########
WESTERN
CENTRAL
##########

##########
SECCHI # VARIABLE NUMBER 2
##########

STATISTICS	P VALUE	D. F.
T (SEPARATE) -12.83	0.000	47.0
T (POOLED) -15.80	0.000	111
F(FOR VARIANCES) 6.65	0.000	40, 71

GROUP	1 WESTERN	2 CENTRAL
MEAN	1.6903	5.3493
STD DEV	0.6646	1.7174
S.E.M.	0.0783	0.2476
SAMPLE SIZE	72	41
MAXIMUM	3.9000	10.2000
MINIMUM	0.6000	2.7000

1 WESTERN (N= 72)
2 CENTRAL (N= 41)
MIN----------MAX MIN----------MAX
AN H = 5 CASES AN X = 1 CASES

##########
TURBID # VARIABLE NUMBER 2
##########

STATISTICS	P VALUE	D. F.
T (SEPARATE) 15.95	0.000	148.3
T (POOLED) 17.70	0.000	321
F(FOR VARIANCES) 43.08	0.000	143, 178

GROUP	1 WESTERN	2 CENTRAL
MEAN	6.6278	0.9760
STD DEV	4.2131	0.6419
S.E.M.	0.3511	0.0480
SAMPLE SIZE	144	179
MAXIMUM	28.0000	3.1000
MINIMUM	1.2000	0.3000

1 WESTERN (N= 144)
2 CENTRAL (N= 179)
MIN----------MAX MIN----------MAX
AN H 6 CASES AN X = 25 CASES

##########
CHLACORR # VARIABLE NUMBER 7
##########

STATISTICS	P VALUE	D. F.
T (SEPARATE) 8.73	-0.000	208.8
T (POOLED) 9.28	0.000	322
F(FOR VARIANCES) 3.41	0.000	143, 179

GROUP	1 WESTERN	2 CENTRAL
MEAN	7.0167	3.0881
STD DEV	4.8606	2.6317
S.E.M.	0.4051	0.1962
SAMPLE SIZE	144	180
MAXIMUM	28.9300	11.4000
MINIMUM	0.7000	0.2900

1 WESTERN (N 144)
2 CENTRAL (N= 180)
MIN----------MAX MIN----------MAX
AN H - 5 CASES AN X 11 CASES

##########
PHEO # VARIABLE NUMBER 8
##########

STATISTICS	P VALUE	D. F.
T (SEPARATE) 8.30	-0.000	167.1
T (POOLED) 9.09	0.000	322
F(FOR VARIANCES) 9.54	0.000	143, 179

GROUP	1 WESTERN	2 CENTRAL
MEAN	4.8945	1.5243
STD DEV	4.6748	1.5138
S.E.M.	0.3896	0.1128
SAMPLE SIZE	144	180
MAXIMUM	37.7100	7.6400
MINIMUM	0.0000	0.0000

1 WESTERN (N= 144)
2 CENTRAL (N= 180)
MIN----------MAX MIN----------MAX
AN H - 7 CASES AN X - 21 CASES

##########
TSS # VARIABLE NUMBER 3
##########

STATISTICS	P VALUE	D. F.
T (SEPARATE) 17.27	0.000	154.1
T (POOLED) 18.73	0.000	312
F(FOR VARIANCES) 19.74	0.000	142, 170

GROUP	1 WESTERN	2 CENTRAL
MEAN	7.5022	1.4135
STD DEV	4.1293	0.9293
S.E.M.	0.3453	0.0711
SAMPLE SIZE	143	171
MAXIMUM	29.6000	4.0400
MINIMUM	2.3900	0.2900

1 WESTERN (N 143)
2 CENTRAL (N= 171)
MIN----------MAX MIN----------MAX
AN H - 6 CASES AN X - 21 CASES

##########
RS # VARIABLE NUMBER 4
##########

STATISTICS	P VALUE	D. F.
T (SEPARATE) 16.19	0.000	150.6
T (POOLED) 17.60	0.000	312
F(FOR VARIANCES) 27.71	0.000	142, 170

GROUP	1 WESTERN	2 CENTRAL
MEAN	5.5609	0.6353
STD DEV	3.5839	0.6808
S.E.M.	0.2997	0.0521
SAMPLE SIZE	143	171
MAXIMUM	24.4800	3.0300
MINIMUM	1.1400	0.0000

1 WESTERN (N= 144)
2 CENTRAL (N= 171)
MIN----------MAX MIN----------MAX
AN H = 6 CASES AN X 24 CASES

##########
VS # VARIABLE NUMBER 5
##########

STATISTICS	P VALUE	D. F.
T (SEPARATE) 14.35	0.000	175.3
T (POOLED) 15.35	0.000	312
F(FOR VARIANCES) 7.11	0.000	142, 170

GROUP	1 WESTERN	2 CENTRAL
MEAN	1.9413	0.7782
STD DEV	0.9170	0.3438
S.E.M.	0.0767	0.0263
SAMPLE SIZE	143	171
MAXIMUM	5.4000	2.2600
MINIMUM	0.1400	0.2100

1 WESTERN (N 143)
2 CENTRAL (N= 171)
MIN----------MAX MIN----------MAX
AN H - 9 CASES AN X - 9 CASES

DIFFERENCES AMONG GROUP MEANS USING ALL VARIABLES
FOR THE FOLLOWING GROUPS
########
WESTERN
CENTRAL
########

########
PERVS # VARIABLE NUMBER 6
########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-20.29	0.000	274.5
T (POOLED)	-19.36	0.000	312
F(FOR VARIANCES)	3.27	0.000	170, 142

GROUP	1 WESTERN	2 CENTRAL
MEAN	28.5969	63.6258
STD DEV	10.7473	19.2723
S.E.M.	0.8987	1.4738
SAMPLE SIZE	143	171
MAXIMUM	60.1400	100.0000
MINIMUM	1.7200	25.0800

1 WESTERN (N= 143)
2 CENTRAL (N= 171)
MIN----------MAX MIN----------MAX
AN H = 6 CASES
AN X = 6 CASES

########
CONDCORR # VARIABLE NUMBER 8
########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-16.64	0.000	172.1
T (POOLED)	-18.15	0.000	322
F(FOR VARIANCES)	7.88	0.000	143, 179

GROUP	1 WESTERN	2 CENTRAL
MEAN	238.7917	264.7609
STD DEV	18.1870	6.4785
S.E.M.	1.5156	0.4829
SAMPLE SIZE	144	180
MAXIMUM	308.0000	298.0000
MINIMUM	206.0000	239.0000

1 WESTERN (N= 144)
2 CENTRAL (N= 180)
MIN----------MAX MIN----------MAX
AN H = 5 CASES
AN X = 17 CASES

########
CL # VARIABLE NUMBER 9
########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-11.74	0.000	171.2
T (POOLED)	-12.79	0.000	321
F(FOR VARIANCES)	8.16	0.000	143, 178

GROUP	1 WESTERN	2 CENTRAL
MEAN	11.6604	14.6592
STD DEV	2.9235	1.0233
S.E.M.	0.2436	0.0765
SAMPLE SIZE	144	179
MAXIMUM	26.0000	17.0000
MINIMUM	6.9000	7.0000

1 WESTERN (N= 144)
2 CENTRAL (N= 179)
MIN----------MAX MIN----------MAX
AN H = 4 CASES
AN X = 18 CASES

########
ALKTOT # VARIABLE NUMBER 6
########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-17.56	0.000	234.4
T (POOLED)	-18.37	0.000	322
F(FOR VARIANCES)	2.37	0.000	143, 179

GROUP	1 WESTERN	2 CENTRAL
MEAN	93.3139	101.8133
STD DEV	5.0242	3.2408
S.E.M.	0.4187	0.2430
SAMPLE SIZE	144	180
MAXIMUM	107.3000	109.6000
MINIMUM	84.0000	93.6000

1 WESTERN (N= 144)
2 CENTRAL (N= 180)
MIN----------MAX MIN----------MAX
AN H = 3 CASES
AN X = 7 CASES

########
ALKPH # VARIABLE NUMBER 7
########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-4.80	0.000	283.3
T (POOLED)	-4.88	0.000	322
F(FOR VARIANCES)	1.35	0.058	143, 179

GROUP	1 WESTERN	2 CENTRAL
MEAN	2.3174	3.8011
STD DEV	2.5430	2.1894
S.E.M.	0.2119	0.1632
SAMPLE SIZE	144	180
MAXIMUM	10.5000	10.8000
MINIMUM	0.0000	0.0000

1 WESTERN (N= 144)
2 CENTRAL (N= 180)
MIN----------MAX MIN----------MAX
AN H = 9 CASES
AN X = 4 CASES

########
PH # VARIABLE NUMBER 5
########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-4.83	0.000	244.5
T (POOLED)	-5.02	0.000	322
F(FOR VARIANCES)	2.10	0.000	143, 179

GROUP	1 WESTERN	2 CENTRAL
MEAN	8.2128	8.3133
STD DEV	0.2178	0.1469
S.E.M.	0.0177	0.0110
SAMPLE SIZE	144	180
MAXIMUM	8.7500	8.6800
MINIMUM	7.5900	7.9100

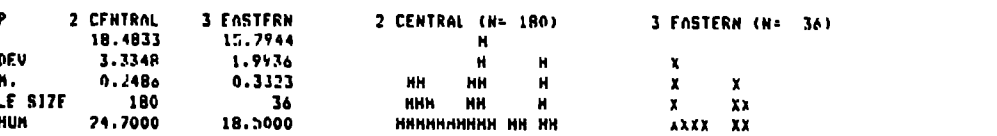
1 WESTERN (N= 144)
2 CENTRAL (N= 180)
MIN----------MAX MIN----------MAX
AN H = 3 CASES
AN X = 7 CASES

DIFFERENCES AMONG GROUP MEANS USING ALL VARIABLES
FOR THE FOLLOWING GROUPS
$$$$$$$$$$
$ CENTRAL $
$ EASTERN $
$$$$$$$$$$

$$$$$$$$$$
$ TEMP $ VARIABLE NUMBER 7
$$$$$$$$$$

STATISTICS		P VALUE	D. F.
T (SEPARATE)	6.48	-0.000	80.2
T (POOLED)	4.67	0.000	214
F(FOR VARIANCES)	2.80	0.001	179, 35

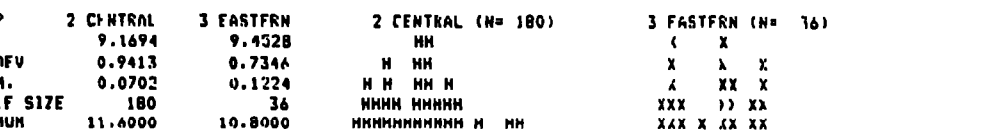
GROUP	2 CENTRAL	3 EASTERN
MEAN	18.4833	15.7944
STD DEV	3.3348	1.9936
S.E.M.	0.2486	0.3323
SAMPLE SIZE	180	36
MAXIMUM	24.7000	18.5000
MINIMUM	10.6000	12.4000



$$$$$$$$$$
$ DO $ VARIABLE NUMBER 3
$$$$$$$$$$

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-2.01	0.049	60.5
T (POOLED)	-1.70	0.090	214
F(FOR VARIANCES)	1.64	0.084	179, 35

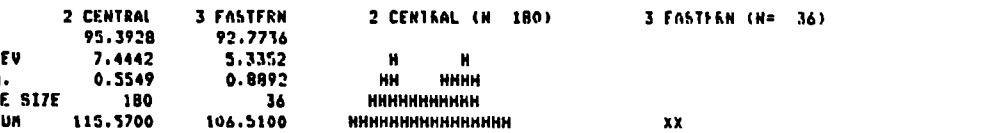
GROUP	2 CENTRAL	3 EASTERN
MEAN	9.1694	9.4528
STD DEV	0.9413	0.7346
S.E.M.	0.0702	0.1224
SAMPLE SIZE	180	36
MAXIMUM	11.6000	10.8000
MINIMUM	7.7000	8.3000



$$$$$$$$$$
$ PERDO $ VARIABLE NUMBER 4
$$$$$$$$$$

STATISTICS		P VALUE	D. F.
T (SEPARATE)	2.50	0.015	65.6
T (POOLED)	2.01	0.046	214
F(FOR VARIANCES)	1.95	0.022	179, 35

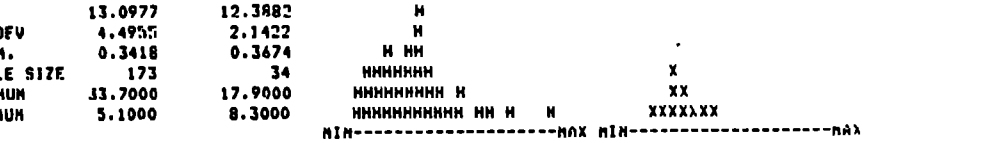
GROUP	2 CENTRAL	3 EASTERN
MEAN	95.3928	92.7736
STD DEV	7.4442	5.3352
S.E.M.	0.5549	0.8892
SAMPLE SIZE	180	36
MAXIMUM	115.5700	106.5100
MINIMUM	81.4800	85.5800



$$$$$$$$$$
$ CORRTP $ VARIABLE NUMBER 2
$$$$$$$$$$

STATISTICS		P VALUE	D. F.
T (SEPARATE)	1.41	0.160	100.4
T (POOLED)	0.90	0.370	205
F(FOR VARIANCES)	4.40	0.000	172, 33

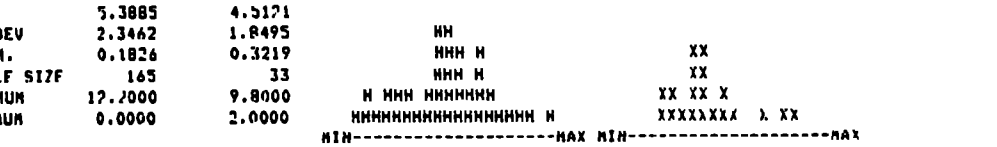
GROUP	2 CENTRAL	3 EASTERN
MEAN	13.0977	12.3882
STD DEV	4.4955	2.1422
S.E.M.	0.3418	0.3674
SAMPLE SIZE	173	34
MAXIMUM	33.7000	17.9000
MINIMUM	5.1000	8.3000



$$$$$$$$$$
$ CORRTP $ VARIABLE NUMBER 3
$$$$$$$$$$

STATISTICS		P VALUE	D. F.
T (SEPARATE)	2.37	0.021	54.8
T (POOLED)	2.02	0.045	196
F(FOR VARIANCES)	1.61	0.114	164, 32

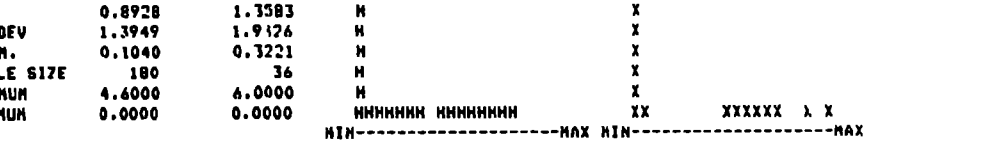
GROUP	2 CENTRAL	3 EASTERN
MEAN	5.3885	4.5171
STD DEV	2.3462	1.8495
S.E.M.	0.1826	0.3219
SAMPLE SIZE	165	33
MAXIMUM	12.2000	9.8000
MINIMUM	0.0000	2.0000



$$$$$$$$$$
$ SKP $ VARIABLE NUMBER 8
$$$$$$$$$$

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-1.38	0.176	42.6
T (POOLED)	-1.70	0.090	214
F(FOR VARIANCES)	1.92	0.006	35, 179

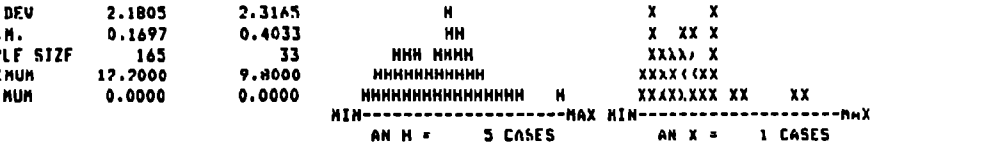
GROUP	2 CENTRAL	3 EASTERN
MEAN	0.8928	1.3583
STD DEV	1.3949	1.9426
S.E.M.	0.1040	0.3221
SAMPLE SIZE	180	36
MAXIMUM	4.6000	6.0000
MINIMUM	0.0000	0.0000



$$$$$$$$$$
$ CALCSOP $ VARIABLE NUMBER 7
$$$$$$$$$$

STATISTICS		P VALUE	D. F.
T (SEPARATE)	3.05	0.004	44.1
T (POOLED)	3.17	0.002	196
F(FOR VARIANCES)	1.14	0.611	32, 164

GROUP	2 CENTRAL	3 EASTERN
MEAN	4.4479	3.1152
STD DEV	2.1805	2.3165
S.E.M.	0.1697	0.4033
SAMPLE SIZE	165	33
MAXIMUM	12.2000	9.8000
MINIMUM	0.0000	0.0000

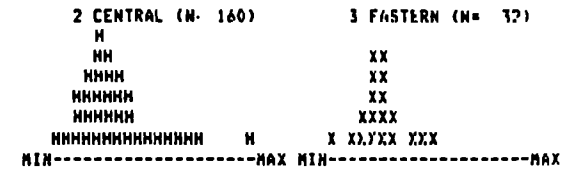


DIFFERENCES AMONG GROUP MEANS USING ALL VARIABLES
FOR THE FOLLOWING GROUPS
$$$$$$$$$$
$ CENTRAL $
$ EASTERN $
$$$$$$$$$$

$$$$$$$$$$$$
$ CALCPP $ VARIABLE NUMBER 5
$$$$$$$$$$$$

STATISTICS		P VALUE	D. F.
T (SEPARATE)	0.10	0.921	55.0
T (POOLED)	0.08	0.934	190
F(FOR VARIANCES)	1.74	0.072	159, 31

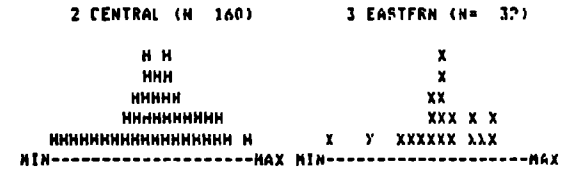
GROUP	2 CENTRAL	3 EASTERN
MEAN	7.9025	7.8469
STD DEV	3.5744	2.7122
S.E.M.	0.2826	0.4795
SAMPLE SIZE	160	32
MAXIMUM	27.2000	14.5000
MINIMUM	0.9000	1.8000



$$$$$$$$$$$$
$ PERPP $ VARIABLE NUMBER 6
$$$$$$$$$$$$

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-1.12	0.269	47.9
T (POOLED)	-1.04	0.301	190
F(FOR VARIANCES)	1.25	0.469	159, 31

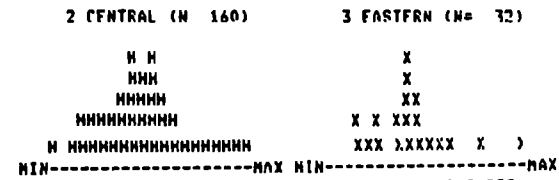
GROUP	2 CENTRAL	3 EASTERN
MEAN	59.2600	62.4756
STD DEV	16.2737	14.5433
S.E.M.	1.2865	2.5709
SAMPLE SIZE	160	32
MAXIMUM	100.0000	86.5100
MINIMUM	11.5600	15.6100



$$$$$$$$$$$$
$ PERTFP $ VARIABLE NUMBER 4
$$$$$$$$$$$$

STATISTICS		P VALUE	D. F.
T (SEPARATE)	1.12	0.269	47.9
T (POOLED)	1.04	0.301	190
F(FOR VARIANCES)	1.25	0.469	159, 31

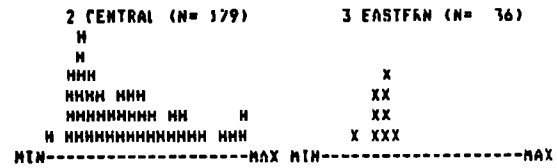
GROUP	2 CENTRAL	3 EASTERN
MEAN	40.7400	37.5244
STD DEV	16.2737	14.5433
S.E.M.	1.2865	2.5709
SAMPLE SIZE	160	32
MAXIMUM	88.4400	84.3900
MINIMUM	0.0000	13.4900



$$$$$$$$$$$$
$ NITNIT $ VARIABLE NUMBER 2
$$$$$$$$$$$$

STATISTICS		P VALUE	D. F.
T (SEPARATE)	4.00	0.000	212.6
T (POOLED)	1.93	0.054	213
F(FOR VARIANCES)	28.60	0.000	178, 35

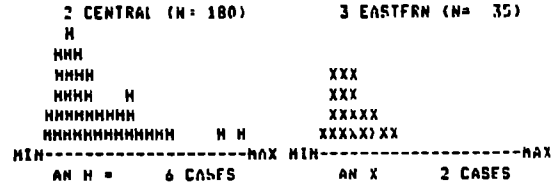
GROUP	2 CENTRAL	3 EASTERN
MEAN	219.9217	189.4722
STD DEV	93.9669	17.5719
S.E.M.	7.0234	2.9286
SAMPLE SIZE	179	36
MAXIMUM	463.0000	221.0000
MINIMUM	69.0000	130.0000



$$$$$$$$$$$$
$ NH3 $ VARIABLE NUMBER 3
$$$$$$$$$$$$

STATISTICS		P VALUE	D. F.
T (SEPARATE)	2.80	0.006	80.3
T (POOLED)	1.96	0.051	213
F(FOR VARIANCES)	3.07	0.000	179, 34

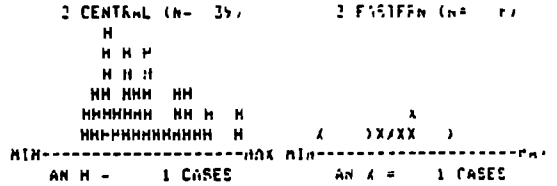
GROUP	2 CENTRAL	3 EASTERN
MEAN	9.0950	7.1714
STD DEV	5.6104	3.2301
S.E.M.	0.4182	0.5460
SAMPLE SIZE	180	35
MAXIMUM	34.7000	14.0000
MINIMUM	1.7000	1.5000



$$$$$$$$$$$$
$ NJELCMP $ VARIABLE NUMBER 2
$$$$$$$$$$$$

STATISTICS		P VALUE	D. F.
T (SEPARATE)	1.76	0.108	10.4
T (POOLED)	1.70	0.096	45
F(FOR VARIANCES)	1.11	0.969	38, 7

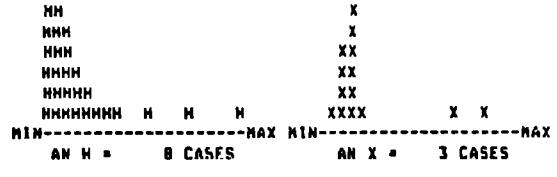
GROUP	2 CENTRAL	3 EASTERN
MEAN	0.3385	0.1912
STD DEV	0.0712	0.0685
S.E.M.	0.0116	0.0242
SAMPLE SIZE	39	8
MAXIMUM	0.4100	0.3000
MINIMUM	0.1400	0.0600



$$$$$$$$$$$$
$ SRS $ VARIABLE NUMBER 4
$$$$$$$$$$$$

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-2.24	0.030	45.4
T (POOLED)	-2.52	0.012	213
F(FOR VARIANCES)	1.43	0.147	35, 178

GROUP	2 CENTRAL	3 EASTERN
MEAN	539.0224	741.5000
STD DEV	424.4769	307.1508
S.E.M.	31.7769	84.5251
SAMPLE SIZE	179	36
MAXIMUM	3563.0000	3026.0000
MINIMUM	81.0000	297.0000

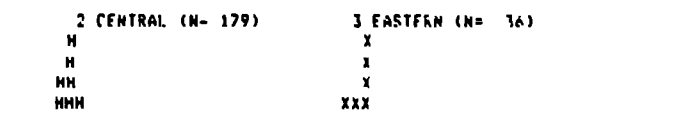


DIFFFRENCES AMONG GROUP MEANS USING ALL VARIABLES
FOR THE FOLLOWING GROUPS
##########
CENTRAL
EASTERN
##########

##########
TURBID # VARIABLE NUMBER 2
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-1.01	0.317	46.5
T (POOLED)	-1.10	0.271	213
F(FOR VARIANCES)	1.29	0.286	35, 178

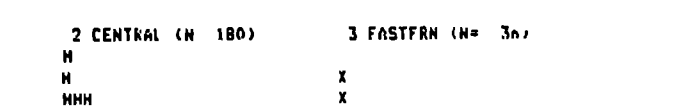
GROUP	2 CENTRAL	3 EASTERN
MEAN	0.9760	1.1083
STD DEV	0.6419	0.7299
S.E.M.	0.0480	0.1217
SAMPLE SIZE	179	36
MAXIMUM	3.1000	3.3000
MINIMUM	0.3000	0.4000



##########
CHLACORR # VARIABLE NUMBER 7
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	0.95	0.345	61.2
T (POOLED)	0.80	0.424	214
F(FOR VARIANCES)	1.68	0.069	179, 35

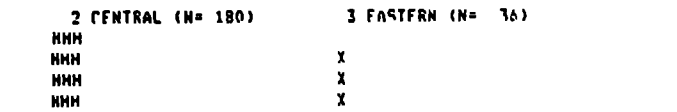
GROUP	2 CENTRAL	3 EASTERN
MEAN	3.0881	2.7164
STD DEV	2.6317	2.0276
S.E.M.	0.1962	0.3379
SAMPLE SIZE	180	36
MAXIMUM	11.4000	7.1600
MINIMUM	0.2900	0.6100



##########
PHEO # VARIABLE NUMBER 8
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-1.15	0.258	41.4
T (POOLED)	-1.49	0.136	214
F(FOR VARIANCES)	2.26	0.001	35, 179

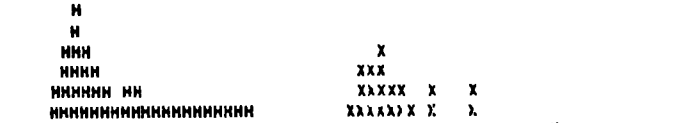
GROUP	2 CENTRAL	3 EASTERN
MEAN	1.5263	1.9800
STD DEV	1.5138	2.2759
S.E.M.	0.1128	0.3793
SAMPLE SIZE	180	36
MAXIMUM	7.6400	8.9300
MINIMUM	0.0000	0.2000



##########
TSS # VARIABLE NUMBER 3
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-0.63	0.530	74.4
T (POOLED)	-0.48	0.631	205
F(FOR VARIANCES)	2.35	0.004	170, 35

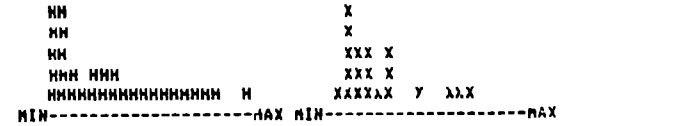
GROUP	2 CENTRAL	3 EASTERN
MEAN	1.4135	1.4914
STD DEV	0.9293	0.6065
S.E.M.	0.0711	0.1011
SAMPLE SIZE	171	36
MAXIMUM	4.0400	3.0700
MINIMUM	0.2900	0.7400



##########
RS # VARIABLE NUMBER 4
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-0.97	0.337	70.0
T (POOLED)	-0.76	0.447	205
F(FOR VARIANCES)	2.10	0.011	170, 35

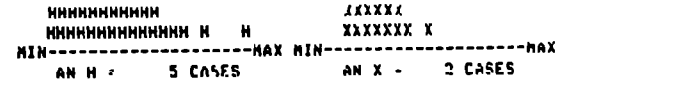
GROUP	2 CENTRAL	3 EASTERN
MEAN	0.6353	0.7261
STD DEV	0.4808	0.4695
S.E.M.	0.0521	0.0782
SAMPLE SIZE	171	36
MAXIMUM	3.0300	2.1300
MINIMUM	0.0000	0.2700



##########
VS # VARIABLE NUMBER 5
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	0.26	0.796	77.5
T (POOLED)	0.19	0.846	205
F(FOR VARIANCES)	2.52	0.002	170, 35

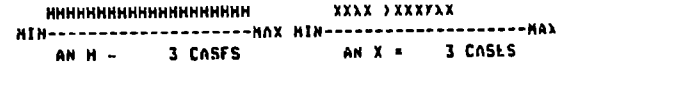
GROUP	2 CENTRAL	3 EASTERN
MEAN	0.7782	0.7667
STD DEV	0.3438	0.2166
S.E.M.	0.0263	0.0361
SAMPLE SIZE	171	36
MAXIMUM	2.2600	1.2900
MINIMUM	0.2100	0.4200



##########
PERVS # VARIABLE NUMBER 6
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	4.01	0.000	84.8
T (POOLED)	2.87	0.004	205
F(FOR VARIANCES)	2.93	0.000	170, 35

GROUP	2 CENTRAL	3 EASTERN
MEAN	63.6258	54.0586
STD DEV	19.2723	11.2616
S.E.M.	1.4738	1.8769
SAMPLE SIZE	171	36
MAXIMUM	100.0000	71.5000
MINIMUM	25.0800	30.5100

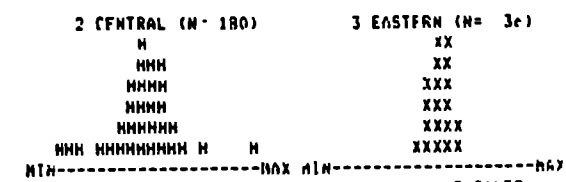


DIFFERENCES AMONG GROUP MEANS USING ALL VARIABLES
FOR THE FOLLOWING GROUPS
##########
CENTRAL
EASTERN
##########

##########
CONDCORR # VARIABLE NUMBER 8
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-8.46	0.000	110.5
T (POOLED)	-5.35	0.000	214
F(FOR VARIANCES)	4.59	0.000	179, 35

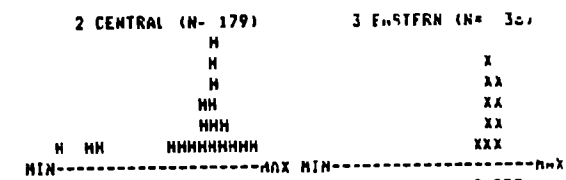
GROUP	2 CENTRAL	3 EASTERN
MEAN	264.7609	270.6667
STD DEV	6.4785	3.0237
S.E.M.	0.4829	0.5040
SAMPLE SIZE	180	36
MAXIMUM	298.0000	275.0000
MINIMUM	239.0000	263.0000



##########
CL # VARIABLE NUMBER 9
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-2.96	0.003	191.4
T (POOLED)	-1.56	0.120	213
F(FOR VARIANCES)	12.25	0.000	178, 35

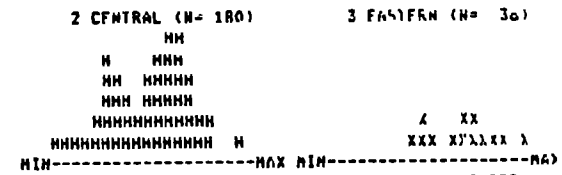
GROUP	2 CENTRAL	3 EASTERN
MEAN	14.6592	14.9278
STD DEV	1.0233	0.2924
S.E.M.	0.0765	0.0487
SAMPLE SIZE	179	36
MAXIMUM	17.0000	15.5000
MINIMUM	7.0000	14.3000



##########
ALKTOT # VARIABLE NUMBER 6
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-6.50	-0.000	56.8
T (POOLED)	-5.78	-0.000	214
F(FOR VARIANCES)	1.42	0.219	179, 35

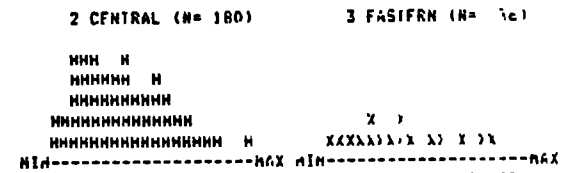
GROUP	2 CENTRAL	3 EASTERN
MEAN	101.8133	105.1494
STD DEV	3.2608	2.7357
S.E.M.	0.2430	0.4559
SAMPLE SIZE	180	36
MAXIMUM	109.6000	111.1000
MINIMUM	93.6000	100.8000



##########
ALKPH # VARIABLE NUMBER 7
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	1.15	0.254	54.0
T (POOLED)	1.07	0.286	214
F(FOR VARIANCES)	1.25	0.443	179, 35

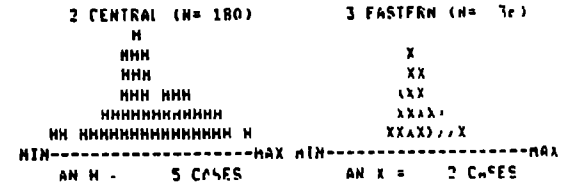
GROUP	2 CENTRAL	3 EASTERN
MEAN	3.8011	3.3806
STD DEV	2.1894	1.9591
S.E.M.	0.1632	0.3265
SAMPLE SIZE	180	36
MAXIMUM	10.8000	8.9000
MINIMUM	0.0000	0.0000



##########
PH # VARIABLE NUMBER 5
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	2.70	0.008	117.8
T (POOLED)	1.67	0.097	214
F(FOR VARIANCES)	5.04	0.000	179, 35

GROUP	2 CENTRAL	3 EASTERN
MEAN	8.3133	8.2717
STD DEV	0.1469	0.0654
S.E.M.	0.0110	0.0109
SAMPLE SIZE	180	36
MAXIMUM	8.6800	8.4200
MINIMUM	7.9100	8.1600



DIFFERENCES AMONG GROUP MEANS USING ALL VARIABLES
FOR THE FOLLOWING GROUPS
##########
CENTRAL
EASTERN
##########

##########
TEMP # VARIABLE NUMBER 2
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	11.36	0.000	81.0
T (POOLED)	9.28	0.000	95
F(FOR VARIANCES)	2.76	0.005	68, 27

GROUP	2 CENTRAL	3 EASTERN
MEAN	10.6145	6.3500
STD DEV	2.2661	1.3645
S.E.M.	0.2728	0.2579
SAMPLE SIZE	69	28
MAXIMUM	17.3000	10.8000
MINIMUM	6.2000	4.3000

2 CENTRAL (N= 69)
3 EASTERN (N= 28)
MIN----------MAX MIN----------MAX
AN H = 2 CASES AN X = 2 CASES

##########
DO # VARIABLE NUMBER 3
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-6.72	-0.000	62.8
T (POOLED)	-6.10	-0.000	95
F(FOR VARIANCES)	1.59	0.179	68, 27

GROUP	2 CENTRAL	3 EASTERN
MEAN	5.1464	8.9143
STD DEV	2.9174	2.3110
S.E.M.	0.3512	0.4367
SAMPLE SIZE	69	28
MAXIMUM	10.4000	12.3000
MINIMUM	1.0000	4.8000

2 CENTRAL (N= 69)
3 EASTERN (N= 28)
MIN----------MAX MIN----------MAX
AN H = 2 CASES AN X = 2 CASES

##########
PERDO # VARIABLE NUMBER 4
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-6.34	-0.000	68.3
T (POOLED)	-5.56	0.000	95
F(FOR VARIANCES)	1.89	0.069	68, 27

GROUP	2 CENTRAL	3 EASTERN
MEAN	44.9215	72.9414
STD DEV	24.1630	17.5987
S.E.M.	2.9089	3.3258
SAMPLE SIZE	69	28
MAXIMUM	88.3000	98.4600
MINIMUM	9.0900	42.7400

2 CENTRAL (N= 69)
3 EASTERN (N= 28)
MIN----------MAX MIN----------MAX
AN H = 2 CASES AN X 2 CASES

##########
CORRTP # VARIABLE NUMBER 2
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	0.90	0.371	49.4
T (POOLED)	0.87	0.387	91
F(FOR VARIANCES)	1.19	0.648	66, 25

GROUP	2 CENTRAL	3 EASTERN
MEAN	14.1104	13.4731
STD DEV	3.7542	3.4456
S.E.M.	0.4586	0.6757
SAMPLE SIZE	67	26
MAXIMUM	34.7000	19.4000
MINIMUM	8.4000	8.0000

2 CENTRAL (N 67)
3 EASTERN (N= 26)
MIN----------MAX MIN----------MAX
AN H = 3 CASES AN X = 1 CASES

##########
CORRTFP # VARIABLE NUMBER 3
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	2.30	0.025	67.8
T (POOLED)	1.94	0.055	90
F(FOR VARIANCES)	2.21	0.030	65, 25

GROUP	2 CENTRAL	3 EASTERN
MEAN	3.5712	4.3462
STD DEV	2.9556	1.9862
S.E.M.	0.3638	0.3895
SAMPLE SIZE	66	26
MAXIMUM	16.6000	9.1000
MINIMUM	0.0000	1.8000

2 CENTRAL (N= 66)
3 EASTERN (N= 26)
MIN----------MAX MIN----------MAX
AN H = 2 CASES AN X = 2 CASES

##########
SRP # VARIABLE NUMBER 8
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-3.89	0.000	31.5
T (POOLED)	-5.20	0.000	94
F(FOR VARIANCES)	5.00	0.000	27, 67

GROUP	2 CENTRAL	3 EASTERN
MEAN	0.4162	1.9536
STD DEV	0.8984	2.0079
S.E.M.	0.1089	0.3794
SAMPLE SIZE	68	28
MAXIMUM	6.2000	4.8000
MINIMUM	0.0000	0.0000

2 CENTRAL (N= 68)
3 EASTERN (N= 28)
MIN----------MAX MIN----------MAX
AN H 8 CASES AN X 2 CASES

##########
CALCSOP # VARIABLE NUMBER 7
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	5.73	0.000	67.1
T (POOLED)	4.88	0.000	89
F(FOR VARIANCES)	2.15	0.037	64, 25

GROUP	2 CENTRAL	3 EASTERN
MEAN	5.2123	2.1423
STD DEV	2.7463	1.8745
S.E.M.	0.3406	0.1676
SAMPLE SIZE	65	26
MAXIMUM	16.6000	6.4000
MINIMUM	0.0000	0.0000

2 CENTRAL (N= 65)
3 EASTERN (N= 26)
MIN----------MAX MIN----------MAX
AN H = 3 CASES AN X = 3 CASES

DIFFERENCES AMONG GROUP MEANS USING ALL VARIABLES
FOR THE FOLLOWING GROUPS
##########
CENTRAL
EASTERN
##########

##########
CALCPP # VARIABLE NUMBER 5
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-0.11	0.910	37.6
T (POOLED)	-0.12	0.906	87
F(FOR VARIANCES)	1.24	0.497	23, 64

GROUP	2 CENTRAL	3 EASTERN
MEAN	8.6031	8.7000
STD DEV	3.3063	3.6778
S.E.M.	0.4101	0.7507
SAMPLE SIZE	65	24
MAXIMUM	17.6000	15.8000
MINIMUM	1.2000	1.0000

2 CENTRAL (N= 65)
3 EASTERN (N= 24)
MIN----------MAX MIN----------MAX
AN H = 2 CASES
AN X = 2 CASES

##########
PERPP # VARIABLE NUMBER 6
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-1.03	0.309	41.8
T (POOLED)	-1.02	0.311	87
F(FOR VARIANCES)	1.04	0.955	64, 23

GROUP	2 CENTRAL	3 EASTERN
MEAN	60.4151	64.8529
STD DEV	18.3124	17.9655
S.E.M.	2.2714	3.6672
SAMPLE SIZE	65	24
MAXIMUM	100.0000	86.3000
MINIMUM	8.3100	9.6900

2 CENTRAL (N= 65)
3 EASTERN (N= 24)
MIN----------MAX MIN----------MAX
AN H = 2 CASES
AN X = 2 CASES

##########
PERTFP # VARIABLE NUMBER 4
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	1.03	0.309	41.8
T (POOLED)	1.02	0.311	87
F(FOR VARIANCES)	1.04	0.955	64, 23

GROUP	2 CENTRAL	3 EASTERN
MEAN	39.5849	35.1471
STD DEV	18.3124	17.9655
S.E.M.	2.2714	3.6672
SAMPLE SIZE	65	24
MAXIMUM	91.6900	90.3100
MINIMUM	0.0000	13.7000

2 CENTRAL (N= 65)
3 EASTERN (N= 24)
MIN----------MAX MIN----------MAX
AN H = 2 CASES
AN X = 2 CASES

##########
NITNIT # VARIABLE NUMBER 2
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-2.31	0.023	91.0
T (POOLED)	-1.78	0.079	95
F(FOR VARIANCES)	4.03	0.000	68, 27

GROUP	2 CENTRAL	3 EASTERN
MEAN	290.0144	317.7500
STD DEV	78.5712	39.1262
S.E.M.	9.4589	7.3942
SAMPLE SIZE	69	28
MAXIMUM	537.0000	365.0000
MINIMUM	144.0000	265.0000

2 CENTRAL (N= 69)
3 EASTERN (N= 28)
MIN----------MAX MIN----------MAX
AN H = 2 CASES
AN X = 2 CASES

##########
NH3 # VARIABLE NUMBER 3
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	4.06	0.000	75.6
T (POOLED)	3.41	0.001	95
F(FOR VARIANCES)	2.34	0.016	68, 27

GROUP	2 CENTRAL	3 EASTERN
MEAN	23.9841	12.8321
STD DEV	15.9387	10.4151
S.E.M.	1.9188	1.9683
SAMPLE SIZE	69	28
MAXIMUM	57.8000	33.8000
MINIMUM	3.0000	1.5000

2 CENTRAL (N= 69)
3 EASTERN (N= 28)
MIN----------MAX MIN----------MAX
AN H = 3 CASES
AN X = 3 CASES

##########
SRS # VARIABLE NUMBER 4
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	2.48	0.015	78.9
T (POOLED)	2.05	0.043	95
F(FOR VARIANCES)	2.58	0.008	68, 27

GROUP	2 CENTRAL	3 EASTERN
MEAN	1565.3913	1277.1786
STD DEV	691.1313	429.9860
S.E.M.	83.2024	81.2597
SAMPLE SIZE	69	28
MAXIMUM	2976.0000	1937.0000
MINIMUM	192.0000	728.0000

2 CENTRAL (N= 69)
3 EASTERN (N= 28)
MIN----------MAX MIN----------MAX
AN H = 2 CASES
AN X = 2 CASES

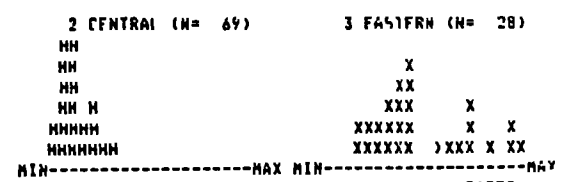
T-TEST HYDRA86 BASIN COMPARISON HYPO

DIFFERENCES AMONG GROUP MEANS USING ALL VARIABLES
FOR THE FOLLOWING GROUPS
##########
CENTRAL
EASTERN
##########

##########
TURBID # VARIABLE NUMBER 2
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-7.75	-0.000	28.8
T (POOLED)	-11.36	0.000	95
F(FOR VARIANCES)	12.31	0.000	27, 68

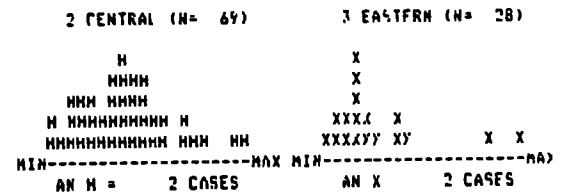
GROUP	2 CENTRAL	3 EASTERN
MEAN	1.4565	4.4786
STD DEV	0.5784	2.0293
S.E.M.	0.0696	0.3835
SAMPLE SIZE	69	28
MAXIMUM	3.0000	8.8000
MINIMUM	0.4000	1.8000



##########
CHLACORR # VARIABLE NUMBER 7
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	2.83	0.007	47.4
T (POOLED)	2.91	0.005	95
F(FOR VARIANCES)	1.13	0.661	27, 68

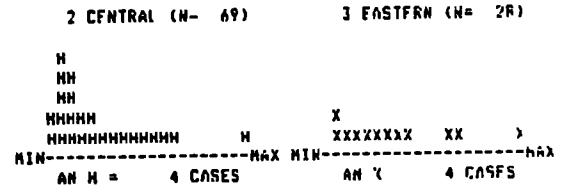
GROUP	2 CENTRAL	3 EASTERN
MEAN	1.3614	0.8911
STD DEV	0.7084	0.7544
S.E.M.	0.0853	0.1426
SAMPLE SIZE	69	28
MAXIMUM	3.3800	3.5300
MINIMUM	0.0300	0.1900



##########
PHEO # VARIABLE NUMBER 8
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-1.43	0.160	40.9
T (POOLED)	-1.59	0.115	95
F(FOR VARIANCES)	1.66	0.096	27, 68

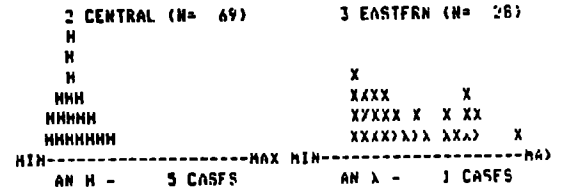
GROUP	2 CENTRAL	3 EASTERN
MEAN	1.3148	1.7282
STD DEV	1.0645	1.3712
S.E.M.	0.1282	0.2591
SAMPLE SIZE	69	28
MAXIMUM	6.1000	6.3400
MINIMUM	0.1100	0.4600



##########
TSS # VARIABLE NUMBER 3
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-6.91	-0.000	28.8
T (POOLED)	-10.13	0.000	95
F(FOR VARIANCES)	12.31	0.000	27, 68

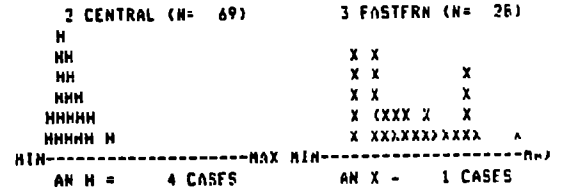
GROUP	2 CENTRAL	3 EASTERN
MEAN	1.6751	4.4886
STD DEV	0.6038	2.1184
S.E.M.	0.0727	0.4003
SAMPLE SIZE	69	28
MAXIMUM	3.3600	9.5300
MINIMUM	0.4700	1.8500



##########
RS # VARIABLE NUMBER 4
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-7.79	-0.000	28.5
T (POOLED)	-11.53	0.000	95
F(FOR VARIANCES)	14.64	0.000	27, 68

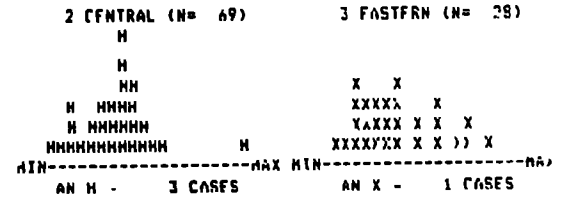
GROUP	2 CENTRAL	3 EASTERN
MEAN	0.9603	3.7107
STD DEV	0.4819	1.8440
S.E.M.	0.0580	0.3485
SAMPLE SIZE	69	28
MAXIMUM	2.5000	8.2100
MINIMUM	0.0200	1.3800



##########
VS # VARIABLE NUMBER 5
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-0.97	0.337	38.9
T (POOLED)	-1.11	0.268	95
F(FOR VARIANCES)	1.93	0.031	27, 68

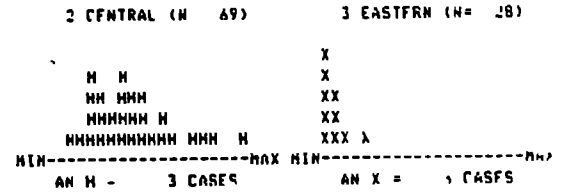
GROUP	2 CENTRAL	3 EASTERN
MEAN	0.7142	0.7779
STD DEV	0.2270	0.3149
S.E.M.	0.0273	0.0595
SAMPLE SIZE	69	28
MAXIMUM	1.7600	1.5200
MINIMUM	0.1900	0.3300



##########
PERVS # VARIABLE NUMBER 6
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	14.23	0.000	92.7
T (POOLED)	9.98	-0.000	95
F(FOR VARIANCES)	9.08	0.000	68, 27

GROUP	2 CENTRAL	3 EASTERN
MEAN	45.3533	18.3550
STD DEV	13.9739	4.6484
S.E.M.	1.6823	0.8766
SAMPLE SIZE	69	28
MAXIMUM	97.0600	31.7700
MINIMUM	21.9600	13.1600



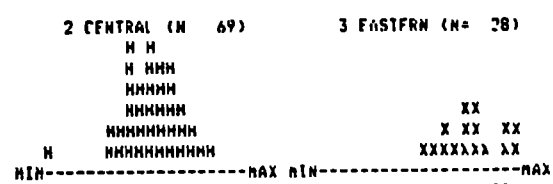
T-TEST HYDRA86 BASIN COMPARISON HYPO

DIFFERENCES AMONG GROUP MEANS USING ALL VARIABLES
FOR THE FOLLOWING GROUPS
##########
CENTRAL
EASTERN
##########

##########
CONDCORR # VARIABLE NUMBER 8
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-7.40	-0.000	47.7
T (POOLED)	-7.57	-0.000	95
F(FOR VARIANCES)	1.12	0.697	27, 68

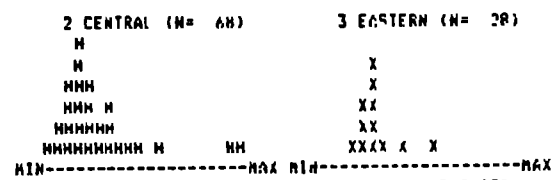
GROUP	2 CENTRAL	3 EASTERN
MEAN	275.2609	281.3571
STD DEV	3.5341	3.7139
S.E.M.	0.4255	0.7056
SAMPLE SIZE	69	28
MAXIMUM	283.0000	288.0000
MINIMUM	261.0000	275.0000



##########
CL # VARIABLE NUMBER 9
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-1.94	0.056	92.9
T (POOLED)	-1.46	0.147	94
F(FOR VARIANCES)	4.78	0.000	67, 27

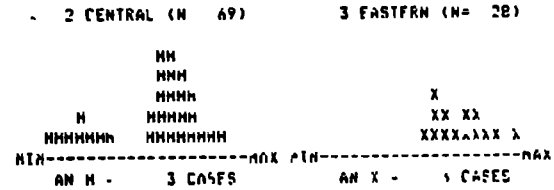
GROUP	2 CENTRAL	3 EASTERN
MEAN	14.9574	15.1464
STD DEV	0.6557	0.3000
S.E.M.	0.0795	0.0567
SAMPLE SIZE	68	28
MAXIMUM	18.0000	16.3000
MINIMUM	14.1000	14.7000



##########
ALKTOT # VARIABLE NUMBER 6
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-4.29	0.000	88.2
T (POOLED)	-3.36	0.001	95
F(FOR VARIANCES)	3.55	0.001	68, 27

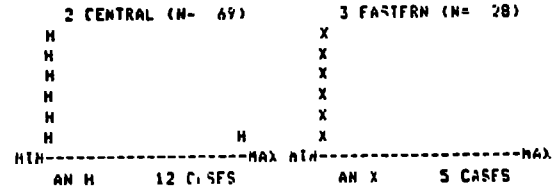
GROUP	2 CENTRAL	3 EASTERN
MEAN	106.1464	108.7321
STD DEV	3.8470	2.0418
S.E.M.	0.4631	0.3859
SAMPLE SIZE	69	28
MAXIMUM	117.3000	114.4000
MINIMUM	96.4000	106.1000



##########
ALKPH # VARIABLE NUMBER 7
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	1.00	0.321	68.0
T (POOLED)	0.64	0.527	95
F(FOR VARIANCES)	0.00	1.000	68, 27

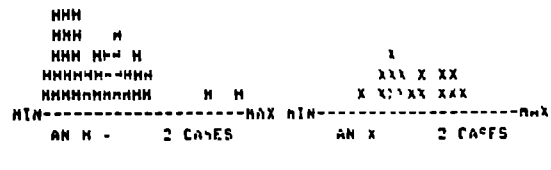
GROUP	2 CENTRAL	3 EASTERN
MEAN	0.0377	0.0000
STD DEV	0.3130	0.0000
S.E.M.	0.0377	0.0000
SAMPLE SIZE	69	28
MAXIMUM	2.6000	0.0000
MINIMUM	0.0000	0.0000



##########
PH # VARIABLE NUMBER 5
##########

STATISTICS		P VALUE	D. F.
T (SEPARATE)	-6.71	-0.000	64.1
T (POOLED)	-6.04	0.000	95
F(FOR VARIANCES)	1.66	0.143	68, 27

GROUP	2 CENTRAL	3 EASTERN
MEAN	7.4991	7.7132
STD DEV	0.1683	0.1305
S.E.M.	0.0203	0.0247
SAMPLE SIZE	69	28
MAXIMUM	8.1700	7.9300
MINIMUM	7.2600	7.4800



APPENDIX E

Appendix E contains the BMDP statistical computer outputs for the quality control data. The data in the BMDP outputs was generated through a CLEAR computer program (CALDIF) containing the following options.

Option 1

Option 1 calculates the absolute difference (ABS) between splits (X11, X12, X21, X22) using the following formula:

ABS (X11 - X12) AND ABS (X21 - X22)

Option 1 was used on all parameters having split measurements.

Option 2

Option 2 calculates the absolute difference (ABS) between replicates (X1, X2) using the following formula:

ABS (X1 - X2)

Option 2 was used on all quality control parameters.

See the quality control section for the explanation for the terms split and replicate.

QC86 OPTION 1 DIFFERENCE BTWN SPLITS

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* TP       *
************
```

VARIABLE NUMBER	2	MAXIMUM	2.0000000
NUMBER OF DISTINCT VALUES .	17	MINIMUM	0.0000000
NUMBER OF VALUES COUNTED. .	49	RANGE	2.0000000
NUMBER OF VALUES NOT COUNTED	1	VARIANCE	0.2609949
		ST.DEV.	0.5108766
		(Q3-Q1)/2	0.3500000

```
H                 EACH 'H'
H  H              REPRESENTS
HH H                  2
HHHH              COUNT(S)
HHHH  H
HHHH HHHHHHHH H
L---------------U
```

LOCATION ESTIMATES

		ST.ERROR
MEAN	0.5673470	0.0729824
MEDIAN	0.4000000	0.0577351
MODE	NOT UNIQUE	

EACH '-' ABOVE = 0.1500
L= 0.0000
U= 2.4000

	VALUE	VALUE/S.E.		
			Q1=	0.2000000
			Q3=	0.9000000
SKEWNESS	0.98	2.80	S-=	0.0564704
KURTOSIS	0.09	0.12	S+=	1.0782236

EACH '.' BELOW = 0.0200

```
   S         Q           M         .                   Q         S                          M
M  -         1           M         M                   3         +                          
I..................................E.........................................................A
N                        D         A                                                        X
                         I         N
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
0.00000	6	12.2	12.2	0.50000	6	12.2	63.3	1.10000	2	4.1	85.7	1.70000	1	2.0	98.0
0.10000	6	12.2	24.5	0.60000	4	8.2	71.4	1.30000	2	4.1	89.8	2.00000	1	2.0	100.0
0.20000	4	8.2	32.7	0.80000	1	2.0	73.5	1.40000	1	2.0	91.8				
0.30000	3	6.1	38.8	0.90000	1	2.0	75.5	1.50000	1	2.0	93.9				
0.40000	6	12.2	51.0	1.00000	3	6.1	81.6	1.60000	1	2.0	95.9				

QC86 OPTION 1 DIFFERENCE BTWN SPLITS

```
************
* TFF      *
************
```

VARIABLE NUMBER	3	MAXIMUM	7.0000000
NUMBER OF DISTINCT VALUES .	17	MINIMUM	0.0000000
NUMBER OF VALUES COUNTED. .	48	RANGE	7.0000000
NUMBER OF VALUES NOT COUNTED	2	VARIANCE	1.6165780
		ST.DEV.	1.2714472
		(Q3-Q1)/2	0.3750000

```
H
H
H
H                 EACH 'H'
H                 REPRESENTS
H                     3
H                 COUNT(S)
HH
HHHH
HHHH      H  H
L---------------U
```

LOCATION ESTIMATES

		ST.ERROR
MEAN	0.7541667	0.1835176
MEDIAN	0.4000000	0.1154701
MODE	0.0000000	

EACH '-' ABOVE = 0.5000
L= 0.0000
U= 8.0000

	VALUE	VALUE/S.E.		
			Q1=	0.1000000
			Q3=	0.8500000
SKEWNESS	3.59	10.15	S-=	-0.5172805
KURTOSIS	13.58	19.20	S+=	2.0256138

EACH '.' BELOW = 0.0750

```
S         Q      Q               S                                                         M
-       M 1  M   M 3             +                                                         
.......I.....E...E.........................................................................A
       N     D   A                                                                         X
             I   N
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
0.00000	10	20.8	20.8	0.50000	2	4.2	60.4	1.00000	1	2.1	79.2	5.50000	1	2.1	97.9
0.10000	5	10.4	31.2	0.60000	1	2.1	62.5	1.10000	1	2.1	81.2	7.00000	1	2.1	100.0
0.20000	3	6.2	37.5	0.70000	4	8.3	70.8	1.30000	2	4.2	85.4				
0.30000	4	8.3	45.8	0.80000	2	4.2	75.0	1.40000	1	2.1	87.5				
0.40000	5	10.4	56.2	0.90000	1	2.1	77.1	1.60000	4	8.3	95.8				

QC86 OPTION 1 DIFFERENCE BTWN SPLITS

```
************
* SRP      *
************
                                                MAXIMUM        1.0000000
VARIABLE NUMBER . . . . . .        4            MINIMUM        0.0000000
NUMBER OF DISTINCT VALUES .        7            RANGE          1.0000000
NUMBER OF VALUES COUNTED. .       47            VARIANCE       0.0372248
NUMBER OF VALUES NOT COUNTED       3            ST.DEV.        0.1929373
                                                (Q3-Q1)/2      0.0500000

LOCATION ESTIMATES                                    ST.ERROR
                     MEAN            0.0872341      0.0281428
                     MEDIAN          0.0000000      0.0000000
                     MODE            0.0000000

H
H
H                  EACH 'H'
H                  REPRESENTS
H                     4
H                  COUNT(S)
H
H H
HHHH H   H   H
L----------------U

EACH '-' ABOVE =     0.0750
             L=      0.0000
             U=      1.2000

                                                       Q1=    0.0000000
                           VALUE    VALUE/S.E.         Q3=    0.1000000
SKEWNESS                    3.10         8.69          S-=   -0.1057032
KURTOSIS                   10.36        14.50          S+=    0.2801713

EACH '.' BELOW =     0.0100

S         Q       Q                S                                                                   M
-         M       M3               +                                                                   A
..........I.......E....................................................................................X
          N       A
                  N
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
0.00000	33	70.2	70.2	0.20000	5	10.6	89.4	0.40000	1	2.1	95.7	1.00000	1	2.1	100.0
0.10000	4	8.5	78.7	0.30000	2	4.3	93.6	0.70000	1	2.1	97.9				

QC86 OPTION 1 DIFFERENCE BTWN SPLITS

```
************
* NITNIT   *
************
                                                MAXIMUM        7.0000000
VARIABLE NUMBER . . . . . .        5            MINIMUM        0.0000000
NUMBER OF DISTINCT VALUES .        8            RANGE          7.0000000
NUMBER OF VALUES COUNTED. .       50            VARIANCE       2.3526533
NUMBER OF VALUES NOT COUNTED .     0            ST.DEV.        1.5338361
                                                (Q3-Q1)/2      0.5000000

LOCATION ESTIMATES                                    ST.ERROR
                     MEAN            1.1200000      0.2169172
                     MEDIAN          1.0000000      0.2886753
                     MODE            0.0000000

HH
HH
HH
HH                 EACH 'H'
HH                 REPRESENTS
HH                    2
HH                 COUNT(S)
HH H
HH H
HH H H H H H H H
L----------------U

EACH '-' ABOVE =     0.5000
             L=      0.0000
             U=      8.0000

                                                       Q1     0.0000000
                           VALUE    VALUE/S.E.         Q3=    1.0000000
SKEWNESS                    2.17         6.28          S-=   -0.4138361
KURTOSIS                    4.76         6.88          S+=    2.6538363

EACH '.' BELOW -     0.0750

S     Q            Q                 S                                                     M
-     M            M M               +                                                     A
......I............E.E.....................................................................X
      N            D A
                   I N
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
0.	20	40.0	40.0	2.	6	12.0	90.0	4.	1	2.0	94.0	6.	1	2.0	98.0
1.	19	38.0	78.0	3.	1	2.0	92.0	5.	1	2.0	96.0	7.	1	2.0	100.0

QC86 OPTION 1 DIFFERENCE BTWN SPLITS

```
************
* NH3      *
************
                                                   MAXIMUM          9.1999998
VARIABLE NUMBER . . . . . .          2             MINIMUM          0.0000000
NUMBER OF DISTINCT VALUES .         30             RANGE            9.1999998      H
NUMBER OF VALUES COUNTED. .         44             VARIANCE         7.2001004      H                EACH 'H'
NUMBER OF VALUES NOT COUNTED         6             ST.DEV.          2.6833003      H              REPRESENTS
                                                   (Q3-Q1)/2        2.0750000      HH                  2
                                                                                   HH               COUNT(S)
LOCATION ESTIMATES                                       ST.ERROR                  HH H
                              MEAN         2.5613635     0.4045227                 HH H   H
                              MEDIAN       1.3000001     0.5196155                 HH HHHHHHHH H
                              MODE         0.1000000                              L---------------U

                                                                         EACH '-' ABOVE =        0.7500
                                                                                     L=        0.0000
                                                                                     U=       12.0000

                                                                                               Q1=     0.4000000
                                                                         VALUE   VALUE/S.E.    Q3=     4.5500002
                                                          SKEWNESS        0.93         2.53    S-=    -0.1219368
                                                          KURTOSIS       -0.44        -0.60    S+=     5.2446638

                                                                         EACH '.' BELOW =        0.0750
S      Q                                        Q         S
- MM   1              M           M             3         +                                                      M
..MO..............E...........E.......................................................................................A
 ND               D           A                                                                                  X
  E               I           N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.00000	3	6.8	6.8	0.90000	2	4.5	43.2	3.50000	1	2.3	70.5	6.20000	1	2.3	88.6
0.10000	4	9.1	15.9	1.00000	2	4.5	47.7	3.80000	1	2.3	72.7	7.00000	1	2.3	90.9
0.20000	1	2.3	18.2	1.20000	1	2.3	50.0	4.40000	1	2.3	75.0	7.20000	1	2.3	93.2
0.30000	2	4.5	22.7	1.40000	1	2.3	52.3	4.70000	1	2.3	77.3	7.90000	1	2.3	95.5
0.40000	2	4.5	27.3	1.50000	2	4.5	56.8	5.20000	1	2.3	79.5	8.20000	1	2.3	97.7
0.50000	1	2.3	29.5	2.50000	1	2.3	59.1	5.40000	1	2.3	81.8	9.20000	1	2.3	100.0
0.70000	2	4.5	34.1	2.60000	3	6.8	65.9	5.90000	1	2.3	84.1				
0.80000	2	4.5	38.6	2.90000	1	2.3	68.2	6.00000	1	2.3	86.4				

QC86 OPTION 1 DIFFERENCE BTWN SPLITS

```
************
* SRS      *
************
                                                   MAXIMUM        240.0000000      H
VARIABLE NUMBER . . . . . .          7             MINIMUM          0.0000000      H
NUMBER OF DISTINCT VALUES .         22             RANGE          240.0000000      H
NUMBER OF VALUES COUNTED. .         49             VARIANCE      1773.0417480      H                EACH 'H'
NUMBER OF VALUES NOT COUNTED         1             ST.DEV.         42.1075020      H              REPRESENTS
                                                   (Q3-Q1)/2       11.0000000      H                   3
                                                                                   HH               COUNT(S)
LOCATION ESTIMATES                                       ST.ERROR                  HH
                              MEAN        24.0000000     6.0153575                 HH
                              MEDIAN      10.0000000     2.8867528                 HHHHH  H H     H
                              MODE         0.0000000                              L---------------U

                                                                         EACH '-' ABOVE =       15.0000
                                                                                     L=        0.0000
                                                                                     U=      240.0000

                                                                                               Q1-     4.0000000
                                                                         VALUE   VALUE/S.E.    Q3=    26.0000000
                                                          SKEWNESS        3.47         9.92    S-=   -18.1075020
                                                          KURTOSIS       13.28        18.97    S+=    66.1075058

                                                                         EACH '.' BELOW =        2.0000
S        Q        Q                   S
-      M 1 M     M3                   +                                                                          M
........I...E......E..............................................................................................A
       N   D     A                                                                                               X
           I     N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.	12	24.5	24.5	10.	5	10.2	53.1	26.	3	6.1	79.6	71.	1	2.0	93.9
4.	2	4.1	28.6	15.	4	8.2	61.2	27.	1	2.0	81.6	114.	1	2.0	95.9
5.	3	6.1	34.7	16.	2	4.1	65.3	32.	2	4.1	85.7	143.	1	2.0	98.0
6.	2	4.1	38.8	20.	1	2.0	67.3	40.	1	2.0	87.8	240.	1	2.0	100.0
8.	1	2.0	40.8	22.	1	2.0	69.4	50.	1	2.0	89.8				
9.	1	2.0	42.9	25.	2	4.1	73.5	63.	1	2.0	91.8				

QCB6 OPTION 1 DIFFERENCE BTWN SPLITS

```
************
* TURBID   *
************
                                          MAXIMUM         0.3000000
VARIABLE NUMBER . . . . . .       2       MINIMUM         0.0000000
NUMBER OF DISTINCT VALUES .       4       RANGE           0.3000000
NUMBER OF VALUES COUNTED. .      48       VARIANCE        0.0046631
NUMBER OF VALUES NOT COUNTED      2       ST.DEV.         0.0682871
                                          (Q3-Q1)/2       0.0500000

LOCATION ESTIMATES                            ST.ERROR
                 MEAN          0.0541667     0.0098564
                 MEDIAN        0.0000000     0.0288675
                 MODE          0.0000000
```

```
H
H
H  H           EACH 'H'
H  H           REPRESENTS
H  H              3
H  H           COUNT(S)
H  H
H  H
H  H   H   H
L---------------U

EACH '-' ABOVE =      0.0200
              L=      0.0000
              U=      0.3200

                                                         Q1-    0.0000000
                       VALUE    VALUE/S.E.               Q3-    0.1000000
SKEWNESS               1.25          3.54                S--   -0.0141204
KURTOSIS               1.76          2.49                S+=    0.1224537

EACH '.' BELOW -      0.0025
```

```
S  Q                     Q        S                                  M
-  1           M         3        +                                  A
.....I..........E..................................................A
   N           A                                                     X
               N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.00000	26	54.2	54.2	0.10000	19	39.6	93.7	0.20000	2	4.2	97.9	0.30000	1	2.1	100.0

QCB6 OPTION 1 DIFFERENCE BTWN SPLITS

```
************
* CONDCORR *
************
                                          MAXIMUM        22.0000000
VARIABLE NUMBER . . . . . .       3       MINIMUM         0.0000000
NUMBER OF DISTINCT VALUES .      10       RANGE          22.0000000
NUMBER OF VALUES COUNTED. .      49       VARIANCE       12.3562937
NUMBER OF VALUES NOT COUNTED      1       ST.DEV.         3.5151520
                                          (Q3-Q1)/2       1.0000000

LOCATION ESTIMATES                            ST.ERROR
                 MEAN          2.6530612     0.5021645
                 MEDIAN        2.0000000     0.2886753
                 MODE         NOT UNIQUE
```

```
HH
HH
HH
HH             EACH 'H'
HH             REPRESENTS
HH                2
HH             COUNT(S)
HH
HHH
HHHHHHH      H
L---------------U

EACH '-' ABOVE =      1.5000
              L=      0.0000
              U=     24.0000

                                                         Q1-    1.0000000
                       VALUE    VALUE/S.E.               Q3-    3.0000000
SKEWNESS               3.69         10.54                S-=   -0.8620908
KURTOSIS              16.76         23.94                S+=    6.1682134

EACH '.' BELOW =      0.2000
```

```
S        Q       Q        S                                  M
-   M    1    M  M 3      +                                  A
.....I.........E..E........................................A
    N         D  A                                           X
              I  N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.	9	18.4	18.4	3.	8	16.3	79.6	7.	1	2.0	93.9	22.	1	2.0	100.0
1.	11	22.4	40.8	4.	4	8.2	87.8	8.	1	2.0	95.9				
2.	11	22.4	63.3	5.	2	4.1	91.8	10.	1	2.0	98.0				

```
QC86 OPTION 1 DIFFERENCE BTWN SPLITS

 ************
 * CL       *
 ************
                                                MAXIMUM         0.6000000
VARIABLE NUMBER . . . . . . .       8           MINIMUM         0.0000000
NUMBER OF DISTINCT VALUES .         6           RANGE           0.6000000
NUMBER OF VALUES COUNTED. .        50           VARIANCE        0.0147959
NUMBER OF VALUES NOT COUNTED        0           ST.DEV.         0.1216385
                                                (Q3-Q1)/2       0.1000000

LOCATION ESTIMATES                                   ST.ERROR
                   MEAN             0.1300000     0.0172023
                   MEDIAN           0.1000000     0.0788675
                   MODE             0.1000000

                         H
                         H H
                         HH H              EACH 'H'
                         HH H              REPRESENTS
                         HH H                  2
                         HH H               COUNT(S)
                         HH H
                         HH H
                         HH H H    H H
                        L----------------U

               EACH '-' ABOVE =         0.0500
                            L=          0.0000
                            U=          0.8000

                                              Q1=    0.0000000
                         VALUE  VALUE/S.E.    Q3=    0.2000000
         SKEWNESS         1.59       4.60     S-=    0.0083615
         KURTOSIS         3.83       5.53     S+=    0.2516385

               EACH '.' BELOW =         0.0050

Q S                                  Q          S                                           M
M -               M   M              3          +                                           A
I.................F...F.....................................................................A
N                 D   A                                                                     X
                  I   N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.00000	13	26.0	26.0	0.20000	15	30.0	92.0	0.50000	1	2.0	98.0				
0.10000	18	36.0	62.0	0.30000	2	4.0	96.0	0.60000	1	2.0	100.0				

```
QC86 OPTION 1 DIFFERENCE BTWN SPLITS

 ************
 * PH       *
 ************
                                                MAXIMUM         0.2300000
VARIABLE NUMBER . . . . . . .       4           MINIMUM         0.0000000
NUMBER OF DISTINCT VALUES .         6           RANGE           0.2300000
NUMBER OF VALUES COUNTED. .        49           VARIANCE        0.0010826
NUMBER OF VALUES NOT COUNTED        1           ST.DEV.         0.0329024
                                                (Q3-Q1)/2       0.0100000

LOCATION ESTIMATES                                   ST.ERROR
                   MEAN             0.0161224     0.0047003
                   MEDIAN           0.0100000     0.0028868
                   MODE            NOT UNIQUE

                         H
                         H
                         H
                         H                 EACH 'H'
                         HH                REPRESENTS
                         HH                    3
                         HH                 COUNT(S)
                         HH
                         HH
                         HH H             H
                        L----------------U

               EACH '-' ABOVE =         0.0150
                            L=          0.0000
                            U=          0.2400

                                              Q1=    0.0000000
                         VALUE  VALUE/S.E.    Q3=    0.0200000
         SKEWNESS         5.71      16.32     S-=   -0.0167800
         KURTOSIS        34.24      48.92     S+=    0.0490249

               EACH '.' BELOW =         0.0020

S       Q       Q              S                                                            M
-       M    M  M 3            +                                                            A
........I....E..E...........................................................................A
        N    D  A                                                                           X
             I  N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.000000	15	30.6	30.6	0.020000	15	30.6	91.8	0.050000	1	2.0	98.0				
0.010000	15	30.6	61.2	0.030000	2	4.1	95.9	0.230000	1	2.0	100.0				

```
QC86 OPTION 2 DIFFERENCE BTWN REPLICATES

 ************
 * TEMP     *
 ************
                                          MAXIMUM        0.2000000              H
VARIABLE NUMBER . . . . . .      2        MINIMUM        0.0000000              H
NUMBER OF DISTINCT VALUES .      3        RANGE          0.2000000              H
NUMBER OF VALUES COUNTED. .     23        VARIANCE       0.0024111              H             EACH 'H'
NUMBER OF VALUES NOT COUNTED     2        ST.DEV.        0.0491026              H             REPRESENTS
                                          (Q3-Q1)/2      0.0000000              H                 2
                                                                                H             COUNT(S)
LOCATION ESTIMATES                             ST.ERROR                         H
                    MEAN         0.0173913    0.0102386                         H
                    MEDIAN       0.0000000    0.0000000                         H  H  H
                    MODE         0.0000000                                     L-------------U

                                                                 EACH '-' ABOVE =      0.0200
                                                                             L=        0.0000
                                                                             U=        0.2600

                                                                                   Q1=    0.0000000
                                                                 VALUE  VALUE/S.F. Q3=    0.0000000
                                                     SKEWNESS     2.73       5.34  S-=   -0.0317113
                                                     KURTOSIS     6.44       6.30  S+=    0.0664939

                                                                 EACH '.' BELOW =      0.0020

   S         Q     M                       S                                                 M
   -         M     M                       +                                                 A
   ..........I.....+.............................................................................A
             N     A                                                                         X
                   N

                  PERCENTS                           PERCENTS                          PERCENTS
  VALUE   COUNT  CELL   CUM      VALUE   COUNT  CELL   CUM      VALUE   COUNT  CELL   CUM
  0.00000    20  87.0  87.0      0.10000     2   8.7  95.7      0.20000     1   4.3 100.0
------------------------------------------------------------------------------------------------------
```

```
QC86 OPTION 2 DIFFERENCE BTWN REPLICATES

 ************
 * DO       *
 ************                                                                      H
                                          MAXIMUM        0.3000000                 H
VARIABLE NUMBER . . . . . .      3        MINIMUM        0.0000000              H  H
NUMBER OF DISTINCT VALUES .      4        RANGE          0.3000000              H  H          EACH 'H'
NUMBER OF VALUES COUNTED. .     23        VARIANCE       0.0086166              H  H          REPRESENTS
NUMBER OF VALUES NOT COUNTED     2        ST.DEV.        0.0928257              H  H              1
                                          (Q3-Q1)/2      0.0500000              H  H          COUNT(S)
                                                                                H  H  H
LOCATION ESTIMATES                             ST.ERROR                         H  H  H  H
                    MEAN         0.0956522    0.0193555                         H  H  H  H
                    MEDIAN       0.1000000    0.0288675                        L-------------U
                    MODE         0.1000000

                                                                 EACH '-' ABOVE =      0.0250
                                                                             L=        0.0000
                                                                             U=        0.3250

                                                                                   Q1=    0.0000000
                                                                 VALUE  VALUE/S.F. Q3=    0.1000000
                                                     SKEWNESS     0.77       1.50  S-=    0.0028265
                                                     KURTOSIS    -0.24      -0.23  S+=    0.1884778

                                                                 EACH '.' BELOW =      0.0025

 Q S                        Q                      S                                         M
 M -                        MM                     +                                         M
 I..........................ME..........................................................M
 N                          AD                                                               X
                            NI

                  PERCENTS                        PERCENTS                       PERCENTS                       PERCENTS
  VALUE   COUNT  CELL   CUM      VALUE   COUNT  CELL   CUM     VALUE   COUNT  CELL   CUM     VALUE   COUNT  CELL   CUM
  0.00000     8  34.8  34.8      0.10000    10  43.5  78.3     0.20000     3  13.0  91.3     0.30000     2   8.7 100.0
------------------------------------------------------------------------------------------------------
```

QC86 OPTION 2 DIFFERENCE BTWN REPLICATES

```
*************
* TP        *
*************
                                                  MAXIMUM          5.6999998
VARIABLE NUMBER . . . . . .          2            MINIMUM          0.0000000
NUMBER OF DISTINCT VALUES .         17            RANGE            5.6999998
NUMBER OF VALUES COUNTED. .         24            VARIANCE         2.1310146
NUMBER OF VALUES NOT COUNTED         1            ST.DEV.          1.4597995
                                                  (Q3-Q1)/2        0.6000000

LOCATION ESTIMATES                                    ST.ERROR
                     MEAN            1.4166669      0.2979803
                     MEDIAN          0.9000000      0.2020727
                     MODE            0.9000000
```

```
H
H                 EACH 'H'
HH                REPRESENTS
HH                    1
HHH               COUNT(S)
HHH
HHH   H
HHH HHH H  H
L-------------U

EACH '-' ABOVE =      0.5000
            L=        0.0000
            U=        6.5000

                                       Q1=    0.5000000
              VALUE    VALUE/S.F.      Q3=    1.6999999
SKEWNESS       1.47          2.94      S-=   -0.0431327
KURTOSIS       1.32          1.32      S+=    2.8764665

EACH '.' BELOW =      0.0500
```

```
S        Q                  Q                S                                M
-M       1     M      M     3                +                                A
.I...............E.........E.............................................................A
 N               D       A                                                    X
                 I       N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.00000	1	4.2	4.2
0.10000	2	8.3	12.5
0.20000	1	4.2	16.7
0.30000	1	4.2	20.8
0.40000	1	4.2	25.0
0.60000	2	8.3	33.3
0.70000	1	4.2	37.5
0.80000	1	4.2	41.7
0.90000	4	16.7	58.3
1.20000	2	8.3	66.7
1.30000	2	8.3	75.0
2.10000	1	4.2	79.2
3.00000	1	4.2	83.3
3.20000	1	4.2	87.5
3.30000	1	4.2	91.7
4.30000	1	4.2	95.8
5.70000	1	4.2	100.0

QC86 OPTION 2 DIFFERENCE BTWN REPLICATES

```
*************
* TFP       *
*************
                                                  MAXIMUM          9.5000000
VARIABLE NUMBER . . . . . .          3            MINIMUM          0.0000000
NUMBER OF DISTINCT VALUES .         17            RANGE            9.5000000
NUMBER OF VALUES COUNTED. .         23            VARIANCE         5.5181031
NUMBER OF VALUES NOT COUNTED         2            ST.DEV.          2.3490644
                                                  (Q3-Q1)/2        0.9000000

LOCATION ESTIMATES                                    ST.ERROR
                     MEAN            1.4913045      0.4898138
                     MEDIAN          0.6000000      0.1732052
                     MODE            0.0000000
```

```
H                 EACH 'H'
H                 REPRESENTS
H                     2
H                 COUNT(S)
H
HH
HHHHH    H  H
L-------------U

EACH '-' ABOVE =      0.7500
            L=        0.0000
            U=        9.7500

                                       Q1=    0.2000000
              VALUE    VALUE/S.F.      Q3=    2.0000000
SKEWNESS       2.33          4.56      S-=   -0.8577598
KURTOSIS       4.59          4.50      S+=    3.8403690

EACH '.' BELOW -      0.1000
```

```
S        Q                 Q               S                       M
-      M 1   M       M     3               +                       A
........I.....E........E.............................................A
        N     D        A                                           X
              I        N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.00000	3	13.0	13.0
0.10000	2	8.7	21.7
0.20000	1	4.3	26.1
0.30000	2	8.7	34.8
0.40000	1	4.3	39.1
0.50000	2	8.7	47.8
0.60000	1	4.3	52.2
0.70000	1	4.3	56.5
0.80000	1	4.3	60.9
0.90000	2	8.7	69.6
1.20000	1	4.3	73.9
2.00000	1	4.3	78.3
2.20000	1	4.3	82.6
2.60000	1	4.3	87.0
3.50000	1	4.3	91.3
7.00000	1	4.3	95.7
9.50000	1	4.3	100.0

QC86 OPTION 2 DIFFERENCE BTWN REPLICATES

```
************
* SRP      *
************
                                                MAXIMUM         1.9000000
VARIABLE NUMBER . . . . . . .        4          MINIMUM         0.0000000
NUMBER OF DISTINCT VALUES .          8          RANGE           1.9000000                               H
NUMBER OF VALUES COUNTED. .         23          VARIANCE        0.1841897                               H              EACH 'H'
NUMBER OF VALUES NOT COUNTED         2          ST.DEV.         0.4291733                               H             REPRESENTS
                                                (Q3-Q1)/2       0.2000000                               H                  2
                                                                                                        H               COUNT(S)
LOCATION ESTIMATES                                   ST.ERROR                                           H
                      MEAN             0.2347826      0.0894888                                         H  H
                      MEDIAN           0.0000000      0.0866026                                         HHHHH       H
                      MODE             0.0000000                                                       L-------------U

                                                                                                 EACH '-' ABOVE =        0.1500
                                                                                                             L=          0.0000
                                                                                                             U=          1.9500

                                                                                                                         Q1-      0.0000000
                                                                                          VALUE    VALUE/S.F.            Q3=      0.4000000
                                                                           SKEWNESS        2.67          5.22            S-=     -0.1943907
                                                                           KURTOSIS        7.46          7.30            S+=      0.6639559

                                                                                                 EACH '.' BELOW =        0.0200
           S        Q                    Q         S
           -        M           M        3         +                                                             M
           .........I...........E............................................................................... A
                    N           A                                                                                X
                                N

                   PERCENTS                         PERCENTS                         PERCENTS                          PERCENTS
  VALUE     COUNT  CELL   CUM      VALUE    COUNT  CELL   CUM      VALUE    COUNT  CELL   CUM      VALUE    COUNT  CELL   CUM
  0.00000     13   56.5   56.5     0.30000    2     8.7   73.9     0.50000    2     8.7   87.0     0.70000    1     4.3   95.7
  0.10000      2    8.7   65.2     0.40000    1     4.3   78.3     0.60000    1     4.3   91.3     1.90000    1     4.3  100.0
--------------------------------------------------------------------------------------------------------------------------------
```

QC86 OPTION 2 DIFFERENCE BTWN REPLICATES

```
************
* NITNIT   *
************
                                                MAXIMUM        17.0000000
VARIABLE NUMBER . . . . . . .        5          MINIMUM         0.0000000
NUMBER OF DISTINCT VALUES .          9          RANGE          17.0000000
NUMBER OF VALUES COUNTED. .         25          VARIANCE       19.6766644                               H              EACH 'H
NUMBER OF VALUES NOT COUNTED         0          ST.DEV.         4.4358387                               H             REPRESENTS
                                                (Q3-Q1)/2       2.0000000                               H                  2
                                                                                                        H               COUNT(S)
LOCATION ESTIMATES                                   ST.ERROR                                           H
                      MEAN             3.4800000      0.8871678                                         HH  H
                      MEDIAN           1.0000000      0.5773506                                         HH HHH   H H
                      MODE             1.0000000                                                       L-------------U

                                                                                                 EACH '-' ABOVE =        1.5000
                                                                                                             L=          0.0000
                                                                                                             U=         19.5000

                                                                                                                         Q1-      1.0000000
                                                                                          VALUE    VALUE/S.F.            Q3=      5.0000000
                                                                           SKEWNESS        1.68          3.43            S-=     -0.9558387
                                                                           KURTOSIS        2.12          2.17            S+=      7.9158387

                                                                                                 EACH '.' BELOW =        0.1500
   S         Q                  Q              S
   -    M    M         M        3              +                                                                   M
   ......I......E...............E......................................................................................A
        N    D         A                                                                                               X
             I         N

                   PERCENTS                         PERCENTS                         PERCENTS                          PERCENTS
  VALUE     COUNT  CELL   CUM      VALUE    COUNT  CELL   CUM      VALUE    COUNT  CELL   CUM      VALUE    COUNT  CELL   CUM
       0.      5   20.0   20.0          3.    1     4.0   68.0          8.    1     4.0   92.0
       1.      8   32.0   52.0          5.    2     8.0   76.0         14.    1     4.0   96.0
       2.      3   12.0   64.0          7.    3    12.0   88.0         17.    1     4.0  100.0
--------------------------------------------------------------------------------------------------------------------------------
```

QC86 OPTION 2 DIFFERENCE BTWN REPLICATES

```
*************
* NH3       *
*************
```

VARIABLE NUMBER	2	MAXIMUM	9.0000000
NUMBER OF DISTINCT VALUES .	19	MINIMUM	0.1000000
NUMBER OF VALUES COUNTED. .	20	RANGE	8.8999996
NUMBER OF VALUES NOT COUNTED	5	VARIANCE	6.6950274
		ST.DEV.	2.5874751
		(Q3-Q1)/2	1.7750001

LOCATION ESTIMATES

		ST.ERROR
MEAN	3.2150002	0.5785770
MEDIAN	2.8500001	0.7505558
MODE	0.1000000	

```
 H   H                EACH 'H'
 HH H H               REPRESENTS
 HH H H                  1
 HHHH HHHH HH          COUNT(S)
L-------------U
```

EACH '-' ABOVE = 0.7500
L= 0.0000
U= 9.7500

	VALUE	VALUE/S.E.		
			Q1-	1.1000000
			Q3=	4.6500001
SKEWNESS	0.65	1.18	S-=	0.6275251
KURTOSIS	-0.52	-0.47	S+=	5.8024755

EACH '.' BELOW = 0.0750

```
          S     Q                                    Q          S                          M
M         -     1              M  M                  3          +                          A
I..............................E..E..........................................................X
N                              D  A
                               I  N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.10000	2	10.0	10.0
0.30000	1	5.0	15.0
0.50000	1	5.0	20.0
1.00000	1	5.0	25.0
1.20000	1	5.0	30.0
1.40000	1	5.0	35.0
1.60000	1	5.0	40.0
2.60000	1	5.0	45.0
2.70000	1	5.0	50.0
3.00000	1	5.0	55.0
3.80000	1	5.0	60.0
3.90000	1	5.0	65.0
4.00000	1	5.0	70.0
4.50000	1	5.0	75.0
4.80000	1	5.0	80.0
5.50000	1	5.0	85.0
6.40000	1	5.0	90.0
7.90000	1	5.0	95.0
9.00000	1	5.0	100.0

QC86 OPTION 2 DIFFERENCE BTWN REPLICATES

```
*************
* SAS       *
*************
```

VARIABLE NUMBER	3	MAXIMUM	311.0000000
NUMBER OF DISTINCT VALUES . .	21	MINIMUM	13.0000000
NUMBER OF VALUES COUNTED. .	24	RANGE	298.0000000
NUMBER OF VALUES NOT COUNTED	1	VARIANCE	6692.6669922
		ST.DEV.	81.8087234
		(Q3-Q1)/2	31.5000000

LOCATION ESTIMATES

		ST.ERROR
MEAN	76.8333359	16.6991348
MEDIAN	43.5000000	12.1243620
MODE	15.0000000	

```
 H
 H
 H                    EACH 'H'
 H                    REPRESENTS
 HH                      1
 HH                    COUNT(S)
 HHH
 HHHH
 HHHHH H H H H
L-------------U
```

EACH '-' ABOVE = 25.0000
L= 0.0000
U= 325.0000

	VALUE	VALUE/S.E.		
			Q1-	26.5000000
			Q3=	89.5000000
SKEWNESS	1.68	3.35	S-=	-4.9753876
KURTOSIS	1.70	1.70	S+=	158.6420593

EACH '.' BELOW = 2.5000

```
S      Q                                       S                                       M
-  MM  1     M       M  3                      +                                       A
.......{O............E.........E.....................................................................X
   MO        D       A
   E         I       N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
13.	1	4.2	4.2
15.	3	12.5	16.7
20.	1	4.2	20.8
26.	1	4.2	25.0
27.	1	4.2	29.2
29.	1	4.2	33.3
34.	1	4.2	37.5
35.	2	8.3	45.8
39.	1	4.2	50.0
48.	1	4.2	54.2
49.	1	4.2	58.3
53.	1	4.2	62.5
70.	1	4.2	66.7
71.	1	4.2	70.8
84.	1	4.2	75.0
95.	1	4.2	79.2
118.	1	4.2	83.3
167.	1	4.2	87.5
205.	1	4.2	91.7
270.	1	4.2	95.8
311.	1	4.2	100.0

QC86 OPTION 2 DIFFERENCE BTWN REPLICATES

SECCHI

		MAXIMUM	0.5000000
VARIABLE NUMBER	8	MINIMUM	0.0000000
NUMBER OF DISTINCT VALUES .	5	RANGE	0.5000000
NUMBER OF VALUES COUNTED. .	11	VARIANCE	0.0321818
NUMBER OF VALUES NOT COUNTED	14	ST.DEV.	0.1793929
		(Q3-Q1)/2	0.1000000

LOCATION ESTIMATES

		ST.ERROR
MEAN	0.1272727	0.0540890
MEDIAN	0.0000000	0.0577351
MODE	0.0000000	

EACH 'H' REPRESENTS 1 COUNT(S)

```
H
H
H
H
H H
HH H   H H
L-------------U
```

EACH '-' ABOVE = 0.0700
L= 0.0000
U= 0.0700

	VALUE	VALUE/S.E.
SKEWNESS	1.05	1.42
KURTOSIS	-0.44	-0.30

Q1= 0.0000000
Q3= 0.2000000
S-= -0.0521202
S+= 0.3066667

EACH '.' BELOW = 0.0050

```
S         Q                   M         Q         S
-         M                   E         3         +                                   M
.....I.....................E.....................................................A
     N                   A                                                         X
                         N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.00000	6	54.5	54.5	0.20000	2	18.2	81.8	0.50000	1	9.1	100.0				
0.10000	1	9.1	63.6	0.40000	1	9.1	90.9								

QC86 OPTION 2 DIFFERENCE BTWN REPLICATES

TURBID

		MAXIMUM	0.9000000
VARIABLE NUMBER	2	MINIMUM	0.0000000
NUMBER OF DISTINCT VALUES .	9	RANGE	0.9000000
NUMBER OF VALUES COUNTED. .	24	VARIANCE	0.0614493
NUMBER OF VALUES NOT COUNTED	1	ST.DEV.	0.2478896
		(Q3-Q1)/2	0.1250000

LOCATION ESTIMATES

		ST.ERROR
MEAN	0.2666667	0.0506003
MEDIAN	0.2000000	0.0577351
MODE	0.1000000	

EACH 'H' REPRESENTS 1 COUNT(S)

```
H
H
H
H
H H
HHHH
HHHH     H
HHHH HHH H H
|-------------U
```

EACH '-' ABOVE = 0.0750
L= 0.0000
U= 0.0750

	VALUE	VALUE/S.E.
SKEWNESS	1.07	2.14
KURTOSIS	0.09	0.09

Q1= 0.1000000
Q3= 0.3500000
S-= 0.0187770
S+= 0.5145563

EACH '.' BELOW = 0.0075

```
   S         Q                   M         Q         S
M  -         M         M         F         3         +                                   M
I.....................D.....................E.....................................A
N            D         D         A                                                     X
             E         I         N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.00000	3	12.5	12.5	0.30000	4	16.7	75.0	0.60000	1	4.2	87.5				
0.10000	8	33.3	45.8	0.40000	1	4.2	79.2	0.70000	2	8.3	95.8				
0.20000	3	12.5	58.3	0.50000	1	4.2	83.3	0.90000	1	4.2	100.0				

QC86 OPTION 2 DIFFERENCE BTWN REPLICATES

```
************
* CHLACORR *
************
                                                    MAXIMUM          6.0599999
VARIABLE NUMBER . . . . . .        6                MINIMUM          0.0700000
NUMBER OF DISTINCT VALUES .       23                RANGE            5.9899998                                   EACH 'H'
NUMBER OF VALUES COUNTED. .       25                VARIANCE         2.7141001                        H         REPRESENTS
NUMBER OF VALUES NOT COUNTED       0                ST.DEV.          1.6474526                        H              2
                                                    (Q3-Q1)/2        0.8200000                        H           COUNT(S)
                                                                                                      H
LOCATION ESTIMATES                                          ST.ERROR                                  HHH  H
                          MEAN              1.3019999      0.3294905                                  HHHHHH    H H
                          MEDIAN            0.5800000      0.3088825                                 L-------------U
                          MODE             NOT UNIQUE
                                                                                         EACH '-' ABOVE =       0.5000
                                                                                                     L=         0.0000
                                                                                                     U=         6.5000

                                                                                                     Q1=     0.1400000
                                                                          VALUE    VALUE/S.E.        Q3=     1.7800000
                                                            SKEWNESS       1.64          3.35        S-=    -0.3454527
                                                            KURTOSIS       1.84          1.88        S+=     2.9494526

                                                                                         EACH '.' BELOW =       0.0500

S        Q                            Q                  S                                                          M
-        M1       M            M      3                  +                                                          A
.........I........E.............E.......................................................................................X
         N        D            A                                                                                     
                  I            N
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
0.07000	1	4.0	4.0	0.20000	1	4.0	36.0	0.82000	1	4.0	60.0	2.84000	1	4.0	84.0
0.08000	2	8.0	12.0	0.33000	1	4.0	40.0	1.15000	1	4.0	64.0	2.86000	1	4.0	88.0
0.12000	2	8.0	20.0	0.37000	1	4.0	44.0	1.27000	1	4.0	68.0	2.99000	1	4.0	92.0
0.13000	1	4.0	24.0	0.46000	1	4.0	48.0	1.36000	1	4.0	72.0	5.47000	1	4.0	96.0
0.14000	1	4.0	28.0	0.58000	1	4.0	52.0	1.78000	1	4.0	76.0	6.06000	1	4.0	100.0
0.17000	1	4.0	32.0	0.74000	1	4.0	56.0	2.36000	1	4.0	80.0				

QC86 OPTION 2 DIFFERENCE BTWN REPLICATES

```
************
* PHEO     *
************
                                                    MAXIMUM          9.1099997                        H
VARIABLE NUMBER . . . . . .        7                MINIMUM          0.0000000                        H
NUMBER OF DISTINCT VALUES .       24                RANGE            9.1099997                        H
NUMBER OF VALUES COUNTED. .       25                VARIANCE         5.9307664                        H          EACH 'H'
NUMBER OF VALUES NOT COUNTED       0                ST.DEV.          2.4352138                        H         REPRESENTS
                                                    (Q3-Q1)/2        1.6500000                        HH             1
                                                                                                      HH          COUNT(S)
LOCATION ESTIMATES                                          ST.ERROR                                  HH    H
                          MEAN              2.0592000      0.4870428                                  HHH H H
                          MEDIAN            1.0900000      0.5167288                                  HHH HHH  H  H
                          MODE              0.0500000                                                L-------------U
                                                                                         EACH '-' ABOVE =       0.7500
                                                                                                     L=         0.0000
                                                                                                     U=         9.7500

                                                                                                     Q1=     0.1700000
                                                                          VALUE    VALUE/S.E.        Q3=     3.4700000
                                                            SKEWNESS       1.30          2.64        S-=    -0.3760138
                                                            KURTOSIS       0.89          0.91        S+=     4.4944139

                                                                                         EACH '.' BELOW =       0.0750

S     Q                                             Q           S                                                 M
-    MM 1          M            M                   3           +                                                 A
.....1D............E............F...................................................................................X
     ND            D            A
      E            I            N
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
0.00000	1	4.0	4.0	0.30000	1	4.0	32.0	1.13000	1	4.0	56.0	4.16000	1	4.0	80.0
0.02000	1	4.0	8.0	0.33000	1	4.0	36.0	1.49000	1	4.0	60.0	4.63000	1	4.0	84.0
0.03000	1	4.0	12.0	0.63000	1	4.0	40.0	1.58000	1	4.0	64.0	4.67000	1	4.0	88.0
0.05000	2	8.0	20.0	0.78000	1	4.0	44.0	2.12000	1	4.0	68.0	4.85000	1	4.0	92.0
0.07000	1	4.0	24.0	0.86000	1	4.0	48.0	3.17000	1	4.0	72.0	6.77000	1	4.0	96.0
0.17000	1	4.0	28.0	1.09000	1	4.0	52.0	3.47000	1	4.0	76.0	9.11000	1	4.0	100.0

QC86 OPTION 2 DIFFERENCE BTWN REPLICATES

```
************
* TSS      *
************
                                              MAXIMUM        2.0799999
VARIABLE NUMBER . . . . . .       3           MINIMUM        0.0200000
NUMBER OF DISTINCT VALUES .      18           RANGE          2.0599999
NUMBER OF VALUES COUNTED. .      25           VARIANCE       0.1934776                H              EACH 'H'
NUMBER OF VALUES NOT COUNTED      0           ST.DEV.        0.4398609                H              REPRESENTS
                                              (Q3-Q1)/2      0.1250000                H                  2
                                                                                      H              COUNT(S)
LOCATION ESTIMATES                               ST.ERROR                             HH
                   MEAN            0.3112000    0.0879722                             HHH
                   MEDIAN          0.1800000    0.0635086                             HHHH H    H
                   MODE           NOT UNIQUE                                         L-------------U

                                                                       EACH '-' ABOVE =        0.2000
                                                                                   L=          0.0000
                                                                                   U=          2.6000

                                                                                           Q1       0.0600000
                                                                       VALUE    VALUE/S.F.  Q3=      0.3100000
                                                        SKEWNESS        2.81          5.73   S-=     -0.1786609
                                                        KURTOSIS        8.24          8.41   S+=      0.7510610

                                                                       EACH '.' BELOW =        0.0200

     S      Q       Q                       S                                                          M
     -    M 1   M   M                       +                                                          A
     ........I.......E.....E.......................................................................A
            N       D     A                                                                            X
                    I     N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.02000	1	4.0	4.0	0.08000	1	4.0	40.0	0.29000	3	12.0	72.0	0.63000	1	4.0	92.0
0.03000	2	8.0	12.0	0.09000	2	8.0	48.0	0.31000	1	4.0	76.0	1.01000	1	4.0	96.0
0.04000	1	4.0	16.0	0.18000	1	4.0	52.0	0.42000	1	4.0	80.0	2.08000	1	4.0	100.0
0.06000	3	12.0	28.0	0.23000	1	4.0	56.0	0.51000	1	4.0	84.0				
0.07000	2	8.0	36.0	0.26000	1	4.0	60.0	0.58000	1	4.0	88.0				

QC86 OPTION 2 DIFFERENCE BTWN REPLICATES

```
************
* RS       *
************
                                              MAXIMUM        1.7700000                H
VARIABLE NUMBER . . . . . .       4           MINIMUM        0.0100000                H
NUMBER OF DISTINCT VALUES .      22           RANGE          1.7600000                HH
NUMBER OF VALUES COUNTED. .      25           VARIANCE       0.2009833                HH             EACH 'H'
NUMBER OF VALUES NOT COUNTED      0           ST.DEV.        0.4483117                HH             REPRESENTS
                                              (Q3-Q1)/2      0.1850000                HH                 1
                                                                                      HH             COUNT(S)
LOCATION ESTIMATES                               ST.ERROR                             HH
                   MEAN            0.3560000    0.0896623                             HHH   H
                   MEDIAN          0.1900000    0.0346410                             HHH H HH   H
                   MODE            0.2400000                                         L-------------U

                                                                       EACH '-' ABOVE =        0.1500
                                                                                   L=          0.0000
                                                                                   U=          1.9500

                                                                                           Q1=      0.0600000
                                                                       VALUE    VALUE/S.F.  Q3=      0.4300000
                                                        SKEWNESS        1.78          3.64   S-=     -0.0923116
                                                        KURTOSIS        2.27          2.32   S+=      0.8043117

                                                                       EACH '.' BELOW =        0.0150

S       Q                   Q                   S                                                        M
-    M  1      M  M     M   3                   +                                                        A
.......I...........E...O......E.......................................................................A
     N         D  D     A                                                                                X
               I  E     N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.010000	1	4.0	4.0	0.080000	1	4.0	32.0	0.200000	1	4.0	56.0	0.960000	1	4.0	88.0
0.020000	1	4.0	8.0	0.120000	1	4.0	36.0	0.240000	3	12.0	68.0	1.140000	1	4.0	92.0
0.030000	1	4.0	12.0	0.140000	1	4.0	40.0	0.280000	1	4.0	72.0	1.200000	1	4.0	96.0
0.040000	1	4.0	16.0	0.160000	1	4.0	44.0	0.430000	1	4.0	76.0	1.770000	1	4.0	100.0
0.050000	1	4.0	20.0	0.180000	1	4.0	48.0	0.450000	1	4.0	80.0				
0.060000	2	8.0	28.0	0.190000	1	4.0	52.0	0.610000	1	4.0	84.0				

QC86 OPTION 2 DIFFERENCE BTWN RFPLICATES

****
* VS *
****

		MAXIMUM	2.0799999
VARIABLF NUMBER	5	MINIMUM	0.0000000
NUMBEF OF DISTINCT VALUES .	20	RANGE	2.0799999
NUMBER OF VALUES COUNTED. .	25	VARIANCE	0.2145307
NUMBER OF VALUES NOT COUNTED	0	ST.DEV.	0.4842837
		(Q3-Q1)/2	0.1100000

LOCATION ESTIMATES

		ST.ERROR
MEAN	0.3016000	0.0968567
MEDIAN	0.1500000	0.0490748
MODE	NOT UNIQUE	

H
H
H
H
H
HH
HH
HHH H H H
L----------U

EACH 'H' REPRESENTS 2 COUNT(S)

EACH '-' ABOVE = 0.2000
L= 0.0000
U= 2.6000

	VALUE	VALUF/S.F.
SKEWNESS	2.54	5.19
KURTOSIS	5.77	5.89

Q1= 0.0500000
Q3= 0.2700000
S-= -0.1828836
S+= 0.7858837

EACH '.' BFLOW = 0.0200

```
S          Q          Q                    S
-       M  1    M     3M                   +                                                              M
.........I........E......F.....................................................................................A
         N       D      A                                                                                    X
                 I      N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUF	COUNT	PERCENTS CELL	PERCENTS CUM	VALUF	COUNT	PERCENTS CELL	PERCENTS CUM	VALUF	COUNT	PERCENTS CELL	PERCENTS CUM
0.000000	1	4.0	4.0	0.090000	1	4.0	40.0	0.180000	1	4.0	68.0	0.380000	1	4.0	84.0
0.010000	1	4.0	8.0	0.110000	1	4.0	44.0	0.190000	1	4.0	64.0	0.450000	1	4.0	88.0
0.020000	3	12.0	20.0	0.140000	1	4.0	48.0	0.220000	2	8.0	72.0	0.940000	1	4.0	92.0
0.030000	1	4.0	24.0	0.150000	1	4.0	52.0	0.270000	1	4.0	76.0	1.380000	1	4.0	96.0
0.050000	3	12.0	36.0	0.170000	1	4.0	56.0	0.320000	1	4.0	80.0	2.080000	1	4.0	100.0

QC86 OPTION 2 DIFFERENCE BTWN REPLICATES

****
* CONDCORR *
****

		MAXIMUM	27.0000000
VARIABLE NUMBER	7	MINIMUM	0.0000000
NUMBER OF DISTINCT VALUES .	9	RANGE	27.0000000
NUMBER OF VALUES COUNTED. .	24	VARIANCE	32.4927521
NUMBER OF VALUES NOT COUNTED	1	ST.DEV.	5.7002416
		(Q3-Q1)/2	2.0000000

LOCATION ESTIMATES

		ST.ERROR
MEAN	4.1666665	1.1635569
MEDIAN	3.0000000	0.8660259
MODE	NOT UNIQUE	

H
HH
HH
HH
HH
HHH H H
L----------U

EACH 'H' REPRESENTS 2 COUNT(S)

EACH '-' ABOVE = 2.5000
L= 0.0000
U= 32.5000

	VALUE	VALUF/S.F.
SKEWNESS	2.93	5.86
KURTOSIS	8.64	8.64

Q1= 1.0000000
Q3= 5.0000000
S-= -1.5335751
S+= 9.8669081

EACH '.' BFLOW = 0.2500

```
S          Q          Q          S
-       M  1       M  M  3       +                                                                          M
.........I...........F..F.....................................................................................A
         N          D  A                                                                                    X
                    I  N
```

VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM	VALUE	COUNT	PERCENTS CELL	PERCENTS CUM
0.	3	12.5	12.5	3.	5	20.8	62.5	7.	1	4.2	91.7				
1.	5	20.8	33.3	4.	2	8.3	70.8	14.	1	4.2	95.8				
2.	2	8.3	41.7	5.	4	16.7	87.5	27.	1	4.2	100.0				

QC86 OPTION 2 DIFFERENCE BTWN REPLICATES

```
 ************
 * CL       *
 ************
```

VARIABLE NUMBER	8	MAXIMUM	0.9000000
NUMBER OF DISTINCT VALUES .	9	MINIMUM	0.0000000
NUMBER OF VALUES COUNTED. .	25	RANGE	0.9000000
NUMBER OF VALUES NOT COUNTED	0	VARIANCE	0.0516667
		ST.DEV.	0.2273030
		(Q3-Q1)/2	0.1000000

```
   H              EACH 'H'
  HH              REPRESENTS
  HHH                 1
  HHH H            COUNT(S)
  HHH HHH
 HHHH HHH  HH
L-------------U
```

EACH '-' ABOVE = 0.0750
L= 0.0000
U= 0.9750

LOCATION ESTIMATES		ST.ERROR
MEAN	0.3200001	0.0454606
MEDIAN	0.3000000	0.0577351
MODE	0.2000000	

	VALUE	VALUE/S.E.		
			Q1=	0.2000000
			Q3=	0.4000000
SKEWNESS	0.95	1.93	S-=	0.0926970
KURTOSIS	0.19	0.19	S+=	0.5473031

EACH '.' BELOW = 0.0075

```
            S          Q             Q           S                                      M
M           -          M     M M     3           +                                      A
I......................O.....E.E........................................................X
N                      D     D A
                       E     I N
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
0.00000	1	4.0	4.0	0.30000	4	16.0	64.0	0.60000	2	8.0	92.0				
0.10000	5	20.0	24.0	0.40000	3	12.0	76.0	0.80000	1	4.0	96.0				
0.20000	6	24.0	48.0	0.50000	2	8.0	84.0	0.90000	1	4.0	100.0				

QC86 OPTION 2 DIFFERENCE BTWN REPLICATES

```
 ************
 * ALKTOT   *
 ************
```

VARIABLE NUMBER	4	MAXIMUM	2.2000000
NUMBER OF DISTINCT VALUES .	15	MINIMUM	0.0000000
NUMBER OF VALUES COUNTED. .	25	RANGE	2.2000000
NUMBER OF VALUES NOT COUNTED .	0	VARIANCE	0.3670667
		ST.DEV.	0.6058603
		(Q3-Q1)/2	0.4000000

```
 H                EACH 'H'
 H                REPRESENTS
 H                    1
 HHH H             COUNT(S)
 HHH H
 HHH H H
 HHHHH H HHH
L-------------U
```

EACH '-' ABOVE = 0.2000
L= 0.0000
U= 2.6000

LOCATION ESTIMATES		ST.ERROR
MEAN	0.7040000	0.1211721
MEDIAN	0.6000000	0.1732052
MODE	0.1000000	

	VALUE	VALUE/S.E.		
			Q1=	0.2000000
			Q3=	1.0000000
SKEWNESS	0.93	1.90	S-=	0.0981397
KURTOSIS	-0.09	-0.10	S+=	1.3098603

EACH '.' BELOW = 0.0200

```
   S  Q                         Q            S                        M
M -M  1           M    M        3            +                        A
I....O............E....E..............................................X
N   D             D    A
    E             I    N
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
0.00000	1	4.0	4.0	0.40000	2	8.0	44.0	0.90000	2	8.0	72.0	1.70000	1	4.0	92.0
0.10000	4	16.0	20.0	0.50000	1	4.0	48.0	1.00000	2	8.0	80.0	1.90000	1	4.0	96.0
0.20000	2	8.0	28.0	0.60000	3	12.0	60.0	1.30000	1	4.0	84.0	2.20000	1	4.0	100.0
0.30000	2	8.0	36.0	0.80000	1	4.0	64.0	1.40000	1	4.0	88.0				

QC86 OPTION 2 DIFFERENCE BTWN REPLICATES

```
  ##########
  # ALPH   #
  ##########
```

		MAXIMUM	1.6000000
VARIABLE NUMBER	5	MINIMUM	0.0000000
NUMBER OF DISTINCT VALUES .	6	RANGE	1.6000000
NUMBER OF VALUES COUNTED. .	25	VARIANCE	0.1427667
NUMBER OF VALUES NOT COUNTED	0	ST.DEV.	0.3778448
		(Q3-Q1)/2	0.1000000

```
H              EACH 'H'
H              REPRESENTS
HH                 2
HH             COUNT(S)
HH
HH
HH
HH     H  H
L-------------U
```

LOCATION ESTIMATES

		ST.ERROR
MEAN	0.2120000	0.0755690
MEDIAN	0.1000000	0.0577151
MODE	0.0000000	

EACH '-' ABOVE = 0.1700
L= 0.0000
U= 1.9500

	VALUE	VALUE/S.E.		
			Q1-	0.0000000
			Q3=	0.2000000
SKEWNESS	2.73	5.58	S-=	-0.1658448
KURTOSIS	6.58	6.71	S+=	0.5898448

EACH '.' BELOW = 0.0150

```
S        Q        Q                S
-        M    M   3M               +                                                    M
.........I.....F.....F.....................................................................A
         N    D   A                                                                     X
              I   N
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
0.00000	10	40.0	40.0	0.20000	6	24.0	80.0	1.20000	1	4.0	96.0				
0.10000	4	16.0	56.0	0.30000	3	12.0	92.0	1.60000	1	4.0	100.0				

QC86 OPTION 2 DIFFERENCE BTWN REPLICATES

```
  ##########
  # PH     #
  ##########
```

		MAXIMUM	0.2300000
VARIABLE NUMBER	6	MINIMUM	0.0000000
NUMBER OF DISTINCT VALUES .	6	RANGE	0.2300000
NUMBER OF VALUES COUNTED. .	24	VARIANCE	0.0020433
NUMBER OF VALUES NOT COUNTED	1	ST.DEV.	0.0452028
		(Q3-Q1)/2	0.0050000

```
H              EACH 'H'
H              REPRESENTS
H                  3
H              COUNT(S)
H
H
HHH        H
L-------------U
```

LOCATION ESTIMATES

		ST.ERROR
MEAN	0.0254167	0.0092270
MEDIAN	0.0100000	0.0028868
MODE	0.0100000	

EACH '-' ABOVE = 0.0200
L= 0.0000
U= 0.2600

	VALUE	VALUE/S.E.		
			Q1-	0.0100000
			Q3=	0.0200000
SKEWNESS	4.02	8.05	S-=	-0.0197882
KURTOSIS	15.27	15.27	S+=	0.0702195

EACH '.' BELOW = 0.0020

```
S            Q    Q                S
-        M   M    3  M             +                                                    M
.........I....E.....E.....................................................................A
         N   D      A                                                                   X
             I      N
```

VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM	VALUE	COUNT	PERCENTS CELL	CUM
0.000000	1	4.2	4.2	0.020000	8	33.3	87.5	0.060000	1	4.2	95.8				
0.010000	12	50.0	54.2	0.040000	1	4.2	91.7	0.230000	1	4.2	100.0				

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(Please read Instructions on the reverse before completing)

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15 SUPPLEMENTARY NOTES

16. ABSTRACT

The 1986 Lake Erie open lake surveillance/monitoring program followed the plan recommended and sanctioned by the Water Quality Board of the International Joint Commission, Great Lakes Regional Office. This study included twelve western basin, six central and three eastern basin surveys. Several conventional physical and chemical parameters were measured on all surveys. The western basin data set has the greatest seasonal coverage, spanning from April through November. Based upon total phosphorus, chlorophyll and secchi transparency, the western basin is classified as eutrophic. Total phosphorus concentrations ranged from 10 to 50 ug/l, with a seasonal median concentration of 25 ug/l. The central basin epilimnion was similar in nutrient concentration and trophic classification (mesotrophic) as was reported for 1985. Seasonal median total phosphorus and chlorophyll concentrations were 13 ug/l and 2 ug/l respectivily. In contrast with 1985, the central basin hypolimnion was not found to have gone anoxic, thus anoxic sediment regeneration of phosphorus, ammonia and silica was not found to occur. However, the oxygen depletion rate was 4.7 mg/l/month, the highest rate calculated in recent years. Only limited seasonal information was collected for the eastern basin during the 1986 field season. Based upon the available information, phosphorus and chlorophyll concentrations were similar to those recorded in previous studies.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
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