TECHNICAL MEMORANDUM

January 1980

UPLAND DETENTION/RETENTION DEMONSTRATION PROJECT

SEMI-ANNUAL REPORT TO THE

COORDINATING COUNCIL ON THE RESTORATION OF THE KISSIMMEE RIVER VALLEY AND TAYLOR CREEK/ NUBBIN SLOUGH BASIN

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COORDINATING COUNCIL ON THE RESTORATION OF THE KISSIMMEE RIVER
VALLEY AND TAYLOR CREEK/NUBBIN SLOUGH BASIN

by

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SOUTH FLORIDA WATER MANAGEMENT DISTRICT
Resource Planning Department
Department of Field Services

INTERIM REPORT

Any findings, conclusions, and actual data are subject to change and/or revision.

Final publication of these data will be included in future District reports to the Coordinating Council on the Restoration of the Kissimmee River Valley and Taylor Creek/Nubbin Slough Basin.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF FIGURES (CONTINUED)

INTRODUCTION

This is the latest of a continuing series of periodic reports designed to inform the Coordinating Council on the Restoration of the Kissimmee River Valley and Taylor Creek/Nubbin Slough Basin (KRVCC), and other interested parties, of the progress to date achieved by this agency (SFWMD) on the Upland Detention/Retention Demonstration Project currently in progress.

The SFWMD has contractually agreed to carry out basic hydrological engineering design studies and perform designated construction activities at the five project study sites. Routine water quantity and quality monitoring are also designated as the District's responsibility.

The previously submitted report to Council (July 1979) documented the background and history of the SFWMD's role with the KRVCC in the Upland Demonstration Project. It identified and addressed each of the five major elements of the formal contractual agreement between the two entities. These elements were (1) engineering and construction, (2) hydrology, (3) water quality monitoring, (4) laboratory activities, and (5) reports.

This document will follow the same format in describing the District's activities for the subject period July through December 1979.

In general, the District is pleased to report that in spite of some setbacks in engineering and construction, progress is being achieved toward completion of identified project goals and objectives. At this time it is anticipated that all phases of the District's monitoring program will be in operation in advance of the 1980 wet season.

ELEMENT I

ENGINEERING AND CONSTRUCTION ACTIVITIES

Introduction

During the time period July 1 - December 1, 1979, engineering activity for the Upland Detention/Retention project has been directed toward completion of the culverts and catwalk structure at Armstrong Slough as well as build up of the access road to S-65A, fabrication and installation of a protective shelter for a stage recorder and automatic water sampling device at the SEZ dairy outfall site, and routine maintenance. In addition, major emphasis was placed on determining remedial action to replace or repair washouts that occurred at the critical depth flumes at both the Wildcat and Armstrong slough sites. In this Chapter, each of these activities will be discussed in detail.

Culvert Completion at Armstrong Slough

During the latter part of July 1979 catwalks were installed above the risers at the culverts under the S-65A access road (station 1, Armstrong slough).

Protective Instrument Shelter at SEZ Dairy

Hopefully vandalism problems will be solved by the installation of a steel shelter located at the outfall culvert from the SEZ Dairy perimeter ditch to Wolf Creek (Figure I-1). This shelter is suspended across the channel,upstream of the culvert,on two 8 inch steel I beams. It is stabilized by cross braces between the beams and 1/4 inch steel cables running from the top of the structure to anchors on the ground. The shelter is vented and equipped with an exhaust fan and 110 v. power receptacles. A stage recorder and stilling well have been installed in the shelter. The structure was installed during November 1979.

Operation and Maintenance

During September - December 1979, the threat of heavy rains from hurricanes David and Fredrick as well as seasonally heavy rains that occurred following these storms necessitated constant riser board manipulation at the Armstrong slough culvert site. The heavy rains were responsible for additional maintenance time required to repair gully cuts and remove spoil deposits at the Armstrong culvert site. This gullying effect was an anticipated periodic maintenance task, but these rains aggrevated conditions to the point of requiring attention earlier than expected.

Armstrong Slough Flume Washout

A washout at the Armstrong slough flume was first noted on August 6, 1979 and is believed to have occurred during or following heavy local rains during the weekend of August 4 - 5, 1979 (Appendix I-A). Initial aerial site inspection revealed what appeared to be a newly constructed access road with associated borrow ditches in a critical area upstream of the flume site. This was initially identified as the cause of the flume washout as it was believed that, in effect, the construction allowed runoff from the Pine Island slough watershed to flow into the channel upstream of the flume. The additional flow would have overloaded the design capacities of the structures and consequently caused the resulting washout. A later inspection and discussion with the landowner showed this not to be the case as the road had been in existence for ten years. Recent maintenance activity gave the impression that it was indeed new construction (Appendix I-E).

During and following this period, several meetings and inspections were held in an effort to determine the sources of the greater than expected flows, and the type of remedial actions that could be taken in structure design so that peak flows of the observed magnitude could be handled without sacrificing flow measurement sensitivity at low to normal flows (Appendices I-B, I-C, I-G, I-H, I-I, I-J). Current plans call for total reconstruction of the flume with a wider throat, increased erosion protection, and provision of a controlled failure point at elevation 54.0 by shortening the south tie-back levee by approximately 200 feet. This activity is currently scheduled for mid-February to mid-March 1980.

Wildcat Slough Flume Washout

OERC field personnel observed a small washout at the Wildcat slough flume on September 5, 1979 during a routine field sampling excursion. The washout was reported and an inspection team was on site the same day (Appendix I-D). Failure of the tieback levee at this flume has been attributed to a piping problem (Appendix I-F). It is felt that this problem can be solved by installation of additional sheet piling and concrete reinforcement of the flume wing walls. This repair activity is currently scheduled for the latter half of January (Appendix I-J).

Other

Necessary maintenance and repair activities have been identified at both the Ash slough and Peavine pasture sites. This activity is largely confined to repair of ditches, levees, and plugs. Some flume reconstruction is necessary on the east side of the Ash slough marsh. This activity is anticipated to be completed by March 1980 (Appendix I-J).

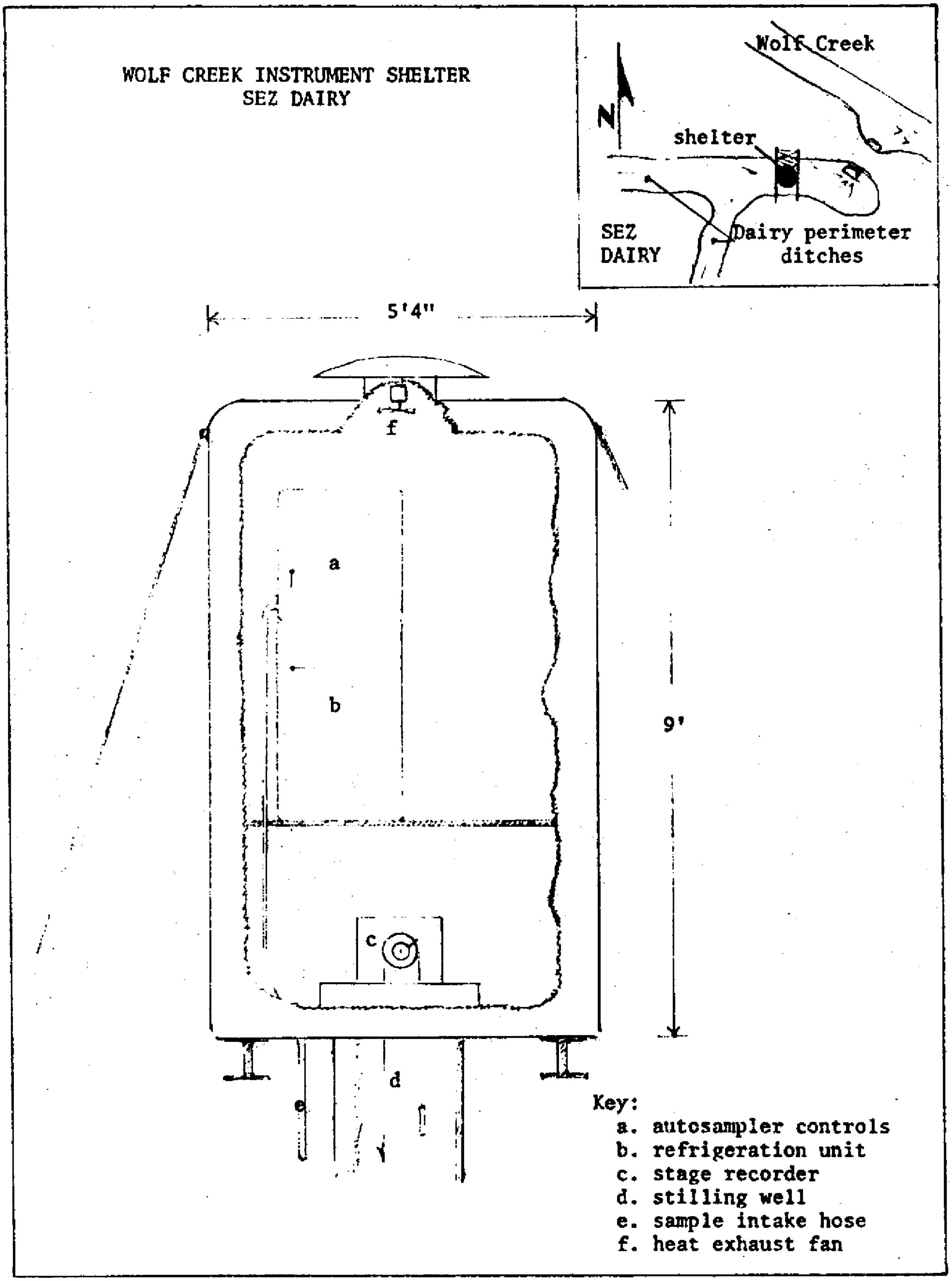

WOLF CREEK INSTRUMENT SHELTER
SEZ DAIRY
Wolf Creek
N
shelter
SEZ
DAIRY
Dairy perimeter
ditches
5'4"
9'
a
b
c
d
e
f
Key:
a. autosampler controls
b. refrigeration unit
c. stage recorder
d. stilling well
e. sample intake hose
f. heat exhaust fan

Figure I-1

ELEMENT II

HYDROLOGY

Introduction

Flow data at each site are obtained indirectly through the use of flow control structures, available stage data, and application of the appropriate flow equation for the type of outflow structure (flume or culvert) in use at each gaging location. Instantaneous flow rates can be mathematically calculated for any stage which is recorded by digital stage recorders at 30 minute intervals. This scheme results in 48 stage recordings at a like number of instantaneous flow volume data points each day. These rates are multiplied by the corresponding time interval and summed to yield faily flow volume.

$$\text{Daily flow volume} \quad (Qi_{1-48}) = (Qi_1 + Qi_2 + \ldots + Qi_{48})$$

where Qi = flow volume for 30 minute interval

This discussion will address the hydrological considerations of the types of flow control structures in use for the Upland D/R project, the manner in which flow calculations are made, and finally the status of the hydrological data collection and verification.

Flow Control/Measurement Structures

There are two types of structures which measure and, in some cases, control inflow and outflow at the project study sites. These structures are critical flow flumes and culverts with risers and stoplogs. In addition, there is one site in which an open channel rating, in conjunction with available stage information provided by an on site stage recorder, is used to compute flow data.

Flumes

Critical flow flumes are designed specifically for the computation of flow rates from stage data. The term "critical depth" refers to the depth at which the flow undergoes a transition between sub and super critical flow. Where critical flow is achieved, a series of well established energy relationships can be used in conjunction with approach channel characteristics to compute flow rates. The flumes for this project have been designed so that critical flow will be established in a region of parallel flow within the throat of the flume (Figure II-1). The SFWMD utilizes a computer program adopted from Replogle (1975) for performing the computations that convert stage data to flow rates.

Although flumes have proven to be very accurate for flow measurements, care must be taken to see that they are sized correctly for the anticipated range of flow to be measured. At very low stages the system becomes hydraulically and computationally unstable and the results of the flow calculation are suspect. The flumes for this project were sized so that the influence of these low stages on the reliability of monthly and yearly flow volume will be negligible. At high stages the downstream water level must be checked against that upstream to insure that there is enough head drop for the transition to critical flow to occur in the flume throat. When the stages are within the design range of the flume, the results of the flow calculations are accurate within $\pm$ 5.0 percent. The District's computer program for flume discharge is designed to check every data point for conformance with the design limits of each site. Low flow, insufficient head drop, or reverse flow conditions are all flagged separately. Flagged values are investigated individually to determine the best estimate of flow for each occurrence.

Culverts

The culverts used for outflow control on this project are equipped with risers and stoplogs at the upstream end. These structures are designed primarily to maintain a specified water level upstream. Reasonable estimates of the flow rates through the culverts can be made under most circumstances assuming that the inlet is well maintained and an accurate log is kept of the stop log position at all times.

For the purpose of flow computation, the structures are treated as horizontal, sharp crested weirs with end contractions. Methodology of flow calculation is adapted from King and Brater (1963). The basic equation is:

$$Q = C_e L_e H_e^{3/2}$$

where:

Q is discharge through the culverts

C_e is the discharge coefficient. This is a function of inlet width, channel width, channel depth at the inlet and head.

L_e is the equivalent length. This term is based on the size of the riser opening adjusted for the ratio of the structure width to the channel width. L_e is modified if there are any I-beam supports in the center of the riser as is the case with the larger culverts.

H_e is equivalent head determined by subtracting the elevation of the stop logs from the upstream stage. A factor of .003 is added to incorporate the effects of surface tension.

While flow calculations at culverts are reasonable and reliable, the nature of the culvert structure prohibits accuracy on a level equivalent to that achieved by use of the critical depth flumes. There are many reasons for this. These type structures have not been subjected to vigorous laboratory analysis as have weirs and flumes; therefore, no calibration data is available in the literature. In addition, the flow regime at the inlet is complex and variable depending on nearby aquatic weeds, floating debris, the condition of the stop logs, and water levels (upstream and downstream). In this latter case, when downstream water levels are above the stop logs, the final flow value is adjusted by a factor applied to similar conditions over a sharp crested weir (King and Brater, 1963). Other factors affecting accuracy are reverse flows, culvert control and/or inaccurate stop log records.

Under ideal conditions this method can be expected to be accurate to within ± 15 percent.

Open Channel Rating

Direct calibration of open channel flows is difficult and time consuming, particularly in sand bed channels which are subject to continuous scours and fill. The changing characteristics of the channel can have a dramatic influence on the relationship between stage and discharge in channels of this type. A further complication is introduced when severe backwater effects cause the stage to change independently of the discharge. This situation is common where there is a movable control downstream of the measuring site. Manipulation of the control to change water levels upstream of the control may influence water levels at the measuring site independent of the flow passing the site.

The open channel flow rating used in this study is located on the main channel of Armstrong Slough upstream of the detention area. Biweekly flow measurements are made manually using conventional open channel flow measurement techniques. An equation of the form $\text{DISCHARGE} = A\,(\text{Stage} - B)^C$ is used to relate discharge to stage, where A, B, and C are constants selected to fit the equation to the weekly flow measurements. It is necessary to use different coefficients for the low flow range and the high flow range. These coefficients are reviewed periodically to determine rating shifts.

A screening of data available between March 22, 1979 and August 28, 1979 indicated that backwater effects were not significant during this period. It is possible, however, that changes in channel characteristics downstream of the measuring stations or a change in operating procedure at the culverts downstream will require a reevaluation.

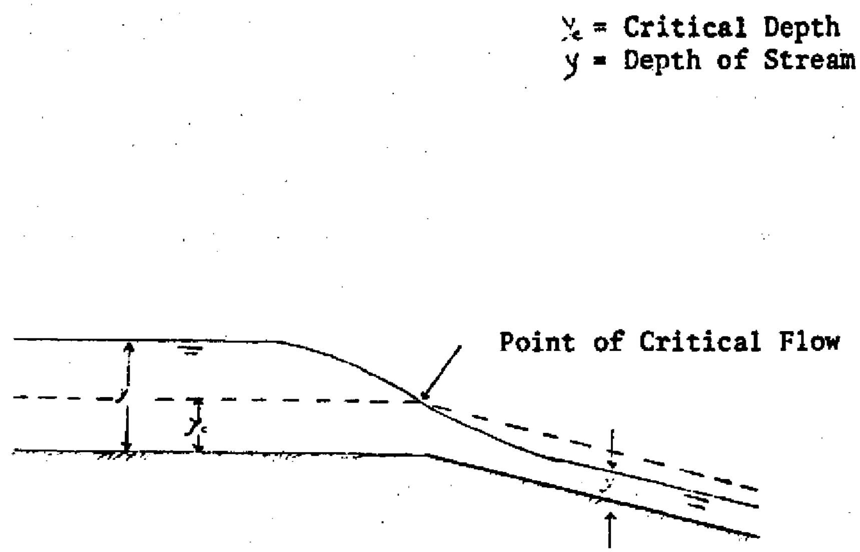
A severe storm event in September 1979 caused the loss of the stage recorder and prevented gathering enough information to establish the adequacy of the flow rating procedure in the high flow range. An analysis of the available data indicates that in the low to moderate flow range this relationship will provide flow estimates within $\pm$ 20 percent of the true value except for a short period immediately following a significant storm (flows larger than 100 cfs). Flows of this magnitude cause the rating to become unstable until the channel readjusts itself to changes in the sediment load.

Status of Data Collection and Verification

Status of the hydrological data record for each gaging station through the subject date of this report is presented in Table II-1.

As of this report date, the routine and procedures for collecting, transferring, manipulating, and interpreting raw hydrological data have been established. Verification techniques include (1) automatic flagging of flow data as addressed in the critical flow flume discussion, (2) input routines which insure that data being stored in the computer is properly loaded and labeled with respect to date, time, and station identification code, (3) checks to insure that only values within a legitimate range are entered, (4) comparison of both stage and discharge hydrographs at similar stations is made by plotting several stations on one computer plot. This provides a rough check on auxiliary data such as operation logs on culvert structures and provides a good check for consistent datum elevations, (5) additional statistical checking procedures to be incorporated when an adequate length of data is available. These may include items such as "rate of change" comparisons, mass balance checks and multi-station correlation analysis.

Hydrological flow and discharge data are now beginning to exit from this loading-verification process on a regular basis.



CRITICAL DEPTH AT BREAK IN GRADE

From: Roberson & Crowe,

Figure II-1

TABLE II-1

STAGE DATA

STATION	START-DATE	MISSING RECORDS
Lykes @ C-41A U.S.	12/20/78	None
Lykes @ C-41A D.S.	12/20/78	12/20/78 - 2/15/79
Lykes Culverts U.S.	12/19/78	None (1)
Lykes Culverts D.S.	12/19/78	None (1)
SEZ Dairy Pond	12/4/78	None
Wildcat Slough Flume U.S.	3/19/79	None (1)
Wildcat Slough Flume D.S.	3/19/79	None
Armstrong Slough	3/16/79	9/16/79 - 10/24/79 (2)
Armstrong Culverts U.S.	8/14/79	None
Armstrong Culverts D.S.	8/8/79	8/8/79 - 10/31/79 (1)
Maxey Peavine Flume U.S.	7/18/79	None
Maxey Peavine Flume D.S.	7/18/79	None
Bass Pasture Flume U.S.	9/10/79	None
Bass Pasture Flume D.S.	9/10/79	None (1)
Bass Ditch Flume U.S.	6/11/79	None
Bass Culverts U.S.	6/13/79	None
Bass Culverts D.S.	6/13/79	None

(1) Stage at these sites fell below minimum reach of recorder. Stages above the minimum were recorded accurately.

(2) Recording station washout

TABLE II-2

DISCHARGE DATA

STATION	START-DATE	MISSING RECORDS
Lykes @ C-41A	12/15/79	None
Lykes Culverts	12/19/78	None
Wildcat Slough Flume	3/19/79	8/27 - 9/24 (1)
Armstrong Slough	3/16/79	9/16 - 10/24 (2)
Maxey Peavine Flume	7/18/79	None
Bass Pasture Flume	9/10/79	None
Bass Ditch Flume	6/11/79	

(1) Inaccurate stage data

(2) Recording Station washout

ELEMENT III WATER QUALITY MONITORING

During this report period (July - December 1979) five major areas of emphasis for the water quality sampling program were proposed to the KRVCC staff through a memorandum dated November 16, 1979 (Appendix III-1). These areas of emphasis are based on contractual requirements laid out in the agreement between the KRVCC and the SFWMD for the Upland Demonstration Project. The memorandum specifies those tasks that the Okeechobee Environmental Research Center (OERC) staff would perform and the manner and type of analyses that would be attempted to fulfill obligations of the SFWMD to the KRVCC. This memorandum was presented as a basis for discussion with the idea that what finally evolves as a list of tasks and functions will be considered by the OERC and KRVCC as those activities that will be sufficient to satisfy the specific contractual requirements.

The following discussion will address the status of each of the specified tasks or activities.

I. Nitrogen and Phosphorus Concentrations and Budgets

As described in the July 1979 annual report to the KRVCC, OERC personnel continue to monitor water quality stations at each site. As of October 1979, the routine sampling program has been cut back from weekly to biweekly as specified in the contractual agreement.

In the wake of Hurricane David, high water left some routine grab sampling stations inaccessible for several weeks. These stations were specifically those located upstream from the critical depth flume at Peavine Pasture, and the sampling location on the tributary draining the western portion of the Wildcat slough watershed on the Lykes Bros. Ranch. The inaccessibility of this latter station was due to the washout of a culvert under the access road roughly ¼ mile from the station. Ranch personnel at Brighton have been informed of this situation, but as of the date of this report, there has been no action by Lykes Bros. to remedy the problem. Routine water quality sampling was resumed at that location after water levels fell to the point where the channel at the culvert can be safely crossed on foot. Unless repairs are made, this site will again become inaccessible when water stages in the channel reach higher levels.

Preliminary results of the water quality sampling program were presented before the KRVCC and staff at the Coordinating Council meeting in Okeechobee on November 2, 1979. These preliminary results were designed to (1) exhibit the ranges and means of total nitrogen (total N) and total phosphorus (total P) concentrations that have been experienced during the study, (2) provide a method of preliminary comparison of the contributions of N and P observed at each site, and (3) provide insight into the effects of detention/retention (D/R) structures and/or SCS designed dairy waste treatment lagoons on mitigation of N and P loadings to natural waterways.

The results presented here are an update of those presented at the November 2, 1979 KRVCC meeting. Analyses are based on water quality data collected over the period of record April 1, 1979 - September 20, 1979. As such, these data reflect the initial effects of Hurricane David and subsequent rainfall events. At this writing, data analysis and verification is not complete for the time period subsequent to September 20, 1979. An evaluation of the full effects of the 1979 wet season is anticipated as a logical and necessary requisite to be included in the 1979-80 annual progress report to the KRVCC. Site description maps depicting sampling station locations can be found in Appendix III-2.

Figures III-1 and III-2 depict the means and ranges of concentrations of total N and total P observed at the outfall stations of each of the five study sites of the Upland D/R demonstration project. These figures provide a convenient means of rapid visual comparison of these water quality constituents among the various study sites. They will be referred to frequently during the course of the ensuing discussion.

For ease of identification comparison, the outfall location from each study site of the Upland Detention/Retention Project has been designated as sampling station 1. With the exception of the SEZ Dairy site, sampling stations are numbered in increasing sequence as one progresses upstream within each study site.

Wildcat Slough (Lykes Bros. Inc. Ranch)

N and P concentrations at stations 1 and 3 appear to be consistently low throughout the pertinent period of record (Figure III-3). Average concentrations of N and P at station 2 are an order of magnitude higher than at the other locations. There is also a great deal of variation in concentrations noted as station 2 as reflected by the wide range of reported values for N (0.78 - 40.96 mg/l) and P (0.010 - 6.316 mg/l). It is of some interest to note that the highest reported concentrations for N and P occurred during the period April 1 through May 7, 1979. If one evaluated those data collected after that date, however, the mean concentrations of N and P at station 2 are still 3 to 4 times greater than N and P concentrations at stations 1 and 3.

Unfortunately, the available hydrological data is not adequate to interpret those figures in terms of actual loading rates. These data do suggest that there may be some clear differences in the land use practices between those subwatersheds that contribute to stations 2 and 3. Water quality at station 1 appears to be as good or better than that at the other sampling locations. This may reflect a greater volume of flow from the eastern tributary which would in effect dilute the higher N and P concentrations contributed by the western arm.

Armstrong Slough (Latt Maxcy Corp.)

Over the period April 1 through September 20, 1979, the Armstrong slough sampling stations exhibited a wider range of N and P concentrations than did those at Wildcat slough (with the exception of station 2) (Figures III-1, III-2 and III-4). Average N concentrations were similar to those observed at the outfall (station 1) at Wildcat while average P concentrations were 2 to 3 times greater at Armstrong. No extreme differences were observed between stations in either ranges or means for N and P concentrations.

Accurate hydrological data is unavailable from this site and, therefore, no insight into nutrient loadings can be gained at this time.

Peavine Pasture (Latt Maxcy Corp.)

Previous to the end of June 1979, stations 2 and 3 located at sites upstream from the critical depth flume (station 1) contained only intermittent standing waters. During July, August, and September seasonal rainfall was sufficient to provide water at each of these sites. The rains brought by Hurricane David (September 3, 1979) and those that followed during September have provided an opportunity to evaluate the effects of an "extreme" event on hydrological runoff quantity and quality. The full extent of these effects can't be ascertained until such time as all of the hydrological data have been compiled and evaluated. Some of the preliminary trends are discussed in the following text.

At this time the Peavine pasture site is the only Upland D/R project site that has some hydrological data available for evaluation. These data, total discharge volume over the critical depth flume at station 1 (Figure III-5), are available for the period mid-June through early September. Discharge through the flume began on June 29, 1979 and has been continuous through the period of record pertinent to the discussion. If one includes the initial discharge of water over the flume beginning in late June, one can see four distinct discharge events of increasing magnitude culminating with discharge resulting from Hurricane David in early September.

Water quality in terms of total N and total P concentrations at the station 1 outfall location is not radically different from concentrations of these parameters observed at the outfall stations at Armstrong and Wildcat sloughs (Figures III-1 and III-2). Figure III-6 depicts mean concentrations and ranges for total N and total P at each of the three stations. While mean total N at station 1 is less than at stations 2 and 3, mean total P concentrations are higher (by a factor of 2 at station 3). Even so, when dealing with such low concentrations, slight differences appear to be dramatic on first observation but in terms of absolute effects, they may be rather insignificant.

The availability of hydrological data as well as water quality data allows some preliminary calculations on nutrient budgets, loading rates, and contributory rates from rainfall runoff. Table III-1 presents a summation of these calculations for total N and total P over the time period July 4 through September 12, 1979.

Fairly constant concentrations of N and P indicate that the range of loadings in kilograms per day (kg/day or kg d^{-1}) for total N (0.59 - 55.71) and total P (0.022 - 1.251) is not due to large fluctuations in these parameters but rather to fluctuations in the volume of flow carrying these constituents. With the exception of the drop in total N that occurs concurrently with the surge in flow rate (Figure III-7), there otherwise appears to be no obvious dilution effect caused by increased flows nor does there appear to be a concentration effect as a result of decreased flows. Observation of the watershed contributions of total N and total P in kg ha^{-1} and d^{-1} suggests that increased N and P export rates are positively correlated with increased discharge rates (m^3 d^{-1}). A least squares analysis on this data provides a best fit curve of

$$y = e^{.90398 \ln x - 11.3977}$$

with a Pearson (product-moment) correlation coefficient of .987 for total N (Figure III-8) and a best fit curve of

$$y = .023 \times 10^{-3} x + .089$$

with a Pearson correlation coefficient of .951 for total P (Figure III-9).

Calculated export rates are a function of discharge, nutrient concentration, and watershed surface area. Where nutrient concentrations and watershed surface area remain constant or nearly so, as in these instances, export rates tend to vary predominantly as a function of discharge. The strong correlations arrived at in this discussion can be considered, therefore, neither unusual nor surprising. It must be reiterated that these observations are preliminary data and must not be construed as a final product of this study. The main purpose in their presentation at this time is for demonstration of methods to be used for data evaluation and to provide information to the KRVCC depicting trends that OERC staff have observed to date.

Ash Slough (J. C. Bass Ranch)

Armstrong slough, Wildcat slough, and Peavine pasture are representative of native rangeland or improved pasture concomitant with low density grazing operations. The N and P contributions from the respective watersheds to downstream receiving waters are relatively low and similar among sites.

Ash slough is representative of a more intensive land use management scheme characterized by greater cattle grazing density, frequent range fertilization programs and extensively ditched pasture for rapid drainage after rains. These management schemes do appear to have an impact on water quality as total N and total P released from this site to downstream receiving waters are significantly greater than N and P discharges from the aforementioned locations. The mean total N concentration at the outfill culvert at Ash slough is roughly twice that at either of the other three sites (Figure III-1) while mean total P concentrations range from 7 to 22 times greater (Figure III-2). Ranges of observed concentrations of both total N and total P are greater at the Ash slough site than the three sites previously discussed.

Mean concentrations of total N and total P over the pertinent period of record do not appear to vary greatly between the various stations (Figure III-10). The range of observed total N concentrations at both stations 1 and 3 are much greater than those at stations 2 and 4. Ranges for total P concentrations are greater at stations 2 and 3. Of interest is the fact that mean total N and total P concentrations are greater at station 1 (the D/R marsh outfall) than at either stations 2 or 4 (D/R marsh inflow locations). Cattle have had free access to this site and have been observed standing in and about the pool at station 1. The implications of this practice on water quality at this station are unknown.

Hydrological data are just becoming available at the time of this writing but have not been evaluated; therefore, no attempts have been made to calculate nutrient budgets. Lack of this data in conjunction with present land use practices at this site preclude any conclusions, preliminary statements, or insights into the function of the marsh as a nutrient source or sink or of the effectiveness of this site as a detention/retention marsh for the purpose of mitigating high N and P loads.

SEZ Dairy

The SEZ Dairy is representative of the most intense land use scheme of the sites selected for this study. Dairy farming operation in this area is characterized by large numbers of cattle confined to relatively small areas. This results in large quantities of excretia being accumulated on the land. Rainfall runoff can carry the decomposing remnants of this material into nearby waterways and thus the operation can be a significant contributor to deterioration of water quality of the receiving stream. To some extent, U. S. Soil Conservation Service (SCS) designed treatment lagoons may be partially effective waste treatment systems. The lagoon system at SEZ Dairy appears to be effective in reducing total N and total P loads as evidenced by the drop in their mean concentrations from the barnwash (station 2) through the anaerobic lagoon (effluent at station 3) to the outfall of the aerobic lagoon (station 4) (Figures III-11 and III-12). Caution should be used when reaching conclusions as to the absolute effectiveness of the lagoons. In actual practice this is not a continuous flow through system. Pumping schedules for the anaerobic lagoon seem to be based on the water level in the lagoon which is in turn a function of rainfall, evaporation, and loading from effluent. In fact, during the infrequent times when pumping of the anaerobic to the aerobic lagoon has been noted, the observer can see that the location of the aerobic lagoon outfall is so close to the influent location that the potential for mixing and retention in the system seems to be reduced. Thus, the second lagoon appears to be "short circuited" and treatment between the anaerobic lagoon and the drainage ditch on the north side of the dairy is probably not as effective as it could be.

During the interim periods between pumping of the anaerobic pond, the lagoons are a closed system; that is, no effluent is released directly to the downstream seepage and drainage ditches. The remarkable similarities of mean total N and mean total P concentrations at station 5 located in the northern drainage ditch downstream from the lagoon outfall, and station 6 located in the southern drainage ditch, are probably indicative that most of the time N and P concentrations measured at those sites reflect a similarity of land use practices (cattle holding and grazing) in the contributing portions of the watershed. It would follow that total N and total P concentrations at station 5 probably do not reflect outfall from the dairy's waste treatment lagoons except at irregular intervals.

An additional reduction of both total N and total P occurs between stations 5 and 6 and the outfall from the dairy at Wolf Creek (station 1). This is probably attributable to additional retention time and some occasional additional dilution as the water is conveyed in the drainage ditch system through ungrazed pasture.

While the SCS wastewater treatment lagoons and the drainage system at SEZ Dairy do appear to have an effect in significantly reducing N and P concentrations (90 - 95% reduction for total N and 80 - 85% reduction for total P), N and P in the effluent from the site to downstream receiving waters is significantly greater than any of the other study sites (Figures III-1 and III-2). In fact, mean total N and total P concentrations are over twice those observed at Ash slough and over six times higher in total N and almost 54 times higher in total P than mean concentrations for those constituents at Wildcat slough.

Relating these concentrations in terms of total loadings is not feasible at this time due to the lack of sufficient hydrological data necessary to determine total flow volumes

Due to time constraints and the preliminary basis of these analyses, this document addresses only total N and total P relationships. The routine water quality sampling and analysis program has produced a data set that includes concentrations of individual nitrogen and phosphorus species as well as the physical parameters, pH, color, turbidity, and conductance. These data as well as total N and total P are presented in Appendix V.

II. Storm Event Sampling Program

In a letter dated December 13, 1979 to KRVCC staff (Appendix III-3). a "storm event" sampling program has been proposed by OERC personnel. The program currently being considered by the KRVCC staff is based on the following major points:

(1) "Storm event" is defined as a distinct event when discharge occurs from the outfall of a study area as a result of antecedent rainfall and runoff. This definition is based on preliminary 1979 hydrological data that indicates that there are distinct periods where little or no discharge occurs at outfalls from these sites. "Wet" periods where discharge does occur are interspersed among these.

(2) Due to time, logistics, and equipment limitations, storm event monitoring will be restricted to the three sites closest to the OERC, namely, Wildcat and Ash sloughs and the SEZ Dairy. These sites represent a spectrum of land management uses, Wildcat slough is representative of native rangeland and some improved pasture. Ash slough represents moderately heavy use improved pasture and implementation of D/R methodology, and SEZ Dairy is representative of intense use of land for cattle holding and grazing and SCS designed waste treatment lagoon methodology.

To date, there have been some innate problems in the operation of the portable automatic samplers purchased for this phase of the project. These equipment problems are in the process of being resolved and hopefully these instruments will soon be operational. Installation of permanent automatic samplers is still dependent upon providing 120 volt electrical power to the necessary sites.

The OERC staff hopes to be able to catch the initial "storm event" of the 1980 rainy season. To insure that this is possible, a target date of March 1, 1980 is set for installation of all samplers at the desired locations.

III. Rainwater Collection and Analysis

Collection of weekly composite rainwater samples at S65D began in mid-September 1979. Routine N and P analyses are performed on these samples at the OERC laboratory. The estimates of rainwater quality provided by these data and other rainfall quality data collected by the District will be utilized as baseline information for evaluating the surface water quality at the various study sites.

IV. Soil Moisture Sample Collection and Analysis

To date no definite program has been proposed or implemented. It is anticipated that OERC and KRVCC staff will finalize this issue and initiate a soil moisture sampling program at the study sites in early 1980.

V. Groundwater Quality Samples and Analysis

A program to routinely collect and analyze groundwater samples for N, P, and possibly chloride has been proposed to KRVCC staff. USGS personnel are committed to install up to 10 groundwater quality sampling wells in late December. OERC staff will develop these wells and began a routine monthly or bimonthly water quality sampling program in early 1980.

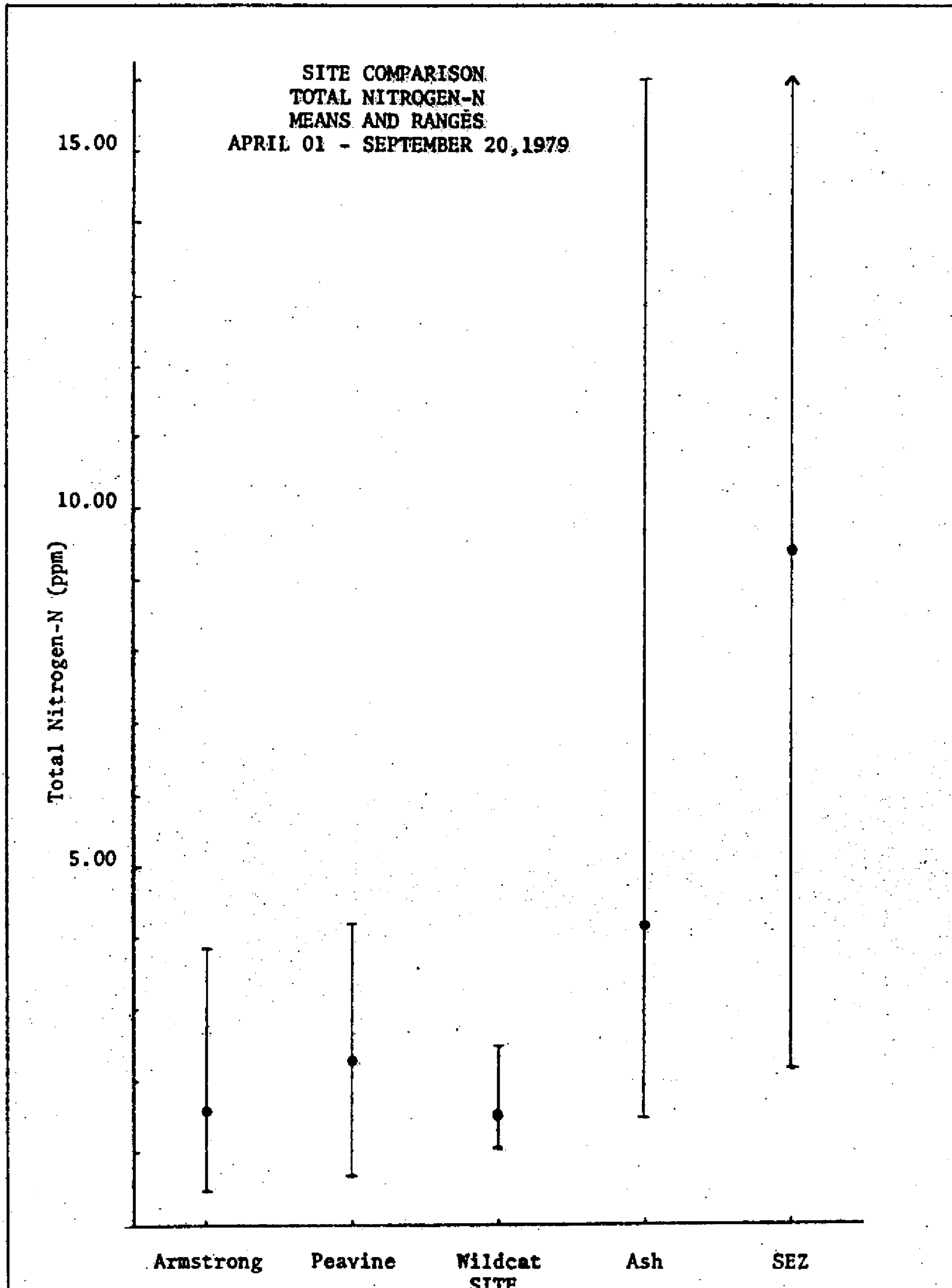

SITE COMPARISON
TOTAL NITROGEN-N
MEANS AND RANGES
APRIL 01 - SEPTEMBER 20,1979
15.00
10.00
5.00
Total Nitrogen-N (ppm)
Armstrong
Peavine
Wildcat
Ash
SEZ
SITE

Figure III-1

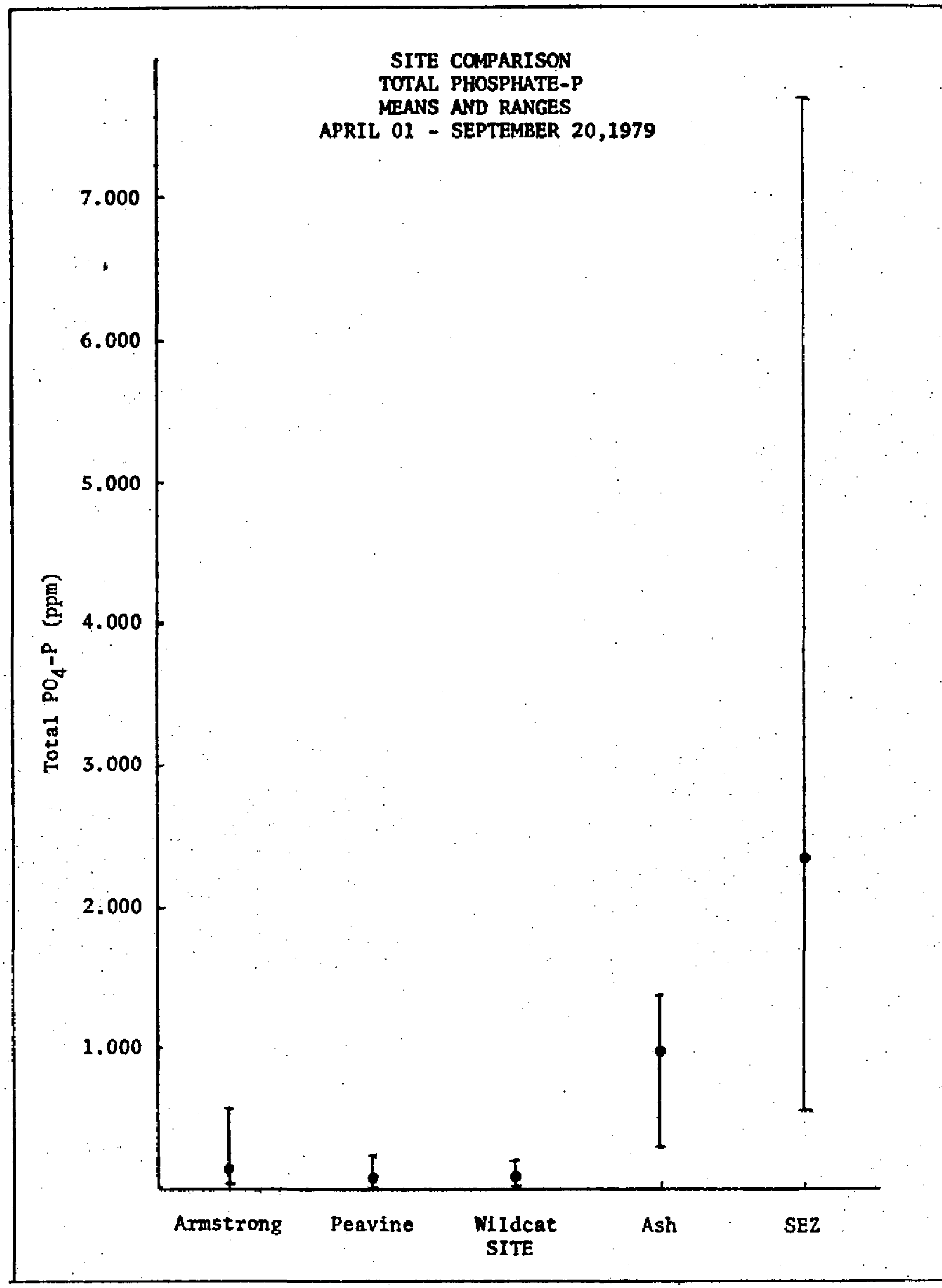

SITE COMPARISON
TOTAL PHOSPHATE-P
MEANS AND RANGES
APRIL 01 - SEPTEMBER 20,1979
7.000
6.000
5.000
4.000
3.000
2.000
1.000
Total PO_4-P (ppm)
Armstrong
Peavine
Wildcat
Ash
SEZ
SITE

Figure III-2

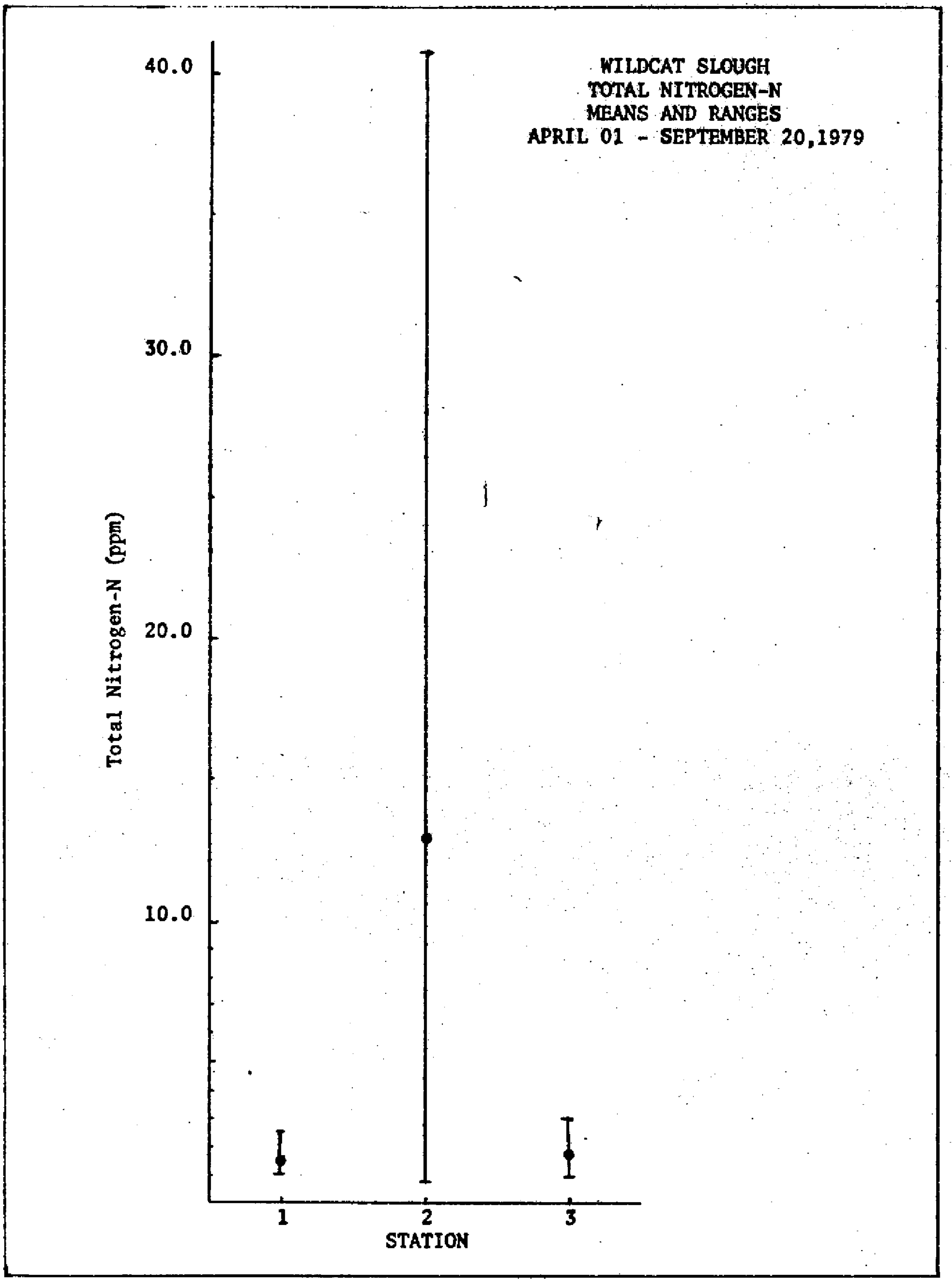


Figure III-3a

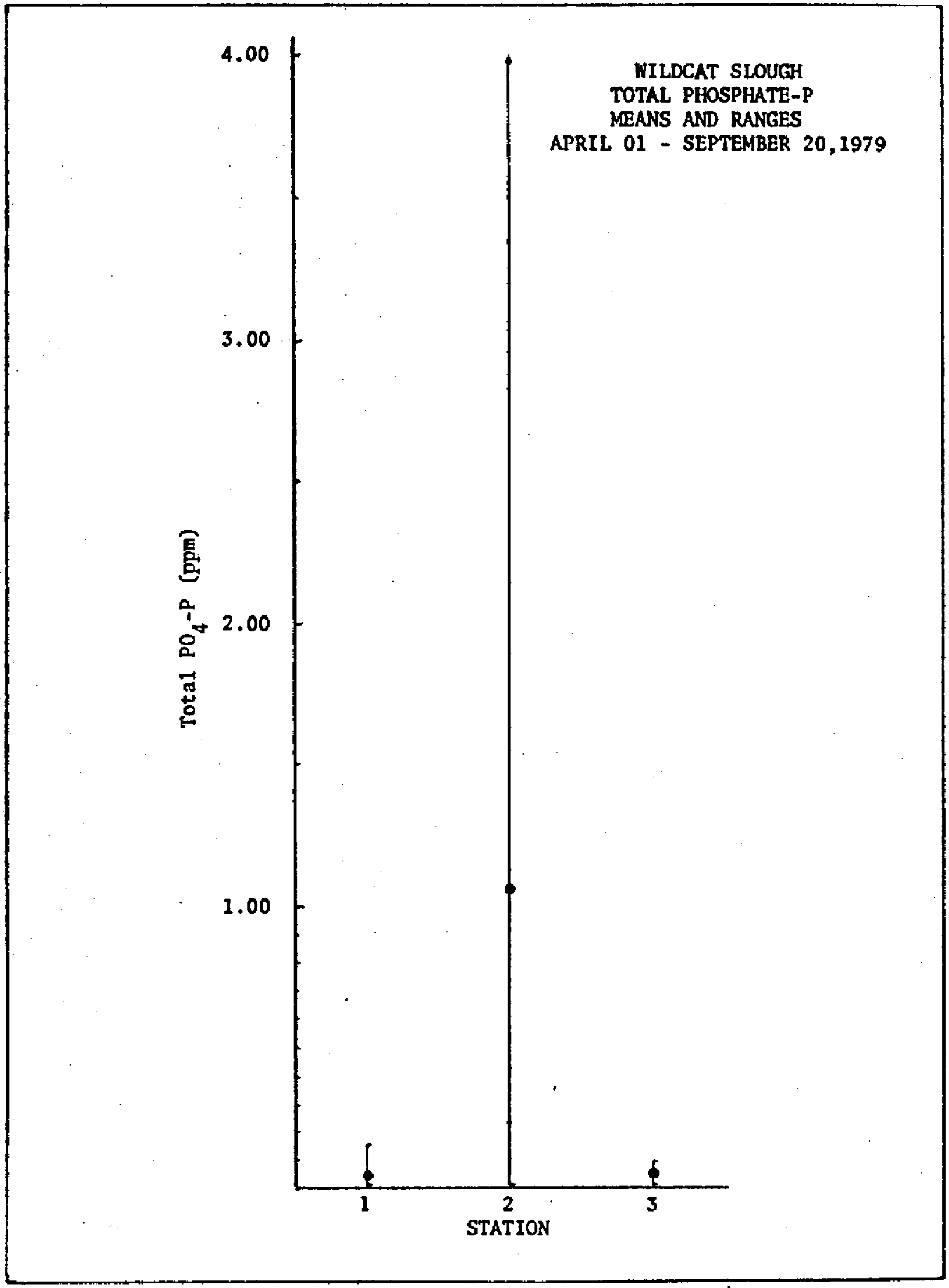


Figure III-3b

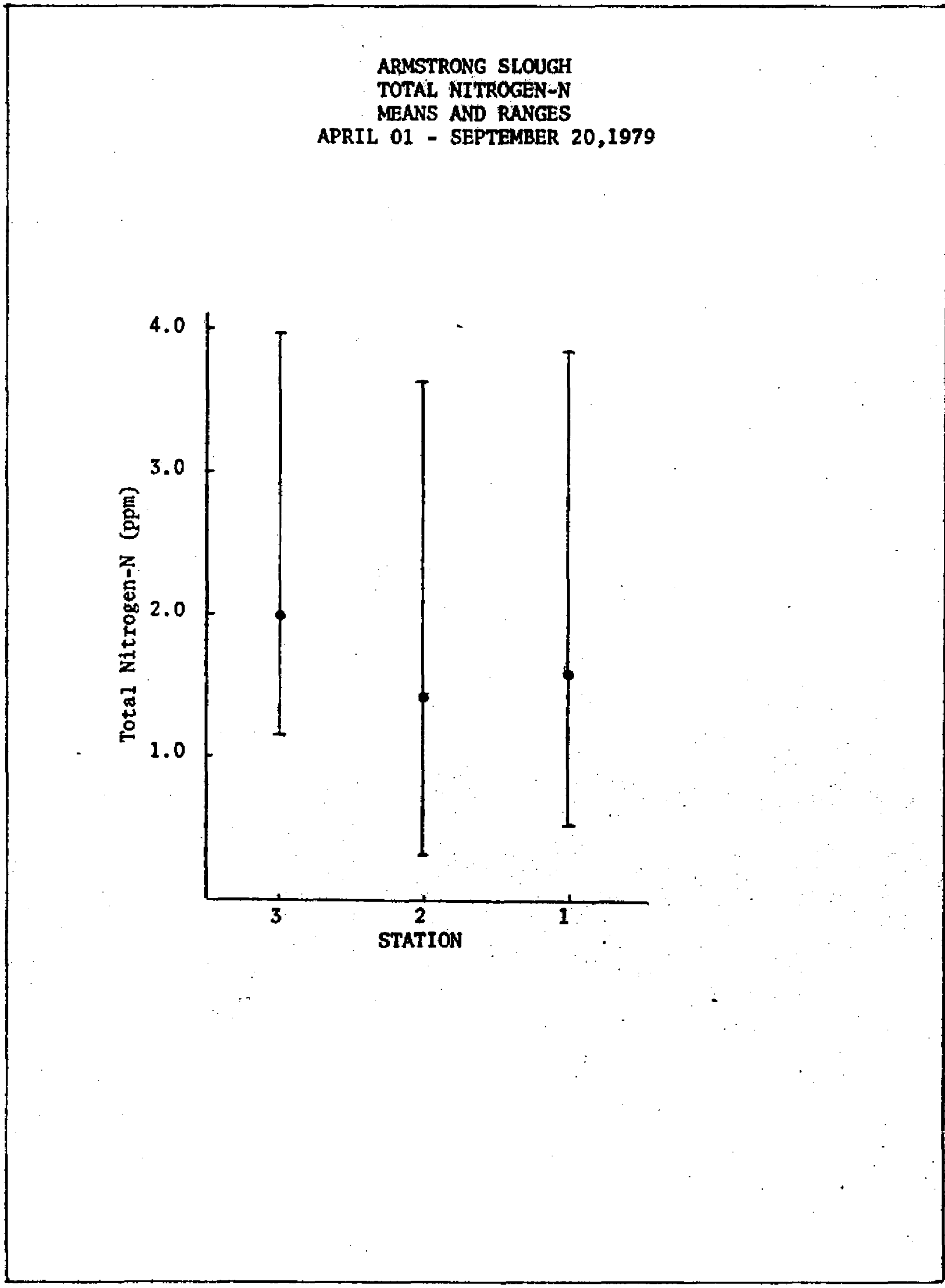


Figure III-4a

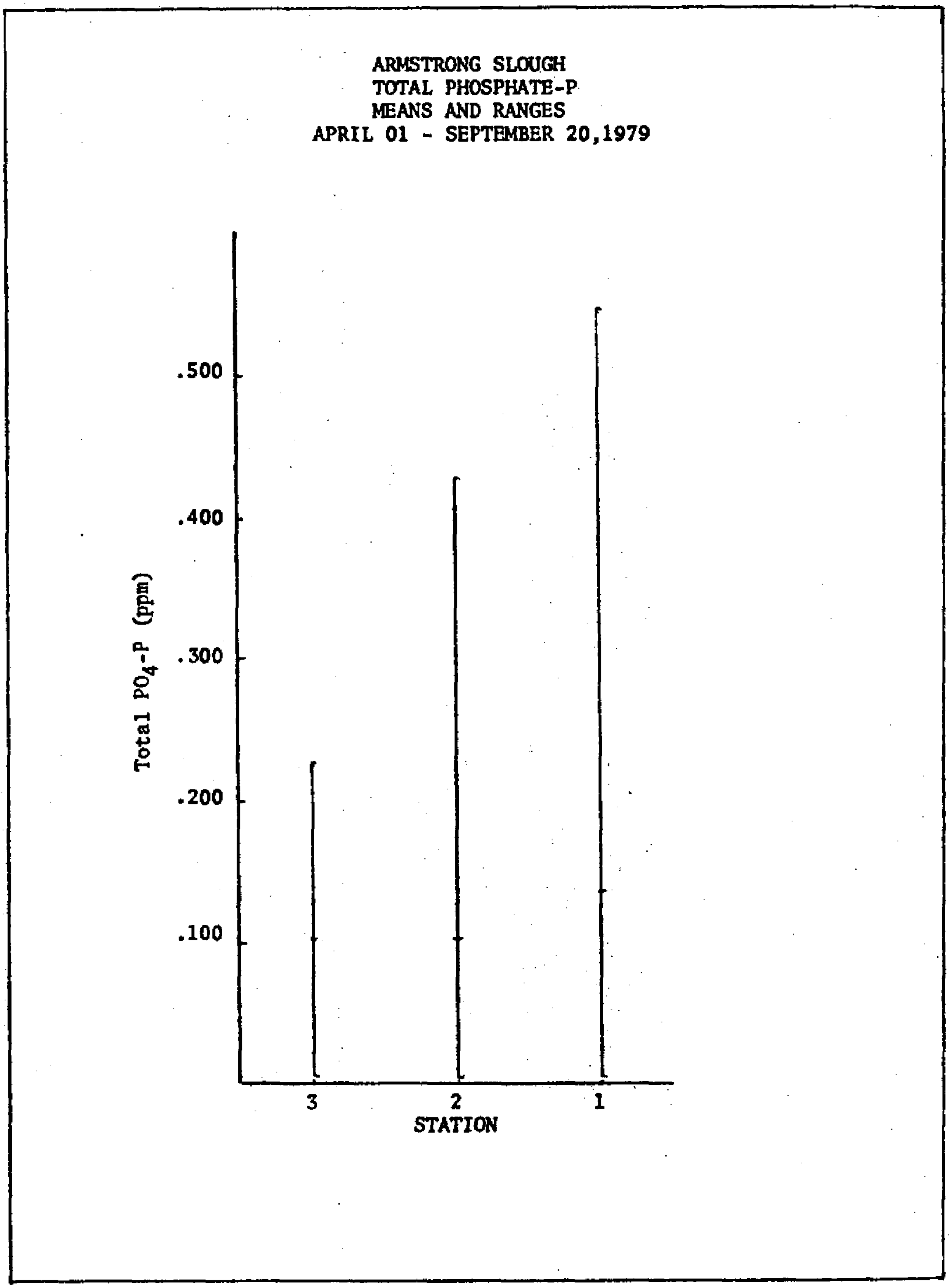


Figure III-4b

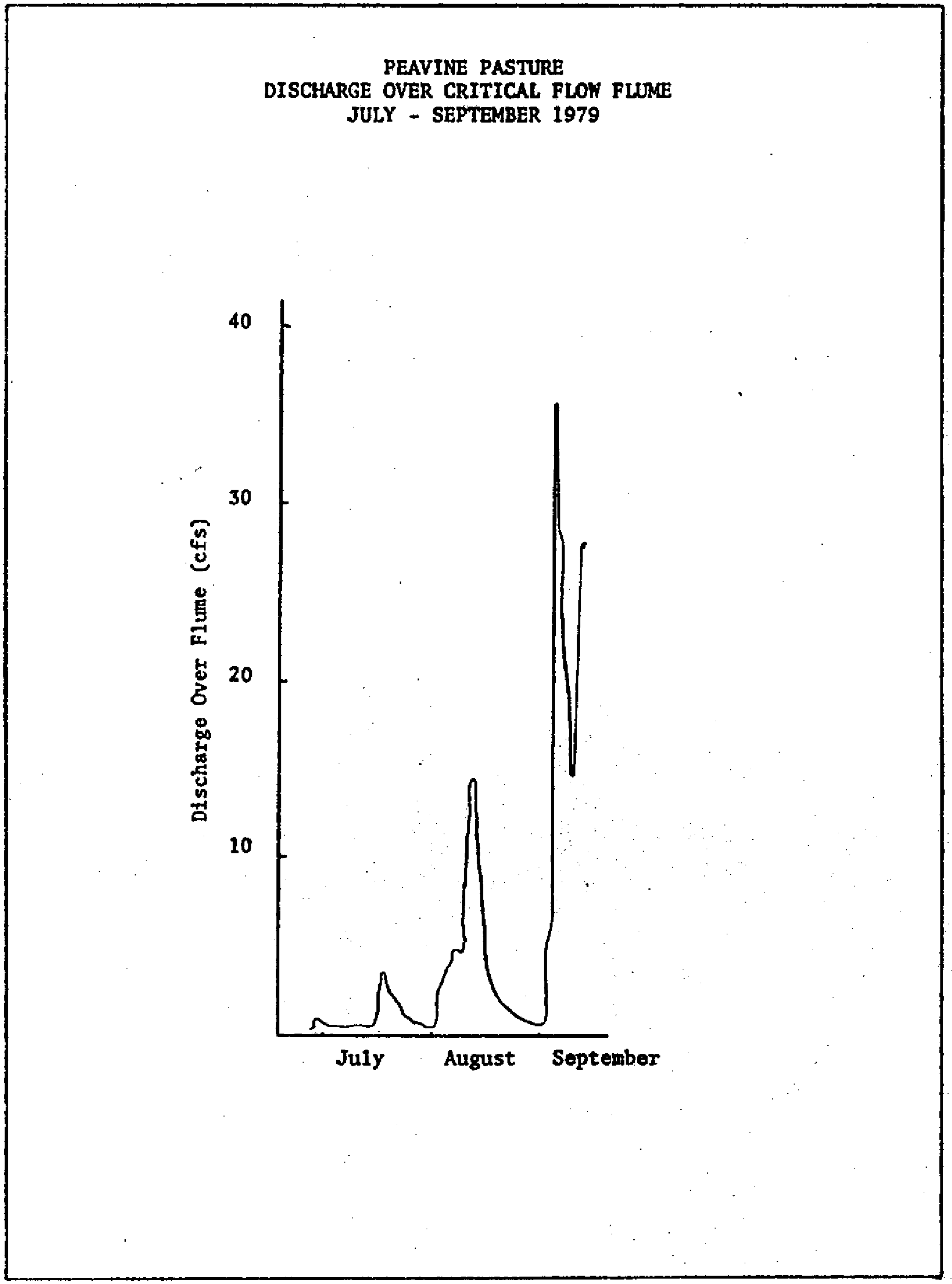

PEAVINE PASTURE
DISCHARGE OVER CRITICAL FLOW FLUME
JULY - SEPTEMBER 1979
40
30
20
10
Discharge Over Flume (cfs)
July
August
September

Figure III-5

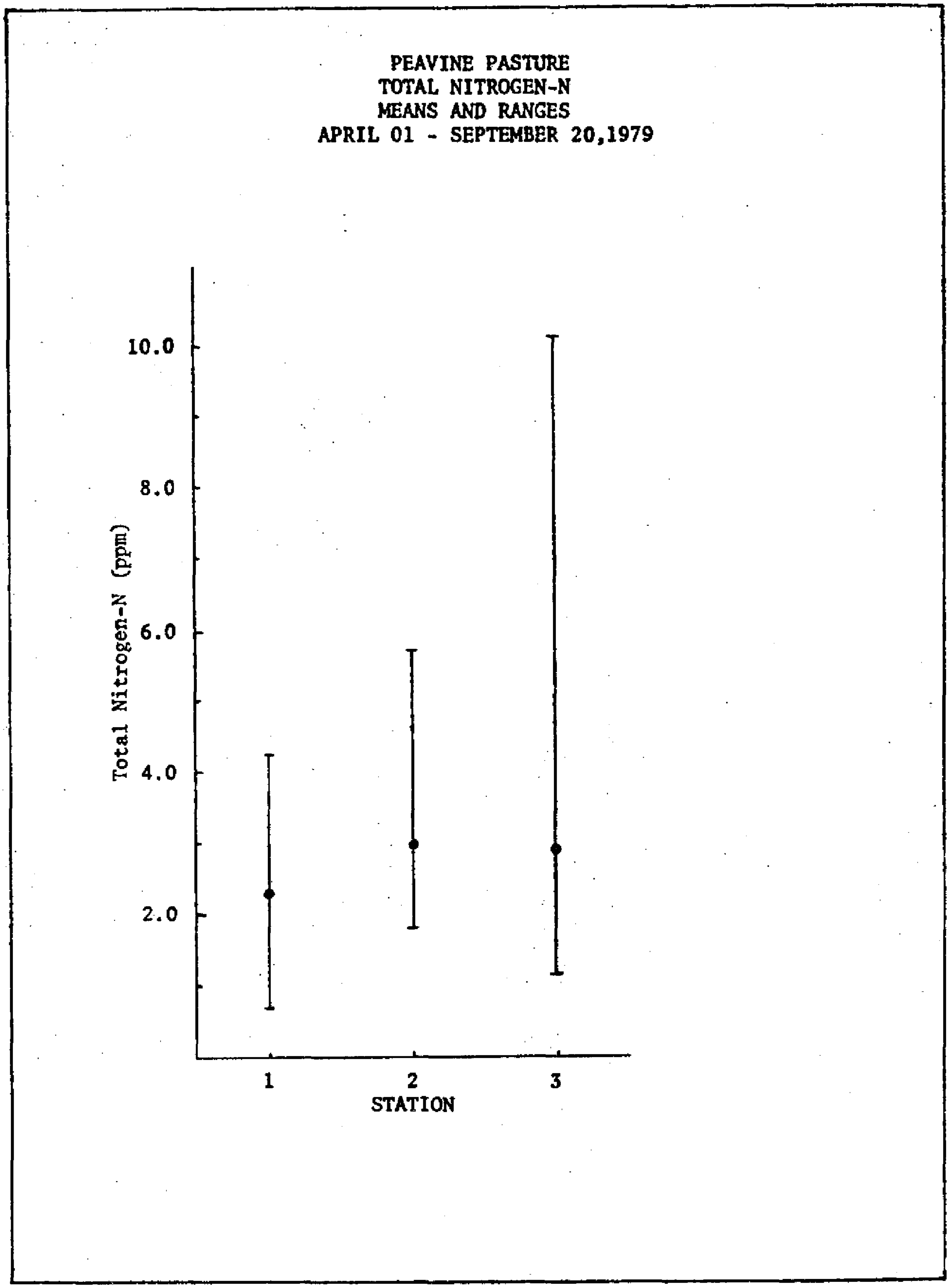


Figure III-6a

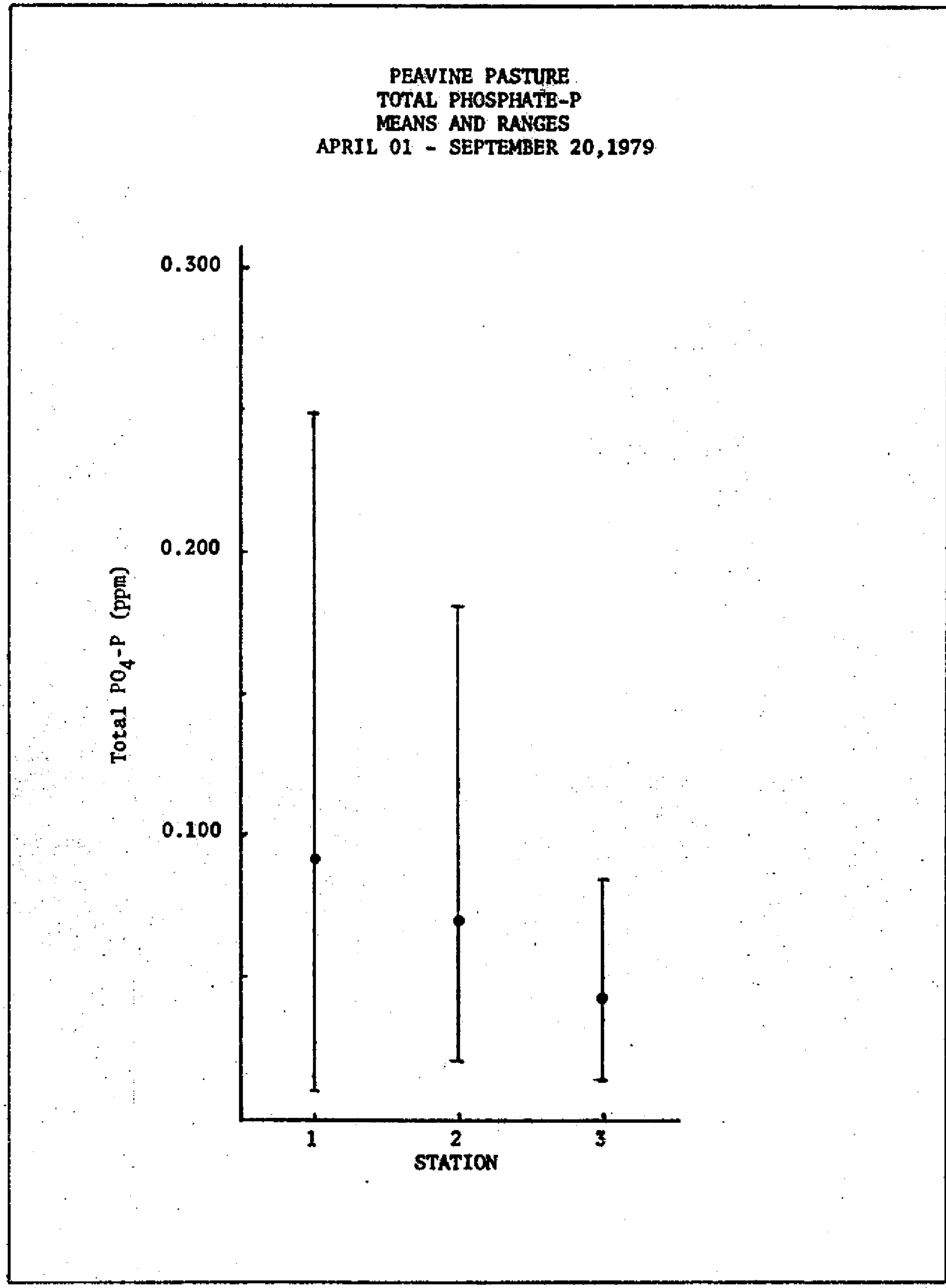


Figure III-6b

TABLE III-1

NITROGEN CONTRIBUTIONS FROM NATIVE PASTURE (LOW DENSITY CATTLE GRAZING) TO DOWNSTREAM RECEIVING WATERS (PEAVINE SITE)

	Days in Interval	Total Interval Flow Volume (m^3)	Total N (mg/l)	Average Internal Total N (mg/l)	Kg Total N	Kg/day Total N	Approx.** Kg/ha/day Total N
7/4			1.81				
	7	1,974		2.09	4.13	0.59	0.002
7/11			2.36				
	7	3,610		2.30	8.30	1.19	0.03
7/18			2.24				
	6	30,150		2.24	67.54	11.26	0.031
7/24			2.23				
	8	9,265		2.17	20.11	2.51	0.007
8/1			2.10				
	6	22,973		2.15	49.39	8.23	0.023
8/7			2.19				
	8	163,759*		2.07	338.98	42.37	0.116
8/15			1.95				
	6	57,877		1.89	109.39	18.23	0.050
8/21			1.82				
	7	17,525		1.88	32.95	4.71	0.013
8/28			1.93				
	6	6,591		1.30	8.57	1.43	0.004
9/3			0.067				
	9	511,728*		0.98	501.49	55.72	0.153
9/12			1.28				
	6						

*Loss of accuracy during these periods as discharges approached or exceeded design parameters of the flow measuring devices.

**Based on a drainage basin of approximately 900 acres (364.4 Ha) as described in KRVCC Guide to Council Project Sites.

TABLE III-1 (Continued)

PHOSPHORUS CONTRIBUTIONS FROM NATIVE PASTURE (LOW DENSITY CATTLE GRAZING) TO DOWNSTREAM RECEIVING WATERS (PEAVINE SITE)

	Days in Interval	Total P (mg/l)	Av. Interval Total P (mg/l)	Kg Total P	Kg/day Total P	Approx.** Kg/ha/day Total N
7/4		0.088				
	7		0.126	0.174	0.025	0.07
7/11		0.164				
	7		0.128	0.462	0.066	0.18
7/18		0.091				
	6		0.051	1.538	0.322	0.88
7/24		0.010				
	8		0.019	0.176	0.022	0.06
8/1		0.027				
	6		0.036	0.827	0.138	0.38
8/7		0.045				
	8		0.042	6.878	0.860	2.36
8/15		0.038				
	6		0.036	2.084	0.347	0.95
8/21		0.033				
	7		0.042	0.736	0.105	0.29
8/28		0.050				
	6		0.035	0.231	0.039	0.11
9/3		0.020				
	9		0.022	11.258	1.251	3.43
9/12		0.023				

* Loss of accuracy during these periods as discharges approached or exceeded design parameters of the flow measuring devices

** Based on a drainage basin of approximately 900 acres (364.4 Ha) as described to KRVCC Guide to Council Project sites.

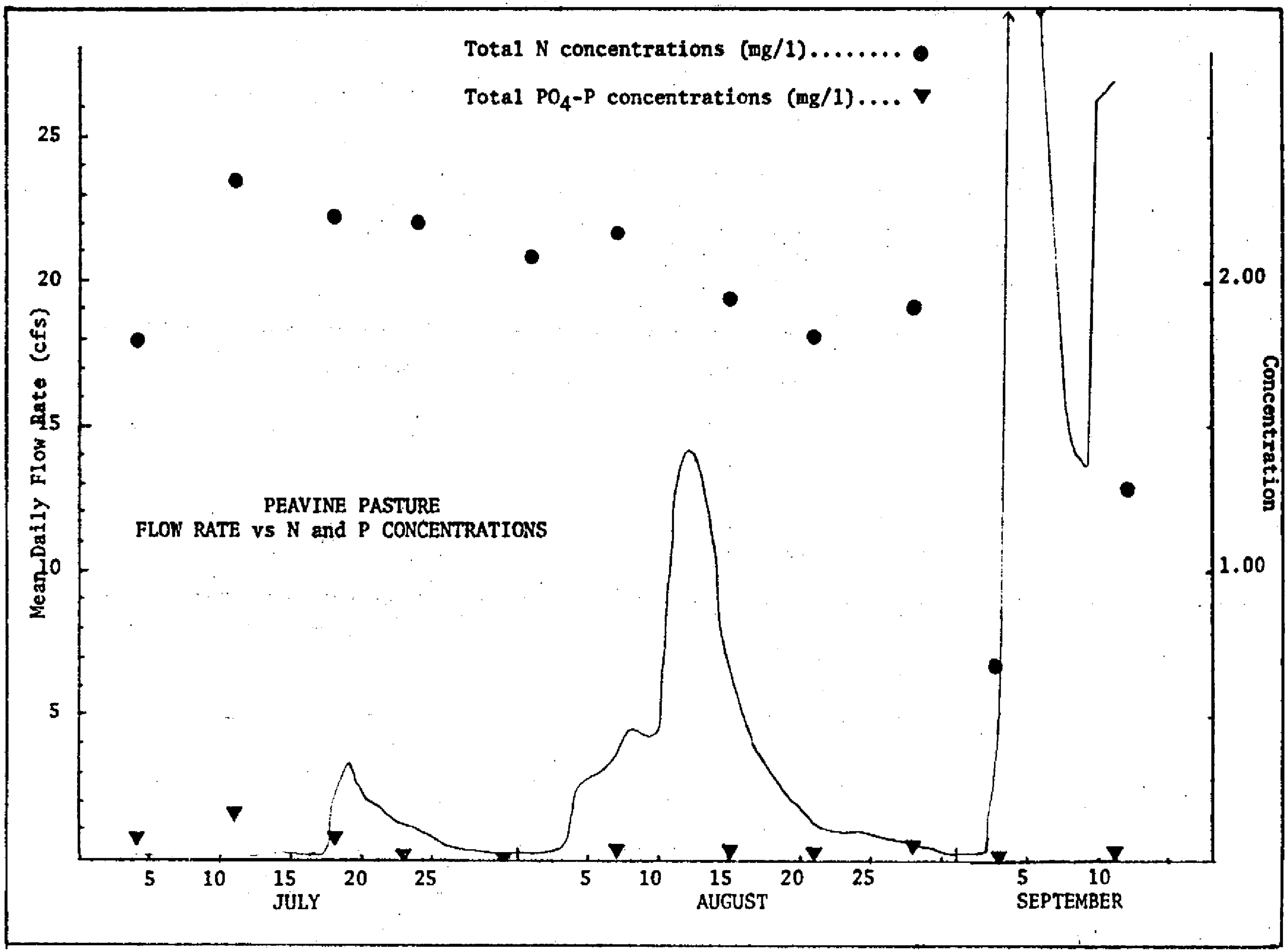

Total N concentrations (mg/l)........ ●
Total PO4-P concentrations (mg/l).... ▼
PEAVINE PASTURE
FLOW RATE vs N and P CONCENTRATIONS
Mean Daily Flow Rate (cfs)
Concentration
25
20
15
10
5
2.00
1.00
5
10
15
20
25
JULY
5
10
15
20
25
AUGUST
5
10
SEPTEMBER

Figure III-7

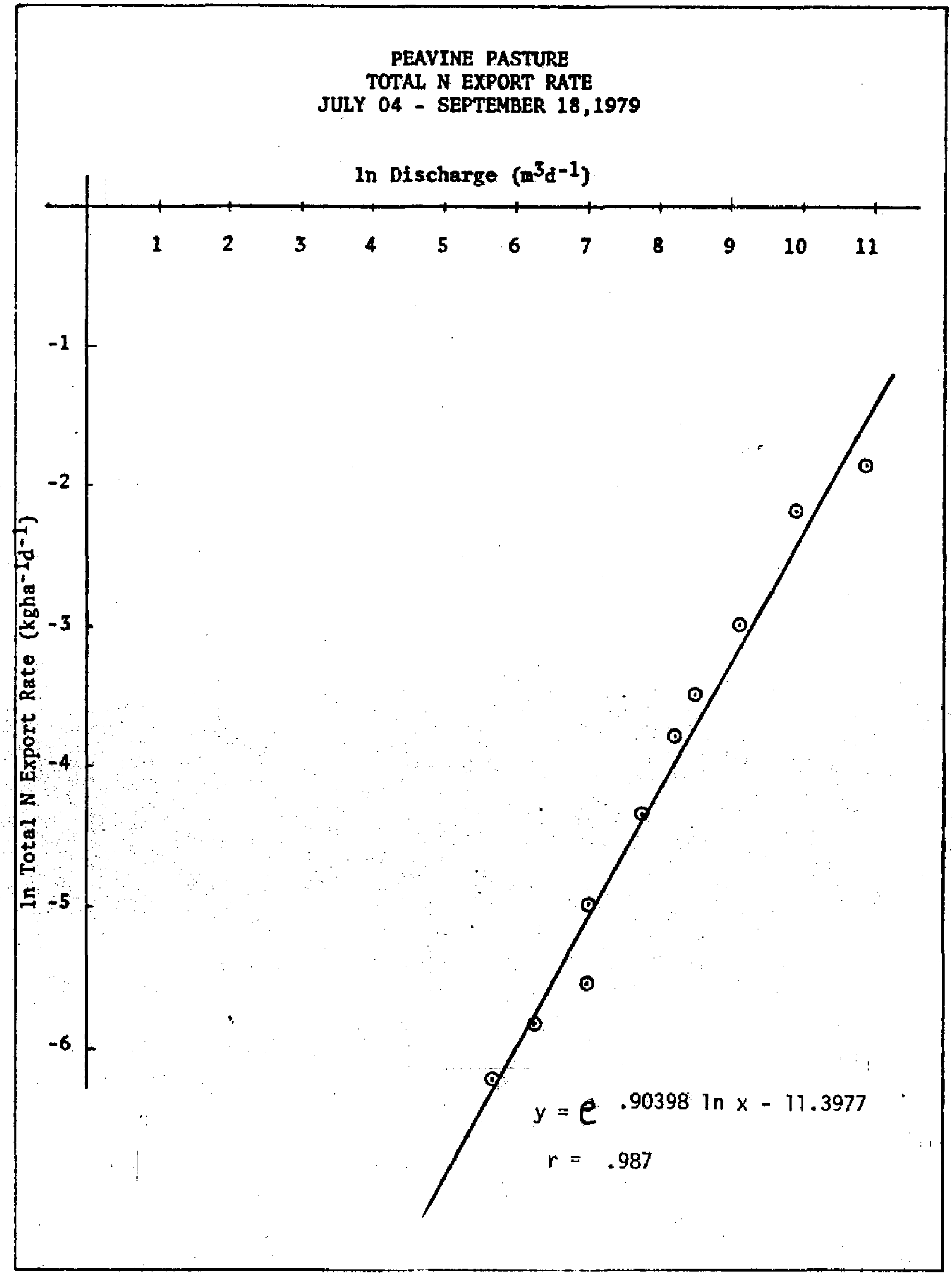

PEAVINE PASTURE
TOTAL N EXPORT RATE
JULY 04 - SEPTEMBER 18,1979
ln Discharge (m3d-1)
1
2
3
4
5
6
7
8
9
10
11
-1
-2
-3
-4
-5
-6
ln Total N Export Rate (kgha-1d-1)
y = e .90398 ln x - 11.3977
r = .987

Figure III-8

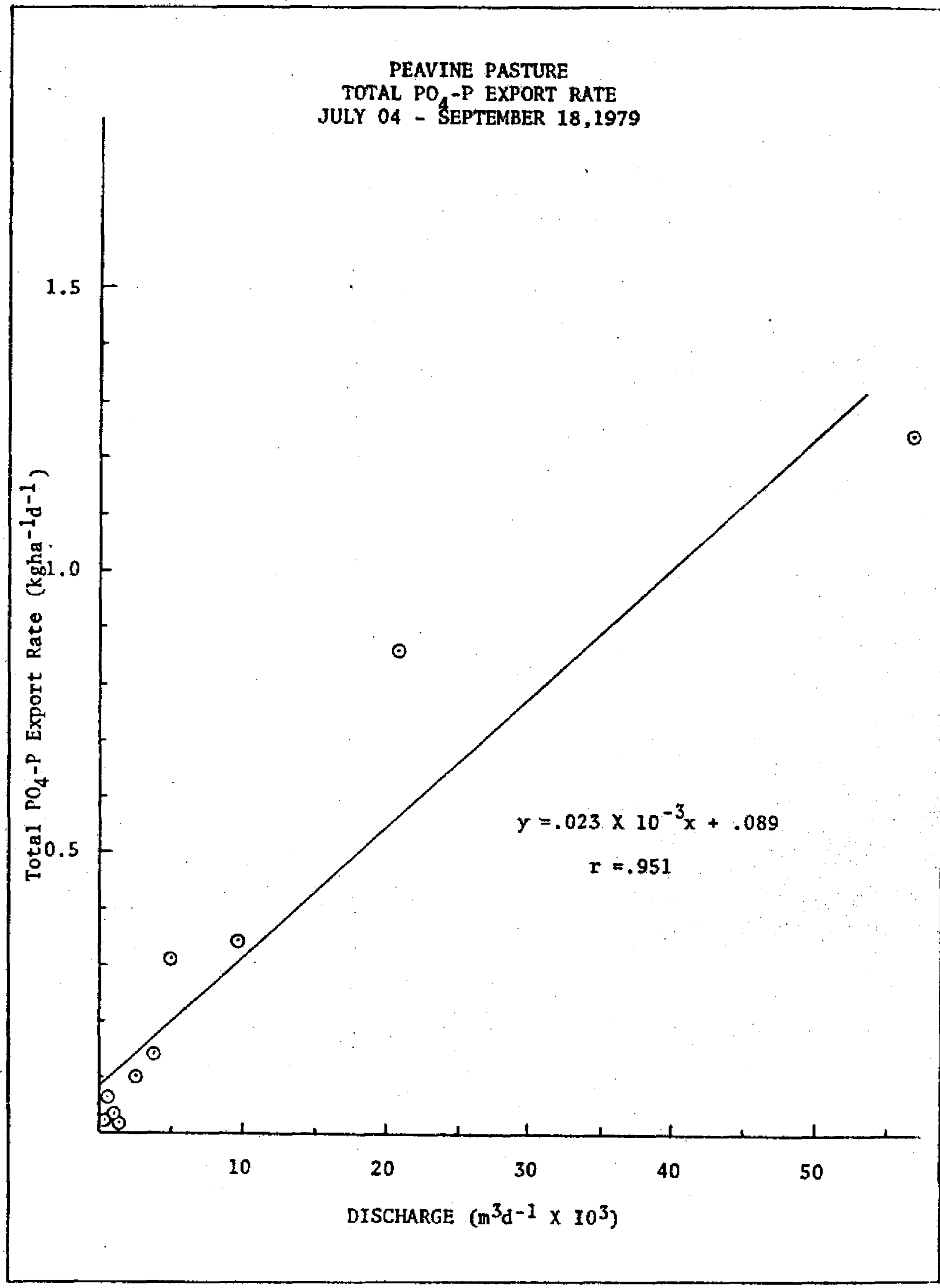

PEAVINE PASTURE
TOTAL PO_4-P EXPORT RATE
JULY 04 - SEPTEMBER 18,1979
1.5
1.0
0.5
Total PO_4-P Export Rate ($kgha^{-1}d^{-1}$)
$y = .023 \times 10^{-3}x + .089$
r = .951
10
20
30
40
50
DISCHARGE ($m^3d^{-1} \times 10^3$)

Figure III-9

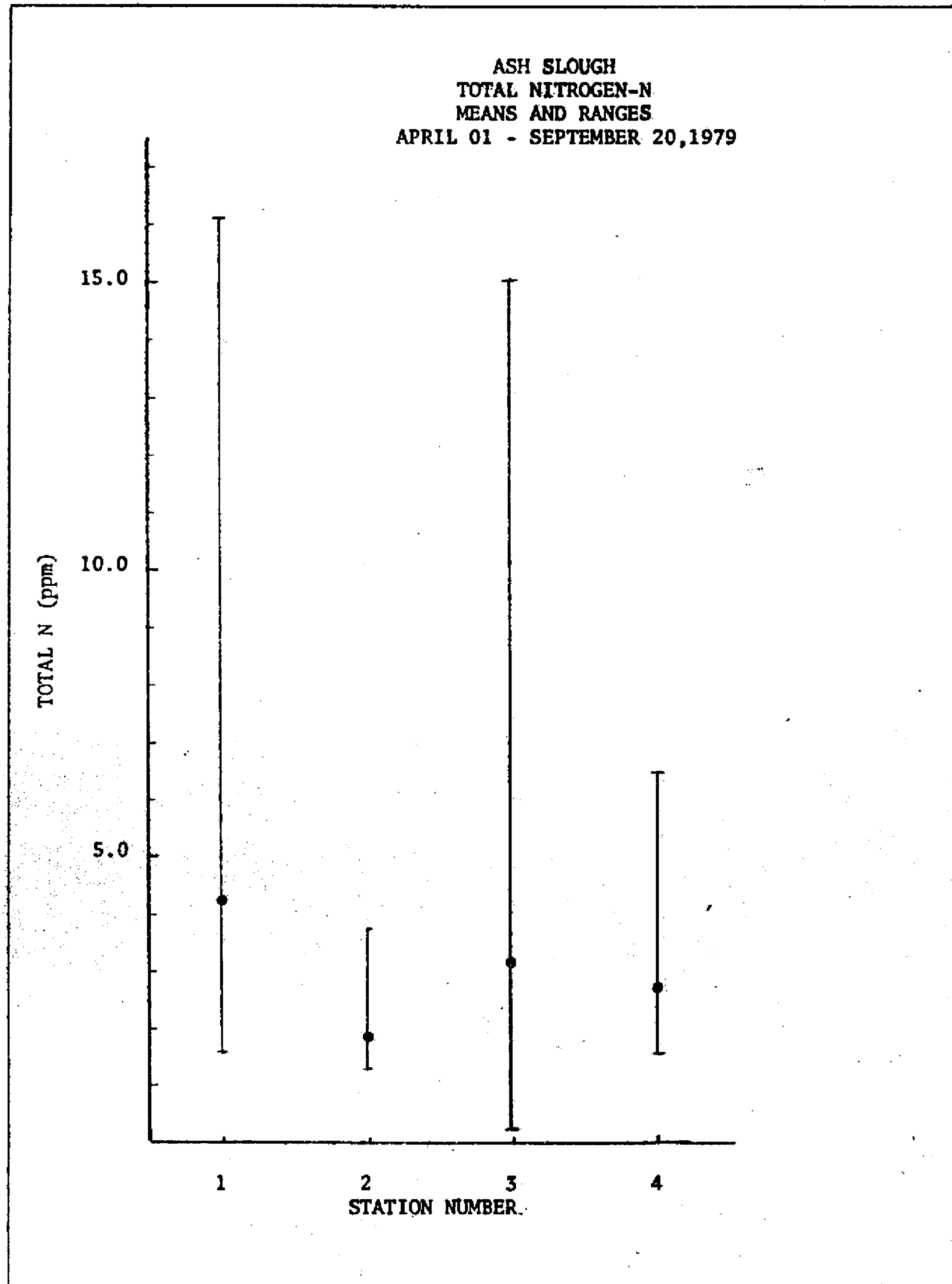


Figure III-10a

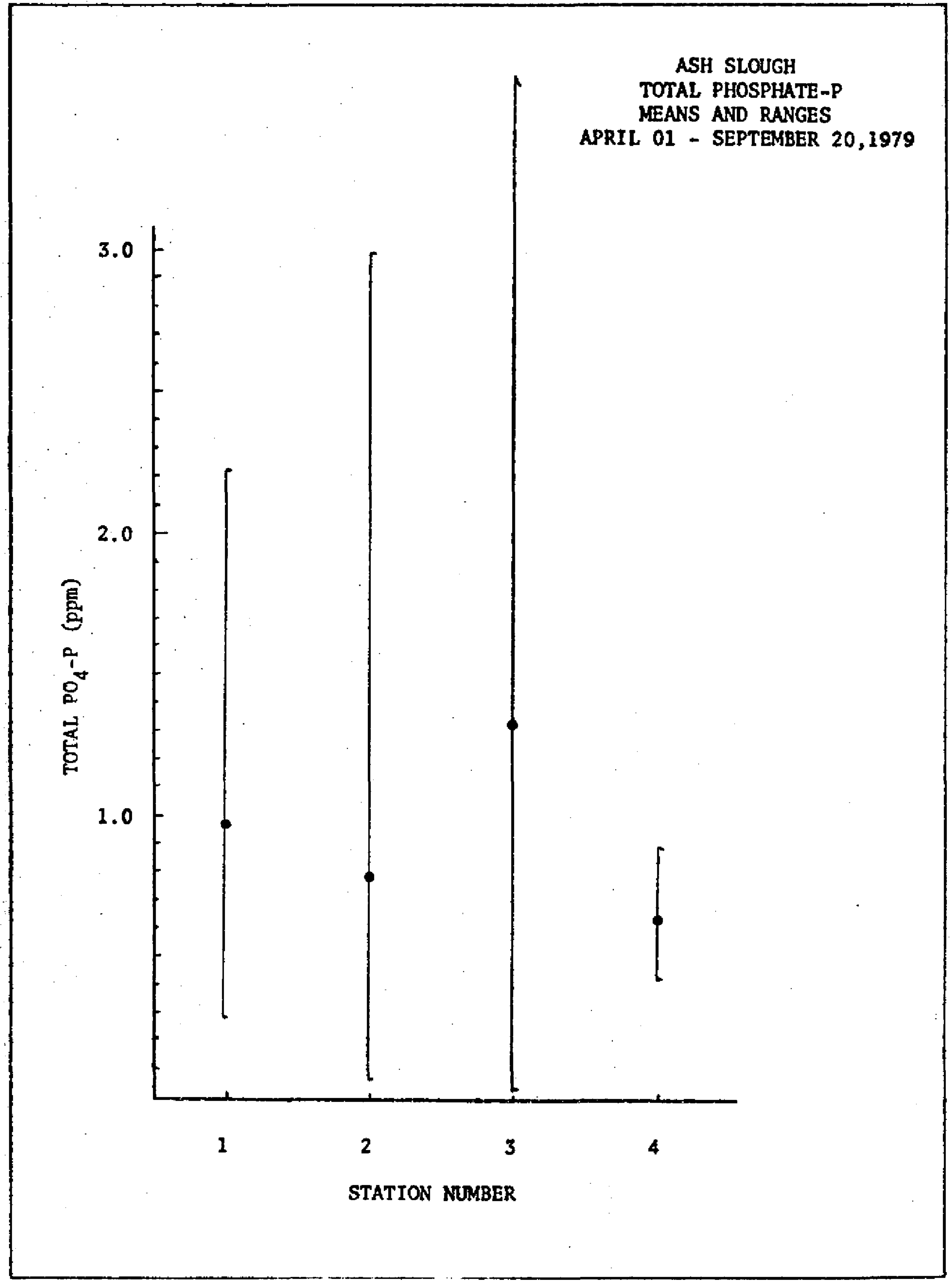


Figure III-10b

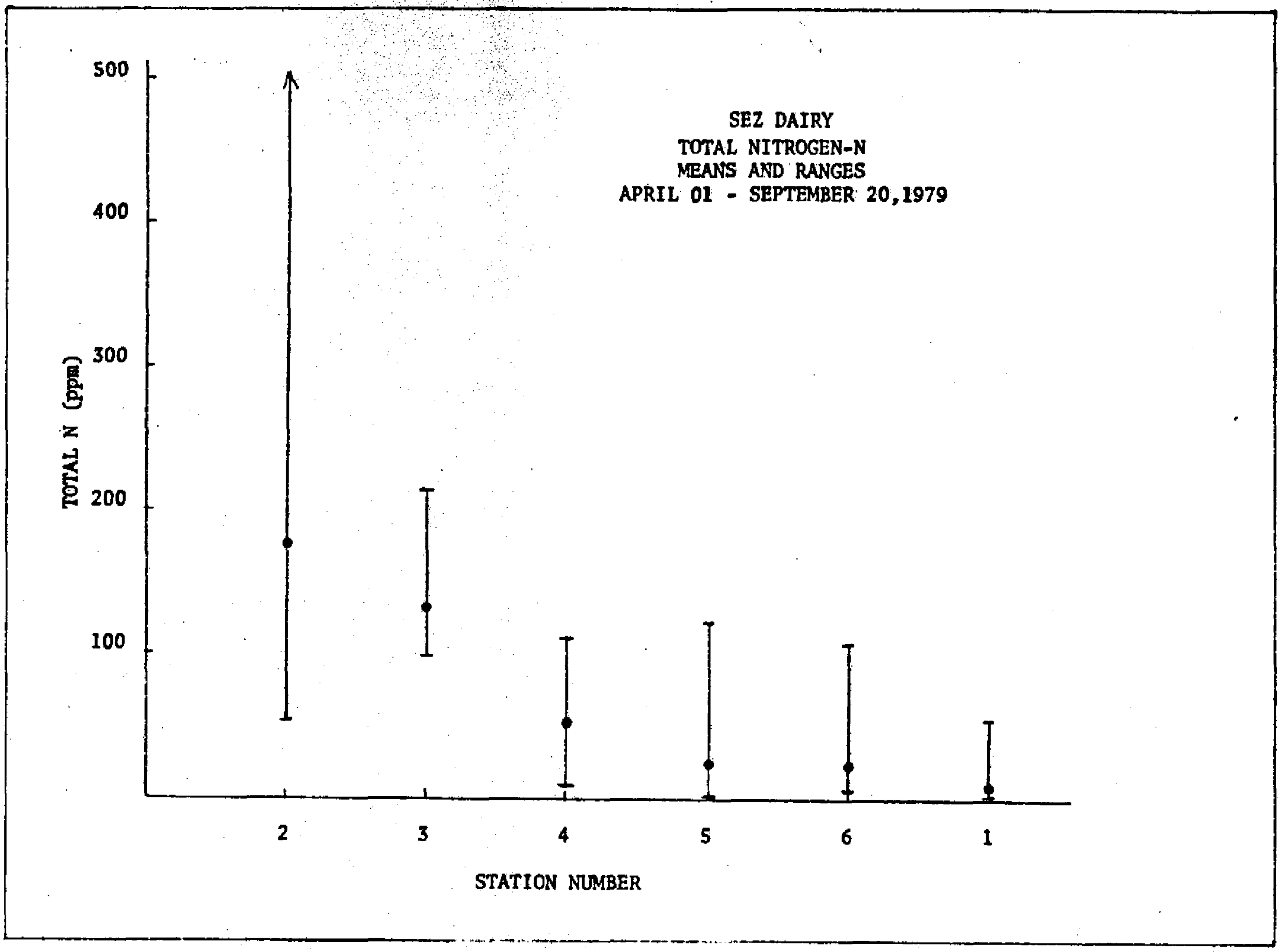


Figure III-11

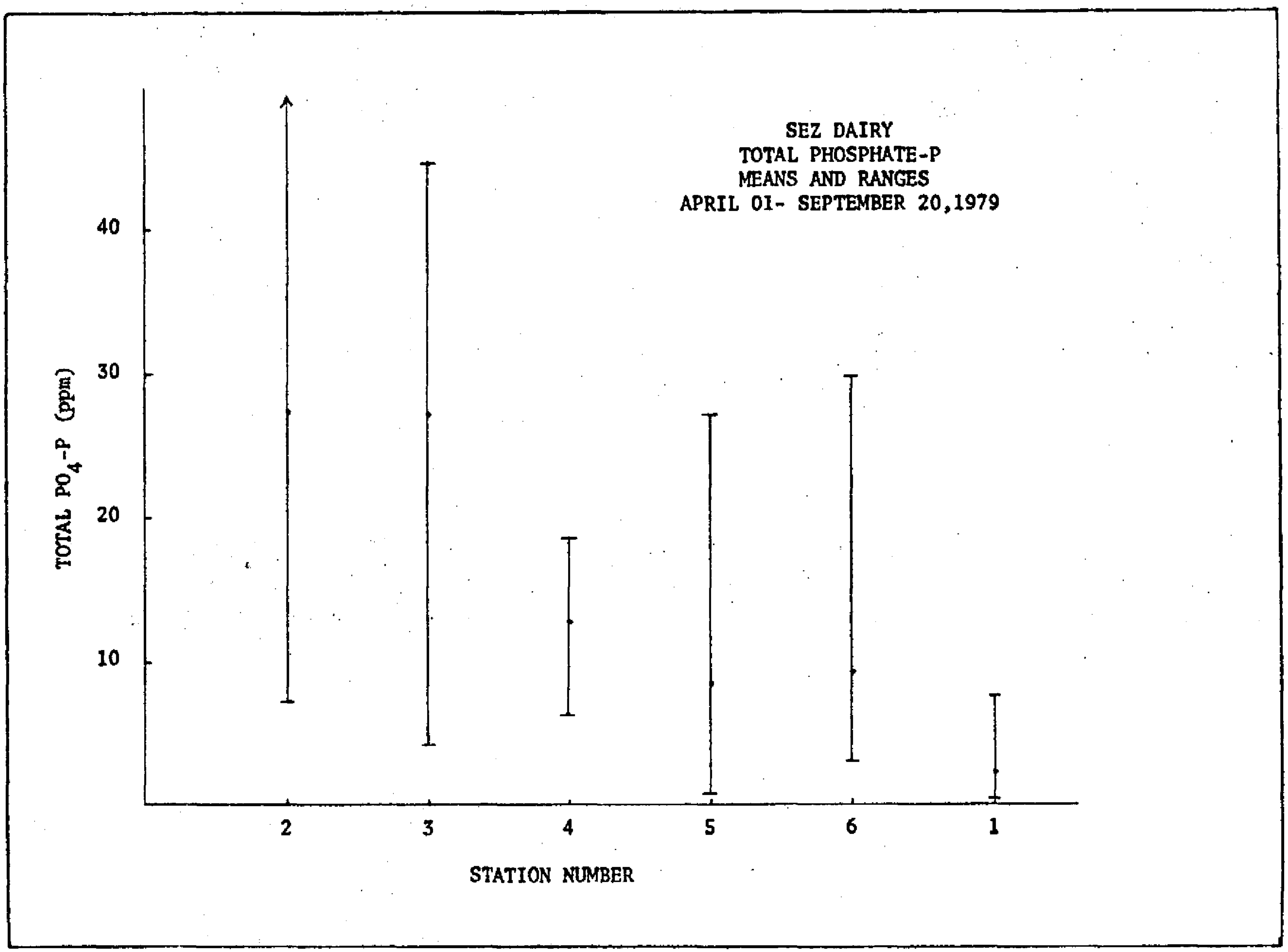


Figure III-12

ELEMENT IV

LABORATORY

Introduction

Water samples collected for the Upland Detention/Retention Project are analyzed for chemical and physical parameters at the OERC laboratory. Chemical parameters monitored are the nitrogen species (nitrate, nitrite, ammonia, total Kjeldahl nitrogen) and phosphorus species (ortho and total phosphorus). Physical parameters monitored include pH, color, turbidity, and specific conductance. Laboratory methodology for water quality analysis and a discussion of the routine procedures and tests to insure quality control of the laboratory product will be addressed in the following discussion.

Methods

All laboratory analytical procedures are based on EPA guidelines in Methods for Chemical Analysis of Water and Wastes, 1979 Ed., and the American Public Health Association's Standard Methods, 14th Ed. A general description of each method used by the OERC follows. More detailed information is referenced in Appendix IV.

Total Kjeldahl Nitrogen (TKN):

Total Kjeldahl nitrogen is the sum of the organic and ammonia nitrogen forms. The organic nitrogen in the sample is converted to ammonia nitrogen in sulfuric acid digestion procedure which is catalyzed by potassium sulfate and mercuric oxide at 370°C. The digestate is then analyzed for ammonia using an automated colorimetric procedure in which an emerald-green color is formed by the reaction of ammonia, sodium salicylate, sodium hypochlorite and sodium nitroprusside in a buffered medium at pH 12.8 - 13.0.

The automated procedure utilizing a Technicon AutoAnalyzer(R) II is described schematically in Figure IV-1.

Inorganic standards of ammonium chloride, organic standards of acetanilide and deionized water blanks are carried through the digestion and colorimetric procedures. The quality control samples are analyzed using these procedures also. Specific details of the methods are in Appendix IV-1.

Ammonia (NH_4-N):

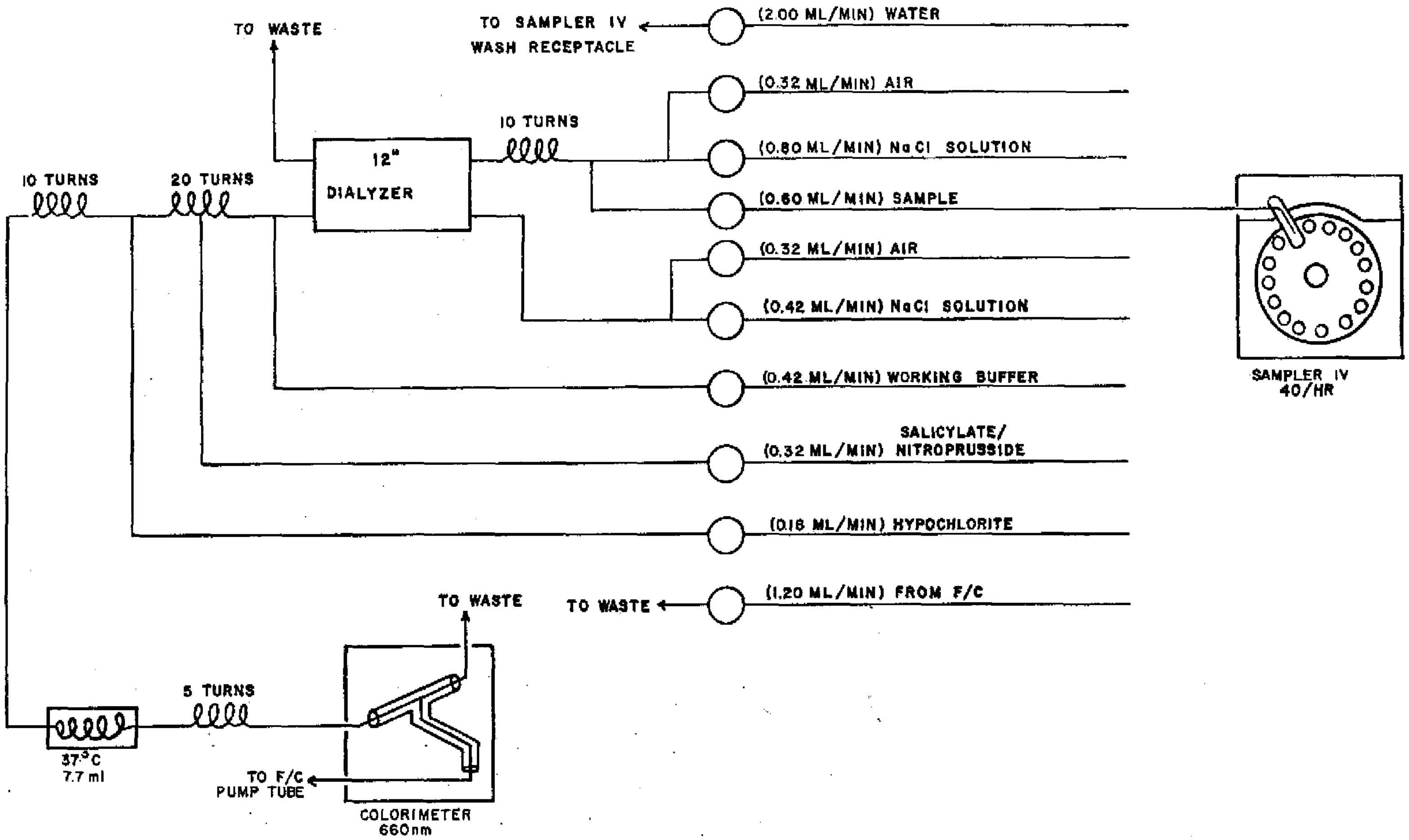
This automated procedure for the determination of ammonia on a filtered sample utilizes the Berthelot reaction. Alkaline phenol and hypochlorite react with ammonia to form indophenol blue which is proportional to the ammonia concentration in the sample. Sodium nitroprusside is added to intensify the color.

The automated procedure utilizing a Technicon AutoAnalyzer(R) II is described schematically in Figure IV-2.

Standard solutions of ammonium chloride are used to calibrate the instrument and for quality control procedures. Specific details of the method are in Appendix IV-2.

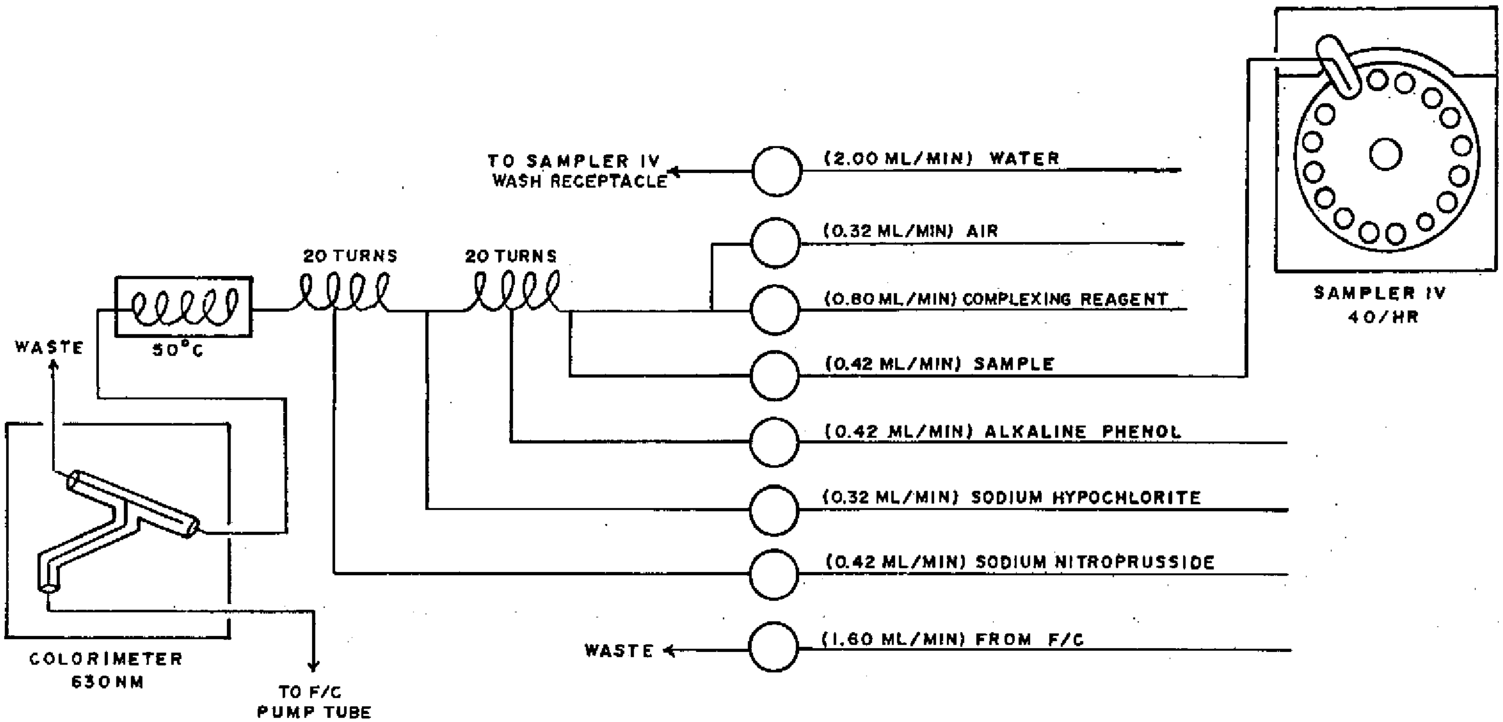
Nitrate + Nitrite (NO_x- N):

The cadmium reduction method is used for the determination of nitrate and nitrite nitrogen. The filtered sample is passed through a glass column which has been packed with cadmium granules which have been coated with copper sulfate. In the column, nitrate (NO_3) is reduced to nitrite (NO_2) which is then measured by the colorimetric diazotization method. The nitrite originally present plus the reduced nitrate is determined by diazotizing with sulfanilamide coupling with N-1-naphthylethylenediamine dihydrochloride



TOTAL KJELDAHL NITROGEN IN WATER AND WASTEWATER
PREDIGESTED SAMPLES (RANGE: 0-10.0 mg N/l)

FIGURE IV-1



AMMONIA IN WATER AND WASTEWATER
(RANGE: 0-0.50/2.0 mg N/l)

FIGURE IV-2

which produce a soluble, reddish-purple dye.

The automated procedure utilizing a Technicon AutoAnalyzer(R) II is described schematically in Figure IV-3.

Standard solutions of potassium nitrate are used to calibrate the instrument and for quality control procedures. Specific details of the method are in Appendix IV-3.

Nitrate (NO_2-N):

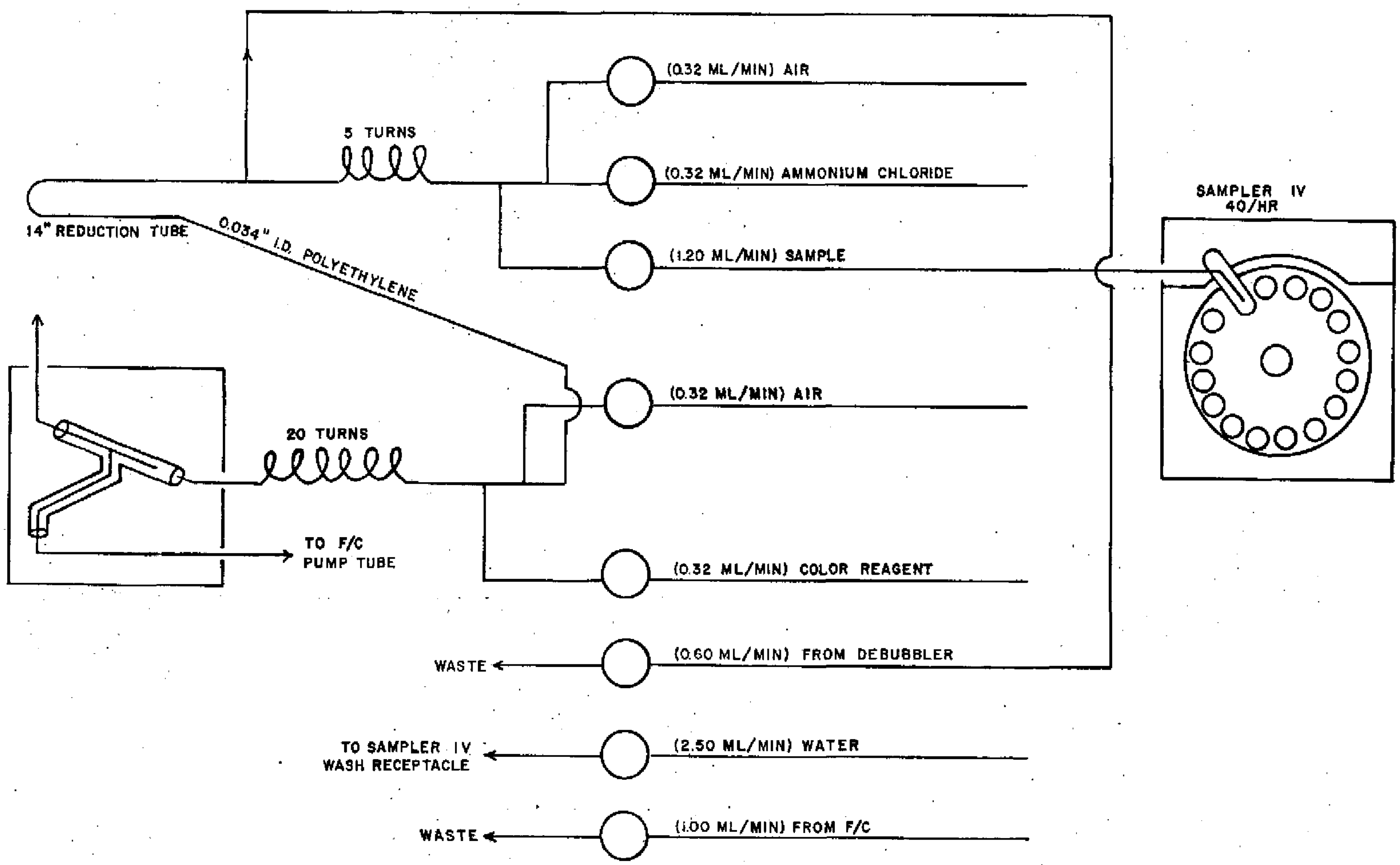
The nitrite concentration is determined on a filtered sample through the formation of a reddish-purple azo dye produced at pH 2.0 - 2.5. The nitrite ions diazotize sulfanilic acid which then couples with the N-1 naphthylethylenediamine dihydrochloride to form the soluble dye.

The automated procedure utilizing a Technicon AutoAnalyzer(R) II is described schematically in Figure IV-4.

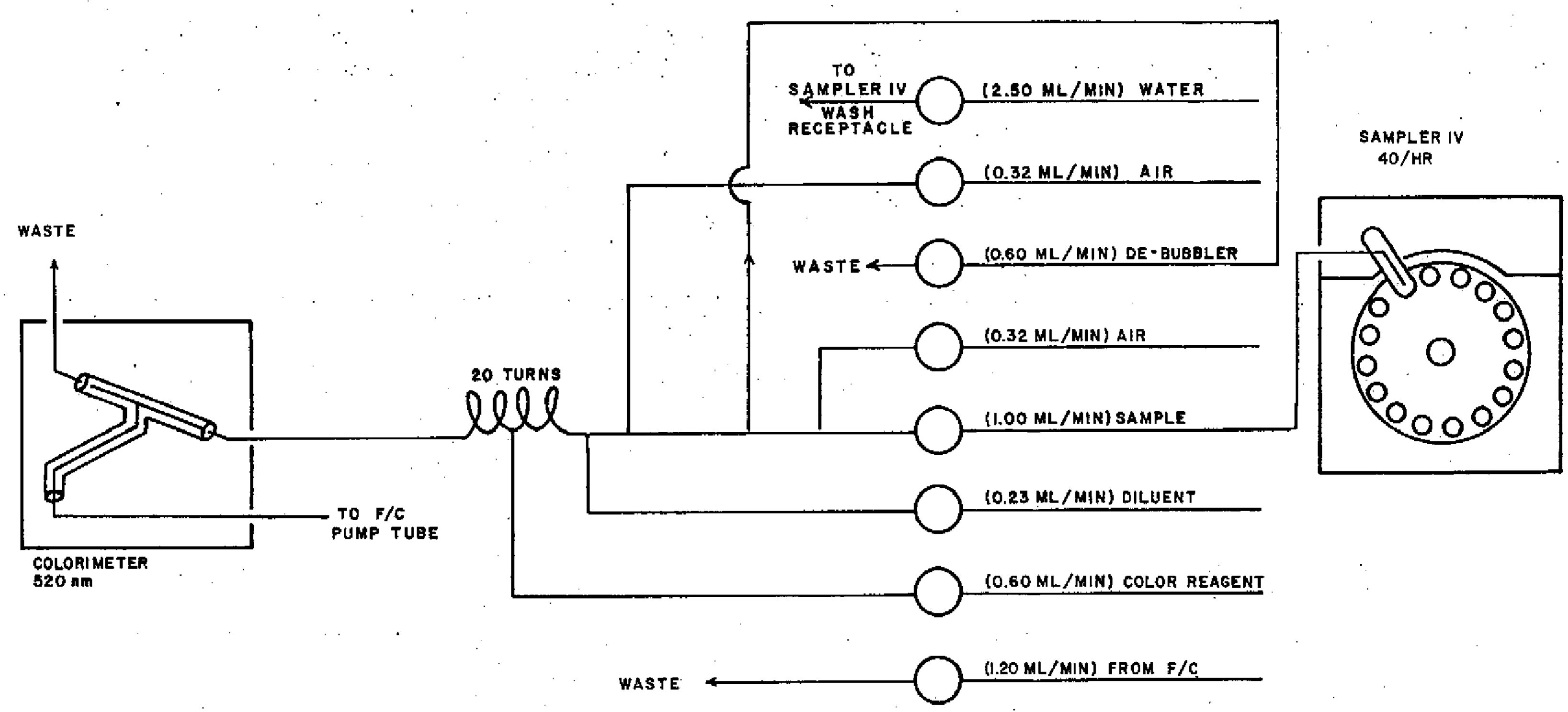
Standard solutions of sodium nitrite are used to calibrate the instrument and for quality control procedures. Specific details of the method are in Appendix IV-4.

Total Phosphate (TPO_4-P):

The total phosphorus concentration is determined on an unfiltered sample following digestion by the ascorbic acid method. The combined phosphorus forms are broken down by the sulfuric acid-potassium persulfate digestion procedure to the measurable orthophosphate. The total phosphate concentration is then determined by reaction of the orthophosphate with ammonium molybdate and potassium antimony tartrate under acidic conditions to form phosphomolybdic acid, a heteropoly acid. The phosphomolybdic acid is reduced by ascorbic acid to form the intensely colored molybdenum blue compound.



NITRATE AND NITRITE IN WATER AND WASTEWATER
(RANGE: 0-0.20/0.40 mg N/l)



NITRITE IN WATER AND WASTEWATER
(RANGE: 0-0.20/0.40 mg/l)

FIGURE IV-4

The automated procedure utilizing the Technicon AutoAnalyzer(R) II is described schematically in Figure IV-5.

Standard solutions of potassium phosphate monobasic are used to calibrate the instrument and for quality control procedures. Specific details are given in Appendix IV-5.

Orthophosphate (OPO_4-P):

The orthophosphate concentration is determined on a filtered sample. Ammonium molybdate and potassium antimony tartrate react in an acid medium with dilute solutions of orthophosphate to form phosphomolybidic acid which is reduced to the intensely colored molybdenum blue by ascorbic acid.

The automated procedure utilizing the Technicon AutoAnalyzer(R) II is described schematically in Figure IV-5.

Standard solution of potassium phosphate monobasic are used to calibrate the instrument and for quality control procedure. Specific details are given in Appendix IV-6.

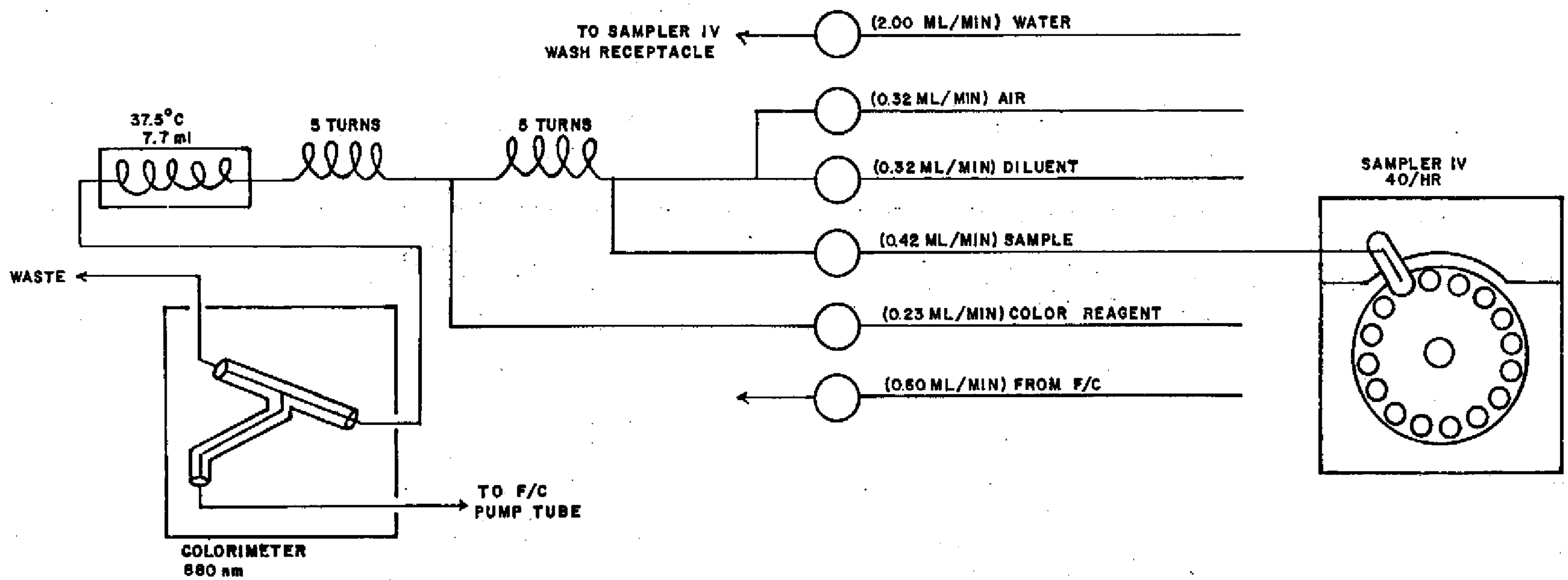
Color:

The "true" color of the sample is measured by the comparison of the filtered sample to standard reference color solutions. A Bausch and Lomb Spectronic 710 is calibrated at 465 nm in the concentration mode with a series of chloroplatinate standards. One color unit is 1 mg/l platinum in the form of the chloroplatinate ion.

Specific details of the method are in Appendix IV-7.

pH:

pH is a measure of the free hydrogen ion concentration of the sample. It is expressed as the common logarithm of the reciprocal of the hydrogen



ORTHO PHOSPHATE IN WATER AND WASTEWATER
AND
TOTAL PHOSPHATE IN WATER AND WASTEWATER (PRE-DIGESTED SAMPLES)
(RANGE: 0-0.50/2.00 mg P/l)

FIGURE IV-5

ion activity in moles per liter at a given temperature ($pH = \frac{1}{\log (H+)}$). The electrode method measures the change in potential of the system when the positively charged hydrogen ions are brought in contact with the system through a semi-permeable glass membrane in the electrode. pH is measured with a Corning Model 130 pH meter and combination electrode.

Specific details of the method are in Appendix IV-8.

Specific Conductance:

Conductivity is a measure of the ability of water to carry an electric current and is used to estimate dissolved solid concentrations. Solutions of electrolytes conduct an electric current by the migration of ions under the influence of an electric field. The numerical conductivity value depends on the total concentration of ionic species in the sample and the temperature at which the measurement is made. Conductance is defined as the reciprocal of resistance and is measured in mhos. Specific conductance is defined as the conductance of a conductor 1 cm long and 1 cm^2 in cross-sectional area. Specific conductance of water samples is reported in µsiemens which is numerically equivalent to conductivity in µmhos/cm. A Radiometer Model CDM3 Conductivity Meter with Model CDA 100 Manual Temperature Compensator is used to measure specific conductance and results are reported in µsiemens.

Specific details of the method are in Appendix IV-9.

Turbidity:

Turbidity is an expression of the optical property that causes light to be scattered and absorbed rather than transmitted in straight lines through the sample. The nephelometric method, as measured by the Hach Model 2100A turbidimeter is based on the comparison of the intensity of light scattered by the sample and the intensity of light scattered by a standard reference solution under the same conditions. The results are reported in nephelometric turbidity units (NTU's).

Specific details of the method are in Appendix IV-10.

Quality Control

Multiple steps are taken at the OERC to insure the quality of its analytical product. These steps are designed to maintain both the precision (repeatability) and accuracy (true value) of the analyses.

To insure precision and accuracy during routine daily operations OERC laboratory personnel adhere to the following procedure:

1. The AutoAnalyzers are calibrated with a minimum of four standards plus a dionized water blank at the beginning of the day's analysis.
2. The calibration setting is compared to previous calibration data to insure that it is in the acceptable range. If the values are not comparable, steps are taken to correct the problem before any samples are analyzed.
3. Standard addition groups to confirm the accuracy of the methods and repeat samples to confirm the precision of method are included in each day's analysis. Standard additions are inserted at the beginning, middle, and end of the run. A repeat sample is randomly selected from those to be analyzed during the day's run.

   Standard addition groups are prepared by mixing equal aliquots of randomly chosen sample with a known standard. The resulting solution is analyzed and a percent recovery value is calculated using the following equation:

$$\frac{C - \frac{1}{2} A}{\frac{1}{2} B} \times 100 = \% \text{ recovery}$$

Where: A = pure sample
B = pure standard solution
C = ½ sample + ½ standard (standard addition sample)

If analytical methods and laboratory procedures are precise and accurate, then theoretically the result will always equal 100 percent recovery. In reality, when dealing with small sample aliquots containing minute quantities in the ppm range, achieving the ideal 100 percent recovery is usually impossible. Instead, accuracy to within $\pm$ 10 percent of the ideal is considered acceptable, while results of greater than $\pm$ 15 percent from the ideal would be indicative of some problem in the techniques or procedures. Percent recovery values are plotted on a time continuum to serve as a visual example of the level of precision being achieved at the OERC laboratory (Figures IV-6 and IV-7).

In summary, quality controls on routine daily Autoanalyzer operation at the OERC laboratory are the following:

1. Standard set
2. Standard addition group
3. Nine samples
4. Repeat sample
5. Repeat steps 1, 3 and 4 for one-half the samples to be analyzed
6. Standard addition group
7. Repeat steps 1, 3 and 4 for remaining samples
8. Standard addition group
9. Standard set

This procedure is followed for total Kjeldahl nitrogen, ammonia, nitrate + nitrite, nitrite, total phosphate and orthophosphate.

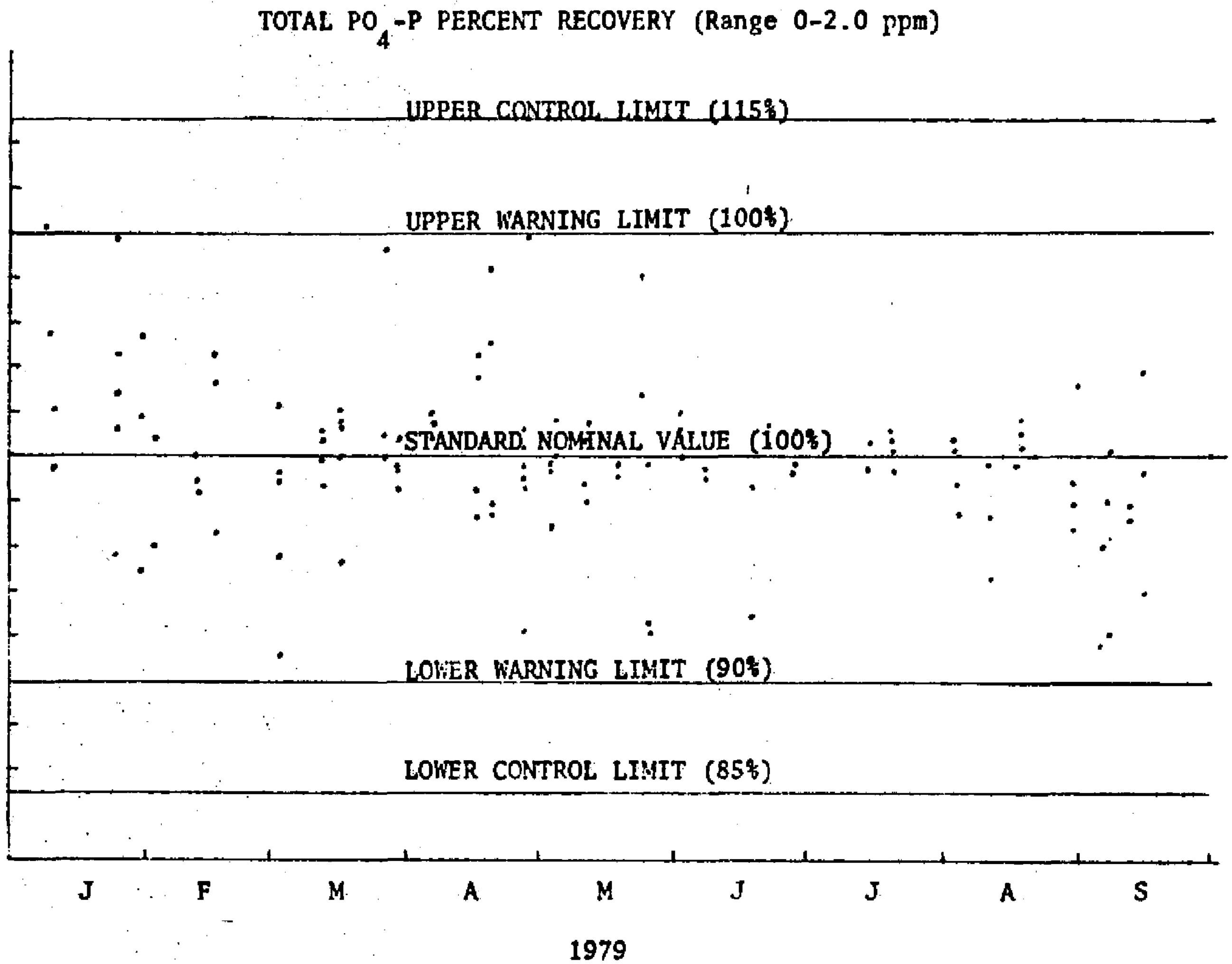

TOTAL PO4-P PERCENT RECOVERY (Range 0-2.0 ppm)
UPPER CONTROL LIMIT (115%)
UPPER WARNING LIMIT (100%)
STANDARD NOMINAL VALUE (100%)
LOWER WARNING LIMIT (90%)
LOWER CONTROL LIMIT (85%)
J
F
M
A
M
J
J
A
S
1979

Figure IV-6

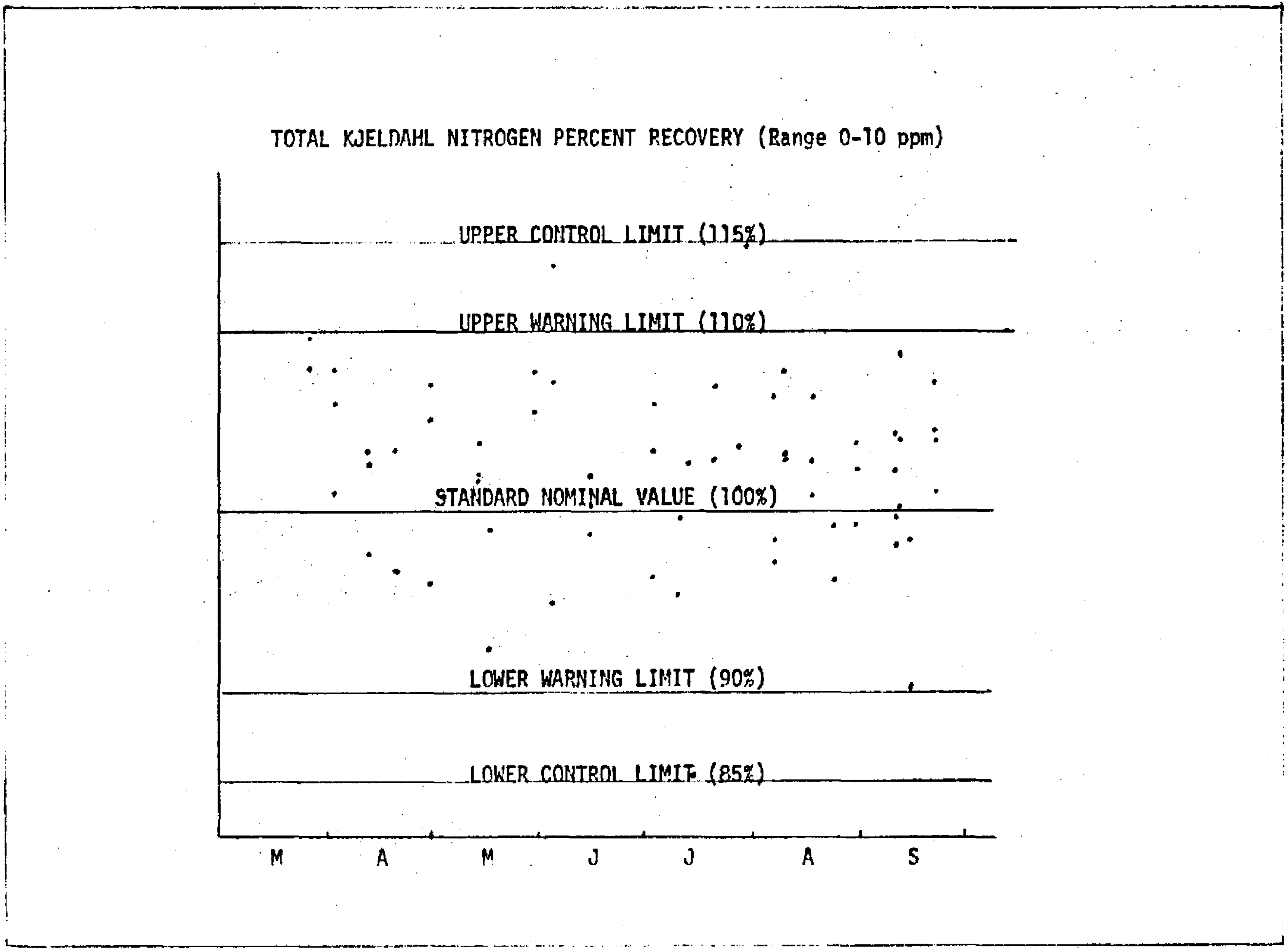

TOTAL KJELDAHL NITROGEN PERCENT RECOVERY (Range 0-10 ppm)
UPPER CONTROL LIMIT (115%)
UPPER WARNING LIMIT (110%)
STANDARD NOMINAL VALUE (100%)
LOWER WARNING LIMIT (90%)
LOWER CONTROL LIMIT (85%)
M A M J J A S

Figure IV-7

The instruments for the determination of the physical parameters are calibrated as per the manufacturer's instructions. This calibration is checked after every ten samples are analyzed. If necessary, the instrument is recalibrated and any samples previously analyzed are rerun.

For additional laboratory precision checks and identification of sources of variability, occasional comparisons are made of aliquots from a single sample versus multiple discrete grab samples taken from the field at the same time from a single sampling location. Comparison of parameter values from the discrete samples provides insight as to the amount of variability in the samples that can be attributed to field conditions or techniques, while similar comparison of the multiple analyses of the single sample allows a determination of variability due solely to laboratory procedures and analytical techniques. Data presented in Table IV-1 is indicative of the results of this type of comparison. For each parameter, the reported concentration of the discrete versus composite samples are very similar. Where variability does exist, in most cases it is greater in the discrete samples. The consistency of the data for both the composite and discrete samples is an indication of OERC staff's ability to achieve precision in both the field and the laboratory phases of the data collection and analysis process.

As a final accuracy check, OERC results are compared to those achieved at other laboratories analyzing aliquots of the same samples. On a routine monthly basis a water quality sample is obtained somewhere in the District during the course of the normal sampling routine. The sample is split into two aliquots, one is sent to the District's water chemistry laboratory at West Palm Beach and the other is sent to the OERC laboratory.

TABLE IV-1

COMPOSITE VS DISCRETE GRAB SAMPLE COMPARISON

	TKN-N*	NH_4-N*	NO_x-N*	NO_3-N*	T-PO_4-P*	O-PO_4-P*	pH	Specific Cond.**	Turbidity‡	Color+
Composite										
a	3.22	0.01	<0.008	0.010	1.339	0.929	7.71	451	8.0	116
b	3.44	0.02	<0.008	0.011	1.399	0.916	7.85	450	8.7	117
c	3.34	0.02	<0.008	0.011	1.355	0.938	7.81	438	7.9	120
d	3.42	0.02	<0.008	0.010	1.361	0.936	7.82	435	8.2	126
e	3.47	0.02	<0.008	0.010	1.399	0.940	7.83	445	8.6	125
Discrete										
f	4.04	0.02	<0.008	<0.008	1.405	0.942	7.83	444	8.4	127
g	3.34	0.01	<0.008	<0.008	1.339	0.942	7.88	443	8.0	125
h	3.94	0.02	<0.008	<0.008	1.383	0.940	7.93	447	8.1	125
i	3.39	<0.01	<0.008	<0.008	1.355	0.931	7.75	447	7.9	116
j	3.76	0.01	<0.008	<0.008	1.417	0.936	7.80	441	9.1	117

All samples were collected at SEZ Dairy, station 1, on June 26, 1979. Samples a through e are discrete grab samples. The discrete samples were collected in rapid succession in order to minimize variability due to the time element during which the samples were collected.

* mg/l
** μsiemens
‡ Nephelometric turbidity units
\+ Standard color units

The results of the two analyses are compared. Major differences occurring in reported values would be indicative of accuracy problems at one or both of the laboratories. Results of such comparisons are plotted graphically in Figures IV-8 - IV-13. In almost all cases there is some slight deviation from unity; however, considering the small concentrations of nutrients present in the samples and all the possibilities of introducing error throughout the collection, storage and analytical process, these type of results demonstrate that the OERC analytical procedures produce results well within standard limits of acceptable accuracy and precision.

For an additional accuracy check, the OERC is investigating the use of commercially prepared solutions for analysis and comparison with the known concentration levels. This procedure, to be implemented in the near future,will provide yet another means of monitoring the quality of the OERC data output.

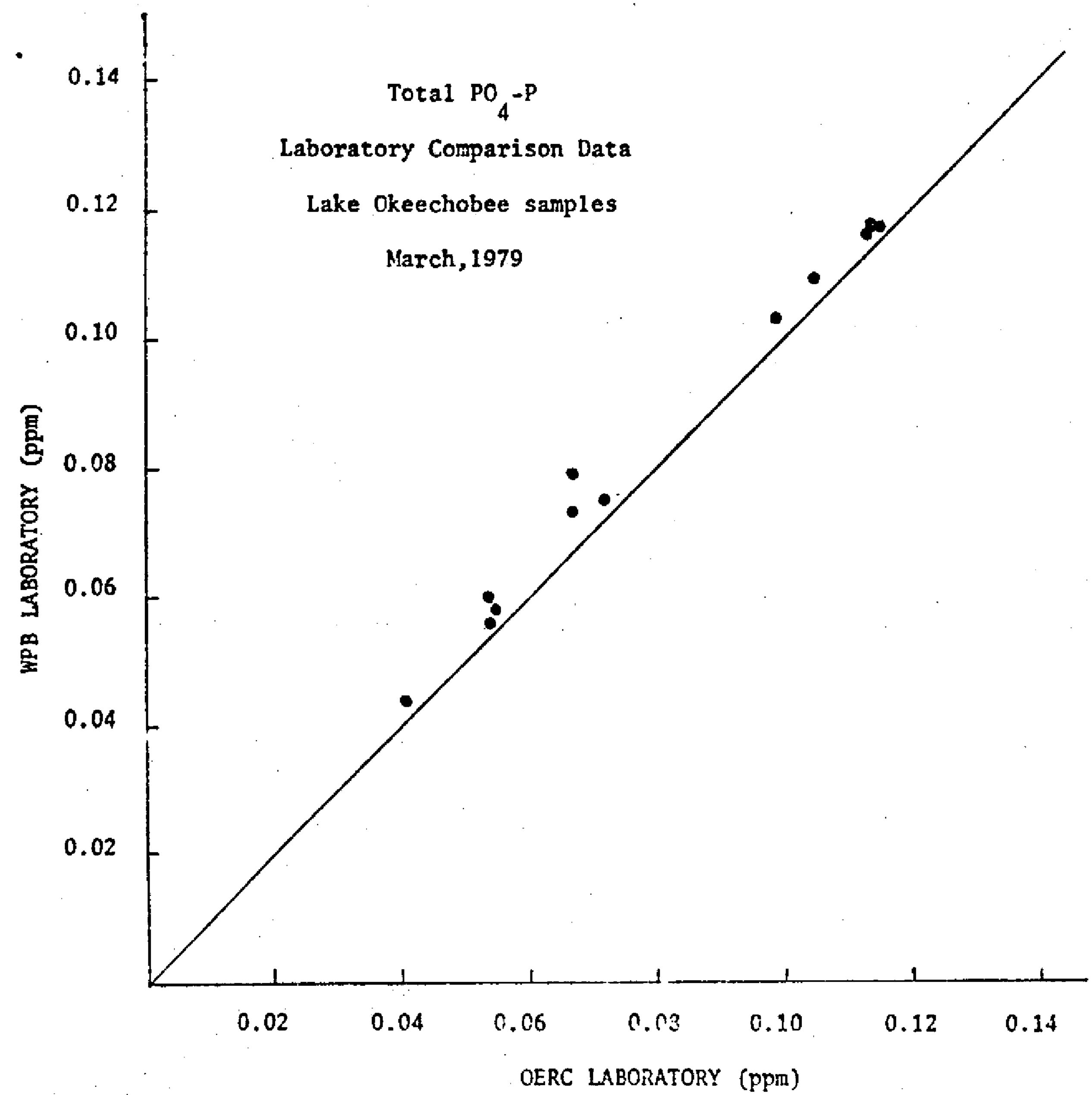

Total PO_4-P
Laboratory Comparison Data
Lake Okeechobee samples
March,1979
WPB LABORATORY (ppm)
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.02
0.04
0.06
0.03
0.10
0.12
0.14
OERC LABORATORY (ppm)

Figure IV-8

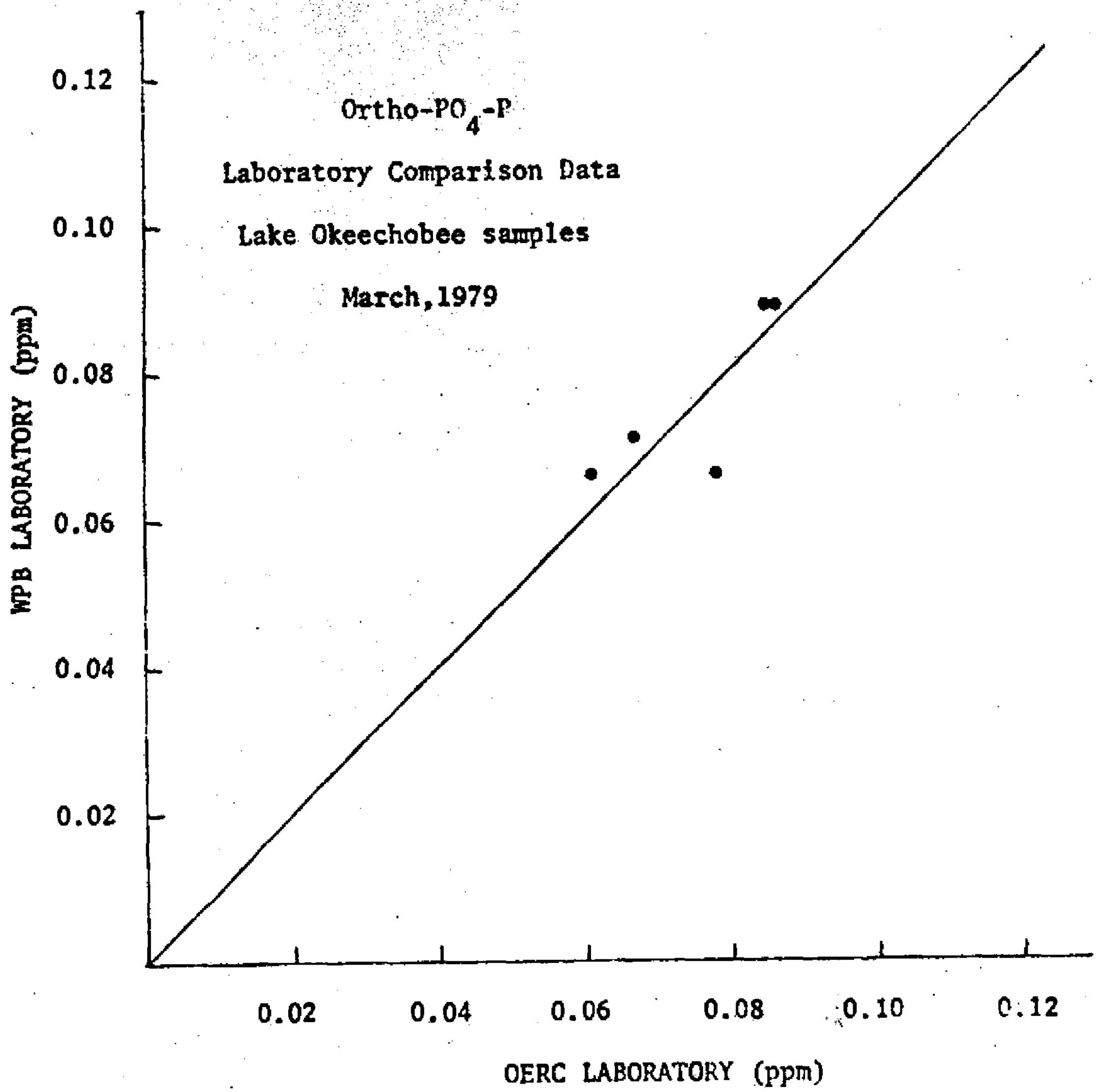
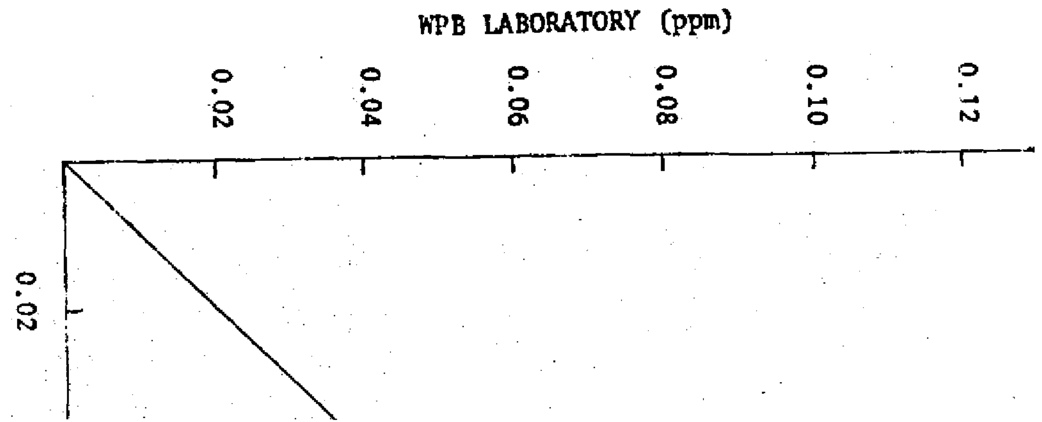
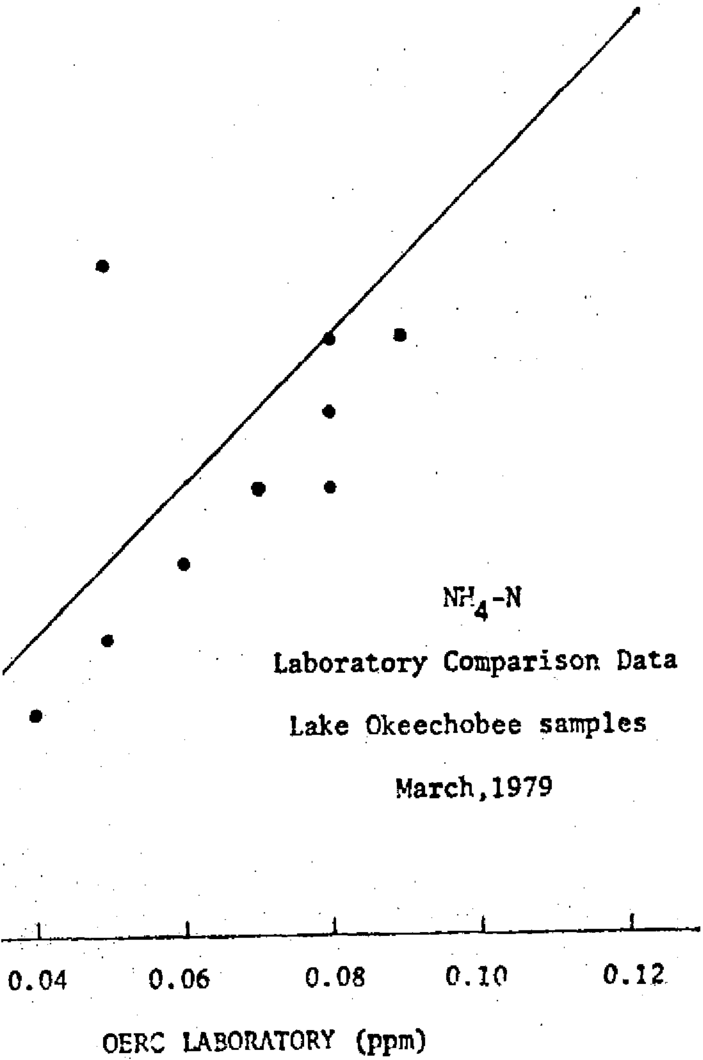

Ortho-PO_4-P
Laboratory Comparison Data
Lake Okeechobee samples
March,1979
WPB LABORATORY (ppm)
0.12
0.10
0.08
0.06
0.04
0.02
0.02
0.04
0.06
0.08
0.10
0.12
OERC LABORATORY (ppm)

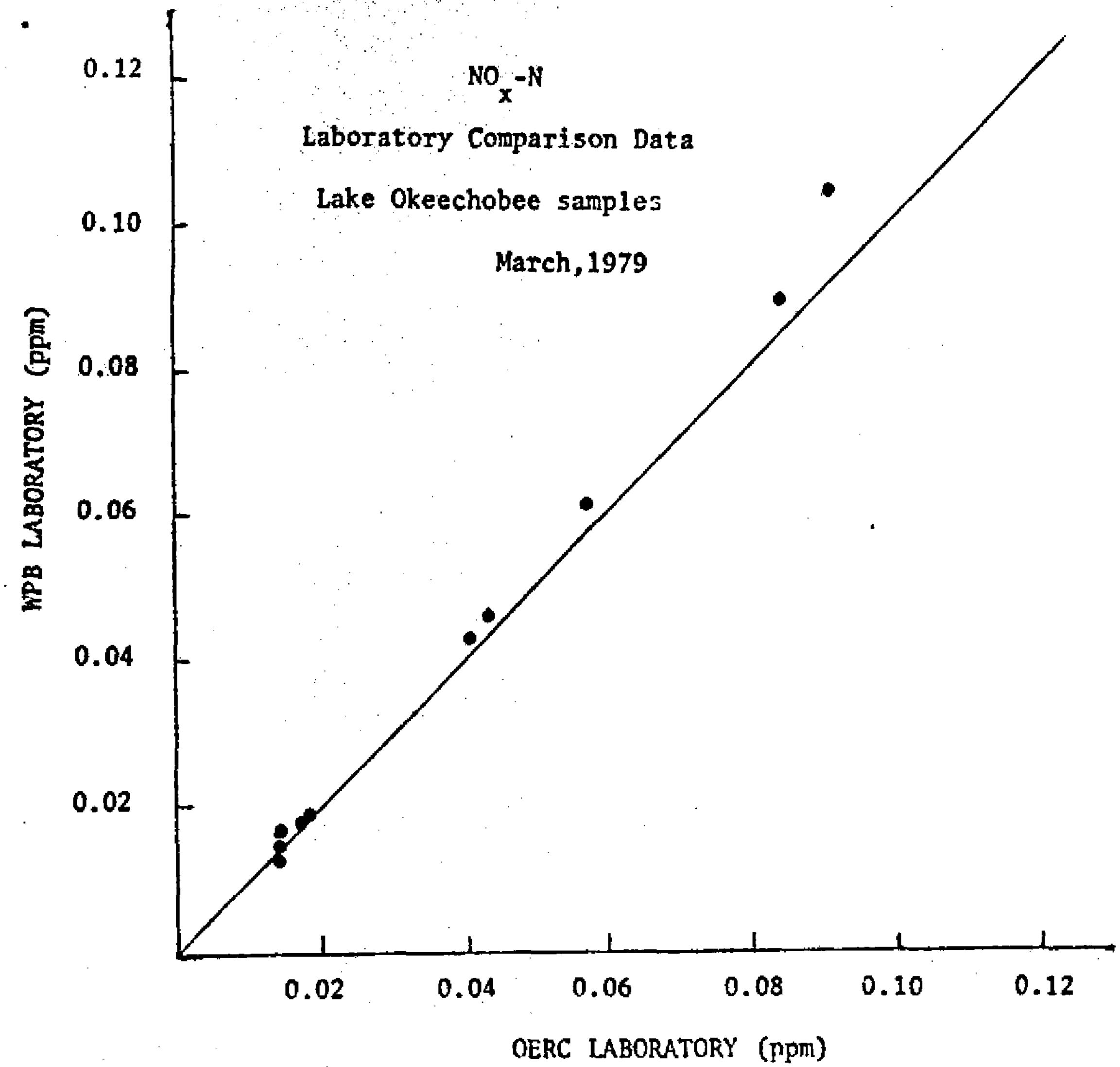
Figure IV-9


WPB LABORATORY (ppm)
0.02
0.04
0.06
0.08
0.10
0.12
0.02



NH_4-N
Laboratory Comparison Data
Lake Okeechobee samples
March, 1979

Figure IV-10



NO_x-N
Laboratory Comparison Data
Lake Okeechobee samples
March,1979
WPB LABORATORY (ppm)
0.12
0.10
0.08
0.06
0.04
0.02
0.02
0.04
0.06
0.08
0.10
0.12
OERC LABORATORY (ppm)

Figure IV-11

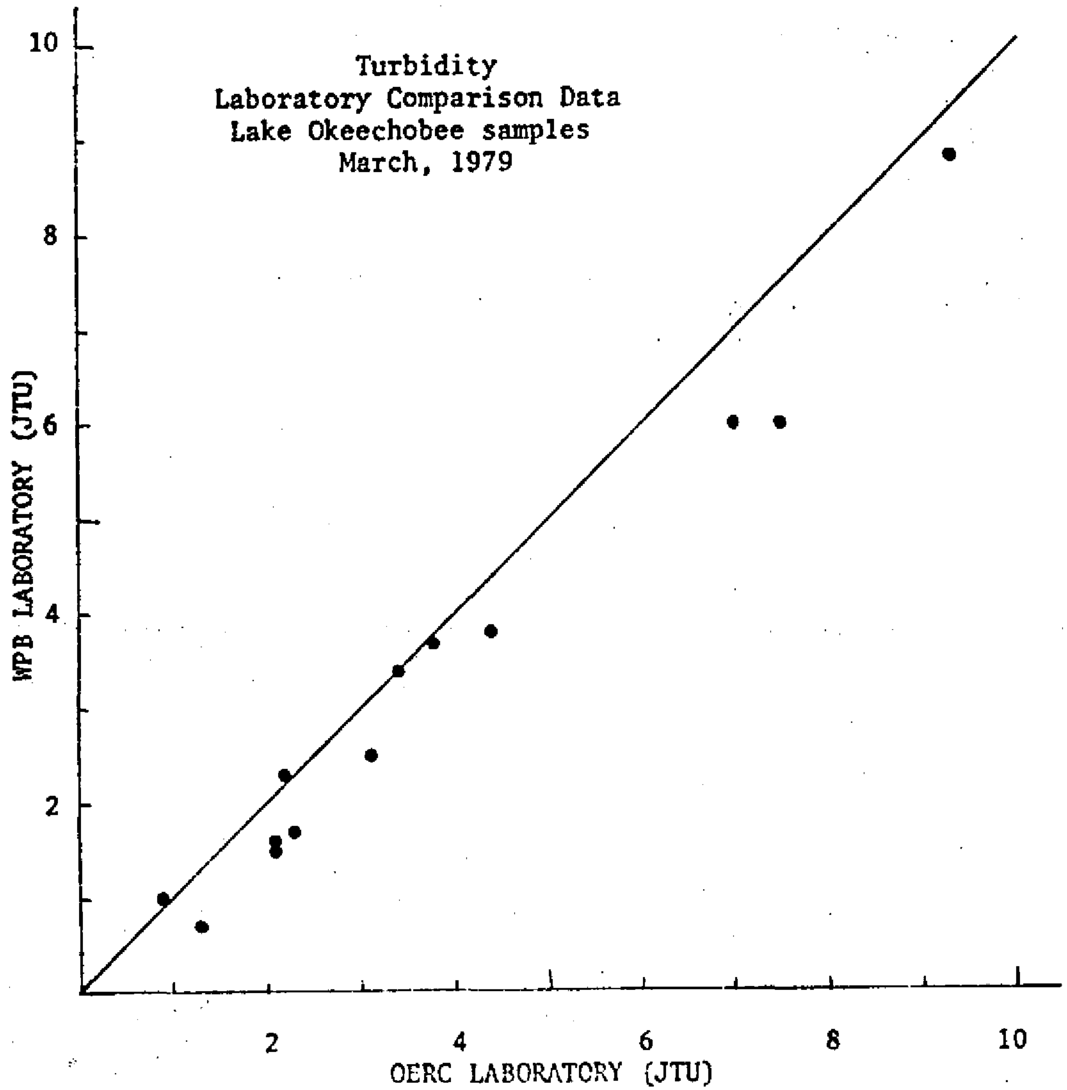

Turbidity
Laboratory Comparison Data
Lake Okeechobee samples
March, 1979
10
8
6
4
2
WPB LABORATORY (JTU)
2
4
6
8
10
OERC LABORATORY (JTU)

Figure IV-12

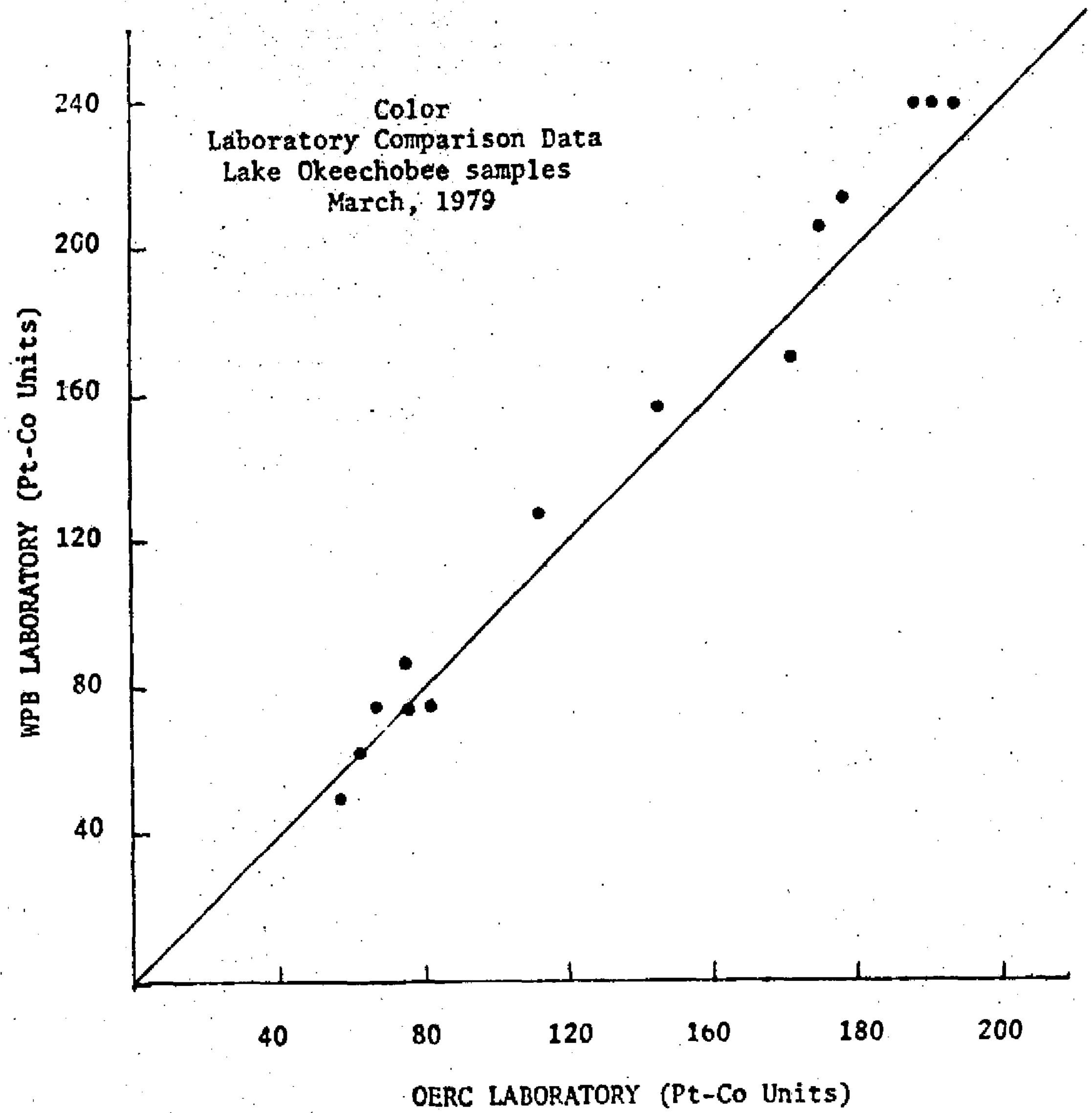

Color
Laboratory Comparison Data
Lake Okeechobee samples
March, 1979
240
200
160
120
80
40
WPB LABORATORY (Pt-Co Units)
40
80
120
160
180
200
OERC LABORATORY (Pt-Co Units)

Figure IV-13

ELEMENT V

REPORTS

Formal reports during the subject period were limited to a single project status update before the Coordinating Council on the Restoration of the Kissimmee River Valley and Taylor Creek/Nubbin Slough Basin on November 2, 1979 in Okeechobee, Florida. This presentation emphasized the data collection and quality control aspects of the SFWMD's role in the Upland Detention/Retention Demonstration Project. Examples of ranges and means of nitrogen and phosphorus concentration observed at the project sites were graphically displayed and some comments were made regarding the apparent contribution of N and P from each of the sites.

A revised version of the SFWMD's annual report for the project period, August 1978 through July 1979, was presented to the KRVCC for their ongoing review and comments as per the Council's project report review procedure.

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King and Brater, 1963. Handbook of Hydraulics, 5th Edition. McGraw Hill Book Co., New York, N. Y.

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APPENDICES I-A -- I-J

APPENDIX I-A

MEMORANDUM

August 13, 1979

TO: The Files

FROM: R. Mierau, Water Resources Division

SUBJECT: Washout of Flume Tiebacks at Maxey Impoundment

Game Commission personnel first noted a washout in the tieback levee for the flume structure at Maxey Impoundment on Monday afternoon, August 6, 1979. Since numerous personnel visit this area on a regular basis, it is assumed that the washout occurred sometime during the weekend of August 4-5.

The design runoff rate for this structure is 0.5 inch per day (40 CFS). This design runoff rate is fairly conservative for this type of agricultural drainage. It might be expected that rainfall intensities of 8-10 inches per week would be required to exceed this rate. A provision of 13 CFS for possible transfer of water from Pine Island Slough during periods in which water levels were higher due to rainfall differences between basins was provided for. This allowance was considered very conservative due to the nature of the connecting channel between the two drainage areas. It would require a stage difference on the order of 2 feet over the mile long divide section to realize flows of this magnitude. As an additional factor of safety more than a foot of free-board was provided which has the potential of more than tripling the flow which could pass the structure without damage.

A helicopter inspection of the area by R. Mierau, R. Rodgers, and R. Ulevich of SFWMD was made on the morning of 8/10/79. High water marks on the structure (See Figure 1) indicated the maximum flow through the structure was on the order of 60 CFS. This is equivalent to a runoff rate of 0.7 inches per day from the entire 2000 acre drainage area. Total flow thru the section, including the washout may have been as high as 200 CFS (2.4 inch/day). Rainfall at S-65A was approximately 0.85 inches over the period 8/3 to 8/6. This amount of rainfall should not generate runoff rates larger than 8 CFS from this type of drainage area. Even with the maximum amount of transfer from Pine Island Slough envisioned discharge should have been within the design range for the structure.

Rainfall for the Pine Island Slough Area was much larger than the rainfall at S-65A. Nearly 3 inches of rain fell on the upper part of Pine Island Slough drainage area as indicated by raingauges at Peavine Trail and El Maximo ranch between August 1 and August 4.

With this in mind, an inspection of the upstream portion of the area drained by the flume and the portion of Pine Island Slough downstream of the inter-section of the connection between the two drainage areas was made in order to determine whether significant alterations in the drainage pattern had been made since the design criteria were established or a severe blocking of the Pine Island Slough had occurred.

No unusual obstructions were found in the lower portion of Pine Island Slough. An alteration in the drainage pattern at a critical location was found, however. The landowner had constructed an access road leading from Pine Island Slough parallel to the channel of the slough on which the flume is located across the high ground which serves as the drainage divide. This road has substantial borrow ditches on both sides of the road (See Figure 2). While the road is not continuous, (it has a small gap near Pine Island Slough) the borrow ditches effectively increase the coveyance capacity between the problem area and Pine Island Slough by more than an order of magnitude. This additional conveyance is more than adequate to explain the increase in expected flow which lead to failure of the tie-back levee at the flume.

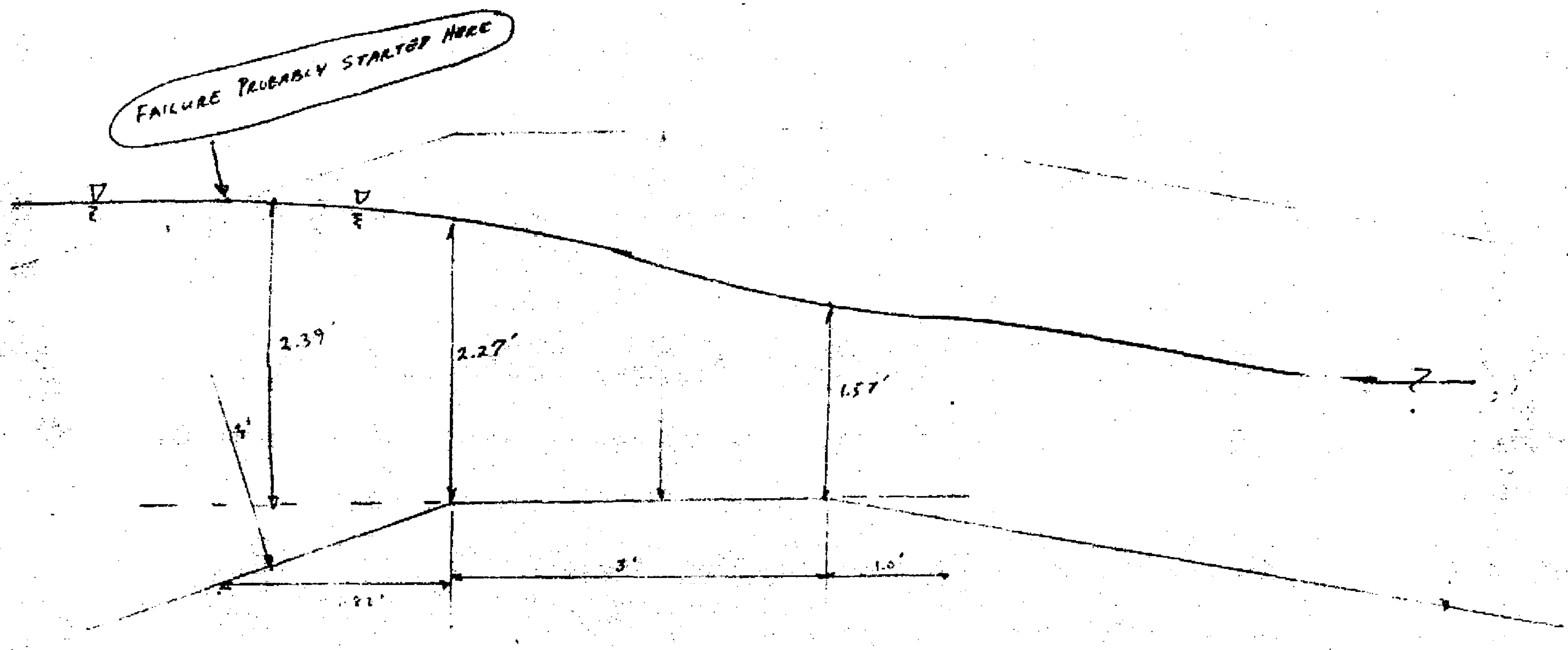
Inspection of the flume site indicated that failure was most likely initiated by eddie currents which developed on the upstream side of the flume just over the top of the upstream training wall. Due to an oversight by this writer, inadequate erosion protection was supplied at this location to realize the full factor of safety against failure intended in the hydraulic design. Had this additional erosion protection been in place, the failure would probably have occurred anyway because the magnitude of flow was so large. If the unexpected road had not been constructed flows would not have exceeded design conditions and the structure would have functioned as intended.

Site inspection revealed that the flume itself had maintained its structural integrity much to the credit of the structural design engineer, Red Rodgers and the crew from the Okeechobee Field Station which did the actural construction.

Two remedial actions are possible to prevent reoccurance of this type of failure during small rainfall events. The first is to completely block the borrow ditches and slough channel in the basin divide section. It seems unlikely however that the landowner would be willing to sacrifice the improved drainage obtained by the borrow ditches, constructed at considerable expense, and which will undoubtedly decrease maintenance problems on the access road considerably. The second alternative is to leave the borrow ditches as they are and build another flume beside the existing one at an elevation high enough to preserve the low-flow measuring capability of the existing flume and also provide the additional discharge capacity required to handle the flow through the new borrow ditches. The second alternative might impact the rainfall-runoff study being conducted by the University of Florida as it would not be possible to accurately account for the exchange of flow between the Armstrong Slough and Pine Island Slough systems.

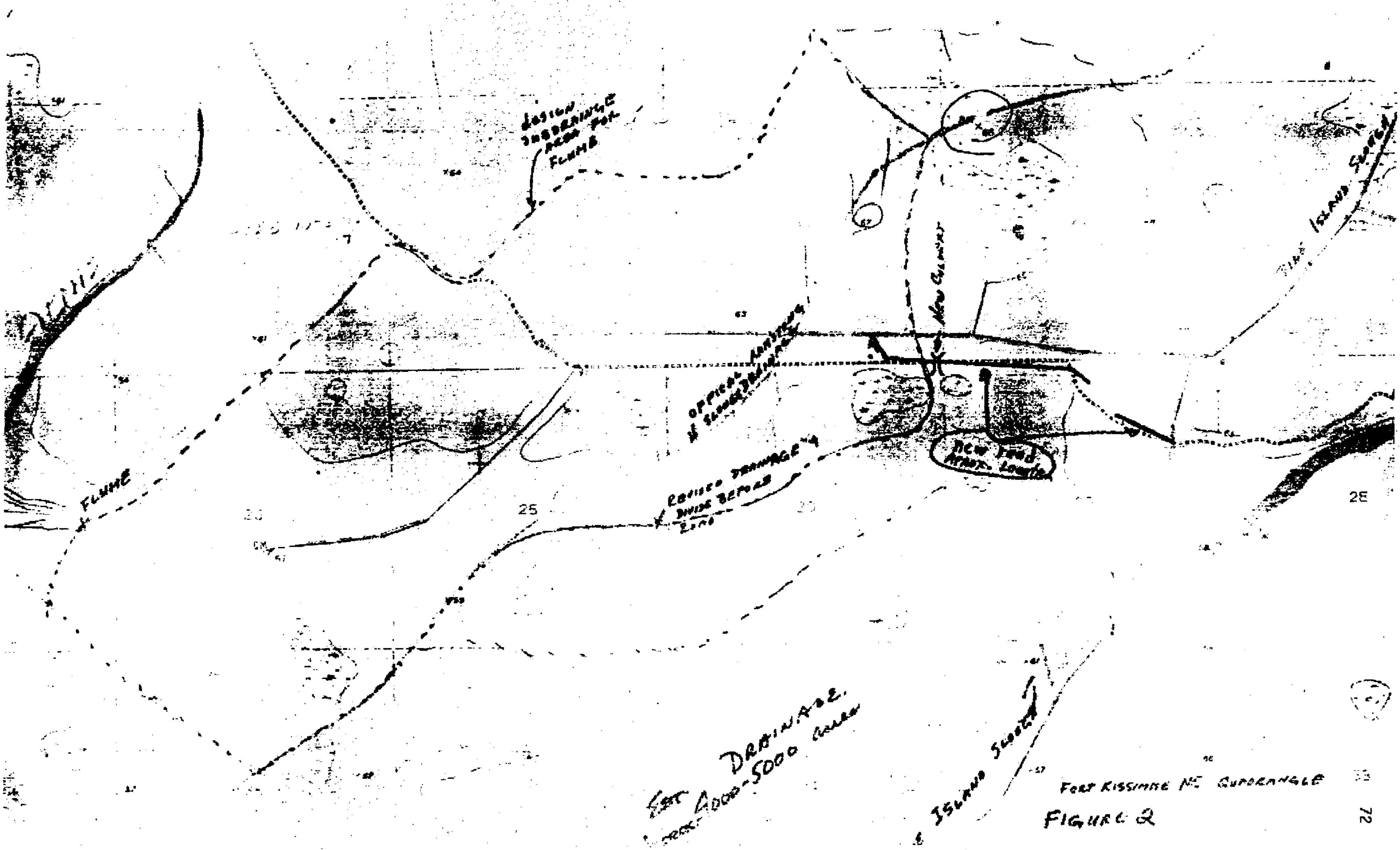
Whichever action is selected, additional erosion protection should be supplied on all flumes constructed for this project.

R. Mierau
Water Resources Division



HIGH WATER MARKS AFTER 'FAILURE ON OR BEFORE AUG 6, 1979
APPROXIMATE DISCHARGE 62 CFS

FIGURE 1



Fort Kissimmee NE Quadrangle

Figure 2

COORDINATING COUNCIL
ON THE
RESTORATION OF THE KISSIMMEE RIVER VALLEY
AND
TAYLOR CREEK - NUBBIN SLOUGH BASIN

2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301
(904) 488-9830

MEMORANDUM

August 16, 1979

TO: Council Members

FROM: Patrick M. McCaffrey PMM

SUBJECT: Washout at Armstrong Slough detention facility

Sometime during the weekend of August 4-5, the tieback levees associated with the flume entering Armstrong Slough from the south washed out. Subsequent investigations by the South Florida Water Management District suggest that the failure was most probably due to diversion of flow from the adjacent Pine Island Slough drainage as a consequence of road building operations by the landowner. A South Florida Water Management District staff report on the subject is attached for information purposes.

On August 15, Council staff met with Messrs. Davis, Mierau, Ulevich and Goldstein of the South Florida Water Management District to consider available options for repair of the levee. Basic alternatives identified are as follows:

1. Restore to design conditions. This would entail reestablishment of the original drainage divide prior to repair of the levee. Plugs in the borrow canals being constructed by the owner should suffice.

2. Rebuild to accomodate enlarged drainage area. This would ential building a supplemental flume or weir to accomodate the increased flow.

3. Shift to rating at south inflow and measurement at north inflow. The flume in question is one of two inflows to the Armstrong Slough marsh. The original plan for this site called for measured water flows at one inflow and the outflow. This data would then permit use of a less precise and less costly rating curve at the other inflow. This option would reverse the measure/rate status of the two inflows.

4. Settle for rating at both inflows. With measured outflow data, and good quality rating at the north inflow, it may be possible to produce acceptable rating curves for the south inflow. This would introduce very large

uncertainties from a technical standpoint and would severely limit our ability to quantify nutrient loads. Although this is likely to be the least-cost option in terms of cash demand, it would jeapordize the integrity of the project.

None of these options can be further evaluated until we have opportunity to meet with the landowner and develop comparative cost estimates. The District staff is attempting to develop initial cost estimates at this time and we expect to meet with the landowner next week.

I will keep you advised of developments.

PMM/cs

Attachment

APPENDIX I-C

6-C-38

M E M O R A N D U M

TO: Files

FROM: Robert J. Ulevich, Administrative Officer, Executive Office

SUBJECT: KRV - Upland Detention/Retention Project
Armstrong Slough
Wash-out - Flume Tiebacks

The attached documentation explains quite well the events and observations in reference to the subjected wash-out.

The task in hand is to repair/reconstruct this study site to adequately handle future rainfall events of comparable or greater magnitudes than those experienced.

These following areas were discussed in reference to this task:

1. That a 2-year projection is needed from the landowner as to planned modifications to existing drainage patterns

2. Determination of the size of a tandem flume or size of a new flume if so determined.

3. Erosion control

   a. Material
   b. Associated shipping problems
   c. Placement

4. Reconstruction/repair

   a. Equipment requirement - availability

      1) District
      2) Commercial

   b. Manpower requirements - availability

   c. Logistics

      1) Weather - current wet conditions
      2) Accessibility (possibility of storm events during construction period)

5. Controlled drainage

   A. Upstream culvert placement

6. Maintainment of existing structure integrity - temporary shoring-up?

Scheduled for the week of August 20, 1979 is a meeting between myself, R. Rodgers, and the Okeechobee Field Station personnel who have been involved in this project, the purpose of which is to determine the best approach to handling this specific task.

I will keep those interested parties posted of present and future actions to be taken.

ROBERT J. ULEVICH
Administrative Officer
Executive Office

August 17, 1979/mk
Attachment
cc: DFS
Okeechobee FS
R. Rodgers
R. Mireau
F. Davis
A. Goldstein - OERC
KRVCC - Tallahassee without attachments

6500 ulevich

APPENDIX I-D

TRIP REPORT - 9/5/79

WILDCAT SLOUGH WASHOUT

A small washout at the Wildcat Slough flume was reported by Fred Davis at 12:00 hours 9/5/79. The site was visited by helicopter at 1600 the same day by R. Mierau and R. Ulevich to determine whether emerge[illegible]y corrective action was required.

The upstream stage recorder was malfunctioning in that the counterweight was resting on the float providing incorrect stage readings on the paper tape. The chart was reading 5.708 feet. The true reading should have been 6.282 feet. Corrective measures for this condition are to shorten the float tape until the proper stage range can be realized and to check past records for prior occurance of this problem (not a problem prior to 8/1/79).

The downstream recorder at this site indicated that peak flows had occurred at 0900 9/4/79 and that the stage was approximately 0.10 foot higher at the time of observation (1630 09/05/79). This was verified by highwater marks on the flume. Flow through the flume at these stages is 140-150 cfs which is about the design flow condition. At these stages some flow bypasses the structure around the end of the levees. Flow bypassing the structure was estimated as 5 - 10 cfs.

Site inspection determined that failure occurred by seepage through the levees immediately adjacent to the structure carrying away the fine sand under the soil cement bags on the east side of the flume causing the bags to cave in to a level approximately level with the top of the sheet pile cutoff wall. The seepage could be observed on the opposite side of the flume at the time of the inspection, and the bags had begun to settle at that location.

Since water levels have begun to receed the structure does not seem to be in immediate danger. Repairs should begin as soon as water levels receed to the point of permitting reasonable access. Emergency shore[illegible] is not required at at this time. Although the levee on the side of the flume which is still intact may experience a similar type failure, enough damage has already been sustained to require repair.

Corrective measures should consider raising the cutoff wall to the top of the levee or higher on both sides of the flume to the end of the cutoff wall. This could be accomplished by pouring a concrete cap wall on the sheet pile. An alternative approach would be to replace part of the fill with select material resistent to piping damage. The remaining flume sites should be investigated to determine whether similar fill material was used on these structures.

Ron Mierau
Water Resources Division
Resource Planning Department

RM:bk

6-C-38

M E M O R A N D U M

TO: Jack Maloy, Executive Director

FROM: Robert Ulevich, Administrative Officer

SUBJECT: Reconstruction Costs
KRV-Upland Detention/Retention Project
Armstrong Slough

Prior to the aerial inspection of August 31, 1979, it was the opinion of the undersigned that the costs for the reconstruction of the Armstrong Slough tie back be the responsibility of the KRVCC. This is based on the fact that the washout was caused by modification in the design drainage basin by the landowner in the form of new roadwork.

On August 31, 1979 in an aerial inspection and discussion with the landowner, it was determined that this particular road system has been in existence for ten years and only gave the appearance of being new when viewed from the air. This new appearance was caused by the recutting of roadside ditches and the reshaping and resloping of the existing roadway. This activity was completed approximately 12 months ago. These ditches still had retained a fresh-cut appearance when viewed during the first washout inspection of August 10, 1979.

Eliminating the roadwork as the major source contributing to the washout focuses attention to the actual criteria used for the establishment of the drainage basin and subsequent construction design. Since these areas are within the bounds of the SFWMD, in its role as subcontractor-construction, I recommend that the SFWMD be responsible for costs associated with the reconstruction of this particular site.

An approximation of those costs is as follows:

Labor	$20,000*
Materials	9,000
Equipment Rental	5,900
	$34,900**

Unless further advised, preparation will be underway for a late October, early November, 1979 start-up, with completion estimated in six-eight weeks.

I will keep you further advised of development relative to this matter.

ROBERT ULEVICH
Administrative Officer

September 12, 1979/mk
*Cost estimate does not include administrative/technical support.
**Cost estimate total does not include District equipment costs.

6-C-38

M E M O R A N D U M

TO: Files

FROM: Robert J. Ulevich, Administrative Officer, Executive Office

SUBJECT: KRVCC - Upland Detention/Retention
Wildcat Slough Washout

Since V.C. Mobley of the Okeechobee Field Station had visited the subjected site earlier on September 5, 1979 and was in charge of actual construction, I asked him to join Ron Mierau and myself on the helicopter inspection.

Attached for reference is Mierau's trip report of September 5, 1979. The trip report explains well the conditions found.

After moving some cement bags, close physical inspection of the west wing of the flume revealed a soil composition of select shell rock and water, indicating substantial seepage. Since the local fill is of a fine sugar sand type, it would not take long to realize a shift in the bag foundation and subsequent cave-in. This already is occurring to a larger degree on the downstream side.

It was the consensus that an extension of the existing sheet piling (seep shield) to an elevation above the tie-back would be a logical corrective action. This would then be capped off with concrete, similar to a sea wall.

Additional concern was aired to the placement of select fill under the wings of the flume. Since select fill (shell rock) was used in this instance as opposed to local fill and failure still occurred, thoughts were aired as to the building of forms and the placement of concrete.

Finally, the placement of an erosion material such as granite upstream and downstream was mentioned.

Looking on the bright side, I feel fortunate that we were able to observe this break in its germ stage as it allowed for the determination of the piping problem. Had this early observation not occurred, I believe we would have been in an uncomfortable speculative position similar to the Armstrong washout.

Aerial inspection and follow-up discussion with V.C. Mobley revealed the near impossibility of moving any equipment to site at this time. Barring any major storm events, accessability should improve in two weeks. Hopefully, this time will also allow the levee material to dry to a point of being able to be worked. Whereas the Armstrong site will require raising the tie-back elevation, the Wildcat site elevation appears quite sufficient, thus eliminating a period of digging and drying of fill.

A better approximation of costs will be possible after a ground inspection within the next week.

I will keep those interested posted of future activities relative to this matter.

ROBERT J. ULEVICH
Administrative Officer
Executive Office

September 12, 1979/mk
Attachment
cc: Joe Schweigart
Red Rodgers
Ron Mierau, w/o attachment
Fred Davis
Pete Rhoads
Al Goldstein, OERC
KRVCC
Okeechobee FS

6-C-38

M E M O R A N D U M

TO: Files

FROM: Robert J. Ulevich, Administrative Officer, Executive Office

SUBJECT: KRV - Upland Detention/Retention
Armstrong Slough
Reconstruction Update

A meeting was held on September 11, 1979 in Red Rodgers' office to discuss the subjected reconstruction. In attendance were Mssrs. Marban, Rodgers, Mierau, and Ulevich.

Red Rodgers had indicated that he had flown over the subjected area Monday, 9/10/79, in the helicopter and made these observations (reference attached quad sheet section: Fort Kissimmee N.E.):

1. At the confluence of Armstrong and Pine Island Slough (A) -- water in the channel was almost level with the adjacent ground, indicating a depth of approximately 5-6 feet. Historic high water marks and discussions with landowner support this water depth in the Pine Island Slough;

2. Points BC -- indicated little, if any, flow either to the east or west;

3. Points CD -- indicated very minimal water movement to the west;

4. Points DE -- noted an increase in water movement; and

5. Point E to flume -- substantial water movement.

Supplied with this information it became a concern that the placement of a restrictive culvert at point E may be in error. If substantial flows do not build up until they are downstream of point E, then the restrictive cfs passage intended by the culvert placement would not occur. This will be better determinable after current survey cross-sections are taken of the slough.

The major points of discussion centered on the establishment of a design drainage basin and a "why" and "where" did the water come from to cause the velocities required to washout the tie-back.

The areas identified by points F and G are those areas questionable in the establishment of the design basin. Area F is an intensively ditched series of improved pastures whose drainage may or may not affect the Armstrong Slough region in question. Area G is a marsh, rangeland area. These two areas would account for the differences expressed in the design drainage basin.

Proposed at this meeting were the following design criteria:

1. Leaving the existing 3-foot bottom flume intact -- removing south wing;

2. Joining to the existing flume at an elevation 9" higher a 35-foot flume (throat dimension);

3. Building up of tie-back levee (approximately 1 foot);

4. Establishment of a controlled failure point on the south side of the south tie-back;

5. Extension of sheet piling to a higher elevation than the tie-back levee;

6. Placement of concrete cap on tie-back levee (approximately 10 feet); and

7. Placement of granite riprap.

Please note that these design proposals are very preliminary and will be further analyzed pending the following actions.

1. Establishment of a design drainage basin using the following information:

    A. Survey cross-sections of slough;

    B. Computed flow calculations for a 3-foot and 35-foot multi-stage flume with a 300-400 cfs rate at a 54' to 55' elevation; and

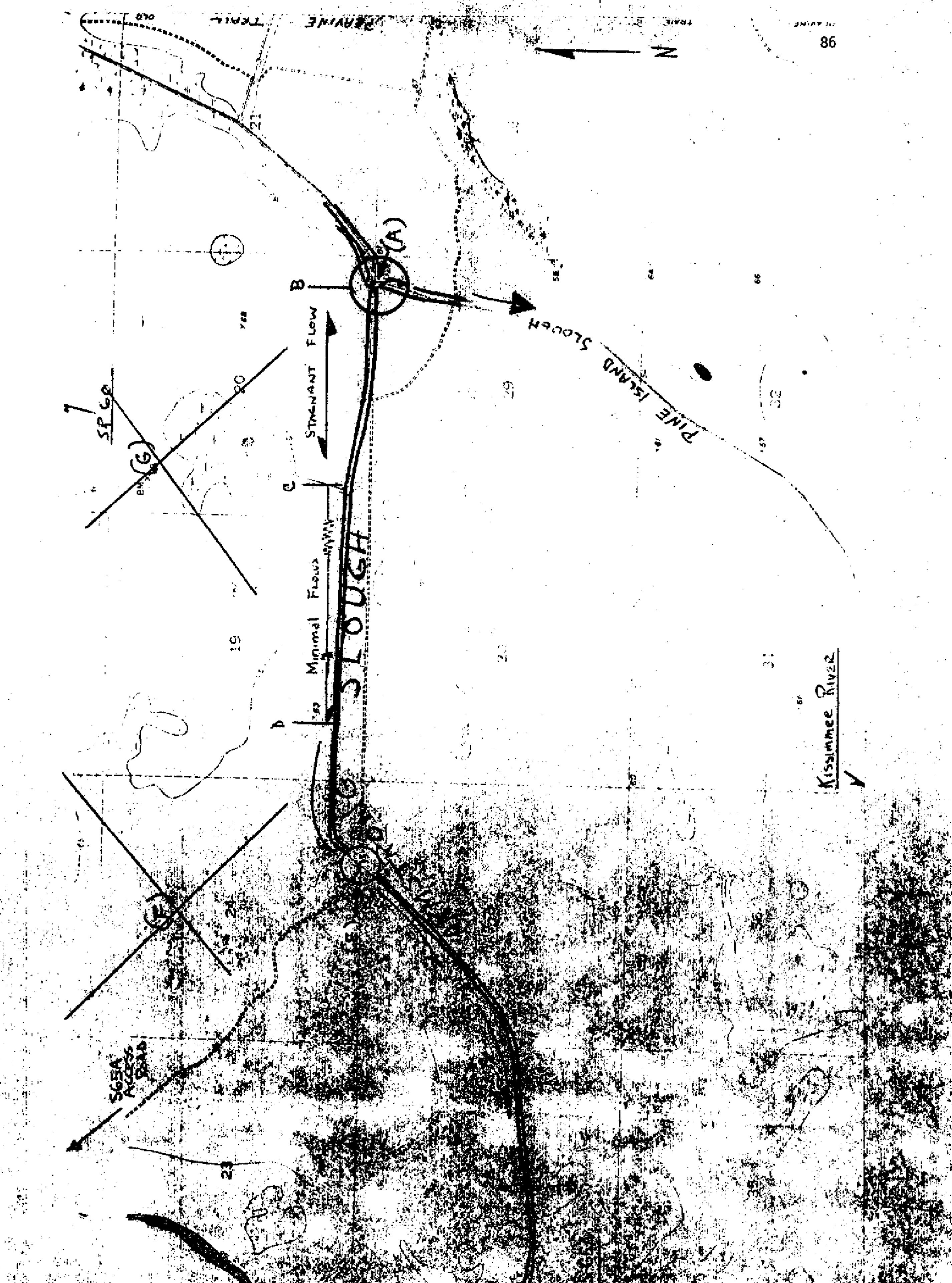
    C. Aerial and ground inspection paying particular attention to points F and G, plus areas north of SR 60 and east of the Peavine Trail noting any installations or irregularities that may allow the additional influx of water into the existing drainage basin.

(1) Discussion with landowner as to the history of drainage basin flow patterns and possibility of spring locations.

Projected time for completion of noted activities is two weeks.

ROBERT J. ULEVICH
Administrative Officer
Executive Office

September 12, 1979/mk
Attachment
cc: Participants
Joe Schweigart
Okeechobee FS
Fred Davis
Pete Rhoads
Al Goldstein, OERC


N
(A)
B
STAGNANT FLOW
PINE ISLAND SLOUGH
SP 60
(G)
C
Minimal Flow
SLOUGH
D
(F)
S65A ACCESS ROAD
Kissimmee River

6-KRCC

MEMORANDUM

TO: Files

FROM: Robert J. Ulevich, Administrative Officer, Executive Office

SUBJECT: KRV Upland Detention/Retention Reconstruction Project
Armstrong and Wildcat Sites

Resultant of numerous in-house discussions and reviews, the following information is offered in reference to the subjected matter.

I. Final Construction Design

Realizing the need to design a structure which would withstand calculated velocities as well as provide the ability to retrieve usable data, the following was agreed upon as being the most cost-effective design.

Basically, this structure is a single stage-flat bottom flume with a throat width of 15 feet. This flume will be able to handle peak flows in the vicinity of 290-300 cfs. The previous structure had a throat width of 3 feet with a design runoff rate of approximately 40 cfs.

Additional structural changes will involve the:

-- Use of 20 foot lengths of sheet pile to act as both an anchor, and a seep shield extending to the top of the tie-back levee elevation.

-- Extension of the concrete side slopes of the flume to allow for anchor wings on the top of the tie-back levee.

-- Placement of a blanket of granite riprap upstream and downstream to reduce the effects of eddy currents.

-- Shortening of the south tie-back levee by approximately 200 feet to El. 54.0, thus allowing a controlled failure point.

Attached for reference are three views of the new flume.

II. Costs

The previously mentioned cost estimate of $40,000 was reduced to $32,000 by:

A. Eliminating a restrictive culvert upstream in Armstrong Slough.

B. Using a single stage flume.

C. Not raising the elevation of the tie-back levee, therefore saving the time and costs associated with digging and drying of fill.

These revised costs are broken down as follows:

Armstrong Site:

Labor	$13,000
Materials	7,500
Equipment Rental	3,500
Armstrong Site Total	$24,000

Wildcat Site:

Labor	$ 4,000
Materials	2,500
Equipment Rental	1,500
Wildcat Slough Total	$ 8,000

Overall Totals:

Labor	$17,000
Materials	10,000
Equipment Rental	5,000
	$32,000

III. Scheduling

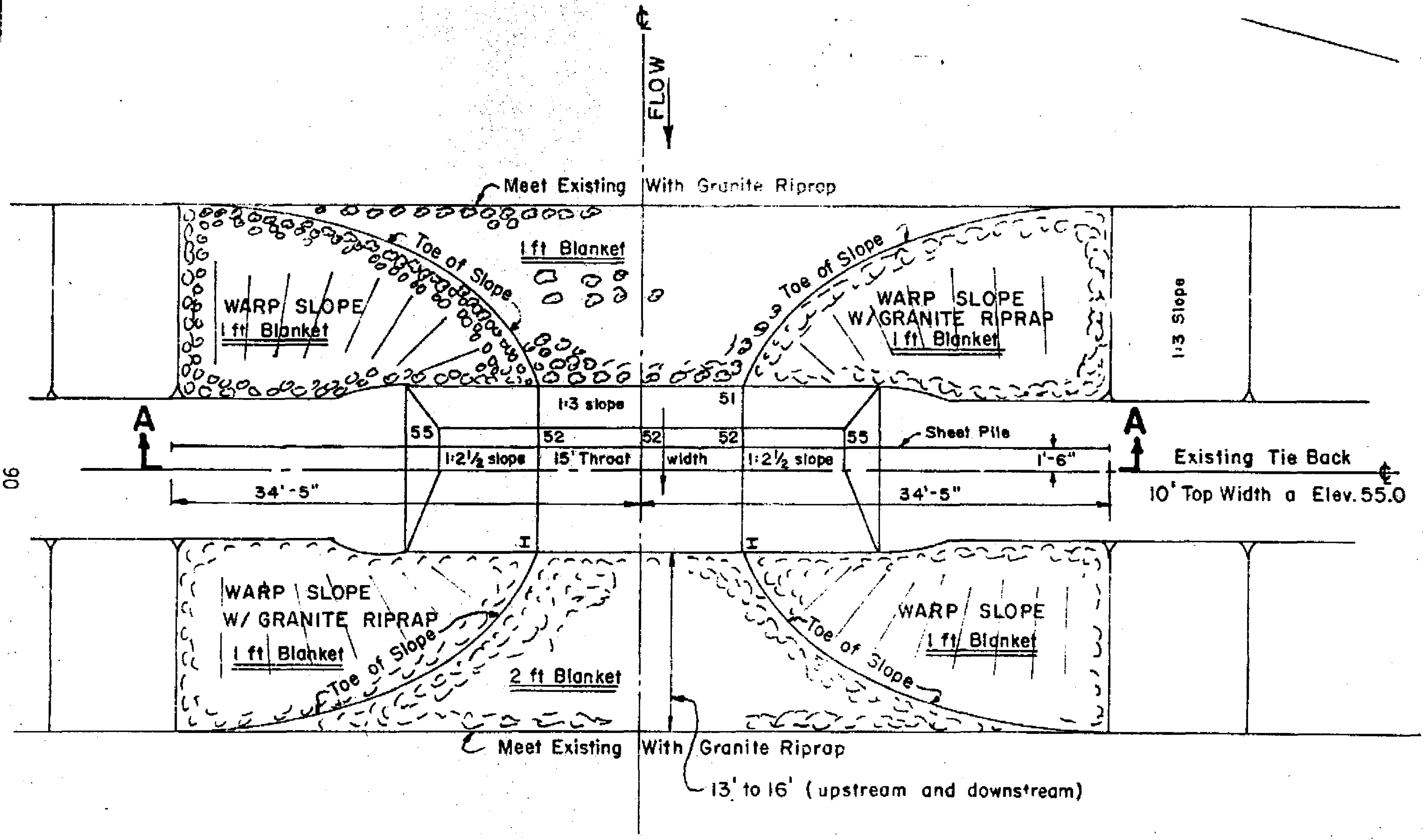
Although March is the deadline for reconstruction completion, past history has shown that there is no such thing as a large enough time cushion. Last January nonseasonal heavy rains forced the postponement of the initial project for weeks. After that, construction conditions were not the best. Realizing the criticalness of this final study year, sufficient time should be allowed for proper field testing.

Largely dependent on monetary approval, as well as material shipments and weather, these tentative dates are given:

Armstrong Site	Start-up	November 26, 1979
	Finish-up	January 3, 1980
Wildcat Site	Start-up	January 7, 1980
	Finish-up	January 17, 1980

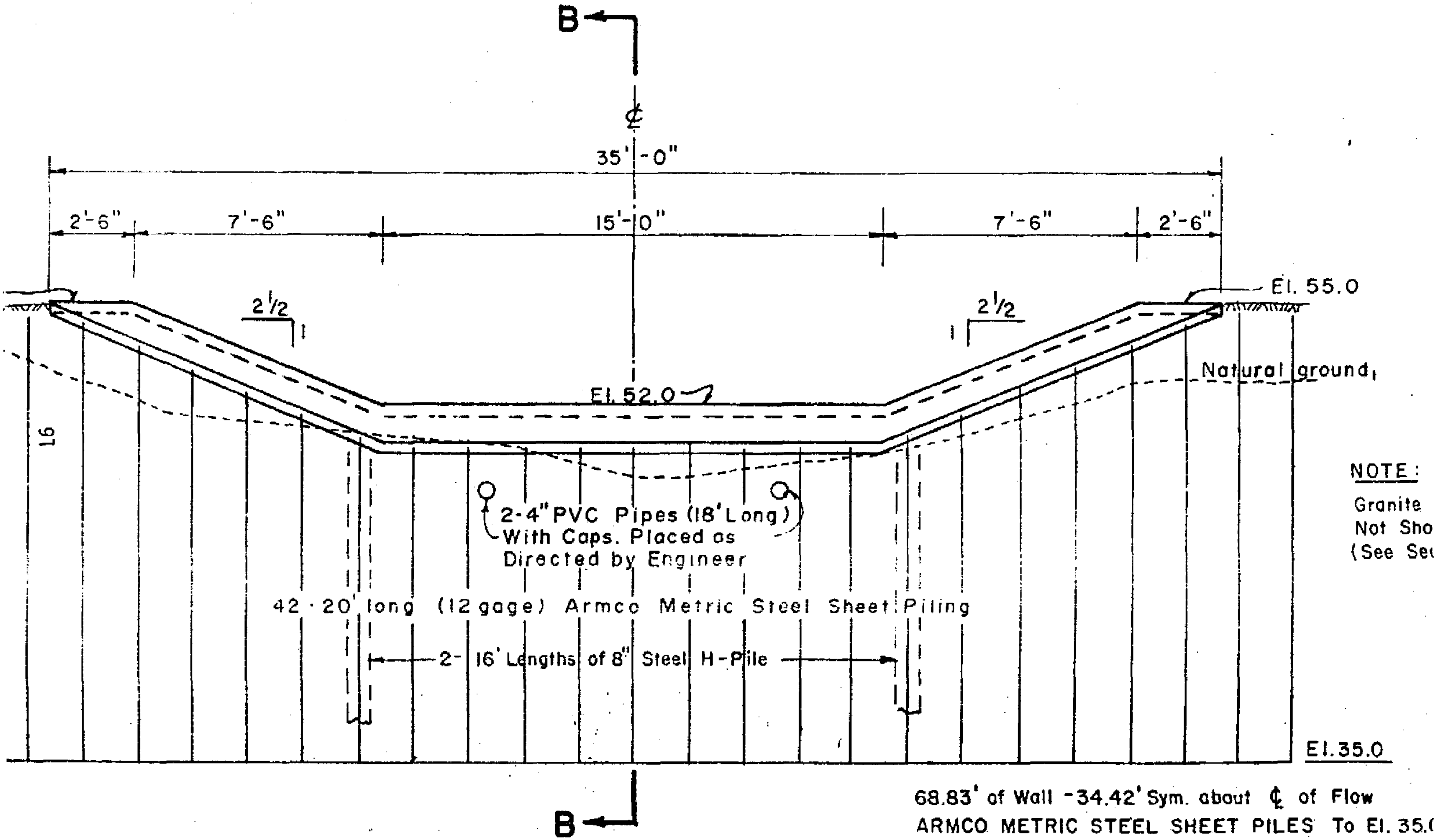
ROBERT J. ULEVICH
Administrative Officer
Executive Office

November 6, 1979/mjk
Attachment
cc: J. Wodraska
J. Schweigart
R. Rodgers
R. Mierau
F. Davis
P. Rhoads
A. Goldstein, OERC
KRVCC
Okeechobee FS

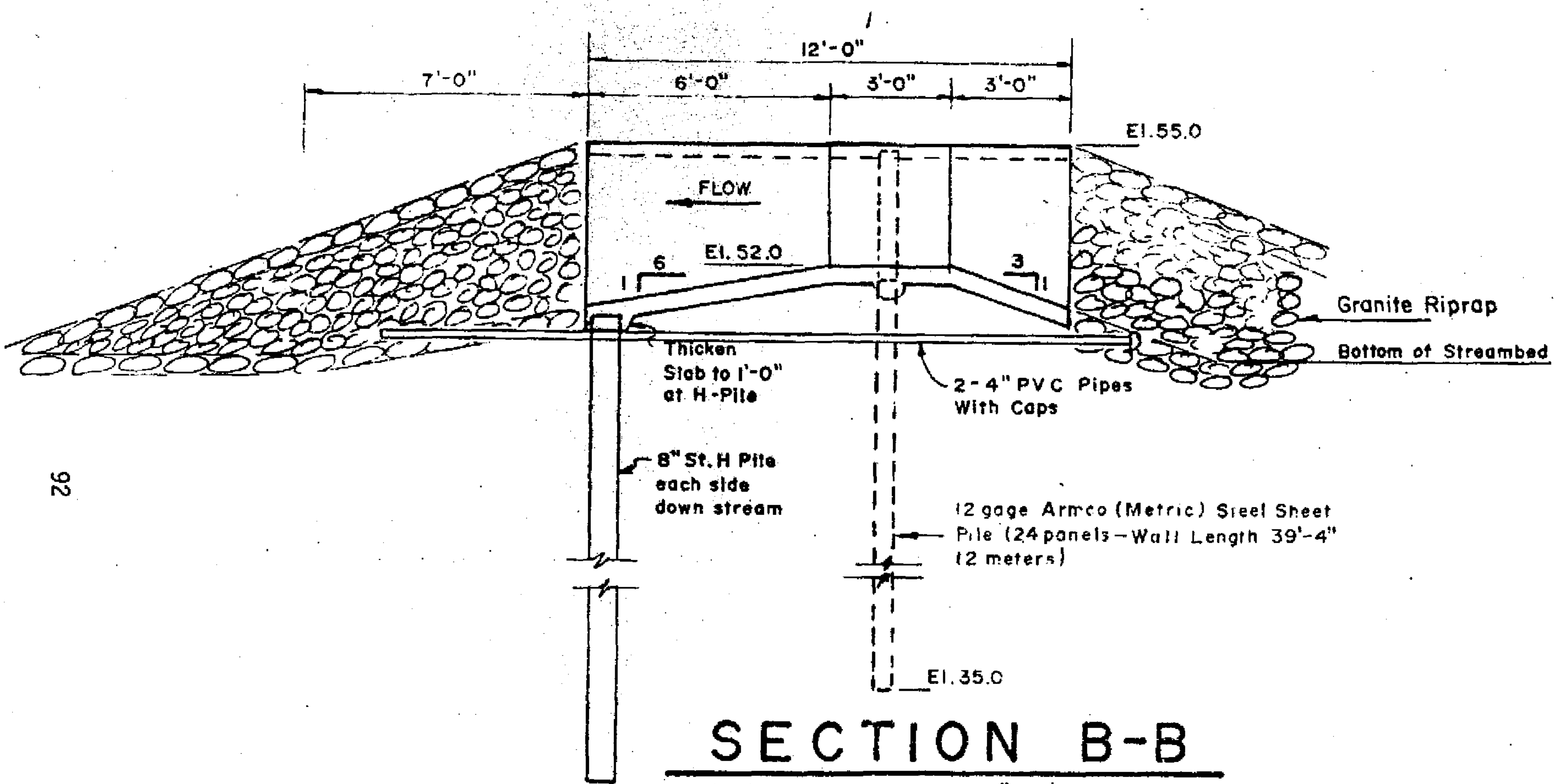


DETAIL A

SCALE: 1" = 10'-0"



B
35'-0"
2'-6"
7'-6"
15'-0"
7'-6"
2'-6"
El. 55.0
2 1/2
1
2 1/2
1
Natural ground
El. 52.0
16
2-4" PVC Pipes (18' Long) With Caps. Placed as Directed by Engineer
42 - 20' long (12 gage) Armco Metric Steel Sheet Piling
2- 16' Lengths of 8" Steel H-Pile
El. 35.0
B
NOTE:
Granite
Not Sho
(See Se
68.83' of Wall -34.42' Sym. about ℄ of Flow
ARMCO METRIC STEEL SHEET PILES To El. 35.(



SECTION B-B

SCALE: 1" = 4'

6-KRCC

November 8, 1979

M E M O R A N D U M

TO: Governing Board

FROM: Assistant Executive Director

SUBJECT: Release of Funds

Attached are explanations of the circumstances surrounding the structure damages relative to the Kissimmee River Valley Coordinating Council's Upland Detention/Retention Demonstration Project.

One of the District's roles in this Demonstration Project is that of sub-contractor -- construction. Per contract, the District had agreed to build flumes at designated site locations. As a result of technical, as well as abnormal weather conditions, damages were experienced at the Armstrong and Wildcat flumes. Therefore, it is requested that the Governing Board ~~grant the authority to~~ release funds up to an amount of $15,000 from the "District Reserve Fund" for purposes of repairing these flumes. These requested funds will be used for the purchase of material and rental of equipment necessary for these repairs.

Emer. Res. for Contingencies

Approved Bd. Action —

11/9/79

JRW/ruj

Recommended Distribution per C. Connell

6000-501-306 D $10000

6000-501-402 D $5000

$15000

M. A. Goldstein
O.E.R.C.

APPENDIX I-J

MEMORANDUM

TO: Executive Office Files

FROM: Bob Ulevich, Administrative Officer - Department of Field Services

SUBJECT: Proposed Reconstruction-Maintenance Schedule
KRV U D/R Project

The following proposed activities schedule is offered for informational purposes relative to the above subjectod project.

1. ASH SLOUGH (BASS RANCH)
   Start-up: Monday, January 7, 1980
   Completion: Friday, January 11, 1980

ACTIVITY BREAKDOWN

a. West Flume/Tie-Back Levee
   1. Reshape/Repair Levee
   2. Re-channelize downstream/discharge area of flume
   3. Placement of 8 - 10 tons of rip-rap, immediately downstream of the flume, to stabilize the discharge area.

b. Sheet Flow Ditch - East Pasture

   Overall: Recut/Rebuild Ditch additional 18" - 24".

   1. Tie-in North End to Main Levee (run somewhat uphill towards north end).
   2. Install gate in north fence to allow access to East Pasture.
   3. Construct a 500' Berm Ditch (ditch side north) running southwest - separating existing marsh areas. This ditch is to tie-in to existing east ditch.

c. East Flume

   Option 1. Reset existing flume 6" below current flume elevation.
   Option 2. Construct new flume with larger side slope - 6" below current flume elevation.

   Either way, it will be necessary to construct inflow and outflow aprons for the option selected.

d. Culverts - Main Tie-Back Levee

   Patch work as required.

II. WILDCAT SLOUGH (LYKES BROS. RANCH)

Start-up: Monday, January 14, 1980
Completion: Friday, February 1, 1980

Some settling has been experienced at the Structure, causing minor cracking in the east wing. It is felt that this cracking will be remedied by jacking the wing back up to design elevation and shoring up with packed concrete. It is felt that this placed concrete will also eliminate the piping problem which initiated the original washout. This in turn will be finished off with a concrete cap, similar to a sea-wall.

ACTIVITY BREAKDOWN

a. Flume - reinforcement of wing walls - formed concrete

b. Tie-back levee - Patch work as required

c. Placement of earthen plug - upstream in slough as designated by KRVCC.

III. PEAVINE TRAIL SITE (Latt Maxcy Corp. Ranch)

Start-up: Thursday, February 7, 1980
Completion: Friday, February 8, 1980

No major work required. Three minor areas of work identified.

ACTIVITY BREAKDOWN

a. Re-installation of earthen plug in northern arm of defined channel.

b. Reshape/rebuild secondary tie-back levee parallel to Peavine Trail.

c. Main Tie-Back Levee - Patch work as required.

IV. ARMSTRONG SLOUGH (Latt Maxcy Corp. Ranch)

Start-up: Monday, February 11, 1980
Completion: Friday, March 14, 1980

Two specific work sites are identified with the Armstrong study area, (a) the south flume site and (b) the culvert site (S-65A Access Road).

ACTIVITY BREAKDOWN

a. Flume - Total Reconstruction

(See Memos to File for details)

b. Culverts (Access Road to S-65-A)

- Extend Breach Wall (Sheet Piling)
- Fill Placement as required
- Restore road side slopes

V. POINTS TO CONSIDER

Associated with this particular project are some areas of concern which may influence the proposed completion dates.

1. WEATHER - Because of the remoteness of these study sites, accessibility can loom as a major time consuming factor.

2. GEOGRAPHICAL LOCATIONS - Because of the distances between each site, considerable time is consumed in transporting the equipment from one location to another.

3. MAJOR EQUIPMENT REQUIREMENTS -
   Equipment to be furnished by the Okeechobee and West Palm Beach Field Stations.
   - Dragline 22B- is currently being used on the FPL reservoir project. Anticipated use of the 22B for the KRV project is projected for February 1980.

4. LABOR - On site labor performed by Okeechobee Field Station personnel. Since most of the original crew are still involved with the FPL project - this may have an effect on the KRV project schedule. Possible use of other field station personnel to do the KRV job.

5. MOVING RIP RAP - It is estimated that it will require 3 days to unload and transport the 160 tons of granite rip rap. Plans call for using six trucks with one each being borrowed from WPB, Clewiston and Kissimmee Field Stations to complement the three from the Okeechobee Field Station.

6. Initial Scheduling calls for a 4 - 10 hour day work week, with modification as necessary to meet specific deadlines.

Robert J. Ulevich
Administrative Officer
Department of Field Services

12/18/79

RJU:dmg

cc--F. Davis
A. Goldstein, O.E.R.C.
KRVCC - Tallahassee
J. Schweigart
Okeechobee Field Station
P. Rhoads
R. Mierau
Red Rodgers

MEMORANDUM

November 16, 1979

TO: Steve Gatewood, KRVCC

FROM: Alan Goldstein, OERC

SUBJECT: Upland Detention/Retention Project
OERC Responsibilities

OERC staff (specifically OERC personnel) will provide the KRVCC with the following:

1. Monthly, seasonal, and/or annual nitrogen and phosphorus budgets for each study site. In addition staff will:
   a. Compare N and P budgets among sites.
   b. Compare N and P loadings and losses between stations at each site.
   c. Make a determination of the effects of the D/R areas on N and P loads leaving the study sites.

2. The effects of storm events on N and P loadings will be analyzed giving Ash Slough, Wildcat Slough, and SEZ Dairy priority. Similar events will be measured at the Peavine and Armstrong sites only if time and resources allow. OERC staff will:
   a. Develop a criteria to define a "storm event".
   b. Determine runoff detention time in the D/R area.
   c. Determine N and P concentrations in time over the span of the event.
   d. Determine the characteristics of the water quality pulse at downstream locations in the marsh.
   e. Determine N and P budgets over the span of the event.
   f. Determine the effects of the timing or the sequence of the event (i.e. 1st event of the season, etc.).

3. Collect rainwater samples at S65D and analyze these at the OERC facility for N and P concentrations. N and P concentrations in rainfall collected at S65B and the Okeechobee Field Station will be compared and used in conjunction with rainfall quantity measurements to determine the possible contributions of N and P from this source.

4. Soil moisture samples
   Open for discussion

5. Ground water
   Every two months or more often, if desired, ground water quality will be monitored by taking samples from one USGS observation well at each site. This analysis will include the N and P series as well as chlorides and PH. This data will be turned over to the KRVCC for possible incorporation into the study as they desire.

APPENDIX
III-2

STUDY SITE LOCATIONS

WILDCAT SLOUGH

Brighton Ranch
Lykes Bros. Inc.

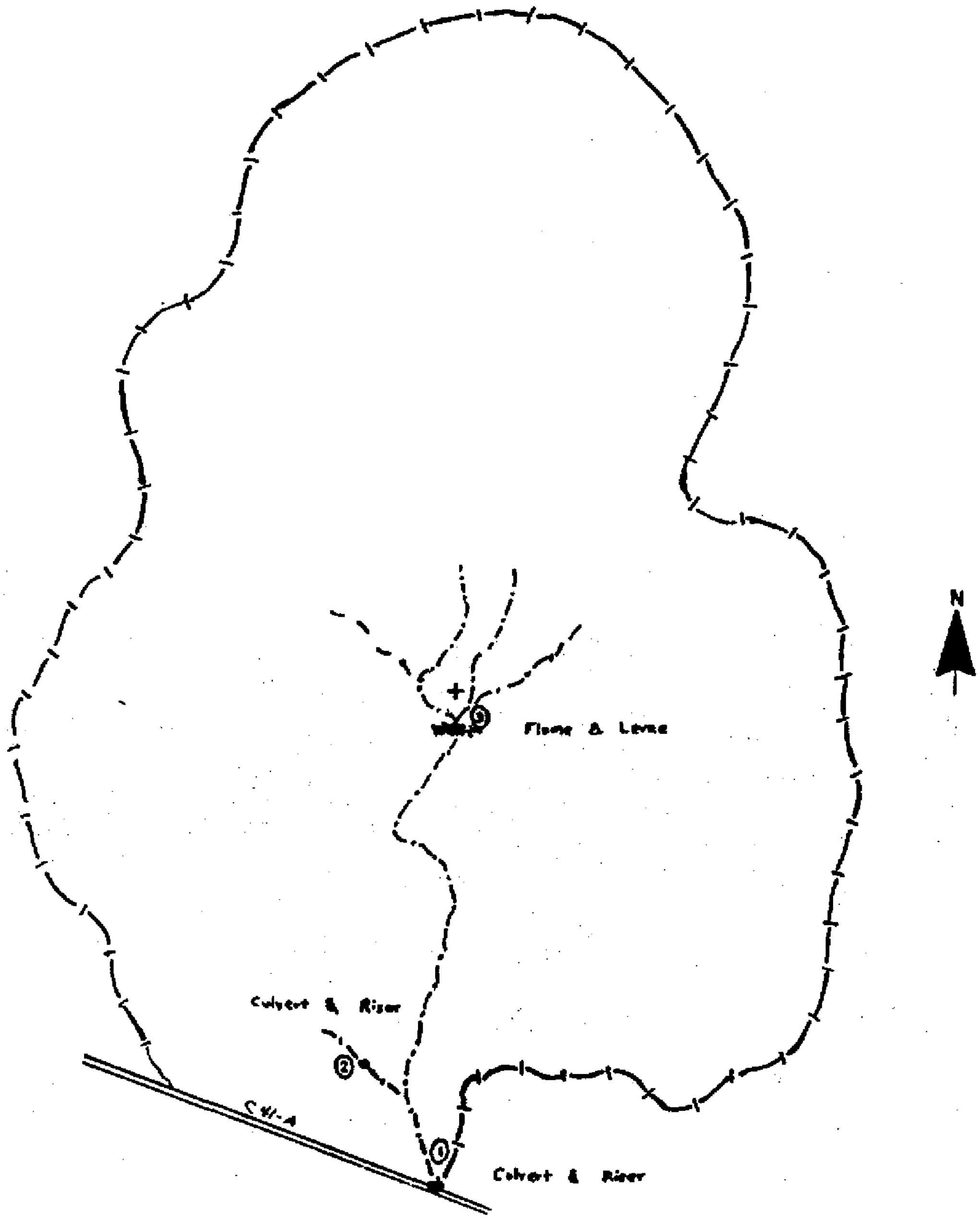
LEGEND

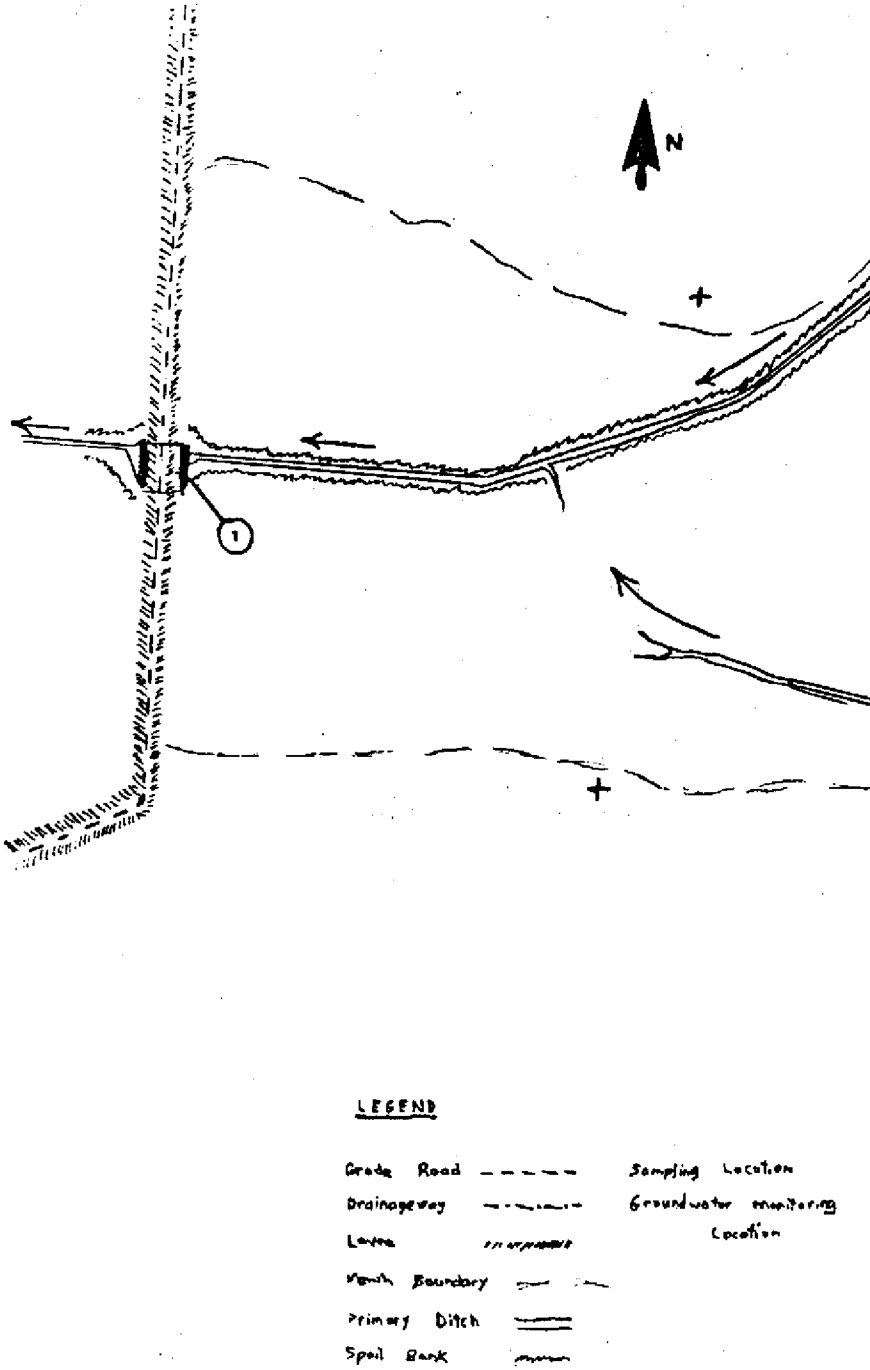
Watershed Boundary

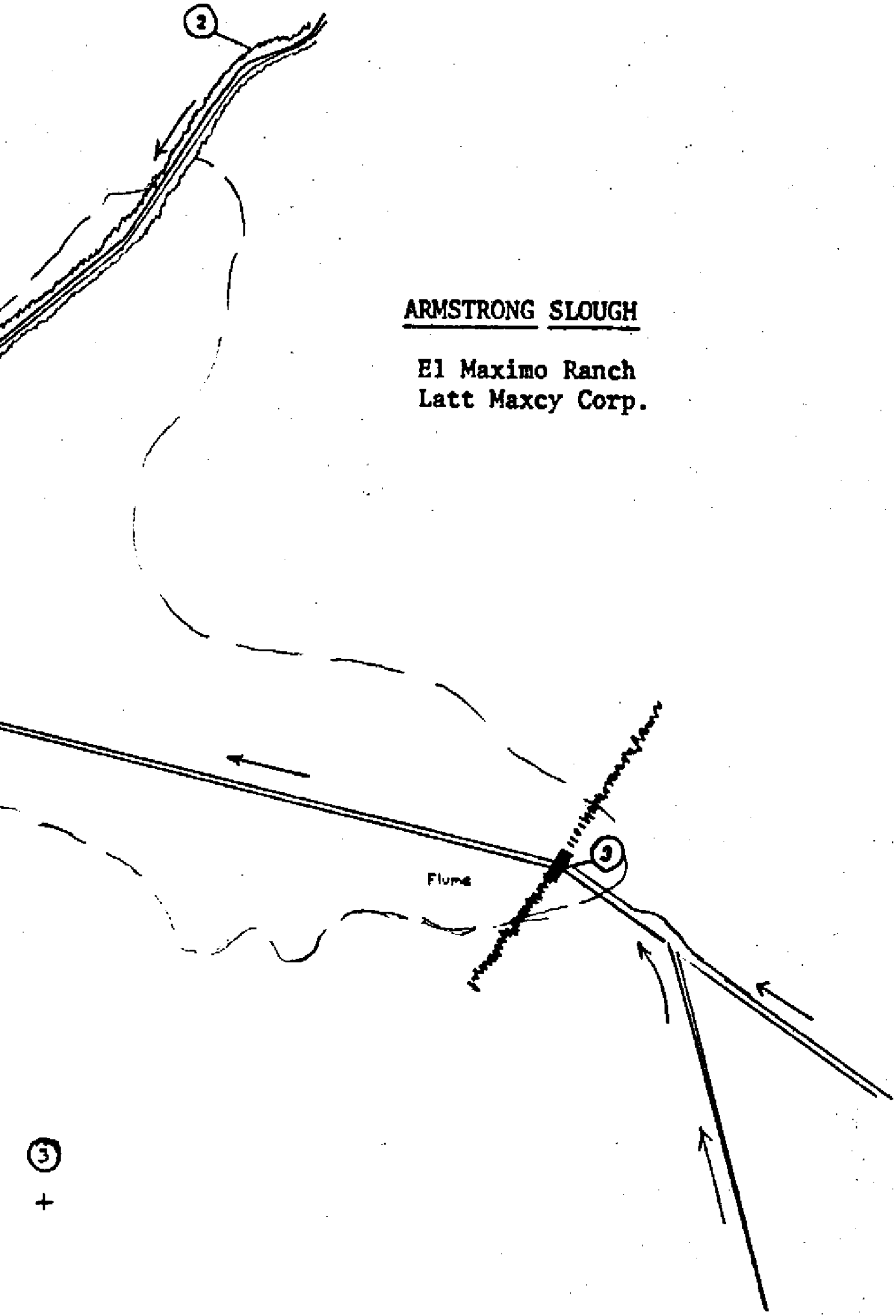
Drainage Ditch

Sampling Location

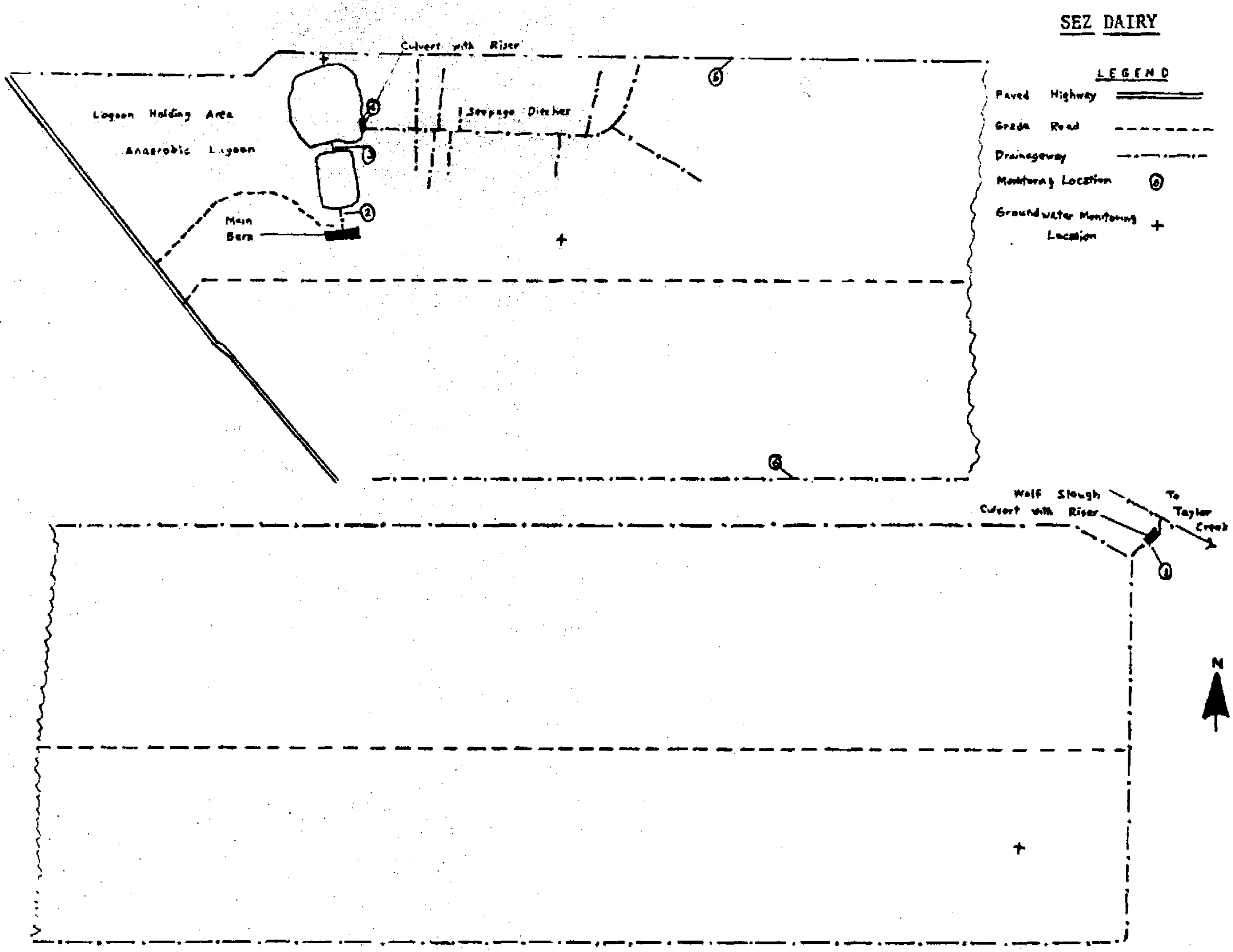
Groundwater Monitoring Location

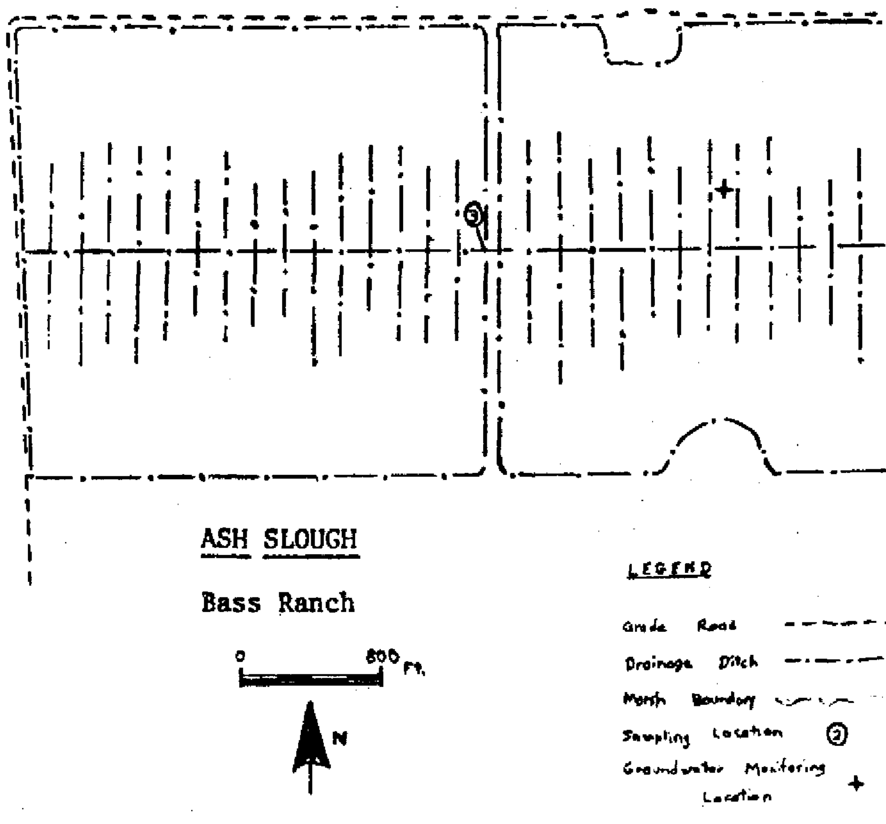


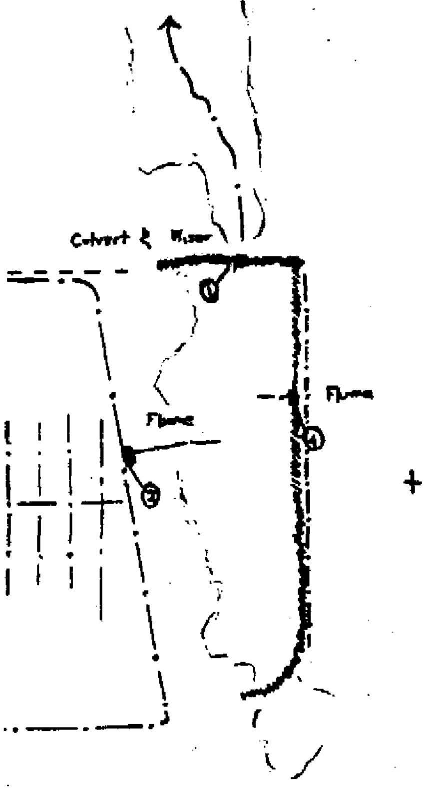

N
1
LEGEND
Grade Road
Drainageway
Levee
Marsh Boundary
Primary Ditch
Spoil Bank
Sampling Location
Groundwater monitoring Location

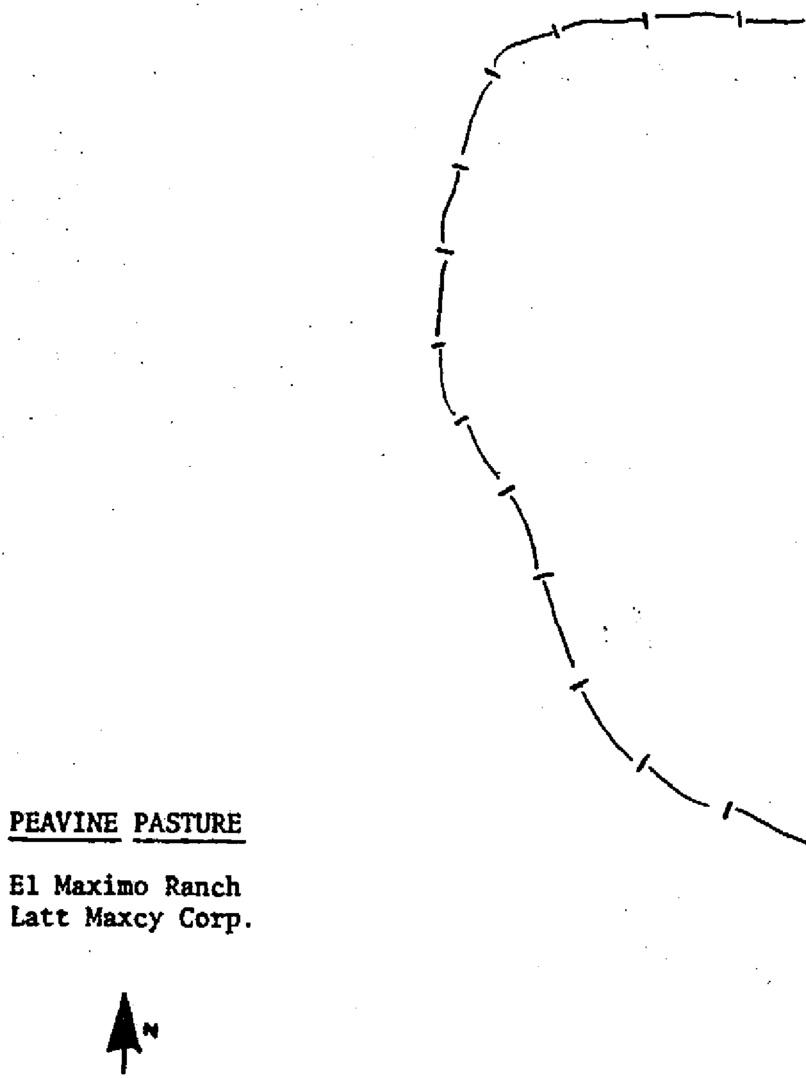


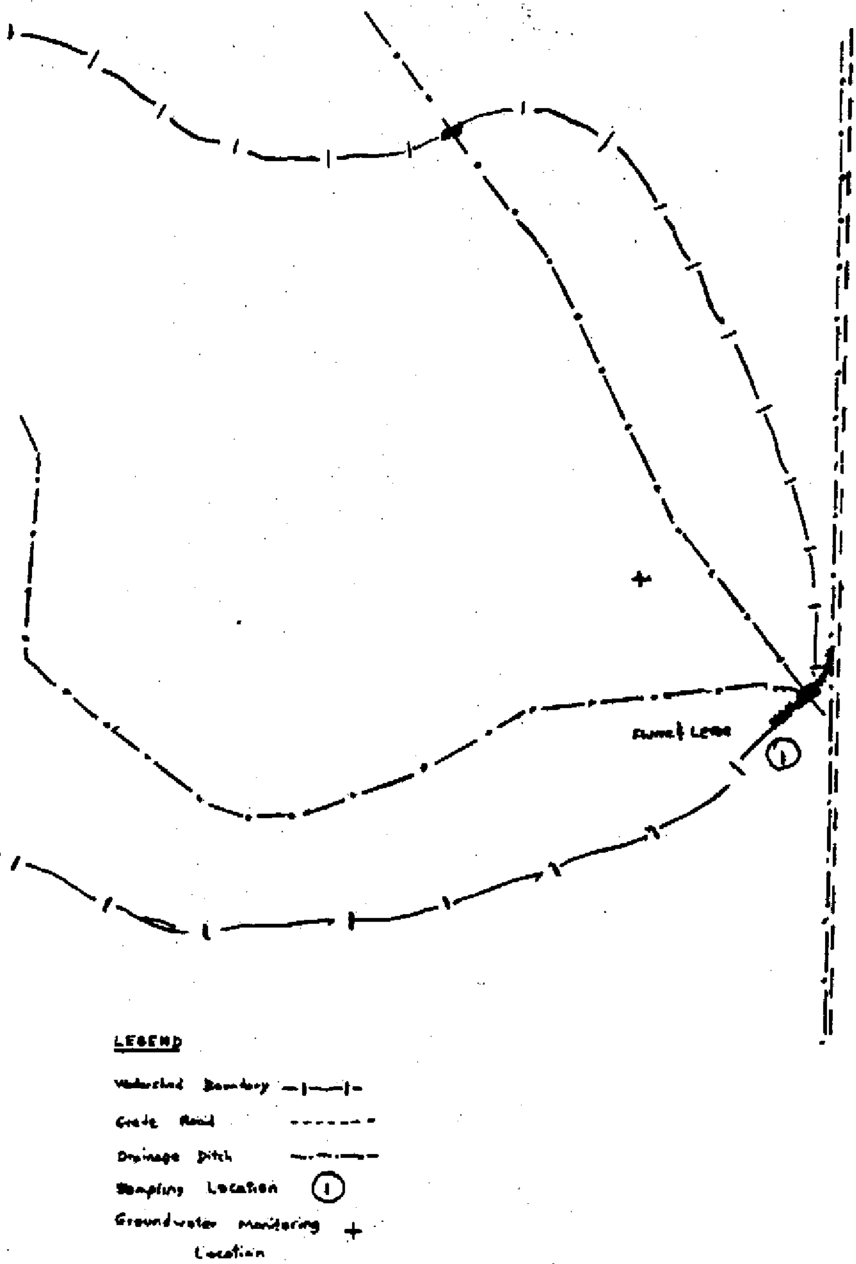
ARMSTRONG SLOUGH
El Maximo Ranch
Latt Maxcy Corp.
2
3
Flume
3


SEZ DAIRY
Culvert with Riser
Lagoon Holding Area
Anaerobic Lagoon
Seepage Ditches
Main Barn
LEGEND
Paved Highway
Grade Road
Drainageway
Monitoring Location
Groundwater Monitoring Location
Wolf Slough
Culvert with Riser
To Taylor Creek
N


ASH SLOUGH
Bass Ranch
0
800 Ft.
N
LEGEND
Grade Road
Drainage Ditch
Marsh Boundary
Sampling Location
Groundwater Monitoring Location


Culvert ℄
Flume
Flume
1
2
4


PEAVINE PASTURE
El Maximo Ranch
Latt Maxcy Corp.
N



LEGEND
Watershed Boundary
Grade Road
Drainage Ditch
Sampling Location
Groundwater Monitoring Location

APPENDIX III-1

December 13, 1979

Mr. Steve Gatewood
Coordinating Council on the Restoration of the Kissimmee
River Valley and Taylor Creek-Nubbin Slough Basin
Twin Towers Bldg.
2600 Blair Stone Rd.
Tallahassee, Florida 32301

Dear Mr. Gatewood:

A stated objective of the Upland D/R demonstration project is a determination of the effects of various land use practices and the relative importance of each as contributors of factors leading to deterioration of quality in and of natural waters downstream from these areas.

Rainfall and associated runoff are the triggering mechanisms for transport of the water quality constituents of the land surface to the receiving waters. The amount of rainfall and runoff necessary to trigger a discharge event is a function of existing water stages in the conveyance channels, soil moisture, vegetation, drainage basin area, rainfall intensity, and rainfall duration. Obviously if antecedent water stages are high it takes less rainfall (either intensity, duration, or both) to trigger a discharge event than if antecedent water stages are low. Since a rainfall event of given intensity or duration may or may not provide discharge from a site, we believe that the occurrence of such a rainfall event is not sufficient in itself to define "storm event" as addressed in the project description provided by the KRVCC. We propose to define an event as occurring at such time as water stages in the channel at the outfall measuring structure (culvert or flume) reach a level sufficient to result in measurable discharge of water leaving the study site. In those instances where there is continuous measurable discharge, this criteria will have to be revised and best judgement used to distinguish "events" based on periodic rises and falls in water stages.

Figure I is a stage level and discharge histogram depiction of data collected between mid-June to mid-September 1979 at the critical depth flume located at the outfall from the Peavine pasture study site. This figure graphically depicts an example where both criteria for defining storm events would come into play. An initial discharge event begins on or about July 1st when the stage rises about 64.6'. Following that period there is continual discharge over the flume. There are, however, three distinct successive discharge peaks each lasting several days. These were July 17 - 27, August 4 - 26, and September 4 - ? Each of these events was distinct from the others in that (1) the water stage had dropped substantially so that the occurrence of the next event was obvious by the sharp jump in water stage over a 24 hour period and (2) the events are temporarily spaced such that the time interval between sharp increases in water stages is sufficient to effectively distinguish the event as a separate occurrence and not merely an extension of previous occurrences.

OERC staff propose to monitor storm (discharge) events by the use of the 120 volt permanent automatic water samplers and the portable automatic water sampling devices requested by the KRVCC for use during this project. The sampling devices will be deployed at the inflow and outflow monitoring stations of the following three proposed study sites:

	Powered Samplers	Auto Samplers
Ash Slough	1	2-3
Wildcat Slough	-	3
Sez Dairy	-	2-3

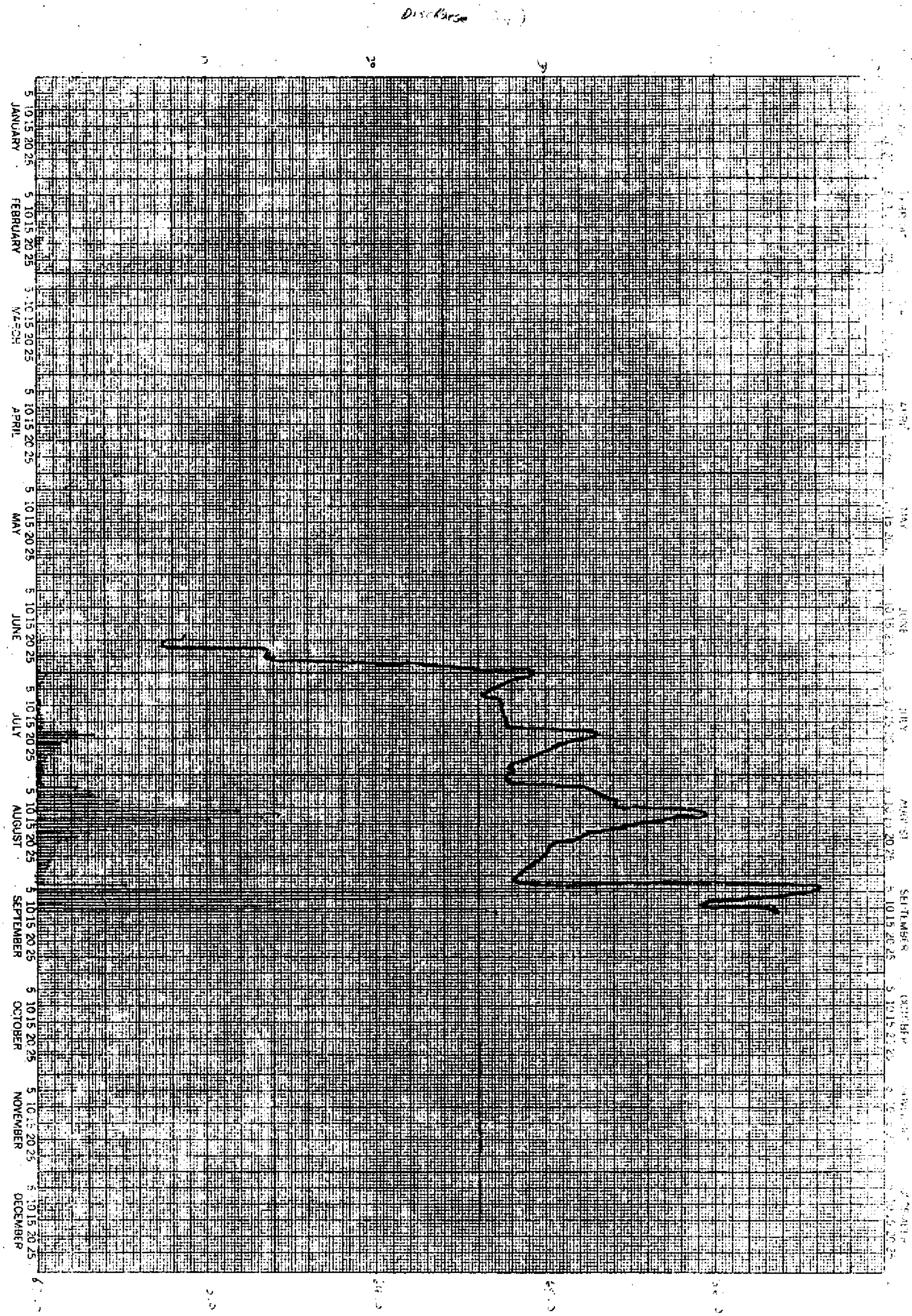
There sites are proposed as storm event study sites based on (1) their ease of accessibility to the OERC in Okeechobee and (2) their representation of the variety of basic land use practices employed in all the project study sites and (3) Ash Slough is a functional D/R area which we believe is most likely to be representative of the way the D/R management option would be implemented by local agricultural interests.

The type of rainfall intensity and duration necessary to result in a discharge event at any one of the study sites quite possibly would result from a weather system wherein the entire Kissimmee River basin would be subjected to a homogenous probability of similar rainfall intensities. It is possible that rainfall sufficient to cause an "event" at any one of the study sites would also simultaneously produce an event at any or all of the other study sites. If this is the case, all OERC personnel and water sampling equipment will be required to function in either primary or backup modes.

We feel that it is important to catch the initial discharge event of the rainy season. It is believed that this event will be the most dramatic in terms of water quality impact to receiving waters due to an initial slug of nutrient materials (either dissolved or particulate) that have accumulated on the land surface during the antecedent dry period. We, therefore, plan to closely monitor weather situations and deploy automatic samplers by April 1980. We would like to have all sites where power is required operational some months before this time, preferably by the first of February 1980. In order to meet this schedule, KRVCC cooperation is required so that power installation can be expedited. A covered shelter structure is already in place at the SEZ Dairy site and one can be installed in short order at Ash Slough. No structure or power is needed at the Wildcat Slough site.

Yours truly,

Alan L. Goldstein
Okeechobee Environmental Research Center


JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER

46 2890

APPENDIX IV

ANALYTICAL METHODS

APPENDIX IV-1

Total Kjeldahl Nitrogen (0-10 mg/l) TKN

DIGESTION

Reagents

1. Pope Kjeldahl Reagent - Formulation #5 (15 grams potassium sulfate (K_2SO_4) + 0.7 gram mercuric oxide (HgO)

2. Sulfuric Acid, concentrated

3. Hengar boiling chips

Standards

Inorganic stock: Dissolve 3.819 grams ammonium chloride (NH_4Cl) in 1 liter deionized H_2O.

Solution A: Dilute 10 mls stock solution to 100 mls with deionized H_2O.

Working standards:

10 mls solution A/100 mls deionized H_2O =	10.0 mg/l
5 mls solution A/100 mls deionized H_2O =	5.0 mg/l
3 mls solution A/100 mls deionized H_2O =	3.0 mg/l
1 ml solution A/100 mls deionized H_2O =	1.0 mg/l

Organic stock: Dissolve 0.9655 grams acetanilide ($CH_3CONHC_6H_5$) in 1 liter deionized H_2O.

Working standards:

5 mls stock solution/100 mls deionized H_2O =	5.0 ppm
3 mls stock solution/100 mls deionized H_2O =	3.0 ppm

Standard and Sample Treatment

Put 2 Hengar boiling chips and 2.5 grams Pope Kjeldahl reagent (from the dispenser) into B/D 40 tubes which have been marked with sample numbers.

Standards: Pipet 20 mls working standard into marked tubes. Put in rack.

Samples: Pipet 20 mls sample into marked tubes. If dilutions are necessary, make them before digestion to insure complete sample digestion.

Blanks: Pipet 20 mls deionized H_2O into marked tubes.

Standard addition: Using the designated quality control samples, pipet 20 mls sample into one tube. Pipet 10 mls sample into a second tube and add 10 mls intermediate standard to the second tube. Pipet 20 mls intermediate standard into a third tube.

Turn both fume hood switches to low. Add 6.0 mls sulfuric acid, concentrated, (H_2SO_4) to each tube and put in B/D 40 rack.

B/D 40 Procedure

1. Turn "High Temp" and "Low Temp" knobs to 200^{o}C. Turn power on in timer box. Turn on B/D 40 by pressing "Manual" button.
NOTE: Warm up time to 200^{o}C is approximately 30 minutes.

2. After block has reached 200^{o}C, place the rack of samples in the block digestor. Make certain end plates are in position on rack.

3. Place acid scrubber hood on top of rack and close fume hood door.

4. Turn acid scrubber switch on. Make sure water is running in scrubber.

5. Turn both fume hood switches to high.

6. Program B/D 40

   a. Turn total cycle time to 2½ hours.

   b. Turn low temp time to 1 hour.

   c. Turn high temp knob to 370^{o}C.

   d. Press AUTO button.

7. Turn key to activate hood velocity alarm.

8. At end of 2½ hour cycle turn B/D 40 off.

9. Leaving the acid scrubber hood on, remove the rack from the B/D 40 and place on stand. Let cool for 7-10 minutes.

10. Turn off acid scrubber and very slowly add approximately 20 mls deionized water to each tube. Mix well on the vortex mixer.

11. Let cool at least ½ hour, bring up to volume (75 mls) with deionized H_2O, cover securely with Parafilm and invert 8 times to mix.

Comments

1. Each rack should contain a set of inorganic standards and two blanks.

2. Exercise extreme caution while using the heated rack and working with concentrated acid. Wear lab coat, rubber gloves and full face mask.

ANALYSIS

Reagents

1. 20% Sodium Hydroxide: Dissolve 262 mls 50% sodium hydroxide in 600 mls deionized H_2O. Dilute to 1 liter.

2. 20% Sodium Potassium Tartrate: Dissolve 200 grams sodium potassium tartrate ($NaKC_4H_4O_6.4H_2O$) in 600 mls deionized H_2O. Dilute to 1 liter.

3. 0.5 M Stock Buffer Solution: Dissolved 134 grams sodium phosphate, dibasic ($Na_2HPO_4.7H_2O$) in 800 mls deionized H_2O. Add 26.3 mls 50% sodium hydroxide (NaOH). Dilute to 1 liter.

4. Working Buffer Solution: Using the above reagents, add 250 mls sodium potassium tartrate solution to 200 mls stock buffer solution. Slowly with swirling, add 250 mls 20% sodium hydroxide solution. Dilute to 1 liter with deionized H_2O and add 1.0 ml Brij-35.

5. Sodium Chloride or Saline Solution: Dissolved 100 grams sodium chloride (NaCl) in 600 mls deionized H_2O. Dilute to 1 liter and add 1.0 ml Brij-35.

6. Sodium Salicylate/Sodium Nitroprusside Solution (Color Reagent): Dissolve 150 grams sodium salicylate ($C_6H_4(OH)COONa$) and 0.30 grams sodium nitroprusside ($Na_2Fe(CN)_5NO.2H_2O$) in 600 mls deionized H_2O. Filter into a 1 liter volumetric and dilute with deionized H_2O. Add 1.0 ml Brij-35. Store in a dark bottle.

7. Sodium Hypochlorite Solution: Dilute 6.0 mls sodium hypochlorite, 4-6%, (NaOCl), to 100 mls with deionized H_2O. Add 2 drops Brij-35. Make fresh daily.

Performance Rate

40 samples per hour (4:1)

Wavelength and Flowcell

660 nanometers, long flowcell, phototube 63V, 12 inch dialyzer

Standards

Inorganic: 10.0, 5.0, 3.0 and 1.0 mg/l
Organic: 5.0 and 3.0 mg/l

Membrane Conditioning

1. Place new dialysis type "C" membrane in 12 inch dialyzer before starting pump.

2. Place all reagent lines, except color reagent, in their respective containers. After 5 minutes place color reagent line in container.

3. Let reagents run through lines for approximately 30 minutes. Then place sample probe in 10 ppm standard and let run for 15 minutes.

4. Remove sample probe from standard and put in water receptacle. Let run 15 mins. Turn on chart and check for stable baseline.

5. Conditioning takes approximately 1 hour.

Comments

1. Linear

2. For start-up, place all reagent lines except color reagent in their respective containers. After instrument has run for 10 minutes, put in color line. To shut-down, remove color line first, let the remaining reagents run for 10 minutes, then put all lines in the Triton X-100 solution.

3. Triton X-100 solution: Mix 50 mls Triton X-100 with 50 mls methanol. Dilute 1.0 ml of the Triton X-100-methanol solution to 1 liter with deionized H_2O.

4. Std. Cal. Setting

   2.30-3.30 for 10 ppm.

General Description of Method

This is a colorimetric determination of nitrogen in which an emerald green color is formed by reaction of ammonia, sodium salicylate, sodium nitroprusside and sodium hypochlorite in a buffered alkaline medium, pH 12.8-13.0. The samples must be submitted to an acid digestion before analysis.

Bibliography

1. Technicon "Total Kjeldahl Nitrogen and Total Phorphorus BD-40 Digestion Procedure for WAter", August 1974.

2. Methods for Chemical Analysis of Water and Wastes, EPA, Method 351.2 (1979).

APPENDIX IV-2

Ammonia (0-2.0 mg/l) NH_4^+-N

Reagents:

1. Tartrate-Citrate Complexing Reagent: Dissolve 33 grams potassium sodium tartrate ($NaKC_4H_4O_6.4H_2O$, also called Rochelle salt) and 24 grams sodium citrate ($Na_3C_6H_5O_7.2H_2O$) in 1 liter deionized H_2O; add 5 mls Brij 35 solution. Adjust pH to 5.0 with concentrated sulfuric acid (H_2SO_4).

2. Alkaline Phenol: Add 94 mls liquified phenol, 88% (C_6H_5OH) to 500 mls deionized H_2O in a water bath; add 47.2 mls 50% sodium hydroxide solution (NaOH). Dilute to 1 liter with deionized H_2O. Filter through glass wool.

3. Sodium hypochlorite: Dilute 250 mls sodium hypochlorite solution (NaOCl) to 500 mls with deionized water. Unstable, prepare fresh daily. Commercial bleach may be used also.

4. Sodium nitroprusside: Dissolve 0.5 grams sodium nitroprusside (sodium nitroferricyanide, $Na_2Fe(CN)_5NO.2H_2O$) in 1 liter deionized water.

Performance Rate:

40 samples per hour (4:1)

Wavelength and Flowcell:

630 nanometers, short flowcell, phototube 63V

Standards:

Stock: Dissolve 3.819 grams ammonium chloride (NH_4Cl) in 1 liter deionized H_2O.

Solution A: Dilute 1 ml stock solution to 100 mls with deionized H_2O.

Working standards:

20 mls solution A/100 mls di H_2O = 2.0 mg/l
10 mls solution A/100 mls di H_2O = 1.0 mg/l
5 mls solution A/100 mls di H_2O = 0.5 mg/l
3 mls solution A/100 mls di H_2O = 0.3 mg/l
1 ml solution A/100 mls di H_2O = 0.1 mg/l
10 mls 0.5 ppm std./ 100 mls di H_2O = 0.05 mg/l

High level standards are 2.0, 1.0, 0.5, 0.3, and 0.1 mg/l

Low level standards are 0.5, 0.3, 0.1 and 0.05 mg/l

Comments:

1. To guard against unwanted side effects and to prepare the manifold for the color producing agents, the complexing reagent line should be introduced 5 mins. before the remaining reagent lines and removed 5 mins after those reagent lines.

2. Linear

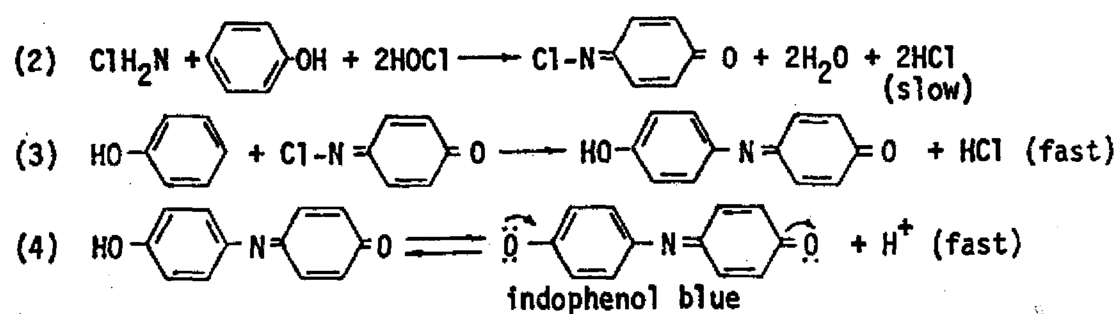
3. Std. Cal. settings

   High level = 2.0-2.75
   Low level = 8.0-8.75

General Description:

This automated procedure for the determination of ammonia utilizes the Berthelot Reaction, first reported in 1859, whereby a blue colored compound is formed when ammonia salt is added to sodium phenoxide following the addition of sodium hypochlorite. To inhibit the precipitation of calcium and magnesium hydroxides, potassium sodium tartrate and sodium citrate are added to the sample stream. The chemical reaction is approximately as follows. Sodium nitroprusside is added to intensify the indophenol blue color.

(1) $NH_3 + HOCl \rightleftharpoons NH_2Cl + H_2O$ (fast)



Operator Comments:

1. All glassware used for preparation of chemicals and standards must be acid washed prior to use.

2. The ammonia and ortho-phosphate standards can be combined for dual channel operation.

Bibliography:

1. Standard Methods for the Examination of Water and Wastewater, 14th Edition, p. 616, Method 604 (1975)

2. Methods for Chemical Analysis of Water and Wastes, EPA, Method 350.1 (1979)

APPENDIX IV-3

Nitrate + Nitrite (0-0.2 mg/l) NO_x-N

Reagents:

1. Nitrate-Nitrite Color Reagent: Add 100 mls concentrated phosphoric acid (H_3PO_4) to 700 mls deionized H_2O, completely dissolve 10 grams sulfanilamide ($4\text{-}NH_2C_6H_4SO_2NH_2$). Dissolved 0.5 grams N-1-Naphthyl-ethylenediamine Dihydrochloride ($C_{10}H_7NHCH_2CH_2NH_2 \cdot 2HCl$, also called Marshall"s reagent), add 0.5 mls Brij 35 solution and dilute to 1 liter with deionized H_2O. Store in a dark bottle. Stable for one month.

2. Ammonium Chloride Solution: Dissolve 37.8 grams ammonium chloride (NH_4Cl) in 1 liter deionized H_2O, add 0.5 mls Brij 35 solution and 4 drops ammonium hydroxide (NH_4OH).

3. Copper Sulfate, 1% Solution: Dissolve 10 grams cupric sulfate ($CuSO_4$) in 1 liter deionized H_2O.

4. Cadmium Reduction Column: Wash new cadmium granules (Cd) with 15 mls diethyl ether($(C_2H_5)_2O$),wash two times with 15 mls portions 25% hydrochloric acid (HCl), rinse well with deionized H_2O. Swirl the clean granules in 25 mls copper sulfate 1% solution for 90 seconds, rinse very gently three (3) times with deionized H_2O, swirl the granules in copper sulfate 1% solution again. Rinse very gently ten (10) times with deionized H_2O. Immediately fill reductor column under deionized H_2O. Run 1.0 ppm standard to condition the column for analysis.

Performance Rate:

40 samples per hour (4:1)

Wavelength and Flowcell:

520 nanometers, phototube 340, short flowcell

Standards:

Stock: Dissolve 0.7219 grams potassium nitrate (KNO_3) in 1 liter deionized H_2O. Preserve with 2 drops chloroform ($CHCL_3$). Stable one month if refrigerated.

Solution A: Dilute 2 mls stock solution to 100 mls with deionized H_2O.

Working standards:

10 mls solution A/100 mls deionized H_2O =	0.20 mg/l
5 mls solution A/100 mls deionized H_2O =	0.10 mg/l
3 mls solution A/100 mls deionized H_2O =	0.06 mg/l
1 ml solution A/100 mls deionized H_2O =	0.02 mg/l

Comments:

1. Linear

2. Place ammonium chloride (NH_4Cl) line in reagent 3 minutes before adding reduction column.

3. Care should be taken not to trap air in the reduction column.

4. Std. Cal. Setting = 3.60 - 4.50

General Description:

This automated procedure for the determination of nitrate + nitrite utilizes the procedure whereby nitrate is reduced to nitrite by a copper-cadmium reduction column. The nitrite ion then reacts with sulfanilamide under acidic conditions to form a diazo compound. This compound then couples with N-1-Naphthylethylenediamine dihydrochloride to form a reddish-purple azo dye.

In the surface waters normally encountered in surveillance studies, the concentration of oxidizing or reducing agents and potentially interfering metal ions are well below the limits causing interferences. When present in sufficient concentration, metal ions may produce a positive error, i.e. divalent mercury and divalent copper may form colored complex ions having absorption bands in the region of color measurement.

Operator Comments:

Bibliography:

1. Standard Methods for the Examination of Water and Wastewater, 14th Edition, p. 620, Method 605 (1975).

2. Methods for Chemical Analysis of Water and Wastes, EPA, Method 353.2 (1979).

APPENDIX IV-4

Nitrite (0-0.2 mg/l) NO_2-N

Reagents:

1. Nitrate-Nitrite Color Reagent: Add 100 mls concentrated phosphoric acid (H_3PO_4) to 700 mls deionized H_2O, completely dissolve 10 grams sulfanilamide ($4\text{-}NH_2C_6H_4SO_2NH_2$). Dissolve 0.5 grams N-1-Naphthyl-ethylenediamine Dihydrochloride ($C_{10}H_7NHCH_2CH_2NH_2 \cdot 2HCl$, also called Marshall's reagent), add 0.5 mls Brij 35 solution and dilute to 1 liter with deionized H_2O. Store in a dark bottle. Stable one month.

2. Siluent: Add 1.0 mls Brij 35 solution to 1 liter deionized H_2O.

Performance Rate:

40 samples per hour (4:1)

Wavelength and Flowcell:

520 nanometers, phototube 34Q, short flowcell

Standards:

Stock: Dissolve 0.4926 grams sodium nitrite ($NaNO_2$) in 1 liter deionized H_2O. Stable one month if refrigerated.

Solution A: Dilute 2 mls stock solution to 100 mls with deionized H_2O.

Working standards:

10 mls solution A/100 mls di H_2O =	0.20 mg/l
5 mls solution A/100 mls di H_2O =	0.10 mg/l
3 mls solution A/100 mls di H_2O =	0.06 mg/l
1 mls solution A/100 mls di H_2O =	0.02

Comments:

1. Linear

2. Wash color line with 10% NaOH, rinse well with deionized H_2O.

3. Std. Cal. Setting = 4.5 - 5.5

General Description:

This automated procedure for the determination of nitrite is an adaptation of the diazotization method of Stanard Methods. Under acidic conditions the nitrite ion reacts with sulfanilamide to yield a diazo compound which couples with N-1-Naphthylethylenediamine dihydrochloride to form a soluble dye which is measured colorimetrically.

There are very few known interferences at concentrations less than 1000 times that of the nitrite; however, recent addition of strong oxidants or reductants to the samples will readily affect the nitrite concentrations. High alkalinity (greater than 600 ppm) will give low results due to a shift in pH of the color reaction.

Operator Comments:

Bibliography:

1. Standard Methods for the Examination of Water and Wastewater, 14th Edition, p. 620, Method 605 (1975).

2. Methods for Chemical Analysis of Water and Wastes, EPA, Method 353.2 (1979).

APPENDIX IV-5

Total Phosphate (0-2.0 mg/l) TPO_4-P

DIGESTION

Digestion Reagent

Place 24 grams potassium persulfate ($K_2S_2O_8$) in 400 mls deionized water. Slowly add 15 mls concentrated sulfuric acid (H_2SO_4) and mix until completely dissolved. Dilute to 500 mls with deionized water and transfer to the Repipet bottle.

Standards

Stock: Dissolve 4.394 grams potassium phosphate, monobasic (KH_2PO_4) in 1 liter deionized H_2O.

Solution A: Dilute 1 ml stock solution to 100 mls with deionized H_2O.

Working standards:

20 mls solution A/100 mls di H_2O =	2.0 mg/l
10 mls solution A/100 mls di H_2O =	1.0 mg/l
5 mls solution A/100 mls di H_2O =	0.5 mg/l
3 mls solution A/100 mls di H_2O =	0.3 mg/l
1 ml solution A/100 mls di H_2O =	0.1 mg/l
0.5 ml solution A/100 mls di H_2O =	0.05 mg/l

Standard and Sample Treatment

Standards: Put 100 mls working standards and blank into 125 ml Erlenmeyer flasks. Add 10 ml digestion reagent and cap with 50 ml beakers.

Samples: Mark sample numbers on 10 ml beakers. Using the Manostat pipet, pipet 20 ml sample into test tubes, rinsing the pipet with di H_2O between samples. Add 2 mls digestion reagent to each tube and cap with 10 ml beakers. If dilutions are necessary, make them before digestion to insure complete sample digestion.

Standard addition: Using the designated quality control samples, pipet 20 ml sample into one test tube. Pipet 10 ml sample into a second tube and add 10 ml intermediate standard to the second tube. Pipet 20 ml intermediate standard into a third tube. Add 2 ml digestion reagent to each tube and cap with marked 10 ml beakers.

Autoclave

Check water level on top of autoclave and in autoclave, then put the try of samples and/or standards in the autoclave. Shut the door and seal it securely. Turn the timer to 45 mins. to start the autoclave. When the cycle is complete, let the samples cool to 54°C before opening the door and removing samples. Let cool to room temperature before analyzing.

ANALYSIS

Reagents:

1. 4.9N Sulfuric Acid: Slowly add 136 mls concentrated sulfuric acid (H_2SO_4) to 800 mls deionized H_2O. Dilute to 1 liter with deionized H_2O.

2. Ammonium Molybdate: Dissolve 40 grams ammonium molybdate ($(NH_4)_6Mo_7O_{24} \cdot 4H_2O$) in 1 liter deionized H_2O. Keep refrigerated.

3. Antimony Potassium Tartrate: Dissolve 3 grams antimony potassium tartrate ($K(SbO)C_4H_4O_6 \cdot \frac{1}{2}H_2O$) in 1 liter deionized H_2O. Keep refrigerated.

4. Ascorbic Acid: Dissolve 0.90 grams ascorbic acid ($C_6H_8O_6$) in 50 mls deionized water. Make fresh daily.

5. Combined Color Reagent: Using the above reagents, combine in the following order, mixing after each addition. 50 mls 4.9N sulfuric acid, 15 mls ammonium molybdate, 5 mls antimony potassium tartrate, and 30 mls ascorbic acid. The combined reagent should be yellow in color. Make fresh daily.

6. Diluent: Add 50 mls acetone to 1 liter deionized H_2O, add 5 mls Levor IV and mix well.

Performance Rate:

40 samples per hour (4:1)

Wavelength and Flowcell

880 nanometers, short flowcell, phototube 25V

Standards:

Use the digested standards. High level standards are 2.0, 1.0, 0.5, 0.3, and 0.1 mg/l. Low level standards are 0.5, 0.3, 0.1, and 0.05 mg/l.

Comments:

1. Linear

2. Place diluent line in for 5 mins before adding color line.

3. Std. Cal. Settings

   High level = 1.75-2.50
   Low level = 7.25-8.00

General Description

In this automated procedure for the determination of ortho phosphate (digestion reduces total phosphate to ortho phosphate for analysis) ammonium molybdate and antimony potassium tartrate react in an acid medium to form an antimony-phosphomolybdate complex. The complex is reduced to an intensely blue colored complex by ascorbic acid. The color produced is proportional to the phosphorus concentration.

Interferences from copper, iron, and low level silicon are insignificant.

Operator Comments:

1. All glassware used for preparation of chemicals and standards must be acid washed prior to use.

Bibliography

1. Standard Methods for the Examination of Water and Wastewater, 14th Edition, p. 476, Method 425C-III (1975).

2. Ibid, p. 624, Method 606.

3. Methods for Chemical Analysis of Water and Wastes, EPA Method 365.1 (1979).

APPENDIX IV-6

Ortho Phosphate (0-2.0 mg/l) $O\text{-}PO_4\text{-}P$

Reagents

1. 4.9N Sulfuric Acid: slowly add 136 mls concentrated sulfuric acid (H_2SO_4) to 800 mls deionized H_2O; dilute to 1 liter.

2. Ammonium Molybdate: dissolve 40 grams ammonium molybdate ($(NH_4)_6Mo_7O_{24} \cdot 4H_2O$) in 1 liter deionized H_2O. Keep refrigerated.

3. Antimony Potassium Tartrate: dissolve 3 grams antimony potassium tartrate ($K(SbO)C_4H_4O_6 \cdot \frac{1}{2}H_2O$) in 1 liter deionized H_2O. Keep refrigerated.

4. Ascorbic Acid: dissolve 0.90 grams ascorbic acid ($C_6H_8O_6$) in 50 mls deionized water. Make fresh daily.

5. Combined Color Reagent: using the above reagents, combine in the following order, mixing after each addition. 50 mls 4.9N sulfuric acid, 15 mls ammonium molybdate, 5 mls antimony potassium tartrate, and 30 mls ascorbic acid. The combined reagent should be yellow in color. Make fresh daily.

6. Diluent: Add 50 mls acetone to 1 liter deionized H_2O, add 5 mls Levor IV and mix well.

Performance Rate:

40 samples per hour (4:1)

Wavelength and Flowcell:

880 nanometers, short flowcell, phototube 25V

Standards:

Stock: dissolve 4.394 grams potassium phosphate, monobasic (KH_2PO_4) in 1 liter deionized H_2O.

Solution A: dilute 1 ml stock solution to 100 mls with deionized H_2O.

Working standards:

20 mls solution A/100 mls di H_2O = 2.0 mg/l
10 mls solution A/100 mls di H_2O = 1.0 mg/l
5 mls solution A/100 mls di H_2O = 0.5 mg/l
3 mls solution A/100 mls di H_2O = 0.3 mg/l
1 ml solution A/100 mls di H_2O = 0.1 ppm
10 mls 0.5 ppm std./100 mls di H_2O = 0.05 mg/l

High level standards are 2.0, 1.0, 0.5, 0.3, and 0.1 mg/l

Low level standards are 0.5, 0.3, 0.1, and 0.05 mg/l

Comments:

1. Linear

2. Place diluent line in for 5 mins. before adding color line.

3. Std. Cal. Settings

   High level = 1.75 - 2.50
   Low level = 7.25 - 8.0

General Description:

In this automated procedure for the determination of ortho phosphate ammonium molybdate and antimony potassium tartrate react in an acid medium to form an antimony-phosphomolybdate complex. The complex is reduced to an intensely blue colored complex by ascorbic acid. The color produced is proportional to the phosphorus concentration.

Interferences from copper, iron, and low level silicon are insignificant.

Operator Comments:

1. All glassware used for preparation of chemicals and standards must be acid washed prior to use.

2. The ammonia and ortho phosphate standards can be combined for dual channel operation.

Bibliography

1. Standard Methods for the Examination of Water and Wastewater, 14th Edition, p. 624, Method 606 (1975).

2. Methods for Chemical Analysis of Water and Wastes, EPA Method 365.1 (1979).

APPENDIX IV-7

Color

Equipment

Bausch & Lomb Spectronic 710 equipped with a flow-thru cell for measurement at 465 nm.

Reagent

Platinum-cobalt color standard, 500 APHA color units

Standards

1. Color reagent as listed above

2. 300 mls color reagent/50 mls deionized H_2O = 300 color units
   100 mls color reagent/50 mls deionized H_2O = 100 color units
   50 mls color reagent/50 mls deionized H_2O = 50 color units

Procedure

1. Calibration

   a. Let instrument warm-up for 15 minutes
   b. Rinse the cell several times with deionized H_2O
   c. With instrument in absorbance mode, aspirate deionized H_2O and set zero.
   d. Change instrument to concentration mode, purge cell, then aspirate 500 color unit standard. Using the concentration adjust knob, adjust until reading is 500.
   e. Rinse cell and aspirate 300 color unit standard. It should read 300 ± 9 units.
   f. Rinse cell and aspirate 100 color unit standard. It should read 100 ± 3 units.
   g. Rinse cell and aspirate 50 color unit standard. It should read 50 ± 2 units.

2. Sample measurement

   a. Rinse cell and aspirate sample.
   b. Record reading.
   c. After every ten samples, check reading with 300 color unit standard. If reading has changed, recalibrate instrument as outlined above.

Bibliography

1. Standard Methods for the Examination of Water and Wastewater, 14th Edition, p. 64, Method 204A (1975)

2. Methods for Chemical Analysis of Water and Wastes, EPA, Method 110.2 (1979)

APPENDIX IV-8

pH

Equipment

1. Corning Model 130 pH meter and combination electrode

2. Magnetic stirrer and stirring bar

3. 100 mls glass beakers

Reagents

1. pH 4.01 buffer

2. pH 7.00 buffer

3. pH 10.00 buffer

Procedure

1. Calibration of meter

   a. Pour 40 mls pH 7.00 buffer into beaker, stir for one minute, turn stirrer off and take reading. If meter does not read pH 7.00 turn calibrate knob until reading is 7.00.
   b. Rinse electrode with deionized H_2O.
   c. Pour 40 mls pH 4.01 buffer into another beaker, stir well, turn off stirrer. If meter does not read 4.01, use the slope knob to adjust the reading to 4.01.
   d. Rinse electrode with deionized H_2O.
   e. Pour 40 mls pH 10.00 buffer into another beaker, stir well, turn off stirrer. Meter should read 10.0 ± 0.1.

2. Sample measurement

   a. Let samples come to room temperature before analysis.
   b. Set pH meter temperature to the sample temperature.
   c. Pour 40 mls sample into a beaker, stir well, turn off stirrer, and let meter come to equilibrium before taking reading.
   d. Rinse electrode with deionized H_2O.
   e. Repeat steps c and d for all samples.
   f. After every ten samples, check meter calibration with pH 7.00 buffer. If reading is not 7.00 ± 0.05, repeat the steps outlined under "Calibration of meter".
   g. Meter should be in standby mode unless reading is being taken.

Bibliography

1. Standard Methods for the Examination of Water and Wastewater, 14th Edition, p. 460 (1975)

2. Methods for Chemical Analysis of Water and Wastes, EPA, Method 150.1 (1979)

APPENDIX IV-9

Specific Conductance

Equipment

1. Radiometer Conductivity Meter equipped with manual temperature compensator

2. Thermometer

Reagent

0.1000M potassium chloride: Dissolve 0.7455 grams potassium chloride (KCl) in 1000 mls deionized H_2O in a volumetric flask.

Procedure

1. Calibration of meter

   a. Let meter warm-up for 10 minutes.
   b. Set temperature compensator (T.C.) to MAN
   c. Set cell constant to 1.0.
   d. Set TEMP. ^{o}C knob to temperature of samples.
   e. Rinse electrode with deionized water.
   f. Immerse electrode in 0.1000M potassium chloride.
   g. Turn TEMP. COEFF. %/^{o}C knob until the meter reads 1413 usiemems (umhos/cm).

2. Sample measurement

   a. Rinse electrode with deionized H_2O.
   b. Immerse electrode in sample.
   c. Take reading. Make certain that you read the correct scale for the range selected.
   d. After every ten samples, check the meter calibration with the 0.1000M potassium chloride.

General Description

Specific conductance or conductivity is a measure of the ability of water to conduct an electric current. The electrode cell consists of two platinum electrodes spaced exactly 1.0 cm apart. The measurement is made when an electric current is passed between the two platinum electrodes by the ions in the sample. The value recorded is related to the number of ions in the sample and the temperature of the sample.

Bibliography

1. Standard Methods for the Examination of Water and Wastewater, 14th Edition, p. 71, Method 205 (1975).

2. Methods for Chemical Analysis of Water and Wastes, EPA, Method 120.1 (1979).

APPENDIX IV-10

Turbidity

Equipment

1. Hach Turbidimeter Model 2100A

2. Sealed turbidity standards

Procedure

1. Calibration of meter

   a. Let instrument warm-up at least 30 minutes.
   b. Select the appropriate range for the samples to be measured.
   c. Using the appropriate sealed standard for that range, use the STANDARDIZE knob to adjust the meter reading to the standard value.

2. Sample measurement

   a. Shake sample well
   b. Pour 25 mls sample into the cell. (Measure with a graduated cylinder).
   c. Take sample reading. Take care to make certain you read from the correct scale.
   d. Rinse cell with deionized H_2O between samples.
   e. When using the 100 and 1000 ranges use the cell riser.
   f. When changing range steps b and c under calibration of meter must be done before any readings are taken.
   g. Check instrument calibration after every ten samples.

General Description

Turbidity measures the amount of light scattered by the particles suspended in the sample. When light hits a particle it is deflected at an angle rather than continuing straight through the sample. The Hach Turbidimeter Model 2100A is a nephelometer which measures the amount of light which has been scattered at a 90° angle from the path of the incident light. The values are reported in NTU's (nephelometric turbidity units).

Bibliography

1. Standard Methods for the Examination of Water and Wastewater, 14th Edition, p. 132, Method 214A (1975)

2. Methods for Chemical Analysis of Water and Wastes, EPA, Method 180.1 (1979)

APPENDIX V

UPLAND DEMONSTRATION PROJECT DATA

APRIL 01 - SEPTEMBER 30,1979

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OAMS DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 1 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OAMS- 51	1	4/ 4/79	202.	6.85	1.7	71.
OAMS- 55	1	4/11/79	255.	7.27	1.5	49.
OAMS- 58	1	4/18/79	220.	7.23	1.9	29.
OAMS- 60	1	4/25/79	222.	7.15	6.0	74.
OAMS- 64	1	5/ 2/79	355.	6.96	2.9	102.
OAMS- 66	1	5/ 9/79	292.	7.43	2.5	48.
OAMS- 70	1	5/17/79	276.	7.40	20.0	138.
OAMS- 73	1	5/23/79	238.	7.00	2.1	67.
OAMS- 302	1	5/30/79	218.	7.17	1.8	58.
OAMS- 305	1	6/ 6/79	184.	7.11	4.3	48.
OAMS- 308	1	6/13/79	124.	6.92	3.2	40.
OAMS- 311	1	6/20/79	167.	7.66	53.0	134.
OAMS- 314	1	6/27/79	152.	6.67	2.2	110.
OAMS- 317	1	7/ 4/79	123.	6.70	1.5	159.
OAMS- 320	1	7/11/79	152.	6.81	1.5	169.
OAMS- 323	1	7/18/79	98.	6.30	1.3	305.
OAMS- 326	1	7/24/79	98.	6.40	1.2	235.
OAMS- 329	1	8/ 1/79	80.	6.16	1.9	178.
OAMS- 334	1	8/15/79	86.	6.16	2.0	316.
OAMS- 337	1	8/21/79	89.	6.24	1.4	246.
OAMS- 340	1	8/28/79	112.	6.63	2.0	211.
OAMS- 343	1	9/ 3/79	29.	5.61	2.3	210.
OAMS- 346	1	9/12/79	60.	5.93	2.2	322.
OAMS- 348	1	9/19/79	62.	6.13	2.5	281.
OAMS- 351	1	9/25/79	74.	6.02	1.5	249.

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STAT

PROJECT OAMS DATE OF PRINT

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 1 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH MG N/
OAMS- 51	1	4/ 4/79	< 0.008	< 0.004	< 0.008	0.02	0.
OAMS- 55	1	4/11/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.
OAMS- 58	1	4/18/79	< 0.008	< 0.004	< 0.008	0.02	0.
OAMS- 60	1	4/25/79	0.341	0.271	0.070	1.83	2.
OAMS- 64	1	5/ 2/79	0.077	0.058	0.019	0.48	0.
OAMS- 66	1	5/ 9/79	0.010	< 0.004	< 0.008	< 0.04	0.
OAMS- 70	1	5/17/79	< 0.008	< 0.004	< 0.008	0.05	0.
OAMS- 73	1	5/23/79	0.044	0.036	< 0.008	0.11	0.
OAMS- 302	1	5/30/79	< 0.008	< 0.004	< 0.008	0.08	0.
OAMS- 305	1	6/ 6/79	< 0.008	< 0.004	< 0.008	0.09	0.
OAMS- 308	1	6/13/79	< 0.008	< 0.004	< 0.008	0.01	0.
OAMS- 311	1	6/20/79	0.134	0.116	0.018	0.34	0.
OAMS- 314	1	6/27/79	0.035	0.027	< 0.008	0.04	0.
OAMS- 317	1	7/ 4/79	< 0.008	< 0.004	< 0.008	0.04	0.
OAMS- 320	1	7/11/79	0.008	< 0.004	0.005	0.02	0.
OAMS- 323	1	7/18/79	0.014	0.010	< 0.004	0.05	0.
OAMS- 326	1	7/24/79	0.018	0.010	0.008	0.02	0.
OAMS- 329	1	8/ 1/79	0.010	< 0.004	0.007	0.02	0.
OAMS- 334	1	8/15/79	0.011	< 0.004	0.010	0.03	0.
OAMS- 337	1	8/21/79	0.025	0.017	0.008	0.06	0.
OAMS- 340	1	8/28/79	0.023	0.015	0.008	0.04	0.
OAMS- 343	1	9/ 3/79	< 0.004	< 0.004	0.006	0.01	0.
OAMS- 346	1	9/12/79	0.008		0.012	0.02	0.
OAMS- 348	1	9/19/79	< 0.004	< 0.004	0.010	< 0.01	< 0.
OAMS- 351	1	9/25/79			0.010	0.02	

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OAMS DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 1 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L		OPO4 MG P/L	TPO4 MG P/L
OAMS- 51	1	4/ 4/79	0.83	0.81	0.84		0.052	0.083
OAMS- 55	1	4/11/79	0.68	0.64	0.69		0.048	0.077
OAMS- 58	1	4/18/79	1.05	1.03	1.06		0.049	0.112
OAMS- 60	1	4/25/79	3.16	1.33	3.50	<	0.040	0.094
OAMS- 64	1	5/ 2/79	2.29	1.81	2.37		0.021	0.109
OAMS- 66	1	5/ 9/79	1.16	1.12	1.17	<	0.040	0.056
OAMS- 70	1	5/17/79	2.14	2.09	2.15		0.064	0.460
OAMS- 73	1	5/23/79	0.76	0.65	0.80		0.047	0.082
OAMS- 302	1	5/30/79	1.34	1.26	1.35		0.060	0.212
OAMS- 305	1	6/ 6/79	0.88	0.79	0.89		0.040	0.096
OAMS- 308	1	6/13/79	0.52	0.51	0.53		0.042	0.068
OAMS- 311	1	6/20/79	3.74	3.40	3.87		0.026	0.548
OAMS- 314	1	6/27/79	0.91	0.87	0.95		0.051	0.099
OAMS- 317	1	7/ 4/79	1.22	1.18	1.23		0.041	0.080
OAMS- 320	1	7/11/79	1.60	1.58	1.61		0.026	0.068
OAMS- 323	1	7/18/79	1.89	1.84	1.90		0.036	0.096
OAMS- 326	1	7/24/79	1.69	1.67	1.71		0.026	0.066
OAMS- 329	1	8/ 1/79	1.43	1.41	1.44		0.021	0.048
OAMS- 334	1	8/15/79	2.13	2.10	2.14		0.032	0.108
OAMS- 337	1	8/21/79	1.46	1.40	1.49		0.034	0.075
OAMS- 340	1	8/28/79	1.64	1.60	1.66		0.021	0.076
OAMS- 343	1	9/ 3/79	0.50	0.49	0.50		0.054	0.104
OAMS- 346	1	9/12/79	2.11	2.09	2.12		0.072	0.218
OAMS- 348	1	9/19/79	1.95	1.94	1.95		0.201	0.356
OAMS- 351	1	9/25/79	1.52	1.50			0.060	0.128

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STA

PROJECT DAMS DATE OF PRINT

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 1 CODE

	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
NUM. VALS.			25	25	25	25
AVERAGE			159.	6.72	5.0	154.
ST. DEV.			84.	0.54	10.7	96.
MIN. VAL.			29.	5.61	1.2	29.
MAX. VAL.			355.	7.66	53.0	322.

	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+N MG N/L
NUM. VALS.			24	23	25	25	24
AVERAGE			0.035	0.027	0.011	0.14	0.1
ST. DEV.			0.071	0.059	0.013	0.37	0.4
MIN. VAL.			0.004	0.004	0.004	0.01	0.0
MAX. VAL.			0.341	0.271	0.070	1.83	2.1

	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/
NUM. VALS.			25	25	24	25	25
AVERAGE			1.54	1.40	1.58	0.048	0.14
ST. DEV.			0.78	0.66	0.85	0.035	0.1[illegible]
MIN. VAL.			0.50	0.49	0.50	0.021	0.04
MAX. VAL.			3.74	3.40	3.87	0.201	0.54

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OAMS DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 2 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OAMS- 52	2	4/ 4/79	226.	7.22	1.7	42.
OAMS- 53	2	4/11/79	250.	7.36	1.6	34.
OAMS- 56	2	4/18/79	183.	7.33	1.4	25.
OAMS- 61	2	4/25/79	373.	7.71	1.2	31.
OAMS- 62	2	5/ 2/79	477.	7.45	2.6	55.
OAMS- 65	2	5/ 9/79	321.	7.46	1.6	35.
OAMS- 68	2	5/17/79	277.	7.22	1.9	123.
OAMS- 71	2	5/23/79	192.	6.94	1.7	58.
OAMS- 300	2	5/30/79	178.	7.24	1.8	45.
OAMS- 303	2	6/ 6/79	137.	7.13	2.1	39.
OAMS- 306	2	6/13/79	113.	7.23	3.0	46.
OAMS- 309	2	6/20/79	105.	7.07	5.3	68.
OAMS- 312	2	6/27/79	189.	6.73	2.3	96.
OAMS- 315	2	7/ 4/79	145.	6.64	1.6	109.
OAMS- 318	2	7/11/79	152.	6.53	1.4	167.
OAMS- 321	2	7/18/79	150.	6.40	1.8	232.
OAMS- 324	2	7/24/79	128.	6.44	2.5	185.
OAMS- 327	2	8/ 1/79	84.	6.46	2.2	152.
OAMS- 330	2	8/ 7/79	136.	6.28	2.0	265.
OAMS- 332	2	8/15/79	84.	6.09	1.4	283.
OAMS- 335	2	8/21/79	110.	6.17	1.8	228.
OAMS- 338	2	8/28/79	131.	6.44	2.0	216.
OAMS- 341	2	9/ 3/79	39.	5.95	2.5	219.
OAMS- 344	2	9/12/79	80.	6.08	2.5	365.
OAMS- 347	2	9/19/79	72.	6.06	2.4	282.
OAMS- 350	2	9/25/79	92.	5.95	1.7	247.

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STA

PROJECT DAMS DATE OF PRIN

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 2 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+N MG N
DAMS- 52	2	4/ 4/79	< 0.008	< 0.004	< 0.008	0.02	0
DAMS- 53	2	4/11/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0
DAMS- 56	2	4/18/79	< 0.008	< 0.004	< 0.008	0.02	0
DAMS- 61	2	4/25/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0
DAMS- 62	2	5/ 2/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0
DAMS- 65	2	5/ 9/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0
DAMS- 68	2	5/17/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0
DAMS- 71	2	5/23/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0
DAMS- 300	2	5/30/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0
DAMS- 303	2	6/ 6/79	< 0.008	< 0.004	< 0.008	0.02	0
DAMS- 306	2	6/13/79	0.008	< 0.004	< 0.008	0.03	0
DAMS- 309	2	6/20/79	< 0.008	< 0.004	< 0.008	0.02	0
DAMS- 312	2	6/27/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0
DAMS- 315	2	7/ 4/79	< 0.008	< 0.004	< 0.008	0.02	0
DAMS- 318	2	7/11/79	0.008	< 0.004	0.006	0.03	0
DAMS- 321	2	7/18/79	0.016	0.009	0.007	0.06	0
DAMS- 324	2	7/24/79	0.019	0.012	0.007	0.07	0
DAMS- 327	2	8/ 1/79	0.007	< 0.004	0.006	0.02	0
DAMS- 330	2	8/ 7/79	0.016	0.008	0.008	0.04	0
DAMS- 332	2	8/15/79	0.014	< 0.004	0.011	0.04	0
DAMS- 335	2	8/21/79	0.034	0.027	0.007	0.07	0
DAMS- 338	2	8/28/79	0.017	0.010	0.007	0.04	0
DAMS- 341	2	9/ 3/79	0.006		0.007	0.01	0
DAMS- 344	2	9/12/79	0.010		0.014		
DAMS- 347	2	9/19/79	< 0.004	< 0.004	0.010	< 0.01	< 0
DAMS- 350	2	9/25/79			0.011	0.04	

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OAMS DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 2 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
OAMS- 52	2	4/ 4/79	0.31	0.29	0.32	0.046	0.075
OAMS- 53	2	4/11/79	0.78	0.74	0.79	< 0.040	0.066
OAMS- 56	2	4/18/79	0.48	0.46	0.49	0.035	0.061
OAMS- 61	2	4/25/79	0.55	0.51	0.56	< 0.040	< 0.040
OAMS- 62	2	5/ 2/79	1.02	0.98	1.03	0.021	0.063
OAMS- 65	2	5/ 9/79	0.66	0.62	0.67	< 0.040	0.044
OAMS- 68	2	5/17/79	1.13	1.09	1.14	< 0.040	0.067
OAMS- 71	2	5/23/79	0.64	0.63	0.65	0.030	0.055
OAMS- 300	2	5/30/79	1.02	0.98	1.03	0.021	0.054
OAMS- 303	2	6/ 6/79	3.62	3.60	3.63	0.016	0.060
OAMS- 306	2	6/13/79	0.47	0.44	0.48	0.035	0.091
OAMS- 309	2	6/20/79	0.96	0.94	0.97	0.043	0.102
OAMS- 312	2	6/27/79	1.27	1.26	1.28	0.034	0.186
OAMS- 315	2	7/ 4/79	1.12	1.10	1.13	0.032	0.070
OAMS- 318	2	7/11/79	2.17	2.14	2.18	0.020	0.107
OAMS- 321	2	7/18/79	2.09	2.03	2.11	0.020	0.039
OAMS- 324	2	7/24/79	1.84	1.77	1.86	0.025	0.089
OAMS- 327	2	8/ 1/79	1.59	1.57	1.60	0.026	0.045
OAMS- 330	2	8/ 7/79	1.67	1.63	1.69	0.023	0.084
OAMS- 332	2	8/15/79	2.08	2.04	2.09	0.044	0.136
OAMS- 335	2	8/21/79	1.66	1.59	1.69	0.037	0.091
OAMS- 338	2	8/28/79	1.68	1.64	1.70	0.018	0.077
OAMS- 341	2	9/ 3/79	1.31	1.30	1.32	0.111	0.170
OAMS- 344	2	9/12/79	2.51		2.52	0.114	0.345
OAMS- 347	2	9/19/79	2.25	2.24	2.25	0.253	0.429
OAMS- 350	2	9/25/79	1.77	1.73		0.084	0.199

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STAT

PROJECT DAMS DATE OF PRINT

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 2 CODE

	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
NUM. VALS.			26	26	26	26
AVERAGE			170.	6.75	2.1	140.
ST. DEV.			101.	0.55	0.8	101.
MIN. VAL.			39.	5.95	1.2	25.
MAX. VAL.			477.	7.71	5.3	365.

	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+N MG N/L
NUM. VALS.			25	23	26	25	24
AVERAGE			0.011	0.006	0.008	0.03	0.0
ST. DEV.			0.006	0.005	0.002	0.02	0.0
MIN. VAL.			0.004	0.004	0.006	0.01	0.0
MAX. VAL.			0.034	0.027	0.014	0.07	0.1

	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/
NUM. VALS.			26	25	25	26	26
AVERAGE			1.41	1.33	1.41	0.048	0.10
ST. DEV.			0.77	0.75	0.78	0.049	0.09
MIN. VAL.			0.31	0.29	0.32	0.016	0.03
MAX. VAL.			3.62	3.60	3.63	0.253	0.42

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STAT

PROJECT OAMS DATE OF PRINT

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 3 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OAMS- 50	3	4/ 4/79	263.	8.18	3.7	284.
OAMS- 54	3	4/11/79	290.	8.78	1.8	80.
OAMS- 57	3	4/18/79	323.	9.17	1.8	63.
OAMS- 59	3	4/25/79	315.	7.05	3.6	76.
OAMS- 63	3	5/ 2/79	332.	8.11	2.1	56.
OAMS- 67	3	5/ 9/79	265.	7.11	13.0	150.
OAMS- 69	3	5/17/79	134.	6.67	1.8	231.
OAMS- 72	3	5/23/79	155.	6.78	3.3	244.
OAMS- 301	3	5/30/79	147.	7.01	3.5	224.
OAMS- 304	3	6/ 6/79	154.	6.81	4.0	190.
OAMS- 307	3	6/13/79	175.	7.50	3.5	168.
OAMS- 310	3	6/20/79	139.	6.70	4.8	54.
OAMS- 313	3	6/27/79	76.	6.67	8.7	66.
OAMS- 316	3	7/ 4/79	66.	6.03	1.4	250.
OAMS- 319	3	7/11/79	74.	6.17	1.1	192.
OAMS- 322	3	7/18/79	48.	5.72	0.6	399.
OAMS- 325	3	7/24/79	58.	5.67	1.0	320.
OAMS- 328	3	8/ 1/79	87.	6.03	2.1	342.
OAMS- 331	3	8/ 7/79	38.	5.63	0.7	298.
OAMS- 333	3	8/15/79	41.	5.34	0.6	276.
OAMS- 336	3	8/21/79	45.	5.36	0.8	290.
OAMS- 339	3	8/28/79	50.	5.37	1.0	252.
OAMS- 342	3	9/ 3/79	26.	5.10	1.8	188.
OAMS- 345	3	9/12/79	37.	5.34	0.7	242.
OAMS- 349	3	9/19/79	33.	5.42	0.5	252.

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STAT

PROJECT OAMS DATE OF PRINT

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 3 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR		NOX MG N/L		NO3 MG N/L		NO2 MG N/L		NH4 MG N/L		NOX+NH MG N/
OAMS- 50	3	4/ 4/79	<	0.008	<	0.004	<	0.008		0.01		0.[illegible]
OAMS- 54	3	4/11/79	<	0.008	<	0.004	<	0.008	<	0.04	<	0.[illegible]
OAMS- 57	3	4/18/79	<	0.008	<	0.004	<	0.008	<	0.01	<	0.[illegible]
OAMS- 59	3	4/25/79		0.077		0.067		0.010		0.21		0.[illegible]
OAMS- 63	3	5/ 2/79	<	0.008	<	0.004	<	0.008	<	0.04	<	0.[illegible]
OAMS- 67	3	5/ 9/79		0.023		0.015	<	0.008	<	0.04		0.[illegible]
OAMS- 69	3	5/17/79	<	0.008	<	0.004	<	0.008	<	0.04	<	0.[illegible]
OAMS- 72	3	5/23/79	<	0.008	<	0.004	<	0.008		0.02		0.[illegible]
OAMS- 301	3	5/30/79	<	0.008	<	0.004	<	0.008	<	0.04	<	0.[illegible]
OAMS- 304	3	6/ 6/79	<	0.008	<	0.004	<	0.008	<	0.01	<	0.[illegible]
OAMS- 307	3	6/13/79	<	0.008	<	0.004	<	0.008		0.01		0.[illegible]
OAMS- 310	3	6/20/79	<	0.008	<	0.004	<	0.008	<	0.01	<	0.[illegible]
OAMS- 313	3	6/27/79		0.034		0.026	<	0.008	<	0.01		0.[illegible]
OAMS- 316	3	7/ 4/79	<	0.008	<	0.004	<	0.008		0.01		0.[illegible]
OAMS- 319	3	7/11/79		0.005				0.007		0.01		0.[illegible]
OAMS- 322	3	7/18/79		0.011				0.012		0.02		0.[illegible]
OAMS- 325	3	7/24/79		0.011				0.013	<	0.01		0.[illegible]
OAMS- 328	3	8/ 1/79		0.012				0.014		0.05		0.[illegible]
OAMS- 331	3	8/ 7/79		0.009				0.010		0.02		0.[illegible]
OAMS- 333	3	8/15/79		0.004				0.008		0.02		0.[illegible]
OAMS- 336	3	8/21/79		0.008				0.009		0.02		0.[illegible]
OAMS- 339	3	8/28/79		0.006				0.008		0.01		0.[illegible]
OAMS- 342	3	9/ 3/79	<	0.004	<	0.004		0.005	<	0.04	<	0.[illegible]
OAMS- 345	3	9/12/79		0.005				0.008		0.02		0.[illegible]
OAMS- 349	3	9/19/79	<	0.004	<	0.004		0.008	<	0.01	<	0.[illegible]

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OAMS DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 3 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
OAMS- 50	3	4/ 4/79	1.98	1.97	1.99	< 0.010	0.090
OAMS- 54	3	4/11/79	1.34	1.30	1.35	< 0.040	0.065
OAMS- 57	3	4/18/79	1.60	1.59	1.61	0.010	0.080
OAMS- 59	3	4/25/79	1.77	1.56	1.85	< 0.040	0.110
OAMS- 63	3	5/ 2/79	1.48	1.44	1.49	< 0.010	0.077
OAMS- 67	3	5/ 9/79	3.95	3.91	3.97	< 0.040	0.227
OAMS- 69	3	5/17/79	2.02	1.98	2.03	< 0.040	0.136
OAMS- 72	3	5/23/79	2.20	2.18	2.21	0.017	0.108
OAMS- 301	3	5/30/79	2.13	2.09	2.14	< 0.010	0.117
OAMS- 304	3	6/ 6/79	2.32	2.31	2.33	< 0.010	0.082
OAMS- 307	3	6/13/79	2.34	2.33	2.35	< 0.010	0.154
OAMS- 310	3	6/20/79	1.64	1.63	1.65	< 0.010	0.103
OAMS- 313	3	6/27/79	1.13	1.12	1.16	0.027	0.177
OAMS- 316	3	7/ 4/79	1.99	1.98	2.00	0.047	0.130
OAMS- 319	3	7/11/79	1.87	1.86	1.88	0.023	0.093
OAMS- 322	3	7/18/79	2.20	2.18	2.21	0.058	0.126
OAMS- 325	3	7/24/79	2.91	2.90	2.92	0.027	0.137
OAMS- 328	3	8/ 1/79	2.97	2.92	2.98	0.025	0.122
OAMS- 331	3	8/ 7/79	1.51	1.49	1.52	0.019	0.069
OAMS- 333	3	8/15/79	1.43	1.41	1.43	0.020	0.062
OAMS- 336	3	8/21/79	1.49	1.47	1.50	0.018	0.072
OAMS- 339	3	8/28/79	2.34	2.33	2.35	0.015	0.112
OAMS- 342	3	9/ 3/79	1.04	1.00	1.04	0.050	0.086
OAMS- 345	3	9/12/79	1.46	1.44	1.47	0.025	0.060
OAMS- 349	3	9/19/79	1.47	1.46	1.47	0.014	0.043

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STAT[illegible]

PROJECT OAMS DATE OF PRINT[illegible]

PARAMETER	RANGE OF VALUES			UNITS
DATE	4/ 1/79	-	9/31/79	MO/DA/YR
STATION =	3		CODE	

	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
NUM. VALS.			25	25	25	25
AVERAGE			135.	6.55	2.7	207.
ST. DEV.			104.	1.13	2.8	98.
MIN. VAL.			26.	5.10	0.5	54.
MAX. VAL.			332.	9.17	13.0	399.

	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH[illegible] MG N/[illegible]
NUM. VALS.			25	16	25	25	25
AVERAGE			0.012	0.010	0.009	0.03	0.[illegible]
ST. DEV.			0.015	0.016	0.002	0.04	0.[illegible]
MIN. VAL.			0.004	0.004	0.005	0.01	0.[illegible]
MAX. VAL.			0.077	0.067	0.014	0.21	0.[illegible]

	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P[illegible]
NUM. VALS.			25	25	25	25	25
AVERAGE			1.94	1.91	1.96	0.025	0.1[illegible]
ST. DEV.			0.65	0.65	0.65	0.015	0.0[illegible]
MIN. VAL.			1.04	1.00	1.04	0.010	0.0[illegible]
MAX. VAL.			3.95	3.91	3.97	0.058	0.2[illegible]

SAMPLE	DATE MO/DA/YR	TIME	STATION	UP,DOWN STREAM	DISCHARGE	WEATHER	SAMPLE TYPE
OAMS- 51	4/ 4/79	1046.	1			2=SLIGHT OVERCAST	
OAMS- 55	4/11/79	1241.	1			2=SLIGHT OVERCAST	
OAMS- 58	4/18/79	1153.	1			1=CLEAR	
OAMS- 60	4/25/79	1132.	1			4=VERY OVERCAST	
OAMS- 64	5/ 2/79	1306.	1			3=MEDIUM OVERCAST	
OAMS- 66	5/ 9/79	1305.	1			6=RAIN	
OAMS- 70	5/17/79	1523.	1			4=VERY OVERCAST	
OAMS- 73	5/23/79	1137.	1			4=VERY OVERCAST	
OAMS- 302	5/30/79	1244.	1			3=MEDIUM OVERCAST	
OAMS- 305	6/ 6/79	1240.	1			2=SLIGHT OVERCAST	
OAMS- 308	6/13/79	1135.	1			4=VERY OVERCAST	
OAMS- 311	6/20/79	1237.	1			1=CLEAR	
OAMS- 314	6/27/79	1231.	1			3=MEDIUM OVERCAST	
OAMS- 317	7/ 4/79	1314.	1			1=CLEAR	
OAMS- 320	7/11/79	1400.	1			2=SLIGHT OVERCAST	
OAMS- 323	7/18/79	1401.	1			2=SLIGHT OVERCAST	
OAMS- 326	7/24/79	1328.	1			4=VERY OVERCAST	
OAMS- 329	8/ 1/79	1220.	1			2=SLIGHT OVERCAST	
OAMS- 334	8/15/79	1404.	1			3=MEDIUM OVERCAST	
OAMS- 337	8/21/79	1320.	1			3=MEDIUM OVERCAST	
OAMS- 340	8/28/79	1355.	1			3=MEDIUM OVERCAST	
OAMS- 343	9/ 3/79	1420.	1			3=MEDIUM OVERCAST	
OAMS- 346	9/12/79	1245.	1			4=VERY OVERCAST	
OAMS- 348	9/19/79	1237.	1			3=MEDIUM OVERCAST	
OAMS- 351	9/25/79	1325.	1			3=MEDIUM OVERCAST	
OAMS- 52	4/ 4/79	1113.	2			2=SLIGHT OVERCAST	
OAMS- 53	4/11/79	1123.	2			2=SLIGHT OVERCAST	
OAMS- 56	4/18/79	1057.	2			1=CLEAR	
OAMS- 61	4/25/79	1151.	2			4=VERY OVERCAST	
OAMS- 62	5/ 2/79	1100.	2			3=MEDIUM OVERCAST	
OAMS- 65	5/ 9/79	1100.	2			4=VERY OVERCAST	
OAMS- 68	5/17/79	1320.	2			3=MEDIUM OVERCAST	
OAMS- 71	5/23/79	944.	2			3=MEDIUM OVERCAST	
OAMS- 300	5/30/79	1118.	2			3=MEDIUM OVERCAST	
OAMS- 303	6/ 6/79	1109.	2			1=CLEAR	
OAMS- 306	6/13/79	1044.	2			4=VERY OVERCAST	
OAMS- 309	6/20/79	1116.	2			1=CLEAR	
OAMS- 312	6/27/79	1104.	2			3=MEDIUM OVERCAST	
OAMS- 315	7/ 4/79	1149.	2			1=CLEAR	
OAMS- 318	7/11/79	1129.	2			2=SLIGHT OVERCAST	

SAMPLE	DATE MO/DA/YR	TIME	STATION	UP,DOWN STREAM	DISCHARGE	WEATHER	SAMPLE TYPE
OAMS- 321	7/18/79	1239.	2			2=SLIGHT OVERCAST	
OAMS- 324	7/24/79	1149.	2			4=VERY OVERCAST	
OAMS- 327	8/ 1/79	1105.	2			1=CLEAR	
OAMS- 330	8/ 7/79	1121.	2			4=VERY OVERCAST	
OAMS- 332	8/15/79	1213.	2			3=MEDIUM OVERCAST	
OAMS- 335	8/21/79	1144.	2			3=MEDIUM OVERCAST	
OAMS- 338	8/28/79	1215.	2			3=MEDIUM OVERCAST	
OAMS- 341	9/ 3/79	1213.	2			3=MEDIUM OVERCAST	
OAMS- 344	9/12/79	1105.	2			4=VERY OVERCAST	
OAMS- 347	9/19/79	1115.	2			3=MEDIUM OVERCAST	
OAMS- 350	9/25/79	1226.	2			3=MEDIUM OVERCAST	
OAMS- 50	4/ 4/79	1025.	3			2=SLIGHT OVERCAST	
OAMS- 54	4/11/79	1156.	3			3=MEDIUM OVERCAST	
OAMS- 57	4/18/79	1131.	3			1=CLEAR	
OAMS- 59	4/25/79	1112.	3			4=VERY OVERCAST	
OAMS- 63	5/ 2/79	1249.	3			3=MEDIUM OVERCAST	
OAMS- 67	5/ 9/79	1335.	3			6=RAIN	
OAMS- 69	5/17/79	1438.	3			3=MEDIUM OVERCAST	
OAMS- 72	5/23/79	1110.	3			4=VERY OVERCAST	
OAMS- 301	5/30/79	1159.	3			3=MEDIUM OVERCAST	
OAMS- 304	6/ 6/79	1156.	3			2=SLIGHT OVERCAST	
OAMS- 307	6/13/79	1117.	3			4=VERY OVERCAST	
OAMS- 310	6/20/79	1150.	3			1=CLEAR	
OAMS- 313	6/27/79	1146.	3			3=MEDIUM OVERCAST	
OAMS- 316	7/ 4/79	1248.	3			1=CLEAR	
OAMS- 319	7/11/79	1338.	3			2=SLIGHT OVERCAST	
OAMS- 322	7/18/79	1341.	3			2=SLIGHT OVERCAST	
OAMS- 325	7/24/79	1256.	3			4=VERY OVERCAST	
OAMS- 328	8/ 1/79	1200.	3			1=CLEAR	
OAMS- 331	8/ 7/79	1307.	3			4=VERY OVERCAST	
OAMS- 333	8/15/79	1342.	3			3=MEDIUM OVERCAST	
OAMS- 336	8/21/79	1300.	3			3=MEDIUM OVERCAST	
OAMS- 339	8/28/79	1333.	3			3=MEDIUM OVERCAST	
OAMS- 342	9/ 3/79	1331.	3			3=MEDIUM OVERCAST	
OAMS- 345	9/12/79	1200.	3			4=VERY OVERCAST	
OAMS- 349	9/19/79	1255.	3			3=MEDIUM OVERCAST	

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATIO[N]

PROJECT OBAS DATE OF PRINTIN[G]

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 1 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OBAS- 38	1	4/ 2/79	321.	7.28	17.0	37.
OBAS- 39	1	4/ 9/79	405.	7.48	36.5	393.
OBAS- 41	1	5/ 1/79	236.	8.59	14.5	201.
OBAS- 44	1	5/14/79	80.	6.59	6.0	206.
OBAS- 48	1	5/21/79	150.	6.56	5.0	284.
OBAS- 51	1	5/27/79	82.	6.19	1.2	173.
OBAS- 300	1	5/30/79	89.	6.62	1.8	228.
OBAS- 302	1	5/31/79	112.	6.38	1.3	235.
OBAS- 306	1	6/ 4/79	122.	6.43	3.5	237.
OBAS- 310	1	6/11/79	136.	6.85	15.0	305.
OBAS- 311	1	6/25/79	213.	8.96	20.0	253.
OBAS- 312	1	7/16/79	98.	6.48	17.0	106.
OBAS- 316	1	7/27/79	197.	7.68	4.0	233.
OBAS- 320	1	8/ 6/79	158.	6.52	4.4	186.
OBAS- 324	1	8/13/79	122.	6.22	1.3	383.
OBAS- 328	1	8/20/79	127.	6.34	3.5	322.
OBAS- 331	1	8/27/79	126.	6.67	3.6	224.
OBAS- 335	1	9/ 5/79	59.	6.37	1.0	283.
OBAS- 339	1	9/10/79	85.	6.20	0.6	243.
OBAS- 343	1	9/24/79	93.	6.18	0.9	322.

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STAT

PROJECT OBAS DATE OF PRINT

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 1 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH MG N/L
OBAS- 38	1	4/ 2/79	0.017	< 0.004	0.014	0.35	0.
OBAS- 39	1	4/ 9/79	0.036	0.005	0.031		
OBAS- 41	1	5/ 1/79	< 0.008	< 0.004	0.009	< 0.04	< 0.
OBAS- 44	1	5/14/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.
OBAS- 48	1	5/21/79	< 0.008	< 0.004	0.010	0.06	0.
OBAS- 51	1	5/27/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.
OBAS- 300	1	5/30/79	< 0.008	< 0.004	0.008	< 0.04	< 0.
OBAS- 302	1	5/31/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.
OBAS- 306	1	6/ 4/79	< 0.008	< 0.004	< 0.008	0.01	0.
OBAS- 310	1	6/11/79	< 0.008	< 0.004	0.010	0.02	0.
OBAS- 311	1	6/25/79	< 0.008	< 0.004	< 0.008	0.01	0.
OBAS- 312	1	7/16/79	0.273	0.262	0.011	0.07	0.
OBAS- 316	1	7/27/79	0.008	< 0.004	0.008	< 0.01	0.
OBAS- 320	1	8/ 6/79	0.007	< 0.004	0.007	0.02	0.
OBAS- 324	1	8/13/79	0.011		0.014	0.02	0.
OBAS- 328	1	8/20/79	0.010		0.012	0.04	0.
OBAS- 331	1	8/27/79	0.016	0.007	0.009	0.01	0.
OBAS- 335	1	9/ 5/79	0.005		0.010	0.03	0.
OBAS- 339	1	9/10/79	0.005		0.009	< 0.04	0.
OBAS- 343	1	9/24/79			0.013	< 0.01	

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OBAS   DATE OF PRINTING

PARAMETER   RANGE OF VALUES   UNITS

DATE   4/ 1/79 - 9/31/79   MO/DA/YR

STATION = 1   CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
OBAS- 38	1	4/ 2/79	4.05	3.70	4.07	0.113	0.296
OBAS- 39	1	4/ 9/79	16.04		16.08		0.804
OBAS- 41	1	5/ 1/79	2.90	2.86	2.91	0.235	0.465
OBAS- 44	1	5/14/79	2.53	2.49	2.54	0.585	0.806
OBAS- 48	1	5/21/79	2.80	2.74	2.81	0.868	0.978
OBAS- 51	1	5/27/79	1.51	1.47	1.52	2.078	2.236
OBAS- 300	1	5/30/79	1.71	1.67	1.72	1.381	1.346
OBAS- 302	1	5/31/79	1.59	1.58	1.60	1.338	1.341
OBAS- 306	1	6/ 4/79	2.82	2.81	2.83	0.956	1.047
OBAS- 310	1	6/11/79	4.25	4.23	4.26	0.480	1.076
OBAS- 311	1	6/25/79	6.37	6.36	6.38	0.397	1.032
OBAS- 312	1	7/16/79	9.15	9.08	9.42	0.463	0.971
OBAS- 316	1	7/27/79	3.42	3.41	3.43	1.120	1.383
OBAS- 320	1	8/ 6/79	2.76	2.74	2.77	0.988	1.218
OBAS- 324	1	8/13/79	2.73	2.71	2.74	0.705	0.857
OBAS- 328	1	8/20/79	2.57	2.53	2.58	0.464	0.630
OBAS- 331	1	8/27/79	2.37	2.36	2.39	0.266	0.428
OBAS- 335	1	9/ 5/79	1.71	1.68	1.72	0.905	0.973
OBAS- 339	1	9/10/79	1.64	1.60	1.65	0.700	0.802
OBAS- 343	1	9/24/79	1.92	1.91		0.526	0.618

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STAT

PROJECT OBAS DATE OF PRINT

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 1 CODE

	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
NUM. VALS.			20	20	20	20
AVERAGE			151.	6.83	7.9	243.
ST. DEV.			87.	0.79	9.3	84.
MIN. VAL.			59.	6.18	0.6	37.
MAX. VAL.			405.	8.96	36.5	393.

	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+N MG N/
NUM. VALS.			19	15	20	19	18
AVERAGE			0.024	0.021	0.011	0.05	0.
ST. DEV.			0.061	0.067	0.005	0.08	0.
MIN. VAL.			0.005	0.004	0.007	0.01	0.
MAX. VAL.			0.273	0.262	0.031	0.35	0.

	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P
NUM. VALS.			20	19	19	19	20
AVERAGE			3.74	3.05	3.86	0.767	0.9
ST. DEV.			3.42	1.86	3.52	0.479	0.4
MIN. VAL.			1.51	1.47	1.52	0.113	0.2
MAX. VAL.			16.04	9.08	16.08	2.078	2.2

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OBAS DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 2 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OBAS- 46	2	5/14/79	180.	7.01	12.0	256.
OBAS- 50	2	5/27/79	104.	6.41	1.2	188.
OBAS- 304	2	5/31/79	146.	6.73	1.5	236.
OBAS- 308	2	6/ 4/79	150.	7.10	2.7	224.
OBAS- 314	2	7/16/79	52.	6.96	4.5	31.
OBAS- 318	2	7/27/79	146.	9.08	1.4	100.
OBAS- 322	2	8/ 6/79	90.	6.56	1.2	130.
OBAS- 327	2	8/13/79	204.	6.32	1.5	206.
OBAS- 329	2	8/20/79	127.	6.64	1.0	265.
OBAS- 333	2	8/27/79	113.	7.36	3.3	121.
OBAS- 337	2	9/ 5/79	68.	6.28	0.7	254.
OBAS- 341	2	9/10/79	104.	6.18	1.1	268.
OBAS- 345	2	9/24/79	116.	6.31	0.6	258.

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATI

PROJECT OBAS DATE OF PRINTI

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 2 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR		NOX MG N/L		NO3 MG N/L		NO2 MG N/L		NH4 MG N/L		NOX+NH MG N/L
OBAS- 46	2	5/14/79	<	0.008	<	0.004	<	0.008		0.06		0.07
OBAS- 50	2	5/27/79	<	0.008	<	0.004	<	0.008		0.04		0.05
OBAS- 304	2	5/31/79	<	0.008	<	0.004		0.008		0.03		0.04
OBAS- 308	2	6/ 4/79	<	0.008	<	0.004	<	0.008	<	0.01	<	0.01
OBAS- 314	2	7/16/79		0.268		0.260		0.008		0.05		0.32
OBAS- 318	2	7/27/79		0.006	<	0.004	<	0.004	<	0.01		0.02
OBAS- 322	2	8/ 6/79		0.004				0.005		0.02		0.02
OBAS- 327	2	8/13/79		0.006				0.007		0.01		0.02
OBAS- 329	2	8/20/79		0.008				0.009		0.01		0.02
OBAS- 333	2	8/27/79		0.019		0.014		0.005	<	0.01		0.03
OBAS- 337	2	9/ 5/79	<	0.004	<	0.004		0.008		0.02		0.02
OBAS- 341	2	9/10/79		0.006				0.009		0.02		0.03
OBAS- 345	2	9/24/79						0.011	<	0.01		

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OBAS DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 2 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
OBAS- 46	2	5/14/79	3.71	3.65	3.72	0.309	0.664
OBAS- 50	2	5/27/79	1.85	1.81	1.86	3.135	2.995
OBAS- 304	2	5/31/79	1.70	1.67	1.71	1.005	1.056
OBAS- 308	2	6/ 4/79	2.51	2.50	2.52	0.910	1.084
OBAS- 314	2	7/16/79	0.98	0.93	1.25	0.138	0.205
OBAS- 318	2	7/27/79	1.26	1.25	1.27	0.017	0.069
OBAS- 322	2	8/ 6/79	1.33	1.31	1.33	0.507	0.592
OBAS- 327	2	8/13/79	2.01	2.00	2.02	0.617	0.742
OPAS- 329	2	8/20/79	2.07	2.06	2.08	0.288	0.439
OBAS- 333	2	8/27/79	1.87	1.86	1.89	0.085	0.273
OBAS- 337	2	9/ 5/79	1.26	1.24	1.26	0.772	0.835
OBAS- 341	2	9/10/79	1.81	1.79	1.82	0.500	0.625
OBAS- 345	2	9/24/79	1.49	1.48		0.467	0.523

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATI[ON]

PROJECT OBAS DATE OF PRINTI[N]

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 2 CODE

	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
NUM. VALS.			13	13	13	13
AVERAGE			123.	6.84	2.5	195.
ST. DEV.			42.	0.76	3.1	76.
MIN. VAL.			52.	6.18	0.6	31.
MAX. VAL.			204.	9.08	12.0	268.

	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG M/L
NUM. VALS.			12	8	13	13	12
AVERAGE			0.029	0.037	0.008	0.02	0.05
ST. DEV.			0.075	0.090	0.002	0.02	0.09
MIN. VAL.			0.004	0.004	0.004	0.01	0.01
MAX. VAL.			0.268	0.260	0.011	0.06	0.32

	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
NUM. VALS.			13	13	12	13	13
AVERAGE			1.83	1.81	1.89	0.673	0.777
ST. DEV.			0.70	0.69	0.70	0.800	0.732
MIN. VAL.			0.98	0.93	1.25	0.017	0.069
MAX. VAL.			3.71	3.65	3.72	3.135	2.995

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATIO

PROJECT OBAS DATE OF PRINTIN(

PARAMETER	RANGE OF VALUES			UNITS
DATE	4/ 1/79	-	9/31/79	MO/DA/YR

STATION = 3 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OBAS- 40	3	4/23/79	935.	7.97	0.6	13.
OBAS- 42	3	5/ 1/79	820.	7.18	9.0	88.
OBAS- 43	3	5/ 7/79	325.	7.60	6.4	59.
OBAS- 47	3	5/14/79	320.	6.74	3.2	192.
OBAS- 49	3	5/21/79	313.	7.05	1.8	211.
OBAS- 53	3	5/27/79	130.	6.44	1.8	194.
OBAS- 305	3	5/31/79	181.	7.06	1.7	238.
OBAS- 309	3	6/ 4/79	185.	7.20	1.7	227.
OBAS- 315	3	7/16/79	59.	6.35	6.2	83.
OBAS- 319	3	7/27/79	247.	7.55	3.4	189.
OBAS- 323	3	8/ 6/79	238.	7.03	2.3	305.
OBAS- 326	3	8/13/79	105.	6.13	0.9	306.
OBAS- 330	3	8/20/79	226.	7.45	1.1	203.
OBAS- 334	3	8/27/79	215.	6.95	1.0	169.
OBAS- 338	3	9/ 5/79	80.	6.15	1.5	231.
OBAS- 342	3	9/10/79	160.	6.32	1.8	243.
OBAS- 346	3	9/24/79	113.	6.30	0.9	353.

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STAT

PROJECT OBAS DATE OF PRINT

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 3 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+N MG N/
OBAS- 40	3	4/23/79	< 0.008	< 0.004	< 0.008	< 0.04	< C.
OBAS- 42	3	5/ 1/79	< 0.008	< 0.004	< 0.008	4.55	4.
OBAS- 43	3	5/ 7/79	0.010	< 0.004	< 0.008	0.04	0.
OBAS- 47	3	5/14/79	0.079	0.069	0.010	0.39	0.
OBAS- 49	3	5/21/79	0.008	< 0.004	< 0.008	0.05	0.
OBAS- 53	3	5/27/79	< 0.008	< 0.004	< 0.008	0.09	0.
OBAS- 305	3	5/31/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.
OBAS- 309	3	6/ 4/79	< 0.008	< 0.004	< 0.008	< 0.01	< C.
OBAS- 315	3	7/16/79	0.314	0.305	0.009	0.03	0.
OBAS- 319	3	7/27/79	0.008	< 0.004	0.006	< 0.01	0.
OBAS- 323	3	8/ 6/79	0.010		0.011	0.04	0.
OBAS- 326	3	8/13/79	0.010		0.011	0.02	0.
OBAS- 330	3	8/20/79	0.005		0.007	0.03	0.
OBAS- 334	3	8/27/79	0.007	< 0.004	0.006	0.01	0.
OBAS- 338	3	9/ 5/79	< 0.004	< 0.004	0.008	0.03	0.
OBAS- 342	3	9/10/79	0.005		0.008	0.03	0.
OBAS- 346	3	9/24/79			0.010	< 0.01	

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OBAS DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 3 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
OBAS- 40	3	4/23/79	0.21	0.17	0.22	< 0.040	< 0.040
OBAS- 42	3	5/ 1/79	15.11	10.56	15.12	< 0.010	0.264
OBAS- 43	3	5/ 7/79	4.19	4.15	4.20	< 0.040	0.362
OBAS- 47	3	5/14/79	3.29	2.90	3.37	2.688	2.889
OBAS- 49	3	5/21/79	0.62	0.57	0.63	1.201	1.281
OBAS- 53	3	5/27/79	2.17	2.08	2.18	4.677	4.558
OBAS- 305	3	5/31/79	2.13	2.12	2.14	1.528	1.671
OBAS- 309	3	6/ 4/79	2.78	2.77	2.79	1.415	1.462
OBAS- 315	3	7/16/79	2.66	2.63	2.97	0.647	0.919
OBAS- 319	3	7/27/79	3.70	3.69	3.71	0.580	0.828
OBAS- 323	3	8/ 6/79	3.53	3.49	3.54	2.189	2.544
OBAS- 326	3	8/13/79	2.29	2.27	2.30	0.593	0.711
OBAS- 330	3	8/20/79	1.68	1.65	1.69	0.363	0.493
OBAS- 334	3	8/27/79	2.12	2.11	2.13	0.300	0.395
OBAS- 338	3	9/ 5/79	1.71	1.68	1.71	1.342	1.420
OBAS- 342	3	9/10/79	1.75	1.72	1.76	1.289	1.442
OBAS- 346	3	9/24/79	1.55	1.54		1.158	1.908

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STAT

PROJECT OBAS DATE OF PRINT

PARAMETER	RANGE OF VALUES			UNITS
DATE	4/ 1/79	-	9/31/79	MO/DA/YR
STATION = 3			CODE	

	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
NUM. VALS.			17	17	17	17
AVERAGE			274.	6.91	2.7	194.
ST. DEV.			242.	0.56	2.4	91.
MIN. VAL.			59.	6.13	0.6	13.
MAX. VAL.			935.	7.97	9.0	353.

	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+N MG N/
NUM. VALS.			16	12	17	17	16
AVERAGE			0.031	0.035	0.008	0.32	0.3
ST. DEV.			0.077	0.087	0.001	1.09	1.1
MIN. VAL.			0.004	0.004	0.006	0.01	0.0
MAX. VAL.			0.314	0.305	0.011	4.55	4.5

	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P
NUM. VALS.			17	17	16	17	17
AVERAGE			3.03	2.71	3.15	1.180	1.3
ST. DEV.			3.28	2.27	3.37	1.176	1.1
MIN. VAL.			0.21	0.17	0.22	0.010	0.0
MAX. VAL.			15.11	10.56	15.12	4.677	4.5

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OBAS DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 4 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OBAS- 45	4	5/14/79	41.	6.20	5.7	185.
OBAS- 52	4	5/27/79	76.	6.14	1.7	316.
OBAS- 301	4	5/30/79	79.	5.84	1.7	372.
OBAS- 303	4	5/31/79	88.	5.81	1.4	383.
OBAS- 307	4	6/ 4/79	88.	6.12	2.5	448.
OBAS- 313	4	7/16/79	31.	5.58	5.4	62.
OBAS- 317	4	7/27/79	64.	6.81	6.0	330.
OBAS- 321	4	8/ 6/79	92.	6.79	1.5	262.
OBAS- 325	4	8/13/79	86.	5.59	1.5	360.
OBAS- 332	4	8/27/79	80.	5.99	21.5	282.
OBAS- 336	4	9/ 5/79	57.	6.08	1.1	268.
OBAS- 340	4	9/10/79	50.	6.09	1.2	279.
OBAS- 344	4	9/24/79	50.	5.95	0.8	324.

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STAT

PROJECT OBAS DATE OF PRINT

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 4 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+N MG N/L
OBAS- 45	4	5/14/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.0
OBAS- 52	4	5/27/79	< 0.008	< 0.004	0.011	< 0.01	< 0.0
OBAS- 301	4	5/30/79	0.011		0.015	0.05	0.0
OBAS- 303	4	5/31/79	0.009		0.015	0.03	0.0
OBAS- 307	4	6/ 4/79	0.009		0.015	0.03	0.0
OBAS- 313	4	7/16/79	0.153	0.148	0.005	0.02	0.1
OBAS- 317	4	7/27/79	0.011		0.012	0.06	0.0
OBAS- 321	4	8/ 6/79	0.008		0.010	0.04	0.0
OBAS- 325	4	8/13/79	0.014	< 0.004	0.013	0.03	0.0
OBAS- 332	4	8/27/79	0.042	0.028	0.014	0.08	0.1
OBAS- 336	4	9/ 5/79	< 0.004	< 0.004	0.009	0.03	0.0
OBAS- 340	4	9/10/79	0.009		0.011	0.03	0.0
OBAS- 344	4	9/24/79			0.015	< 0.01	

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATIO

PROJECT OBAS DATE OF PRINTIN

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 4 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
OBAS- 45	4	5/14/79	1.93	1.89	1.94	0.296	0.426
OBAS- 52	4	5/27/79	2.26	2.25	2.27	0.515	0.577
OBAS- 301	4	5/30/79	2.59	2.54	2.60	0.519	0.608
OBAS- 303	4	5/31/79	2.26	2.23	2.27	0.460	0.563
OBAS- 307	4	6/ 4/79	3.07	3.04	3.08	0.357	0.526
OBAS- 313	4	7/16/79	1.36	1.34	1.51	0.393	0.482
OBAS- 317	4	7/27/79	3.55	3.49	3.56	0.414	0.853
OBAS- 321	4	8/ 6/79	2.17	2.13	2.18	0.590	0.766
OBAS- 325	4	8/13/79	2.40	2.37	2.41	0.545	0.645
OBAS- 332	4	8/27/79	6.38	6.30	6.42	0.295	0.825
OBAS- 336	4	9/ 5/79	1.52	1.49	1.52	0.412	0.473
OBAS- 340	4	9/10/79	1.88	1.85	1.89	0.791	0.898
OBAS- 344	4	9/24/79	1.94	1.93		0.393	0.501

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATIO

PROJECT OBAS DATE OF PRINTIN

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 4 CODE

	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
NUM. VALS.			13	13	13	13
AVERAGE			68.	6.08	4.0	298.
ST. DEV.			20.	0.38	5.6	97.
MIN. VAL.			31.	5.58	0.8	62.
MAX. VAL.			92.	6.81	21.5	448.

	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
NUM. VALS.			12	6	13	13	12
AVERAGE			0.024	0.032	0.012	0.04	0.06
ST. DEV.			0.042	0.058	0.003	0.02	0.05
MIN. VAL.			0.004	0.004	0.005	0.01	0.01
MAX. VAL.			0.153	0.148	0.015	0.08	0.17

	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
NUM. VALS.			13	13	12	13	13
AVERAGE			2.56	2.53	2.64	0.460	0.626
ST. DEV.			1.29	1.27	1.33	0.135	0.159
MIN. VAL.			1.36	1.34	1.51	0.295	0.476
MAX. VAL.			6.38	6.30	6.42	0.791	0.898

SAMPLE	DATE MO/DA/YR	TIME	STATION	UP,DOWN STREAM	DISCHARGE	WEATHER	SAMPLE TYPE	C
OBAS- 38	4/ 2/79	952.	1			1=CLEAR		
OBAS- 39	4/ 9/79	1025.	1			3=MEDIUM OVERCAST		
OBAS- 41	5/ 1/79	1334.	1			4=VERY OVERCAST		
OBAS- 44	5/14/79	1404.	1			4=VERY OVERCAST		
OBAS- 48	5/21/79	1252.	1			1=CLEAR		
OBAS- 51	5/27/79	855.	1			2=SLIGHT OVERCAST		
OBAS- 300	5/30/79	1424.	1			4=VERY OVERCAST		
OBAS- 302	5/31/79	1233.	1			2=SLIGHT OVERCAST		
OBAS- 306	6/ 4/79	1258.	1			1=CLEAR		
OBAS- 310	6/11/79	1223.	1			2=SLIGHT OVERCAST		
OBAS- 311	6/25/79	1309.	1			2=SLIGHT OVERCAST		
OBAS- 312	7/16/79	1312.	1			4=VERY OVERCAST		
OBAS- 316	7/27/79	1429.	1			5=DRIZZLE		
OBAS- 320	8/ 6/79	1334.	1			2=SLIGHT OVERCAST		
OBAS- 324	8/13/79	1251.	1			3=MEDIUM OVERCAST		
OBAS- 328	8/20/79	1330.	1			3=MEDIUM OVERCAST		
OBAS- 331	8/27/79	1343.	1			4=VERY OVERCAST		
OBAS- 335	9/ 5/79	1444.	1			2=SLIGHT OVERCAST		
OBAS- 339	9/10/79	946.	1			4=VERY OVERCAST		
OBAS- 343	9/24/79	1404.	1			4=VERY OVERCAST		
OBAS- 46	5/14/79	1425.	2			4=VERY OVERCAST		
OBAS- 50	5/27/79	835.	2			2=SLIGHT OVERCAST		
OBAS- 304	5/31/79	1309.	2			2=SLIGHT OVERCAST		
OBAS- 308	6/ 4/79	1319.	2			1=CLEAR		
OBAS- 314	7/16/79	1332.	2			4=VERY OVERCAST		
OBAS- 318	7/27/79	1442.	2			5=DRIZZLE		
OBAS- 322	8/ 6/79	1418.	2			3=MEDIUM OVERCAST		
OBAS- 327	8/13/79	1331.	2			3=MEDIUM OVERCAST		
OBAS- 329	8/20/79	1345.	2			3=MEDIUM OVERCAST		
OBAS- 333	8/27/79	1400.	2			4=VERY OVERCAST		
OBAS- 337	9/ 5/79	1521.	2			2=SLIGHT OVERCAST		
OBAS- 341	9/10/79	1000.	2			4=VERY OVERCAST		
OBAS- 345	9/24/79	1416.	2			4=VERY OVERCAST		
OBAS- 40	4/23/79	945.	3			4=VERY OVERCAST		
OBAS- 42	5/ 1/79	1357.	3			4=VERY OVERCAST		
OBAS- 43	5/ 7/79	1014.	3			6=RAIN		
OBAS- 47	5/14/79	1442.	3			4=VERY OVERCAST		
OBAS- 49	5/21/79	1323.	3			1=CLEAR		
OBAS- 53	5/27/79	330.	3			1=CLEAR		
OBAS- 305	5/31/79	1337.	3			2=SLIGHT OVERCAST		

COMMENTS FOR SELECTED SAMPLES OF PROJECT OBAS DATE OF PRINT

SAMPLE	DATE MO/DA/YR	TIME	STATION	UP,DOWN STREAM	DISCHARGE	WEATHER	SAMPLE TYPE
OBAS- 309	6/ 4/79	1332.	3			1=CLEAR	
OBAS- 315	7/16/79	1349.	3			4=VERY OVERCAST	
OBAS- 319	7/27/79	1457.	3			5=DRIZZLE	
OBAS- 323	8/ 6/79	1432.	3			3=MEDIUM OVERCAST	
OBAS- 326	8/13/79	1315.	3			3=MEDIUM OVERCAST	
OBAS- 330	8/20/79	1406.	3			3=MEDIUM OVERCAST	
OBAS- 334	8/27/79	1419.	3			4=VERY OVERCAST	
OBAS- 338	9/ 5/79	1545.	3			2=SLIGHT OVERCAST	
OBAS- 342	9/10/79	1014.	3			5=DRIZZLE	
OBAS- 346	9/24/79	1442.	3			4=VERY OVERCAST	
OBAS- 45	5/14/79	1413.	4			4=VERY OVERCAST	
OBAS- 52	5/27/79	908.	4			1=CLEAR	
OBAS- 301	5/30/79	1432.	4			4=VERY OVERCAST	
OBAS- 303	5/31/79	1252.	4			2=SLIGHT OVERCAST	
OBAS- 307	6/ 4/79	1309.	4			1=CLEAR	
OBAS- 313	7/16/79	1322.	4			4=VERY OVERCAST	
OBAS- 317	7/27/79	1434.	4			5=DRIZZLE	
OBAS- 321	8/ 6/79	1345.	4			3=MEDIUM OVERCAST	
OBAS- 325	8/13/79	1259.	4			3=MEDIUM OVERCAST	
OBAS- 332	8/27/79	1349.	4			4=VERY OVERCAST	
OBAS- 336	9/ 5/79	1505.	4			2=SLIGHT OVERCAST	
OBAS- 340	9/10/79	948.	4			4=VERY OVERCAST	
OBAS- 344	9/24/79	1406.	4			4=VERY OVERCAST	

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OLKS DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 1 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OLKS- 227	1	4/ 2/79	81.	5.77	3.4	254.
OLKS- 236	1	4/ 9/79	110.	6.21	3.4	217.
OLKS- 239	1	4/16/79	115.	6.01	4.6	214.
OLKS- 242	1	4/23/79	150.	6.38	4.0	181.
OLKS- 245	1	4/30/79	168.	6.47	4.0	129.
OLKS- 248	1	5/ 7/79	123.	6.74	3.0	68.
OLKS- 254	1	5/21/79	61.	5.58	1.0	247.
OLKS- 302	1	5/29/79	71.	5.61	1.3	244.
OLKS- 251	1	5/41/79	92.	5.55	1.8	302.
OLKS- 305	1	6/ 4/79	61.	5.73	0.9	224.
OLKS- 308	1	6/11/79	60.	5.72	0.9	239.
OLKS- 311	1	6/18/79	64.	5.62	1.2	329.
OLKS- 314	1	6/25/79	112.	6.10	1.4	278.
OLKS- 317	1	7/ 2/79	172.	6.55	1.4	157.
OLKS- 319	1	7/ 9/79	164.	6.25	1.2	180.
OLKS- 322	1	7/16/79	195.	6.52	1.0	115.
OLKS- 325	1	7/23/79	207.	6.77	4.9	122.
OLKS- 328	1	7/30/79	217.	6.78	1.1	102.
OLKS- 329	1	8/ 6/79	212.	6.66	1.0	81.
OLKS- 332	1	8/13/79	228.	6.92	1.4	86.
OLKS- 335	1	8/20/79	86.	5.92	1.4	278.
OLKS- 338	1	8/27/79	104.	5.70	1.0	214.
OLKS- 341	1	9/ 5/79	40.	5.55	1.9	173.
OLKS- 343	1	9/10/79	38.	5.76	1.0	200.
OLKS- 345	1	9/24/79	38.	5.60	0.8	210.

UPLANOS OEMONSTRATION PROJECT OATA LISTED BY STA

PROJECT OLKS DATE OF PRIN

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/OA/YR

STATION = 1 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/OA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+N MG N
OLKS- 227	1	4/ 2/79	< 0.008	< 0.004	< 0.008	0.02	0
OLKS- 236	1	4/ 9/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0
OLKS- 239	1	4/16/79	< 0.008	< 0.004	0.008	0.01	0
OLKS- 242	1	4/23/79	0.034	0.026	< 0.008	0.07	0
OLKS- 245	1	4/30/79	0.046	0.038	< 0.008	0.05	0
OLKS- 248	1	5/ 7/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0
OLKS- 254	1	5/21/79	< 0.008	< 0.004	< 0.008	0.02	0
OLKS- 302	1	5/29/79	< 0.008	< 0.004	0.010	< 0.04	< 0
OLKS- 251	1	5/41/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0
OLKS- 305	1	6/ 4/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0
OLKS- 308	1	6/11/79	< 0.008	< 0.004	< 0.008	0.02	0
OLKS- 311	1	6/18/79	< 0.008	< 0.004	0.010	0.02	0
OLKS- 314	1	6/25/79	< 0.008	< 0.004	0.009	< 0.04	< 0
OLKS- 317	1	7/ 2/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0
OLKS- 319	1	7/ 9/79	0.005		0.006	< 0.04	0
OLKS- 322	1	7/16/79	0.008	< 0.004	0.004	< 0.01	0
OLKS- 325	1	7/23/79	0.013	0.009	< 0.004	< 0.01	0
OLKS- 328	1	7/30/79	0.013	0.007	0.006	< 0.01	0
OLKS- 329	1	8/ 6/79	0.012	0.007	0.005	0.01	0
OLKS- 332	1	8/13/79	0.030	0.026	< 0.004	0.02	0
OLKS- 335	1	8/20/79	0.008	< 0.004	0.008	0.02	0
OLKS- 338	1	8/27/79	0.049	0.042	0.007	0.02	0
OLKS- 341	1	9/ 5/79	< 0.004	< 0.004	0.006	0.02	0
OLKS- 343	1	9/10/79	< 0.004	< 0.004	0.007	0.03	0
OLKS- 345	1	9/24/79			0.008	< 0.01	

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OLKS — DATE OF PRINTING

PARAMETER — RANGE OF VALUES — UNITS

DATE 4/ 1/79 – 9/31/79 MO/DA/YR

STATION = 1 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L		DPO4 MG P/L		TPO4 MG P/L
OLKS- 227	1	4/ 2/79	2.13	2.11	2.14	<	0.010		0.044
OLKS- 236	1	4/ 9/79	2.04	2.00	2.05	<	0.040		0.054
OLKS- 239	1	4/16/79	2.51	2.50	2.52	<	0.008		0.152
OLKS- 242	1	4/23/79	1.82	1.75	1.85	<	0.040		0.092
OLKS- 245	1	4/30/79	1.57	1.52	1.62		0.025		0.112
OLKS- 248	1	5/ 7/79	2.22	2.18	2.23	<	0.040		0.041
OLKS- 254	1	5/21/79	1.59	1.57	1.60	<	0.010		0.013
OLKS- 302	1	5/29/79	1.78	1.74	1.79	<	0.010	<	0.040
OLKS- 251	1	5/41/79	2.38	2.34	2.39	<	0.040		0.042
OLKS- 305	1	6/ 4/79	1.29	1.25	1.30	<	0.040		0.023
OLKS- 308	1	6/11/79	1.40	1.38	1.41	<	0.010	<	0.010
OLKS- 311	1	6/18/79	1.39	1.37	1.40	<	0.010		0.032
OLKS- 314	1	6/25/79	1.76	1.72	1.77	<	0.010		0.043
OLKS- 317	1	7/ 2/79	1.22	1.21	1.23	<	0.010		0.039
OLKS- 319	1	7/ 9/79	1.38	1.34	1.39	<	0.040		0.038
OLKS- 322	1	7/16/79	1.34	1.33	1.35	<	0.010		0.032
OLKS- 325	1	7/23/79	1.07	1.06	1.08	<	0.010		0.039
OLKS- 328	1	7/30/79	1.32	1.31	1.33	<	0.010		0.020
OLKS- 329	1	8/ 6/79	1.13	1.12	1.14	<	0.010		0.034
OLKS- 332	1	8/13/79	1.21	1.19	1.24	<	0.010		0.041
OLKS- 335	1	8/20/79	1.55	1.53	1.56	<	0.010		0.040
OLKS- 338	1	8/27/79	1.68	1.66	1.73	<	0.010		0.023
OLKS- 341	1	9/ 5/79	1.32	1.30	1.32	<	0.010	<	0.010
OLKS- 343	1	9/10/79	1.46	1.43	1.46	<	0.010		0.016
OLKS- 345	1	9/24/79	1.38	1.37		<	0.010		0.020

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY ST

PROJECT OLKS DATE OF PRI

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 1 CODE

	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
NUM. VALS.			25	25	25	25
AVERAGE			119.	6.10	2.0	192.
ST. DEV.			61.	0.47	1.3	70.
MIN. VAL.			38.	5.55	0.8	68.
MAX. VAL.			228.	6.92	4.9	329.

	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX MG
NUM. VALS.			24	23	25	25	2
AVERAGE			0.013	0.010	0.007	0.03	C
ST. DEV.			0.013	0.012	0.002	0.02	C
MIN. VAL.			0.004	0.004	0.004	0.01	C
MAX. VAL.			0.049	0.042	0.010	0.07	C

	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TP MG
NUM. VALS.			25	25	24	25	2
AVERAGE			1.60	1.57	1.62	0.018	0.
ST. DEV.			0.39	0.39	0.40	0.013	0.
MIN. VAL.			1.07	1.06	1.08	0.008	0.
MAX. VAL.			2.51	2.50	2.52	0.040	0.

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OLKS DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 2 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OLKS- 226	2	4/ 2/79	113.	5.60	5.4	486.
OLKS- 235	2	4/ 9/79	144.	5.90	7.1	535.
OLKS- 238	2	4/16/79	168.	6.17	7.4	679.
OLKS- 241	2	4/23/79	281.	7.05	6.9	995.
OLKS- 244	2	4/30/79	218.	6.87	8.0	748.
OLKS- 247	2	5/ 7/79	173.	6.75	6.6	567.
OLKS- 250	2	5/14/79	60.	5.56	1.0	301.
OLKS- 253	2	5/21/79	74.	5.62	0.9	357.
OLKS- 301	2	5/29/79	60.	5.68	3.2	351.
OLKS- 304	2	6/ 4/79	64.	5.53	0.9	407.
OLKS- 307	2	6/11/79	66.	5.44	0.8	464.
OLKS- 310	2	6/18/79	75.	5.22	0.8	513.
OLKS- 313	2	6/25/79	85.	5.39	0.7	611.
OLKS- 316	2	7/ 2/79	87.	5.54	2.5	646.
OLKS- 318	2	7/ 9/79	94.	6.04	2.3	594.
OLKS- 321	2	7/16/79	92.	5.87	2.5	509.
OLKS- 324	2	7/23/79	104.	5.97	5.8	545.
OLKS- 327	2	7/30/79	146.	6.08	6.7	677.
OLKS- 331	2	8/13/79	83.	5.54	3.0	133.
OLKS- 334	2	8/20/79	88.	5.42	1.3	276.
OLKS- 337	2	8/27/79	68.	5.38	0.6	311.
OLKS- 340	2	9/ 5/79	43.	5.82	0.6	196.

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATI

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PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 2 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
DLKS- 226	2	4/ 2/79	0.015		0.018	1.25	1.2
DLKS- 235	2	4/ 9/79	0.010		0.022	4.29	4.3
DLKS- 238	2	4/16/79	0.023		0.033	6.61	6.6
DLKS- 241	2	4/23/79	< 0.008	< 0.004	< 0.008	17.99	18.0
DLKS- 244	2	4/30/79	0.019	0.011	< 0.008	13.60	13.6
DLKS- 247	2	5/ 7/79	0.029	< 0.004	0.026	11.68	11.7
DLKS- 250	2	5/14/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.0
DLKS- 253	2	5/21/79	< 0.008	< 0.004	0.011	0.03	0.0
DLKS- 301	2	5/29/79	0.009		0.017	< 0.04	0.0
DLKS- 304	2	6/ 4/79	0.008		0.014	0.04	0.0
DLKS- 307	2	6/11/79	0.012		0.017	0.06	0.0
DLKS- 310	2	6/18/79	< 0.008	< 0.004	0.018	0.09	0.1
DLKS- 313	2	6/25/79	0.016		0.020	0.11	0.1
DLKS- 316	2	7/ 2/79	0.015		0.022	0.50	0.5
DLKS- 318	2	7/ 9/79	0.023		0.024	1.01	1.0
DLKS- 321	2	7/16/79	0.018		0.021	1.24	1.2
DLKS- 324	2	7/23/79	0.021		0.022	1.52	1.5
DLKS- 327	2	7/30/79	0.018		0.029	5.18	5.2
DLKS- 331	2	8/13/79	0.455	0.442	0.013	0.30	0.7
DLKS- 334	2	8/20/79	0.008		0.010	0.02	0.0
DLKS- 337	2	8/27/79	0.049	0.042	0.007	0.05	0.1
DLKS- 340	2	9/ 5/79	< 0.004	< 0.004	0.007	0.02	0.0

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OLKS DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 2 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
OLKS- 226	2	4/ 2/79	6.23	4.98	6.25	0.052	0.214
OLKS- 235	2	4/ 9/79	10.05	5.76	10.06	0.294	0.510
OLKS- 238	2	4/16/79	22.51	15.90	22.53	0.694	1.522
OLKS- 241	2	4/23/79	40.95	22.96	40.96	5.041	6.316
OLKS- 244	2	4/30/79	25.41	11.81	25.43	10.040	5.511
OLKS- 247	2	5/ 7/79	28.77	17.09	28.80	4.272	4.774
OLKS- 250	2	5/14/79	2.19	2.15	2.20	< 0.040	0.062
OLKS- 253	2	5/21/79	1.97	1.94	1.98	< 0.010	0.023
OLKS- 301	2	5/29/79	2.57	2.53	2.58	< 0.010	0.057
OLKS- 304	2	6/ 4/79	2.21	2.17	2.22	< 0.010	0.027
OLKS- 307	2	6/11/79	2.51	2.45	2.52	< 0.010	0.040
OLKS- 310	2	6/18/79	10.43	10.34	10.44	< 0.010	0.045
OLKS- 313	2	6/25/79	3.40	3.29	3.42	0.011	0.094
OLKS- 316	2	7/ 2/79	6.01	5.51	6.03	0.019	0.283
OLKS- 318	2	7/ 9/79	5.59	4.58	5.61	0.017	0.204
OLKS- 321	2	7/16/79	5.24	4.00	5.26	0.042	0.194
OLKS- 324	2	7/23/79	7.86	6.34	7.88	0.027	0.383
OLKS- 327	2	7/30/79	19.02	13.84	19.04	0.124	0.774
OLKS- 331	2	8/13/79	0.32	< 0.10	0.78	0.078	0.172
OLKS- 334	2	8/20/79	2.36	2.34	2.37	0.011	0.110
OLKS- 337	2	8/27/79	2.27	2.22	2.32	< 0.010	0.048
OLKS- 340	2	9/ 5/79	1.49	1.47	1.49	< 0.010	< 0.010

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATI

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PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 2 CODE

	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
NUM. VALS.			22	22	22	22
AVERAGE			108.	5.84	3.4	496.
ST. DEV.			58.	0.50	2.7	198.
MIN. VAL.			43.	5.22	0.6	132.
MAX. VAL.			281.	7.05	8.0	995.

	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
NUM. VALS.			22	9	22	22	22
AVERAGE			0.036	0.058	0.017	2.99	3.0
ST. DEV.			0.094	0.145	0.008	5.09	5.0
MIN. VAL.			0.004	0.004	0.007	0.02	0.0
MAX. VAL.			0.455	0.442	0.033	17.99	18.0

	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
NUM. VALS.			22	22	22	22	22
AVERAGE			9.52	6.53	9.55	0.947	0.97
ST. DEV.			10.87	6.11	10.86	2.443	1.90
MIN. VAL.			0.32	0.10	0.78	0.010	0.01
MAX. VAL.			40.95	22.96	40.96	10.040	6.31

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATIO

PROJECT OLKS DATE OF PRINTIN

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 3 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OLKS- 225	3	4/ 2/79	70.	4.83	2.7	218.
OLKS- 228	3	4/ 2/79	70.	4.81	2.1	208.
OLKS- 229	3	4/ 2/79	69.	4.79	1.9	206.
OLKS- 230	3	4/ 2/79	70.	4.77	2.2	209.
OLKS- 231	3	4/ 3/79	70.	4.77	1.8	209.
OLKS- 232	3	4/ 3/79	70.	4.78	1.8	214.
OLKS- 233	3	4/ 3/79	71.	4.69	2.2	217.
OLKS- 234	3	4/ 9/79	79.	5.41	1.5	244.
OLKS- 237	3	4/16/79	91.	6.02	4.6	279.
OLKS- 240	3	4/23/79	102.	6.15	4.8	199.
OLKS- 243	3	4/30/79	98.	5.86	3.1	174.
OLKS- 246	3	5/ 7/79	88.	6.30	4.7	173.
OLKS- 249	3	5/14/79	56.	5.09	1.9	177.
OLKS- 252	3	5/21/79	53.	5.01	0.9	154.
OLKS- 300	3	5/29/79	49.	5.20	0.9	149.
OLKS- 303	3	6/ 4/79	50.	4.93	1.0	162.
OLKS- 306	3	6/11/79	53.	4.98	1.2	185.
OLKS- 309	3	6/18/79	55.	4.98	1.2	186.
OLKS- 312	3	6/25/79	52.	6.02	2.0	168.
OLKS- 315	3	7/ 2/79	88.	6.70	2.2	238.
OLKS- 320	3	7/16/79	52.	5.25	1.7	125.
OLKS- 323	3	7/23/79	49.	5.36	1.2	155.
OLKS- 326	3	7/30/79	61.	6.53	1.6	158.
OLKS- 330	3	8/13/79	46.	4.95	1.1	106.
OLKS- 333	3	8/20/79	46.	4.98	0.7	134.
OLKS- 336	3	8/27/79	44.	5.05	0.8	125.
OLKS- 339	3	9/ 5/79	31.	5.12	0.8	200.
OLKS- 342	3	9/10/79	32.	5.46	0.7	136.
OLKS- 344	3	9/24/79	30.	5.45	0.5	143.

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATI

PROJECT OLKS | DATE OF PRINTIN

PARAMETER | RANGE OF VALUES | UNITS

DATE | 4/ 1/79 - 9/31/79 | MO/DA/YR

STATION = 3 | CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
OLKS- 225	3	4/ 2/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.01
OLKS- 228	3	4/ 2/79	< 0.008	< 0.004	< 0.008	0.02	0.03
OLKS- 229	3	4/ 2/79	< 0.008	< 0.004	< 0.008	0.01	0.02
OLKS- 230	3	4/ 2/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.01
OLKS- 231	3	4/ 3/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.01
OLKS- 232	3	4/ 3/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.01
OLKS- 233	3	4/ 3/79	< 0.008	< 0.004	< 0.008	0.02	0.03
OLKS- 234	3	4/ 9/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OLKS- 237	3	4/16/79	< 0.008	< 0.004	0.008	0.02	0.03
OLKS- 240	3	4/23/79	0.031	0.023	< 0.008	0.05	0.08
OLKS- 243	3	4/30/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OLKS- 246	3	5/ 7/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OLKS- 249	3	5/14/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OLKS- 252	3	5/21/79	< 0.008	< 0.004	< 0.008	0.02	0.03
OLKS- 300	3	5/29/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OLKS- 303	3	6/ 4/79	< 0.008	< 0.004	< 0.008	0.02	0.03
OLKS- 306	3	6/11/79	< 0.008	< 0.004	< 0.008	0.03	0.04
OLKS- 309	3	6/18/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.01
OLKS- 312	3	6/25/79	< 0.008	< 0.004	< 0.008	0.03	0.04
OLKS- 315	3	7/ 2/79	< 0.008	< 0.004	< 0.008	0.01	0.02
OLKS- 320	3	7/16/79	< 0.004	< 0.004	0.004	0.02	0.02
OLKS- 323	3	7/23/79	0.005	< 0.004	0.005	< 0.04	0.05
OLKS- 326	3	7/30/79	< 0.004	< 0.004	0.007	0.01	0.01
OLKS- 330	3	8/13/79	< 0.004	< 0.004	< 0.004	0.01	0.01
OLKS- 333	3	8/20/79	0.004		0.005	0.01	0.01
OLKS- 336	3	8/27/79	0.009		0.012	< 0.01	0.02
OLKS- 339	3	9/ 5/79	< 0.004	< 0.004	0.005	0.02	0.02
OLKS- 342	3	9/10/79	< 0.004	< 0.004	0.005	0.03	0.03
OLKS- 344	3	9/24/79			0.006	< 0.01	

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OLKS DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 3 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L		OPO4 MG P/L		TPO4 MG P/L
OLKS- 225	3	4/ 2/79	2.00	1.99	2.01	<	0.010	<	0.040
OLKS- 228	3	4/ 2/79	1.62	1.60	1.63	<	0.010	<	0.040
OLKS- 229	3	4/ 2/79	1.81	1.80	1.82	<	0.010	<	0.040
OLKS- 230	3	4/ 2/79	1.71	1.70	1.72	<	0.010	<	0.040
OLKS- 231	3	4/ 3/79	1.81	1.80	1.82	<	0.010	<	0.040
OLKS- 232	3	4/ 3/79	1.79	1.78	1.80	<	0.010	<	0.040
OLKS- 233	3	4/ 3/79	1.87	1.85	1.88	<	0.010	<	0.040
OLKS- 234	3	4/ 9/79	2.44	2.40	2.45	<	0.040	<	0.040
OLKS- 237	3	4/16/79	3.02	3.00	3.03	<	0.010		0.082
OLKS- 240	3	4/23/79	2.69	2.64	2.72	<	0.040		0.100
OLKS- 243	3	4/30/79	2.11	2.07	2.12	<	0.010		0.071
OLKS- 246	3	5/ 7/79	2.61	2.57	2.62	<	0.040		0.082
OLKS- 249	3	5/14/79	1.73	1.69	1.74	<	0.040	<	0.040
OLKS- 252	3	5/21/79	1.15	1.13	1.16	<	0.010		0.015
OLKS- 300	3	5/29/79	1.21	1.17	1.22		0.013		0.047
OLKS- 303	3	6/ 4/79	1.14	1.12	1.15	<	0.010		0.015
OLKS- 306	3	6/11/79	1.36	1.33	1.37		0.016		0.020
OLKS- 309	3	6/18/79	1.61	1.60	1.62		0.013		0.052
OLKS- 312	3	6/25/79	1.40	1.37	1.41	<	0.010	<	0.040
OLKS- 315	3	7/ 2/79	2.59	2.58	2.60	<	0.010		0.075
OLKS- 320	3	7/16/79	1.37	1.35	1.37		0.023		0.090
OLKS- 323	3	7/23/79	1.27	1.23	1.28		0.010		0.050
OLKS- 326	3	7/30/79	1.91	1.90	1.91	<	0.010		0.048
OLKS- 330	3	8/13/79	0.94	0.93	0.94		0.018		0.036
OLKS- 333	3	8/20/79	0.99	0.98	0.99	<	0.010		0.020
OLKS- 336	3	8/27/79	1.07	1.06	1.08	<	0.010		0.032
OLKS- 339	3	9/ 5/79	0.96	0.94	0.96	<	0.010	<	0.010
OLKS- 342	3	9/10/79	1.18	1.15	1.18	<	0.010		0.014
OLKS- 344	3	9/24/79	1.27	1.26		<	0.010		0.029

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATI

PROJECT OLKS DATE OF PRINTI

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 3 CODE

	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
NUM. VALS.			29	29	29	29
AVERAGE			62.	5.32	1.9	181.
ST. DEV.			19.	0.58	1.2	40.
MIN. VAL.			30.	4.69	0.5	106.
MAX. VAL.			102.	6.70	4.8	279.

	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH MG N/L
NUM. VALS.			28	26	29	29	28
AVERAGE			0.008	0.005	0.007	0.02	0.0
ST. DEV.			0.005	0.004	0.002	0.01	0.0
MIN. VAL.			0.004	0.004	0.004	0.01	0.0
MAX. VAL.			0.031	0.023	0.012	0.05	0.0

	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/
NUM. VALS.			29	29	28	29	29
AVERAGE			1.68	1.65	1.70	0.015	0.04
ST. DEV.			0.57	0.57	0.58	0.010	0.02
MIN. VAL.			0.94	0.93	0.94	0.010	0.01
MAX. VAL.			3.02	3.00	3.03	0.040	0.10

SAMPLE	DATE MO/DA/YR	TIME	STATION	UP,DOWN STREAM	DISCHARGE	WEATHER	SAMPLE TYPE
OLKS- 227	4/ 2/79	1308.	1			2=SLIGHT OVERCAST	
OLKS- 236	4/ 9/79	1340.	1			1=CLEAR	
OLKS- 239	4/16/79	1401.	1			1=CLEAR	
OLKS- 242	4/23/79	1244.	1			4=VERY OVERCAST	
OLKS- 245	4/30/79	1306.	1			4=VERY OVERCAST	
OLKS- 248	5/ 7/79	1338.	1			4=VERY OVERCAST	
OLKS- 254	5/21/79	1126.	1			1=CLEAR	
OLKS- 302	5/29/79	1422.	1			2=SLIGHT OVERCAST	
OLKS- 251	5/41/79	1302.	1			2=SLIGHT OVERCAST	
OLKS- 305	6/ 4/79	1127.	1			2=SLIGHT OVERCAST	
OLKS- 308	6/11/79	1059.	1			3=MEDIUM OVERCAST	
OLKS- 311	6/18/79	1101.	1			1=CLEAR	
OLKS- 314	6/25/79	1141.	1			1=CLEAR	
OLKS- 317	7/ 2/79	1106.	1			3=MEDIUM OVERCAST	
OLKS- 319	7/ 9/79	1114.	1			1=CLEAR	
OLKS- 322	7/16/79	1136.	1			3=MEDIUM OVERCAST	
OLKS- 325	7/23/79	1330.	1			4=VERY OVERCAST	
OLKS- 328	7/30/79	1156.	1				
OLKS- 329	8/ 6/79	1225.	1			2=SLIGHT OVERCAST	
OLKS- 332	8/13/79	1116.	1			1=CLEAR	
OLKS- 335	8/20/79	1152.	1			3=MEDIUM OVERCAST	
OLKS- 338	8/27/79	1157.	1			5=DRIZZLE	
OLKS- 341	9/ 5/79	1153.	1			2=SLIGHT OVERCAST	
OLKS- 343	9/10/79	1410.	1			3=MEDIUM OVERCAST	
OLKS- 345	9/24/79	1221.	1			3=MEDIUM OVERCAST	
OLKS- 226	4/ 2/79	1206.	2			1=CLEAR	
OLKS- 235	4/ 9/79	1234.	2			2=SLIGHT OVERCAST	
OLKS- 238	4/16/79	1246.	2			1=CLEAR	
OLKS- 241	4/23/79	1140.	2			4=VERY OVERCAST	
OLKS- 244	4/30/79	1151.	2			4=VERY OVERCAST	
OLKS- 247	5/ 7/79	1214.	2			4=VERY OVERCAST	
OLKS- 250	5/14/79	1158.	2			2=SLIGHT OVERCAST	
OLKS- 253	5/21/79	1039.	2			1=CLEAR	
OLKS- 301	5/29/79	1333.	2			2=SLIGHT OVERCAST	
OLKS- 304	6/ 4/79	1046.	2			2=SLIGHT OVERCAST	
OLKS- 307	6/11/79	1019.	2			2=SLIGHT OVERCAST	
OLKS- 310	6/18/79	1021.	2			1=CLEAR	
OLKS- 313	6/25/79	1051.	2			1=CLEAR	
OLKS- 316	7/ 2/79	1024.	2			3=MEDIUM OVERCAST	
OLKS- 318	7/ 9/79	1035.	2			1=CLEAR	

COMMENTS FOR SELECTED SAMPLES OF PROJECT OLKS DATE OF PRINT[illegible]

SAMPLE	DATE MO/DA/YR	TIME	STATION	UP,DOWN STREAM	DISCHARGE	WEATHER	SAMPLE TYPE
OLKS- 321	7/16/79	1045.	2			3=MEDIUM OVERCAST	
OLKS- 324	7/23/79	1244.	2			3=MEDIUM OVERCAST	
OLKS- 327	7/30/79	1052.	2			1=CLEAR	
OLKS- 331	8/13/79	1025.	2			1=CLEAR	
OLKS- 334	8/20/79	1057.	2			2=SLIGHT OVERCAST	
OLKS- 337	8/27/79	1102.	2			3=MEDIUM OVERCAST	
OLKS- 340	9/ 5/79	1040.	2			2=SLIGHT OVERCAST	
OLKS- 225	4/ 2/79	1125.	3			1=CLEAR	
OLKS- 228	4/ 2/79	1320.	3			1=CLEAR	20=AUT[illegible]
OLKS- 229	4/ 2/79	1520.	3			1=CLEAR	20=AUT[illegible]
OLKS- 230	4/ 2/79	1920.	3			1=CLEAR	20=AUT[illegible]
OLKS- 231	4/ 3/79	120.	3			1=CLEAR	20=AUT[illegible]
OLKS- 232	4/ 3/79	720.	3			1=CLEAR	20=AUT[illegible]
OLKS- 233	4/ 3/79	1120.	3			1=CLEAR	20=AUT[illegible]
OLKS- 234	4/ 9/79	1155.	3			3=MEDIUM OVERCAST	
OLKS- 237	4/16/79	1133.	3			1=CLEAR	
OLKS- 240	4/23/79	1100.	3			4=VERY OVERCAST	
OLKS- 243	4/30/79	1108.	3			5=DRIZZLE	
OLKS- 246	5/ 7/79	1134.	3			5=DRIZZLE	
OLKS- 249	5/14/79	956.	3			2=SLIGHT OVERCAST	
OLKS- 252	5/21/79	950.	3			1=CLEAR	
OLKS- 300	5/29/79	1211.	3			3=MEDIUM OVERCAST	
OLKS- 303	6/ 4/79	1009.	3			2=SLIGHT OVERCAST	
OLKS- 306	6/11/79	944.	3			2=SLIGHT OVERCAST	
OLKS- 309	6/18/79	947.	3			1=CLEAR	
OLKS- 312	6/25/79	1007.	3			1=CLEAR	
OLKS- 315	7/ 2/79	947.	3			2=SLIGHT OVERCAST	
OLKS- 320	7/16/79	958.	3			2=SLIGHT OVERCAST	
OLKS- 323	7/23/79	1129.	3			3=MEDIUM OVERCAST	
OLKS- 326	7/30/79	1013.	3			1=CLEAR	
OLKS- 330	8/13/79	954.	3			1=CLEAR	
OLKS- 333	8/20/79	1008.	3			2=SLIGHT OVERCAST	
OLKS- 336	8/27/79	1004.	3			3=MEDIUM OVERCAST	
OLKS- 339	9/ 5/79	956.	3			2=SLIGHT OVERCAST	
OLKS- 342	9/10/79	1215.	3			3=MEDIUM OVERCAST	
OLKS- 344	9/24/79	1017.	3			3=MEDIUM OVERCAST	

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATI[

PROJECT OPVN — DATE OF PRINTI[

PARAMETER — RANGE OF VALUES — UNITS

DATE — 4/ 1/79 - 9/31/79 — MO/DA/YR

STATION = 1 — CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OPVN- 39	1	4/ 4/79	272.	7.52	21.0	125.
OPVN- 40	1	4/11/79	303.	7.38	9.8	136.
OPVN- 41	1	4/25/79	389.	7.30	28.0	118.
OPVN- 42	1	5/ 2/79	362.	7.38	6.0	146.
OPVN- 43	1	5/ 9/79	354.	7.40	6.5	124.
OPVN- 44	1	5/17/79	68.	5.87	1.0	307.
OPVN- 46	1	5/23/79	77.	6.16	1.1	308.
OPVN- 300	1	5/30/79	96.	6.46	1.5	346.
OPVN- 301	1	6/ 6/79	107.	6.45	4.1	321.
OPVN- 302	1	6/13/79	102.	6.38	17.0	235.
OPVN- 303	1	6/20/79	128.	6.44	9.7	181.
OPVN- 304	1	6/27/79	114.	6.43	2.9	108.
OPVN- 307	1	7/ 4/79	69.	5.45	0.8	236.
OPVN- 309	1	7/11/79	84.	5.67	0.7	478.
OPVN- 312	1	7/18/79	67.	5.64	1.1	458.
OPVN- 315	1	7/24/79	71.	5.74	1.2	317.
OPVN- 318	1	8/ 1/79	75.	5.42	0.5	396.
OPVN- 321	1	8/ 7/79	60.	5.69	0.7	325.
OPVN- 324	1	8/15/79	55.	5.21	0.5	341.
OPVN- 327	1	8/21/79	60.	5.62	0.7	337.
OPVN- 330	1	8/28/79	60.	5.38	0.6	256.
OPVN- 333	1	9/ 3/79	30.	5.55	1.5	139.
OPVN- 334	1	9/12/79	39.	5.49	0.5	263.
OPVN- 335	1	9/19/79	34.	5.84	0.4	237.
OPVN- 337	1	9/25/79	40.	5.74	0.6	268.

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATI

PROJECT OPVN DATE OF PRINTIN

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 1 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
OPVN- 39	1	4/ 4/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.01
OPVN- 40	1	4/11/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OPVN- 41	1	4/25/79	0.142	0.116	0.026	0.90	1.04
OPVN- 42	1	5/ 2/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OPVN- 43	1	5/ 9/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OPVN- 44	1	5/17/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OPVN- 46	1	5/23/79	< 0.008	< 0.004	< 0.008	0.03	0.04
OPVN- 300	1	5/30/79	< 0.008	< 0.004	0.012	0.04	0.0[illegible]
OPVN- 301	1	6/ 6/79	< 0.006	< 0.004	0.009	0.02	0.03
OPVN- 302	1	6/13/79	< 0.008	< 0.004	< 0.008	0.03	0.04
OPVN- 303	1	6/20/79	< 0.008	< 0.004	< 0.008	0.02	0.03
OPVN- 304	1	6/27/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.01
OPVN- 307	1	7/ 4/79	< 0.008	< 0.004	< 0.008	0.03	0.04
OPVN- 309	1	7/11/79	0.012		0.015	0.03	0.04
OPVN- 312	1	7/18/79	0.008		0.012	0.01	0.02
OPVN- 315	1	7/24/79	0.010	< 0.004	0.009	< 0.01	0.02
OPVN- 318	1	8/ 1/79	0.007		0.013	0.02	0.03
OPVN- 321	1	8/ 7/79	0.009		0.011	0.02	0.03
OPVN- 324	1	8/15/79	0.006		0.011	0.01	0.02
OPVN- 327	1	8/21/79	0.009		0.011	0.01	0.02
OPVN- 330	1	8/28/79	0.006		0.009	0.01	0.02
OPVN- 333	1	9/ 3/79	< 0.004	< 0.004	< 0.004	0.01	0.01
OPVN- 334	1	9/12/79	0.005		0.008	0.03	0.04
OPVN- 335	1	9/19/79	< 0.004	< 0.004	0.008	< 0.01	< 0.0[illegible]
OPVN- 337	1	9/25/79			0.010	< 0.01	

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATIC

PROJECT OPVN DATE OF PRINTIN

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION * 1 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
OPVN- 39	1	4/ 4/79	3.36	3.35	3.37	< 0.010	0.206
OPVN- 40	1	4/11/79	2.96	2.92	2.97	< 0.040	0.121
OPVN- 41	1	4/25/79	4.10	3.20	4.24	< 0.040	0.248
OPVN- 42	1	5/ 2/79	2.90	2.86	2.91	< 0.010	0.127
OPVN- 43	1	5/ 9/79	2.81	2.77	2.82		0.100
OPVN- 44	1	5/17/79	2.10	2.06	2.11	< 0.040	0.054
OPVN- 46	1	5/23/79	1.86	1.83	1.87	< 0.010	0.037
OPVN- 300	1	5/30/79	2.14	2.10	2.15	< 0.010	0.075
OPVN- 301	1	6/ 6/79	2.44	2.42	2.45	< 0.010	0.101
OPVN- 302	1	6/13/79	3.14	3.11	3.15	0.017	0.230
OPVN- 303	1	6/20/79	3.42	3.40	3.43	< 0.010	0.241
OPVN- 304	1	6/27/79	1.56	1.55	1.57	< 0.010	0.066
OPVN- 307	1	7/ 4/79	1.80	1.77	1.81	0.016	0.088
OPVN- 309	1	7/11/79	2.35	2.32	2.36	0.050	0.164
OPVN- 312	1	7/18/79	2.23	2.22	2.24	0.025	0.091
OPVN- 315	1	7/24/79	2.22	2.21	2.23	< 0.010	< 0.010
OPVN- 318	1	8/ 1/79	2.09	2.07	2.10	< 0.010	0.027
OPVN- 321	1	8/ 7/79	2.18	2.16	2.19	< 0.010	0.045
OPVN- 324	1	8/15/79	1.94	1.93	1.95	< 0.010	0.038
OPVN- 327	1	8/21/79	1.81	1.80	1.82	< 0.010	0.033
OPVN- 330	1	8/28/79	1.92	1.91	1.93	< 0.010	0.050
OPVN- 333	1	9/ 3/79	0.68	0.67	0.68	< 0.010	0.020
OPVN- 334	1	9/12/79	1.27	1.24	1.28	< 0.010	0.023
OPVN- 335	1	9/19/79	1.11	1.10	1.11	< 0.010	0.024
OPVN- 337	1	9/25/79	1.27	1.26		< 0.010	0.029

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATI

PROJECT OPVN DATE OF PRINTI

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 1 CODE

	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
NUM. VALS.			25	25	25	25
AVERAGE			125.	6.14	4.7	260.
ST. DEV.			112.	0.74	7.2	106.
MIN. VAL.			30.	5.21	0.4	108.
MAX. VAL.			389.	7.52	28.0	478.

	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
NUM. VALS.			24	16	25	25	24
AVERAGE			0.013	0.011	0.010	0.06	0.0[illegible]
ST. DEV.			0.027	0.028	0.004	0.18	0.[illegible]
MIN. VAL.			0.004	0.004	0.004	0.01	0.0[illegible]
MAX. VAL.			0.142	0.116	0.026	0.90	1.[illegible]

	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
NUM. VALS.			25	25	24	24	25
AVERAGE			2.23	2.17	2.28	0.017	0.0[illegible]
ST. DEV.			0.79	0.72	0.80	0.012	0.0[illegible]
MIN. VAL.			0.68	0.67	0.68	0.010	0.01[illegible]
MAX. VAL.			4.10	3.40	4.24	0.050	0.2[illegible]

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATI

PROJECT OPVN   DATE OF PRINTIN

PARAMETER   RANGE OF VALUES   UNITS

DATE   4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 2   CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OPVN- 306	2	6/27/79	62.	5.56	4.0	135.
OPVN- 311	2	7/11/79	72.	5.20	0.8	259.
OPVN- 314	2	7/18/79	57.	5.29	0.7	152.
OPVN- 317	2	7/24/79	72.	5.26	1.8	139.
OPVN- 320	2	8/ 1/79	76.	5.14	3.9	154.
OPVN- 323	2	8/ 7/79	53.	5.28	2.3	113.
OPVN- 326	2	8/15/79	50.	5.22	1.1	152.
OPVN- 329	2	8/21/79	60.	5.43	1.3	146.
OPVN- 332	2	8/28/79	54.	5.38	1.6	109.

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATIO

PROJECT OPVN DATE OF PRINTIN

PARAMETER RANGE OF VALUES UNITS

OATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 2 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
OPVN- 306	2	6/27/79	< 0.008	< 0.004	< 0.008	0.02	0.03
OPVN- 311	2	7/11/79	0.007		0.010	0.02	0.03
OPVN- 314	2	7/18/79	0.005	< 0.004	0.004	< 0.01	0.02
OPVN- 317	2	7/24/79	< 0.004	< 0.004	0.005	< 0.01	< 0.01
OPVN- 320	2	8/ 1/79	< 0.004	< 0.004	0.006	0.02	0.02
OPVN- 323	2	8/ 7/79	< 0.004	< 0.004	< 0.004	< 0.01	< 0.01
OPVN- 326	2	8/15/79	< 0.004	< 0.004	0.004	0.01	0.01
OPVN- 329	2	8/21/79	< 0.004	< 0.004	< 0.004	< 0.01	< 0.01
OPVN- 332	2	8/28/79	< 0.004	< 0.004	< 0.004	0.02	0.02

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATIO

PROJECT OPVN DATE OF PRINTIN

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 2 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
OPVN- 306	2	6/27/79	3.21	3.19	3.22	< 0.010	0.115
OPVN- 311	2	7/11/79	2.47	2.45	2.48	< 0.010	0.044
OPVN- 314	2	7/18/79	1.82	1.81	1.83	< 0.010	0.021
OPVN- 317	2	7/24/79	2.46	2.45	2.46	< 0.010	0.037
OPVN- 320	2	8/ 1/79	5.75	5.73	5.75	< 0.010	0.182
OPVN- 323	2	8/ 7/79	2.80	2.79	2.80	< 0.010	0.058
OPVN- 326	2	8/15/79	1.94	1.93	1.94	< 0.010	0.041
OPVN- 329	2	8/21/79	3.83	3.82	3.83	< 0.010	0.070
OPVN- 332	2	8/28/79	2.68	2.66	2.68	< 0.010	0.060

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATI

PROJECT OPVN DATE OF PRINTI

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 2 CODE

	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
NUM. VALS.			9	9	9	9
AVERAGE			62.	5.31	1.9	151.
ST. DEV.			9.	0.13	1.2	44.
MIN. VAL.			50.	5.14	0.7	109.
MAX. VAL.			76.	5.56	4.0	259.

	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH MG N/L
NUM. VALS.			9	8	9	9	9
AVERAGE			0.005	0.004	0.005	0.01	0.0
ST. DEV.			0.002		0.002	0.01	0.0
MIN. VAL.			0.004	0.004	0.004	0.01	0.0
MAX. VAL.			0.008	0.004	0.010	0.02	0.0

	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/
NUM. VALS.			9	9	9	9	9
AVERAGE			3.00	2.98	3.00	0.010	0.07
ST. DEV.			1.20	1.20	1.20	0.000	0.05
MIN. VAL.			1.82	1.81	1.83	0.010	0.02
MAX. VAL.			5.75	5.73	5.75	0.010	0.1[illegible]

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY ST

PROJECT OPVN DATE OF PRI

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 3 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OPVN- 45	3	5/17/79	68.	5.45	1.5	300.
OPVN- 47	3	5/23/79	128.	6.08	1.4	254.
OPVN- 305	3	6/27/79	134.	5.04	1.7	117.
OPVN- 308	3	7/ 4/79	47.	5.32	1.3	219.
OPVN- 310	3	7/11/79	70.	5.07	0.9	173.
OPVN- 313	3	7/18/79	55.	5.26	0.6	248.
OPVN- 316	3	7/24/79	66.	5.24	1.8	200.
OPVN- 319	3	8/ 1/79	71.	5.07	2.6	167.
OPVN- 322	3	8/ 7/79	55.	5.16	0.6	146.
OPVN- 325	3	8/15/79	50.	5.35	0.9	126.
OPVN- 328	3	8/21/79	62.	5.12	3.1	193.
OPVN- 331	3	8/28/79	60.	5.08	2.9	157.

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OPVN DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 3 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR		NOX MG N/L		NO3 MG N/L		NO2 MG N/L		NH4 MG N/L		NOX+NH4 MG N/L
OPVN- 45	3	5/17/79	<	0.008	<	0.004	<	0.008	<	0.04	<	0.01
OPVN- 47	3	5/23/79	<	0.008	<	0.004	<	0.008		0.04		0.05
OPVN- 305	3	6/27/79	<	0.008	<	0.004	<	0.008		0.05		0.06
OPVN- 308	3	7/ 4/79	<	0.008	<	0.004	<	0.008		0.01		0.02
OPVN- 310	3	7/11/79		0.005				0.007		0.02		0.03
OPVN- 313	3	7/18/79		0.006				0.007	<	0.01		0.02
OPVN- 316	3	7/24/79	<	0.004	<	0.004		0.007	<	0.01	<	0.01
OPVN- 319	3	8/ 1/79	<	0.004	<	0.004		0.007		0.01		0.01
OPVN- 322	3	8/ 7/79		0.004				0.005		0.01		0.01
OPVN- 325	3	8/15/79	<	0.004	<	0.004	<	0.004	<	0.01	<	0.01
OPVN- 328	3	8/21/79		0.005				0.007	<	0.01		0.02
OPVN- 331	3	8/28/79	<	0.004	<	0.004		0.005		0.01		0.01

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATIO

PROJECT OPVN DATE OF PRINTIN

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 3 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
OPVN- 45	3	5/17/79	3.03	2.99	3.04	< 0.040	0.060
OPVN- 47	3	5/23/79	2.35	2.31	2.36	0.012	0.036
OPVN- 305	3	6/27/79	1.59	1.54	1.60	< 0.010	0.038
OPVN- 308	3	7/ 4/79	2.75	2.74	2.76	< 0.010	0.040
OPVN- 310	3	7/11/79	1.77	1.75	1.78	< 0.010	0.054
OPVN- 313	3	7/18/79	1.60	1.59	1.61	< 0.010	0.027
OPVN- 316	3	7/24/79	2.89	2.88	2.89	< 0.010	0.037
OPVN- 319	3	8/ 1/79	3.37	3.36	3.37	< 0.010	0.060
OPVN- 322	3	8/ 7/79	1.31	1.30	1.31	< 0.010	0.014
OPVN- 325	3	8/15/79	1.18	1.17	1.18	< 0.010	0.020
OPVN- 328	3	8/21/79	10.15	10.14	10.15	< 0.010	0.083
OPVN- 331	3	8/28/79	2.91	2.90	2.91	< 0.010	0.048

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATI

PROJECT OPVN DATE OF PRINTI

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 3 CODE

	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
NUM. VALS.			12	12	12	12
AVERAGE			72.	5.27	1.6	192.
ST. DEV.			29.	0.29	0.9	55.
MIN. VAL.			47.	5.04	0.6	117.
MAX. VAL.			134.	6.08	3.1	300.

	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH MG N/L
NUM. VALS.			12	8	12	12	12
AVERAGE			0.006	0.004	0.007	0.02	0.0
ST. DEV.			0.002		0.001	0.02	0.0
MIN. VAL.			0.004	0.004	0.004	0.01	0.0
MAX. VAL.			0.008	0.004	0.008	0.05	0.0

	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/
NUM. VALS.			12	12	12	12	12
AVERAGE			2.91	2.89	2.91	0.013	0.04
ST. DEV.			2.40	2.40	2.40	0.009	0.01
MIN. VAL.			1.18	1.17	1.18	0.010	0.01
MAX. VAL.			10.15	10.14	10.15	0.040	0.08

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATIO

PROJECT OPVN DATE OF PRINTIN

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 4 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OPVN- 336	4	9/19/79	38.	5.83	0.9	335.
OPVN- 338	4	9/25/79	37.	5.74	0.7	518.

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATI

PROJECT OPVN DATE OF PRINTI

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 4 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH MG N/L
OPVN- 336	4	9/19/79	< 0.004	< 0.004	0.011	< 0.01	< 0.0
OPVN- 338	4	9/25/79			0.011	0.01	

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATIO

PROJECT OPVN DATE OF PRINTIN

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 4 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
OPVN- 336	4	9/19/79	2.06	2.05	2.06	< 0.010	0.057
OPVN- 338	4	9/25/79	1.39	1.38		< 0.010	0.055

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY ST

PROJECT OPVN DATE OF PRI

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 4 CODE

	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
NUM. VALS.			2	2	2	2
AVERAGE			38.	5.79	0.8	427.
ST. DEV.			1.	0.06	0.1	129.
MIN. VAL.			37.	5.74	0.7	335.
MAX. VAL.			38.	5.83	0.9	518.

	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L
NUM. VALS.			1	1	2	2
AVERAGE			0.004	0.004	0.011	0.01
ST. DEV.					0.000	0.00
MIN. VAL.			0.004	0.004	0.011	0.01
MAX. VAL.			0.004	0.004	0.011	0.01

	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TP MG
NUM. VALS.			2	2	1	2	
AVERAGE			1.73	1.72	2.06	0.010	0
ST. DEV.			0.47	0.47		0.000	0
MIN. VAL.			1.39	1.38	2.06	0.010	0
MAX. VAL.			2.06	2.05	2.06	0.010	0

SAMPLE	DATE MO/DA/YR	TIME	STATION	UP,DOWN STREAM	DISCHARGE	WEATHER	SAMPLE TYPE	C(
OPVN- 39	4/ 4/79	1255.	1			3=MEDIUM OVERCAST		
OPVN- 40	4/11/79	1316.	1			2=SLIGHT OVERCAST		
OPVN- 41	4/25/79	939.	1			4=VERY OVERCAST		
OPVN- 42	5/ 2/79	1336.	1			3=MEDIUM OVERCAST		
OPVN- 43	5/ 9/79	948.	1			4=VERY OVERCAST		
OPVN- 44	5/17/79	1121.	1			4=VERY OVERCAST		
OPVN- 46	5/23/79	1216.	1			4=VERY OVERCAST		
OPVN- 300	5/30/79	931.	1			2=SLIGHT OVERCAST		
OPVN- 301	6/ 6/79	943.	1			1=CLEAR		
OPVN- 302	6/13/79	925.	1			4=VERY OVERCAST		
OPVN- 303	6/20/79	937.	1			1=CLEAR		
OPVN- 304	6/27/79	1305.	1			4=VERY OVERCAST		
OPVN- 307	7/ 4/79	939.	1			1=CLEAR		
OPVN- 309	7/11/79	1008.	1			2=SLIGHT OVERCAST		
OPVN- 312	7/18/79	928.	1			2=SLIGHT OVERCAST		
OPVN- 315	7/24/79	939.	1			4=VERY OVERCAST		
OPVN- 318	8/ 1/79	934.	1			1=CLEAR		
OPVN- 321	8/ 7/79	950.	1			3=MEDIUM OVERCAST		
OPVN- 324	8/15/79	948.	1			3=MEDIUM OVERCAST		
OPVN- 327	8/21/79	930.	1			2=SLIGHT OVERCAST		
OPVN- 330	8/28/79	950.	1			2=SLIGHT OVERCAST		
OPVN- 333	9/ 3/79	1113.	1			4=VERY OVERCAST		
OPVN- 334	9/12/79	1015.	1			3=MEDIUM OVERCAST		
OPVN- 335	9/19/79	1010.	1			4=VERY OVERCAST		
OPVN- 337	9/25/79	1000.	1			3=MEDIUM OVERCAST		
OPVN- 306	6/27/79	1328.	2			4=VERY OVERCAST		
OPVN- 311	7/11/79	1038.	2			2=SLIGHT OVERCAST		
OPVN- 314	7/18/79	1004.	2			2=SLIGHT OVERCAST		
OPVN- 317	7/24/79	1009.	2			4=VERY OVERCAST		
OPVN- 320	8/ 1/79	1000.	2			1=CLEAR		
OPVN- 323	8/ 7/79	1017.	2			3=MEDIUM OVERCAST		
OPVN- 326	8/15/79	1020.	2			3=MEDIUM OVERCAST		
OPVN- 329	8/21/79	1003.	2			3=MEDIUM OVERCAST		
OPVN- 332	8/28/79	1024.	2			2=SLIGHT OVERCAST		
OPVN- 45	5/17/79	1206.	3			4=VERY OVERCAST		
OPVN- 47	5/23/79	1300.	3			3=MEDIUM OVERCAST		
OPVN- 305	6/27/79	1319.	3			4=VERY OVERCAST		
OPVN- 308	7/ 4/79	956.	3			1=CLEAR		
OPVN- 310	7/11/79	1029.	3			2=SLIGHT OVERCAST		
OPVN- 313	7/18/79	951.	3			2=SLIGHT OVERCAST		

SAMPLE	DATE MO/DA/YR	TIME	STATION	UP,DOWN STREAM	DISCHARGE	WEATHER	SAMPLE TYPE
OPVN- 316	7/24/79	958.	3			4=VERY OVERCAST	
OPVN- 319	8/ 1/79	948.	3			1=CLEAR	
OPVN- 322	8/ 7/79	1009.	3			3=MEDIUM OVERCAST	
OPVN- 325	8/15/79	1008.	3			3=MEDIUM OVERCAST	
OPVN- 328	8/21/79	948.	3			3=MEDIUM OVERCAST	
OPVN- 331	8/28/79	1009.	3			2=SLIGHT OVERCAST	
OPVN- 336	9/19/79	1027.	4			4=VERY OVERCAST	
OPVN- 338	9/25/79	1016.	4			3=MEDIUM OVERCAST	

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OSEZ DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 1 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OSEZ- 192	1	4/ 3/79	429.	7.13	47.0	255.
OSEZ- 203	1	4/10/79	411.	7.96	51.5	268.
OSEZ- 204	1	4/17/79	436.	7.28	43.0	256.
OSEZ- 210	1	4/24/79	443.	7.56	38.5	151.
OSEZ- 215	1	5/ 1/79	424.	7.33	31.5	174.
OSEZ- 221	1	5/ 8/79	485.	7.29	21.0	186.
OSEZ- 227	1	5/15/79	195.	6.65	8.0	313.
OSEZ- 233	1	5/22/79	402.	7.04	34.0	173.
OSEZ- 300	1	5/29/79	144.	6.76	7.3	235.
OSEZ- 306	1	6/ 5/79	343.	6.98	17.5	264.
OSEZ- 312	1	6/12/79	328.	7.15	15.5	216.
OSEZ- 318	1	6/19/79	925.	7.80	21.0	209.
OSEZ- 332	1	6/26/79	451.	7.71	8.0	116.
OSEZ- 333	1	6/26/79	450.	7.85	8.7	117.
OSEZ- 334	1	6/26/79	438.	7.81	7.9	120.
OSEZ- 335	1	6/26/79	435.	7.82	8.2	126.
OSEZ- 336	1	6/26/79	445.	7.83	8.6	125.
OSEZ- 337	1	6/26/79	444.	7.83	8.4	127.
OSEZ- 338	1	6/26/79	443.	7.88	8.0	125.
OSEZ- 339	1	6/26/79	447.	7.93	8.1	125.
OSEZ- 340	1	6/26/79	447.	7.75	7.9	116.
OSEZ- 341	1	6/26/79	441.	7.80	9.1	117.
OSEZ- 347	1	7/ 3/79	570.	7.49	19.5	190.
OSEZ- 353	1	7/10/79	265.	7.04	7.4	215.
OSEZ- 372	1	7/17/79	502.	7.34	30.0	352.
OSEZ- 378	1	7/23/79	900.	7.75	21.0	216.
OSEZ- 384	1	7/31/79	410.	7.23	20.0	132.
OSEZ- 412	1	8/ 8/79	385.	7.31	12.0	108.
OSEZ- 418	1	8/14/79	372.	7.07	16.0	115.
OSEZ- 424	1	8/22/79	393.	7.43	7.6	96.
OSEZ- 430	1	8/29/79	820.	7.84	17.0	150.
OSEZ- 436	1	9/ 6/79	265.	6.83	5.2	312.
OSEZ- 442	1	9/11/79	264.	6.80	5.0	342.
OSEZ- 448	1	9/18/79	224.	6.60	2.9	307.
OSEZ- 454	1	9/26/79	158.	6.44	4.1	288.

UPLANDS DEMONSTRATTON PROJECT DATA LISTED BY STA

PROJECT OSEZ DATE OF PRIN

PARAMETEP RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 1 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+N MG N
OSEZ- 192	1	4/ 3/79	0.011	< 0.004	0.010	0.12	
OSEZ- 203	1	4/10/79	< 0.008	< 0.004	< 0.008	< 0.04	<
OSEZ- 204	1	4/17/79	< 0.008	< 0.004	< 0.008	0.04	
OSEZ- 210	1	4/24/79	< 0.008	< 0.004	< 0.008	< 0.04	<
OSEZ- 215	1	5/ 1/79	< 0.008	< 0.004	< 0.008	0.05	
OSEZ- 221	1	5/ 8/79	< 0.008	< 0.004	< 0.008	4.6P	
OSEZ- 227	1	5/15/79	0.078	0.070	< 0.008	0.50	
OSEZ- 233	1	5/22/79	< 0.008	< 0.004	< 0.008	< 0.01	<
OSEZ- 300	1	5/29/79	0.080	0.060	0.020	1.12	
OSEZ- 306	1	6/ 5/79	0.057	0.046	0.011	0.22	
OSEZ- 312	1	6/12/79	0.012	< 0.004	< 0.008	0.04	
OSEZ- 318	1	6/19/79	< 0.008	< 0.004	< 0.008	14.64	1
OSEZ- 332	1	6/26/79	< 0.008	< 0.004	0.010	0.01	
OSEZ- 333	1	6/26/79	< 0.008	< 0.004	0.011	0.02	
OSEZ- 334	1	6/26/79	< 0.008	< 0.004	0.011	0.02	
OSEZ- 335	1	6/26/79	< 0.008	< 0.004	0.010	0.02	
OSEZ- 336	1	6/26/79	< 0.008	< 0.004	0.010	0.02	
OSEZ- 337	1	6/26/79	< 0.008	< 0.004	< 0.008	0.02	
OSEZ- 338	1	6/26/79	< 0.008	< 0.004	< 0.008	0.01	
OSEZ- 339	1	6/26/79	< 0.008	< 0.004	< 0.008	0.02	
OSEZ- 340	1	6/26/79	< 0.008	< 0.004	< 0.008	< 0.01	<
OSEZ- 341	1	6/26/79	< 0.008	< 0.004	< 0.008	0.01	
OSEZ- 347	1	7/ 3/79	< 0.008	< 0.004	< 0.008	5.32	
OSEZ- 353	1	7/10/79	0.012	< 0.004	0.009	0.15	
OSEZ- 372	1	7/17/79	0.017	< 0.004	0.013	6.29	
OSEZ- 378	1	7/23/79	0.018		0.019	20.59	2
OSEZ- 384	1	7/31/79	0.016	< 0.004	0.016	0.97	
OSEZ- 412	1	8/ 8/79	0.010	< 0.004	0.009	0.16	
OSEZ- 418	1	8/14/79	0.005	< 0.004	0.005	0.06	
OSEZ- 424	1	8/22/79	< 0.004	< 0.004	< 0.004	0.02	
OSEZ- 430	1	8/29/79	0.293	0.012	0.281	7.61	
OSEZ- 436	1	9/ 6/79	0.009		0.011	1.85	
OSEZ- 442	1	9/11/79	0.010		0.012	1.57	
OSEZ- 448	1	9/18/79	0.023	0.011	0.012	1.05	
OSEZ- 454	1	9/26/79			0.018	0.58	

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OSEZ DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 1 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
OSEZ- 192	1	4/ 3/79	3.85	3.73	3.86	0.398	1.421
OSEZ- 203	1	4/10/79	5.51	5.47	5.52	0.196	1.620
OSEZ- 204	1	4/17/79	4.32	4.28	4.33	0.173	0.799
OSEZ- 210	1	4/24/79	4.14	4.10	4.15	0.061	0.652
OSEZ- 215	1	5/ 1/79	3.51	3.46	3.52	0.101	0.579
OSEZ- 221	1	5/ 8/79	8.67	3.99	8.68	0.268	0.959
OSEZ- 227	1	5/15/79	3.84	3.34	3.92	1.465	2.173
OSEZ- 233	1	5/22/79	3.20	3.19	3.21	0.251	1.028
OSEZ- 300	1	5/29/79	3.73	2.61	3.81	2.051	2.431
OSEZ- 306	1	6/ 5/79	4.26	4.04	4.32	1.611	2.499
OSEZ- 312	1	6/12/79	2.26	2.22	2.27	0.628	1.040
OSEZ- 318	1	6/19/79	35.58	20.94	35.59	1.097	4.211
OSEZ- 332	1	6/26/79	3.22	3.21	3.23	0.929	1.339
OSEZ- 333	1	6/26/79	3.44	3.42	3.45	0.916	1.399
OSEZ- 334	1	6/26/79	3.34	3.32	3.35	0.938	1.355
OSEZ- 335	1	6/26/79	3.42	3.40	3.43	0.936	1.361
OSEZ- 336	1	6/26/79	3.47	3.45	3.48	0.940	1.399
OSEZ- 337	1	6/26/79	4.04	4.02	4.05	0.942	1.405
OSEZ- 338	1	6/26/79	3.34	3.33	3.35	0.942	1.339
OSEZ- 339	1	6/26/79	3.94	3.92	3.95	0.940	1.383
OSEZ- 340	1	6/26/79	3.39	3.38	3.40	0.931	1.355
OSEZ- 341	1	6/26/79	3.76	3.75	3.77	0.936	1.417
OSEZ- 347	1	7/ 3/79	13.05	7.73	13.06	1.288	2.453
OSEZ- 353	1	7/10/79	3.15	3.00	3.16	1.104	1.375
OSEZ- 372	1	7/17/79	13.99	7.70	14.01	5.884	7.672
OSEZ- 378	1	7/23/79	28.67	8.08	28.69	3.057	6.493
OSEZ- 384	1	7/31/79	2.61	1.64	2.63	1.671	2.414
OSEZ- 412	1	8/ 8/79	56.69	56.53	56.70	0.809	1.334
OSEZ- 418	1	8/14/79	2.20	2.14	2.21	0.811	1.472
OSEZ- 424	1	8/22/79	2.35	2.33	2.35	0.295	0.560
OSEZ- 430	1	8/29/79	13.58	5.97	13.87	2.411	4.222
OSEZ- 436	1	9/ 6/79	5.09	3.24	5.10	3.478	3.928
OSEZ- 442	1	9/11/79	5.11	3.54	5.12	3.124	3.647
OSEZ- 448	1	9/18/79	3.68	2.63	3.70	1.959	2.238
OSEZ- 454	1	9/26/79	2.91	2.33		1.056	1.312

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STA

PROJECT OSEZ DATE OF PRIN

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 1 CODE

	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
NUM. VALS.			35	35	35	35
AVERAGE			427.	7.38	16.8	192.
ST. DEV.			172.	0.44	13.0	77.
MIN. VAL.			144.	6.44	2.9	96.
MAX. VAL.			925.	7.96	51.5	352.

	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+N MG N/
NUM. VALS.			34	31	35	35	34
AVERAGE			0.024	0.010	0.018	1.94	2.
ST. DEV.			0.051	0.017	0.046	4.42	4.
MIN. VAL.			0.004	0.004	0.004	0.01	0.
MAX. VAL.			0.293	0.070	0.281	20.59	20.

	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P
NUM. VALS.			35	35	34	35	35
AVERAGE			7.75	5.81	7.92	1.274	2.0
ST. DEV.			11.12	9.41	11.26	1.169	1.5
MIN. VAL.			2.20	1.64	2.21	0.061	0.5
MAX. VAL.			56.69	56.53	56.70	5.884	7.6

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OSEZ DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 – 9/31/79 MO/DA/YR

STATION = 2 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OSEZ- 195	2	4/ 3/79	1525.	8.27	130.0	339.
OSEZ- 200	2	4/10/79	1150.	7.66	69.5	269.
OSEZ- 207	2	4/17/79	2540.	8.02	125.0	788.
OSEZ- 212	2	4/24/79	4450.	7.75	170.0	1455.
OSEZ- 218	2	5/ 1/79	1625.	8.29	160.0	440.
OSEZ- 224	2	5/ 8/79	1150.	8.33	71.0	195.
OSEZ- 230	2	5/15/79	1700.	7.87	170.0	876.
OSEZ- 236	2	5/22/79	1280.	7.91	145.0	336.
OSEZ- 303	2	5/29/79	2250.	8.11	175.0	850.
OSEZ- 309	2	6/ 5/79	1270.	7.36	145.0	439.
OSEZ- 315	2	6/12/79	1800.	7.93	150.0	452.
OSEZ- 321	2	6/19/79	1130.	8.09	150.0	262.
OSEZ- 324	2	6/21/79	1418.	7.98	62.0	125.
OSEZ- 325	2	6/21/79	1555.	8.20	70.0	176.
OSEZ- 326	2	6/21/79	1500.	8.04	65.5	155.
OSEZ- 327	2	6/21/79	1482.	8.03	82.0	199.
OSEZ- 328	2	6/21/79	1680.	8.07	128.0	270.
OSEZ- 329	2	6/21/79	1880.	8.04	165.0	510.
OSEZ- 330	2	6/21/79	1480.	7.84	153.0	380.
OSEZ- 331	2	6/21/79	1200.	7.78	125.0	270.
OSEZ- 344	2	6/26/79	1325.	7.97	170.0	425.
OSEZ- 350	2	7/ 3/79	1340.	7.53	130.0	441.
OSEZ- 356	2	7/10/79	1760.	8.56	140.0	410.
OSEZ- 359	2	7/13/79	1075.	7.70	36.0	76.
OSEZ- 360	2	7/13/79	953.	7.64	46.0	86.
OSEZ- 361	2	7/13/79	1115.	7.57	73.5	115.
OSEZ- 362	2	7/13/79	863.	7.68	34.0	64.
OSEZ- 363	2	7/13/79	1580.	8.12	128.0	219.
OSEZ- 364	2	7/13/79	2910.	8.18	155.0	523.
OSEZ- 365	2	7/13/79	1750.	7.94	148.0	421.
OSEZ- 366	2	7/13/79	1350.	7.66	130.0	321.
OSEZ- 367	2	7/13/79	1775.	7.57	170.0	684.
OSEZ- 368	2	7/13/79	1745.	7.62	155.0	514.
OSEZ- 369	2	7/13/79	2430.	8.14	170.0	602.
OSEZ- 370	2	7/13/79	1665.	8.13	128.0	279.
OSEZ- 371	2	7/13/79	1582.	7.54	150.0	464.
OSEZ- 375	2	7/17/79	1307.	8.27	130.0	303.
OSEZ- 381	2	7/23/79	1605.	8.19	143.0	443.
OSEZ- 387	2	7/31/79	1420.	8.20	160.0	372.
OSEZ- 390	2	8/ 3/79	2340.	8.56	92.0	231.

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STAT

PROJECT OSEZ DATE OF PRINT

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 2 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+N MG N/
OSEZ- 195	2	4/ 3/79	0.068	0.025	0.043	20.88	20.
OSEZ- 200	2	4/10/79	0.026	0.010	0.016	14.07	14.
OSEZ- 207	2	4/17/79	0.063	0.006	0.057	77.77	77.
OSEZ- 212	2	4/24/79	0.063	0.013	0.050	116.90	116.
OSEZ- 218	2	5/ 1/79	0.028	0.019	0.009	45.60	45.
OSEZ- 224	2	5/ 8/79	0.031	0.011	0.020	14.83	14.
OSEZ- 230	2	5/15/79	0.044	0.023	0.021	44.40	44.
OSEZ- 236	2	5/22/79	0.098	0.056	0.042	25.78	25.
OSEZ- 303	2	5/29/79	0.119	0.044	0.075	16.36	16.
OSEZ- 309	2	6/ 5/79	0.109	0.035	0.074	14.81	14.
OSEZ- 315	2	6/12/79	0.069	0.023	0.046	93.17	93.
OSEZ- 321	2	6/19/79	0.052	0.026	0.026	14.75	14.
OSEZ- 324	2	6/21/79	0.166	0.048	0.118	36.75	36.
OSEZ- 325	2	6/21/79	0.053	0.016	0.037	49.73	49.
OSEZ- 326	2	6/21/79	0.027	0.007	0.020	45.31	45.
OSEZ- 327	2	6/21/79	0.021	0.008	0.013	43.65	43.
OSEZ- 328	2	6/21/79	0.027	0.007	0.020	65.46	65.
OSEZ- 329	2	6/21/79	0.040	0.006	0.034	76.22	76.
OSEZ- 330	2	6/21/79	0.047	0.012	0.035	40.62	40.
OSEZ- 331	2	6/21/79	0.045	0.010	0.035	21.30	21.
OSEZ- 344	2	6/26/79	0.073	0.022	0.051	25.44	25.
OSEZ- 350	2	7/ 3/79	0.066	0.026	0.040	28.77	28.
OSEZ- 356	2	7/10/79	0.032	< 0.004	0.029	43.58	43.
OSEZ- 359	2	7/13/79	< 0.004	< 0.004	< 0.004	12.79	12.
OSEZ- 360	2	7/13/79	< 0.004	< 0.004	< 0.004	10.25	10.
OSEZ- 361	2	7/13/79	0.004	< 0.004	< 0.004	16.49	16.
OSEZ- 362	2	7/13/79	< 0.004	< 0.004	< 0.004	7.60	7.
OSEZ- 363	2	7/13/79	0.017	0.007	0.010	24.39	24.
OSEZ- 364	2	7/13/79	0.077	0.025	0.052	136.59	136.
OSEZ- 365	2	7/13/79	0.089	0.035	0.054	82.47	82.
OSEZ- 366	2	7/13/79	0.066	0.024	0.042	26.93	27.
OSEZ- 367	2	7/13/79	0.103	0.015	0.088	75.29	75.
OSEZ- 368	2	7/13/79	0.084	0.015	0.069	75.84	75.
OSEZ- 369	2	7/13/79	0.092	0.016	0.076	144.60	144.
OSEZ- 370	2	7/13/79	0.043	0.007	0.036	91.58	91.
OSEZ- 371	2	7/13/79	0.076	0.013	0.063	34.22	34.
OSEZ- 375	2	7/17/79	0.051	0.015	0.036	20.86	20.
OSEZ- 381	2	7/23/79	0.055	0.016	0.039	55.82	55.
OSEZ- 387	2	7/31/79	0.026	0.007	0.019	25.80	25.
OSEZ- 390	2	8/ 3/79	0.007		0.009	96.46	96.

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OSEZ DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 2 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
OSEZ- 195	2	4/ 3/79	211.10	190.22	211.17	2.663	16.645
OSEZ- 200	2	4/10/79	54.00	39.93	54.03	1.971	7.628
OSEZ- 207	2	4/17/79	279.18	201.41	279.24	6.065	28.413
OSEZ- 212	2	4/24/79	703.13	586.23	703.19	12.492	87.953
OSEZ- 218	2	5/ 1/79	149.41	103.81	149.44	7.467	23.887
OSEZ- 224	2	5/ 8/79	78.03	63.20	78.06	1.882	7.170
OSEZ- 230	2	5/15/79	182.95	138.55	182.99	9.327	51.861
OSEZ- 236	2	5/22/79	91.88	66.10	91.98	5.707	18.506
OSEZ- 303	2	5/29/79	516.80	500.44	516.92	7.497	74.886
OSEZ- 309	2	6/ 5/79	123.51	108.70	123.62	7.294	20.787
OSEZ- 315	2	6/12/79	150.41	57.24	150.48	9.240	28.549
OSEZ- 321	2	6/19/79	85.87	71.12	85.92	5.798	29.225
OSEZ- 324	2	6/21/79	94.11	57.36	94.28	3.158	6.873
OSEZ- 325	2	6/21/79	103.86	54.13	103.91	3.225	8.864
OSEZ- 326	2	6/21/79	97.82	52.51	97.85	2.936	7.924
OSEZ- 327	2	6/21/79	98.52	54.87	98.54	5.332	11.021
OSEZ- 328	2	6/21/79	139.40	73.94	139.43	8.804	19.705
OSEZ- 329	2	6/21/79	167.27	91.05	167.31	8.504	30.546
OSEZ- 330	2	6/21/79	112.92	72.30	112.97	6.763	24.849
OSEZ- 331	2	6/21/79	75.29	53.99	75.34	6.963	19.982
OSEZ- 344	2	6/26/79	145.43	119.99	145.50	5.809	25.900
OSEZ- 350	2	7/ 3/79	113.91	85.14	113.98	6.140	24.203
OSEZ- 356	2	7/10/79	223.39	179.81	223.42	6.655	24.603
OSEZ- 359	2	7/13/79	41.30	28.51	41.30	1.375	6.229
OSEZ- 360	2	7/13/79	36.48	26.23	36.48	2.343	7.932
OSEZ- 361	2	7/13/79	48.75	32.26	48.75	3.163	7.108
OSEZ- 362	2	7/13/79	27.06	19.46	27.06	1.626	3.593
OSEZ- 363	2	7/13/79	153.64	129.25	153.66	3.379	23.694
OSEZ- 364	2	7/13/79	363.15	226.56	363.23	6.350	28.967
OSEZ- 365	2	7/13/79	181.52	99.05	181.61	4.608	27.484
OSEZ- 366	2	7/13/79	105.93	79.00	106.00	5.667	21.827
OSEZ- 367	2	7/13/79	187.22	111.93	187.32	8.502	36.821
OSEZ- 368	2	7/13/79	200.80	124.96	200.88	7.705	36.272
OSEZ- 369	2	7/13/79	301.80	157.20	301.89	7.159	43.521
OSEZ- 370	2	7/13/79	152.38	60.80	152.42	3.834	17.323
OSEZ- 371	2	7/13/79	143.84	109.62	143.92	10.050	29.022
OSEZ- 375	2	7/17/79	120.39	99.53	120.44	3.538	19.410
OSEZ- 381	2	7/23/79	159.55	103.73	159.61	3.767	24.382
OSEZ- 387	2	7/31/79	136.53	110.73	136.56	3.938	26.694
OSEZ- 390	2	8/ 3/79	270.38	173.92	270.39	4.024	22.496

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATI

PROJECT OSEZ DATE OF PRINTI

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 2 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OSEZ- 391	2	8/ 3/79	1060.	7.84	46.0	102.
OSEZ- 392	2	8/ 3/79	1172.	7.78	90.0	184.
OSEZ- 393	2	8/ 3/79	1025.	7.74	40.0	119.
OSEZ- 394	2	8/ 3/79	1370.	7.72	69.0	179.
OSEZ- 395	2	8/ 3/79	1285.	7.72	115.0	256.
OSEZ- 396	2	8/ 3/79	1475.	7.89	94.5	221.
OSEZ- 397	2	8/ 3/79	1300.	7.87	117.0	218.
OSEZ- 398	2	8/ 3/79	1518.	7.81	147.0	314.
OSEZ- 399	2	8/ 3/79	2400.	8.44	165.0	402.
OSEZ- 400	2	8/ 3/79	1400.	7.92	138.0	285.
OSEZ- 401	2	8/ 3/79	1505.	7.82	152.0	330.
OSEZ- 402	2	8/ 3/79	1750.	8.23	135.0	300.
OSEZ- 403	2	8/ 3/79	1960.	8.34	140.0	335.
OSEZ- 404	2	8/ 3/79	1270.	7.72	120.0	245.
OSEZ- 405	2	8/ 3/79	1840.	8.22	130.0	303.
OSEZ- 406	2	8/ 3/79	1470.	7.90	150.0	316.
OSEZ- 407	2	8/ 3/79	1650.	8.13	128.0	281.
OSEZ- 408	2	8/ 3/79	1170.	7.61	125.0	255.
OSEZ- 409	2	8/ 3/79	1770.	7.42	560.0	488.
OSEZ- 410	2	8/ 3/79	1865.	7.30	650.0	126.
OSEZ- 411	2	8/ 3/79	1015.	7.43	48.0	128.
OSEZ- 415	2	8/ 8/79	1440.	8.16	87.0	164.
OSEZ- 421	2	8/14/79	1370.	8.26	135.0	220.
OSEZ- 427	2	8/22/79	1190.	8.27	98.0	121.
OSEZ- 433	2	8/29/79	1215.	8.05	83.0	146.
OSEZ- 439	2	9/ 6/79	1670.	8.45	135.0	127.
OSEZ- 445	2	9/11/79	1755.	8.34	165.0	286.
OSEZ- 451	2	9/18/79	1960.	8.05	142.0	216.
OSEZ- 457	2	9/26/79	1130.	7.94	117.0	190.

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OSEZ DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION # 2 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
OSEZ- 391	2	8/ 3/79	0.008	< 0.004	0.008	9.79	9.80
OSEZ- 392	2	8/ 3/79	0.006		0.007	13.96	13.97
OSEZ- 393	2	8/ 3/79	0.010		0.013	7.18	7.19
OSEZ- 394	2	8/ 3/79	0.005		0.007	32.45	32.46
OSEZ- 395	2	8/ 3/79	0.010	< 0.004	0.009	22.89	22.90
OSEZ- 396	2	8/ 3/79	0.011		0.013	36.50	36.51
OSEZ- 397	2	8/ 3/79	0.012	< 0.004	0.011	25.21	25.22
OSEZ- 398	2	8/ 3/79	0.010		0.011	37.95	37.96
OSEZ- 399	2	8/ 3/79	0.015		0.016	75.89	75.91
OSEZ- 400	2	8/ 3/79	0.014	< 0.004	0.011	37.95	37.96
OSEZ- 401	2	8/ 3/79	0.016	< 0.004	0.013	35.92	35.94
OSEZ- 402	2	8/ 3/79	0.021	0.005	0.016	46.64	46.66
OSEZ- 403	2	8/ 3/79	0.024	< 0.004	0.023	51.27	51.29
OSEZ- 404	2	8/ 3/79	0.016	< 0.004	0.012	20.86	20.88
OSEZ- 405	2	8/ 3/79	0.015	< 0.004	0.014	53.01	53.03
OSEZ- 406	2	8/ 3/79	0.013	< 0.004	0.012	29.84	29.85
OSEZ- 407	2	8/ 3/79	0.019	< 0.004	0.016	35.34	35.36
OSEZ- 408	2	8/ 3/79	0.023	0.007	0.016	12.17	12.19
OSEZ- 409	2	8/ 3/79	0.034	0.010	0.024	41.14	41.17
OSEZ- 410	2	8/ 3/79	0.011	< 0.004	0.007	6.02	6.03
OSEZ- 411	2	8/ 3/79	0.015	0.007	0.008	7.65	7.67
OSEZ- 415	2	8/ 8/79	0.013	< 0.004	0.009	8.86	8.87
OSEZ- 421	2	8/14/79	0.021	0.006	0.015	32.96	32.98
OSEZ- 427	2	8/22/79	0.020	0.012	0.008	7.99	8.01
OSEZ- 433	2	8/29/79	0.015	0.006	0.009	7.41	7.43
OSEZ- 439	2	9/ 6/79	0.014	0.006	0.008	23.15	23.16
OSEZ- 445	2	9/11/79	0.017	< 0.004	0.013	13.95	13.97
OSEZ- 451	2	9/18/79	0.015	0.004	0.011	14.32	14.34
OSEZ- 457	2	9/26/79			0.011	6.58	

PROJECT OSEZ DATE OF PRINT

PARAMETER	RANGE OF VALUES			UNITS
DATE	4/ 1/79	-	9/31/79	MO/DA/YR

STATION = 2 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P
OSEZ- 391	2	8/ 3/79	37.09	27.30	37.10	2.232	7.0
OSEZ- 392	2	8/ 3/79	66.49	52.53	66.50	4.113	18.0
OSEZ- 393	2	8/ 3/79	28.82	21.64	28.83	2.053	5.8
OSEZ- 394	2	8/ 3/79	85.22	52.77	85.23	5.435	15.1
OSEZ- 395	2	8/ 3/79	86.52	63.63	86.53	5.043	17.6
OSEZ- 396	2	8/ 3/79	119.62	83.12	119.63	3.766	14.5
OSEZ- 397	2	8/ 3/79	89.35	64.14	89.36	3.755	17.5
OSEZ- 398	2	8/ 3/79	131.38	93.43	131.39	5.468	26.6
OSEZ- 399	2	8/ 3/79	331.35	255.46	331.37	4.225	39.5
OSEZ- 400	2	8/ 3/79	133.34	95.39	133.35	4.068	26.1
OSEZ- 401	2	8/ 3/79	140.31	104.39	140.33	4.561	26.3
OSEZ- 402	2	8/ 3/79	209.77	163.13	209.79	3.744	24.2
OSEZ- 403	2	8/ 3/79	192.57	141.30	192.59	3.273	28.0
OSEZ- 404	2	8/ 3/79	88.70	67.84	88.72	3.979	18.5
OSEZ- 405	2	8/ 3/79	172.10	119.09	172.12	3.934	21.2
OSEZ- 406	2	8/ 3/79	127.24	97.40	127.25	3.889	27.5
OSEZ- 407	2	8/ 3/79	145.54	110.20	145.56	3.800	20.5
OSEZ- 408	2	8/ 3/79	76.29	64.12	76.31	4.942	23.4
OSEZ- 409	2	8/ 3/79	285.63	244.49	285.66	8.861	70.6
OSEZ- 410	2	8/ 3/79	398.86	392.84	398.87	2.826	98.6
OSEZ- 411	2	8/ 3/79	42.97	35.32	42.99	3.195	8.0
OSEZ- 415	2	8/ 8/79	107.21	98.35	107.22	2.590	13.4
OSEZ- 421	2	8/14/79	97.13	64.17	97.15	3.192	20.1
OSEZ- 427	2	8/22/79	101.97	93.98	101.99	2.263	13.6
OSEZ- 433	2	8/29/79	74.36	66.95	74.38	1.488	10.1
OSEZ- 439	2	9/ 6/79	206.61	183.46	206.62	6.076	24.8
OSEZ- 445	2	9/11/79	167.95	154.00	167.97	8.733	32.7
OSEZ- 451	2	9/18/79	179.51	165.19	179.53	5.486	28.5
OSEZ- 457	2	9/26/79	103.86	97.28		2.632	17.0

PROJECT OSEZ DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 2 CODE

	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
NUM. VALS.			69	69	69	69
AVERAGE			1579.	7.95	135.1	328.
ST. DEV.			528.	0.29	90.8	222.
MIN. VAL.			863.	7.30	34.0	64.
MAX. VAL.			4450.	8.56	650.0	1455.

	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
NUM. VALS.			68	61	69	69	68
AVERAGE			0.038	0.013	0.027	38.68	39.19
ST. DEV.			0.034	0.012	0.024	31.10	31.09
MIN. VAL.			0.004	0.004	0.004	6.02	6.03
MAX. VAL.			0.166	0.056	0.118	144.60	144.69

	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
NUM. VALS.			69	69	68	69	69
AVERAGE			154.44	115.76	155.23	4.954	24.651
ST. DEV.			112.23	98.25	112.90	2.376	17.622
MIN. VAL.			27.06	19.46	27.06	1.375	3.593
MAX. VAL.			703.13	586.23	703.19	12.492	98.674

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATI

PROJECT OSEZ DATE OF PRINTI

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 3 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OSEZ- 196	3	4/ 3/79	2040.	7.11	73.0	368.
OSEZ- 198	3	4/10/79	2075.	7.10	51.0	317.
OSEZ- 208	3	4/17/79	2165.	7.11	84.0	430.
OSEZ- 213	3	4/24/79	2200.	7.17	51.0	464.
OSEZ- 219	3	5/ 1/79	2100.	7.13	110.0	377.
OSEZ- 225	3	5/ 8/79	2050.	7.18	55.0	424.
OSEZ- 231	3	5/15/79	1950.	7.11	35.0	433.
OSEZ- 237	3	5/22/79	2100.	7.14	90.0	417.
OSEZ- 304	3	5/29/79	1930.	7.11	38.0	393.
OSEZ- 310	3	6/ 5/79	2000.	7.07	28.5	396.
OSEZ- 316	3	6/12/79	1960.	7.05	62.0	334.
OSEZ- 322	3	6/19/79	2035.	7.07	81.0	520.
OSEZ- 345	3	6/26/79	2030.	7.12	45.0	463.
OSEZ- 351	3	7/ 3/79	1970.	7.03	35.0	465.
OSEZ- 357	3	7/10/79	1840.	7.12	98.0	396.
OSEZ- 376	3	7/17/79	1915.	7.12	43.0	350.
OSEZ- 382	3	7/23/79	1880.	7.19	31.0	282.
OSEZ- 388	3	7/31/79	2050.	7.12	39.0	244.
OSEZ- 416	3	8/ 8/79	1990.	7.13	49.0	336.
OSEZ- 422	3	8/14/79	2065.	7.10	89.5	235.
OSEZ- 428	3	8/22/79	2025.	7.17	68.0	206.
OSEZ- 434	3	8/29/79	2000.	7.15	31.0	209.
OSEZ- 440	3	9/ 6/79	1812.	7.43	32.5	244.
OSEZ- 446	3	9/11/79	1805.	7.19	48.0	217.
OSEZ- 452	3	9/18/79	1920.	7.13	52.5	248.
OSEZ- 458	3	9/26/79	1705.	7.23	35.5	238.

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OSEZ DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 3 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L		NO3 MG N/L		NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
OSEZ- 196	3	4/ 3/79	0.054		0.018		0.036	74.19	74.24
OSEZ- 198	3	4/10/79	0.049		0.012		0.037	76.77	76.82
OSEZ- 208	3	4/17/79	0.051		0.011		0.040	76.64	76.69
OSEZ- 213	3	4/24/79	0.079		0.014		0.065	90.79	90.87
OSEZ- 219	3	5/ 1/79	0.009	<	0.004	<	0.008	83.58	83.59
OSEZ- 225	3	5/ 8/79	0.028		0.008		0.020	87.43	87.46
OSEZ- 231	3	5/15/79	0.031		0.017		0.014	81.87	81.90
OSEZ- 237	3	5/22/79	0.069		0.028		0.041	90.17	90.24
OSEZ- 304	3	5/29/79	0.063		0.020		0.043	86.27	86.33
OSEZ- 310	3	6/ 5/79	0.058		0.016		0.042	80.12	80.18
OSEZ- 316	3	6/12/79	0.039		0.010		0.029	78.80	78.84
OSEZ- 322	3	6/19/79	0.045		0.019		0.026	86.92	86.97
OSEZ- 345	3	6/26/79	0.057		0.012		0.045	82.30	82.36
OSEZ- 351	3	7/ 3/79	0.076		0.020		0.056	88.46	88.54
OSEZ- 357	3	7/10/79	0.037				0.039	77.56	77.60
OSEZ- 376	3	7/17/79	0.051		0.012		0.039	93.79	93.84
OSEZ- 382	3	7/23/79	0.010	<	0.004		0.009	139.66	139.67
OSEZ- 388	3	7/31/79	0.013	<	0.004		0.011	105.28	105.29
OSEZ- 416	3	8/ 8/79	0.011				0.013	61.70	61.71
OSEZ- 422	3	8/14/79	0.011	<	0.004		0.010	56.42	56.43
OSEZ- 428	3	8/22/79	0.020		0.005		0.015	52.43	52.45
OSEZ- 434	3	8/29/79	0.074		0.063		0.011	58.86	58.93
OSEZ- 440	3	9/ 6/79	0.039		0.029		0.010	57.34	57.38
OSEZ- 446	3	9/11/79	0.010				0.011	56.72	56.73
OSEZ- 452	3	9/18/79	0.007				0.008	60.83	60.84
OSEZ- 458	3	9/26/79					0.017	52.80	

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATI

PROJECT OSEZ DATE OF PRINTI

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 3 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
OSEZ- 196	3	4/ 3/79	213.85	139.66	213.90	0.016	31.36
OSEZ- 198	3	4/10/79	133.95	57.18	134.00	< 0.040	31.73
OSEZ- 208	3	4/17/79	145.74	69.10	145.79	0.034	32.49
OSEZ- 213	3	4/24/79	143.35	52.56	143.43	0.098	32.93
OSEZ- 219	3	5/ 1/79	133.11	49.53	133.12	1.791	31.21
OSEZ- 225	3	5/ 8/79	152.83	65.40	152.86	0.046	32.06
OSEZ- 231	3	5/15/79	113.11	31.24	113.14	< 0.040	27.90
OSEZ- 237	3	5/22/79	118.10	27.93	118.17	7.420	18.61
OSEZ- 304	3	5/29/79	137.32	51.05	137.38	0.026	25.34
OSEZ- 310	3	6/ 5/79	128.54	48.42	128.60	0.015	4.32
OSEZ- 316	3	6/12/79	123.73	44.93	123.77	0.049	32.91
OSEZ- 322	3	6/19/79	122.28	35.36	122.33	0.031	29.58
OSEZ- 345	3	6/26/79	131.04	48.74	131.10	0.061	25.29
OSEZ- 351	3	7/ 3/79	192.35	103.89	192.43	0.329	43.91
OSEZ- 357	3	7/10/79	118.02	40.46	118.06	10.255	24.76
OSEZ- 376	3	7/17/79	135.51	41.72	135.56	0.266	25.50
OSEZ- 382	3	7/23/79	119.97		119.98	0.560	24.35
OSEZ- 388	3	7/31/79	122.06	16.78	122.07	< 0.010	18.94
OSEZ- 416	3	8/ 8/79	122.67	60.97	122.68	2.111	24.66
OSEZ- 422	3	8/14/79	124.25	67.83	124.26	8.997	27.09
OSEZ- 428	3	8/22/79	188.87	136.44	188.89	< 0.010	44.63
OSEZ- 434	3	8/29/79	108.92	50.06	108.99	< 0.010	23.21
OSEZ- 440	3	9/ 6/79	104.92	47.58	104.96	< 0.010	19.16
OSEZ- 446	3	9/11/79	99.06	42.34	99.07	9.846	24.8
OSEZ- 452	3	9/18/79	105.51	44.68	105.52	8.112	21.46
OSEZ- 458	3	9/26/79	79.03	26.23		0.289	32.20

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OSEZ DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 3 CODE

	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
NUM. VALS.			26	26	26	26
AVERAGE			1985.	7.14	56.0	346.
ST. DEV.			114.	0.07	23.5	94.
MIN. VAL.			1705.	7.03	28.5	206.
MAX. VAL.			2200.	7.43	110.0	520.

	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
NUM. VALS.			25	21	26	26	25
AVERAGE			0.040	0.016	0.027	78.37	79.44
ST. DEV.			0.024	0.013	0.017	19.08	18.73
MIN. VAL.			0.007	0.004	0.008	52.43	52.45
MAX. VAL.			0.079	0.063	0.065	139.66	139.67

	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
NUM. VALS.			26	25	25	26	26
AVERAGE			131.47	56.00	133.60	1.941	27.334
ST. DEV.			29.35	30.01	27.90	3.545	7.997
MIN. VAL.			79.03	16.78	99.07	0.010	4.327
MAX. VAL.			213.85	139.66	213.90	10.255	44.631

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATI

PROJECT OSEZ DATE OF PRINTI

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 4 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OSEZ- 197	4	4/ 3/79	1600.	7.62	21.5	274.
OSEZ- 199	4	4/10/79	1680.	7.53	21.5	248.
OSEZ- 209	4	4/17/79	1910.	7.43	74.0	323.
OSEZ- 214	4	4/24/79	1840.	7.37	30.0	245.
OSEZ- 220	4	5/ 1/79	1765.	7.53	35.5	762.
OSEZ- 226	4	5/ 8/79	1765.	7.39	50.0	312.
OSEZ- 232	4	5/15/79	1550.	7.57	25.0	234.
OSEZ- 238	4	5/22/79	1950.	7.36	67.0	247.
OSEZ- 305	4	5/29/79	1560.	7.47	24.0	227.
OSEZ- 311	4	6/ 5/79	1550.	7.43	33.5	202.
OSEZ- 317	4	6/12/79	1555.	7.38	47.5	243.
OSEZ- 323	4	6/19/79	1790.	7.34	72.0	281.
OSEZ- 346	4	6/26/79	1750.	7.47	28.0	248.
OSEZ- 352	4	7/ 3/79	1745.	7.39	23.0	271.
OSEZ- 358	4	7/10/79	1585.	7.44	46.0	272.
OSEZ- 377	4	7/17/79	1560.	7.51	19.0	251.
OSEZ- 383	4	7/23/79	1660.	7.47	19.5	268.
OSEZ- 389	4	7/31/79	1735.	7.53	21.5	277.
OSEZ- 417	4	8/ 8/79	1650.	7.48	21.0	238.
OSEZ- 423	4	8/14/79	1680.	7.45	40.0	240.
OSEZ- 429	4	8/22/79	1680.	7.51	25.5	248.
OSEZ- 435	4	8/29/79	1745.	7.52	33.5	218.
OSEZ- 441	4	9/ 6/79	1540.	7.71	20.0	211.
OSEZ- 447	4	9/11/79	1560.	7.50	28.0	222.
OSEZ- 453	4	9/18/79	1540.	7.67	16.8	208.
OSEZ- 459	4	9/26/79	1365.	7.66	22.0	213.

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OSEZ DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 4 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
OSEZ- 197	4	4/ 3/79	0.124	0.049	0.075	17.11	17.23
OSEZ- 199	4	4/10/79	0.269	0.139	0.130	14.63	14.90
OSEZ- 209	4	4/17/79	0.034	0.007	0.027	37.93	37.96
OSEZ- 214	4	4/24/79	0.013		0.016	27.89	27.90
OSEZ- 220	4	5/ 1/79	< 0.008	< 0.004	< 0.008	21.96	21.97
OSEZ- 226	4	5/ 8/79	0.015		0.016	33.90	33.91
OSEZ- 232	4	5/15/79	< 0.008	< 0.004	< 0.008	25.06	25.07
OSEZ- 238	4	5/22/79	0.014	< 0.004	0.011	45.22	45.23
OSEZ- 305	4	5/29/79	0.013	< 0.004	0.013	30.53	30.54
OSEZ- 311	4	6/ 5/79	0.011	< 0.004	0.011	23.08	23.09
OSEZ- 317	4	6/12/79	0.009		0.011	28.27	28.28
OSEZ- 323	4	6/19/79	0.012	< 0.004	0.011	43.68	43.69
OSEZ- 346	4	6/26/79	0.009		0.010	32.25	32.26
OSEZ- 352	4	7/ 3/79	0.011	< 0.004	0.011	45.00	45.01
OSEZ- 358	4	7/10/79	0.008		0.011	33.75	33.76
OSEZ- 377	4	7/17/79	0.009		0.010	27.32	27.33
OSEZ- 383	4	7/23/79	0.011		0.012	49.78	49.79
OSEZ- 389	4	7/31/79	0.012		0.014	37.85	37.86
OSEZ- 417	4	8/ 8/79	0.010		0.012	29.72	29.73
OSEZ- 423	4	8/14/79	0.007		0.010	27.87	27.88
OSEZ- 429	4	8/22/79	0.010		0.012	31.63	31.64
OSEZ- 435	4	8/29/79	0.008		0.010	39.10	39.11
OSEZ- 441	4	9/ 6/79	0.008		0.011	31.08	31.09
OSEZ- 447	4	9/11/79	0.009		0.012	39.28	39.29
OSEZ- 453	4	9/18/79	0.019		0.027	32.44	32.46
OSEZ- 459	4	9/26/79			0.031	27.27	

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATI

PROJECT OSEZ DATE OF PRINTI

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 4 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/
OSEZ- 197	4	4/ 3/79	37.79	20.68	37.91	3.526	8.51
OSEZ- 199	4	4/10/79	26.21	11.58	26.48	7.159	13.97
OSEZ- 209	4	4/17/79	9.62		9.65	0.765	20.14
OSEZ- 214	4	4/24/79	52.66	24.77	52.67	9.110	18.56
OSEZ- 220	4	5/ 1/79	39.73	17.77	39.74	6.361	14.58
OSEZ- 226	4	5/ 8/79	51.33	17.43	51.35	8.129	17.53
OSEZ- 232	4	5/15/79	38.61	13.55	38.62	8.779	14.50
OSEZ- 238	4	5/22/79	110.65	65.43	110.66	9.041	14.76
OSEZ- 305	4	5/29/79	48.40	17.87	48.41	9.019	13.62
OSEZ- 311	4	6/ 5/79	40.44	17.36	40.45	8.076	8.71
OSEZ- 317	4	6/12/79	43.94	15.67	43.95	8.116	13.98
OSEZ- 323	4	6/19/79	110.75	67.07	110.76	13.713	18.6
OSEZ- 346	4	6/26/79	48.20	15.95	48.21	2.127	6.20
OSEZ- 352	4	7/ 3/79	86.41	41.41	86.42	13.773	15.3
OSEZ- 358	4	7/10/79	48.71	14.96	48.72	9.482	12.8
OSEZ- 377	4	7/17/79	41.00	13.68	41.01	10.405	12.3
OSEZ- 383	4	7/23/79	68.89	19.11	68.90	9.913	13.0
OSEZ- 389	4	7/31/79	53.47	15.62	53.48	1.783	9.2
OSEZ- 417	4	8/ 8/79	48.16	18.44	48.17	9.230	10.9
OSEZ- 423	4	8/14/79	42.21	14.34	42.22	9.689	11.6
OSEZ- 429	4	8/22/79	58.41	26.78	58.42	10.208	12.8
OSEZ- 435	4	8/29/79	61.92	22.82	61.93	8.412	13.0
OSEZ- 441	4	9/ 6/79	43.07	11.99	43.08	4.526	8.2
OSEZ- 447	4	9/11/79	56.81	17.53	56.82	6.568	13.7
OSEZ- 453	4	9/18/79	57.56	25.12	57.58	2.838	7.1
OSEZ- 459	4	9/26/79	44.58	17.31		3.828	7.4

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OSEZ DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 4 CODE

	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
NUM. VALS.			26	26	26	26
AVERAGE			1666.	7.49	33.3	269.
ST. DEV.			132.	0.10	16.6	105.
MIN. VAL.			1365.	7.34	16.8	202.
MAX. VAL.			1950.	7.71	74.0	762.

	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
NUM. VALS.			25	10	26	26	25
AVERAGE			0.026	0.022	0.020	32.06	32.28
ST. DEV.			0.056	0.043	0.026	8.55	8.54
MIN. VAL.			0.007	0.004	0.008	14.63	14.90
MAX. VAL.			0.269	0.139	0.130	49.78	49.79

	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
NUM. VALS.			26	25	25	26	26
AVERAGE			52.67	22.57	53.02	7.484	12.761
ST. DEV.			22.04	14.50	22.41	3.413	3.695
MIN. VAL.			9.62	11.58	9.65	0.765	6.209
MAX. VAL.			110.75	67.07	110.76	13.773	20.140

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATI

PROJECT OSEZ DATE OF PRINTI

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 5 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB. PH	TURB JTU	COLOR UNITS
OSEZ- 193	5	4/ 3/79	600.	8.38	63.0	245.
OSEZ- 201	5	4/10/79	555.	7.86	69.0	369.
OSEZ- 206	5	4/17/79	1460.	8.33	51.0	247.
OSEZ- 211	5	4/24/79	1015.	7.37	32.0	455.
OSEZ- 216	5	5/ 1/79	770.	7.53	42.0	171.
OSEZ- 222	5	5/ 8/79	1425.	7.85	22.0	227.
OSEZ- 228	5	5/15/79	545.	7.15	8.4	298.
OSEZ- 234	5	5/22/79	845.	7.55	14.5	133.
OSEZ- 301	5	5/29/79	164.	6.86	4.7	222.
OSEZ- 307	5	6/ 5/79	166.	6.71	2.9	262.
OSEZ- 314	5	6/12/79	270.	7.34	3.8	236.
OSEZ- 319	5	6/19/79	1555.	7.91	24.5	269.
OSEZ- 342	5	6/26/79	963.	7.89	28.0	236.
OSEZ- 348	5	7/ 3/79	1480.	7.80	23.0	247.
OSEZ- 354	5	7/10/79	331.	6.99	25.0	326.
OSEZ- 373	5	7/17/79	215.	6.93	4.9	266.
OSEZ- 379	5	7/23/79	1260.	7.75	16.0	284.
OSEZ- 385	5	7/31/79	658.	7.17	28.0	118.
OSEZ- 413	5	8/ 8/79	550.	7.28	15.5	119.
OSEZ- 419	5	8/14/79	484.	6.97	9.0	145.
OSEZ- 425	5	8/22/79	560.	6.87	3.8	99.
OSEZ- 431	5	8/29/79	1558.	7.79	20.5	225.
OSEZ- 437	5	9/ 6/79	261.	6.83	4.2	278.
OSEZ- 443	5	9/11/79	565.	7.27	6.2	311.
OSEZ- 449	5	9/18/79	138.	6.47	1.2	300.
OSEZ- 455	5	9/26/79	140.	6.40	1.4	305.

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OSEZ DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 5 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
OSEZ- 193	5	4/ 3/79	0.008	< 0.004	< 0.008	< 0.04	0.05
OSEZ- 201	5	4/10/79	0.019		0.023	0.26	0.28
OSEZ- 206	5	4/17/79	0.026		0.027	11.00	11.03
OSEZ- 211	5	4/24/79	0.010	< 0.004	< 0.008	0.22	0.23
OSEZ- 216	5	5/ 1/79	0.026	0.013	0.013	1.24	1.27
OSEZ- 222	5	5/ 8/79	0.020	0.007	0.013	20.08	20.10
OSEZ- 228	5	5/15/79	0.188	0.174	0.014	2.25	2.44
OSEZ- 234	5	5/22/79	0.091	0.078	0.013	4.16	4.25
OSEZ- 301	5	5/29/79	0.163	0.138	0.025	1.04	1.20
OSEZ- 307	5	6/ 5/79	0.014	0.006	0.008	0.46	0.47
OSEZ- 314	5	6/12/79	< 0.008	< 0.004	0.008	0.03	0.04
OSEZ- 319	5	6/19/79	< 0.008	< 0.004	0.012	32.07	32.08
OSEZ- 342	5	6/26/79	0.015		0.019	1.70	1.72
OSEZ- 348	5	7/ 3/79	0.073		0.078	29.05	29.12
OSEZ- 354	5	7/10/79	0.015		0.018	4.43	4.45
OSEZ- 373	5	7/17/79	0.015	< 0.004	0.012	2.47	2.49
OSEZ- 379	5	7/23/79	0.013	< 0.004	0.013	21.95	21.96
OSEZ- 385	5	7/31/79	0.007		0.009	0.50	0.51
OSEZ- 413	5	8/ 8/79	0.005		0.006	0.40	0.41
OSEZ- 419	5	8/14/79	0.012	< 0.004	0.010	0.38	0.39
OSEZ- 425	5	8/22/79	< 0.004	< 0.004	< 0.004	0.16	0.16
OSEZ- 431	5	8/29/79	0.039		0.045	25.05	25.09
OSEZ- 437	5	9/ 6/79	0.008		0.011	1.90	1.91
OSEZ- 443	5	9/11/79	0.007		0.010	14.78	14.79
OSEZ- 449	5	9/18/79	< 0.004	< 0.004	0.009	0.52	0.52
OSEZ- 455	5	9/26/79			0.011	0.42	

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATI[illegible]

PROJECT OSEZ DATE OF PRINTI[illegible]

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 5 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
OSEZ- 193	5	4/ 3/79	21.30	21.26	21.31	6.594	15.9[illegible]
OSEZ- 201	5	4/10/79	21.42	21.16	21.44	1.050	27.1[illegible]
OSEZ- 206	5	4/17/79	38.05	27.05	38.08	2.390	8.3[illegible]
OSEZ- 211	5	4/24/79	14.98	14.76	14.99	3.202	5.4[illegible]
OSEZ- 216	5	5/ 1/79	12.22	10.98	12.25	2.713	5.5[illegible]
OSEZ- 222	5	5/ 8/79	35.24	15.16	35.26	0.444	8.6[illegible]
OSEZ- 228	5	5/15/79	7.66	5.41	7.85	5.911	6.4[illegible]
OSEZ- 234	5	5/22/79	8.48	4.32	8.57	0.335	1.4[illegible]
OSEZ- 301	5	5/29/79	3.69	2.65	3.85	1.867	1.9[illegible]
OSEZ- 307	5	6/ 5/79	2.46	2.00	2.47	0.646	0.8[illegible]
OSEZ- 314	5	6/12/79	2.96	2.93	2.97	0.838	1.2[illegible]
OSEZ- 319	5	6/19/79	94.53	62.46	94.54	0.940	15.1[illegible]
OSEZ- 342	5	6/26/79	21.26	19.56	21.28	7.317	18.4[illegible]
OSEZ- 348	5	7/ 3/79	48.92	19.87	48.99	9.526	16.3[illegible]
OSEZ- 354	5	7/10/79	11.66	7.23	11.67	3.982	5.2[illegible]
OSEZ- 373	5	7/17/79	4.40	1.93	4.42	1.780	2.6[illegible]
OSEZ- 379	5	7/23/79	42.85	20.90	42.86	4.766	10.0[illegible]
OSEZ- 385	5	7/31/79	12.27	11.77	12.28	8.159	10.0[illegible]
OSEZ- 413	5	8/ 8/79	122.02	121.62	122.03	6.845	8.4[illegible]
OSEZ- 419	5	8/14/79	3.43	3.05	3.44	6.392	7.6[illegible]
OSEZ- 425	5	8/22/79	3.03	2.87	3.03	3.240	3.8[illegible]
OSEZ- 431	5	8/29/79	52.69	27.64	52.73	6.928	20.5[illegible]
OSEZ- 437	5	9/ 6/79	5.40	3.50	5.41	2.714	3.3[illegible]
OSEZ- 443	5	9/11/79	19.60	4.82	19.61	2.042	6.9[illegible]
OSEZ- 449	5	9/18/79	2.97	2.45	2.97	0.861	1.0[illegible]
OSEZ- 455	5	9/26/79	2.68	2.26		0.910	1.0[illegible]

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATIO[N]

PROJECT OSEZ DATE OF PRINTIN[G]

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 5 CODE

	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
NUM. VALS.			26	26	26	26
AVERAGE			713.	7.36	20.2	246.
ST. DEV.			482.	0.53	18.7	82.
MIN. VAL.			138.	6.40	1.2	99.
MAX. VAL.			1558.	8.38	69.0	455.

	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
NUM. VALS.			25	15	26	26	25
AVERAGE			0.032	0.030	0.016	6.79	7.08
ST. DEV.			0.048	0.055	0.015	10.17	10.29
MIN. VAL.			0.004	0.004	0.004	0.03	0.04
MAX. VAL.			0.188	0.174	0.078	32.07	32.0[illegible]

	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
NUM. VALS.			26	26	25	26	26
AVERAGE			23.70	16.91	24.57	3.554	8.230
ST. DEV.			29.37	25.11	29.65	2.773	6.897
MIN. VAL.			2.46	1.93	2.47	0.335	0.818
MAX. VAL.			122.02	121.62	122.03	9.526	27.105

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATI

PROJECT OSEZ DATE OF PRINTI

PARAMETER	RANGE OF VALUES			UNITS
DATE	4/ 1/79	-	9/31/79	MO/DA/YR
STATION =	6			CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OSEZ- 194	6	4/ 3/79	1000.	7.47	31.0	125.
OSEZ- 202	6	4/10/79	1023.	7.12	32.0	151.
OSEZ- 205	6	4/17/79	1130.	7.32	19.0	187.
OSEZ- 217	6	5/ 1/79	970.	7.03	21.5	159.
OSEZ- 223	6	5/ 8/79	840.	6.92	18.0	165.
OSEZ- 229	6	5/15/79	880.	7.23	30.5	416.
OSEZ- 235	6	5/22/79	850.	7.00	16.5	148.
OSEZ- 302	6	5/29/79	478.	7.26	18.0	295.
OSEZ- 308	6	6/ 5/79	835.	7.08	18.0	297.
OSEZ- 313	6	6/12/79	840.	7.03	12.0	164.
OSEZ- 320	6	6/19/79	820.	6.84	16.0	184.
OSEZ- 343	6	6/26/79	848.	7.02	22.5	235.
OSEZ- 349	6	7/ 3/79	910.	6.96	15.5	222.
OSEZ- 355	6	7/10/79	1462.	7.42	550.0	643.
OSEZ- 374	6	7/17/79	1015.	7.24	58.0	432.
OSEZ- 380	6	7/23/79	900.	7.12	41.0	124.
OSEZ- 386	6	7/31/79	865.	7.03	42.0	114.
OSEZ- 414	6	8/ 8/79	895.	7.21	8.0	139.
OSEZ- 420	6	8/14/79	1187.	7.07	42.0	222.
OSEZ- 426	6	8/22/79	942.	6.94	18.0	161.
OSEZ- 432	6	8/29/79	908.	6.96	7.3	141.
OSEZ- 438	6	9/ 6/79	637.	7.04	27.0	316.
OSEZ- 444	6	9/11/79	660.	7.14	8.2	339.
OSEZ- 450	6	9/18/79	810.	7.17	8.3	323.
OSEZ- 456	6	9/26/79	863.	7.22	21.5	340.

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATION

PROJECT OSEZ DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 6 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
OSEZ- 194	6	4/ 3/79	0.009	< 0.004	< 0.008	4.64	4.65
OSEZ- 202	6	4/10/79	< 0.008	< 0.004	< 0.008	1.69	1.70
OSEZ- 205	6	4/17/79	< 0.008	< 0.004	< 0.008	0.12	0.13
OSEZ- 217	6	5/ 1/79	< 0.008	< 0.004	< 0.008	0.35	0.36
OSEZ- 223	6	5/ 8/79	< 0.008	< 0.004	< 0.008	1.61	1.62
OSEZ- 229	6	5/15/79	< 0.008	< 0.004	< 0.008	9.28	9.29
OSEZ- 235	6	5/22/79	< 0.008	< 0.004	< 0.008	6.22	6.23
OSEZ- 302	6	5/29/79	0.137	0.016	0.121	1.82	1.96
OSEZ- 308	6	6/ 5/79	< 0.008	< 0.004	0.008	4.83	4.84
OSEZ- 313	6	6/12/79	< 0.008	< 0.004	< 0.008	4.57	4.58
OSEZ- 320	6	6/19/79	< 0.008	< 0.004	< 0.008	4.25	4.26
OSEZ- 343	6	6/26/79	< 0.008	< 0.004	< 0.008	4.58	4.59
OSEZ- 349	6	7/ 3/79	< 0.008	< 0.004	< 0.008	6.34	6.35
OSEZ- 355	6	7/10/79	0.339	0.248	0.091	37.93	38.27
OSEZ- 374	6	7/17/79	0.081	0.021	0.060	18.76	18.84
OSEZ- 380	6	7/23/79	0.020	0.009	0.011	21.89	21.91
OSEZ- 386	6	7/31/79	0.009	< 0.004	0.007	8.66	8.67
OSEZ- 414	6	8/ 8/79	< 0.004	< 0.004	0.004	2.60	2.60
OSEZ- 420	6	8/14/79	0.014	< 0.004	0.010	8.32	8.33
OSEZ- 426	6	8/22/79	< 0.004	< 0.004	< 0.004	4.10	4.10
OSEZ- 432	6	8/29/79	0.004		0.005	2.03	2.03
OSEZ- 438	6	9/ 6/79	0.012		0.013	5.68	5.69
OSEZ- 444	6	9/11/79	0.011		0.013	4.80	4.81
OSEZ- 450	6	9/18/79	0.006		0.012	5.98	5.99
OSEZ- 456	6	9/26/79			0.014	8.58	

UPLANDS DEMONSTRATION PROJECT DATA LISTED BY STATI

PROJECT OSEZ DATE OF PRINTI

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 6 CODE

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
OSEZ- 194	6	4/ 3/79	24.60	19.96	24.61	2.173	19.12
OSEZ- 202	6	4/10/79	16.04	14.35	16.05	2.435	4.6
OSEZ- 205	6	4/17/79	10.19	10.07	10.20	1.327	3.09
OSEZ- 217	6	5/ 1/79	8.04	7.69	8.05	3.175	4.09
OSEZ- 223	6	5/ 8/79	8.17	6.56	8.18	3.412	4.14
OSEZ- 229	6	5/15/79	24.62	15.34	24.63	14.925	17.03
OSEZ- 235	6	5/22/79	16.30	10.08	16.31	3.262	3.19
OSEZ- 302	6	5/29/79	11.65	9.83	11.79	8.173	9.00
OSEZ- 308	6	6/ 5/79	10.81	5.98	10.82	8.671	8.25
OSEZ- 313	6	6/12/79	9.72	5.15	9.73	4.346	4.96
OSEZ- 320	6	6/19/79	9.35	5.10	9.36	4.019	4.64
OSEZ- 343	6	6/26/79	14.99	10.41	15.00	4.633	10.42
OSEZ- 349	6	7/ 3/79	19.06	12.72	19.07	5.684	5.8
OSEZ- 355	6	7/10/79	98.85	60.92	99.19	16.337	29.9
OSEZ- 374	6	7/17/79	39.90	21.14	39.98	16.780	19.4
OSEZ- 380	6	7/23/79	108.74	86.85	108.76	3.479	22.20
OSEZ- 386	6	7/31/79	37.50	28.84	37.51	2.174	4.89
OSEZ- 414	6	8/ 8/79	8.78	6.18	8.78	3.363	3.96
OSEZ- 420	6	8/14/79	30.05	21.73	30.06	4.586	9.9
OSEZ- 426	6	8/22/79	20.84	16.74	20.84	3.481	4.5
OSEZ- 432	6	8/29/79	6.90	4.87	6.90	2.256	3.05
OSEZ- 438	6	9/ 6/79	15.34	9.66	15.35	8.783	10.04
OSEZ- 444	6	9/11/79	11.62	6.82	11.63	7.494	8.64
OSEZ- 450	6	9/18/79	17.81	11.83	17.82	9.012	10.3
OSEZ- 456	6	9/26/79	17.19	8.61		9.093	10.5

PROJECT OSEZ DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

STATION = 6 CODE

	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
NUM. VALS.			25	25	25	25
AVERAGE			903.	7.11	44.1	242.
ST. DEV.			187.	0.16	106.1	126.
MIN. VAL.			478.	6.84	7.3	114.
MAX. VAL.			1462.	7.47	550.0	643.

	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
NUM. VALS.			24	20	25	25	24
AVERAGE			0.031	0.018	0.018	7.19	7.16
ST. DEV.			0.072	0.054	0.029	8.15	8.38
MIN. VAL.			0.004	0.004	0.004	0.12	0.13
MAX. VAL.			0.339	0.248	0.121	37.93	38.27

	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
NUM. VALS.			25	25	24	25	25
AVERAGE			23.88	16.70	24.19	6.123	9.436
ST. DEV.			25.64	18.63	26.19	4.440	6.980
MIN. VAL.			6.90	4.87	6.90	1.322	3.052
MAX. VAL.			108.74	86.85	108.76	16.780	29.865

SAMPLE	DATE MO/DA/YR	TIME	STATION	UP,DOWN STREAM	DISCHARGE	WEATHER	SAMPLE TYPE
OSEZ- 192	4/ 3/79	925.	1			2=SLIGHT OVERCAST	
OSEZ- 203	4/10/79	1523.	1			1=CLEAR	
OSEZ- 204	4/17/79	919.	1			1=CLEAR	
OSEZ- 210	4/24/79	900.	1			5=DRIZZLE	
OSEZ- 215	5/ 1/79	855.	1			5=DRIZZLE	
OSEZ- 221	5/ 8/79	914.	1			4=VERY OVERCAST	
OSEZ- 227	5/15/79	939.	1			2=SLIGHT OVERCAST	
OSEZ- 233	5/22/79	903.	1			1=CLEAR	
OSEZ- 300	5/29/79	922.	1			3=MEDIUM OVERCAST	
OSEZ- 306	6/ 5/79	902.	1			1=CLEAR	
OSEZ- 312	6/12/79	905.	1			2=SLIGHT OVERCAST	
OSEZ- 318	6/19/79	854.	1			1=CLEAR	
OSEZ- 332	6/26/79	922.	1			2=SLIGHT OVERCAST	
OSEZ- 333	6/26/79	922.	1			2=SLIGHT OVERCAST	
OSEZ- 334	6/26/79	922.	1			2=SLIGHT OVERCAST	
OSEZ- 335	6/26/79	922.	1			2=SLIGHT OVERCAST	
OSEZ- 336	6/26/79	922.	1			2=SLIGHT OVERCAST	
OSEZ- 337	6/26/79	936.	1			2=SLIGHT OVERCAST	
OSEZ- 338	6/26/79	940.	1			2=SLIGHT OVERCAST	
OSEZ- 339	6/26/79	944.	1			2=SLIGHT OVERCAST	
OSEZ- 340	6/26/79	947.	1			2=SLIGHT OVERCAST	
OSEZ- 341	6/26/79	951.	1			2=SLIGHT OVERCAST	
OSEZ- 347	7/ 3/79	848.	1			1=CLEAR	
OSEZ- 353	7/10/79	920.	1			1=CLEAR	
OSEZ- 372	7/17/79	902.	1			2=SLIGHT OVERCAST	
OSEZ- 378	7/23/79	858.	1			2=SLIGHT OVERCAST	
OSEZ- 384	7/31/79	903.	1			2=SLIGHT OVERCAST	
OSEZ- 412	8/ 8/79	900.	1			4=VERY OVERCAST	
OSEZ- 418	8/14/79	920.	1			1=CLEAR	
OSEZ- 424	8/22/79	854.	1			2=SLIGHT OVERCAST	
OSEZ- 430	8/29/79	903.	1			1=CLEAR	
OSEZ- 436	9/ 6/79	1038.	1			2=SLIGHT OVERCAST	
OSEZ- 442	9/11/79	842.	1			4=VERY OVERCAST	
OSEZ- 448	9/18/79	912.	1			1=CLEAR	
OSEZ- 454	9/26/79	1015.	1			3=MEDIUM OVERCAST	
OSEZ- 195	4/ 3/79	1045.	2			2=SLIGHT OVERCAST	
OSEZ- 200	4/10/79	1423.	2			1=CLEAR	
OSEZ- 207	4/17/79	1038.	2			1=CLEAR	
OSEZ- 212	4/24/79	1018.	2			5=DRIZZLE	
OSEZ- 218	5/ 1/79	1006.	2			5=DRIZZLE	

SAMPLE	DATE MO/DA/YR	TIME	STATION	UP,DOWN STREAM	DISCHARGE	WEATHER	SAMPLE TYPE	(
OSEZ- 224	5/ 8/79	1047.	2			4=VERY OVERCAST		
OSEZ- 230	5/15/79	1112.	2			2=SLIGHT OVERCAST		
OSEZ- 236	5/22/79	1001.	2			1=CLEAR		
OSEZ- 303	5/29/79	1018.	2			3=MEDIUM OVERCAST		
OSEZ- 309	6/ 5/79	1023.	2			1=CLEAR		
OSEZ- 315	6/12/79	1016.	2			2=SLIGHT OVERCAST		
OSEZ- 321	6/19/79	1003.	2			2=SLIGHT OVERCAST		
OSEZ- 324	6/21/79	637.	2			2=SLIGHT OVERCAST	20=AUTO	
OSEZ- 325	6/21/79	653.	2			2=SLIGHT OVERCAST	20=AUTO	
OSEZ- 326	6/21/79	708.	2			2=SLIGHT OVERCAST	20=AUTO	
OSEZ- 327	6/21/79	723.	2			2=SLIGHT OVERCAST	20=AUTO	
OSEZ- 328	6/21/79	738.	2			2=SLIGHT OVERCAST	20=AUTO	
OSEZ- 329	6/21/79	754.	2			2=SLIGHT OVERCAST	20=AUTO	
OSEZ- 330	6/21/79	809.	2			2=SLIGHT OVERCAST	20=AUTO	
OSEZ- 331	6/21/79	824.	2			2=SLIGHT OVERCAST	20=AUTO	
OSEZ- 344	6/26/79	1103.	2			1=CLEAR		
OSEZ- 350	7/ 3/79	954.	2			1=CLEAR		
OSEZ- 356	7/10/79	1026.	2			2=SLIGHT OVERCAST		
OSEZ- 359	7/13/79	633.	2			2=SLIGHT OVERCAST	20=AUTO	
OSEZ- 360	7/13/79	649.	2			2=SLIGHT OVERCAST	20=AUTO	
OSEZ- 361	7/13/79	704.	2			2=SLIGHT OVERCAST	20=AUTO	
OSEZ- 362	7/13/79	719.	2			2=SLIGHT OVERCAST	20=AUTO	
OSEZ- 363	7/13/79	734.	2			2=SLIGHT OVERCAST	20=AUTO	
OSEZ- 364	7/13/79	749.	2			2=SLIGHT OVERCAST	20=AUTO	
OSEZ- 365	7/13/79	804.	2			2=SLIGHT OVERCAST	20=AUTO	
OSEZ- 366	7/13/79	819.	2			2=SLIGHT OVERCAST	20=AUTO	
OSEZ- 367	7/13/79	834.	2			2=SLIGHT OVERCAST	20=AUTO	
OSEZ- 368	7/13/79	849.	2			2=SLIGHT OVERCAST	20=AUTO	
OSEZ- 369	7/13/79	904.	2			2=SLIGHT OVERCAST	20=AUTO	
OSEZ- 370	7/13/79	919.	2			2=SLIGHT OVERCAST	20=AUTO	
OSEZ- 371	7/13/79	934.	2			2=SLIGHT OVERCAST	20=AUTO	
OSEZ- 375	7/17/79	1015.	2			2=SLIGHT OVERCAST		
OSEZ- 381	7/23/79	1012.	2			2=SLIGHT OVERCAST		
OSEZ- 387	7/31/79	1010.	2			2=SLIGHT OVERCAST		
OSEZ- 390	8/ 3/79	645.	2			2=SLIGHT OVERCAST	20=AUTO	
OSEZ- 391	8/ 3/79	700.	2			2=SLIGHT OVERCAST		
OSEZ- 392	8/ 3/79	715.	2			2=SLIGHT OVERCAST		
OSEZ- 393	8/ 3/79	730.	2			2=SLIGHT OVERCAST		
OSEZ- 394	8/ 3/79	745.	2			2=SLIGHT OVERCAST		
OSEZ- 395	8/ 3/79	800.	2			2=SLIGHT OVERCAST		

SAMPLE	DATE MO/DA/YR	TIME	STATION	UP,DOWN STREAM	DISCHARGE	WEATHER	SAMPLE TYPE
OSEZ- 396	8/ 3/79	815.	2			2=SLIGHT OVERCAST	
OSEZ- 397	8/ 3/79	830.	2			2=SLIGHT OVERCAST	
OSEZ- 398	8/ 3/79	845.	2			2=SLIGHT OVERCAST	
OSEZ- 399	8/ 3/79	900.	2			2=SLIGHT OVERCAST	
OSEZ- 400	8/ 3/79	915.	2			2=SLIGHT OVERCAST	
OSEZ- 401	8/ 3/79	930.	2			2=SLIGHT OVERCAST	
OSEZ- 402	8/ 3/79	945.	2			2=SLIGHT OVERCAST	
OSEZ- 403	8/ 3/79	1000.	2			2=SLIGHT OVERCAST	
OSEZ- 404	8/ 3/79	1015.	2			2=SLIGHT OVERCAST	
OSEZ- 405	8/ 3/79	1030.	2			2=SLIGHT OVERCAST	20=AUTO
OSEZ- 406	8/ 3/79	1045.	2			2=SLIGHT OVERCAST	20=AUTO
OSEZ- 407	8/ 3/79	1100.	2			2=SLIGHT OVERCAST	20=AUTO
OSEZ- 408	8/ 3/79	1115.	2			2=SLIGHT OVERCAST	20=AUTO
OSEZ- 409	8/ 3/79	1130.	2			2=SLIGHT OVERCAST	20=AUTO
OSEZ- 410	8/ 3/79	1145.	2			2=SLIGHT OVERCAST	20=AUTO
OSEZ- 411	8/ 3/79	1219.	2			2=SLIGHT OVERCAST	20=AUTO
OSEZ- 415	8/ 8/79	1003.	2			4=VERY OVERCAST	
OSEZ- 421	8/14/79	1033.	2			3=MEDIUM OVERCAST	
OSEZ- 427	8/22/79	1024.	2			2=SLIGHT OVERCAST	
OSEZ- 433	8/29/79	1015.	2			2=SLIGHT OVERCAST	
OSEZ- 439	9/ 6/79	1140.	2			2=SLIGHT OVERCAST	
OSEZ- 445	9/11/79	949.	2			4=VERY OVERCAST	
OSEZ- 451	9/18/79	1040.	2			3=MEDIUM OVERCAST	
OSEZ- 457	9/26/79	1130.	2			3=MEDIUM OVERCAST	
OSEZ- 196	4/ 3/79	1051.	3			2=SLIGHT OVERCAST	
OSEZ- 198	4/10/79	1405.	3			1=CLEAR	
OSEZ- 208	4/17/79	1045.	3			1=CLEAR	
OSEZ- 213	4/24/79	1025.	3			5=DRIZZLE	
OSEZ- 219	5/ 1/79	1011.	3			5=DRIZZLE	
OSEZ- 225	5/ 8/79	1055.	3			4=VERY OVERCAST	
OSEZ- 231	5/15/79	1118.	3			2=SLIGHT OVERCAST	
OSEZ- 237	5/22/79	1008.	3			1=CLEAR	
OSEZ- 304	5/29/79	1024.	3			3=MEDIUM OVERCAST	
OSEZ- 310	6/ 5/79	1032.	3			1=CLEAR	
OSEZ- 316	6/12/79	1022.	3			2=SLIGHT OVERCAST	
OSEZ- 322	6/19/79	1015.	3			2=SLIGHT OVERCAST	
OSEZ- 345	6/26/79	1110.	3			1=CLEAR	
OSEZ- 351	7/ 3/79	1000.	3			1=CLEAR	
OSEZ- 357	7/10/79	1034.	3			2=SLIGHT OVERCAST	
OSEZ- 376	7/17/79	1022.	3			2=SLIGHT OVERCAST	

SAMPLE	DATE MO/DA/YR	TIME	STATION	UP,DOWN STREAM	DISCHARGE	WEATHER	SAMPLE TYPE	C
OSEZ- 382	7/23/79	1021.	3			2=SLIGHT OVERCAST		
OSEZ- 388	7/31/79	1016.	3			2=SLIGHT OVERCAST		
OSEZ- 416	8/ 8/79	1010.	3			4=VERY OVERCAST		
OSEZ- 422	8/14/79	1040.	3			3=MEDIUM OVERCAST		
OSEZ- 428	8/22/79	1031.	3			2=SLIGHT OVERCAST		
OSEZ- 434	8/29/79	1021.	3			2=SLIGHT OVERCAST		
OSEZ- 440	9/ 6/79	1145.	3			2=SLIGHT OVERCAST		
OSEZ- 446	9/11/79	959.	3			4=VERY OVERCAST		
OSEZ- 452	9/18/79	1050.	3			3=MEDIUM OVERCAST		
OSEZ- 458	9/26/79	1138.	3			3=MEDIUM OVERCAST		
OSEZ- 197	4/ 3/79	1055.	4			2=SLIGHT OVERCAST		
OSEZ- 199	4/10/79	1413.	4			1=CLEAR		
OSEZ- 209	4/17/79	1051.	4			1=CLEAR		
OSEZ- 214	4/24/79	1029.	4			5=DRIZZLE		
OSEZ- 220	5/ 1/79	1015.	4			5=DRIZZLE		
OSEZ- 226	5/ 8/79	1103.	4			4=VERY OVERCAST		
OSEZ- 232	5/15/79	1121.	4			2=SLIGHT OVERCAST		
OSEZ- 238	5/22/79	1013.	4			1=CLEAR		
OSEZ- 305	5/29/79	1027.	4			3=MEDIUM OVERCAST		
OSEZ- 311	6/ 5/79	1036.	4			1=CLEAR		
OSEZ- 317	6/12/79	1025.	4			2=SLIGHT OVERCAST		
OSEZ- 323	6/19/79	1018.	4			2=SLIGHT OVERCAST		
OSEZ- 346	6/26/79	1115.	4			1=CLEAR		
OSEZ- 352	7/ 3/79	1003.	4			1=CLEAR		
OSEZ- 358	7/10/79	1037.	4			2=SLIGHT OVERCAST		
OSEZ- 377	7/17/79	1025.	4			2=SLIGHT OVERCAST		
OSEZ- 383	7/23/79	1025.	4			2=SLIGHT OVERCAST		
OSEZ- 389	7/31/79	1025.	4			2=SLIGHT OVERCAST		
OSEZ- 417	8/ 8/79	1016.	4			4=VERY OVERCAST		
OSEZ- 423	8/14/79	1044.	4			3=MEDIUM OVERCAST		
OSEZ- 429	8/22/79	1035.	4			2=SLIGHT OVERCAST		
OSEZ- 435	8/29/79	1027.	4			2=SLIGHT OVERCAST		
OSEZ- 441	9/ 6/79	1154.	4			2=SLIGHT OVERCAST		
OSEZ- 447	9/11/79	1003.	4			4=VERY OVERCAST		
OSEZ- 453	9/18/79	1055.	4			3=MEDIUM OVERCAST		
OSEZ- 459	9/26/79	1142.	4			3=MEDIUM OVERCAST		
OSEZ- 193	4/ 3/79	1007.	5			2=SLIGHT OVERCAST		
OSEZ- 201	4/10/79	1436.	5			1=CLEAR		
OSEZ- 206	4/17/79	1018.	5			1=CLEAR		
OSEZ- 211	4/24/79	942.	5			5=DRIZZLE		

SAMPLE	DATE MO/DA/YR	TIME	STATION	UP,DOWN STREAM	DISCHARGE	WEATHER	SAMPLE TYPE
OSEZ- 216	5/ 1/79	926.	5			5=DRIZZLE	
OSEZ- 222	5/ 8/79	1002.	5			4=VERY OVERCAST	
OSEZ- 228	5/15/79	1032.	5			2=SLIGHT OVERCAST	
OSEZ- 234	5/22/79	929.	5			1=CLEAR	
OSEZ- 301	5/29/79	946.	5			3=MEDIUM OVERCAST	
OSEZ- 307	6/ 5/79	952.	5			1=CLEAR	
OSEZ- 314	6/12/79	957.	5			2=SLIGHT OVERCAST	
OSEZ- 319	6/19/79	930.	5			1=CLEAR	
OSEZ- 342	6/26/79	1028.	5			1=CLEAR	
OSEZ- 348	7/ 3/79	923.	5			1=CLEAR	
OSEZ- 354	7/10/79	955.	5			2=SLIGHT OVERCAST	
OSEZ- 373	7/17/79	941.	5			2=SLIGHT OVERCAST	
OSEZ- 379	7/23/79	931.	5			2=SLIGHT OVERCAST	
OSEZ- 385	7/31/79	934.	5			2=SLIGHT OVERCAST	
OSEZ- 413	8/ 8/79	930.	5			4=VERY OVERCAST	
OSEZ- 419	8/14/79	956.	5			2=SLIGHT OVERCAST	
OSEZ- 425	8/22/79	933.	5			2=SLIGHT OVERCAST	
OSEZ- 431	8/29/79	938.	5			1=CLEAR	
OSEZ- 437	9/ 6/79	1109.	5			2=SLIGHT OVERCAST	
OSEZ- 443	9/11/79	915.	5			5=DRIZZLE	
OSEZ- 449	9/18/79	949.	5			3=MEDIUM OVERCAST	
OSEZ- 455	9/26/79	1048.	5			3=MEDIUM OVERCAST	
OSEZ- 194	4/ 3/79	1023.	6			2=SLIGHT OVERCAST	
OSEZ- 202	4/10/79	1450.	6			1=CLEAR	
OSEZ- 205	4/17/79	958.	6			1=CLEAR	
OSEZ- 217	5/ 1/79	945.	6			5=DRIZZLE	
OSEZ- 223	5/ 8/79	1022.	6			4=VERY OVERCAST	
OSEZ- 229	5/15/79	1045.	6			2=SLIGHT OVERCAST	
OSEZ- 235	5/22/79	944.	6			1=CLEAR	
OSEZ- 302	5/29/79	959.	6			3=MEDIUM OVERCAST	
OSEZ- 308	6/ 5/79	1007.	6			1=CLEAR	
OSEZ- 313	6/12/79	944.	6			2=SLIGHT OVERCAST	
OSEZ- 320	6/19/79	944.	6			1=CLEAR	
OSEZ- 343	6/26/79	1047.	6			1=CLEAR	
OSEZ- 349	7/ 3/79	937.	6			1=CLEAR	
OSEZ- 355	7/10/79	1010.	6			2=SLIGHT OVERCAST	
OSEZ- 374	7/17/79	957.	6			2=SLIGHT OVERCAST	
OSEZ- 380	7/23/79	953.	6			2=SLIGHT OVERCAST	
OSEZ- 386	7/31/79	950.	6			2=SLIGHT OVERCAST	
OSEZ- 414	8/ 8/79	945.	6			4=VERY OVERCAST	

SAMPLE	DATE MO/DA/YR	TIME	STATION	UP,DOWN STREAM	DISCHARGE	WEATHER	SAMPLE TYPE	C
OSEZ- 420	8/14/79	1013.	6			3=MEDIUM OVERCAST		
OSEZ- 426	8/22/79	949.	6			2=SLIGHT OVERCAST		
OSEZ- 432	8/29/79	956.	6			2=SLIGHT OVERCAST		
OSEZ- 438	9/ 6/79	1123.	6			2=SLIGHT OVERCAST		
OSEZ- 444	9/11/79	931.	6			4=VERY OVERCAST		
OSEZ- 450	9/18/79	1006.	6			3=MEDIUM OVERCAST		
OSEZ- 456	9/26/79	1110.	6			3=MEDIUM OVERCAST		

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTI

PROJECT OAMS DATE OF PRINTI

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OAMS- 50	3	4/ 4/79	263.	8.18	3.7	284.
OAMS- 51	1	4/ 4/79	202.	6.85	1.7	71.
OAMS- 52	2	4/ 4/79	226.	7.22	1.7	42.
OAMS- 53	2	4/11/79	250.	7.36	1.6	34.
OAMS- 54	3	4/11/79	290.	8.78	1.8	80.
OAMS- 55	1	4/11/79	255.	7.27	1.5	49.
OAMS- 56	2	4/18/79	183.	7.33	1.4	25.
OAMS- 57	3	4/18/79	323.	9.17	1.8	63.
OAMS- 58	1	4/18/79	220.	7.23	1.9	29.
OAMS- 59	3	4/25/79	315.	7.05	3.6	76.
OAMS- 60	1	4/25/79	222.	7.15	6.0	74.
OAMS- 61	2	4/25/79	373.	7.71	1.2	31.
OAMS- 62	2	5/ 2/79	477.	7.45	2.6	55.
OAMS- 63	3	5/ 2/79	332.	8.11	2.1	56.
OAMS- 64	1	5/ 2/79	355.	6.96	2.9	102.
OAMS- 65	2	5/ 9/79	321.	7.46	1.6	35.
OAMS- 66	1	5/ 9/79	292.	7.43	2.5	48.
OAMS- 67	3	5/ 9/79	265.	7.11	13.0	150.
OAMS- 68	2	5/17/79	277.	7.22	1.9	123.
OAMS- 69	3	5/17/79	134.	6.67	1.8	231.
OAMS- 70	1	5/17/79	276.	7.40	20.0	136.
OAMS- 71	2	5/23/79	192.	6.94	1.7	58.
OAMS- 72	3	5/23/79	155.	6.78	3.3	244.
OAMS- 73	1	5/23/79	238.	7.00	2.1	67.
OAMS- 300	2	5/30/79	178.	7.24	1.8	45.
OAMS- 301	3	5/30/79	147.	7.01	3.5	224.
OAMS- 302	1	5/30/79	218.	7.17	1.8	58.
OAMS- 303	2	6/ 6/79	137.	7.13	2.1	39.
OAMS- 304	3	6/ 6/79	154.	6.81	4.0	190.
OAMS- 305	1	6/ 6/79	184.	7.11	4.3	48.
OAMS- 306	2	6/13/79	113.	7.23	3.0	46.
OAMS- 307	3	6/13/79	175.	7.50	3.5	168.
OAMS- 308	1	6/13/79	124.	6.92	3.2	40.
OAMS- 309	2	6/20/79	105.	7.07	5.3	68.
OAMS- 310	3	6/20/79	139.	6.70	4.8	54.
OAMS- 311	1	6/20/79	167.	7.66	53.0	134.
OAMS- 312	2	6/27/79	189.	6.73	2.3	96.
OAMS- 313	3	6/27/79	76.	6.67	8.7	66.
OAMS- 314	1	6/27/79	152.	6.67	2.2	110.
OAMS- 315	2	7/ 4/79	145.	6.64	1.6	109.

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTIA

PROJECT OAMS DATE OF PRINTIN

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
OAMS- 50	3	4/ 4/79	< 0.008	< 0.004	< 0.008	0.01	0.0
OAMS- 51	1	4/ 4/79	< 0.008	< 0.004	< 0.008	0.02	0.0
OAMS- 52	2	4/ 4/79	< 0.008	< 0.004	< 0.008	0.02	0.0
OAMS- 53	2	4/11/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OAMS- 54	3	4/11/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OAMS- 55	1	4/11/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OAMS- 56	2	4/18/79	< 0.008	< 0.004	< 0.008	0.02	0.0
OAMS- 57	3	4/18/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.01
OAMS- 58	1	4/18/79	< 0.008	< 0.004	< 0.008	0.02	0.0
OAMS- 59	3	4/25/79	0.077	0.067	0.010	0.21	0.2
OAMS- 60	1	4/25/79	0.341	0.271	0.070	1.83	2.1
OAMS- 61	2	4/25/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OAMS- 62	2	5/ 2/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OAMS- 63	3	5/ 2/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OAMS- 64	1	5/ 2/79	0.077	0.058	0.019	0.48	0.5
OAMS- 65	2	5/ 9/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OAMS- 66	1	5/ 9/79	0.010	< 0.004	< 0.008	< 0.04	0.0
OAMS- 67	3	5/ 9/79	0.023	0.015	< 0.008	< 0.04	0.0
OAMS- 68	2	5/17/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.0
OAMS- 69	3	5/17/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.0
OAMS- 70	1	5/17/79	< 0.008	< 0.004	< 0.008	0.05	0.0
OAMS- 71	2	5/23/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.0
OAMS- 72	3	5/23/79	< 0.008	< 0.004	< 0.008	0.02	0.0
OAMS- 73	1	5/23/79	0.044	0.036	< 0.008	0.11	0.1
OAMS- 300	2	5/30/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.0
OAMS- 301	3	5/30/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.0
OAMS- 302	1	5/30/79	< 0.008	< 0.004	< 0.008	0.08	0.0
OAMS- 303	2	6/ 6/79	< 0.008	< 0.004	< 0.008	0.02	0.0
OAMS- 304	3	6/ 6/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.0
OAMS- 305	1	6/ 6/79	< 0.008	< 0.004	< 0.008	0.09	0.1
OAMS- 306	2	6/13/79	0.008	< 0.004	< 0.008	0.03	0.0
OAMS- 307	3	6/13/79	< 0.008	< 0.004	< 0.008	0.01	0.0
OAMS- 308	1	6/13/79	< 0.008	< 0.004	< 0.008	0.01	0.0
OAMS- 309	2	6/20/79	< 0.008	< 0.004	< 0.008	0.02	0.0
OAMS- 310	3	6/20/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.0
OAMS- 311	1	6/20/79	0.134	0.116	0.018	0.34	0.4
OAMS- 312	2	6/27/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.0
OAMS- 313	3	6/27/79	0.034	0.026	< 0.008	< 0.01	0.0
OAMS- 314	1	6/27/79	0.035	0.027	< 0.008	0.04	0.0
OAMS- 315	2	7/ 4/79	< 0.008	< 0.004	< 0.008	0.02	0.0

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTIAL

PROJECT OAMS   DATE OF PRINTING

PARAMETER   RANGE OF VALUES   UNITS

DATE   4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OP04 MG P/L	TP04 MG P/L
OAMS- 50	3	4/ 4/79	1.98	1.97	1.99	< 0.010	0.090
OAMS- 51	1	4/ 4/79	0.83	0.81	0.84	0.052	0.083
OAMS- 52	2	4/ 4/79	0.31	0.29	0.32	0.046	0.075
OAMS- 53	2	4/11/79	0.78	0.74	0.79	< 0.040	0.066
OAMS- 54	3	4/11/79	1.34	1.30	1.35	< 0.040	0.065
OAMS- 55	1	4/11/79	0.68	0.64	0.69	0.048	0.077
OAMS- 56	2	4/18/79	0.48	0.46	0.49	0.035	0.061
OAMS- 57	3	4/18/79	1.60	1.59	1.61	0.010	0.080
OAMS- 58	1	4/18/79	1.05	1.03	1.06	0.049	0.112
OAMS- 59	3	4/25/79	1.77	1.56	1.85	< 0.040	0.110
OAMS- 60	1	4/25/79	3.16	1.33	3.50	< 0.040	0.094
OAMS- 61	2	4/25/79	0.55	0.51	0.56	< 0.040	< 0.040
OAMS- 62	2	5/ 2/79	1.02	0.98	1.03	0.021	0.063
OAMS- 63	3	5/ 2/79	1.48	1.44	1.49	< 0.010	0.077
OAMS- 64	1	5/ 2/79	2.29	1.81	2.37	0.021	0.109
OAMS- 65	2	5/ 9/79	0.66	0.62	0.67	< 0.040	0.044
OAMS- 66	1	5/ 9/79	1.16	1.12	1.17	< 0.040	0.056
OAMS- 67	3	5/ 9/79	3.95	3.91	3.97	< 0.040	0.227
OAMS- 68	2	5/17/79	1.13	1.09	1.14	< 0.040	0.067
OAMS- 69	3	5/17/79	2.02	1.98	2.03	< 0.040	0.136
OAMS- 70	1	5/17/79	2.14	2.09	2.15	0.064	0.460
OAMS- 71	2	5/23/79	0.64	0.63	0.65	0.030	0.055
OAMS- 72	3	5/23/79	2.20	2.18	2.21	0.017	0.108
OAMS- 73	1	5/23/79	0.76	0.65	0.80	0.047	0.082
OAMS- 300	2	5/30/79	1.02	0.98	1.03	0.021	0.054
OAMS- 301	3	5/30/79	2.13	2.09	2.14	< 0.010	0.117
OAMS- 302	1	5/30/79	1.34	1.26	1.35	0.060	0.212
OAMS- 303	2	6/ 6/79	3.62	3.60	3.63	0.016	0.060
OAMS- 304	3	6/ 6/79	2.32	2.31	2.33	< 0.010	0.082
OAMS- 305	1	6/ 6/79	0.88	0.79	0.89	0.040	0.096
OAMS- 306	2	6/13/79	0.47	0.44	0.48	0.035	0.091
OAMS- 307	3	6/13/79	2.34	2.33	2.35	< 0.010	0.154
OAMS- 308	1	6/13/79	0.52	0.51	0.53	0.042	0.068
OAMS- 309	2	6/20/79	0.96	0.94	0.97	0.043	0.102
OAMS- 310	3	6/20/79	1.64	1.63	1.65	< 0.010	0.103
OAMS- 311	1	6/20/79	3.74	3.40	3.87	0.026	0.548
OAMS- 312	2	6/27/79	1.27	1.26	1.28	0.034	0.186
OAMS- 313	3	6/27/79	1.13	1.12	1.16	0.027	0.177
OAMS- 314	1	6/27/79	0.91	0.87	0.95	0.051	0.099
OAMS- 315	2	7/ 4/79	1.12	1.10	1.13	0.032	0.070

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTIA

PROJECT OAMS DATE OF PRINTIN

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OAMS- 316	3	7/ 4/79	66.	6.03	1.4	250.
OAMS- 317	1	7/ 4/79	123.	6.70	1.5	159.
OAMS- 318	2	7/11/79	152.	6.53	1.4	167.
OAMS- 319	3	7/11/79	74.	6.17	1.1	192.
OAMS- 320	1	7/11/79	152.	6.81	1.5	169.
OAMS- 321	2	7/18/79	150.	6.40	1.8	232.
OAMS- 322	3	7/18/79	48.	5.72	0.6	399.
OAMS- 323	1	7/18/79	98.	6.30	1.3	305.
OAMS- 324	2	7/24/79	128.	6.44	2.5	185.
OAMS- 325	3	7/24/79	58.	5.67	1.0	320.
OAMS- 326	1	7/24/79	98.	6.40	1.2	235.
OAMS- 327	2	8/ 1/79	84.	6.46	2.2	152.
OAMS- 328	3	8/ 1/79	87.	6.03	2.1	342.
OAMS- 329	1	8/ 1/79	80.	6.16	1.9	178.
OAMS- 330	2	8/ 7/79	136.	6.28	2.0	265.
OAMS- 331	3	8/ 7/79	38.	5.63	0.7	298.
OAMS- 332	2	8/15/79	84.	6.09	1.4	283.
OAMS- 333	3	8/15/79	41.	5.34	0.6	276.
OAMS- 334	1	8/15/79	86.	6.16	2.0	316.
OAMS- 335	2	8/21/79	110.	6.17	1.8	228.
OAMS- 336	3	8/21/79	45.	5.36	0.8	290.
OAMS- 337	1	8/21/79	89.	6.24	1.4	246.
OAMS- 338	2	8/28/79	131.	6.44	2.0	216.
OAMS- 339	3	8/28/79	50.	5.37	1.0	252.
OAMS- 340	1	8/28/79	112.	6.63	2.0	211.
OAMS- 341	2	9/ 3/79	39.	5.95	2.5	219.
OAMS- 342	3	9/ 3/79	26.	5.10	1.8	188.
OAMS- 343	1	9/ 3/79	29.	5.61	2.3	210.
OAMS- 344	2	9/12/79	80.	6.08	2.5	365.
OAMS- 345	3	9/12/79	37.	5.34	0.7	242.
OAMS- 346	1	9/12/79	60.	5.93	2.2	322.
OAMS- 347	2	9/19/79	72.	6.06	2.4	282.
OAMS- 348	1	9/19/79	62.	6.13	2.5	281.
OAMS- 349	3	9/19/79	33.	5.42	0.5	252.
OAMS- 350	2	9/25/79	92.	5.95	1.7	247.
OAMS- 351	1	9/25/79	74.	6.02	1.5	249.

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTIAL

PROJECT OAMS DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
OAMS- 316	3	7/ 4/79	< 0.008	< 0.004	< 0.008	0.01	0.02
OAMS- 317	1	7/ 4/79	< 0.008	< 0.004	< 0.008	0.04	0.05
OAMS- 318	2	7/11/79	0.008	< 0.004	0.006	0.03	0.04
OAMS- 319	3	7/11/79	0.005		0.007	0.01	0.02
OAMS- 320	1	7/11/79	0.008	< 0.004	0.005	0.02	0.03
OAMS- 321	2	7/18/79	0.016	0.009	0.007	0.06	0.08
OAMS- 322	3	7/18/79	0.011		0.012	0.02	0.03
OAMS- 323	1	7/18/79	0.014	0.010	< 0.004	0.05	0.06
OAMS- 324	2	7/24/79	0.019	0.012	0.007	0.07	0.09
OAMS- 325	3	7/24/79	0.011		0.013	< 0.01	0.02
OAMS- 326	1	7/24/79	0.018	0.010	0.008	0.02	0.04
OAMS- 327	2	8/ 1/79	0.007	< 0.004	0.006	0.02	0.03
OAMS- 328	3	8/ 1/79	0.012		0.014	0.05	0.06
OAMS- 329	1	8/ 1/79	0.010	< 0.004	0.007	0.02	0.03
OAMS- 330	2	8/ 7/79	0.016	0.008	0.008	0.04	0.06
OAMS- 331	3	8/ 7/79	0.009		0.010	0.02	0.03
OAMS- 332	2	8/15/79	0.014	< 0.004	0.011	0.04	0.05
OAMS- 333	3	8/15/79	0.004		0.008	0.02	0.02
OAMS- 334	1	8/15/79	0.011	< 0.004	0.010	0.03	0.04
OAMS- 335	2	8/21/79	0.034	0.027	0.007	0.07	0.10
OAMS- 336	3	8/21/79	0.008		0.009	0.02	0.03
OAMS- 337	1	8/21/79	0.025	0.017	0.008	0.06	0.09
OAMS- 338	2	8/28/79	0.017	0.010	0.007	0.04	0.06
OAMS- 339	3	8/28/79	0.006		0.008	0.01	0.02
OAMS- 340	1	8/28/79	0.023	0.015	0.008	0.04	0.06
OAMS- 341	2	9/ 3/79	0.006		0.007	0.01	0.02
OAMS- 342	3	9/ 3/79	< 0.004	< 0.004	0.005	< 0.04	< 0.01
OAMS- 343	1	9/ 3/79	< 0.004	< 0.004	0.006	0.01	0.01
OAMS- 344	2	9/12/79	0.010		0.014		
OAMS- 345	3	9/12/79	0.005		0.008	0.02	0.03
OAMS- 346	1	9/12/79	0.008		0.012	0.02	0.03
OAMS- 347	2	9/19/79	< 0.004	< 0.004	0.010	< 0.01	< 0.01
OAMS- 348	1	9/19/79	< 0.004	< 0.004	0.010	< 0.01	< 0.01
OAMS- 349	3	9/19/79	< 0.004	< 0.004	0.008	< 0.01	< 0.01
OAMS- 350	2	9/25/79			0.011	0.04	
OAMS- 351	1	9/25/79			0.010	0.02	

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTIA

PROJECT OAMS DATE OF PRINT

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
OAMS- 316	3	7/ 4/79	1.99	1.98	2.00	0.047	0.130
OAMS- 317	1	7/ 4/79	1.22	1.18	1.23	0.041	0.080
OAMS- 318	2	7/11/79	2.17	2.14	2.18	0.020	0.107
OAMS- 319	3	7/11/79	1.87	1.86	1.88	0.023	0.093
OAMS- 320	1	7/11/79	1.60	1.58	1.61	0.026	0.068
OAMS- 321	2	7/18/79	2.09	2.03	2.11	0.020	0.039
OAMS- 322	3	7/18/79	2.20	2.18	2.21	0.058	0.126
OAMS- 323	1	7/18/79	1.89	1.84	1.90	0.036	0.096
OAMS- 324	2	7/24/79	1.84	1.77	1.86	0.025	0.089
OAMS- 325	3	7/24/79	2.91	2.90	2.92	0.027	0.137
OAMS- 326	1	7/24/79	1.69	1.67	1.71	0.026	0.066
OAMS- 327	2	8/ 1/79	1.59	1.57	1.60	0.026	0.045
OAMS- 328	3	8/ 1/79	2.97	2.92	2.98	0.025	0.122
OAMS- 329	1	8/ 1/79	1.43	1.41	1.44	0.021	0.048
OAMS- 330	2	8/ 7/79	1.67	1.63	1.69	0.023	0.084
OAMS- 331	3	8/ 7/79	1.51	1.49	1.52	0.019	0.069
OAMS- 332	2	8/15/79	2.08	2.04	2.09	0.044	0.136
OAMS- 333	3	8/15/79	1.43	1.41	1.43	0.020	0.062
OAMS- 334	1	8/15/79	2.13	2.10	2.14	0.032	0.108
OAMS- 335	2	8/21/79	1.66	1.59	1.69	0.037	0.091
OAMS- 336	3	8/21/79	1.49	1.47	1.50	0.018	0.072
OAMS- 337	1	8/21/79	1.46	1.40	1.49	0.034	0.075
OAMS- 338	2	8/28/79	1.68	1.64	1.70	0.018	0.077
OAMS- 339	3	8/28/79	2.34	2.33	2.35	0.015	0.112
OAMS- 340	1	8/28/79	1.64	1.60	1.66	0.021	0.076
OAMS- 341	2	9/ 3/79	1.31	1.30	1.32	0.111	0.170
OAMS- 342	3	9/ 3/79	1.04	1.00	1.04	0.050	0.086
OAMS- 343	1	9/ 3/79	0.50	0.49	0.50	0.054	0.104
OAMS- 344	2	9/12/79	2.51		2.52	0.114	0.345
OAMS- 345	3	9/12/79	1.46	1.44	1.47	0.025	0.060
OAMS- 346	1	9/12/79	2.11	2.09	2.12	0.072	0.218
OAMS- 347	2	9/19/79	2.25	2.24	2.25	0.253	0.429
OAMS- 348	1	9/19/79	1.95	1.94	1.95	0.201	0.356
OAMS- 349	3	9/19/79	1.47	1.46	1.47	0.014	0.043
OAMS- 350	2	9/25/79	1.77	1.73		0.084	0.199
OAMS- 351	1	9/25/79	1.52	1.50		0.060	0.128

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTIA

PROJECT OBAS DATE OF PRINTIN

PARAMETER	RANGE OF VALUES			UNITS
DATE	4/ 1/79	-	9/31/79	MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OBAS- 38	1	4/ 2/79	321.	7.28	17.0	37.
OBAS- 39	1	4/ 9/79	405.	7.48	36.5	393.
OBAS- 40	3	4/23/79	935.	7.97	0.6	13.
OBAS- 41	1	5/ 1/79	236.	8.59	14.5	201.
OBAS- 42	3	5/ 1/79	820.	7.18	9.0	88.
OBAS- 43	3	5/ 7/79	325.	7.60	6.4	59.
OBAS- 44	1	5/14/79	80.	6.59	6.0	206.
OBAS- 45	4	5/14/79	41.	6.20	5.7	185.
OBAS- 46	2	5/14/79	180.	7.01	12.0	256.
OBAS- 47	3	5/14/79	320.	6.74	3.2	192.
OBAS- 48	1	5/21/79	150.	6.56	5.0	284.
OBAS- 49	3	5/21/79	313.	7.05	1.8	211.
OBAS- 50	2	5/27/79	104.	6.41	1.2	188.
OBAS- 51	1	5/27/79	82.	6.19	1.2	173.
OBAS- 52	4	5/27/79	76.	6.14	1.7	316.
OBAS- 53	3	5/27/79	130.	6.44	1.8	194.
OBAS- 300	1	5/30/79	89.	6.62	1.8	228.
OBAS- 301	4	5/30/79	79.	5.84	1.7	372.
OBAS- 302	1	5/31/79	112.	6.38	1.3	235.
OBAS- 303	4	5/31/79	88.	5.81	1.4	383.
OBAS- 304	2	5/31/79	146.	6.73	1.5	236.
OBAS- 305	3	5/31/79	181.	7.06	1.7	238.
OBAS- 306	1	6/ 4/79	122.	6.43	3.5	237.
OBAS- 307	4	6/ 4/79	88.	6.12	2.5	448.
OBAS- 308	2	6/ 4/79	150.	7.10	2.7	224.
OBAS- 309	3	6/ 4/79	185.	7.20	1.7	227.
OBAS- 310	1	6/11/79	136.	6.85	15.0	305.
OBAS- 311	1	6/25/79	213.	8.96	20.0	253.
OBAS- 312	1	7/16/79	98.	6.48	17.0	106.
OBAS- 313	4	7/16/79	31.	5.58	5.4	62.
OBAS- 314	2	7/16/79	52.	6.96	4.5	31.
OBAS- 315	3	7/16/79	59.	6.35	6.2	83.
OBAS- 316	1	7/27/79	197.	7.68	4.0	233.
OBAS- 317	4	7/27/79	64.	6.81	6.0	330.
OBAS- 318	2	7/27/79	146.	9.08	1.4	100.
OBAS- 319	3	7/27/79	247.	7.55	3.4	189.
OBAS- 320	1	8/ 6/79	158.	6.52	4.4	186.
OBAS- 321	4	8/ 6/79	92.	6.79	1.5	262.
OBAS- 322	2	8/ 6/79	90.	6.56	1.2	130.
OBAS- 323	3	8/ 6/79	238.	7.03	2.3	305.

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTI

PROJECT OBAS DATE OF PRINTI

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH MG N/L
OBAS- 38	1	4/ 2/79	0.017	< 0.004	0.014	0.35	0.3
OBAS- 39	1	4/ 9/79	0.036	0.005	0.031		
OBAS- 40	3	4/23/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.0
OBAS- 41	1	5/ 1/79	< 0.008	< 0.004	0.009	< 0.04	< 0.0
OBAS- 42	3	5/ 1/79	< 0.008	< 0.004	< 0.008	4.55	4.5
OBAS- 43	3	5/ 7/79	0.010	< 0.004	< 0.008	0.04	0.0
OBAS- 44	1	5/14/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.0
OBAS- 45	4	5/14/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.0
OBAS- 46	2	5/14/79	< 0.008	< 0.004	< 0.008	0.06	0.0
OBAS- 47	3	5/14/79	0.079	0.069	0.010	0.39	0.4
OBAS- 48	1	5/21/79	< 0.008	< 0.004	0.010	0.06	0.0
OBAS- 49	3	5/21/79	0.008	< 0.004	< 0.008	0.05	0.0
OBAS- 50	2	5/27/79	< 0.008	< 0.004	< 0.008	0.04	0.0
OBAS- 51	1	5/27/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.0
OBAS- 52	4	5/27/79	< 0.008	< 0.004	0.011	< 0.01	< 0.0
OBAS- 53	3	5/27/79	< 0.008	< 0.004	< 0.008	0.09	0.1
OBAS- 300	1	5/30/79	< 0.008	< 0.004	0.008	< 0.04	< 0.0
OBAS- 301	4	5/30/79	0.011		0.015	0.05	0.0
OBAS- 302	1	5/31/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.01
OBAS- 303	4	5/31/79	0.009		0.015	0.03	0.0
OBAS- 304	2	5/31/79	< 0.008	< 0.004	0.008	0.03	0.0
OBAS- 305	3	5/31/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.01
OBAS- 306	1	6/ 4/79	< 0.008	< 0.004	< 0.008	0.01	0.0
OBAS- 307	4	6/ 4/79	0.009		0.015	0.03	0.0
OBAS- 308	2	6/ 4/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.01
OBAS- 309	3	6/ 4/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.01
OBAS- 310	1	6/11/79	< 0.008	< 0.004	0.010	0.02	0.0
OBAS- 311	1	6/25/79	< 0.008	< 0.004	< 0.008	0.01	0.0
OBAS- 312	1	7/16/79	0.273	0.262	0.011	0.07	0.34
OBAS- 313	4	7/16/79	0.153	0.148	0.005	0.02	0.17
OBAS- 314	2	7/16/79	0.268	0.260	0.008	0.05	0.32
OBAS- 315	3	7/16/79	0.314	0.305	0.009	0.03	0.34
OBAS- 316	1	7/27/79	0.008	< 0.004	0.008	< 0.01	0.02
OBAS- 317	4	7/27/79	0.011		0.012	0.06	0.07
OBAS- 318	2	7/27/79	0.006	< 0.004	< 0.004	< 0.01	0.02
OBAS- 319	3	7/27/79	0.008	< 0.004	0.006	< 0.01	0.02
OBAS- 320	1	8/ 6/79	0.007	< 0.004	0.007	0.02	0.03
OBAS- 321	4	8/ 6/79	0.008		0.010	0.04	0.05
OBAS- 322	2	8/ 6/79	0.004		0.005	0.02	0.02
OBAS- 323	3	8/ 6/79	0.010		0.011	0.04	0.05

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTIAL

PROJECT OBAS DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
OBAS- 38	1	4/ 2/79	4.05	3.70	4.07	0.113	0.256
OBAS- 39	1	4/ 9/79	16.04		16.08		0.804
OBAS- 40	3	4/23/79	0.21	0.17	0.22	< 0.040	< 0.040
OBAS- 41	1	5/ 1/79	2.90	2.86	2.91	0.235	0.465
OBAS- 42	3	5/ 1/79	15.11	10.56	15.12	< 0.010	0.264
OBAS- 43	3	5/ 7/79	4.19	4.15	4.20	< 0.040	0.382
OBAS- 44	1	5/14/79	2.53	2.49	2.54	0.585	0.806
OBAS- 45	4	5/14/79	1.93	1.89	1.94	0.296	0.426
OBAS- 46	2	5/14/79	3.71	3.65	3.72	0.309	0.664
OBAS- 47	3	5/14/79	3.29	2.90	3.37	2.688	2.889
OBAS- 48	1	5/21/79	2.80	2.74	2.81	0.868	0.978
OBAS- 49	3	5/21/79	0.62	0.57	0.63	1.201	1.281
OBAS- 50	2	5/27/79	1.85	1.81	1.86	3.135	2.995
OBAS- 51	1	5/27/79	1.51	1.47	1.52	2.078	2.236
OBAS- 52	4	5/27/79	2.26	2.25	2.27	0.515	0.577
OBAS- 53	3	5/27/79	2.17	2.08	2.18	4.677	4.558
OBAS- 300	1	5/30/79	1.71	1.67	1.72	1.381	1.346
OBAS- 301	4	5/30/79	2.59	2.54	2.60	0.519	0.608
OBAS- 302	1	5/31/79	1.59	1.58	1.60	1.338	1.341
OBAS- 303	4	5/31/79	2.26	2.23	2.27	0.460	0.563
OBAS- 304	2	5/31/79	1.70	1.67	1.71	1.005	1.056
OBAS- 305	3	5/31/79	2.13	2.12	2.14	1.528	1.671
OBAS- 306	1	6/ 4/79	2.82	2.81	2.83	0.956	1.047
OBAS- 307	4	6/ 4/79	3.07	3.04	3.08	0.357	0.526
OBAS- 308	2	6/ 4/79	2.51	2.50	2.52	0.910	1.084
OBAS- 309	3	6/ 4/79	2.78	2.77	2.79	1.415	1.462
OBAS- 310	1	6/11/79	4.25	4.23	4.26	0.480	1.076
OBAS- 311	1	6/25/79	6.37	6.36	6.38	0.397	1.032
OBAS- 312	1	7/16/79	9.15	9.08	9.42	0.463	0.971
OBAS- 313	4	7/16/79	1.36	1.34	1.51	0.393	0.482
OBAS- 314	2	7/16/79	0.98	0.93	1.25	0.138	0.205
OBAS- 315	3	7/16/79	2.66	2.63	2.97	0.647	0.919
OBAS- 316	1	7/27/79	3.42	3.41	3.43	1.120	1.383
OBAS- 317	4	7/27/79	3.55	3.49	3.56	0.414	0.853
OBAS- 318	2	7/27/79	1.26	1.25	1.27	0.017	0.069
OBAS- 319	3	7/27/79	3.70	3.69	3.71	0.580	0.828
OBAS- 320	1	8/ 6/79	2.76	2.74	2.77	0.988	1.218
OBAS- 321	4	8/ 6/79	2.17	2.13	2.18	0.590	0.766
OBAS- 322	2	8/ 6/79	1.33	1.31	1.33	0.507	0.597
OBAS- 323	3	8/ 6/79	3.53	3.49	3.54	2.189	2.544

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTIAL

PROJECT OBAS DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OBAS- 324	1	8/13/79	122.	6.22	1.3	383.
OBAS- 325	4	8/13/79	86.	5.59	1.5	360.
OBAS- 326	3	8/13/79	105.	6.13	0.9	306.
OBAS- 327	2	8/13/79	204.	6.32	1.5	206.
OBAS- 328	1	8/20/79	127.	6.34	3.5	322.
OBAS- 329	2	8/20/79	127.	6.64	1.0	265.
OBAS- 330	3	8/20/79	226.	7.45	1.1	203.
OBAS- 331	1	8/27/79	126.	6.67	3.6	224.
OBAS- 332	4	8/27/79	80.	5.99	21.5	282.
OBAS- 333	2	8/27/79	113.	7.36	3.3	121.
OBAS- 334	3	8/27/79	215.	6.95	1.0	169.
OBAS- 335	1	9/ 5/79	59.	6.37	1.0	283.
OBAS- 336	4	9/ 5/79	57.	6.08	1.1	268.
OBAS- 337	2	9/ 5/79	68.	6.28	0.7	254.
OBAS- 338	3	9/ 5/79	80.	6.15	1.5	231.
OBAS- 339	1	9/10/79	85.	6.20	0.6	243.
OBAS- 340	4	9/10/79	50.	6.09	1.2	279.
OBAS- 341	2	9/10/79	104.	6.18	1.1	268.
OBAS- 342	3	9/10/79	160.	6.32	1.8	243.
OBAS- 343	1	9/24/79	93.	6.18	0.9	322.
OBAS- 344	4	9/24/79	50.	5.95	0.8	324.
OBAS- 345	2	9/24/79	116.	6.31	0.6	258.
OBAS- 346	3	9/24/79	113.	6.30	0.9	353.

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENT

PROJECT OBAS DATE OF PRINT

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+N… MG N/…
OBAS- 324	1	8/13/79	0.011		0.014	0.02	0.
OBAS- 325	4	8/13/79	0.014	< 0.004	0.013	0.03	0.
OBAS- 326	3	8/13/79	0.010		0.011	0.02	0.
OBAS- 327	2	8/13/79	0.006		0.007	0.01	0.
OBAS- 328	1	8/20/79	0.010		0.012	0.04	0.
OBAS- 329	2	8/20/79	0.008		0.009	0.01	0.
OBAS- 330	3	8/20/79	0.005		0.007	0.03	0.
OBAS- 331	1	8/27/79	0.016	0.007	0.009	0.01	0.
OBAS- 332	4	8/27/79	0.042	0.028	0.014	0.08	0.
OBAS- 333	2	8/27/79	0.019	0.014	0.005	< 0.01	0.
OBAS- 334	3	8/27/79	0.007	< 0.004	0.006	0.01	0.
OBAS- 335	1	9/ 5/79	0.005		0.010	0.03	0.
OBAS- 336	4	9/ 5/79	< 0.004	< 0.004	0.009	0.03	0.
OBAS- 337	2	9/ 5/79	< 0.004	< 0.004	0.008	0.02	0.
OBAS- 338	3	9/ 5/79	< 0.004	< 0.004	0.008	0.03	0.
OBAS- 339	1	9/10/79	0.005		0.009	< 0.04	0.
OBAS- 340	4	9/10/79	0.009		0.011	0.03	0.
OBAS- 341	2	9/10/79	0.006		0.009	0.02	0.
OBAS- 342	3	9/10/79	0.005		0.008	0.03	0.
OBAS- 343	1	9/24/79			0.013	< 0.01	
OBAS- 344	4	9/24/79			0.015	< 0.01	
OBAS- 345	2	9/24/79			0.011	< 0.01	
OBAS- 346	3	9/24/79			0.010	< 0.01	

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTIAL

PROJECT OBAS DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
OBAS- 324	1	8/13/79	2.73	2.71	2.74	0.705	0.857
OBAS- 325	4	8/13/79	2.40	2.37	2.41	0.545	0.645
OBAS- 326	3	8/13/79	2.29	2.27	2.30	0.593	0.711
OBAS- 327	2	8/13/79	2.01	2.00	2.02	0.617	0.742
OBAS- 328	1	8/20/79	2.57	2.53	2.58	0.464	0.630
OBAS- 329	2	8/20/79	2.07	2.06	2.08	0.288	0.439
OBAS- 330	3	8/20/79	1.68	1.65	1.69	0.363	0.493
OBAS- 331	1	8/27/79	2.37	2.36	2.39	0.266	0.428
OBAS- 332	4	8/27/79	6.38	6.30	6.42	0.295	0.825
OBAS- 333	2	8/27/79	1.87	1.86	1.89	0.085	0.273
OBAS- 334	3	8/27/79	2.12	2.11	2.13	0.300	0.395
OBAS- 335	1	9/ 5/79	1.71	1.68	1.72	0.905	0.973
OBAS- 336	4	9/ 5/79	1.52	1.49	1.52	0.412	0.473
OBAS- 337	2	9/ 5/79	1.26	1.24	1.26	0.772	0.835
OBAS- 338	3	9/ 5/79	1.71	1.68	1.71	1.342	1.420
OBAS- 339	1	9/10/79	1.64	1.60	1.65	0.700	0.802
OBAS- 340	4	9/10/79	1.88	1.85	1.89	0.791	0.898
OBAS- 341	2	9/10/79	1.81	1.79	1.82	0.500	0.625
OBAS- 342	3	9/10/79	1.75	1.72	1.76	1.289	1.442
OBAS- 343	1	9/24/79	1.92	1.91		0.526	0.618
OBAS- 344	4	9/24/79	1.94	1.93		0.393	0.501
OBAS- 345	2	9/24/79	1.49	1.48		0.467	0.523
OBAS- 346	3	9/24/79	1.55	1.54		1.158	1.908

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTI

PROJECT OLKS DATE OF PRINT

PARAMETER	RANGE OF VALUES			UNITS
DATE	4/ 1/79	-	9/31/79	MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OLKS- 225	3	4/ 2/79	70.	4.83	2.7	218.
OLKS- 226	2	4/ 2/79	113.	5.60	5.4	486.
OLKS- 227	1	4/ 2/79	81.	5.77	3.4	254.
OLKS- 228	3	4/ 2/79	70.	4.81	2.1	208.
OLKS- 229	3	4/ 2/79	69.	4.79	1.9	206.
OLKS- 230	3	4/ 2/79	70.	4.77	2.2	209.
OLKS- 231	3	4/ 3/79	70.	4.77	1.8	209.
OLKS- 232	3	4/ 3/79	70.	4.78	1.8	214.
OLKS- 233	3	4/ 3/79	71.	4.69	2.2	217.
OLKS- 234	3	4/ 9/79	79.	5.41	1.5	244.
OLKS- 235	2	4/ 9/79	144.	5.90	7.1	535.
OLKS- 236	I	4/ 9/79	110.	6.21	3.4	217.
OLKS- 237	3	4/16/79	91.	6.02	4.6	279.
OLKS- 238	2	4/16/79	168.	6.17	7.4	679.
OLKS- 239	1	4/16/79	115.	6.01	4.6	214.
OLKS- 240	3	4/23/79	102.	6.15	4.8	199.
OLKS- 241	2	4/23/79	281.	7.05	6.9	995.
OLKS- 242	1	4/23/79	150.	6.38	4.0	181.
OLKS- 243	3	4/30/79	98.	5.86	3.1	174.
OLKS- 244	2	4/30/79	218.	6.87	8.0	748.
OLKS- 245	1	4/30/79	168.	6.47	4.0	129.
OLKS- 246	3	5/ 7/79	88.	6.30	4.7	173.
OLKS- 247	2	5/ 7/79	173.	6.75	6.6	567.
OLKS- 248	1	5/ 7/79	123.	6.74	3.0	68.
OLKS- 249	3	5/14/79	56.	5.09	1.9	177.
OLKS- 250	2	5/14/79	60.	5.56	1.0	301.
OLKS- 251	1	5/41/79	92.	5.55	1.8	302.
OLKS- 252	3	5/21/79	53.	5.01	0.9	154.
OLKS- 253	2	5/21/79	74.	5.62	0.9	357.
OLKS- 254	1	5/21/79	61.	5.58	1.0	247.
OLKS- 300	3	5/29/79	49.	5.20	0.9	149.
OLKS- 301	2	5/29/79	60.	5.68	3.2	351.
OLKS- 302	1	5/29/79	71.	5.61	1.3	244.
OLKS- 303	3	6/ 4/79	50.	4.93	1.0	162.
OLKS- 304	2	6/ 4/79	64.	5.53	0.9	407.
OLKS- 305	1	6/ 4/79	61.	5.73	0.9	224.
OLKS- 306	3	6/11/79	53.	4.98	1.2	185.
OLKS- 307	2	6/11/79	66.	5.44	0.8	464.
OLKS- 308	1	6/11/79	60.	5.72	0.9	239.
OLKS- 309	3	6/18/79	55.	4.98	1.2	186.

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTIAL

PROJECT OLKS　　　　　　　　DATE OF PRINTING

PARAMETER	RANGE OF VALUES			UNITS
DATE	4/ 1/79	-	9/31/79	MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
OLKS- 225	3	4/ 2/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.01
OLKS- 226	2	4/ 2/79	0.015		0.018	1.25	1.27
OLKS- 227	1	4/ 2/79	< 0.008	< 0.004	< 0.008	0.02	0.03
OLKS- 228	3	4/ 2/79	< 0.008	< 0.004	< 0.008	0.02	0.03
OLKS- 229	3	4/ 2/79	< 0.008	< 0.004	< 0.008	0.01	0.02
OLKS- 230	3	4/ 2/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.01
OLKS- 231	3	4/ 3/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.01
OLKS- 232	3	4/ 3/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.01
OLKS- 233	3	4/ 3/79	< 0.008	< 0.004	< 0.008	0.02	0.03
OLKS- 234	3	4/ 9/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OLKS- 235	2	4/ 9/79	0.010		0.022	4.29	4.30
OLKS- 236	1	4/ 9/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OLKS- 237	3	4/16/79	< 0.008	< 0.004	0.008	0.02	0.03
OLKS- 238	2	4/16/79	0.023		0.033	6.61	6.63
OLKS- 239	1	4/16/79	< 0.008	< 0.004	0.008	0.01	0.02
OLKS- 240	3	4/23/79	0.031	0.023	< 0.008	0.05	0.08
OLKS- 241	2	4/23/79	< 0.008	< 0.004	< 0.008	17.99	18.00
OLKS- 242	1	4/23/79	0.034	0.026	< 0.008	0.07	0.10
OLKS- 243	3	4/30/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OLKS- 244	2	4/30/79	0.019	0.011	< 0.008	13.60	13.62
OLKS- 245	1	4/30/79	0.046	0.038	< 0.008	0.05	0.10
OLKS- 246	3	5/ 7/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OLKS- 247	2	5/ 7/79	0.029	< 0.004	0.026	11.68	< 11.71
OLKS- 248	1	5/ 7/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OLKS- 249	3	5/14/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OLKS- 250	2	5/14/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OLKS- 251	1	5/41/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OLKS- 252	3	5/21/79	< 0.008	< 0.004	< 0.008	0.02	0.03
OLKS- 253	2	5/21/79	< 0.008	< 0.004	0.011	0.03	0.04
OLKS- 254	1	5/21/79	< 0.008	< 0.004	< 0.008	0.02	0.03
OLKS- 300	3	5/29/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OLKS- 301	2	5/29/79	0.009		0.017	< 0.04	0.05
OLKS- 302	1	5/29/79	< 0.008	< 0.004	0.010	< 0.04	< 0.01
OLKS- 303	3	6/ 4/79	< 0.008	< 0.004	< 0.008	0.02	0.03
OLKS- 304	2	6/ 4/79	0.008		0.014	0.04	0.05
OLKS- 305	1	6/ 4/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OLKS- 306	3	6/11/79	< 0.008	< 0.004	< 0.008	0.03	0.04
OLKS- 307	2	6/11/79	0.012		0.017	0.06	0.07
OLKS- 308	1	6/11/79	< 0.008	< 0.004	< 0.008	0.02	0.03
OLKS- 309	3	6/18/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.01

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTI

PROJECT OLKS DATE OF PRINTI

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L		OPO4 MG P/L		TPO4 MG P/L
OLKS- 225	3	4/ 2/79	2.00	1.99	2.01	<	0.010	<	0.04
OLKS- 226	2	4/ 2/79	6.23	4.98	6.25		0.052		0.21
OLKS- 227	1	4/ 2/79	2.13	2.11	2.14	<	0.010		0.04
OLKS- 228	3	4/ 2/79	1.62	1.60	1.63	<	0.010	<	0.04
OLKS- 229	3	4/ 2/79	1.81	1.80	1.82	<	0.010	<	0.04
OLKS- 230	3	4/ 2/79	1.71	1.70	1.72	<	0.010	<	0.04
OLKS- 231	3	4/ 3/79	1.81	1.80	1.82	<	0.010	<	0.04
OLKS- 232	3	4/ 3/79	1.79	1.78	1.80	<	0.010	<	0.04
OLKS- 233	3	4/ 3/79	1.87	1.85	1.88	<	0.010	<	0.04
OLKS- 234	3	4/ 9/79	2.44	2.40	2.45	<	0.040	<	0.04
OLKS- 235	2	4/ 9/79	10.05	5.76	10.06		0.294		0.5
OLKS- 236	1	4/ 9/79	2.04	2.00	2.05	<	0.040		0.0
OLKS- 237	3	4/16/79	3.02	3.00	3.03	<	0.010		0.0
OLKS- 238	2	4/16/79	22.51	15.90	22.53		0.694		1.5
OLKS- 239	1	4/16/79	2.51	2.50	2.52	<	0.008		0.1
OLKS- 240	3	4/23/79	2.69	2.64	2.72	<	0.040		0.10
OLKS- 241	2	4/23/79	40.95	22.96	40.96		5.041		6.31
OLKS- 242	1	4/23/79	1.82	1.75	1.85	<	0.040		0.0
OLKS- 243	3	4/30/79	2.11	2.07	2.12	<	0.010		0.0
OLKS- 244	2	4/30/79	25.41	11.81	25.43		10.040		5.5
OLKS- 245	1	4/30/79	1.57	1.52	1.62		0.025		0.1
OLKS- 246	3	5/ 7/79	2.61	2.57	2.62	<	0.040		0.0
OLKS- 247	2	5/ 7/79	28.77	17.09	28.80		4.272		4.77
OLKS- 248	1	5/ 7/79	2.22	2.18	2.23	<	0.040		0.0
OLKS- 249	3	5/14/79	1.73	1.69	1.74	<	0.040	<	0.0
OLKS- 250	2	5/14/79	2.19	2.15	2.20	<	0.040		0.0
OLKS- 251	1	5/41/79	2.38	2.34	2.39	<	0.040		0.0
OLKS- 252	3	5/21/79	1.15	1.13	1.16	<	0.010		0.0
OLKS- 253	2	5/21/79	1.97	1.94	1.98	<	0.010		0.0
OLKS- 254	1	5/21/79	1.59	1.57	1.60	<	0.010		0.0
OLKS- 300	3	5/29/79	1.21	1.17	1.22		0.013		0.0
OLKS- 301	2	5/29/79	2.57	2.53	2.58	<	0.010		0.0
OLKS- 302	1	5/29/79	1.78	1.74	1.79	<	0.010	<	0.0
OLKS- 303	3	6/ 4/79	1.14	1.12	1.15	<	0.010		0.0
OLKS- 304	2	6/ 4/79	2.21	2.17	2.22	<	0.010		0.0
OLKS- 305	1	6/ 4/79	1.29	1.25	1.30	<	0.040		0.0
OLKS- 306	3	6/11/79	1.36	1.33	1.37		0.016		0.0
OLKS- 307	2	6/11/79	2.51	2.45	2.52	<	0.010		0.0
OLKS- 308	1	6/11/79	1.40	1.38	1.41	<	0.010	<	0.0
OLKS- 309	3	6/18/79	1.61	1.60	1.62		0.013		0.0

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTIAL

PROJECT OLKS DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OLKS- 310	2	6/18/79	75.	5.22	0.8	513.
OLKS- 311	1	6/18/79	64.	5.62	1.2	329.
OLKS- 312	3	6/25/79	52.	6.02	2.0	168.
OLKS- 313	2	6/25/79	85.	5.39	0.7	611.
OLKS- 314	1	6/25/79	112.	6.10	1.4	278.
OLKS- 315	3	7/ 2/79	88.	6.70	2.2	238.
OLKS- 316	2	7/ 2/79	87.	5.54	2.5	646.
OLKS- 317	1	7/ 2/79	172.	6.55	1.4	157.
OLKS- 318	2	7/ 9/79	94.	6.04	2.3	594.
OLKS- 319	1	7/ 9/79	164.	6.25	1.2	180.
OLKS- 320	3	7/16/79	52.	5.25	1.7	125.
OLKS- 321	2	7/16/79	92.	5.87	2.5	509.
OLKS- 322	1	7/16/79	195.	6.52	1.0	115.
OLKS- 323	3	7/23/79	49.	5.36	1.2	155.
OLKS- 324	2	7/23/79	104.	5.97	5.8	545.
OLKS- 325	1	7/23/79	207.	6.77	4.9	122.
OLKS- 326	3	7/30/79	61.	6.53	1.6	158.
OLKS- 327	2	7/30/79	146.	6.08	6.7	677.
OLKS- 328	1	7/30/79	217.	6.78	1.1	102.
OLKS- 329	1	8/ 6/79	212.	6.66	1.0	81.
OLKS- 330	3	8/13/79	46.	4.95	1.1	106.
OLKS- 331	2	8/13/79	83.	5.54	3.0	133.
OLKS- 332	1	8/13/79	228.	6.92	1.4	86.
OLKS- 333	3	8/20/79	46.	4.98	0.7	134.
OLKS- 334	2	8/20/79	88.	5.42	1.3	276.
OLKS- 335	1	8/20/79	86.	5.92	1.4	228.
OLKS- 336	3	8/27/79	44.	5.05	0.8	125.
OLKS- 337	2	8/27/79	68.	5.38	0.6	311.
OLKS- 338	1	8/27/79	104.	5.70	1.0	214.
OLKS- 339	3	9/ 5/79	31.	5.12	0.8	200.
OLKS- 340	2	9/ 5/79	43.	5.82	0.6	196.
OLKS- 341	1	9/ 5/79	40.	5.55	1.9	173.
OLKS- 342	3	9/10/79	32.	5.46	0.7	136.
OLKS- 343	1	9/10/79	38.	5.76	1.0	200.
OLKS- 344	3	9/24/79	30.	5.45	0.5	143.
OLKS- 345	1	9/24/79	38.	5.60	0.8	210.

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENT

PROJECT OLKS DATE OF PRINT

PARAMETER	RANGE OF VALUES			UNITS
DATE	4/ 1/79	-	9/31/79	MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+N MG N/
OLKS- 310	2	6/18/79	< 0.008	< 0.004	0.018	0.09	0.
OLKS- 311	1	6/18/79	< 0.008	< 0.004	0.010	0.02	0.
OLKS- 312	3	6/25/79	< 0.008	< 0.004	< 0.008	0.03	0.
OLKS- 313	2	6/25/79	0.016		0.020	0.11	0.
OLKS- 314	1	6/25/79	< 0.008	< 0.004	0.009	< 0.04	< 0.
OLKS- 315	3	7/ 2/79	< 0.008	< 0.004	< 0.008	0.01	0.
OLKS- 316	2	7/ 2/79	0.015		0.022	0.50	0.
OLKS- 317	1	7/ 2/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.
OLKS- 318	2	7/ 9/79	0.023		0.024	1.01	1.
OLKS- 319	1	7/ 9/79	0.005		0.006	< 0.04	0.
OLKS- 320	3	7/16/79	< 0.004	< 0.004	0.004	0.02	0.
OLKS- 321	2	7/16/79	0.018		0.021	1.24	1.
OLKS- 322	1	7/16/79	0.008	< 0.004	0.004	< 0.01	0.
OLKS- 323	3	7/23/79	0.005	< 0.004	0.005	< 0.04	0.
OLKS- 324	2	7/23/79	0.021		0.022	1.52	1.
OLKS- 325	1	7/23/79	0.013	0.009	< 0.004	< 0.01	0.
OLKS- 326	3	7/30/79	< 0.004	< 0.004	0.007	0.01	0.
OLKS- 327	2	7/30/79	0.018		0.029	5.18	5.
OLKS- 328	1	7/30/79	0.013	0.007	0.006	< 0.01	0.
OLKS- 329	1	8/ 6/79	0.012	0.007	0.005	0.01	0.
OLKS- 330	3	8/13/79	< 0.004	< 0.004	< 0.004	0.01	0.
OLKS- 331	2	8/13/79	0.455	0.442	0.013	0.30	0.
OLKS- 332	1	8/13/79	0.030	0.026	< 0.004	0.02	0.
OLKS- 333	3	8/20/79	0.004		0.005	0.01	0.
OLKS- 334	2	8/20/79	0.008		0.010	0.02	0.
OLKS- 335	1	8/20/79	0.008	< 0.004	0.008	0.02	0.
OLKS- 336	3	8/27/79	0.009		0.012	< 0.01	0.
OLKS- 337	2	8/27/79	0.049	0.042	0.007	0.05	0.
OLKS- 338	1	8/27/79	0.049	0.042	0.007	0.02	0.
OLKS- 339	3	9/ 5/79	< 0.004	< 0.004	0.005	0.02	0.
OLKS- 340	2	9/ 5/79	< 0.004	< 0.004	0.007	0.02	0.
OLKS- 341	1	9/ 5/79	< 0.004	< 0.004	0.006	0.02	0.
OLKS- 342	3	9/10/79	< 0.004	< 0.004	0.005	0.03	0.
OLKS- 343	1	9/10/79	< 0.004	< 0.004	0.007	0.03	0.
OLKS- 344	3	9/24/79			0.006	< 0.01	
OLKS- 345	1	9/24/79			0.008	< 0.01	

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTIAL

PROJECT OLKS DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
OLKS- 310	2	6/18/79	10.43	10.34	10.44	< 0.010	0.045
OLKS- 311	1	6/18/79	1.39	1.37	1.40	< 0.010	0.032
OLKS- 312	3	6/25/79	1.40	1.37	1.41	< 0.010	< 0.040
OLKS- 313	2	6/25/79	3.40	3.29	3.42	0.011	0.094
OLKS- 314	1	6/25/79	1.76	1.72	1.77	< 0.010	0.043
OLKS- 315	3	7/ 2/79	2.59	2.58	2.60	< 0.010	0.075
OLKS- 316	2	7/ 2/79	6.01	5.51	6.03	0.019	0.283
OLKS- 317	1	7/ 2/79	1.22	1.21	1.23	< 0.010	0.039
OLKS- 318	2	7/ 9/79	5.59	4.58	5.61	0.017	0.204
OLKS- 319	1	7/ 9/79	1.38	1.34	1.39	< 0.040	0.038
OLKS- 320	3	7/16/79	1.37	1.35	1.37	0.023	0.090
OLKS- 321	2	7/16/79	5.24	4.00	5.26	0.042	0.194
OLKS- 322	1	7/16/79	1.34	1.33	1.35	< 0.010	0.032
OLKS- 323	3	7/23/79	1.27	1.23	1.28	0.010	0.050
OLKS- 324	2	7/23/79	7.86	6.34	7.88	0.027	0.383
OLKS- 325	1	7/23/79	1.07	1.06	1.08	< 0.010	0.039
OLKS- 326	3	7/30/79	1.91	1.90	1.91	< 0.010	0.048
OLKS- 327	2	7/30/79	19.02	13.84	19.04	0.124	0.774
OLKS- 328	1	7/30/79	1.32	1.31	1.33	< 0.010	0.020
OLKS- 329	1	8/ 6/79	1.13	1.12	1.14	< 0.010	0.034
OLKS- 330	3	8/13/79	0.94	0.93	0.94	0.018	0.036
OLKS- 331	2	8/13/79	0.32	< 0.10	0.78	0.078	0.172
OLKS- 332	1	8/13/79	1.21	1.19	1.24	< 0.010	0.041
OLKS- 333	3	8/20/79	0.99	0.98	0.99	< 0.010	0.020
OLKS- 334	2	8/20/79	2.36	2.34	2.37	0.011	0.110
OLKS- 335	1	8/20/79	1.55	1.53	1.56	< 0.010	0.040
OLKS- 336	3	8/27/79	1.07	1.06	1.08	< 0.010	0.032
OLKS- 337	2	8/27/79	2.27	2.22	2.32	< 0.010	0.048
OLKS- 338	1	8/27/79	1.68	1.66	1.73	< 0.010	0.023
OLKS- 339	3	9/ 5/79	0.96	0.94	0.96	< 0.010	< 0.010
OLKS- 340	2	9/ 5/79	1.49	1.47	1.49	< 0.010	< 0.010
OLKS- 341	1	9/ 5/79	1.32	1.30	1.32	< 0.010	< 0.010
OLKS- 342	3	9/10/79	1.18	1.15	1.18	< 0.010	0.014
OLKS- 343	1	9/10/79	1.46	1.43	1.46	< 0.010	0.016
OLKS- 344	3	9/24/79	1.27	1.26		< 0.010	0.029
OLKS- 345	1	9/24/79	1.38	1.37		< 0.010	0.020

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTI

PROJECT OPVN DATE OF PRINTI

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OPVN- 39	1	4/ 4/79	272.	7.52	21.0	125.
OPVN- 40	1	4/11/79	303.	7.38	9.8	136.
OPVN- 41	1	4/25/79	389.	7.30	28.0	118.
OPVN- 42	1	5/ 2/79	362.	7.38	6.0	146.
OPVN- 43	1	5/ 9/79	354.	7.40	6.5	124.
OPVN- 44	1	5/17/79	68.	5.87	1.0	307.
OPVN- 45	3	5/17/79	68.	5.45	1.5	300.
OPVN- 46	1	5/23/79	77.	6.16	1.1	308.
OPVN- 47	3	5/23/79	128.	6.08	1.4	254.
OPVN- 300	1	5/30/79	96.	6.46	1.5	346.
OPVN- 301	1	6/ 6/79	107.	6.45	4.1	321.
OPVN- 302	1	6/13/79	102.	6.38	17.0	235.
OPVN- 303	1	6/20/79	128.	6.44	9.7	181.
OPVN- 304	1	6/27/79	114.	6.43	2.9	108.
OPVN- 305	3	6/27/79	134.	5.04	1.7	117.
OPVN- 306	2	6/27/79	62.	5.56	4.0	135.
OPVN- 307	1	7/ 4/79	69.	5.45	0.8	236.
OPVN- 308	3	7/ 4/79	47.	5.32	1.3	219.
OPVN- 309	1	7/11/79	84.	5.67	0.7	478.
OPVN- 310	3	7/11/79	70.	5.07	0.9	173.
OPVN- 311	2	7/11/79	72.	5.20	0.8	259.
OPVN- 312	1	7/18/79	67.	5.64	1.1	458.
OPVN- 313	3	7/18/79	55.	5.26	0.6	248.
OPVN- 314	2	7/18/79	57.	5.29	0.7	152.
OPVN- 315	1	7/24/79	71.	5.74	1.2	317.
OPVN- 316	3	7/24/79	66.	5.24	1.8	200.
OPVN- 317	2	7/24/79	72.	5.26	1.8	139.
OPVN- 318	1	8/ 1/79	75.	5.42	0.5	396.
OPVN- 319	3	8/ 1/79	71.	5.07	2.6	167.
OPVN- 320	2	8/ 1/79	76.	5.14	3.9	154.
OPVN- 321	1	8/ 7/79	60.	5.69	0.7	325.
OPVN- 322	3	8/ 7/79	55.	5.16	0.6	146.
OPVN- 323	2	8/ 7/79	53.	5.28	2.3	113.
OPVN- 324	1	8/15/79	55.	5.21	0.5	341.
OPVN- 325	3	8/15/79	50.	5.35	0.9	126.
OPVN- 326	2	8/15/79	50.	5.22	1.1	152.
OPVN- 327	1	8/21/79	60.	5.62	0.7	337.
OPVN- 328	3	8/21/79	62.	5.12	3.1	193.
OPVN- 329	2	8/21/79	60.	5.43	1.3	146.
OPVN- 330	1	8/28/79	60.	5.38	0.6	256.

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTIAL

PROJECT OPVN DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
OPVN- 39	1	4/ 4/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.01
OPVN- 40	1	4/11/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OPVN- 41	1	4/25/79	0.142	0.116	0.026	0.90	1.04
OPVN- 42	1	5/ 2/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OPVN- 43	1	5/ 9/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OPVN- 44	1	5/17/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OPVN- 45	3	5/17/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OPVN- 46	1	5/23/79	< 0.008	< 0.004	< 0.008	0.03	0.04
OPVN- 47	3	5/23/79	< 0.008	< 0.004	< 0.008	0.04	0.05
OPVN- 300	1	5/30/79	< 0.008	< 0.004	0.012	0.04	0.05
OPVN- 301	1	6/ 6/79	< 0.008	< 0.004	0.009	0.02	0.03
OPVN- 302	1	6/13/79	< 0.008	< 0.004	< 0.008	0.03	0.04
OPVN- 303	1	6/20/79	< 0.008	< 0.004	< 0.008	0.02	0.03
OPVN- 304	1	6/27/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.01
OPVN- 305	3	6/27/79	< 0.008	< 0.004	< 0.008	0.05	0.06
OPVN- 306	2	6/27/79	< 0.008	< 0.004	< 0.008	0.02	0.03
OPVN- 307	1	7/ 4/79	< 0.008	< 0.004	< 0.008	0.03	0.04
OPVN- 308	3	7/ 4/79	< 0.008	< 0.004	< 0.008	0.01	0.02
OPVN- 309	1	7/11/79	0.012		0.015	0.03	0.04
OPVN- 310	3	7/11/79	0.005		0.007	0.02	0.03
OPVN- 311	2	7/11/79	0.007		0.010	0.02	0.03
OPVN- 312	1	7/18/79	0.008		0.012	0.01	0.02
OPVN- 313	3	7/18/79	0.006		0.007	< 0.01	0.02
OPVN- 314	2	7/18/79	0.005	< 0.004	0.004	< 0.01	0.02
OPVN- 315	1	7/24/79	0.010	< 0.004	0.009	< 0.01	0.02
OPVN- 316	3	7/24/79	< 0.004	< 0.004	0.007	< 0.01	< 0.01
OPVN- 317	2	7/24/79	< 0.004	< 0.004	0.005	< 0.01	< 0.01
OPVN- 318	1	8/ 1/79	0.007		0.013	0.02	0.03
OPVN- 319	3	8/ 1/79	< 0.004	< 0.004	0.007	0.01	0.01
OPVN- 320	2	8/ 1/79	< 0.004	< 0.004	0.006	0.02	0.02
OPVN- 321	1	8/ 7/79	0.009		0.011	0.02	0.03
OPVN- 322	3	8/ 7/79	0.004		0.005	0.01	0.01
OPVN- 323	2	8/ 7/79	< 0.004	< 0.004	< 0.004	< 0.01	< 0.01
OPVN- 324	1	8/15/79	0.006		0.011	0.01	0.02
OPVN- 325	3	8/15/79	< 0.004	< 0.004	< 0.004	< 0.01	< 0.01
OPVN- 326	2	8/15/79	< 0.004	< 0.004	0.004	0.01	0.01
OPVN- 327	1	8/21/79	0.009		0.011	0.01	0.02
OPVN- 328	3	8/21/79	0.005		0.007	< 0.01	0.02
OPVN- 329	2	8/21/79	< 0.004	< 0.004	< 0.004	< 0.01	< 0.01
OPVN- 330	1	8/28/79	0.006		0.009	0.01	0.02

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTI

PROJECT OPVN DATE OF PRINTI

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P
OPVN- 39	1	4/ 4/79	3.36	3.35	3.37	< 0.010	0.2
OPVN- 40	1	4/11/79	2.96	2.92	2.97	< 0.040	0.1
OPVN- 41	1	4/25/79	4.10	3.20	4.24	< 0.040	0.2
OPVN- 42	1	5/ 2/79	2.90	2.86	2.91	< 0.010	0.1
OPVN- 43	1	5/ 9/79	2.81	2.77	2.82		0.1
OPVN- 44	1	5/17/79	2.10	2.06	2.11	< 0.040	0.0
OPVN- 45	3	5/17/79	3.03	2.99	3.04	< 0.040	0.0
OPVN- 46	1	5/23/79	1.86	1.83	1.87	< 0.010	0.0
OPVN- 47	3	5/23/79	2.35	2.31	2.36	0.012	0.0
OPVN- 300	1	5/30/79	2.14	2.10	2.15	< 0.010	0.0
OPVN- 301	1	6/ 6/79	2.44	2.42	2.45	< 0.010	0.1
OPVN- 302	1	6/13/79	3.14	3.11	3.15	0.017	0.2
OPVN- 303	1	6/20/79	3.42	3.40	3.43	< 0.010	0.2
OPVN- 304	1	6/27/79	1.56	1.55	1.57	< 0.010	0.0
OPVN- 305	3	6/27/79	1.59	1.54	1.60	< 0.010	0.0
OPVN- 306	2	6/27/79	3.21	3.19	3.22	< 0.010	0.1
OPVN- 307	1	7/ 4/79	1.80	1.77	1.81	0.016	0.0
OPVN- 308	3	7/ 4/79	2.75	2.74	2.76	< 0.010	0.0
OPVN- 309	1	7/11/79	2.35	2.32	2.36	0.050	0.1
OPVN- 310	3	7/11/79	1.77	1.75	1.78	< 0.010	0.0
OPVN- 311	2	7/11/79	2.47	2.45	2.48	< 0.010	0.0
OPVN- 312	1	7/18/79	2.23	2.22	2.24	0.025	0.0
OPVN- 313	3	7/18/79	1.60	1.59	1.61	< 0.010	0.0
OPVN- 314	2	7/18/79	1.82	1.81	1.83	< 0.010	0.0
OPVN- 315	1	7/24/79	2.22	2.21	2.23	< 0.010	< 0.0
OPVN- 316	3	7/24/79	2.89	2.88	2.89	< 0.010	0.0
OPVN- 317	2	7/24/79	2.46	2.45	2.46	< 0.010	0.0
OPVN- 318	1	8/ 1/79	2.09	2.07	2.10	< 0.010	0.0
OPVN- 319	3	8/ 1/79	3.37	3.36	3.37	< 0.010	0.0
OPVN- 320	2	8/ 1/79	5.75	5.73	5.75	< 0.010	0.1
OPVN- 321	1	8/ 7/79	2.18	2.16	2.19	< 0.010	0.0
OPVN- 322	3	8/ 7/79	1.31	1.30	1.31	< 0.010	0.0
OPVN- 323	2	8/ 7/79	2.80	2.79	2.80	< 0.010	0.0
OPVN- 324	1	8/15/79	1.94	1.93	1.95	< 0.010	0.0
OPVN- 325	3	8/15/79	1.18	1.17	1.18	< 0.010	0.0
OPVN- 326	2	8/15/79	1.94	1.93	1.94	< 0.010	0.0
OPVN- 327	1	8/21/79	1.81	1.80	1.82	< 0.010	0.0
OPVN- 328	3	8/21/79	10.15	10.14	10.15	< 0.010	0.0
OPVN- 329	2	8/21/79	3.83	3.82	3.83	< 0.010	0.0
OPVN- 330	1	8/28/79	1.92	1.91	1.93	< 0.010	0.0

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTIAL

PROJECT OPVN DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OPVN- 331	3	8/28/79	60.	5.08	2.9	157.
OPVN- 332	2	8/28/79	54.	5.38	1.6	109.
OPVN- 333	1	9/ 3/79	30.	5.55	1.5	139.
OPVN- 334	1	9/12/79	39.	5.49	0.5	263.
OPVN- 335	1	9/19/79	34.	5.84	0.4	237.
OPVN- 336	4	9/19/79	38.	5.83	0.9	335.
OPVN- 337	1	9/25/79	40.	5.74	0.6	268.
OPVN- 338	4	9/25/79	37.	5.74	0.7	518.

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENT

PROJECT OPVN DATE OF PRINT

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH MG N/
OPVN- 331	3	8/28/79	< 0.004	< 0.004	0.005	0.01	0.
OPVN- 332	2	8/28/79	< 0.004	< 0.004	< 0.004	0.02	0.
OPVN- 333	1	9/ 3/79	< 0.004	< 0.004	< 0.004	0.01	0.
OPVN- 334	1	9/12/79	0.005		0.008	0.03	0.
OPVN- 335	1	9/19/79	< 0.004	< 0.004	0.008	< 0.01	< 0.
OPVN- 336	4	9/19/79	< 0.004	< 0.004	0.011	< 0.01	< 0.
OPVN- 337	1	9/25/79			0.010	< 0.01	
OPVN- 338	4	9/25/79			0.011	0.01	

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTIAL

PROJECT OPVN DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
OPVN- 331	3	8/28/79	2.91	2.90	2.91	< 0.010	0.048
OPVN- 332	2	8/28/79	2.68	2.66	2.68	< 0.010	0.060
OPVN- 333	1	9/ 3/79	0.68	0.67	0.68	< 0.010	0.020
OPVN- 334	1	9/12/79	1.27	1.24	1.28	< 0.010	0.023
OPVN- 335	1	9/19/79	1.11	1.10	1.11	< 0.010	0.024
OPVN- 336	4	9/19/79	2.06	2.05	2.06	< 0.010	0.057
OPVN- 337	1	9/25/79	1.27	1.26		< 0.010	0.029
OPVN- 338	4	9/25/79	1.39	1.38		< 0.010	0.055

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENT

PROJECT OSEZ DATE OF PRINT

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OSEZ- 192	1	4/ 3/79	429.	7.13	47.0	255.
OSEZ- 193	5	4/ 3/79	600.	8.38	63.0	245.
OSEZ- 194	6	4/ 3/79	1000.	7.47	31.0	125.
OSEZ- 195	2	4/ 3/79	1525.	8.27	130.0	339.
OSEZ- 196	3	4/ 3/79	2040.	7.11	73.0	368.
OSEZ- 197	4	4/ 3/79	1600.	7.62	21.5	274.
OSEZ- 198	3	4/10/79	2075.	7.10	51.0	317.
OSEZ- 199	4	4/10/79	1680.	7.53	21.5	248.
OSEZ- 200	2	4/10/79	1150.	7.66	69.5	269.
OSEZ- 201	5	4/10/79	555.	7.86	69.0	369.
OSEZ- 202	6	4/10/79	1023.	7.12	32.0	151.
OSEZ- 203	1	4/10/79	411.	7.96	51.5	268.
OSEZ- 204	1	4/17/79	436.	7.28	43.0	256.
OSEZ- 205	6	4/17/79	1130.	7.32	19.0	187.
OSEZ- 206	5	4/17/79	1460.	8.33	51.0	247.
OSEZ- 207	2	4/17/79	2540.	8.02	125.0	788.
OSEZ- 208	3	4/17/79	2165.	7.11	64.0	430.
OSEZ- 209	4	4/17/79	1910.	7.43	74.0	323.
OSEZ- 210	1	4/24/79	443.	7.56	38.5	151.
OSEZ- 211	5	4/24/79	1015.	7.37	32.0	455.
OSEZ- 212	2	4/24/79	4450.	7.75	170.0	1455.
OSEZ- 213	3	4/24/79	2200.	7.17	51.0	464.
OSEZ- 214	4	4/24/79	1840.	7.37	30.0	245.
OSEZ- 215	1	5/ 1/79	424.	7.33	31.5	174.
OSEZ- 216	5	5/ 1/79	770.	7.53	42.0	171.
OSEZ- 217	6	5/ 1/79	970.	7.03	21.5	159.
OSEZ- 218	2	5/ 1/79	1625.	8.29	160.0	440.
OSEZ- 219	3	5/ 1/79	2100.	7.13	110.0	377.
OSEZ- 220	4	5/ 1/79	1765.	7.53	35.5	762.
OSEZ- 221	1	5/ 8/79	485.	7.29	21.0	186.
OSEZ- 222	5	5/ 8/79	1425.	7.85	22.0	227.
OSEZ- 223	6	5/ 8/79	840.	6.92	18.0	155.
OSEZ- 224	2	5/ 8/79	1150.	8.33	71.0	195.
OSEZ- 225	3	5/ 8/79	2050.	7.18	55.0	424.
OSEZ- 226	4	5/ 8/79	1765.	7.39	50.0	312.
OSEZ- 227	1	5/15/79	195.	6.65	8.0	313.
OSEZ- 228	5	5/15/79	545.	7.15	8.4	298.
OSEZ- 229	6	5/15/79	880.	7.23	30.5	416.
OSEZ- 230	2	5/15/79	1700.	7.87	170.0	876.
OSEZ- 231	3	5/15/79	1950.	7.11	35.0	433.

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTIALL

PROJECT OSEZ | DATE OF PRINTING

PARAMETER | RANGE OF VALUES | UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
OSEZ- 192	1	4/ 3/79	0.011	< 0.004	0.010	0.12	0.13
OSEZ- 193	5	4/ 3/79	0.008	< 0.004	< 0.008	< 0.04	0.05
OSEZ- 194	6	4/ 3/79	0.009	< 0.004	< 0.008	4.64	4.65
OSEZ- 195	2	4/ 3/79	0.068	0.025	0.043	20.88	20.95
OSEZ- 196	3	4/ 3/79	0.054	0.018	0.036	74.19	74.24
OSEZ- 197	4	4/ 3/79	0.124	0.049	0.075	17.11	17.23
OSEZ- 198	3	4/10/79	0.049	0.012	0.037	76.77	76.82
OSEZ- 199	4	4/10/79	0.269	0.139	0.130	14.63	14.90
OSEZ- 200	2	4/10/79	0.026	0.010	0.016	14.07	14.10
OSEZ- 201	5	4/10/79	0.019		0.023	0.26	0.28
OSEZ- 202	6	4/10/79	< 0.008	< 0.004	< 0.008	1.69	1.70
OSEZ- 203	1	4/10/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OSEZ- 204	1	4/17/79	< 0.008	< 0.004	< 0.008	0.04	0.05
OSEZ- 205	6	4/17/79	< 0.008	< 0.004	< 0.008	0.12	0.13
OSEZ- 206	5	4/17/79	0.026		0.027	11.00	11.03
OSEZ- 207	2	4/17/79	0.063	0.006	0.057	77.77	77.83
OSEZ- 208	3	4/17/79	0.051	0.011	0.040	76.64	76.69
OSEZ- 209	4	4/17/79	0.034	0.007	0.027	37.93	37.96
OSEZ- 210	1	4/24/79	< 0.008	< 0.004	< 0.008	< 0.04	< 0.01
OSEZ- 211	5	4/24/79	0.010	< 0.004	< 0.008	0.22	0.23
OSEZ- 212	2	4/24/79	0.063	0.013	0.050	116.90	116.96
OSEZ- 213	3	4/24/79	0.079	0.014	0.065	90.79	90.87
OSEZ- 214	4	4/24/79	0.013		0.016	27.89	27.90
OSEZ- 215	1	5/ 1/79	< 0.008	< 0.004	< 0.008	0.05	0.06
OSEZ- 216	5	5/ 1/79	0.026	0.013	0.013	1.24	1.27
OSEZ- 217	6	5/ 1/79	< 0.008	< 0.004	< 0.008	0.35	0.36
OSEZ- 218	2	5/ 1/79	0.028	0.019	0.009	45.60	45.63
OSEZ- 219	3	5/ 1/79	0.009	< 0.004	< 0.008	83.58	83.59
OSEZ- 220	4	5/ 1/79	< 0.008	< 0.004	< 0.008	21.96	21.97
OSEZ- 221	1	5/ 8/79	< 0.008	< 0.004	< 0.008	4.68	4.69
OSEZ- 222	5	5/ 8/79	0.020	0.007	0.013	20.08	20.10
OSEZ- 223	6	5/ 8/79	< 0.008	< 0.004	< 0.008	1.61	1.62
OSEZ- 224	2	5/ 8/79	0.031	0.011	0.020	14.83	14.86
OSEZ- 225	3	5/ 8/79	0.028	0.008	0.020	87.43	87.46
OSEZ- 226	4	5/ 8/79	0.015		0.016	33.90	33.91
OSEZ- 227	1	5/15/79	0.078	0.070	< 0.008	0.50	0.58
OSEZ- 228	5	5/15/79	0.188	0.174	0.014	2.25	2.44
OSEZ- 229	6	5/15/79	< 0.008	< 0.004	< 0.008	9.28	9.29
OSEZ- 230	2	5/15/79	0.044	0.023	0.021	44.40	44.44
OSEZ- 231	3	5/15/79	0.031	0.017	0.014	81.87	81.90

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTI

PROJECT OSEZ — DATE OF PRINTI

PARAMETER	RANGE OF VALUES			UNITS
DATE	4/ 1/79	-	9/31/79	MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
OSEZ- 192	1	4/ 3/79	3.85	3.73	3.86	0.398	1.42
OSEZ- 193	5	4/ 3/79	21.30	21.26	21.31	6.594	15.09
OSEZ- 194	6	4/ 3/79	24.60	19.96	24.61	2.173	19.12
OSEZ- 195	2	4/ 3/79	211.10	190.22	211.17	2.663	16.64
OSEZ- 196	3	4/ 3/79	213.85	139.66	213.90	0.016	31.36
OSEZ- 197	4	4/ 3/79	37.79	20.68	37.91	3.526	8.51
OSEZ- 198	3	4/10/79	133.95	57.18	134.00	< 0.040	31.73
OSEZ- 199	4	4/10/79	26.21	11.58	26.48	7.159	13.9
OSEZ- 200	2	4/10/79	54.00	39.93	54.03	1.971	7.62
OSEZ- 201	5	4/10/79	21.42	21.16	21.44	1.050	27.10
OSEZ- 202	6	4/10/79	16.04	14.35	16.05	2.435	4.66
OSEZ- 203	1	4/10/79	5.51	5.47	5.52	0.196	1.6
OSEZ- 204	1	4/17/79	4.32	4.28	4.33	0.173	0.79
OSEZ- 205	6	4/17/79	10.19	10.07	10.20	1.322	3.0
OSEZ- 206	5	4/17/79	38.05	27.05	38.08	2.390	8.3
OSEZ- 207	2	4/17/79	279.18	201.41	279.24	6.065	28.4
OSEZ- 208	3	4/17/79	145.74	69.10	145.79	0.034	32.4
OSEZ- 209	4	4/17/79	9.62		9.65	0.765	20.1
OSEZ- 210	1	4/24/79	4.14	4.10	4.15	0.061	0.6
OSEZ- 211	5	4/24/79	14.98	14.76	14.99	3.202	5.4
OSEZ- 212	2	4/24/79	703.13	586.23	703.19	12.492	87.9
OSEZ- 213	3	4/24/79	143.35	52.56	143.43	0.098	32.9
OSEZ- 214	4	4/24/79	52.66	24.77	52.67	9.110	18.5
OSEZ- 215	1	5/ 1/79	3.51	3.46	3.52	0.101	0.5
OSEZ- 216	5	5/ 1/79	12.22	10.98	12.25	2.713	5.5
OSEZ- 217	6	5/ 1/79	8.04	7.69	8.05	3.175	4.0
OSEZ- 218	2	5/ 1/79	149.41	103.81	149.44	7.467	23.8
OSEZ- 219	3	5/ 1/79	133.11	49.53	133.12	1.791	31.2
OSEZ- 220	4	5/ 1/79	39.73	17.77	39.74	6.361	14.5
OSEZ- 221	1	5/ 8/79	8.67	3.99	8.68	0.268	0.9
OSEZ- 222	5	5/ 8/79	35.24	15.16	35.26	0.444	8.6
OSEZ- 223	6	5/ 8/79	8.17	6.56	8.18	3.412	4.1
OSEZ- 224	2	5/ 8/79	78.03	63.20	78.06	1.882	7.1
OSEZ- 225	3	5/ 8/79	152.83	65.40	152.86	0.046	32.0
OSEZ- 226	4	5/ 8/79	51.33	17.43	51.35	8.129	17.5
OSEZ- 227	1	5/15/79	3.84	3.34	3.92	1.465	2.1
OSEZ- 228	5	5/15/79	7.66	5.41	7.85	5.911	6.4
OSEZ- 229	6	5/15/79	24.62	15.34	24.63	14.925	17.0
OSEZ- 230	2	5/15/79	182.95	138.55	182.99	9.327	51.8
OSEZ- 231	3	5/15/79	113.11	31.24	113.14	< 0.040	27.9

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTIALL

PROJECT OSEZ DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OSEZ- 232	4	5/15/79	1550.	7.57	25.0	234.
OSEZ- 233	1	5/22/79	402.	7.04	34.0	173.
OSEZ- 234	5	5/22/79	845.	7.55	14.5	133.
OSEZ- 235	6	5/22/79	850.	7.00	16.5	148.
OSEZ- 236	2	5/22/79	1280.	7.91	145.0	336.
OSEZ- 237	3	5/22/79	2100.	7.14	90.0	417.
OSEZ- 238	4	5/22/79	1950.	7.36	67.0	247.
OSEZ- 300	1	5/29/79	144.	6.76	7.3	235.
OSEZ- 301	5	5/29/79	164.	6.86	4.7	222.
OSEZ- 302	6	5/29/79	478.	7.26	18.0	295.
OSEZ- 303	2	5/29/79	2250.	8.11	175.0	850.
OSEZ- 304	3	5/29/79	1930.	7.11	38.0	393.
OSEZ- 305	4	5/29/79	1560.	7.47	24.0	227.
OSEZ- 306	1	6/ 5/79	343.	6.98	17.5	264.
OSEZ- 307	5	6/ 5/79	166.	6.71	2.9	262.
OSEZ- 308	6	6/ 5/79	835.	7.08	18.0	297.
OSEZ- 309	2	6/ 5/79	1270.	7.36	145.0	439.
OSEZ- 310	3	6/ 5/79	2000.	7.07	28.5	396.
OSEZ- 311	4	6/ 5/79	1550.	7.43	33.5	202.
OSEZ- 312	1	6/12/79	328.	7.15	15.5	216.
OSEZ- 313	6	6/12/79	840.	7.03	12.0	164.
OSEZ- 314	5	6/12/79	270.	7.34	3.8	236.
OSEZ- 315	2	6/12/79	1800.	7.93	150.0	452.
OSEZ- 316	3	6/12/79	1960.	7.05	62.0	334.
OSEZ- 317	4	6/12/79	1555.	7.38	47.5	243.
OSEZ- 318	1	6/19/79	925.	7.80	21.0	209.
OSEZ- 319	5	6/19/79	1555.	7.91	24.5	269.
OSEZ- 320	6	6/19/79	820.	6.84	16.0	184.
OSEZ- 321	2	6/19/79	1130.	8.09	150.0	262.
OSEZ- 322	3	6/19/79	2035.	7.07	81.0	520.
OSEZ- 323	4	6/19/79	1790.	7.34	72.0	281.
OSEZ- 324	2	6/21/79	1418.	7.98	62.0	125.
OSEZ- 325	2	6/21/79	1555.	8.20	70.0	176.
OSEZ- 326	2	6/21/79	1500.	8.04	65.5	155.
OSEZ- 327	2	6/21/79	1482.	8.03	82.0	199.
OSEZ- 328	2	6/21/79	1680.	8.07	128.0	270.
OSEZ- 329	2	6/21/79	1880.	8.04	165.0	510.
OSEZ- 330	2	6/21/79	1480.	7.84	153.0	380.
OSEZ- 331	2	6/21/79	1200.	7.78	125.0	270.
OSEZ- 332	1	6/26/79	451.	7.71	8.0	116.

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTI

PROJECT OSEZ DATE OF PRINTI

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
OSEZ- 232	4	5/15/79	< 0.008	< 0.004	< 0.008	25.06	25.
OSEZ- 233	1	5/22/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.
OSEZ- 234	5	5/22/79	0.091	0.078	0.013	4.16	4.
OSEZ- 235	6	5/22/79	< 0.008	< 0.004	< 0.008	6.22	6.
OSEZ- 236	2	5/22/79	0.098	0.056	0.042	25.78	25.
OSEZ- 237	3	5/22/79	0.069	0.028	0.041	90.17	90.
OSEZ- 238	4	5/22/79	0.014	< 0.004	0.011	45.22	45.
OSEZ- 300	1	5/29/79	0.080	0.060	0.020	1.12	1.
OSEZ- 301	5	5/29/79	0.163	0.138	0.025	1.04	1.
OSEZ- 302	6	5/29/79	0.137	0.016	0.121	1.82	1.
OSEZ- 303	2	5/29/79	0.119	0.044	0.075	16.36	16.
OSEZ- 304	3	5/29/79	0.063	0.020	0.043	86.27	86.
OSEZ- 305	4	5/29/79	0.013	< 0.004	0.013	30.53	30.
OSEZ- 306	1	6/ 5/79	0.057	0.046	0.011	0.22	0.
OSEZ- 307	5	6/ 5/79	0.014	0.006	0.008	0.46	0.
OSEZ- 308	6	6/ 5/79	< 0.008	< 0.004	0.008	4.83	4.
OSEZ- 309	2	6/ 5/79	0.109	0.035	0.074	14.81	14.
OSEZ- 310	3	6/ 5/79	0.058	0.016	0.042	80.12	80.
OSEZ- 311	4	6/ 5/79	0.011	< 0.004	0.011	23.08	23.
OSEZ- 312	1	6/12/79	0.012	< 0.004	< 0.008	0.04	0.
OSEZ- 313	6	6/12/79	< 0.008	< 0.004	< 0.008	4.57	4.
OSEZ- 314	5	6/12/79	< 0.008	< 0.004	0.008	0.03	0.
OSEZ- 315	2	6/12/79	0.069	0.023	0.046	93.17	93.
OSEZ- 316	3	6/12/79	0.039	0.010	0.029	78.80	78.
OSEZ- 317	4	6/12/79	0.009		0.011	28.27	28.
OSEZ- 318	1	6/19/79	< 0.008	< 0.004	< 0.008	14.64	14.
OSEZ- 319	5	6/19/79	< 0.008	< 0.004	0.012	32.07	32.
OSEZ- 320	6	6/19/79	< 0.008	< 0.004	< 0.008	4.25	4.
OSEZ- 321	2	6/19/79	0.052	0.026	0.026	14.75	14.
OSEZ- 322	3	6/19/79	0.045	0.019	0.026	86.92	86.
OSEZ- 323	4	6/19/79	0.012	< 0.004	0.011	43.68	43.
OSEZ- 324	2	6/21/79	0.166	0.048	0.118	36.75	36.
OSEZ- 325	2	6/21/79	0.053	0.016	0.037	49.73	49.
OSEZ- 326	2	6/21/79	0.027	0.007	0.020	45.31	45.
OSEZ- 327	2	6/21/79	0.021	0.008	0.013	43.65	43.
OSEZ- 328	2	6/21/79	0.027	0.007	0.020	65.46	65.
OSEZ- 329	2	6/21/79	0.040	0.006	0.034	76.22	76.
OSEZ- 330	2	6/21/79	0.047	0.012	0.035	40.62	40.
OSEZ- 331	2	6/21/79	0.045	0.010	0.035	21.30	21.
OSEZ- 332	1	6/26/79	< 0.008	< 0.004	0.010	0.01	0.

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTIALI

PROJECT OSEZ DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
OSEZ- 232	4	5/15/79	38.61	13.55	38.62	8.779	14.501
OSEZ- 233	1	5/22/79	3.20	3.19	3.21	0.251	1.028
OSEZ- 234	5	5/22/79	8.48	4.82	8.57	0.335	1.438
OSEZ- 235	6	5/22/79	16.30	10.08	16.31	3.262	3.196
OSEZ- 236	2	5/22/79	91.88	66.10	91.98	5.707	18.506
OSEZ- 237	3	5/22/79	118.10	27.93	118.17	7.420	18.616
OSEZ- 238	4	5/22/79	110.65	65.43	110.66	9.041	14.786
OSEZ- 300	1	5/29/79	3.73	2.61	3.81	2.051	2.431
OSEZ- 301	5	5/29/79	3.69	2.65	3.85	1.867	1.910
OSEZ- 302	6	5/29/79	11.65	9.83	11.79	8.173	9.008
OSEZ- 303	2	5/29/79	516.80	500.44	516.92	7.497	74.886
OSEZ- 304	3	5/29/79	137.32	51.05	137.38	0.026	25.342
OSEZ- 305	4	5/29/79	48.40	17.87	48.41	9.019	13.620
OSEZ- 306	1	6/ 5/79	4.26	4.04	4.32	1.611	2.499
OSEZ- 307	5	6/ 5/79	2.46	2.00	2.47	0.646	0.818
OSEZ- 308	6	6/ 5/79	10.81	5.98	10.82	8.671	8.254
OSEZ- 309	2	6/ 5/79	123.51	108.70	123.62	7.294	20.787
OSEZ- 310	3	6/ 5/79	128.54	48.42	128.60	0.015	4.327
OSEZ- 311	4	6/ 5/79	40.44	17.36	40.45	8.076	8.710
OSEZ- 312	1	6/12/79	2.26	2.22	2.27	0.628	1.044
OSEZ- 313	6	6/12/79	9.72	5.15	9.73	4.346	4.968
OSEZ- 314	5	6/12/79	2.96	2.93	2.97	0.838	1.249
OSEZ- 315	2	6/12/79	150.41	57.24	150.48	9.240	28.549
OSEZ- 316	3	6/12/79	123.73	44.93	123.77	0.049	32.913
OSEZ- 317	4	6/12/79	43.94	15.67	43.95	8.116	13.981
OSEZ- 318	1	6/19/79	35.58	20.94	35.59	1.097	4.211
OSEZ- 319	5	6/19/79	94.53	62.46	94.54	0.940	15.176
OSEZ- 320	6	6/19/79	9.35	5.10	9.36	4.019	4.644
OSEZ- 321	2	6/19/79	85.87	71.12	85.92	5.798	29.225
OSEZ- 322	3	6/19/79	122.28	35.36	122.33	0.031	29.580
OSEZ- 323	4	6/19/79	110.75	67.07	110.76	13.713	18.615
OSEZ- 324	2	6/21/79	94.11	57.36	94.28	3.158	6.873
OSEZ- 325	2	6/21/79	103.86	54.13	103.91	3.225	8.864
OSEZ- 326	2	6/21/79	97.82	52.51	97.85	2.936	7.924
OSEZ- 327	2	6/21/79	98.52	54.87	98.54	5.332	11.021
OSEZ- 328	2	6/21/79	139.40	73.94	139.43	8.804	19.705
OSEZ- 329	2	6/21/79	167.27	91.05	167.31	8.504	30.546
OSEZ- 330	2	6/21/79	112.92	72.30	112.97	6.763	24.849
OSEZ- 331	2	6/21/79	75.29	53.99	75.34	6.963	19.982
OSEZ- 332	1	6/26/79	3.22	3.21	3.23	0.929	1.339

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTI

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PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OSEZ- 333	1	6/26/79	450.	7.85	8.7	117.
OSEZ- 334	1	6/26/79	438.	7.81	7.9	120.
OSEZ- 335	1	6/26/79	435.	7.82	8.2	126.
OSEZ- 336	1	6/26/79	445.	7.83	8.6	125.
OSEZ- 337	1	6/26/79	444.	7.83	8.4	127.
OSEZ- 338	1	6/26/79	443.	7.88	8.0	125.
OSEZ- 339	1	6/26/79	447.	7.93	8.1	125.
OSEZ- 340	1	6/26/79	447.	7.75	7.9	116.
OSEZ- 341	1	6/26/79	441.	7.80	9.1	117.
OSEZ- 342	5	6/26/79	963.	7.89	28.0	236.
OSEZ- 343	6	6/26/79	848.	7.02	22.5	235.
OSEZ- 344	2	6/26/79	1325.	7.97	170.0	425.
OSEZ- 345	3	6/26/79	2030.	7.12	45.0	463.
OSEZ- 346	4	6/26/79	1750.	7.47	28.0	248.
OSEZ- 347	1	7/ 3/79	570.	7.49	19.5	190.
OSEZ- 348	5	7/ 3/79	1480.	7.80	23.0	247.
OSEZ- 349	6	7/ 3/79	910.	6.96	15.5	222.
OSEZ- 350	2	7/ 3/79	1340.	7.53	130.0	441.
OSEZ- 351	3	7/ 3/79	1970.	7.03	35.0	465.
OSEZ- 352	4	7/ 3/79	1745.	7.39	23.0	271.
OSEZ- 353	1	7/10/79	265.	7.04	7.4	215.
OSEZ- 354	5	7/10/79	331.	6.99	25.0	326.
OSEZ- 355	6	7/10/79	1462.	7.42	550.0	643.
OSEZ- 356	2	7/10/79	1760.	6.56	140.0	410.
OSEZ- 357	3	7/10/79	1840.	7.12	98.0	396.
OSEZ- 358	4	7/10/79	1585.	7.44	46.0	272.
OSEZ- 359	2	7/13/79	1075.	7.70	36.0	76.
OSEZ- 360	2	7/13/79	953.	7.64	46.0	86.
OSEZ- 361	2	7/13/79	1115.	7.57	73.5	115.
OSEZ- 362	2	7/13/79	863.	7.68	34.0	64.
OSEZ- 363	2	7/13/79	1580.	8.12	128.0	219.
OSEZ- 364	2	7/13/79	2910.	8.18	155.0	523.
OSEZ- 365	2	7/13/79	1750.	7.94	148.0	421.
OSEZ- 366	2	7/13/79	1350.	7.66	130.0	321.
OSEZ- 367	2	7/13/79	1775.	7.57	170.0	684.
OSEZ- 368	2	7/13/79	1745.	7.62	155.0	514.
OSEZ- 369	2	7/13/79	2430.	8.14	170.0	602.
OSEZ- 370	2	7/13/79	1665.	8.13	128.0	279.
OSEZ- 371	2	7/13/79	1582.	7.54	150.0	464.
OSEZ- 372	1	7/17/79	502.	7.34	30.0	352.

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTIAL

PROJECT OSEZ DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
OSEZ- 333	1	6/26/79	< 0.008	< 0.004	0.011	0.02	0.03
OSEZ- 334	1	6/26/79	< 0.008	< 0.004	0.011	0.02	0.03
OSEZ- 335	1	6/26/79	< 0.008	< 0.004	0.010	0.02	0.03
OSEZ- 336	1	6/26/79	< 0.008	< 0.004	0.010	0.02	0.03
OSEZ- 337	1	6/26/79	< 0.008	< 0.004	< 0.008	0.02	0.03
OSEZ- 338	1	6/26/79	< 0.008	< 0.004	< 0.008	0.01	0.02
OSEZ- 339	1	6/26/79	< 0.008	< 0.004	< 0.008	0.02	0.03
OSEZ- 340	1	6/26/79	< 0.008	< 0.004	< 0.008	< 0.01	< 0.01
OSEZ- 341	1	6/26/79	< 0.008	< 0.004	< 0.008	0.01	0.02
OSEZ- 342	5	6/26/79	0.015		0.019	1.70	1.72
OSEZ- 343	6	6/26/79	< 0.008	< 0.004	< 0.008	4.58	4.59
OSEZ- 344	2	6/26/79	0.073	0.022	0.051	25.44	25.51
OSEZ- 345	3	6/26/79	0.057	0.012	0.045	82.30	82.36
OSEZ- 346	4	6/26/79	0.009		0.010	32.25	32.26
OSEZ- 347	1	7/ 3/79	< 0.008	< 0.004	< 0.008	5.32	5.33
OSEZ- 348	5	7/ 3/79	0.073		0.078	29.05	29.12
OSEZ- 349	6	7/ 3/79	< 0.008	< 0.004	< 0.008	6.34	6.35
OSEZ- 350	2	7/ 3/79	0.066	0.026	0.040	28.77	28.84
OSEZ- 351	3	7/ 3/79	0.076	0.020	0.056	88.46	88.54
OSEZ- 352	4	7/ 3/79	0.011	< 0.004	0.011	45.00	45.01
OSEZ- 353	1	7/10/79	0.012	< 0.004	0.009	0.15	0.16
OSEZ- 354	5	7/10/79	0.015		0.018	4.43	4.45
OSEZ- 355	6	7/10/79	0.339	0.248	0.091	37.93	38.27
OSEZ- 356	2	7/10/79	0.032	< 0.004	0.029	43.58	43.61
OSEZ- 357	3	7/10/79	0.037		0.039	77.56	77.60
OSEZ- 358	4	7/10/79	0.008		0.011	33.75	33.76
OSEZ- 359	2	7/13/79	< 0.004	< 0.004	< 0.004	12.79	12.79
OSEZ- 360	2	7/13/79	< 0.004	< 0.004	< 0.004	10.25	10.25
OSEZ- 361	2	7/13/79	0.004	< 0.004	< 0.004	16.49	16.49
OSEZ- 362	2	7/13/79	< 0.004	< 0.004	< 0.004	7.60	7.60
OSEZ- 363	2	7/13/79	0.017	0.007	0.010	24.39	24.41
OSEZ- 364	2	7/13/79	0.077	0.025	0.052	136.59	136.67
OSEZ- 365	2	7/13/79	0.089	0.035	0.054	82.47	82.56
OSEZ- 366	2	7/13/79	0.066	0.024	0.042	26.93	27.00
OSEZ- 367	2	7/13/79	0.103	0.015	0.088	75.29	75.39
OSEZ- 368	2	7/13/79	0.084	0.015	0.069	75.84	75.92
OSEZ- 369	2	7/13/79	0.092	0.016	0.076	144.60	144.69
OSEZ- 370	2	7/13/79	0.043	0.007	0.036	91.58	91.62
OSEZ- 371	2	7/13/79	0.076	0.013	0.063	34.22	34.30
OSEZ- 372	1	7/17/79	0.017	< 0.004	0.013	6.29	6.31

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTI

PROJECT DSEZ DATE OF PRINTI

PARAMETER	RANGE OF VALUES			UNITS
DATE	4/ 1/79	-	9/31/79	MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/
DSEZ- 333	1	6/26/79	3.44	3.42	3.45	0.916	1.39
DSEZ- 334	1	6/26/79	3.34	3.32	3.35	0.938	1.3
DSEZ- 335	1	6/26/79	3.42	3.40	3.43	0.936	1.3
DSEZ- 336	1	6/26/79	3.47	3.45	3.48	0.940	1.3
DSEZ- 337	1	6/26/79	4.04	4.02	4.05	0.942	1.4
DSEZ- 338	1	6/26/79	3.34	3.33	3.35	0.942	1.3
DSEZ- 339	1	6/26/79	3.94	3.92	3.95	0.940	1.3
DSEZ- 340	1	6/26/79	3.39	3.38	3.40	0.931	1.3
DSEZ- 341	1	6/26/79	3.76	3.75	3.77	0.936	1.4
DSEZ- 342	5	6/26/79	21.26	19.56	21.28	7.317	18.4
DSEZ- 343	6	6/26/79	14.99	10.41	15.00	4.633	10.4
DSEZ- 344	2	6/26/79	145.43	119.99	145.50	5.809	25.9
DSEZ- 345	3	6/26/79	131.04	48.74	131.10	0.061	25.2
DSEZ- 346	4	6/26/79	48.20	15.95	48.21	2.127	6.2
DSEZ- 347	1	7/ 3/79	13.05	7.73	13.06	1.288	2.4
DSEZ- 348	5	7/ 3/79	48.92	19.87	48.99	9.526	16.3
DSEZ- 349	6	7/ 3/79	19.06	12.72	19.07	5.684	5.8
DSEZ- 350	2	7/ 3/79	113.91	85.14	113.98	6.140	24.2
DSEZ- 351	3	7/ 3/79	192.35	103.89	192.43	0.329	43.9
DSEZ- 352	4	7/ 3/79	86.41	41.41	86.42	13.773	15.3
DSEZ- 353	1	7/10/79	3.15	3.00	3.16	1.104	1.3
DSEZ- 354	5	7/10/79	11.66	7.23	11.67	3.982	5.7
DSEZ- 355	6	7/10/79	98.85	60.92	99.19	16.337	29.8
DSEZ- 356	2	7/10/79	223.39	179.81	223.42	6.655	24.6
DSEZ- 357	3	7/10/79	118.02	40.46	118.06	10.255	24.7
DSEZ- 358	4	7/10/79	48.71	14.96	48.72	9.482	12.8
DSEZ- 359	2	7/13/79	41.30	28.51	41.30	1.375	6.2
DSEZ- 360	2	7/13/79	36.48	26.23	36.48	2.343	7.9
DSEZ- 361	2	7/13/79	48.75	32.26	48.75	3.163	7.1
DSEZ- 362	2	7/13/79	27.06	19.46	27.06	1.626	3.5
DSEZ- 363	2	7/13/79	153.64	129.25	153.66	3.379	23.6
DSEZ- 364	2	7/13/79	363.15	226.56	363.23	6.350	28.9
DSEZ- 365	2	7/13/79	181.52	99.05	181.61	4.608	27.4
DSEZ- 366	2	7/13/79	105.93	79.00	106.00	5.667	21.8
DSEZ- 367	2	7/13/79	187.22	111.93	187.32	8.502	36.8
DSEZ- 368	2	7/13/79	200.80	124.96	200.88	7.705	36.2
DSEZ- 369	2	7/13/79	301.80	157.20	301.89	7.159	43.5
DSEZ- 370	2	7/13/79	152.38	60.80	152.42	3.834	17.3
DSEZ- 371	2	7/13/79	143.84	109.62	143.92	10.050	29.0
DSEZ- 372	1	7/17/79	13.99	7.70	14.01	5.884	7.6

PARAMETER	RANGE OF VALUES			UNITS
DATE	4/ 1/79	-	9/31/79	MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OSEZ- 373	5	7/17/79	215.	6.93	4.9	266.
OSEZ- 374	6	7/17/79	1015.	7.24	58.0	432.
OSEZ- 375	2	7/17/79	1307.	8.27	130.0	303.
OSEZ- 376	3	7/17/79	1915.	7.12	43.0	350.
OSEZ- 377	4	7/17/79	1560.	7.51	19.0	251.
OSEZ- 378	1	7/23/79	900.	7.75	21.0	216.
OSEZ- 379	5	7/23/79	1260.	7.75	16.0	284.
OSEZ- 380	6	7/23/79	900.	7.12	41.0	124.
OSEZ- 381	2	7/23/79	1605.	8.19	143.0	443.
OSEZ- 382	3	7/23/79	1880.	7.19	31.0	282.
OSEZ- 383	4	7/23/79	1660.	7.47	19.5	268.
OSEZ- 384	1	7/31/79	410.	7.23	20.0	132.
OSEZ- 385	5	7/31/79	658.	7.17	28.0	118.
OSEZ- 386	6	7/31/79	865.	7.03	42.0	114.
OSEZ- 387	2	7/31/79	1420.	8.20	160.0	372.
OSEZ- 388	3	7/31/79	2050.	7.12	39.0	244.
OSEZ- 389	4	7/31/79	1735.	7.53	21.5	277.
OSEZ- 390	2	8/ 3/79	2340.	8.56	92.0	231.
OSEZ- 391	2	8/ 3/79	1060.	7.84	46.0	102.
OSEZ- 392	2	8/ 3/79	1172.	7.78	90.0	184.
OSEZ- 393	2	8/ 3/79	1025.	7.74	40.0	119.
OSEZ- 394	2	8/ 3/79	1370.	7.72	69.0	179.
OSEZ- 395	2	8/ 3/79	1285.	7.72	115.0	256.
OSEZ- 396	2	8/ 3/79	1475.	7.89	94.5	221.
OSEZ- 397	2	8/ 3/79	1300.	7.87	117.0	218.
OSEZ- 398	2	8/ 3/79	1518.	7.81	147.0	314.
OSEZ- 399	2	8/ 3/79	2400.	8.44	165.0	402.
OSEZ- 400	2	8/ 3/79	1400.	7.92	138.0	285.
OSEZ- 401	2	8/ 3/79	1505.	7.82	152.0	330.
OSEZ- 402	2	8/ 3/79	1750.	8.23	135.0	300.
OSEZ- 403	2	8/ 3/79	1960.	8.34	140.0	335.
OSEZ- 404	2	8/ 3/79	1270.	7.72	120.0	245.
OSEZ- 405	2	8/ 3/79	1840.	8.22	130.0	303.
OSEZ- 406	2	8/ 3/79	1470.	7.90	150.0	316.
OSEZ- 407	2	8/ 3/79	1650.	8.13	128.0	281.
OSEZ- 408	2	8/ 3/79	1170.	7.61	125.0	255.
OSEZ- 409	2	8/ 3/79	1770.	7.42	560.0	488.
OSEZ- 410	2	8/ 3/79	1865.	7.30	650.0	126.
OSEZ- 411	2	8/ 3/79	1015.	7.43	48.0	128.
OSEZ- 412	1	8/ 8/79	385.	7.31	12.0	108.

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTI

PROJECT OSEZ | DATE OF PRINTI

PARAMETER | RANGE OF VALUES | UNITS

DATE | 4/ 1/79 - 9/31/79 | MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L		NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH MG N/L
OSEZ- 373	5	7/17/79	0.015	<	0.004	0.012	2.47	2.4
OSEZ- 374	6	7/17/79	0.081		0.021	0.060	16.76	16.[illegible]
OSEZ- 375	2	7/17/79	0.051		0.015	0.036	20.86	20.9
OSEZ- 376	3	7/17/79	0.051		0.012	0.039	93.79	93.[illegible]
OSEZ- 377	4	7/17/79	0.009			0.010	27.32	27.3
OSEZ- 378	1	7/23/79	0.018			0.019	20.59	20.6
OSEZ- 379	5	7/23/79	0.013	<	0.004	0.013	21.95	21.9
OSEZ- 380	6	7/23/79	0.020		0.009	0.011	21.89	21.9
OSEZ- 381	2	7/23/79	0.055		0.016	0.039	55.82	[illegible]
OSEZ- 382	3	7/23/79	0.010	<	0.004	0.009	139.66	139.6
OSEZ- 383	4	7/23/79	0.011			0.012	49.78	49.7
OSEZ- 384	1	7/31/79	0.016	<	0.004	0.016	0.97	0.9
OSEZ- 385	5	7/31/79	0.007			0.009	0.50	0.5
OSEZ- 386	6	7/31/79	0.009	<	0.004	0.007	8.66	8.6
OSEZ- 387	2	7/31/79	0.026		0.007	0.019	25.80	25.8
OSEZ- 388	3	7/31/79	0.013	<	0.004	0.011	105.28	105.2
OSEZ- 389	4	7/31/79	0.012			0.014	37.85	37.8
OSEZ- 390	2	8/ 3/79	0.007			0.009	96.46	96.4
OSEZ- 391	2	8/ 3/79	0.008	<	0.004	0.008	9.79	9.8
OSEZ- 392	2	8/ 3/79	0.006			0.007	13.96	13.9
OSEZ- 393	2	8/ 3/79	0.010			0.013	7.18	7.1
OSEZ- 394	2	8/ 3/79	0.005			0.007	32.45	32.4
OSEZ- 395	2	8/ 3/79	0.010	<	0.004	0.009	22.89	22.9
OSEZ- 396	2	8/ 3/79	0.011			0.013	36.50	36.5
OSEZ- 397	2	8/ 3/79	0.012	<	0.004	0.011	25.21	25.2
OSEZ- 398	2	8/ 3/79	0.010			0.011	37.95	37.9
OSEZ- 399	2	8/ 3/79	0.015			0.016	75.89	75.9
OSEZ- 400	2	8/ 3/79	0.014	<	0.004	0.011	37.95	37.9
OSEZ- 401	2	8/ 3/79	0.016	<	0.004	0.013	35.92	35.9
OSEZ- 402	2	8/ 3/79	0.021		0.005	0.016	46.64	46.6
OSEZ- 403	2	8/ 3/79	0.024	<	0.004	0.023	51.27	51.2
OSEZ- 404	2	8/ 3/79	0.016	<	0.004	0.012	20.86	20.8
OSEZ- 405	2	8/ 3/79	0.015	<	0.004	0.014	53.01	53.0
OSEZ- 406	2	8/ 3/79	0.013	<	0.004	0.012	29.84	29.8
OSEZ- 407	2	8/ 3/79	0.019	<	0.004	0.016	35.34	35.[illegible]
OSEZ- 408	2	8/ 3/79	0.023		0.007	0.016	12.17	12.1
OSEZ- 409	2	8/ 3/79	0.034		0.010	0.024	41.14	41.1
OSEZ- 410	2	8/ 3/79	0.011	<	0.004	0.007	6.02	6.0
OSEZ- 411	2	8/ 3/79	0.015		0.007	0.008	7.65	7.6
OSEZ- 412	1	8/ 8/79	0.010	<	0.004	0.009	0.16	0.1

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTIAL

PROJECT OSEZ DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
OSEZ- 373	5	7/17/79	4.40	1.93	4.42	1.780	2.663
OSEZ- 374	6	7/17/79	39.90	21.14	39.98	16.780	19.465
OSEZ- 375	2	7/17/79	120.39	99.53	120.44	3.538	19.410
OSEZ- 376	3	7/17/79	135.51	41.72	135.56	0.266	25.507
OSEZ- 377	4	7/17/79	41.00	13.68	41.01	10.405	12.380
OSEZ- 378	1	7/23/79	28.67	8.08	28.69	3.057	6.493
OSEZ- 379	5	7/23/79	42.85	20.90	42.86	4.766	10.061
OSEZ- 380	6	7/23/79	108.74	86.85	108.76	3.479	22.208
OSEZ- 381	2	7/23/79	159.55	103.73	159.61	3.767	24.362
OSEZ- 382	3	7/23/79	119.97		119.98	0.560	24.382
OSEZ- 383	4	7/23/79	68.89	19.11	68.90	9.913	13.098
OSEZ- 384	1	7/31/79	2.61	1.64	2.63	1.671	2.414
OSEZ- 385	5	7/31/79	12.27	11.77	12.28	8.159	10.018
OSEZ- 386	6	7/31/79	37.50	28.84	37.51	2.174	4.890
OSEZ- 387	2	7/31/79	136.53	110.73	136.56	3.938	26.694
OSEZ- 388	3	7/31/79	122.06	16.78	122.07	< 0.010	18.947
OSEZ- 389	4	7/31/79	53.47	15.62	53.48	1.783	9.220
OSEZ- 390	2	8/ 3/79	270.38	173.92	270.39	4.024	22.496
OSEZ- 391	2	8/ 3/79	37.09	27.30	37.10	2.232	7.034
OSEZ- 392	2	8/ 3/79	66.49	52.53	66.50	4.113	18.036
OSEZ- 393	2	8/ 3/79	28.82	21.64	28.83	2.053	5.887
OSEZ- 394	2	8/ 3/79	85.22	52.77	85.23	5.435	15.105
OSEZ- 395	2	8/ 3/79	86.52	63.63	86.53	5.043	17.611
OSEZ- 396	2	8/ 3/79	119.62	83.12	119.63	3.766	14.552
OSEZ- 397	2	8/ 3/79	89.35	64.14	89.36	3.755	17.526
OSEZ- 398	2	8/ 3/79	131.38	93.43	131.39	5.468	28.698
OSEZ- 399	2	8/ 3/79	331.35	255.46	331.37	4.225	39.530
OSEZ- 400	2	8/ 3/79	133.34	95.39	133.35	4.068	26.149
OSEZ- 401	2	8/ 3/79	140.31	104.39	140.33	4.561	26.319
OSEZ- 402	2	8/ 3/79	209.77	163.13	209.79	3.744	24.280
OSEZ- 403	2	8/ 3/79	192.57	141.30	192.59	3.273	28.018
OSEZ- 404	2	8/ 3/79	88.70	67.84	88.72	3.979	18.545
OSEZ- 405	2	8/ 3/79	172.10	119.09	172.12	3.934	21.264
OSEZ- 406	2	8/ 3/79	127.24	97.40	127.25	3.889	27.593
OSEZ- 407	2	8/ 3/79	145.54	110.20	145.56	3.800	20.542
OSEZ- 408	2	8/ 3/79	76.29	64.12	76.31	4.942	23.430
OSEZ- 409	2	8/ 3/79	285.63	244.49	285.66	8.861	70.638
OSEZ- 410	2	8/ 3/79	398.86	392.84	398.87	2.826	98.674
OSEZ- 411	2	8/ 3/79	42.97	35.32	42.99	3.195	8.053
OSEZ- 412	1	8/ 8/79	56.69	56.53	56.70	0.809	1.334

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTI

PROJECT OSEZ   DATE OF PRINTI

PARAMETER   RANGE OF VALUES   UNITS

DATE   4/ 1/79   -   9/31/79   MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OSEZ- 413	5	8/ 8/79	550.	7.28	15.5	119.
OSEZ- 414	6	8/ 8/79	895.	7.21	8.0	139.
OSEZ- 415	2	8/ 8/79	1440.	8.16	87.0	164.
OSEZ- 416	3	8/ 8/79	1990.	7.13	49.0	336.
OSEZ- 417	4	8/ 8/79	1650.	7.48	21.0	238.
OSEZ- 418	1	8/14/79	372.	7.07	16.0	115.
OSEZ- 419	5	8/14/79	484.	6.97	9.0	145.
OSEZ- 420	6	8/14/79	1187.	7.07	42.0	222.
OSEZ- 421	2	8/14/79	1370.	8.26	135.0	220.
OSEZ- 422	3	8/14/79	2065.	7.10	89.5	235.
OSEZ- 423	4	8/14/79	1680.	7.45	40.0	240.
OSEZ- 424	1	8/22/79	393.	7.43	7.6	96.
OSEZ- 425	5	8/22/79	560.	6.87	3.8	99.
OSEZ- 426	6	8/22/79	942.	6.94	18.0	161.
OSEZ- 427	2	8/22/79	1190.	8.27	98.0	121.
OSEZ- 428	3	8/22/79	2025.	7.17	68.0	206.
OSEZ- 429	4	8/22/79	1680.	7.51	25.5	248.
OSEZ- 430	1	8/29/79	820.	7.84	17.0	150.
OSEZ- 431	5	8/29/79	1558.	7.79	20.5	225.
OSEZ- 432	6	8/29/79	908.	6.96	7.3	141.
OSEZ- 433	2	8/29/79	1215.	8.05	83.0	146.
OSEZ- 434	3	8/29/79	2000.	7.15	31.0	209.
OSEZ- 435	4	8/29/79	1745.	7.52	33.5	218.
OSEZ- 436	1	9/ 6/79	265.	6.83	5.2	312.
OSEZ- 437	5	9/ 6/79	261.	6.83	4.2	278.
OSEZ- 438	6	9/ 6/79	637.	7.04	27.0	316.
OSEZ- 439	2	9/ 6/79	1670.	8.45	135.0	127.
OSEZ- 440	3	9/ 6/79	1812.	7.43	32.5	244.
OSEZ- 441	4	9/ 6/79	1540.	7.71	20.0	211.
OSEZ- 442	1	9/11/79	264.	6.80	5.0	342.
OSEZ- 443	5	9/11/79	565.	7.27	6.2	311.
OSEZ- 444	6	9/11/79	660.	7.14	8.2	339.
OSEZ- 445	2	9/11/79	1755.	8.34	165.0	286.
OSEZ- 446	3	9/11/79	1805.	7.19	48.0	217.
OSEZ- 447	4	9/11/79	1560.	7.50	28.0	222.
OSEZ- 448	1	9/18/79	224.	6.60	2.9	307.
OSEZ- 449	5	9/18/79	138.	6.47	1.2	300.
OSEZ- 450	6	9/18/79	810.	7.17	8.3	323.
OSEZ- 451	2	9/18/79	1960.	8.05	142.0	216.
OSEZ- 452	3	9/18/79	1920.	7.13	52.5	248.

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTIALL

PROJECT OSEZ DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX+NH4 MG N/L
OSEZ- 413	5	8/ 8/79	0.005		0.006	0.40	0.41
OSEZ- 414	6	8/ 8/79	< 0.004	< 0.004	0.004	2.60	2.60
OSEZ- 415	2	8/ 8/79	0.013	< 0.004	0.009	8.86	8.87
OSEZ- 416	3	8/ 8/79	0.011		0.013	61.70	61.71
OSEZ- 417	4	8/ 8/79	0.010		0.012	29.72	29.73
OSEZ- 418	1	8/14/79	0.005	< 0.004	0.005	0.06	0.07
OSEZ- 419	5	8/14/79	0.012	< 0.004	0.010	0.38	0.39
OSEZ- 420	6	8/14/79	0.014	< 0.004	0.010	8.32	8.33
OSEZ- 421	2	8/14/79	0.021	0.006	0.015	32.96	32.98
OSEZ- 422	3	8/14/79	0.011	< 0.004	0.010	56.42	56.43
OSEZ- 423	4	8/14/79	0.007		0.010	27.87	27.88
OSEZ- 424	1	8/22/79	< 0.004	< 0.004	< 0.004	0.02	0.02
OSEZ- 425	5	8/22/79	< 0.004	< 0.004	< 0.004	0.16	0.16
OSEZ- 426	6	8/22/79	< 0.004	< 0.004	< 0.004	4.10	4.10
OSEZ- 427	2	8/22/79	0.020	0.012	0.008	7.99	8.01
OSEZ- 428	3	8/22/79	0.020	0.005	0.015	52.43	52.45
OSEZ- 429	4	8/22/79	0.010		0.012	31.63	31.64
OSEZ- 430	1	8/29/79	0.293	0.012	0.281	7.61	7.90
OSEZ- 431	5	8/29/79	0.039		0.045	25.05	25.09
OSEZ- 432	6	8/29/79	0.004		0.005	2.03	2.03
OSEZ- 433	2	8/29/79	0.015	0.006	0.009	7.41	7.43
OSEZ- 434	3	8/29/79	0.074	0.063	0.011	58.86	58.93
OSEZ- 435	4	8/29/79	0.008		0.010	39.10	39.11
OSEZ- 436	1	9/ 6/79	0.009		0.011	1.85	1.86
OSEZ- 437	5	9/ 6/79	0.008		0.011	1.90	1.91
OSEZ- 438	6	9/ 6/79	0.012		0.013	5.68	5.69
OSEZ- 439	2	9/ 6/79	0.014	0.006	0.008	23.15	23.16
OSEZ- 440	3	9/ 6/79	0.039	0.029	0.010	57.34	57.38
OSEZ- 441	4	9/ 6/79	0.008		0.011	31.08	31.09
OSEZ- 442	1	9/11/79	0.010		0.012	1.57	1.58
OSEZ- 443	5	9/11/79	0.007		0.010	14.78	14.79
OSEZ- 444	6	9/11/79	0.011		0.013	4.80	4.81
OSEZ- 445	2	9/11/79	0.017	< 0.004	0.013	13.95	13.97
OSEZ- 446	3	9/11/79	0.010		0.011	56.72	56.73
OSEZ- 447	4	9/11/79	0.009		0.012	39.28	39.29
OSEZ- 448	1	9/18/79	0.023	0.011	0.012	1.05	1.07
OSEZ- 449	5	9/18/79	< 0.004	< 0.004	0.009	0.52	0.52
OSEZ- 450	6	9/18/79	0.006		0.012	5.98	5.99
OSEZ- 451	2	9/18/79	0.015	0.004	0.011	14.32	14.34
OSEZ- 452	3	9/18/79	0.007		0.008	60.83	60.84

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTI

PROJECT OSEZ DATE OF PRINTI

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/
OSEZ- 413	5	8/ 8/79	122.02	121.62	122.03	6.845	8.4
OSEZ- 414	6	8/ 8/79	8.78	6.18	8.78	3.363	3.9
OSEZ- 415	2	8/ 8/79	107.21	98.35	107.22	2.590	13.4
OSEZ- 416	3	8/ 8/79	122.67	60.97	122.68	2.111	24.6
OSEZ- 417	4	8/ 8/79	48.16	18.44	48.17	9.230	10.9
OSEZ- 418	1	8/14/79	2.20	2.14	2.21	0.811	1.4
OSEZ- 419	5	8/14/79	3.43	3.05	3.44	6.392	7.6
OSEZ- 420	6	8/14/79	30.05	21.73	30.06	4.586	9.9
OSEZ- 421	2	8/14/79	97.13	64.17	97.15	3.192	20.1
OSEZ- 422	3	8/14/79	124.25	67.83	124.26	8.997	27.0
OSEZ- 423	4	8/14/79	42.21	14.34	42.22	9.689	11.6
OSEZ- 424	1	8/22/79	2.35	2.33	2.35	0.295	0.5
OSEZ- 425	5	8/22/79	3.03	2.87	3.03	3.240	3.8
OSEZ- 426	6	8/22/79	20.84	16.74	20.84	3.481	4.5
OSEZ- 427	2	8/22/79	101.97	93.98	101.99	2.263	13.6
OSEZ- 428	3	8/22/79	188.87	136.44	188.89	< 0.010	44.6
OSEZ- 429	4	8/22/79	58.41	26.78	58.42	10.208	12.8
OSEZ- 430	1	8/29/79	13.58	5.97	13.87	2.411	4.2
OSEZ- 431	5	8/29/79	52.69	27.64	52.73	6.928	20.5
OSEZ- 432	6	8/29/79	6.90	4.87	6.90	2.256	3.0
OSEZ- 433	2	8/29/79	74.36	66.95	74.38	1.488	10.1
OSEZ- 434	3	8/29/79	108.92	50.06	108.99	< 0.010	23.2
OSEZ- 435	4	8/29/79	61.92	22.82	61.93	8.412	13.0
OSEZ- 436	1	9/ 6/79	5.09	3.24	5.10	3.478	3.9
OSEZ- 437	5	9/ 6/79	5.40	3.50	5.41	2.714	3.3
OSEZ- 438	6	9/ 6/79	15.34	9.66	15.35	8.783	10.0
OSEZ- 439	2	9/ 6/79	206.61	183.46	206.62	6.076	24.8
OSEZ- 440	3	9/ 6/79	104.92	47.58	104.96	< 0.010	19.1
OSEZ- 441	4	9/ 6/79	43.07	11.99	43.08	4.526	8.2
OSEZ- 442	1	9/11/79	5.11	3.54	5.12	3.124	3.6
OSEZ- 443	5	9/11/79	19.60	4.82	19.61	2.042	6.9
OSEZ- 444	6	9/11/79	11.62	6.82	11.63	7.494	8.6
OSEZ- 445	2	9/11/79	167.95	154.00	167.97	8.233	32.7
OSEZ- 446	3	9/11/79	99.06	42.34	99.07	9.846	24.8
OSEZ- 447	4	9/11/79	56.81	17.53	56.82	6.568	13.7
OSEZ- 448	1	9/18/79	3.68	2.63	3.70	1.959	2.2
OSEZ- 449	5	9/18/79	2.97	2.45	2.97	0.861	1.0
OSEZ- 450	6	9/18/79	17.81	11.83	17.82	9.012	10.3
OSEZ- 451	2	9/18/79	179.51	165.19	179.53	5.486	28.5
OSEZ- 452	3	9/18/79	105.51	44.68	105.52	8.112	21.4

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUENTIALI

PROJECT OSEZ DATE OF PRINTING

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	LAB COND UMHOS/CM	LAB PH	TURB JTU	COLOR UNITS
OSEZ- 453	4	9/18/79	1540.	7.67	16.8	208.
OSEZ- 454	1	9/26/79	158.	6.44	4.1	288.
OSEZ- 455	5	9/26/79	140.	6.40	1.4	305.
OSEZ- 456	6	9/26/79	863.	7.22	21.5	340.
OSEZ- 457	2	9/26/79	1130.	7.94	117.0	190.
OSEZ- 458	3	9/26/79	1705.	7.23	35.5	238.
OSEZ- 459	4	9/26/79	1365.	7.66	22.0	213.

UPLANDS DEMONSTRATION PROJECT DATA LISTED SEQUEN

PROJECT OSEZ DATE OF PRI

PARAMETER RANGE OF VALUES UNITS

DATE 4/ 1/79 - 9/31/79 MO/DA/YR

SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	NOX MG N/L	NO3 MG N/L	NO2 MG N/L	NH4 MG N/L	NOX + MG
OSEZ- 453	4	9/18/79	0.019		0.027	32.44	32
OSEZ- 454	1	9/26/79			0.018	0.58	
OSEZ- 455	5	9/26/79			0.011	0.42	
OSEZ- 456	6	9/26/79			0.014	8.58	
OSEZ- 457	2	9/26/79			0.011	6.58	
OSEZ- 458	3	9/26/79			0.017	52.80	
OSEZ- 459	4	9/26/79			0.031	27.27	

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PARAMETER RANGE OF VALUES UNITS

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SAMPLE NUMBER	STATION CODE	DATE MO/DA/YR	TKN MG N/L	TKN-NH4 MG N/L	TOTAL N MG N/L	OPO4 MG P/L	TPO4 MG P/L
DSEZ- 453	4	9/18/79	57.56	25.12	57.58	2.838	7.199
DSEZ- 454	1	9/26/79	2.91	2.33		1.056	1.312
DSEZ- 455	5	9/26/79	2.68	2.26		0.910	1.072
DSEZ- 456	6	9/26/79	17.19	8.61		9.093	10.554
DSEZ- 457	2	9/26/79	103.86	97.28		2.632	17.060
DSEZ- 458	3	9/26/79	79.03	26.23		0.289	32.209
DSEZ- 459	4	9/26/79	44.58	17.31		3.828	7.480