

Jobos Bay (JOB) NERR Water Quality Metadata
January to December 2001
Latest Update: June 30, 2021

I. Data Set & Research Descriptors

1. Principal investigator(s) and contact persons

Principal Investigator:

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2. Entry verification:

After retrieving and carefully cleaning the dataloggers, they are examined to detect any structural damage to the body or to the probes. The DO membrane is checked for ruptures and then replaced if needed. The turbidity probe is examined to assure that no obstruction affects the wiper and that the sensor is clean. Manipulation and observations are registered in the field log for each deployment respectively.

The YSI is connected to a Pentium II 400 MHz IBM compatible computer and the data is reviewed using the YSI computer program Ecowatch for Windows that accompanies the YSI 6000 datalogger. The file is uploaded in two formats, one in YSI PC6000 format and the other in Comma and "Delimited format then the file is renamed to have a ".txt" extension. The YSI Ecowatch for Windows program is used

to plot the data and delete the pre- and post deployment data that are not in range of the other readings. The program is used to perform basic statistical analysis (i.e., min., max., mean, std. dev.). Data is initially reviewed using the Ecowatch graphing tool. Data for a month is compiled into one single Excel 2000 data sheet for further examination to detect gross outliers, and data recorded during instrument retrieval or caused by instrument failure.

Missing dates and times are checked before submitting the data to the Central Data Management Office. CDMO Excel macros are provided to assist in data reviewing and data editing. Data is opened with this program and empty or unrecorded data spaces are filled with periods. Columns are corrected for Specific format (correct data size and number of decimal place holders are specified by the NERR CDMO). Data and time readings are also checked. This program also identifies outliers. Outliers file is saved and printed for revision of each file. Missing data and explanatory reasons are recorded in the Anomalous data section.

Data that is found to be out of the instrument range or normal parameters for each sampling station is removed from the file and a period is inserted into the cell(s). Explanations for changes in data are also included in the metadata. Data that is outside the "normal" range of water quality for a particular site is investigated for validity based on field observation, QC check, Ecowatch for Windows printouts, and the instrument diagnostics. The metadata form is submitted with the data to the CDMO. Data is stored in zip disks. Dr. Pedro Robles and Luis Encarnación were responsible for data management during this period.

3. Research Objectives:

Two dataloggers are deployed at Mar Negro area, a major component of Jobos Bay National Estuarine Research Reserve. The instruments are suspended from a pole at a distance of 0.3 meter from the bottom at each selected site. Data from stations 9 and 10 is being submitted to the Central Data Management Office as part of the System-Wide Monitoring Program. Measurements are taken at thirty-minute intervals for approximately two-week periods. The sites are identified as

representative of areas within the reserve and comparable to the sites that may be receiving impact from human activities from surroundings areas.

Station number nine (9), the impacted site, collects water quality data in a site associated with runoff from littoral and basin mangrove areas. This sampling station is closer to the Thermoelectric Power Plant it is subjected to runoff and potential oil spill contamination from this industrial facility. Information compiled from historical environmental documents, indicate that station nine (9) was used as a disposal site for residues of the previously operating sugar mill operation, and therefore might have high organic input into the sediments.

Station number ten (10), located in the mangrove lagoon area is the reference or non-impacted site.

4. Research methods:

The National Estuarine Research Reserve Water Quality Monitoring Program began sampling at Station nine (9) on December 20, 1995 and Station ten (10) on February 1, 1996. Long term water quality monitoring is being performed at these stations.

Before each YSI 6000 datalogger is deployed, calibration and maintenance is performed following the manufacturer's instruction (YSI Manual addendum 7/94, sections 3, 4 and 7). Calibration standards are only required for pH, salinity, and turbidity, all other parameters are done as described in the manual. Buffer solutions for two-point calibration (pH 7 and pH 10) are purchased from a scientific supply company. Salinity is calibrated with a specific conductance standard 100 mS/cm and is purchased from a scientific supply company.

The two-point turbidity calibration is performed using a 0 NTU (DI water) and 100 NTU standard purchased from a scientific company. The dissolved oxygen membranes are replaced before deployment and are allowed to sit at least 24 hours prior to deployment. Weather conditions and tide stage are recorded in the field observation log during deployment. Measurements of DO, pH, salinity, specific conductance, and temperature, are taken with other calibrated field instruments to check the accuracy of the instrumentation.

Each YSI datalogger is tied with steel cable to a wrought iron galvanized pole, which is plunged into the sediments at each sampling area. Dataloggers are suspended from a pole at 0.3 meter from the bottom of the selected site. Every 30 minutes during the sampling period the following measurements are recorded: date, time, temperature, specific conductance, salinity, dissolved oxygen saturation, dissolved oxygen concentration, depth, pH, and turbidity. Every two weeks the dataloggers are retrieved, uploaded, cleaned, inspected, and calibrated as noted previously. The datalogger is then ready to be deployed again.

5. Site location and character:

The Jobos Bay National Estuarine Research Reserve (JOBNERR) is located on the southern coastal plain of the island of Puerto Rico, a reserve within the West Indies geographical area. JOBNERR is composed of two major areas: (1) Mar Negro, located on the western margin of the Bay, and (2) Cayos Caribe, a chain of 15 tear-shaped islets located to the southeast. The Mar Negro area comprises the bulk of the Reserve, and consists of mangrove forests and a complex system of lagoons and channels interspersed with salt and mud flats. Coral reefs and seagrass beds, with small beach deposits and upland areas fringe Cayos Caribe mangrove islands.

Station 9 is an impacted site and is located on the northeastern section of the Mar Negro component. This sampling station is associated with mangrove lagoon areas and receives runoff from mudflats, the Thermoelectric Power Plant, and adjacent areas. The tidal range varies from 12 to 14 inches in the vicinity of the monitoring station. The salinity at the vicinity of the monitoring station varies from 0.0 ppt to 41.1 ppt. The average depth at station 09 is 1 meter. The bottom is covered by a thick layer of thin sediments with a high content of organic material. Brown and green algae are also present at this site, but a better assessment is needed. The station pole is located at 17° 56' 36.8" N and 66° 14' 18.5" W.

Station 10 is located in a mangrove lagoon not impacted directly by any upland or marine activities. It provides a reference for comparison of data obtained in other stations, especially to the station in Mar Negro lagoon. The tidal range varies from 12 to 14 inches. The salinity at the vicinity of the monitoring station varies from 0.0 ppt to 41.7 ppt. The average depth at station 10 is 1 meter. The bottom is covered with a layer of fine sediments with organic material, followed by a layer of calcareous material mainly from shells and oysters. At this site we can find seagrass (*Thalassia*), calcareous algae (*Halimeda* sp.), green algae (*Caulerpa* sp.) and brown algae (*Dictyota* sp.) among others. The pole is located at 17° 56' 20.3" N and 66° 45' 26.7" W.

Data from stations 9 and 10 is being submitted to the CDMO. Four sondes are permanently devoted to taking readings from these two sites, to assure continuous readings while sondes are taken out of the water for data upload and maintenance. This will avoid data gaps for station 9 and 10 between sonde maintenance procedures. All monitoring is considered long term.

6. Data collection period:

Station nine (9) sampling with the YSI began on December 20, 1995.

Station ten (10) sampling with the YSI began on February 1, 1996.

Began	Ended
Station nine (9)	
12/27/00, 09:30	01/16/01, 09:00
01/16/01, 09:30	01/17/01, 04:00
01/17/01, 10:30	02/06/01, 14:00
02/06/01, 14:30	02/11/01, 10:00
02/11/01, 10:30	02/26/01, 09:00
02/26/01, 09:30	03/18/01, 10:00
03/18/01, 10:30	03/27/01, 09:00
03/27/01, 09:30	04/08/01, 10:00
04/08/01, 10:30	04/11/01, 13:30
04/11/01, 14:00	04/25/01, 08:30
04/25/01, 09:00	05/15/01, 08:00
05/15/01, 09:30	05/16/01, 09:30
05/16/01, 10:00	06/03/01, 08:30
06/03/01, 09:00	06/06/01, 08:30
06/06/01, 09:00	06/25/01, 09:30
06/25/01, 10:00	06/27/01, 08:00
06/27/01, 08:30	07/23/01, 12:00
07/23/01, 12:30	08/14/01, 08:30
08/14/01, 09:00	08/16/01, 09:00
08/16/01, 09:30	09/01/01, 10:30
09/01/01, 11:00	09/05/01, 09:00

09/05/01, 09:30	09/24/01, 09:00
09/24/01, 10:00	09/26/01, 09:30
09/26/01, 10:30	10/16/01, 08:30
10/16/01, 09:00	10/18/01, 08:30
10/18/01, 09:00	11/05/01, 09:00
11/05/01, 09:30	11/07/01, 11:30
11/07/01, 12:00	11/26/01, 09:00
11/26/01, 10:00	11/28/01, 08:30
11/28/01, 09:00	12/17/01, 10:00
12/17/01, 10:30	12/19/01, 10:00
12/19/01, 10:30	01/08/02, 09:00

Station ten (10)

12/27/00, 09:00	01/16/01, 09:30
01/16/01, 10:00	01/17/01, 09:30
01/17/01, 10:00	02/06/01, 13:30
02/06/01, 14:00	02/11/01, 11:00
02/11/01, 11:30	02/26/01, 10:00
02/26/01, 10:30	02/28/01, 09:30
02/28/01, 10:00	03/18/01, 09:30
03/18/01, 10:30	03/27/01, 09:00
03/27/01, 09:30	04/08/01, 09:30
04/08/01, 10:00	04/11/01, 14:30
04/11/01, 15:00	04/23/01, 09:30
04/25/01, 10:00	04/25/01, 08:30
04/25/01, 09:00	05/15/01, 09:00
05/15/01, 09:30	05/16/01, 09:00
05/16/01, 09:30	06/03/01, 09:00
06/03/01, 09:30	06/06/01, 08:00
06/06/01, 09:00	06/25/01, 09:30
06/25/01, 10:00	06/27/01, 08:30
06/27/01, 09:00	07/23/01, 12:00
07/23/01, 12:30	08/14/01, 08:00
08/14/01, 08:30	08/16/01, 09:30
08/16/01, 10:00	09/01/01, 10:00
09/01/01, 10:30	09/05/01, 08:30
09/05/01, 09:00	09/24/01, 09:00
09/24/01, 10:00	09/26/01, 10:00
10/16/01, 09:30	11/05/01, 09:30
11/07/01, 12:30	11/26/01, 10:00
11/28/01, 09:30	12/17/01, 09:30
12/19/01, 11:00	01/08/02, 09:30

7. Distribution

According to the Ocean and Coastal Resource Management Data Dissemination Policy

for the NERRS System-wide Monitoring Program:

NOAA/ERD retains the right to analyze, synthesize and publish summaries of the

NERRS System-wide Monitoring Program data. The PI retains the right to be fully

credited for having collected and processed the data. Following academic courtesy standards, the PI and the NERR site where the data is collected will be

contacted and fully acknowledge in any subsequent publication in which any part of the data are used. Manuscripts resulting from the NOAA/OCRM supported research that are produced for publication in open literature, including referenced scientific journals, will acknowledge that the research was conducted under an award from the Estuarine Reserves Division, Office of Ocean and Coastal Resources Management, National Ocean Service, National Oceanic and Atmospheric Administration. The data set enclosed within this package transmission is only as good as the quality assurance and quality control procedures outlined by the enclose metadata reporting statement. The user bears all responsibility for its subsequent use/misuse in any further analysis or comparisons. The Federal government does not assumes liability to the Recipient or third persons, nor will the Federal government reimburse or indemnify the Recipient for its liability due to any losses resulting in any way from the use of this data. NERR water quality data and metadata can be obtained from the Research Coordinator at the individual NERR site (please see section 1. Principal Investigator and contact persons), from the Data Manager at the Central Data Management Office, (please see personnel directory under general information link on CDMO homepage (<http://cdmo.baruch.sc.edu>)). Data are available in text tab-delimited format. Microsoft Excel spreadsheet format and comma-delimited format.

8. Associated researchers and projects:

Monthly sampling for *Vibrio* species identification was conducted by Mr. Félix Badillo, from Interamerican University, San Germán Campus, Puerto Rico.

A water quality and plankton monitoring characterization was conducted from March 1995-March 1997, monitoring 12 stations in the Jobos Bay system, by the Department of Natural and Environmental Resources Laboratory. Monthly samples for nutrients, plankton and chlorophyll were conducted from March to October 1996.

9. Variable sequence, range of measurements, units, resolution and accuracy:

YSI 6000/6600 datalogger

Variable	Range of Measurements	Resolution
Accuracy		

Date	1-12, 1-31, 00-99 (Mo,Day,Yr)	1 mo, 1 day, 1 yr	NA
Time	0-24, 0-60, 0-60 (Hr,Min,Sec)	1 hr, 1 min, 1 s	NA
Temp	-5 to 45 (c)	0.01 C	+/-
0.15C			
Sp COND	0-100 (mS/cm)	0.01mS/cm	+/-0.5%
Of			
reading + 0.001mS/Cm			
Salinity	0-70 Parts per thousand (ppt)	0.01 ppt	+/- 1%
of			
Reading or 0.1 ppt, (whichever is greater)			
DO	0-200 (% air saturation)	0.1% @air sat	+/-2%
@air			
Saturation			
DO	200-500 (% air saturation	0.1% @ air sat	+/- 6%
@			
Saturation			
DO	0-20 (mg/l)	0.01 mg/l	+/-
0.2mg/l			
DO	20-50 (mg/l)	0.01 mg/l	+/-
0.6mg/l			
Depth (shallow)	0-9.1 (m)	0.001m	+/-
0.018m			
PH	2-14 units	0.01 units	+/-
0.2units			
Turb	0-1000 NTU	0.1 NTU	+/- 5%
of			
Reading or 2 NTU (whichever is greater)			

Data columns are separated by tabs. Each file contains a two line Column header at the top of the page which identifies measurements and Units.

10. Coded variable indicator and variable code definitions:

Site definitions: S09 = Station 9

Site definitions: S10 = Station 10

File definitions: site/month/year (ex: 100801 = Station 10 data from August of 2001).

11. Data anomalies:

January 2001

Station 09

Turbidity values were deleted for the following dates/times due to negative

and/or zero values:

Negative values

01/01/01 00:00:00 through 01/16/01 09:00:00

01/16/01 20:00:00 through 21:00:00

01/16/01 22:30:00

01/17/01 22:00:00 through 23:00:00

01/18/01 00:00:00

01/18/01 01:00:00 through 02:00:00

01/18/01 03:00:00 through 06:30:00

01/18/01 19:00:00 through 19:30:00

01/18/01 20:30:00
01/18/01 22:00:00 through 22:30:00
01/18/01 23:30:00
01/19/01 02:00:00
01/19/01 03:00:00 through 03:30:00
01/19/01 04:30:00 through 06:30:00
01/19/01 20:00:00
01/19/01 21:00:00
01/19/01 22:00:00 through 22:30:00
01/19/01 23:30:00
01/20/01 04:00:00
01/20/01 05:00:00 through 05:30:00
01/21/01 06:00:00
01/21/01 19:30:00
01/22/01 20:30:00 through 21:30:00
01/22/01 22:30:00
01/23/01 07:30:00
01/24/01 09:30:00
01/24/01 12:30:00
01/24/01 14:30:00 through 15:00:00
01/24/01 21:00:00 through 22:00:00
01/25/01 00:30:00
01/25/01 08:00:00
01/25/01 11:00:00
01/25/01 13:00:00 through 14:00:00
01/25/01 16:00:00
01/25/01 22:00:00 through 22:30:00
01/26/01 00:00:00 through 00:30:00
01/26/01 01:30:00 through 02:00:00
01/26/01 11:00:00
01/26/01 12:00:00 through 12:30:00
01/26/01 21:30:00
01/26/01 23:00:00
01/27/01 12:30:00
01/27/01 13:30:00
01/27/01 22:00:00
01/29/01 23:30:00
01/30/01 00:00:00
01/30/01 01:30:00 through 02:00:00
01/30/01 06:30:00

High turbidity values due to algal debris were deleted:

01/26/01 13:00:00

Sonde out for maintenance, no data:

01/17/2001 04:30:00 through 10:00:00

No pH data because of probe was broken

01/16/2001 09:30:00 throughout 01/17/2001 04:00:00

Station 10

Suspicious pH data, data were deleted due to a possible calibration error:

01/16/2001 10:00:00 throughout 01/17/2001 09:30:00

Turbidity values were deleted for the following dates/times due to negative

and/or zero values:

01/01/2001 00:00:00 through 00:30:00
01/01/2001 01:30:00 through 15:00:00
01/01/2001 16:00:00
01/01/2001 18:00:00 through 21:00:00
01/01/2001 22:00:00 through 01/02/2001 02:30:00
01/02/2001 03:30:00 through 12:00:00
01/02/2001 13:00:00 through 13:30:00
01/02/2001 15:00:00 through 15:30:00
01/02/2001 17:00:00 through 17:30:00
01/02/2001 18:30:00 through 01/03/2001 08:30:00
01/03/2001 09:30:00 through 16:00:00
01/03/2001 17:30:00 through 01/04/2001 00:00:00
01/04/2001 01:00:00 through 16:30:00
01/04/2001 17:30:00 through 21:00:00
01/04/2001 22:30:00 through 01/05/2001 15:30:00
01/05/2001 16:30:00 through 18:00:00
01/05/2001 20:00:00 through 22:30:00
01/05/2001 23:30:00
01/06/2001 00:30:00 through 04:00:00
01/06/2001 05:00:00
01/06/2001 06:00:00 through 07:00:00
01/06/2001 08:00:00 through 11:30:00
01/06/2001 12:30:00 through 15:00:00
01/06/2001 17:30:00
01/06/2001 19:00:00 through 23:00:00
01/07/2001 00:00:00 through 03:00:00
01/07/2001 04:00:00 through 05:00:00
01/07/2001 06:00:00 through 12:00:00
01/07/2001 13:00:00 through 14:30:00
01/07/2001 15:30:00 through 16:00:00
01/07/2001 18:30:00 throughout 01/08/2001 05:30:00
01/08/2001 06:30:00 through 09:30:00
01/08/2001 11:00:00
01/08/2001 12:00:00
01/08/2001 20:00:00
01/09/2001 01:00:00
01/09/2001 03:30:00
01/09/2001 05:00:00
01/09/2001 07:00:00
01/09/2001 08:00:00 through 09:00:00
01/10/2001 11:30:00
01/12/2001 05:30:00
01/12/2001 10:00:00
01/12/2001 11:00:00 through 11:30:00
01/12/2001 12:30:00 through 13:30:00
01/12/2001 15:30:00
01/12/2001 19:00:00
01/12/2001 20:30:00
01/12/2001 23:00:00
01/13/2001 01:00:00
01/13/2001 07:00:00
01/13/2001 10:00:00
01/13/2001 12:30:00

01/13/2001 13:30:00
01/13/2001 14:30:00 through 15:00:00
01/13/2001 16:00:00
01/14/2001 11:30:00
01/14/2001 13:00:00 through 14:00:00
01/15/2001 00:00:00
01/15/2001 01:00:00
01/15/2001 03:30:00
01/15/2001 04:30:00
01/15/2001 06:00:00
01/15/2001 08:00:00
01/15/2001 09:00:00 through 09:30:00
01/15/2001 11:00:00 through 12:30:00
01/15/2001 13:30:00
01/15/2001 14:00:00
01/15/2001 15:30:00
01/15/2001 16:30:00 through 17:00:00
01/15/2001 21:30:00 through 23:30:00
01/16/2001 00:00:00 through 01:30:00
01/16/2001 02:30:00 through 04:30:00
01/16/2001 05:30:00 through 09:30:00
01/16/2001 14:30:00
01/16/2001 15:30:00
01/16/2001 16:30:00
01/16/2001 19:00:00
01/16/2001 21:00:00
01/16/2001 22:30:00
01/17/2001 00:00:00
01/17/2001 05:00:00
01/17/2001 10:30:00 through 14:00:00
01/17/2001 18:00:00
01/17/2001 19:00:00 through 21:30:00
01/17/2001 22:30:00 through 01/18/2001 01:00:00
01/18/2001 02:00:00 through 07:00:00
01/18/2001 08:00:00 through 13:30:00
01/18/2001 14:30:00 through 15:00:00
01/18/2001 18:30:00 through 19:30:00
01/18/2001 20:30:00 through 21:30:00
01/18/2001 22:30:00 through 01/19/2001 04:30:00
01/19/2001 05:30:00 through 07:30:00
01/19/2001 08:30:00 through 10:30:00
01/19/2001 12:00:00 through 13:00:00
01/19/2001 14:00:00 through 14:30:00
01/19/2001 16:00:00
01/19/2001 19:30:00
01/19/2001 20:30:00 through 22:00:00
01/19/2001 23:00:00 through 23:30:00
01/20/2001 00:30:00 through 04:30:00
01/20/2001 05:30:00 through 10:00:00
01/20/2001 11:00:00
01/20/2001 15:00:00
01/20/2001 19:30:00
01/20/2001 21:00:00
01/20/2001 22:00:00 through 23:30:00

01/21/2001 00:30:00
01/21/2001 01:30:00 through 02:00:00
01/21/2001 03:30:00 through 10:30:00
01/21/2001 11:30:00 through 13:00:00
01/21/2001 17:30:00
01/21/2001 19:00:00
01/21/2001 20:00:00 through 20:30:00
01/21/2001 21:30:00 through 01/22/2001 12:30:00
01/22/2001 13:30:00 through 14:00:00
01/22/2001 15:30:00 through 16:30:00
01/22/2001 17:30:00
01/22/2001 18:30:00 through 19:00:00
01/22/2001 20:00:00 through 22:00:00
01/22/2001 23:00:00 through 01/23/2001 04:00:00
01/23/2001 05:00:00 through 06:00:00
01/23/2001 07:00:00 through 12:00:00
01/23/2001 13:00:00 through 13:30:00
01/23/2001 19:30:00
01/25/2001 20:00:00
01/23/2001 20:30:00 through 21:00:00
01/23/2001 23:00:00
01/24/2001 02:30:00 through 03:30:00
01/24/2001 04:30:00 through 06:00:00
01/24/2001 07:30:00 through 08:00:00
01/24/2001 09:30:00
01/24/2001 11:00:00
01/24/2001 15:30:00
01/24/2001 23:00:00 through 01/25/2001 11:00:00
01/25/2001 14:00:00
01/25/2001 19:30:00 through 21:00:00
01/25/2001 22:00:00 through 01/26/2001 00:00:00
01/26/2001 01:00:00 through 02:30:00
01/26/2001 03:30:00 through 05:00:00
01/26/2001 06:00:00 through 07:30:00
01/26/2001 08:30:00 through 15:30:00
01/26/2001 19:00:00 through 01/27/2001 02:00:00
01/27/2001 03:00:00 through 06:00:00
01/27/2001 07:00:00 through 13:30:00
01/28/2001 01:00:00
01/28/2001 02:00:00 through 06:30:00
01/28/2001 07:30:00 through 09:00:00
01/28/2001 10:00:00
01/28/2001 11:30:00
01/29/2001 01:30:00
01/29/2001 09:00:00
01/29/2001 21:00:00
01/30/2001 01:30:00
01/30/2001 02:30:00 through 03:00:00
01/30/2001 04:00:00 through 07:30:00
01/30/2001 08:30:00 through 11:00:00
01/30/2001 12:00:00 through 13:30:00
01/30/2001 16:00:00
01/30/2001 20:00:00 through 20:30:00
01/30/2001 21:30:00

01/30/2001 23:30:00 throughout 01/31/2001 00:30:00
01/31/2001 01:30:00
01/31/2001 04:30:00 through 06:00:00
01/31/2001 08:00:00 through 11:30:00
High turbidity values deleted:
01/16/2001 10:30:00 through 11:00:00
01/16/2001 12:00:00 through 12:30:00
01/16/2001 14:00:00
01/16/2001 16:30:00
01/16/2001 18:00:00 through 18:30:00
01/16/2001 22:00:00
01/16/2001 23:30:00
01/17/2001 03:30:00 through 04:00:00
01/17/2001 05:30:00 through 07:00:00
01/17/2001 08:30:00
01/17/2001 16:00:00

February 2001
Station 09

Turbidity values were deleted for the following dates/times due to negative

and/or zero values:

02/11/2001 10:30 through 11:00:00
02/11/2001 13:30:00
02/11/2001 21:00:00
02/11/2001 22:00:00 through 22:30:00
02/11/2001 23:30:00
02/12/2001 00:00:00 through 02:00:00
02/12/2001 02:30:00 through 03:30:00
02/12/2001 04:00:00 through 04:30:00
02/12/2001 05:30:00 through 07:00:00
02/13/2001 00:00:00 through 01:00:00
02/13/2001 02:00:00 through 05:00:00
02/13/2001 06:00:00
02/13/2001 15:30:00 through 16:30:00
02/13/2001 19:00:00 through 23:30:00
02/14/2001 00:00:00 through 04:00:00
02/14/2001 06:00:00
02/14/2001 19:00:00 through 23:30:00
02/15/2001 00:00:00 through 04:30:00
02/15/2001 05:30:00 through 06:30:00
02/15/2001 08:30:00
02/15/2001 10:00:00 through 10:30:00
02/15/2001 11:30:00
02/15/2001 20:00:00 through 23:30:00
02/16/2001 00:00:00 through 05:00:00
02/17/2001 00:00:00
02/17/2001 01:30:00
02/17/2001 03:00:00 through 04:30:00
02/17/2001 11:00:00 through 12:00:00
02/17/2001 13:00:00
02/17/2001 15:00:00 through 18:30:00
02/17/2001 19:30:00 through 02/18/2001 06:30:00

02/18/2001 08:00:00 through 12:00:00
 02/18/2001 13:00:00 through 13:30:00
 02/18/2001 14:30:00 through 15:00:00
 02/18/2001 16:00:00 through 02/19/2001 06:00:00
 02/19/2001 08:30:00 through 12:30:00
 02/19/2001 13:30:00
 02/19/2001 17:00:00 through 02/20/2001 06:30:00
 02/20/2001 07:30:00 through 10:00:00
 02/20/2001 11:00:00 through 15:00:00
 02/20/2001 18:30:00 through 02/21/2001 01:00:00
 02/21/2001 02:00:00 through 06:00:00
 02/21/2001 08:00:00 through 13:00:00
 02/21/2001 14:00:00 through 16:00:00
 02/21/2001 17:00:00
 02/21/2001 19:30:00 throughout 02/22/2001 06:30:00
 02/22/2001 08:00:00 through 08:30:00
 02/22/2001 09:30:00 through 10:00:00
 02/22/2001 11:30:00 through 14:00:00
 02/22/2001 15:00:00
 02/22/2001 16:00:00 through 16:30:00
 02/22/2001 19:00:00 through 02/23/2001 12:00:00
 02/23/2001 13:00:00 through 02/24/2001 16:30:00
 02/24/2001 18:30:00
 02/24/2001 19:30:00 through 20:30:00
 02/24/2001 21:30:00 through 02/25/2001 08:00:00
 02/25/2001 09:00:00 through 11:00:00
 02/25/2001 22:30:00
 02/25/2001 23:30:00
 02/26/2001 00:30:00 through 08:30:00
 02/26/2001 09:30:00 through 10:30:00
 02/26/2001 11:30:00
 02/26/2001 23:00:00 through 23:30:00
 02/27/2001 01:30:00
 02/27/2001 00:30:00
 02/27/2001 03:00:00 through 04:00:00
 02/27/2001 05:00:00
 02/27/2001 06:30:00
 02/27/2001 07:30:00 through 10:30:00
 02/27/2001 20:00:00 through 20:30:00
 02/27/2001 21:30:00 through 02/28/2001 04:30:00
 02/28/2001 08:00:00
 02/28/2001 09:00:00 through 15:30:00
 02/28/2001 17:00:00 through 23:30:00
 pH values: no data because probe was broken
 02/06/2001 14:30:00 throughout 02/11/2001 10:00:00
 02/26/2001 09:30:00 throughout 02/28/2001 23:30:00
 Depth values: deleted data due to negative values caused by sensor malfunction
 02/26/2001 09:30:00 throughout 02/28/2001 09:30:00

Station 10

Turbidity values were deleted for the following dates/times due to negative

and/or zero values:

02/05/2001 09:00:00
02/06/2001 14:30:00
02/06/2001 19:30:00
02/06/2001 21:00:00
02/06/2001 22:00:00
02/07/2001 00:30:00
02/07/2001 03:00:00
02/07/2001 04:30:00
02/07/2001 05:30:00, 07:30:00
02/27/2001 11:00:00, 12:30:00, 13:30:00, 14:30:00, 20:00:00
02/08/2001 03:00:00
02/10/2001 08:30:00
02/11/2001 11:30:00 through 12:30:00
02/11/2001 18:30:00 through 19:30:00
02/11/2001 21:00:00 through 22:30:00
02/11/2001 23:30:00
02/12/2001 00:30:00
02/12/2001 02:30:00 through 09:30:00
02/12/2001 11:30:00
02/12/2001 12:30:00 through 13:00:00
02/12/2001 14:00 through 14:30, and 19:30 through 20:00:00
02/12/2001 22:00:00 through 21:30:00
02/12/2001 23:00:00 through 02/13/2001 04:00:00
02/13/2001 05:00:00 through 09:00:00
02/12/2001 11:00
02/13/2001 12:30:00 through 13:30:00
02/13/2001 14:30:00
02/13/2001 19:00:00 through 19:30:00
02/13/2001 20:30:00 through 00:30:00
02/14/2001 01:30:00 through 09:30:00
02/14/2001 10:30:00 through 12:30:00
02/14/2001 13:30:00 through 14:00:00
02/14/2001 16:00:00
02/14/2001 20:30:00
02/14/2001 21:30:00 through 02/15/2001 03:30:00
02/15/2001 04:30:00
02/15/2001 05:30:00 through 11:30:00
02/15/2001 13:00:00
02/15/2001 14:00:00
02/15/2001 20:00:00 through 22:00:00
02/15/2001 23:00:00 through 02/16/2001 09:30:00
02/16/2001 10:30:00 through 13:30:00
02/16/2001 14:30:00
02/16/2001 18:30:00
02/16/2001 19:30:00 through 23:30:00
02/17/2001 00:30:00 through 01:30:00
02/17/2001 02:30:00 through 05:30:00
02/17/2001 06:30:00 through 14:30:00
02/17/2001 17:00:00
02/17/2001 19:00:00 through 19:30:00
02/17/2001 20:30:00 through 22:00:00
02/17/2001 23:00:00 through 02/18/2001 14:30:00
02/18/2001 19:00:00 through 20:00:00

02/18/2001 21:00:00 through 23:30:00
02/19/2001 00:30:00 through 03:30:00
02/19/2001 04:30:00 through 11:00:00
02/19/2001 12:00:00 through 14:00:00
02/19/2001 15:00:00 through 15:30:00
02/19/2001 17:00:00
02/19/2001 18:00:00 through 18:30:00
02/19/2001 19:30:00 through 02/20/2001 09:30:00
02/20/2001 10:30:00 through 11:30:00
02/20/2001 12:30:00 through 14:30:00
02/20/2001 19:00:00 through 20:30:00
02/20/2001 21:30:00 through 23:30:00
02/21/2001 00:30:00 through 06:30:00
02/21/2001 07:30:00 through 12:30:00
02/21/2001 13:30:00 through 16:00:00
02/21/2001 21:00:00
02/21/2001 22:00:00 through 23:00:00
02/22/2001 01:00:00 through 01:30:00
02/22/2001 02:30:00
02/22/2001 06:30:00 through 07:00:00
02/22/2001 08:00:00
02/22/2001 09:00:00
02/22/2001 13:00:00 through 13:30:00
02/24/2001 07:30:00
02/24/2001 13:00:00
02/24/2001 21:00:00
02/26/2001 05:00:00
02/26/2001 12:30:00
02/26/2001 16:30:00
02/26/2001 17:30:00
02/26/2001 20:00:00
02/26/2001 22:30:00 through 23:00:00
02/27/2001 00:30:00
02/27/2001 03:00:00
02/27/2001 05:30:00 through 06:00:00
02/27/2001 09:30:00
02/27/2001 11:00:00 through 11:30:00
02/27/2001 14:00:00
02/27/2001 15:00:00
02/27/2001 16:30:00
02/27/2001 19:00:00
02/27/2001 23:00:00 through 23:30:00
02/28/2001 00:30:00
02/28/2001 02:00:00
02/28/2001 03:00:00
02/28/2001 05:30:00
02/28/2001 08:30:00
02/28/2001 10:00:00 through 13:30:00
02/28/2001 14:30:00 through 18:30:00
02/28/2001 19:30:00 through 23:30:00
High turbidity values deleted:
02/05/2001 17:30:00
02/06/2001 14:00:00
02/06/2001 15:00:00

02/06/2001 18:30:00
02/06/2001 23:30:00
02/07/2001 02:00:00 through 02:30:00
02/07/2001 04:00:00
02/07/2001 06:30:00 through 07:00:00
02/07/2001 08:30:00 through 09:00:00
02/07/2001 11:30:00 through 12:00:00
02/07/2001 18:30:00 through 19:00:00
02/07/2001 20:30:00
02/08/2001 04:00:00
02/08/2001 07:30:00
02/08/2001 10:30:00
02/08/2001 15:00:00
02/08/2001 18:00:00
02/08/2001 19:00:00
02/08/2001 22:30:00
02/09/2001 04:00:00 through 04:30:00
02/09/2001 06:30:00
02/09/2001 08:00:00
02/09/2001 10:00:00
02/09/2001 13:00:00
02/09/2001 14:30:00
02/09/2001 21:00:00
02/09/2001 23:30:00 through 00:30:00
02/10/2001 02:30:00 through 03:00:00
02/10/2001 06:00:00
02/10/2001 07:00:00 through 07:30:00
02/10/2001 10:30:00 through 11:00:00
02/10/2001 14:00:00 through 15:00:00
02/10/2001 17:30:00
02/10/2001 19:00:00
02/11/2001 01:00:00 through 01:30:00
02/11/2001 04:00:00 through 04:30:00
02/11/2001 06:30:00 through 07:00:00
02/11/2001 09:00:00 through 10:00:00
02/26/2001 11:30:00 through 12:00:00
02/26/2001 17:00:00
02/26/2001 18:30:00 through 19:00:00
02/26/2001 21:30:00 through 22:00:00
02/26/2001 23:30:00
02/27/2001 04:00:00 through 04:30:00
02/27/2001 07:00:00 through 07:30:00
02/27/2001 10:30:00
02/27/2001 17:30:00 through 18:00:00
02/27/2001 20:30:00
02/27/2001 22:30:00
02/28/2001 01:30:00
02/28/2001 06:00:00
02/28/2001 07:00:00
02/28/2001 08:00:00

Deleted depth on 02/06/01 14:00:00 due to datalogger out of water during deployment.

March

Station 09

Negative DO mg/l and DO% values deleted:

03/08/2001 00:30:00 through 01:30:00

03/08/2001 02:30:00 through 09:00:00

03/27/2001 07:00:00 through 08:30:00

Deleted data, bad DO mg/l and DO% values Calibration Problems:

03/27/2001 09:30:00 throughout 03/31/01 23:30:00

Negative depth values deleted:

03/18/2001 10:30:00 throughout 03/27/2001 09:00:00

Turbidity values for the following dates/times were deleted due to negative

and/or zero values:

03/01/2001 00:00:00 through 05:30:00

03/01/2001 08:00:00

03/01/2001 09:30:00 through 13:30:00

03/01/2001 15:00:00 through 15:30:00

03/01/2001 17:00:00

03/01/2001 18:00:00 through 03/02/2001 06:00:00

03/02/2001 10:00:00

03/02/2001 11:00:00 through 12:00:00

03/02/2001 13:00:00

03/02/2001 15:30:00 through 17:00:00

03/02/2001 18:00:00 through 18:30:00

03/02/2001 19:30:00 through 03/03/2001 01:30:00

03/03/2001 02:30:00 through 03/03/2001 03:30:00

03/03/2001 04:30:00

03/03/2001 05:00:00

03/03/2001 17:30:00

03/03/2001 18:30:00 through 19:00:00

03/03/2001 20:00:00 through 03/04/2001 03:00:00

03/04/2001 04:00:00

03/04/2001 06:00:00

03/04/2001 09:30:00

03/04/2001 16:00:00 through 16:30:00

03/04/2001 17:30:00 through 03/05/2001 05:00:00

03/05/2001 06:30:00

03/05/2001 10:30:00

03/05/2001 11:00:00 through 11:30:00

03/05/2001 12:00:00

03/05/2001 14:30:00 through 18:00:00

03/05/2001 19:00:00 through 03/06/2001 06:30:00

03/06/2001 09:00:00

03/06/2001 10:00:00 through 12:00:00

03/06/2001 16:00:00

03/06/2001 17:00:00 through 19:00:00

03/06/2001 20:00:00 through 03/07/2001 12:00:00

03/07/2001 13:30:00

03/07/2001 15:00:00 through 03/08/2001 06:30:00

03/08/2001 08:00:00 through 14:00:00

03/08/2001 15:00:00 through 17:30:00

03/08/2001 18:30:00 through 03/09/2001 07:30:00

03/09/2001 08:30:00 through 14:00:00

03/09/2001 15:00:00 through 15:30:00

03/09/2001 19:00:00 through 03/10/2001 17:30:00

03/10/2001 18:30:00 through 03/11/2001 08:00:00
03/11/2001 09:00:00 through 09:30:00
03/11/2001 11:30:00
03/11/2001 12:30:00 through 17:30:00
03/11/2001 18:30:00 through 03/12/2001 06:00:00
03/12/2001 07:00:00 through 10:00:00
03/12/2001 12:00:00
03/12/2001 15:00:00 through 15:30:00
03/12/2001 17:00:00
03/12/2001 18:00:00 through 03/13/2001 04:00:00
03/13/2001 06:00:00
03/13/2001 07:00:00, 09:00:00, 12:30:00
03/13/2001 13:30:00
03/13/2001 14:30:00 through 15:30:00
03/13/2001 17:30:00 through 03/14/2001 04:30:00
03/14/2001 06:00:00 through 06:30:00
03/14/2001 08:00:00
03/14/2001 09:00:00
03/14/2001 13:30:00
03/14/2001 15:30:00 through 16:30:00
03/14/2001 17:30:00 through 03/15/2001 03:30:00
03/15/2001 04:30:00 through 06:00:00
03/15/2001 08:30:00
03/15/2001 10:30:00, 12:00:00 through 12:30:00
03/15/2001 16:00:00 through 03/16/2001 06:30:00
03/16/2001 13:30:00 through 03/17/2001 04:00:00
03/17/2001 05:00:00 through 07:00:00
03/17/2001 08:30:00 through 14:00:00
03/17/2001 15:00:00 through 15:30:00
03/17/2001 17:00:00 through 03/18/2001 06:00:00
03/18/2001 08:00:00 through 10:00:00
03/23/2001 04:00
03/28/2001 15:00:00
03/28/2001 23:30:00
03/29/2001 00:00:00
03/29/2001 02:30:00
03/29/2001 04:30:00
03/30/2001 04:30:00, 10:00:00, 11:00:00, 23:30:00
03/31/2001 08:30:00, 22:30:00, 23:00:00

Turbidity values for the following dates/times were deleted due to high (>1000

NTU) values:

03/23/2001 03:30:00

No pH data due to lack of probe for deployment 03/18/2001 10:30:00 through

03/27/2001 09:00:00.

Drop in DO% and mg/L 03/07/01 17:30:00 through 03/09/01 11:00:00 possibly due to

increase in water temperatures on 03/06 13:30 (33.2(C) causing more consumption

of oxygen by organisms and algae in the water. These data were not deleted.

Station 10

Turbidity values for the following dates/times were deleted due to negative

and/or zero values:

03/01/2001 00:00:00 through 03/02/2001 17:00:00
03/02/2001 18:00:00
03/02/2001 19:00:00 through 03/03/2001 13:30:00
03/03/2001 15:00:00
03/03/2001 16:00:00 through 16:30:00
03/03/2001 18:00:00 through 03/04/2001 11:30:00
03/04/2001 13:00:00 through 16:30:00
03/04/2001 17:30:00 through 20:30:00
03/04/2001 21:30:00 through 03/05/2001 00:00:00
03/05/2001 01:00:00
03/05/2001 02:00:00 through 03/07/2001 10:00:00
03/07/2001 11:00:00 through 03/09/2001 11:30:00
03/09/2001 13:00:00 through 17:00:00
03/09/2001 18:30:00 through 21:30:00
03/09/2001 22:30:00 through 03/12/2001 13:30:00
03/12/2001 15:00:00
03/12/2001 16:30:00 through 03/14/2001 00:00:00
03/14/2001 01:00:00 through 13:00:00
03/14/2001 15:00:00 through 16:00:00
03/14/2001 17:00:00 through 17:30:00
03/14/2001 18:30:00 through 19:30:00
03/14/2001 20:30:00 through 03/16/2001 10:30:00
03/16/2001 11:30:00 through 13:00:00
03/16/2001 14:00:00 through 18:30:00
03/16/2001 19:30:00 through 03/17/2001 11:00:00
03/17/2001 12:00:00 through 13:00:00
03/17/2001 14:00:00 through 15:30:00
03/17/2001 17:00:00 through 03/18/2001 09:00:00
03/18/2001 12:00:00
03/18/2001 13:00:00
03/18/2001 16:00:00
03/19/2001 01:30:00
03/19/2001 04:30:00
03/19/2001 18:00:00 through 19:00:00
03/19/2001 23:00:00
03/20/2001 02:00:00
03/20/2001 08:30:00
03/20/2001 16:00:00
03/20/2001 19:00:00
03/20/2001 21:00:00
03/20/2001 23:30:00
03/21/2001 02:30:00
03/21/2001 03:30:00
03/21/2001 06:00:00
03/21/2001 21:30:00
03/21/2001 23:00:00
03/22/2001 00:30:00
02/22/2001 03:00:00
03/22/2001 05:30:00
03/22/2001 10:30:00 through 11:00:00
03/22/2001 13:30:00 through 14:00:00

03/22/2001 16:30:00
03/22/2001 19:00:00
03/22/2001 21:00:00
03/22/2001 22:00:00
03/23/2001 00:30:00
03/23/2001 04:00:00
03/23/2001 06:30:00
03/23/2001 08:00:00
03/23/2001 10:30:00
03/23/2001 12:30:00
03/23/2001 13:30:00
03/23/2001 14:30:00
03/23/2001 16:00:00
03/23/2001 17:00:00
03/23/2001 18:30:00
03/23/2001 21:00:00
03/23/2001 23:30:00 through 03/24/2001 00:00:00
03/24/2001 02:30:00
03/24/2001 05:00:00
03/24/2001 07:00:00
03/24/2001 08:00:00
03/24/2001 10:30:00
03/24/2001 13:00:00
03/24/2001 17:00:00
03/24/2001 18:00:00
03/24/2001 19:30:00
03/24/2001 20:30:00
03/24/2001 22:00:00
03/25/2001 00:30:00
03/25/2001 03:00:00
03/25/2001 05:30:00
03/25/2001 08:00:00
03/25/2001 10:30:00
03/25/2001 15:30:00
03/25/2001 18:00:00
03/25/2001 19:00:00
03/25/2001 19:30:00
03/25/2001 21:00:00
03/25/2001 22:30:00
03/26/2001 02:00:00
03/26/2001 03:30:00
03/26/2001 04:30:00
03/26/2001 06:00:00
03/26/2001 08:30:00
03/26/2001 09:30:00
03/26/2001 11:00:00
03/26/2001 13:30:00
03/26/2001 18:30:00
03/26/2001 22:30:00
03/26/2001 23:30:00
03/27/2001 02:30:00
03/27/2001 06:30:00
03/27/2001 09:00:00 through 03/28/2001 00:30:00
03/28/2001 01:30:00 through 23:00:00

03/29/2001 00:00:00 through 11:00:00
03/29/2001 12:00:00 through 13:00:00
03/29/2001 14:00:00 through 15:00:00
03/29/2001 16:00:00 through 03/30/2001 17:30:00
03/30/2001 18:30:00 through 03/31/2001 02:00:00
03/31/2001 03:00:00 through 11:30:00
03/31/2001 12:30:00 through 13:30:00
03/31/2001 14:30:00 through 15:00:00
03/31/2001 16:00:00
03/31/2001 17:30:00
03/31/2001 18:30:00:00 through 22:30:00

High turbidity values deleted:

03/12/2001 16:00:00
03/18/2001 10:30:00
03/18/2001 14:30:00 through 15:30:00
03/18/2001 17:30:00 through 19:00:00
03/18/2001 20:00:00 through 21:30:00
03/18/2001 23:00:00
03/19/2001 00:00:00 through 00:30:00
03/19/2001 02:30:00 through 03:30:00
03/19/2001 05:30:00 through 08:30:00
03/19/2001 10:00:00
03/19/2001 12:00:00
03/19/2001 13:00:00 through 14:00:00
03/19/2001 15:30:00
03/19/2001 17:30:00
03/19/2001 21:30:00
03/19/2001 23:30:00
03/20/2001 01:30:00, 02:30:00
03/20/2001 04:30:00 through 05:00:00
03/20/2001 07:00:00 through 08:00:00
03/20/2001 09:00:00
03/20/2001 10:00:00, 12:30:00, 14:00:00, 15:00:00 through 15:30:00
03/20/2001 17:00:00, 18:00:00 through 18:30:00, 22:30:00 through 23:30:00
03/21/2001 00:00:00
03/21/2001 01:30:00 through 02:00:00
03/21/2001 03:00:00
03/21/2001 05:00:00 through 05:30:00
03/21/2001 07:30:00 through 08:30:00
03/21/2001 10:30:00 through 11:30:00
03/21/2001 13:30:00 through 14:00:00
03/21/2001 16:30:00
03/21/2001 17:30:00
03/21/2001 19:00:00 through 20:30:00
03/21/2001 22:30:00
03/22/2001 09:00:00 through 10:00:00
03/22/2001 12:00:00 through 13:00:00
03/22/2001 18:00:00
03/22/2001 20:30:00
03/22/2001 23:30:00
03/23/2001 02:00:00
03/23/2001 03:00:00 through 03:30:00
03/23/2001 05:00:00 through 06:00:00

03/23/2001 09:30:00
03/23/2001 12:00:00
03/23/2001 22:30:00 through 23:00:00
03/24/2001 06:30:00
03/24/2001 09:30:00
03/24/2001 14:30:00
03/24/2001 23:00:00
03/25/2001 06:30:00 through 07:00:00
03/25/2001 12:30:00 through 13:30:00
03/25/2001 14:30:00 through 15:00:00
03/25/2001 17:00:00
03/25/2001 18:30:00
03/25/2001 22:00:00
03/26/2001 01:00:00 through 01:30:00
03/26/2001 12:30:00
03/26/2001 15:00:00 through 15:30:00
03/26/2001 18:00:00
03/26/2001 19:00:00
03/26/2001 20:30:00
03/27/2001 01:00:00 through 02:00:00
03/27/2001 04:00:00
Values not registered by sonde:
03/31/2001 23:00:00 through 23:30:00
Suspicious pH values were deleted:
03/18/2001 10:30:00 throughout 03/27/2001 09:00:00
Deleted bad data due to sonde maintenance. Sonde was clearly still out of
water
when the sonde took reading:
03/18/01 10:00:00
Suspicious DO% and DO mg/l values retained:
03/15/01 00:00:00 through 22:00:00
It's a possibility this could be due to algae activity or other organism
activity example (Cassiopeia) in the bottom of the sonde.

April 2001

Station 09

Deleted bad DO mg/l and DO% values due to calibration problems:

04/01/01 00:00:00 throughout 04/08/01 09:30:00

Negative turbidity values deleted:

04/01/2001 07:30:00, 08:30:00

04/01/2001 09:00:00

04/01/2001 10:00:00

04/01/2001 22:00:00

04/02/2001 00:00:00, 01:00:00

04/28/2001 03:30:00

04/28/2001 04:00:00

04/29/2001 04:30:00

04/30/2001 03:30:00

04/30/2001 04:00:00

04/30/2001 04:30:00

High turbidity values deleted:

04/08/2001 18:00:00

Deleted data, bad values for all parameters.

04/11/2001 12:00:00 throughout 04/25/2001 08:30:00
Deleted bad depth data due to calibration error:
04/08/01 10:00:00 through 04/11/01 11:30:00

Station 10

Negative and/or zero turbidity values deleted:

04/01/01	00:00:00 through 01:30:00
04/01/01	02:30:00 through 12:30:00
04/01/01	14:00:00 through 04/02/01 19:00:00
04/02/01	20:00:00 through 04/03/01 03:00:00
04/03/01	04:00:00 through 04/04/01 16:00:00
04/04/01	17:00:00 through 04/05/01 04:30:00
04/05/01	05:30:00 through 20:30:00
04/05/01	21:30:00 through 04/06/01 15:00:00
04/06/01	16:00:00 through 04/07/01 09:30:00
04/07/01	10:30:00 through 11:30:00
04/07/01	12:30:00 through 17:00:00
04/07/01	18:00:00 through 23:30:00
04/08/01	00:00:00
04/08/01	01:00:00
04/08/01	02:30:00 through 11:00:00
04/08/01	12:00:00
04/08/01	13:00:00
04/08/01	14:00:00 through 15:30:00
04/08/01	18:00:00 through 23:00:00
04/09/01	15:00:00
04/09/01	23:00:00 through 04/10/01 00:30:00
04/10/01	02:00:00 through 03:30:00
04/10/01	04:30:00 through 05:30:00
04/11/01	18:30:00
04/11/01	18:30:00
04/11/01	20:00:00 through 20:30:00
04/11/01	23:00:00 through 04/12/01 01:30:00
04/12/01	03:00:00 through 04:00:00
04/12/01	05:30:00
04/12/01	07:00:00
04/12/01	13:30:00
04/12/01	19:00:00 through 20:30:00
04/12/01	22:30:00 through 23:30:00
04/13/01	00:30:00 through 01:30:00
04/13/01	03:00:00 through 07:00:00
04/13/01	08:00:00
04/13/01	10:00:00
04/13/01	19:30:00 through 20:00:00
04/13/01	21:00:00 through 22:00:00
04/13/01	23:00:00 through 04/14/01 01:00:00
04/14/01	02:00:00 through 05:00:00
04/14/01	06:00:00 through 08:00:00
04/14/01	09:00:00 through 09:30:00
04/14/01	12:30:00 through 13:30:00
04/14/01	15:00:00
04/14/01	18:30:00
04/14/01	19:30:00
04/14/01	20:30:00 through 21:30:00

04/14/01	22:30:00
04/14/01	23:30:00
04/15/01	00:30:00 through 02:30:00
04/15/01	03:30:00 through 05:00:00
04/15/01	06:00:00 through 09:00:00
04/15/01	10:30:00 through 11:30:00
04/15/01	13:30:00
04/15/01	16:00:00
04/15/01	17:30:00
04/15/01	19:00:00
04/15/01	20:00:00
04/15/01	21:30:00
04/15/01	22:30:00 through 23:00:00
04/16/01	00:00:00 through 00:30:00
04/16/01	01:30:00
04/16/01	02:30:00
04/16/01	03:30:00 through 06:00:00
04/16/01	07:00:00 through 07:30:00
04/16/01	08:30:00 through 10:30:00
04/16/01	12:00:00 through 15:00:00
04/16/01	16:30:00
04/16/01	20:00:00 through 04/17/01 00:00:00
04/17/01	01:00:00 through 04:00:00
04/17/01	05:00:00 through 07:00:00
04/17/01	09:30:00
04/17/01	10:30:00
04/17/01	12:00:00
04/17/01	14:30:00
04/17/01	17:30:00
04/17/01	19:30:00
04/17/01	20:30:00
04/17/01	22:30:00 through 23:00:00
04/18/01	00:00:00 through 02:00:00
04/18/01	03:00:00 through 05:30:00
04/18/01	07:00:00
04/18/01	10:30:00 through 11:00:00
04/18/01	14:00:00
04/18/01	19:00:00
04/18/01	20:00:00 through 20:30:00
04/18/01	22:00:00
04/18/01	23:00:00
04/19/01	00:00:00 through 00:30:00
04/19/01	01:30:00
04/19/01	02:30:00 through 07:30:00
04/19/01	10:00:00 through 10:30:00
04/19/01	11:30:00
04/19/01	14:30:00
04/19/01	19:00:00 through 04/20/01 00:30:00
04/20/01	01:30:00 through 02:00:00
04/20/01	03:30:00 through 05:30:00
04/20/01	06:30:00 through 07:00:00
04/20/01	08:30:00 through 09:00:00
04/20/01	10:30:00 through 11:00:00
04/20/01	18:00:00

04/20/01	21:00:00 through 22:00:00
04/20/01	23:00:00 through 23:30:00
04/21/01	01:00:00
04/21/01	02:00:00
04/21/01	04:00:00
04/21/01	05:00:00 through 05:30:00
04/21/01	06:30:00 through 08:30:00
04/21/01	16:00:00 through 16:30:00
04/21/01	19:30:00
04/21/01	21:00:00
04/21/01	22:30:00
04/21/01	23:30:00 through 04/22/01 00:30:00
04/22/01	01:30:00 through 03:00:00
04/22/01	04:00:00 through 06:30:00
04/22/01	08:00:00
04/22/01	19:00:00 through 19:30:00
04/22/01	22:30:00 through 223:00:00
04/23/01	00:30:00
04/23/01	02:00:00 through 03:00:00
04/23/01	04:00:00 through 04:30:00
04/23/01	05:30:00 through 07:00:00
04/23/01	10:00:00 through 04/24/01 00:00:00
04/24/01	08:30:00 through 11:30:00
04/24/01	14:30:00
04/24/01	15:00:00
04/24/01	17:30:00
04/24/01	18:30:00
04/24/01	21:00:00
04/25/01	04:30:00 through 05:00:00
04/25/01	08:30:00
04/25/01	13:00:00
04/25/01	22:30:00
04/26/01	04:00:00
04/26/01	05:30:00 through 06:00:00
04/27/01	01:00:00 through 02:00:00
04/27/01	03:00:00
04/27/01	04:30:00 through 05:00:00
04/27/01	06:30:00
04/27/01	07:30:00
04/27/01	12:30:00
04/28/01	02:30:00
04/28/01	05:00:00 through 05:30:00
04/28/01	06:30:00 through 07:30:00
04/28/01	10:30:00
04/28/01	22:30:00
04/29/01	02:30:00
04/29/01	04:00:00 through 05:00:00
04/29/01	06:00:00
04/29/01	07:30:00
04/29/01	10:00:00
04/30/01	01:00:00 through 01:30:00
04/30/01	02:30:00
04/30/01	03:30:00
04/30/01	05:00:00 through 07:30:00

04/30/01 10:00:00
04/30/01 11:30:00
High turbidity values were deleted:
04/08/01 13:30:00
04/24/01 17:00:00
04/24/01 19:00:00
04/25/01 03:00:00
04/25/01 03:30:00
04/25/01 02:30:00
04/25/01 01:00:00
04/25/01 00:30:00
No data recorded by sonde:
04/23/2001 09:00:00 through 09:30:00
04/25/2001 09:00:00 through 10:00:00
04/25/2001 11:30:00 through 12:30:00
DO (% and mg/L) suspect due to low readings during new deployment.
04/08/2001 10:00:00 through 04/09/2001 04:30:00
Low pH value suspect and deleted due to new deployment reading.
04/05/2001 10:00:00

May 2001

Station 09

Negative DO mg/l and DO% values deleted for deployment due to calibration error:

05/15/01 09:30:00 through 05/16/01 09:30:00

Negative DO mg/l and DO% values deleted:

05/27/01 05:30:00 through 06:00:00

05/27/01 07:30:00 through 08:30:00

Negative turbidity values deleted:

05/17/2001 04:00:00

05/17/2001 06:00:00

05/17/2001 22:30:00

05/18/2001 01:00:00

05/18/2001 02:00:00

05/18/2001 03:30:00

05/18/2001 04:00:00

05/18/2001 06:30:00

05/19/2001 22:30:00

05/20/2001 01:00:00

05/20/2001 22:30:00

05/21/2001 00:00:00

05/22/2001 00:00:00

05/27/2001 16:00:00

05/29/2001 23:00:00

05/30/2001 21:00:00

05/31/2001 05:00:00

05/31/2001 22:30:00

High turbidity values deleted:

05/04/2001 13:30:00

05/04/2001 23:30:00

05/05/2001 09:00:00

05/05/2001 12:30:00

05/06/2001 01:30:00

05/06/2001 04:30:00

05/06/2001 08:30:00

05/06/2001 18:30:00

05/06/2001 20:00:00

05/24/2001 10:30:00

Deleted depth values because were considered bad data:

05/13/2001 18:30:00 throughout 05/31/2001 23:30:00

No data because sonde maintenance: 05/15/2001 08:30:00 through 09:00:00

Station 10

Turbidity values for the following dates/times were deleted due to negative

and/or zero values:

05/01/2001 01:00:00

05/01/2001 02:30:00 through 03:30:00

05/01/2001 04:30:00

05/01/2001 05:30:00

05/01/2001 06:30:00 through 07:00:00

05/01/2001 10:30:00

05/01/2001 16:30:00

05/01/2001 18:30:00

05/02/2001 02:30:00 through 04:00:00

05/02/2001 05:00:00

05/02/2001 06:00:00 through 08:30:00

05/02/2001 09:30:00

05/02/2001 11:00:00 through 12:00:00

05/02/2001 13:00:00

05/02/2001 14:00:00 through 14:30:00

05/02/2001 16:30:00 through 17:30:00

05/02/2001 19:00:00

05/02/2001 23:00:00

05/03/2001 01:30:00

05/03/2001 02:30:00

05/03/2001 03:30:00

05/03/2001 05:00:00

05/03/2001 06:30 through 09:00:00

05/03/2001 10:00:00 through 11:00:00

05/03/2001 16:00:00

05/04/2001 00:00:00

05/04/2001 03:00:00

05/04/2001 04:30:00 through 05:00:00

05/04/2001 06:00:00 through 07:30:00

05/04/2001 08:30:00

05/04/2001 09:30:00

05/04/2001 10:30:00 through 11:00:00

05/04/2001 12:00:00

05/04/2001 13:30:00

05/04/2001 14:30:00

05/04/2001 18:30:00

05/05/2001 00:00:00 through 02:30:00

05/05/2001 03:30:00

05/05/2001 04:30:00 through 05:00:00

05/05/2001 06:30:00 through 07:00:00

05/05/2001 08:00:00 through 10:00:00

05/05/2001 13:30:00

05/05/2001 22:00:00
05/06/2001 01:30:00
05/06/2001 02:30:00 through 03:00:00
05/06/2001 04:00:00
05/06/2001 05:30:00
05/06/2001 06:30:00
05/06/2001 09:00:00
05/06/2001 17:30:00
05/06/2001 23:30:00
05/10/2001 03:00:00
05/15/2001 10:00:00 through 11:00:00
05/15/2001 12:30:00 through 14:00:00
05/15/2001 15:00:00 through 16:30:00
05/15/2001 17:30:00 through 18:30:00
05/15/2001 20:00:00
05/15/2001 21:00:00 through 21:30:00
05/15/2001 22:30:00 throughout 05/16/2001 00:00:00
05/16/2001 01:00:00
05/16/2001 02:00:00 through 02:30:00
05/16/2001 03:30:00
05/16/2001 06:00:00 through 06:30:00
05/16/2001 09:00:00
05/17/2001 04:00:00
05/17/2001 06:00:00
05/17/2001 22:30:00
05/18/2001 01:00:00
05/18/2001 02:00:00
05/18/2001 03:30:00 through 04:00:00
05/18/2001 06:30:00
05/19/2001 22:30:00
05/20/2001 01:00:00
05/20/2001 22:30:00
05/21/2001 00:00:00
05/22/2001 00:00:00
High turbidity values were deleted:
05/15/2001 19:00:00
05/16/2001 04:00:00
05/24/2001 10:30:00
Deleted bad data due to sonde maintenance, datalogger was out of water:
05/16/2001 09:30:00
Deleted data for depth due to sensor failure:
05/16/2001 10:00:00 throughout 05/24/2001 15:30:00
Deleted data, bad oxygen values due to calibration error:
05/15/2001 09:30:00 throughout 05/16/2001 09:00:00
Missing data due to battery problems:
05/24/2001 16:00:00 throughout 05/31/2001 23:30:00

June 2001
Station 09
DO (% and mg/L) are suspect due to low battery. Data retained.
06/14/2001 08:00:00 through 06/25/2001 09:30:00
Deleted data, bad values for all parameters.
06/25/01 10:00:00 throughout 06/27/01 08:30:00

Turbidity values were deleted for the following dates/times due to negative

and/or zero values:

06/01/2001 01:00:00 through 01:30:00

06/01/2001 04:00:00

06/01/2001 21:00:00 through 21:30:00

06/01/2001 23:00:00

Deleted depth, bad data drift in values, sensor malfunction

06/01/2001 00:00:00 throughout 06/25/2001 09:30:00

Station 10

Turbidity values were deleted for the following date/times due to negative

and/or zero values:

06/06/2001 19:00:00, 22:00:00

06/07/2001 00:30:00, 02:30:00

06/07/2001 04:30:00 through 05:30:00

06/07/2001 06:30:00 through 07:00:00

06/07/2001 08:00:00

06/07/2001 19:00:00 through 19:30:00

06/07/2001 21:00:00 through 22:30:00

06/07/2001 23:30:00 through 06/08/2001 02:30:00

06/08/2001 03:30:00 through 04:00:00

06/08/2001 05:30:00 through 07:00:00

06/08/2001 08:30:00, 17:00:00

06/08/2001 19:00:00 through 20:00:00

06/08/2001 21:00:00 through 06/09/2001 03:30:00

06/09/2001 04:30:00 through 09:00:00

06/09/2001 10:00:00, 14:00:00, 15:00:00, 17:00:00

06/09/2001 18:00:00 through 19:00:00

06/09/2001 12:00:00 through 13:00:00

06/09/2001 20:00:00 through 06/10/2001 05:30:00

06/10/2001 06:30:00 through 08:30:00

06/10/2001 10:00:00 through 11:00:00

06/10/2001 12:00:00 through 13:00:00

06/10/2001 18:30:00 through 23:00:00

06/11/2001 00:00:00 through 07:00:00

06/11/2001 08:00:00 through 11:00:00

06/11/2001 12:00:00, 13:00:00, 14:30:00

06/11/2001 16:00:00 through 16:30:00

06/11/2001 17:30:00 through 22:30:00

06/11/2001 23:30:00 through 06/12/2001 04:30:00

06/12/2001 05:30:00 through 11:30:00

06/15/2001 12:30:00 through 16:00:00

06/12/2001 17:00:00 through 17:30:00

06/12/2001 18:30:00 through 06/13/2001 03:00:00

06/13/2001 04:00:00 through 04:30:00

06/13/2001 05:30:00 through 14:00:00

06/13/2001 15:30:00 through 17:30:00

06/13/2001 18:30:00 through 19:30:00

06/13/2001 20:30:00 through 06/14/2001 12:30:00

06/14/2001 13:30:00 through 19:30:00

06/14/2001 20:30:00 through 06/15/2001 07:00:00

06/15/2001 08:30:00 through 19:00:00
06/15/2001 20:00:00 through 20:30:00
06/15/2001 21:30:00
06/15/2001 22:30:00 through 06/16/2001 03:00:00
06/16/2001 04:00:00 through 05:30:00
06/16/2001 07:00:00
06/16/2001 08:00:00, 13:00:00, 14:00:00 through 16:00:00
06/16/2001 17:00:00 through 17:30:00
06/16/2001 23:30:00
06/16/2001 09:30:00 through 12:00:00
06/16/2001 18:30:00
06/16/2001 19:30:00 through 22:30:00
06/17/2001 00:30:00
06/17/2001 01:30:00 through 09:00:00
06/17/2001 10:00:00
06/17/2001 11:00:00 through 16:00:00
06/17/2001 17:00:00 through 19:00:00
06/17/2001 20:00:00 through 06/18/2001 04:00:00
06/18/2001 06:30:00 through 05:00:00
06/18/2001 08:30:00 through 09:00:00
06/18/2001 10:00:00 through 11:30:00
06/18/2001 15:00:00 through 15:30:00
06/18/2001 18:00:00 through 22:30:00
06/18/2001 23:30:00
06/19/2001 00:30:00
06/19/2001 01:30:00 through 03:00:00
06/19/2001 04:30:00 through 06:30:00
06/19/2001 07:30:00
06/19/2001 08:30:00 through 10:30:00
06/19/2001 13:30:00 through 14:00:00
06/19/2001 15:30:00
06/19/2001 16:30:00 through 19:00:00
06/19/2001 21:00:00 through 21:30:00
06/19/2001 22:30:00 through 23:00:00
06/20/2001 00:00:00 through 00:30:00
06/20/2001 02:00:00 through 04:30:00
06/20/2001 05:30:00 through 06:00:00
06/20/2001 07:00:00 through 08:30:00
06/20/2001 10:30:00, 11:30:00, 14:30:00, 15:30:00
06/20/2001 17:00:00 through 18:00:00
06/20/2001 19:00:00 through 20:00:00
06/20/2001 21:30:00 through 23:00:00
06/21/2001 00:00:00 through 06:00:00
06/21/2001 07:00:00 through 09:00:00
06/21/2001 10:00:00, 11:30:00
06/21/2001 13:30:00 through 14:00:00
06/21/2001 17:00:00 through 17:30:00
06/21/2001 18:30:00
06/21/2001 23:30:00 through 06/22/2001 01:00:00
06/22/2001 02:00:00 through 05:30:00
06/22/2001 06:30:00 through 07:30:00
06/22/2001 09:00:00 through 10:00:00
06/22/2001 13:00:00 through 16:00:00
06/22/2001 17:30:00 through 20:00:00

06/22/2001 22:00:00 through 06/23/2001 00:00:00
06/23/2001 01:00:00 through 02:30:00
06/23/2001 03:30:00 through 07:00:00
06/23/2001 08:30:00 through 11:30:00
06/23/2001 13:30:00 through 15:30:00
06/23/2001 17:30:00 through 18:30:00
06/23/2001 19:30:00, 20:30:00
06/23/2001 21:30:00 through 23:30:00
06/24/2001 00:00:00
06/24/2001 03:00:00 through 09:00:00
06/24/2001 11:00:00 through 11:30:00
06/24/2001 19:00:00
06/24/2001 20:30:00
06/24/2001 22:00:00 through 23:30:00
06/25/2001 01:00:00 through 01:30:00
06/25/2001 02:30:00 through 03:00:00
06/25/2001 04:30:00 through 06:00:00
06/25/2001 07:00:00 through 08:00:00
06/25/2001 09:00:00 through 10:00:00
06/25/2001 12:30:00, 14:00:00, 15:00:00, 16:30:00
06/25/2001 18:00:00
06/25/2001 19:30:00
06/25/2001 23:00:00
06/26/2001 00:30:00
06/26/2001 03:00:00
06/26/2001 05:30:00
06/26/2001 18:00:00, 20:30:00
06/26/2001 22:00:00
06/27/2001 01:30:00
06/27/2001 05:30:00
06/27/2001 07:30:00
06/27/2001 09:00:00 through 09:30:00
06/27/2001 11:00:00 through 12:00:00
06/27/2001 13:00:00 through 16:00:00
06/27/2001 17:30:00, 18:30:00 through 19:00:00
06/27/2001 20:00:00 through 06/28/2001 14:00:00
06/28/2001 15:00:00 through 21:00:00
06/28/2001 22:00:00 through 23:30:00
06/29/2001 00:30:00 through 05:30:00
06/29/2001 06:30:00 through 10:00:00
06/29/2001 11:30:00 through 06/30/2001 03:30:00
06/30/2001 04:30:00 through 05:30:00
06/30/2001 07:00:00 through 07:30:00
06/30/2001 08:30:00 through 15:30:00
06/30/2001 16:30:00 through 23:30:00
High turbidity values deleted:
06/19/2001 00:00:00
06/23/2001 21:00:00
06/24/2001 21:30:00
06/25/2001 00:30:00
06/25/2001 17:30:00
06/25/2001 21:00:00
06/26/2001 01:30:00
06/26/2001 04:00:00

06/26/2001 09:00:00
06/26/2001 17:00:00
06/27/2001 05:00:00
06/27/2001 07:00:00
No data, values where suspicious:
06/01/2001 00:00:00 throughout 06/06/2001 08:00:00
No data due to maintenance.
06/06/2001 08:30:00
Deleted data, DO% and DO mg/l bad values, calibration problem.
06/25/01 10:00:00 throughout 06/27/01 08:30:00

July 2001

Station 09

DO% and DO mg/l negative values, data deleted:

07/23/2001 18:00:00 throughout 07/24/2001 23:30:00

07/25/2001 01:30:00

High turbidity values deleted:

07/11/2001 18:30:00

07/16/2001 09:00:00

07/16/2001 12:30:00

07/16/2001 14:30:00

07/16/2001 17:00:00 through 17:30:00

07/17/2001 12:30:00

07/17/2001 17:30:00

07/17/2001 22:00:00

07/18/2001 01:00:00

07/18/2001 02:00:00

07/18/2001 08:30:00

07/20/2001 00:30:00

07/20/2001 01:00:00

07/20/2001 02:00:00

07/20/2001 04:00:00 through 04:30:00

07/20/2001 07:00:00

07/20/2001 13:30:00

07/20/2001 19:30:00

07/20/2001 21:00:00

07/21/2001 03:00:00

07/21/2001 04:00:00

07/21/2001 05:30:00

07/21/2001 07:30:00

07/21/2001 11:30:00

07/22/2001 12:30:00

07/26/2001 21:00:00

07/31/2001 04:00:00

07/31/2001 07:00:00 through 08:00:00

07/31/2001 09:00:00 through 09:30:00

Bad depth readings deleted due to calibration error for deployment

07/23/2001

13:00:00 through 08/14/2001 08:30:00

Station 10

Turbidity values for the following dates/times were deleted due to negative

and/or zero values:

07/01/2001 00:00:00
07/01/2001 01:30:00 through 05:00:00
07/01/2001 06:00:00 through 13:00:00
07/01/2001 14:30:00 through 21:30:00
07/01/2001 22:30:00 through 07/02/01 09:30:00
07/02/2001 11:00:00
07/02/2001 12:00:00 through 15:00:00
07/02/2001 16:00:00 through 17:00:00
07/02/2001 19:00:00 through 19:30:00
07/02/2001 21:00:00 through 21:30:00
07/02/2001 23:30:00 through 07/03/2001 02:00:00
07/03/2001 03:00:00 through 04:30:00
07/03/2001 05:30:00
07/03/2001 07:00:00
07/03/2001 08:00:00 through 08:30:00
07/03/2001 15:30:00
07/04/2001 07:00:00
07/04/2001 11:00:00
07/05/2001 06:00:00
07/05/2001 18:30:00 through 19:00:00
07/05/2001 22:30:00
07/06/2001 06:00:00 through 07:00:00
07/06/2001 17:00:00
07/06/2001 18:30:00
07/06/2001 19:30:00
07/06/2001 21:00:00 through 22:30:00
07/06/2001 23:30:00 through 07/07/2001 00:00:00
07/07/2001 01:30:00 through 05:30:00
07/07/2001 06:30:00 through 09:00:00
07/07/2001 16:30:00
07/07/2001 17:30:00
07/07/2001 18:30:00
07/07/2001 20:00:00
07/07/2001 21:00:00 through 07/08/01 00:30:00
07/08/2001 01:30:00 through 03:00:00
07/08/2001 04:00:00 through 08:30:00
07/08/2001 09:30:00 through 13:30:00
07/08/2001 14:30:00 through 19:00:00
07/08/2001 20:00:00 through 07/09/01 08:30:00
07/09/2001 09:30:00 through 11:30:00
07/09/2001 12:30:00
07/09/2001 13:30:00 through 16:00:00
07/09/2001 17:00:00 through 19:00:00
07/09/2001 20:00:00 through 22:30:00
07/10/2001 00:30:00 through 03:00:00
07/10/2001 04:00:00 through 04:30:00
07/10/2001 11:30:00
07/10/2001 12:30:00 through 14:30:00
07/10/2001 15:30:00 through 16:30:00
07/10/2001 18:00:00
07/10/2001 19:00:00 through 20:00:00

07/10/2001 23:00:00 through 07/11/01 00:30:00
07/11/2001 01:30:00
07/11/2001 02:30:00
07/11/2001 04:00:00 through 06:00:00
07/11/2001 07:30:00 through 09:30:00
07/11/2001 10:30:00 through 13:00:00
07/11/2001 14:30:00 through 15:00:00
07/11/2001 16:00:00 through 18:00:00
07/11/2001 19:30:00
07/11/2001 21:00:00 through 22:30:00
07/11/2001 23:30:00 through 07/12/01 09:30:00
07/12/2001 10:30:00
07/12/2001 11:30:00 through 18:00:00
07/12/2001 19:00:00 through 19:30:00
07/12/2001 21:00:00 through 21:30:00
07/12/2001 22:30:00 through 23:00:00
07/13/2001 00:30:00 through 06:00:00
07/13/2001 07:00:00 through 09:30:00
07/13/2001 10:30:00 through 12:00:00
07/13/2001 13:00:00 through 13:30:00
07/13/2001 14:30:00 through 21:30:00
07/14/2001 00:00:00
07/14/2001 01:00:00 through 02:30:00
07/14/2001 03:30:00
07/14/2001 04:30:00 through 15:00:00
07/14/2001 16:00:00 through 17:00:00
07/14/2001 18:00:00 through 19:00:00
07/14/2001 20:00:00
07/14/2001 23:00:00
07/15/2001 00:00:00
07/15/2001 01:30:00 through 05:00:00
07/15/2001 06:00:00 through 08:00:00
07/15/2001 09:00:00 through 11:30:00
07/15/2001 13:00:00 through 14:00:00
07/15/2001 15:00:00 through 18:30:00
07/15/2001 20:30:00
07/15/2001 22:30:00
07/16/2001 03:30:00 through 04:00:00
07/16/2001 05:00:00 through 05:30:00
07/16/2001 07:00:00 through 08:00:00
07/16/2001 10:00:00
07/16/2001 13:00:00
07/16/2001 14:00:00 through 16:30:00
07/16/2001 17:30:00
07/16/2001 19:30:00
07/16/2001 21:30:00
07/16/2001 22:30:00 through 07/17/2001 02:00:00
07/17/2001 03:00:00
07/17/2001 04:00:00 through 07:00:00
07/17/2001 08:00:00
07/17/2001 09:00:00
07/17/2001 10:00:00
07/17/2001 11:00:00
07/17/2001 12:00:00 through 12:30:00

07/17/2001 15:00:00
07/17/2001 16:30:00 through 17:00:00
07/17/2001 19:30:00
07/17/2001 21:00:00 through 21:30:00
07/18/2001 01:00:00 through 02:00:00
07/18/2001 03:00:00 through 03:30:00
07/18/2001 04:30:00
07/18/2001 06:00:00
07/18/2001 08:30:00 through 09:00:00
07/18/2001 11:00:00
07/18/2001 23:30:00
07/19/2001 13:00:00
07/20/2001 01:30:00
07/21/2001 03:00:00
High turbidity values deleted:
07/15/2001 21:30:00
07/15/2001 23:30:00 through 07/16/2001 00:00:00
07/21/2001 02:00:00 through 02:30:00
07/21/2001 05:30:00
07/22/2001 03:00:00
07/22/2001 20:00:00
Bad turbidity readings were deleted cause the wiper was found covering
the
sensor:
07/23/01 12:30:00 through 07/31/01 23:30:00

August 2001

Station 09

High turbidity values deleted:

08/01/2001 03:30:00
08/01/2001 08:00:00
08/01/2001 09:30:00 through 10:00:00
08/01/2001 11:00:00 through 11:30:00
08/01/2001 18:00:00
08/02/2001 13:30:00
08/02/2001 15:30:00
08/02/2001 22:00:00
08/05/2001 07:30:00
08/05/2001 19:00:00
08/06/2001 07:00:00
08/06/2001 09:00:00
08/06/2001 18:00:00
08/09/2001 00:30:00
Bad depth readings deleted due to calibration error for deployment
07/23/2001
13:00:00 through 08/14/2001 08:30:00

Station 10

Bad turbidity readings were deleted cause the wiper was found covering
the

sensor:

08/01/01 00:00:00 through 08/14/01 08:00:00
Negative turbidity values were deleted:
08/14/2001 08:30:00 through 08/15/2001 03:30:00

08/15/2001 04:30:00 through 06:00:00
08/15/2001 07:00:00 through 12:30:00
08/15/2001 13:30:00 through 16:30:00
08/15/2001 17:30:00 through 08/16/2001 09:30:00
08/17/2001 01:30:00
08/17/2001 05:30:00
08/18/2001 01:30:00
08/18/2001 06:30:00 through 07:00:00
08/19/2001 03:00:00
08/19/2001 19:30:00
08/20/2001 03:00:00
08/21/2001 04:00:00
08/21/2001 10:00:00
08/21/2001 22:30:00
08/22/2001 00:00:00
08/22/2001 02:30:00
08/22/2001 04:30:00 through 05:00:00
08/22/2001 06:00:00
08/22/2001 10:00:00
08/22/2001 15:00:00
Zero turbidity values deleted:
08/15/2001 06:00:00
08/15/2001 13:00:00
08/16/2001 10:00:00 through 12:30:00
08/16/2001 12:30:00 through 16:30:00
08/16/2001 16:30:00
08/16/2001 17:30:00 through 19:00:00
08/16/2001 19:00:00
08/16/2001 20:30:00
08/16/2001 22:30:00
08/17/2001 04:30:00 through 06:30:00
08/17/2001 06:30:00
08/17/2001 08:00:00
08/17/2001 09:00:00
08/17/2001 15:00:00 through 19:00:00
08/17/2001 19:00:00
08/17/2001 20:30:00
08/17/2001 21:30:00
08/18/2001 03:30:00
08/18/2001 04:30:00
08/18/2001 06:00:00
08/18/2001 08:00:00
08/18/2001 11:30:00
08/18/2001 13:00:00
08/18/2001 14:30:00
08/18/2001 15:30:00 through 18:30:00
08/18/2001 18:30:00
08/18/2001 19:30:00
08/18/2001 22:00:00 through 01:30:00
08/19/2001 01:30:00 through 04:00:00
08/19/2001 04:00:00 through 05:30:00
08/19/2001 05:30:00 through 08:00:00
08/19/2001 08:00:00 through 18:30:00
08/19/2001 17:00:00

08/19/2001 18:30:00
08/19/2001 22:00:00
08/20/2001 03:30:00
08/20/2001 12:30:00
08/20/2001 15:00:00
08/20/2001 19:00:00 through 20:30:00
08/20/2001 20:30:00
08/21/2001 03:00:00
08/21/2001 06:30:00
08/21/2001 09:00:00
08/21/2001 17:30:00
08/21/2001 20:30:00
08/21/2001 21:30:00 through 23:00:00
08/21/2001 23:00:00
08/22/2001 00:30:00
08/22/2001 03:00:00
08/22/2001 04:00:00
08/22/2001 05:30:00
08/22/2001 06:30:00 through 08:00:00
08/22/2001 08:00:00 through 11:00:00
08/22/2001 11:00:00
08/22/2001 14:00:00
08/22/2001 15:30:00
08/22/2001 17:00:00
08/22/2001 18:00:00
08/22/2001 19:00:00 through 20:30:00
08/22/2001 20:30:00
08/22/2001 21:00:00

High turbidity values were deleted:

08/17/2001 02:30:00
08/17/2001 10:00:00 through 10:30:00
08/18/2001 02:30:00 through 03:00:00
08/19/2001 06:30:00
08/19/2001 23:30:00
08/20/2001 02:00:00
08/20/2001 04:00:00 through 05:00:00
08/20/2001 13:30:00
08/20/2001 18:30:00
08/20/2001 22:30:00
08/21/2001 16:30:00
08/23/2001 05:00:00
08/23/2001 08:00:00
08/23/2001 11:00:00
08/26/2001 03:30:00
08/26/2001 16:00:00
08/27/2001 20:00:00
08/28/2001 18:30:00
08/30/2001 20:00:00
08/30/2001 23:30:00

No pH data, no sensor available because it was broken.

08/14/2001 08:30:00 throughout 08/16/2001 09:30:00

September 2001

Station 09

Bad depth readings were deleted, due to bad sensor performance:

09/06/2001 16:00:00 throughout 09/30/2001 23:30:00

Missing data, no data recorded at this time:

09/01/2001 10:30:00

Zero turbidity data deleted:

09/28/2001 16:00:00

No data due to maintenance.

09/24/01 09:30:00

09/26/01 10:00:00

Station 10

Negative and/or zero turbidity values deleted:

09/01/2001 10:30:00 through 13:00:00

09/01/2001 14:00:00 through 17:30:00

09/01/2001 18:30:00

09/01/2001 19:00:00 through 21:00:00

09/01/2001 22:00:00 through 23:30:00

09/02/2001 01:00:00

09/02/2001 02:30:00

09/02/2001 03:30:00, 04:00:00

09/02/2001 06:00:00

09/02/2001 07:00:00 through 09/03/2001 12:30:00

09/03/2001 13:30:00 through 15:00:00

09/03/2001 16:00:00 through 09/04/2001 03:30:00

09/04/2001 04:30:00 through 14:30:00

09/04/2001 15:30:00 through 09/05/2001 01:00:00

09/05/2001 02:00:00

09/05/2001 03:00:00 through 08:30:00

09/06/2001 23:30:00

09/07/2001 00:30:00, 02:30:00

09/07/2001 03:30:00, 04:00:00

09/07/2001 07:00:00

09/08/2001 18:30:00, 19:30:00

09/09/2001 05:00:00, 06:30:00, 11:30:00, 14:00:00

09/09/2001 21:00:00, 21:30:00

09/09/2001 23:00:00 through 23:30:00

09/10/2001 00:30:00 through 03:00:00

09/10/2001 04:00:00 through 10:00:00

09/10/2001 12:00:00, 13:00:00, 16:30:00

09/10/2001 19:00:00 through 20:00:00

09/10/2001 22:00:00 through 22:30:00

09/11/2001 00:30:00

09/11/2001 01:30:00

09/11/2001 02:30:00

09/11/2001 03:00:00 through 03:30:00

09/11/2001 04:00:00

09/11/2001 05:00:00 through 07:30:00

09/11/2001 08:30:00 through 09:30:00

09/11/2001 10:30:00 through 11:00:00

09/11/2001 12:00:00 through 13:30:00

09/11/2001 14:30:00

09/11/2001 17:00:00

09/11/2001 20:00:00

09/11/2001 23:00:00

09/12/2001 00:00:00 through 01:30:00
09/12/2001 02:30:00
09/12/2001 03:30:00 through 04:00:00
09/12/2001 05:00:00 through 05:30:00
09/12/2001 08:00:00 through 08:30:00
09/12/2001 10:30:00, 14:30:00, 15:30:00, 17:00:00
09/12/2001 18:00:00 through 19:30:00
09/12/2001 20:30:00
09/12/2001 22:00:00
09/12/2001 23:00:00 through 23:30:00
09/13/2001 00:30:00 through 02:00:00
09/13/2001 04:00:00 through 04:30:00
09/13/2001 05:30:00
09/13/2001 06:30:00 through 07:00:00
09/13/2001 08:00:00
09/13/2001 09:00:00 through 09:30:00
09/13/2001 10:30:00
09/13/2001 11:30:00 through 12:00:00
09/13/2001 14:00:00 through 14:30:00
09/13/2001 17:00:00
09/13/2001 19:30:00, 20:30:00, 22:00:00, 23:00:00
09/14/2001 00:00:00 through 00:30:00
09/14/2001 01:30:00
09/14/2001 03:00:00
09/14/2001 04:00:00
09/14/2001 05:30:00
09/14/2001 06:30:00
09/14/2001 08:00:00
09/14/2001 09:00:00, 10:30:00, 12:00:00, 13:00:00, 14:30:00, 15:30:00
09/14/2001 17:00:00, 18:00:00, 19:30:00, 20:30:00, 23:00:00
09/14/2001 22:00:00
09/15/2001 00:30:00
09/15/2001 04:00:00
09/15/2001 05:30:00
09/15/2001 06:30:00
09/15/2001 08:00:00
09/15/2001 09:30:00, 10:30:00
09/15/2001 13:00:00 through 14:30:00
09/15/2001 15:30:00
09/15/2001 16:30:00
09/15/2001 18:00:00 through 18:30:00
09/15/2001 19:30:00
09/15/2001 20:30:00 through 23:00:00
09/16/2001 00:00:00
09/16/2001 01:30:00 through 02:00:00
09/16/2001 04:00:00 through 07:00:00
09/16/2001 08:00:00 through 09:00:00
09/16/2001 10:00:00 through 10:30:00
09/16/2001 11:30:00 through 13:00:00
09/16/2001 14:00:00 through 15:30:00
09/16/2001 17:00:00, 19:00:00
09/16/2001 21:30:00 through 22:00:00
09/17/2001 00:00:00 through 00:30:00
09/17/2001 02:30:00

09/17/2001 03:30:00
09/17/2001 04:30:00
09/17/2001 05:30:00 through 6:00:00
09/17/2001 07:00:00
09/24/2001 10:30:00 through 11:00:00
09/24/2001 12:00:00 through 17:30:00
09/24/2001 18:30:00 through 19:00:00
09/24/2001 20:00:00 through 20:30:00
09/24/2001 21:30:00
09/24/2001 22:30:00
09/24/2001 23:30:00 through 09/25/2001 00:00:00
09/25/2001 01:00:00 through 06:30:00
09/25/2001 07:30:00 through 12:30:00
09/25/2001 13:30:00 through 15:00:00
09/25/2001 16:00:00
09/25/2001 17:30:00 through 21:30:00
09/25/2001 22:30:00 through 09/26/2001 03:30:00
09/26/2001 04:30:00 through 07:30:00
09/26/2001 08:30:00 through 10:00:00
High turbidity values were deleted:
09/10/2001 18:00:00
09/11/2001 02:00:00
09/11/2001 18:30:00
09/12/2001 06:30:00
09/13/2001 15:30:00
09/13/2001 18:00:00
09/16/2001 18:00:00
09/16/2001 20:30:00
09/16/2001 23:00:00
09/17/2001 02:00:00
No data due to maintenance.
09/24/2001 09:30:00
No data, sonde was not available because trade-in for a YSI 6600 model.
09/26/2001 10:30:00 throughout 09/30/2001 23:30:00
No pH data, no sensor available because it was broken.
09/01/2001 10:30:00 throughout 09/05/2001 08:30:00
09/24/2001 10:00:00 throughout 09/26/2001 10:00:00
Deleted data, DO% and DO mg/l bad values, tear in membrane:
09/13/01 02:30:00 throughout 09/24/01 09:00:00

October 2001

Station 09

Turbidity values for the following dates/times were deleted due to negative

and/or zero values:

10/10/2001 14:30:00
10/10/2001 17:00:00
10/11/2001 14:00:00 through 15:00:00
10/11/2001 17:30:00
10/11/2001 19:00:00
10/12/2001 14:00:00 through 15:00:00
10/12/2001 16:00:00
10/12/2001 16:30:00

10/13/2001 07:30:00
10/16/2001 09:00:00
10/17/2001 06:30:00, 07:00:00
10/17/2001 08:30:00
10/17/2001 09:30:00
10/18/2001 07:30:00
10/23/2001 14:30:00
10/23/2001 15:00:00
High turbidity values were deleted:
10/30/2001 09:00:00
10/31/2001 23:00:00
Missing data. It seems that due to water leakage in batteries compartment some readings were not conducted by sonde. However, data recorded between those events seems to be good.
10/20/2001 03:00:00, 07:00:00
10/22/2001 23:00:00
10/24/2001 06:30:00, 07:00:00
10/24/2001 12:30:00
10/24/2001 13:30:00
10/24/2001 15:30:00
10/24/2001 17:00:00
10/24/2001 18:00:00
10/24/2001 19:00:00
10/24/2001 20:30:00 through 10/25/2001 05:30:00
10/25/2001 06:30:00 through 12:00:00
10/25/2001 13:00:00 through 10/26/2001 00:00:00
10/26/2001 01:00:00
10/26/2001 04:00:00
10/26/2001 05:30:00
10/26/2001 06:30:00 through 07:30:00
10/26/2001 11:30:00
10/26/2001 12:30 through 13:30
10/27/2001 08:30:00, 09:30:00
10/30/2001 15:30:00 through 16:00:00
10/31/2001 07:00:00, 11:00:00, 12:30:00, 13:30:00
10/31/2001 16:30:00, 21:00:00, 22:30:00
Deleted files, sonde was deployed in the wrong station:
10/18/2001 09:00:00 through 21:00:00
Bad depth data (drift in sensor readings):
10/05/01 02:30:00 through 10/16/01 08:30:00

Station 10

Negative turbidity values were deleted:
10/17/2001 03:00:00
10/17/2001 08:00:00 through 09:30:00
10/18/2001 00:30:00
10/18/2001 03:00:00
10/18/2001 05:30:00
10/19/2001 06:30:00
No data, sonde was not available because trade-in for a YSI 6600 model.
10/01/2001 00:00:00 throughout 10/16/2001 09:00:00
No pH data, no sensor available because it was broken.

10/16/2001 09:30:00 throughout 10/18/2001 09:00:00
10/18/2001 14:30:00 throughout 10/31/2001 23:30:00
Deleted data: Sonde out of the water:
10/18/2001 09:30:00 through 10/18/2001 14:00:00
Deleted data due to negative oxygen readings, both DO%, DO mg/l:
10/18/2001 14:30:00 throughout 10/31/2001 23:30:00

November 2001

Station 09

Turbidity values were deleted for the following dates/times due to negative

and/or zero values:

11/08/2001 12:30:00

11/08/2001 14:30:00

11/17/2001 09:00:00 through 09:30:00

Negative depth deleted:

11/26/2001 09:30:00 throughout 11/28/2001 08:30:00

High turbidity values were deleted:

11/16/2001 18:30:00

11/16/2001 20:00:00

11/17/2001 23:30:00

11/18/2001 03:00:00

11/23/2001 04:00:00

Intermittent readings due to water leakage in battery compartment, data seem to

be good:

11/01/2001 01:00:00

11/01/2001 02:00:00

11/01/2001 06:00:00 through 06:30:00

11/01/2001 08:00:00 through 09:30:00

11/01/2001 10:30:00

11/01/2001 12:00:00

11/01/2001 13:00:00 through 11/02 07:30:00

11/02/2001 08:30:00 through 14:00:00

11/02/2001 15:00:00 through 11/03/2001 00:30:00

11/03/2001 01:30:00 through 11/03/2001 12:30:00

11/03/2001 13:30:00 through 17:30:00

11/03/2001 18:30:00 through 19:30:00

11/03/2001 20:30:00 through 11/05/2001 04:30:00

11/05/2001 06:00:00

11/05/2001 07:00:00

11/05/2001 08:30:00

11/13/2001 05:00:00

11/13/2001 07:30:00

11/13/2001 08:30:00 through 09:00:00

11/13/2001 10:00:00

11/13/2001 11:00:00 through 11:30:00

11/13/2001 12:30:00

11/16/2001 22:30:00

11/17/2001 00:00:00

11/17/2001 18:00:00

11/17/2001 19:00:00

11/17/2001 20:00:00 through 21:00:00

11/17/2001 22:00:00
11/17/2001 23:00:00
11/18/2001 00:00:00 through 00:30:00

Station 10

All DO data were deleted 11/01/2001 00:00:00 through 11/05/2001 09:30:00
due to
negative values.

Turbidity values for the following date/times were deleted due to
negative

and/or zero values:

11/01/2001 03:30:00
11/08/2001 14:00:00
11/09/2001 05:00:00
11/10/2001 01:00:00 through 01:30:00
11/10/2001 03:00:00 through 03:30:00
11/10/2001 06:00:00 through 06:30:00
11/10/2001 07:30:00 through 08:00:00
11/10/2001 20:30:00 through 21:00:00
11/10/2001 23:00:00 through 11/11/2001 00:00:00
11/11/2001 01:00:00 through 01:30:00
11/11/2001 02:30:00
11/11/2001 05:00:00 through 06:30:00
11/11/2001 08:30:00
11/11/2001 12:00:00 through 12:30:00
11/11/2001 20:00:00
11/11/2001 22:30:00 through 23:30:00
11/12/2001 00:30:00
11/12/2001 03:00:00
11/12/2001 04:00:00 through 04:30:00
11/12/2001 05:30:00 through 06:00:00
11/12/2001 08:30:00 through 09:00:00
11/12/2001 10:30:00
11/12/2001 13:30:00
11/12/2001 21:00:00 through 22:00:00
11/13/2001 00:00:00 through 02:00:00
11/13/2001 03:00:00 through 03:30:00
11/13/2001 06:30:00 through 07:30:00
11/13/2001 10:00:00
11/13/2001 11:30:00
11/13/2001 19:30:00 through 20:00:00
11/13/2001 22:00:00
11/14/2001 00:30:00 through 01:30:00
11/14/2001 02:30:00
11/14/2001 05:00:00
11/14/2001 06:00:00
11/14/2001 07:00:00 through 09:00:00
11/14/2001 20:00:00
11/15/2001 04:00:00
11/15/2001 05:00:00
11/15/2001 07:30:00
11/15/2001 08:30:00
11/15/2001 10:30:00

11/15/2001 12:00:00
11/15/2001 19:30:00
11/15/2001 21:00:00
11/16/2001 22:00:00 through 22:30:00
11/18/2001 15:30:00
11/18/2001 23:00:00
11/19/2001 10:30:00
11/19/2001 13:00:00
11/19/2001 23:00:00 through 23:30:00
11/20/2001 20:30:00
11/21/2001 20:30:00
11/21/2001 23:30:00
11/22/2001 01:00:00
11/22/2001 02:30:00
11/22/2001 20:00:00
11/22/2001 21:00:00
11/22/2001 22:00:00
11/22/2001 23:00:00
11/23/2001 06:30:00
11/23/2001 09:30:00
11/24/2001 00:00:00
11/24/2001 01:00:00 through 01:30:00
11/24/2001 03:00:00
11/24/2001 16:00:00 through 16:30:00
11/24/2001 17:30:00 through 19:00:00
11/24/2001 20:00:00 through 22:30:00
11/25/2001 01:00:00 through 02:00:00
11/25/2001 05:30:00
11/25/2001 23:30:00
11/26/2001 05:30:00
No data, sonde was not available because trade-in for a YSI 6600 model.
11/05/2001 10:00:00 throughout 11/07/2001 12:00:00
11/26/2001 10:30:00 throughout 11/28/2001 09:00:00
No pH data, no sensor available because it was broken.
11/01/2001 00:00:00 throughout 11/05/2001 09:30:00
11/07/2001 12:30:00 throughout 11/26/2001 10:00:00
11/28/2001 09:30:00 throughout 11/30/2001 23:30:00

December 2001

Station 09

DO mg/l and DO % outliers were deleted due to negative and zero values:

12/19/2001 15:00:00 through 15:30:00
12/20/2001 00:00:00
12/20/2001 21:30:00
12/21/2001 11:00:00
12/21/2001 14:00:00
12/21/2001 19:30:00
12/23/2001 06:00:00
12/23/2001 20:30:00
12/24/2001 13:00:00
12/24/2001 14:30:00 through 15:00:00
12/24/2001 20:30:00
12/24/2001 22:00:00 through 23:30:00

12/27/2001 20:00:00 through 20:30:00
12/28/2001 10:00:00
12/28/2001 11:30:00
12/28/2001 13:00:00
12/28/2001 16:00:00
12/28/2001 21:00:00
12/29/2001 09:00:00
12/29/2001 11:30:00 through 12:00:00
12/29/2001 13:30:00
12/29/2001 20:00:00
12/30/2001 12:00:00
12/30/2001 19:00:00
12/31/2001 17:30:00
12/31/2001 19:00:00

High turbidity values were deleted:

12/25/2001 19:30:00
12/26/2001 00:00:00
12/26/2001 01:00:00 through 01:30:00
12/26/2001 04:30:00
12/26/2001 10:30:00
12/26/2001 13:30:00
12/26/2001 19:30:00
12/26/2001 22:30:00 through 23:00:00
12/27/2001 08:30:00
12/27/2001 20:00:00
12/27/2001 23:00:00
12/28/2001 03:00:00

Bad depth data

12/17/01 10:30:00 throughout 12/19/01 11:00:00

Station 10

Zero turbidity values deleted:

12/19/2001 22:30:00 through 23:30:00
12/20/2001 00:30:00 through 01:00:00
12/20/2001 02:00:00 through 02:30:00
12/20/2001 03:30:00
12/20/2001 06:00:00 through 06:30:00
12/20/2001 11:30:00
12/20/2001 13:30:00
12/20/2001 21:00:00
12/20/2001 22:00:00 through 12/21/2001 00:00:00
12/21/2001 01:30:00
12/21/2001 03:00:00 through 04:30:00
12/21/2001 06:00:00
12/21/2001 07:00:00
12/21/2001 12:00:00 through 12:30:00
12/21/2001 20:30:00
12/21/2001 23:00:00
12/22/2001 00:30:00 through 01:30:00
12/22/2001 02:30:00 through 03:30:00
12/22/2001 04:30:00 through 05:00:00
12/22/2001 06:00:00
12/22/2001 07:00:00
12/22/2001 10:30:00

12/22/2001 12:00:00
 12/22/2001 13:00:00
 12/22/2001 14:00:00
 12/22/2001 16:00:00
 12/22/2001 20:30:00
 12/22/2001 22:00:00
 12/23/2001 02:00:00
 12/23/2001 23:00:00 through 12/24/2001 01:00:00
 12/24/2001 03:30:00
 12/24/2001 04:30:00 through 05:00:00
 12/24/2001 08:00:00 through 08:30:00
 12/25/2001 08:00:00

High turbidity values deleted:

12/13/2001 02:30:00
 12/14/2001 21:30:00
 12/15/2001 21:00:00
 12/16/2001 03:30:00
 12/16/2001 04:30:00
 12/16/2001 05:30:00

No data, sonde was not available because trade-in for an YSI 6600 model.

12/17/2001 10:00:00 throughout 12/19/2001 10:30:00

No pH data, no sensor available because it was broken.

12/01/2001 00:00:00 throughout 12/17/2001 09:30:00

12/19/2001 11:00:00 throughout 12/31/2001 23:30:00

12. Missing data:

Missing data are denoted by any period in the data set. Data are missing due to

equipment failure where no probes deployed, maintenance/calibration of equipment, elimination of obvious outliers, or elimination of data due to calibration (both pre and post) problems. For more details on deleted data, see

Anomalous Data Section (11.) To find out more details about missing data, contact the Research Coordinator at the site submitting the data.

13. Post deployment information:

End of deployment Post-calibration Readings in Standard Solution:

Site ID	Date mm/dd/yy	DO (Air Sat.) std: 100%	pH (std: 7.0)	Conductivity (mS/cm) (std: 46.2)	Turbidity (NTU) (std: 100)
09	01/16/2001	52.8	8.27	39.72	30.2
09	01/17/2001	101.8	no sensor	47.32	111
09	02/06/2001	67.9	6.81	46.06	92.3
09	02/11/2001	135.7	no sensor	45.31	110.1
09	02/26/2001	57.0	7.13	44.77	104.4
09	02/28/2001	94.5	no sensor	46.53	98
09	03/18/2001	86.8	6.79	46.59	61.4
				(std: 42.6)	
09	03/27/2001	92.6	no sensor	45.6	106.1
09	04/08/2001	84.4	5.67	43.19	94.9
09	04/11/2001	90.2	6.74	44.5	91.1

09	04/23/2001	no data were register, error in programming (std: 100)			
09	04/25/2001	104.3	7.34	102.4	92.9
09	05/15/2001	23.1	7.12	91.84	100.2
09	05/16/2001	103.5	7.02	103.5	105.5
09	06/03/2001	48.6	7.08	93.68	92.2
09	06/06/2001	100.5	7.02	104.2	109.9
09	06/25/2001	83.5	6.87	100.0	89.7
09	06/27/2001	98.6	6.93	102.4	102.5
09	07/24/2001	82.1	7.12	100.0	100.7
09	08/14/2001	101.4	6.92	93.32	120.0
09	08/16/2001	119.4	7.04	99.96	104.5
09	09/01/2001	65.9	7.07	98.8	84.0
09	09/05/2001	92.8	7.25	99.9	117.8
09	09/24/2001	89.6	7.09	94.07	118.0
09	09/26/2001	106.4	7.03	101.7	92.2
09	10/16/2001	98.6	7.18	99.19	79.6
09	11/05/2001	88.9	7.08	99.94	101.9
09	11/07/2001	98.9	7.00	98.98	95.0
09	11/26/2001	86.7	7.20	99.39	133.7
09	11/28/2001	84.2	6.88	100.3	80.8
09	12/17/2001	91.3	7.06	99.88	98.9
09	12/19/2001	101.2	6.99	101.6	103.7

Site ID	Date mm/dd/yy	DO (Air Sat.) std: 100%	pH (std: 7)	Conductivity (mS/cm) (std: 46.2)	Turbidity (NTU) (std: 100)
10	01/16/2001	96.4	7.06	45.52	109.1
10	01/17/2001	99.5	8.1	47.05	112.3
10	02/06/2001	81.9	6.94	46.85	105.8
10	02/11/2001	100.4	7.25	46.91	123.5
10	02/26/2001	31.0	6.95	45.68	99.4
10	02/28/2001	20.6	7.17	46.33	116.6
10	03/18/2001	66.4	6.94	46.23	59.0
				(std: 42.6)	
10	03/27/2001	94.4	6.52	45.73	102.6
10	04/08/2001	80.3	7.15	42.89	73.8
10	04/11/2001	110.7	6.90	42.0	100.0
10	04/23/2001	84.2	6.67	100.0	97.2
				(std: 100)	
10	04/25/2001	102.0	6.67	99.74	99.80
10	05/15/2001	2.3	6.77	98.2	82.5
10	05/16/2001	120.2	7.28	98.46	99.8
10	05/24/2001	85.1	6.95	95.39	90.7
10	06/06/2001	128.1	7.54	103.79	96.2
10	06/25/2001	99.5	6.79	100.1	88.5
10	06/27/2001	86.0	6.98	104.4	119.5
10	07/24/2001	76.0	no sensor	98.78	88.9
10	08/14/2001	68.4	6.92	92.61	105.3
10	08/16/2001	143.4	no sensor	98.83	103.2
10	09/01/2001	95.3	6.73	98.83	92.7
10	09/05/2001	164.0	no sensor	99.76	106.8

10	09/24/2001	25.7	6.67	95.7	261.4
10	09/26/2001	119.2	no sensor	103.2	107.5
10	11/05/2001	12.6	no sensor	98.88	100.9
10	11/26/2001	115.2	no sensor	94.2	94.2
10	12/17/2001	96.8	no sensor	97.99	112.5

14. Other remarks:

On 06/30/2021 this dataset was updated to include embedded QAQC flags for anomalous/suspect data. System-wide monitoring data beginning in 2007 were

processed to allow for QAQC flags and codes to be embedded in the data files rather than detailed in the metadata alone (as in the anomalous/suspect,

deleted, and missing data sections above). Prior to 2006, rejected data were deleted from the dataset so they are unavailable to be used at all, but suspect data were only noted in the metadata document. Suspect data flags <1> were embedded retroactively in order to allow suspect data to be

easily identified and filtered from the dataset if desired for analysis and

reporting purposes. No other flags or codes were embedded in the dataset and

users should still refer to the detailed explanations above for more information.

A) Rain events:

January 2001:

Date	Precip (mm)
------	-------------

8	2.54
---	------

9	0.25
---	------

18	1.02
----	------

19	1.52
----	------

23	3.81
----	------

24	0.25
----	------

26	0.25
----	------

29	1.27
----	------

February 2001:

Day	Precip (mm)
-----	-------------

1	0.51
---	------

2	2.03
---	------

3	0.25
---	------

4	0.51
---	------

5	0.51
---	------

9	1.02
---	------

11	6.86
----	------

12	1.02
----	------

23	0.76
----	------

24	0.25
----	------

March 2001:

Day	Precip (mm)
-----	-------------

5	0.25
---	------

14	1.27
20	2.54
21	29.46
22	61.47
24	0.25
30	1.27
31	1.02

April 2001:

Day	Precip (mm)
7	0.51
9	0.25
11	6.10
12	2.03
19	0.51
21	0.25
30	0.51

May 2001:

Day	Precip (mm)
6	0.25
7	1.78
8	5.84
9	6.86

June 2001:

Day	Precip (mm)
23	0.25
25	0.25
28	0.25
29	0.25
30	0.25

July 2001:

Day	Precip (mm)
4	1.02
5	1.78
19	1.27
23	0.25
24	1.27
26	2.29
27	0.25
30	0.25

August 2001:

Day	Precip (mm)
2	4.57
9	0.51
10	0.25
14	0.25
15	8.89
16	0.76
17	7.62
18	5.08

19	0.25
21	6.86
22	142.49
22	55.63
26	3.05
27	0.51
28	64.26

September 2001:

Day	Precip (mm)
1	7.87
13	1.27
14	5.84
18	7.11
25	0.51

October 2001:

Day	Precip (mm)
3	1.02
5	7.87
8	18.80
9	0.76
10	0.25
11	0.51
14	1.27
15	13.46
16	10.67
17	2.54
19	11.18
20	0.76
28	5.84
29	0.76
30	6.86

November 2001:

Day	Precip (mm)
2	1.27
6	1.78
8	10.16
11	1.02
12	0.25
15	1.02
16	0.25
18	0.25
29	0.25

December 2001:

Day	Precip (mm)
3	0.51
4	16.76
5	0.25
9	3.56
10	10.54
11	15.75

12	4.57
14	1.52
15	6.35
16	11.43
17	2.54
18	25.65
19	2.03
20	2.29
21	10.16
22	8.38
23	2.79

B) Any time a reference is made to turbidity data being negative and/or zero, it was recorded as a negative in the raw data file and a zero in the edited data file due to the formatting of Excel. The technician edited none of these data points by hand nor did he/she delete any of them.

C) Both stations 9 and 10 are in shallow water, with an average depth of one meter. The sensor is about six inches off the bottom. This can cause high and low turbidity data due to organisms entering inside of the sensor area.

D) Station 09: Data reflecting rain effect on water quality parameters from 08/22/2001 02:00:00 throughout 08/31/2001 23:30.

E) Station 10: Data reflecting rain effect on water quality parameters from 08/22/2001 02:00:00 throughout 08/31/2001 23:30.