

ANOMALOUS DATA

This section identifies data that have been determined to be erroneous and removed from the final data set by the 2003 Rescue Project Data Manager or NERR Technicians, provides justification for the removal of the inaccurate data, and identifies “questionable” data. Questionable or suspect data are data that may be compromised in quality but remain in the data set. Wherever possible, both questionable and erroneous data are correlated with information from relevant documentation that may help to explain any problems with the data. The user should evaluate and use these data with caution. Data that have been removed from the final data set are still present in unedited and/or raw data files. Please see the FGDC compliant metadata document for more information on the quality assurance/quality control procedures used to identify erroneous or suspect data. The following information is organized by parameter within each year.

Water Quality data were collected at Thousand Acre for the following dates:

04/15/1994 – 12/31/2002

Note: The Thousand Acre sampling site is subject to silt-laden runoff from Thousand Acre Marsh during and after rain events. As a result excessive fouling of the probes is often a concern. There were also problems with the sample location, which led to contamination of the sonde with mud. The sample location was moved twice over the course of the database in attempts to reduce mud contamination. On 07/19/99 the site was moved from its original location northeast of the Thousand Acre Marsh Bridge, 30 meters down stream where the unit was attached to the bridge itself. Prior to this move, the sensor would often rest on the bottom of the creek at low tide. On 08/13/02, the sample location was moved closer to the middle of the creek, to a site approximately 3 feet deeper than the original. This move appeared to help with the fouling issues (at least for the remainder of 2002).

The turbidity data in particular were often problematic for this site and should be used with caution. The turbidity sensor range of measurement is from 0 to 1000 NTU’s. Readings over 1000 should not be used based on their face value, however, they are valuable in that they may indicate turbidity events that are greater than the sensor’s range of measurement, and are retained in the dataset as a result. These large readings occurred frequently at this site and were only removed/deleted if readings greater than 1000 occurred for an extended period of time and/or the probe reported the same values repeatedly, or if there was another indication of sensor malfunction due to excessive fouling. In addition, large negative values were common at this site in 1996 and 1997. Prior to 1997, the turbidity probe had a “rollover” problem, where the sensor would rollover after experiencing a large turbidity reading and then report a large negative reading. This problem was corrected with new software from YSI that was released in January of 1997 and appears to have been implemented at this site in mid-March of 1997. The remaining small negative readings that were occasionally reported were typically within the calibration error of the sensor.

1994

Specific Conductivity

05/09/94 12:30 – 05/30/94 08:00 2003 Data Manager removed erroneous data (freshwater block in use until 05/30/94, NERR technician had already removed most of this data as being out of range/erroneous, all affected parameters were removed)

Salinity

05/09/94 12:30 – 05/30/94 08:00 2003 Data Manager removed erroneous data (freshwater block in use until 05/30/94, NERR technician had already removed most of this data as being out of range/erroneous, all affected parameters were removed)

Dissolved Oxygen mg/L

05/09/94 12:30 – 05/30/94 08:00 2003 Data Manager removed erroneous data (freshwater block in use for salinity/conductivity until 05/30/94, salinity/conductivity data were determined to be erroneous/out of range, all affected parameters were removed)

Depth

05/09/94 12:30 – 05/30/94 08:00 2003 Data Manager removed erroneous data (freshwater block in use for salinity/conductivity until 05/30/94, salinity/conductivity data were determined to be erroneous/out of range, all affected parameters were removed)

1995

All Variables

05/08/95 15:00 – 05/19/95 08:30 2003 Data Manager removed erroneous data (a YSI was deployed for this period and it appears that the calibrations were off, DO readings were often not recorded because they were out of the sensors range and pH values steadily declined during this period, there were also large discrepancies in the parameter values when the new deployment began)

08/29/95 12:00 2003 Data Manager removed erroneous data (DO and pH readings indicated that sensors may have still been out of the water – these were the first readings for this deployment period)

12/21/95 13:00 – 12/26/95 15:00 Depth readings appeared to be erroneous and were removed by the NERR Technician (since there is no information on the actual depth, these data should be used with caution.

Dissolved Oxygen % & mg/L

06/07/95 11:30 – 06/19/95 07:00 2003 Data Manager removed erroneous data (readings climbed to unbelievably high values, became very erratic, and then steadily declined to extremely low values, probable membrane puncture or tear)

08/28/95 07:00 – 08/28/95 09:30 2003 Data Manager removed erroneous data (readings climbed to unbelievably high values, probable membrane puncture or tear)

Depth

12/21/95 13:00 – 12/26/95 15:00 NERR Technician removed erroneous data (unrealistic values for conditions)

pH

08/29/95 12:30 – 09/01/95 08:30 Questionable data (very erratic readings for this period, continue until unit was serviced/exchanged on 09/01/95)

11/01/95 00:00 – 11/10/95 10:00 Questionable data (readings appear to begin a downward trend at this point, leading to data that were removed by the Data Manager (see below), these data should be used with caution)

11/10/95 15:00 – 11/22/95 10:00 2003 Data Manager removed erroneous data (readings consistently declined throughout the deployment period to unbelievably low readings, probable sensor malfunction)

1996

All Variables

12/10/96 23:30 – 12/12/96 13:00 Questionable data (low battery power, there was water in the unit and the turbidity wiper was off at retrieval, interspersed with missing data, several turbidity values were determined to be erroneous and removed)

Dissolved Oxygen % and mg/L

05/10/96 16:00 – 05/27/96 16:00 NERR Technician removed erroneous data (probe failure)

06/16/96 16:00 Questionable data (extremely high values, large discrepancy from preceding and following readings)

07/10/96 14:00 – 07/22/96 09:00 NERR Technician removed erroneous data

pH

10/16/96 13:30 – 10/28/96 10:00 Questionable data (readings are fairly low and very erratic during the entire deployment period)

Depth

07/25/96 14:30 – 08/05/96 16:00 Questionable data (there was mud in the sensor when the unit was retrieved)

Turbidity

01/05/96 12:00 – 01/22/96 14:00 NERR Technician removed erroneous data (water in unit)
01/22/96 20:00 2003 Data Manager removed erroneous data (large negative reading(s))
01/27/96 03:00 2003 Data Manager removed erroneous data (large negative reading(s))
01/27/96 10:00 2003 Data Manager removed erroneous data (large negative reading(s))
02/01/96 05:30 2003 Data Manager removed erroneous data (large negative reading(s))
02/02/96 13:00 2003 Data Manager removed erroneous data (large negative reading(s))
02/04/96 06:00 2003 Data Manager removed erroneous data (large negative reading(s))
02/04/96 08:00 2003 Data Manager removed erroneous data (large negative reading(s))
02/06/96 00:30 2003 Data Manager removed erroneous data (large negative reading(s))
02/06/96 08:00 2003 Data Manager removed erroneous data (large negative reading(s))
02/06/96 09:30 2003 Data Manager removed erroneous data (large negative reading(s))
02/06/96 18:00 2003 Data Manager removed erroneous data (large negative reading(s))
02/06/96 19:30 2003 Data Manager removed erroneous data (large negative reading(s))
02/07/96 06:30 2003 Data Manager removed erroneous data (large negative reading(s))
02/07/96 07:30 2003 Data Manager removed erroneous data (large negative reading(s))
02/07/96 08:30 2003 Data Manager removed erroneous data (large negative reading(s))
02/07/96 09:30 – 02/07/96 10:00 2003 Data Manager removed erroneous data (large negative reading(s))
02/07/96 11:30 2003 Data Manager removed erroneous data (large negative reading(s))
02/07/96 20:30 2003 Data Manager removed erroneous data (large negative reading(s))
02/08/96 08:30 2003 Data Manager removed erroneous data (large negative reading(s))
03/13/96 10:00 2003 Data Manager removed erroneous data (large negative reading(s))
03/14/96 15:30 – 03/28/96 08:30 2003 Data Manager removed erroneous data (deployment period was extremely erratic and consisted of mostly very large negative readings)

03/30/96 17:30 2003 Data Manager removed erroneous data (large negative reading(s))
04/08/96 16:00 2003 Data Manager removed erroneous data (large negative reading(s))
04/17/96 17:00 – 05/27/96 16:00 NERR Technician removed erroneous data (water in bulkhead)
06/11/96 16:00 2003 Data Manager removed erroneous data (large negative reading(s))
06/12/96 02:30 – 06/12/96 03:00 Questionable data (reading(s) greater than 1000)
06/12/96 05:00 Questionable data (reading(s) greater than 1000)
06/12/96 10:00 Questionable data (reading(s) greater than 1000)
06/12/96 10:30 2003 Data Manager removed erroneous data (large negative reading(s))
06/12/96 11:00 Questionable data (reading(s) greater than 1000)
06/12/96 19:30 Questionable data (reading(s) greater than 1000)
06/15/96 00:00 Questionable data (reading(s) greater than 1000)
06/16/96 04:00 2003 Data Manager removed erroneous data (large negative reading(s))
06/16/96 08:00 Questionable data (reading(s) greater than 1000)
06/16/96 23:30 2003 Data Manager removed erroneous data (large negative reading(s))
06/17/96 00:30 2003 Data Manager removed erroneous data (large negative reading(s))
06/17/96 01:30 2003 Data Manager removed erroneous data (large negative reading(s))
06/17/96 05:00 2003 Data Manager removed erroneous data (large negative reading(s))
06/17/96 07:00 2003 Data Manager removed erroneous data (large negative reading(s))
06/17/96 08:00 2003 Data Manager removed erroneous data (large negative reading(s))
06/19/96 02:00 2003 Data Manager removed erroneous data (large negative reading(s))
06/19/96 05:30 2003 Data Manager removed erroneous data (large negative reading(s))
06/19/96 09:30 2003 Data Manager removed erroneous data (large negative reading(s))
06/19/96 18:00 Questionable data (reading(s) greater than 1000)
06/22/96 16:30 Questionable data (reading(s) greater than 1000)
06/22/96 23:00 2003 Data Manager removed erroneous data (large negative reading(s))
06/26/96 23:30 2003 Data Manager removed erroneous data (large negative reading(s))
06/27/96 11:30 2003 Data Manager removed erroneous data (large negative reading(s))
06/28/96 11:30 2003 Data Manager removed erroneous data (large negative reading(s))
06/28/96 14:00 Questionable data (reading(s) greater than 1000)
06/28/96 14:30 2003 Data Manager removed erroneous data (large negative reading(s))

06/28/96 15:00	Questionable data (reading(s) greater than 1000)
06/28/96 17:00	2003 Data Manager removed erroneous data (large negative reading(s))
06/29/96 16:00	2003 Data Manager removed erroneous data (large negative reading(s))
06/30/96 12:30	2003 Data Manager removed erroneous data (large negative reading(s))
06/30/96 17:30	2003 Data Manager removed erroneous data (large negative reading(s))
07/01/96 16:30	2003 Data Manager removed erroneous data (large negative reading(s))
07/01/96 19:00	2003 Data Manager removed erroneous data (large negative reading(s))
07/01/96 21:00	2003 Data Manager removed erroneous data (large negative reading(s))
07/02/96 03:30	2003 Data Manager removed erroneous data (large negative reading(s))
07/02/96 06:30 – 07/02/96 07:30	2003 Data Manager removed erroneous data (large negative reading(s))
07/02/96 09:00	2003 Data Manager removed erroneous data (large negative reading(s))
07/02/96 19:00	2003 Data Manager removed erroneous data (large negative reading(s))
07/02/96 23:00 – 07/02/96 23:30	2003 Data Manager removed erroneous data (large negative reading(s))
07/03/96 04:30	2003 Data Manager removed erroneous data (large negative reading(s))
07/03/96 12:30 – 07/03/96 13:00	2003 Data Manager removed erroneous data (large negative reading(s))
07/03/96 21:30	2003 Data Manager removed erroneous data (large negative reading(s))
07/04/96 06:30	2003 Data Manager removed erroneous data (large negative reading(s))
07/04/96 09:30 – 07/04/96 10:00	2003 Data Manager removed erroneous data (large negative reading(s))
07/05/96 13:00	2003 Data Manager removed erroneous data (large negative reading(s))
07/06/96 07:30	2003 Data Manager removed erroneous data (large negative reading(s))
07/06/96 14:00	2003 Data Manager removed erroneous data (large negative reading(s))
07/06/96 23:00	2003 Data Manager removed erroneous data (large negative reading(s))
07/07/96 22:00	2003 Data Manager removed erroneous data (large negative reading(s))
07/23/96 19:30	2003 Data Manager removed erroneous data (large negative reading(s))
07/29/96 18:00	2003 Data Manager removed erroneous data (large negative reading(s))
07/31/96 22:00	2003 Data Manager removed erroneous data (large negative reading(s))
08/07/96 15:00 – 08/19/96 10:30	2003 Data Manager removed erroneous data (entire deployment period, readings were very low and often negative, sensor may have been calibrated improperly)
08/27/96 11:00	2003 Data Manager removed erroneous data (large negative reading(s))
08/27/96 20:00 – 08/27/96 20:30	2003 Data Manager removed erroneous data (large negative reading(s))
08/27/96 23:00	2003 Data Manager removed erroneous data (large negative reading(s))
08/28/96 12:00 – 08/28/96 12:30	2003 Data Manager removed erroneous data (large negative reading(s))
08/28/96 13:00	Questionable data (reading(s) greater than 1000)
08/28/96 18:30 – 08/28/96 20:00	2003 Data Manager removed erroneous data (large negative reading(s))
08/28/96 21:00	2003 Data Manager removed erroneous data (large negative reading(s))
08/28/96 22:00 – 08/28/96 22:30	2003 Data Manager removed erroneous data (large negative reading(s))
08/28/96 23:30	2003 Data Manager removed erroneous data (large negative reading(s))
08/29/96 02:30 – 08/29/96 03:00	2003 Data Manager removed erroneous data (large negative reading(s))
08/29/96 04:00 – 08/29/96 05:00	2003 Data Manager removed erroneous data (large negative reading(s))
08/29/96 12:30	2003 Data Manager removed erroneous data (large negative reading(s))
08/29/96 14:30	2003 Data Manager removed erroneous data (large negative reading(s))
08/30/96 18:30 – 08/30/96 19:00	2003 Data Manager removed erroneous data (large negative reading(s))
08/31/96 06:30	2003 Data Manager removed erroneous data (large negative reading(s))
08/31/96 15:00 – 08/31/96 15:30	2003 Data Manager removed erroneous data (large negative reading(s))
08/31/96 18:00	2003 Data Manager removed erroneous data (large negative reading(s))
09/01/96 00:30 – 09/01/96 01:00	2003 Data Manager removed erroneous data (large negative reading(s))
09/01/96 03:00	2003 Data Manager removed erroneous data (large negative reading(s))
09/01/96 11:30	2003 Data Manager removed erroneous data (large negative reading(s))
09/01/96 13:00	2003 Data Manager removed erroneous data (large negative reading(s))
09/03/96 06:30	Questionable data (reading(s) greater than 1000)
09/04/96 15:00 – 09/18/96 14:30	2003 Data Manager removed erroneous data (entire deployment period, readings were started very high and declined steadily throughout, some high negative values and spikes over 1000)
09/21/96 13:00	Questionable data (negative reading(s), within known calibration error)
10/12/96 21:00	2003 Data Manager removed erroneous data (large negative reading(s))
10/13/96 14:00	2003 Data Manager removed erroneous data (large negative reading(s))

10/23/96 21:30	2003 Data Manager removed erroneous data (large negative reading(s))
11/19/96 23:00	2003 Data Manager removed erroneous data (large negative reading(s))
11/22/96 00:00	2003 Data Manager removed erroneous data (large negative reading(s))
11/28/96 17:30	2003 Data Manager removed erroneous data (large negative reading(s))
12/07/96 07:00	2003 Data Manager removed erroneous data (large negative reading(s))
12/10/96 23:30	2003 Data Manager removed erroneous data (low battery power, large negative often identical readings)
12/11/96 21:30	2003 Data Manager removed erroneous data (low battery power, large negative reading(s))
12/11/96 22:30	2003 Data Manager removed erroneous data (low battery power, large negative reading(s))
12/12/96 09:30	2003 Data Manager removed erroneous data (low battery power, large negative reading(s))
12/22/96 16:00	2003 Data Manager removed erroneous data (large negative reading(s))
12/22/96 17:00	2003 Data Manager removed erroneous data (large negative reading(s))
12/25/96 05:30	2003 Data Manager removed erroneous data (large negative reading(s))
12/25/96 08:00	2003 Data Manager removed erroneous data (large negative reading(s))

1997

All Variables

04/22/97 14:00 – 04/22/97 15:00	Questionable data (sharp drop in SpCond, Salinity and DO Readings may indicate that sensors came out of the water at low tide, other parameters seem unaffected)
---------------------------------	--

Dissolved Oxygen % and mg/L

03/07/97 15:30 – 03/10/97 11:30	2003 Data Manager removed erroneous data (there was a large discontinuity in the readings on 03/07/97, readings then became erratic with very large values before drifting off to fairly low values until instrument retrieval, probable membrane puncture or tear)
05/09/97 12:30 – 05/22/97 07:30	NERR Technician removed erroneous data (probe failure)
12/29/97 10:00 – 12/29/97 11:00	Questionable data (sharp drop in readings for these three samples, then return to values similar to the preceding readings)

Turbidity

02/21/97 18:00	Questionable data (reading(s) greater than 1000)
02/25/97 22:30	Questionable data (negative reading, not within recognized calibration error, but fairly small)
03/07/97 07:00	2003 Data Manager removed erroneous data (large negative reading(s))
03/08/97 19:00	2003 Data Manager removed erroneous data (large negative reading(s))
03/09/97 06:00	2003 Data Manager removed erroneous data (large negative reading(s))
03/09/97 17:00	2003 Data Manager removed erroneous data (large negative reading(s))
10/12/97 07:00	Questionable data (negative reading(s), within known calibration error)
12/03/97 20:30	Questionable data (negative reading(s), within known calibration error)
12/11/97 05:00	Questionable data (negative reading(s), within known calibration error)
12/11/97 08:30	Questionable data (negative reading(s), within known calibration error)
12/16/97 14:00 – 12/31/98 23:30	Questionable data (turbidity readings for the entire deployment are very erratic and interspersed with readings great than 1000, these data should be used with caution)
12/18/97 22:30	Questionable data (reading(s) greater than 1000)
12/19/97 15:00	Questionable data (reading(s) greater than 1000)
12/20/97 15:30	Questionable data (reading(s) greater than 1000)
12/20/97 16:30	Questionable data (reading(s) greater than 1000)
12/24/97 06:30	Questionable data (reading(s) greater than 1000)
12/24/97 07:30 – 12/24/97 08:00	Questionable data (reading(s) greater than 1000)
12/24/97 09:00 – 12/24/97 11:30	Questionable data (reading(s) greater than 1000)
12/24/97 12:30 – 12/24/97 13:30	Questionable data (reading(s) greater than 1000)
12/24/97 14:30 – 12/24/97 16:00	Questionable data (reading(s) greater than 1000)

12/24/97 17:00	Questionable data (reading(s) greater than 1000)
12/24/97 19:00	Questionable data (reading(s) greater than 1000)
12/25/97 08:30	Questionable data (reading(s) greater than 1000)
12/27/97 20:00	Questionable data (reading(s) greater than 1000)
12/28/97 01:30	Questionable data (reading(s) greater than 1000)
12/29/97 17:30	Questionable data (reading(s) greater than 1000)
12/31/97 23:00 – 12/31/97 23:30	Questionable data (reading(s) greater than 1000)

1998

Specific Conductivity

04/29/98 12:30 – 05/11/98 09:00	NERR Technician removed erroneous data (probe calibrated in contaminated standard, all affected parameters were removed)
---------------------------------	--

Salinity

04/29/98 12:30 – 05/11/98 09:00	NERR Technician removed erroneous data (conductivity probe calibrated in contaminated standard, all affected parameters were removed)
---------------------------------	---

Dissolved Oxygen %

06/27/98 12:30	NERR Technician removed erroneous data (negative and zero readings)
06/28/98 01:00 – 06/28/98 01:30	NERR Technician removed erroneous data (negative and zero readings)
07/24/98 07:30 – 07/25/98 18:00	NERR Technician removed erroneous data (negative and zero readings)
08/07/98 16:00 – 08/17/98 10:00	2003 Data Manager removed erroneous data (readings became very erratic and climbed to very high values before drifting back down near the end of the deployment period, probable tear in membrane or animal living in probe guard)
08/24/98 20:00 – 08/24/98 22:30	NERR Technician removed erroneous data (negative and zero readings, possibly due to heavy fouling)
08/24/98 23:30	NERR Technician removed erroneous data (negative readings, possibly due to heavy fouling)
08/25/98 09:30 – 08/25/98 10:00	NERR Technician removed erroneous data (negative readings, possibly due to heavy fouling)
11/24/98 16:30 – 12/09/98 11:00	NERR Technician removed erroneous data
11/27/98 07:00 – 11/29/98 20:30	NERR Technician removed erroneous data (spikes over 100%, possible puncture in membrane)

Dissolved Oxygen mg/L

03/30/98 11:00 – 04/15/98 09:00	NERR Technician removed erroneous data
04/29/98 12:30 – 05/11/98 09:00	NERR Technician removed erroneous data (conductivity probe calibrated in contaminated standard, all affected parameters were removed)
06/27/98 12:30	NERR Technician removed erroneous data (negative and zero readings)
06/28/98 01:00 – 06/28/98 01:30	NERR Technician removed erroneous data (negative and zero readings)
07/24/98 07:30 – 07/25/98 18:00	NERR Technician removed erroneous data (negative and zero readings)
08/07/98 16:00 – 08/17/98 10:00	2003 Data Manager removed erroneous data (readings became very erratic and climbed to very high values before drifting back down near the end of the deployment period, probable tear in membrane or animal living in probe guard)
08/24/98 20:00 – 08/24/98 22:30	NERR Technician removed erroneous data (negative and zero readings, possibly due to heavy fouling)
08/24/98 23:30	NERR Technician removed erroneous data (negative readings, possibly due to heavy fouling)
08/25/98 09:30 – 08/25/98 10:00	NERR Technician removed erroneous data (negative readings, possibly due to heavy fouling)
11/24/98 16:30 – 12/09/98 11:00	NERR Technician removed erroneous data
11/27/98 07:00 – 11/29/98 20:30	NERR Technician removed erroneous data (spikes over 100%, possible puncture in membrane)

Depth

04/29/98 12:30 – 05/11/98 09:00 NERR Technician removed erroneous data (conductivity probe calibrated in contaminated standard, all affected parameters were removed)

Turbidity

01/01/98 00:00 Questionable data (reading(s) greater than 1000)
01/01/98 17:30 Questionable data (reading(s) greater than 1000)
01/03/98 08:30 Questionable data (reading(s) greater than 1000)
01/04/98 08:30 Questionable data (reading(s) greater than 1000)
01/04/98 13:00 Questionable data (reading(s) greater than 1000)
02/06/98 15:30 Questionable data (reading(s) greater than 1000)
02/07/98 21:30 Questionable data (reading(s) greater than 1000)
05/27/98 21:00 Questionable data (reading(s) greater than 1000)
05/28/98 20:00 Questionable data (reading(s) greater than 1000)
05/30/98 13:00 – 05/31/98 01:30 2003 Data Manager removed erroneous data (almost all readings for this period were greater than 1000, many were greater than 2000, and were often the same value)

06/02/98 14:00 Questionable data (reading(s) greater than 1000)
06/03/98 21:00 Questionable data (reading(s) greater than 1000)
06/08/98 06:30 – 06/24/98 09:00 Questionable data (readings climb and become very large and erratic throughout the rest of the deployment, many readings greater than 1000, possibly due to probe fouling or siltation events)

06/08/98 06:30 Questionable data (reading(s) greater than 1000)
06/08/98 10:00 Questionable data (reading(s) greater than 1000)
06/08/98 15:30 – 06/08/98 17:00 Questionable data (reading(s) greater than 1000)
06/08/98 18:00 – 06/08/98 19:30 Questionable data (reading(s) greater than 1000)
06/08/98 21:30 – 06/08/98 22:00 Questionable data (reading(s) greater than 1000)
06/09/98 00:00 – 06/09/98 00:30 Questionable data (reading(s) greater than 1000)
06/09/98 01:30 – 10/09/98 06:00 Questionable data (reading(s) greater than 1000)
06/09/98 07:00 – 06/09/98 07:30 Questionable data (reading(s) greater than 1000)
06/09/98 08:30 Questionable data (reading(s) greater than 1000)
06/10/98 04:30 Questionable data (reading(s) greater than 1000)
06/10/98 08:00 – 06/10/98 09:00 Questionable data (reading(s) greater than 1000)
06/10/98 10:00 – 06/10/98 10:30 Questionable data (reading(s) greater than 1000)
06/10/98 12:00 – 06/10/98 13:00 Questionable data (reading(s) greater than 1000)
06/10/98 14:00 – 06/10/98 18:30 Questionable data (reading(s) greater than 1000)
06/10/98 21:30 – 06/10/98 22:00 Questionable data (reading(s) greater than 1000)
06/11/98 03:00 – 06/11/98 03:30 Questionable data (reading(s) greater than 1000)
06/11/98 06:30 Questionable data (reading(s) greater than 1000)
06/11/98 07:30 – 06/11/98 08:00 Questionable data (reading(s) greater than 1000)
06/11/98 09:30 – 06/11/98 10:30 Questionable data (reading(s) greater than 1000)
06/11/98 14:30 – 06/11/98 15:00 Questionable data (reading(s) greater than 1000)
06/11/98 19:30 Questionable data (reading(s) greater than 1000)
06/11/98 20:30 Questionable data (reading(s) greater than 1000)
06/12/98 02:30 – 06/12/98 03:00 Questionable data (reading(s) greater than 1000)
06/12/98 05:00 – 06/12/98 06:30 Questionable data (reading(s) greater than 1000)
06/12/98 09:00 Questionable data (reading(s) greater than 1000)
06/12/98 15:00 Questionable data (reading(s) greater than 1000)
06/12/98 16:30 – 06/12/98 17:00 Questionable data (reading(s) greater than 1000)
06/12/98 18:00 Questionable data (reading(s) greater than 1000)
06/12/98 19:00 Questionable data (reading(s) greater than 1000)
06/12/98 21:00 Questionable data (reading(s) greater than 1000)
06/12/98 22:00 Questionable data (reading(s) greater than 1000)
06/13/98 04:00 – 06/13/98 09:30 Questionable data (reading(s) greater than 1000)
06/13/98 11:30 Questionable data (reading(s) greater than 1000)
06/13/98 12:30 – 06/13/98 15:00 Questionable data (reading(s) greater than 1000)
06/13/98 17:00 Questionable data (reading(s) greater than 1000)

06/13/98 18:00	Questionable data (reading(s) greater than 1000)
06/13/98 22:30	Questionable data (reading(s) greater than 1000)
06/14/98 04:30 – 06/14/98 08:30	Questionable data (reading(s) greater than 1000)
06/14/98 11:00	Questionable data (reading(s) greater than 1000)
06/14/98 15:30	Questionable data (reading(s) greater than 1000)
06/14/98 16:30	Questionable data (reading(s) greater than 1000)
06/15/98 03:00	Questionable data (reading(s) greater than 1000)
06/15/98 06:00 – 06/15/98 07:30	Questionable data (reading(s) greater than 1000)
06/15/98 08:30	Questionable data (reading(s) greater than 1000)
06/15/98 11:00	Questionable data (reading(s) greater than 1000)
06/15/98 12:00	Questionable data (reading(s) greater than 1000)
06/15/98 13:00	Questionable data (reading(s) greater than 1000)
06/15/98 14:00	Questionable data (reading(s) greater than 1000)
06/16/98 12:30	Questionable data (reading(s) greater than 1000)
06/17/98 00:30 – 06/17/98 01:00	Questionable data (reading(s) greater than 1000)
06/17/98 23:00	Questionable data (reading(s) greater than 1000)
06/18/98 18:30	Questionable data (reading(s) greater than 1000)
06/18/98 23:00 – 06/19/98 01:00	Questionable data (reading(s) greater than 1000)
06/19/98 12:30 – 06/19/98 13:00	Questionable data (reading(s) greater than 1000)
06/19/98 23:30 – 06/20/98 00:30	Questionable data (reading(s) greater than 1000)
06/20/98 01:30	Questionable data (reading(s) greater than 1000)
06/20/98 03:30 – 06/20/98 05:00	Questionable data (reading(s) greater than 1000)
06/20/98 07:00	Questionable data (reading(s) greater than 1000)
06/20/98 12:30 – 06/20/98 13:30	Questionable data (reading(s) greater than 1000)
06/20/98 14:30	Questionable data (reading(s) greater than 1000)
06/20/98 22:30	Questionable data (reading(s) greater than 1000)
06/20/98 23:30 – 06/21/98 01:00	Questionable data (reading(s) greater than 1000)
06/21/98 02:00	Questionable data (reading(s) greater than 1000)
06/21/98 03:00 – 06/21/98 04:00	Questionable data (reading(s) greater than 1000)
06/21/98 11:30	Questionable data (reading(s) greater than 1000)
06/21/98 12:30 – 06/21/98 13:00	Questionable data (reading(s) greater than 1000)
06/21/98 14:30 – 06/21/98 15:00	Questionable data (reading(s) greater than 1000)
06/22/98 02:00 – 06/22/98 04:00	Questionable data (reading(s) greater than 1000)
06/22/98 05:00	Questionable data (reading(s) greater than 1000)
06/22/98 08:00	Questionable data (reading(s) greater than 1000)
06/22/98 11:30 – 06/22/98 16:30	Questionable data (reading(s) greater than 1000)
06/23/98 04:30 – 06/23/98 05:30	Questionable data (reading(s) greater than 1000)
06/24/98 05:30 – 06/24/98 08:30	Questionable data (reading(s) greater than 1000)
06/27/98 20:30 – 06/27/98 22:30	Questionable data (negative reading(s), within known calibration error)
06/28/98 01:00	Questionable data (reading(s) greater than 1000)
06/28/98 01:30	Questionable data (negative reading(s), within known calibration error)
06/28/98 05:00	Questionable data (reading(s) greater than 1000)
06/28/98 06:00	Questionable data (reading(s) greater than 1000)
06/28/98 22:30	Questionable data (reading(s) greater than 1000)
06/29/98 01:30	Questionable data (reading(s) greater than 1000)
06/29/98 21:30	Questionable data (negative reading(s), within known calibration error)
06/30/98 00:30	Questionable data (negative reading(s), within known calibration error)
06/30/98 07:30	Questionable data (negative reading(s), within known calibration error)
07/01/98 17:00	Questionable data (negative reading(s), within known calibration error)
07/01/98 20:00	Questionable data (negative reading(s), within known calibration error)
07/02/98 03:00	Questionable data (negative reading(s), within known calibration error)
07/02/98 06:30	Questionable data (negative reading(s), within known calibration error)
07/02/98 14:30	Questionable data (reading(s) greater than 1000)
07/02/98 19:30	Questionable data (negative reading(s), within known calibration error)
07/02/98 21:00	Questionable data (negative reading(s), within known calibration error)
07/03/98 06:00	Questionable data (negative reading(s), within known calibration error)

07/03/98 11:00	Questionable data (negative reading(s), within known calibration error)
07/03/98 17:30	Questionable data (reading(s) greater than 1000)
07/03/98 21:30	Questionable data (negative reading(s), within known calibration error)
07/04/98 01:00	Questionable data (negative reading(s), within known calibration error)
07/04/98 02:30	Questionable data (negative reading(s), within known calibration error)
07/04/98 03:30	Questionable data (negative reading(s), within known calibration error)
07/04/98 06:00	Questionable data (negative reading(s), within known calibration error)
07/04/98 08:30	Questionable data (negative reading(s), within known calibration error)
07/04/98 09:30 – 07/04/98 10:00	Questionable data (negative reading(s), within known calibration error)
07/05/98 00:00	Questionable data (negative reading(s), within known calibration error)
07/05/98 01:00	Questionable data (negative reading(s), within known calibration error)
07/05/98 05:30	Questionable data (negative reading(s), within known calibration error)
07/05/98 06:30	Questionable data (negative reading(s), within known calibration error)
07/05/98 07:30	Questionable data (negative reading(s), within known calibration error)
07/05/98 14:00	Questionable data (negative reading(s), within known calibration error)
07/05/98 15:00	Questionable data (negative reading(s), within known calibration error)
07/06/98 00:30 – 07/06/98 01:30	Questionable data (negative reading(s), within known calibration error)
07/06/98 02:30	Questionable data (reading(s) greater than 1000)
07/10/98 23:30 – 07/15/98 10:30	2003 Data Manager removed erroneous data (readings jumped to a high value and then very gradually declined throughout the rest of the deployment period, readings were often the same value)
07/22/98 18:00	Questionable data (reading(s) greater than 1000)
08/06/98 05:00	Questionable data (reading(s) greater than 1000)
08/06/98 06:00	Questionable data (reading(s) greater than 1000)
08/06/98 12:30 – 08/06/98 13:00	Questionable data (reading(s) greater than 1000)
08/12/98 09:30	Questionable data (reading(s) greater than 1000)
08/12/98 14:30	Questionable data (reading(s) greater than 1000)
08/12/98 19:00	Questionable data (reading(s) greater than 1000)
08/14/98 17:00 – 08/14/98 20:30	Questionable data (reading(s) greater than 1000)
08/15/98 00:30 – 08/15/98 01:00	Questionable data (reading(s) greater than 1000)
08/21/98 11:00	Questionable data (reading(s) greater than 1000)
08/23/98 18:00 – 08/28/98 09:30	Questionable data (readings interspersed erratically with unlikely -1 values)
08/23/98 18:00	Questionable data (negative reading(s), within known calibration error)
08/23/98 20:30	Questionable data (negative reading(s), within known calibration error)
08/23/98 21:30	Questionable data (negative reading(s), within known calibration error)
08/23/98 22:30	Questionable data (negative reading(s), within known calibration error)
08/24/98 00:30	Questionable data (reading(s) greater than 1000)
08/24/98 01:30	Questionable data (negative reading(s), within known calibration error)
08/24/98 03:00	Questionable data (negative reading(s), within known calibration error)
08/24/98 07:00	Questionable data (negative reading(s), within known calibration error)
08/24/98 08:30	Questionable data (negative reading(s), within known calibration error)
08/24/98 09:30	Questionable data (negative reading(s), within known calibration error)
08/25/98 18:30	Questionable data (reading(s) greater than 1000)
08/26/98 00:30	Questionable data (negative reading(s), within known calibration error)
08/26/98 02:00	Questionable data (negative reading(s), within known calibration error)
08/26/98 08:00	Questionable data (negative reading(s), within known calibration error)
08/26/98 17:30	Questionable data (negative reading(s), within known calibration error)
08/26/98 21:00	Questionable data (negative reading(s), within known calibration error)
08/26/98 23:30	Questionable data (negative reading(s), within known calibration error)
08/27/98 02:00	Questionable data (negative reading(s), within known calibration error)
08/27/98 08:30	Questionable data (negative reading(s), within known calibration error)
08/27/98 10:00	Questionable data (negative reading(s), within known calibration error)
08/27/98 11:00	Questionable data (negative reading(s), within known calibration error)
08/27/98 12:00	Questionable data (negative reading(s), within known calibration error)
08/27/98 14:00	Questionable data (negative reading(s), within known calibration error)
08/27/98 15:30	Questionable data (negative reading(s), within known calibration error)

08/27/98 19:30	Questionable data (negative reading(s), within known calibration error)
08/28/98 00:00	Questionable data (negative reading(s), within known calibration error)
08/28/98 04:00	Questionable data (negative reading(s), within known calibration error)
08/28/98 10:00 – 09/01/98 08:00	2003 Data Manager removed erroneous data (most readings were -1 for this period, interspersed with occasional large values)
09/04/98 13:30	Questionable data (reading(s) greater than 1000)
09/04/98 14:30	Questionable data (negative reading(s), within known calibration error)
09/04/98 15:30 – 09/04/98 16:00	Questionable data (reading(s) greater than 1000)
09/05/98 00:30	Questionable data (reading(s) greater than 1000)
09/05/98 02:00 – 09/05/98 03:00	Questionable data (reading(s) greater than 1000)
09/05/98 04:00	Questionable data (reading(s) greater than 1000)
09/05/98 12:30	Questionable data (reading(s) greater than 1000)
09/05/98 13:30 – 09/05/98 16:30	Questionable data (reading(s) greater than 1000)
09/05/98 18:00 – 09/05/98 19:00	Questionable data (reading(s) greater than 1000)
09/05/98 22:00	Questionable data (reading(s) greater than 1000)
09/06/98 07:30 – 09/06/98 08:00	Questionable data (negative reading(s), within known calibration error)
09/06/98 19:00	Questionable data (reading(s) greater than 1000)
09/06/98 22:30	Questionable data (reading(s) greater than 1000)
09/06/98 23:00	Questionable data (negative reading(s), within known calibration error)
09/07/98 00:30	Questionable data (reading(s) greater than 1000)
09/07/98 02:00 – 09/07/98 02:30	Questionable data (negative reading(s), within known calibration error)
09/07/98 05:00	Questionable data (reading(s) greater than 1000)
09/07/98 07:00 – 09/07/98 07:30	Questionable data (negative reading(s), within known calibration error)
09/07/98 11:30	Questionable data (reading(s) greater than 1000)
09/07/98 12:30	Questionable data (negative reading(s), within known calibration error)
09/07/98 14:30	Questionable data (reading(s) greater than 1000)
09/07/98 15:30 – 09/07/98 22:30	Questionable data (reading(s) greater than 1000)
09/07/98 23:00	Questionable data (negative reading(s), within known calibration error)
09/08/98 14:30	Questionable data (negative reading(s), within known calibration error)
09/08/98 20:30	Questionable data (negative reading(s), within known calibration error)
09/09/98 04:00	Questionable data (reading(s) greater than 1000)
09/09/98 06:30	Questionable data (negative reading(s), within known calibration error)
09/09/98 07:30 – 09/09/98 09:30	Questionable data (negative reading(s), within known calibration error)
09/09/98 10:00	Questionable data (reading(s) greater than 1000)
09/10/98 07:30 – 09/10/98 08:30	Questionable data (reading(s) greater than 1000)
09/10/98 09:30	Questionable data (reading(s) greater than 1000)
09/10/98 16:00 – 09/14/98 12:30	2003 Data Manager removed erroneous data (most readings for this period were either -2 or greater than 1000, extremely erratic)
09/16/98 19:00	Questionable data (reading(s) greater than 1000)
09/19/98 10:00 – 09/19/98 10:30	Questionable data (negative reading(s), within known calibration error)
09/29/98 00:00 – 09/29/98 01:00	Questionable data (negative reading(s), within known calibration error, probably due to sensor rollover)
09/29/98 02:00	Questionable data (negative reading(s), within known calibration error, probably due to sensor rollover)
09/29/98 06:30	Questionable data (reading(s) greater than 1000)
09/29/98 09:00	Questionable data (reading(s) greater than 1000)
09/29/98 20:00	Questionable data (reading(s) greater than 1000)
09/29/98 22:30	Questionable data (reading(s) greater than 1000)
09/30/98 01:30	Questionable data (reading(s) greater than 1000)
09/30/98 03:30	Questionable data (negative reading(s), within known calibration error)
09/30/98 12:00	Questionable data (negative reading(s), within known calibration error)
09/30/98 22:00	Questionable data (negative reading(s), within known calibration error)
09/30/98 23:00	Questionable data (reading(s) greater than 1000)
10/01/98 01:00	Questionable data (negative reading(s), within known calibration error)
10/01/98 03:00	Questionable data (negative reading(s), within known calibration error)
10/01/98 11:30	Questionable data (reading(s) greater than 1000)

10/01/98 17:00	Questionable data (reading(s) greater than 1000)
10/01/98 20:00	Questionable data (reading(s) greater than 1000)
10/01/98 22:30	Questionable data (reading(s) greater than 1000)
10/02/98 02:30	Questionable data (reading(s) greater than 1000)
10/03/98 03:00	Questionable data (reading(s) greater than 1000)
10/05/98 05:30	Questionable data (negative reading(s), within known calibration error)
10/05/98 21:30	Questionable data (reading(s) greater than 1000)
10/06/98 07:30 – 10/06/98 14:00	2003 Data Manager removed erroneous data (most readings for this period were either -2 or greater than 1000, extremely erratic)
10/06/98 22:00	Questionable data (negative reading(s), within known calibration error)
10/06/98 23:00	Questionable data (negative reading(s), within known calibration error)
10/07/98 00:30	Questionable data (reading(s) greater than 1000)
10/07/98 02:00	Questionable data (reading(s) greater than 1000)
10/15/98 18:00 – 10/15/98 19:00	Questionable data (reading(s) greater than 1000)
10/16/98 18:30	Questionable data (reading(s) greater than 1000)
10/17/98 06:00	Questionable data (reading(s) greater than 1000)
10/17/98 22:30 – 10/21/98 15:30	Questionable data (readings climb and become fairly large and are often over 1000, probe may have been fouled)
10/17/98 22:30 – 10/18/98 02:00	Questionable data (reading(s) greater than 1000)
10/18/98 03:30	Questionable data (reading(s) greater than 1000)
10/18/98 04:30 – 10/18/98 06:00	Questionable data (reading(s) greater than 1000)
10/18/98 07:00	Questionable data (reading(s) greater than 1000)
10/18/98 09:00 – 10/18/98 11:30	Questionable data (reading(s) greater than 1000)
10/18/98 14:00	Questionable data (reading(s) greater than 1000)
10/18/98 23:30	Questionable data (reading(s) greater than 1000)
10/19/98 04:30 – 10/19/98 05:30	Questionable data (reading(s) greater than 1000)
10/20/98 22:00 – 10/21/98 23:00	Questionable data (reading(s) greater than 1000)
10/21/98 02:00	Questionable data (reading(s) greater than 1000)
10/21/98 03:00 – 10/21/98 04:30	Questionable data (reading(s) greater than 1000)
10/21/98 12:30	Questionable data (reading(s) greater than 1000)
10/21/98 13:30	Questionable data (reading(s) greater than 1000)
10/21/98 15:00	Questionable data (reading(s) greater than 1000)
10/21/98 16:00 – 10/22/98 09:30	2003 Data Manager removed erroneous data (all readings for the remainder of the deployment were greater than 1000)
10/23/98 14:30 – 10/23/98 15:30	Questionable data (negative reading(s), within known calibration error)
10/25/98 08:00	Questionable data (negative reading(s), within known calibration error)
10/25/98 14:30 – 10/25/98 17:30	Questionable data (negative reading(s), within known calibration error)
10/31/98 03:00	Questionable data (reading(s) greater than 1000)
10/31/98 09:00 – 11/04/98 11:30	2003 Data Manager removed erroneous data (almost all readings for this period were -2, many of the remaining readings were greater than 1000, very erratic)
11/04/98 21:30	Questionable data (negative reading(s), within known calibration error)
11/06/98 03:30	Questionable data (negative reading(s), within known calibration error)
11/06/98 04:30	Questionable data (negative reading(s), within known calibration error)
11/06/98 10:00	Questionable data (reading(s) greater than 1000)
11/06/98 11:00	Questionable data (negative reading(s), within known calibration error)
11/06/98 16:00	Questionable data (negative reading(s), within known calibration error)
11/06/98 17:30	Questionable data (negative reading(s), within known calibration error)
11/06/98 20:00	Questionable data (reading(s) greater than 1000)
11/06/98 22:30	Questionable data (negative reading(s), within known calibration error)
11/07/98 00:30 – 11/07/98 01:00	Questionable data (negative reading(s), within known calibration error)
11/07/98 16:00	Questionable data (negative reading(s), within known calibration error)
11/07/98 17:00	Questionable data (negative reading(s), within known calibration error)
11/07/98 20:00 – 11/08/98 04:30	2003 Data Manager removed erroneous data (most readings during this period were either -2 or greater than 1000, very erratic)
11/08/98 09:30 – 11/08/98 12:30	2003 Data Manager removed erroneous data (most readings during this period were either -2 or greater than 1000, very erratic)

11/08/98 22:30 – 11/09/98 11:00	2003 Data Manager removed erroneous data (most readings during this period were either -2 or greater than 1000, very erratic)
11/13/98 21:30 – 1/14/98 15:00	2003 Data Manager removed erroneous data (most readings during this period were either -1 or greater than 1000, very erratic)
11/15/98 16:00	Questionable data (negative reading(s), within known calibration error)
11/16/98 22:30	Questionable data (negative reading(s), within known calibration error)
11/18/98 09:00	Questionable data (reading(s) greater than 1000)
11/18/98 10:00	Questionable data (reading(s) greater than 1000)
11/18/98 14:00 – 11/23/98 13:00	2003 Data Manager removed erroneous data (most readings throughout the rest of the deployment were either -1 or greater than 1000, very erratic)
11/29/98 07:30 – 11/29/98 08:00	Questionable data (reading(s) greater than 1000)
12/01/98 07:00 – 12/01/98 07:30	Questionable data (reading(s) greater than 1000)
12/02/98 01:00 – 12/02/98 01:30	Questionable data (reading(s) greater than 1000)
12/02/98 03:00	Questionable data (reading(s) greater than 1000)
12/02/98 05:30	Questionable data (reading(s) greater than 1000)
12/02/98 07:00	Questionable data (reading(s) greater than 1000)
12/02/98 09:30	Questionable data (reading(s) greater than 1000)
12/02/98 10:30	Questionable data (reading(s) greater than 1000)
12/02/98 13:30 – 12/05/98 03:00	2003 Data Manager removed erroneous data (almost all readings during this period were greater than 1000)
12/05/98 03:30 – 12/09/98 11:00	Questionable data (readings for this period are very large and drop significantly with the new deployment, follow a period of data that were determined to be erroneous and removed, probable probe fouling)
12/05/98 19:00 – 12/05/98 22:30	Questionable data (reading(s) greater than 1000)
12/08/98 16:00	Questionable data (reading(s) greater than 1000)
12/09/98 10:30	Questionable data (reading(s) greater than 1000)
12/13/98 06:30	Questionable data (reading(s) greater than 1000)
12/27/98 07:00 – 12/27/98 08:30	Questionable data (reading(s) greater than 1000)
12/28/98 09:00	Questionable data (reading(s) greater than 1000)
12/28/98 10:00 – 12/28/98 13:30	Questionable data (reading(s) greater than 1000)
12/28/98 16:30 – 12/28/98 17:00	Questionable data (reading(s) greater than 1000)
12/28/98 18:00	Questionable data (reading(s) greater than 1000)
12/28/98 19:00 – 12/28/98 21:00	Questionable data (reading(s) greater than 1000)
12/28/98 22:00	Questionable data (reading(s) greater than 1000)
12/29/98 05:00	Questionable data (reading(s) greater than 1000)
12/29/98 07:30 – 12/29/98 09:00	Questionable data (reading(s) greater than 1000)
12/29/98 14:00	Questionable data (reading(s) greater than 1000)
12/29/98 15:00	Questionable data (reading(s) greater than 1000)
12/29/98 20:00 – 12/29/98 23:00	Questionable data (reading(s) greater than 1000)
12/30/98 00:00 – 12/30/98 01:00	Questionable data (reading(s) greater than 1000)
12/30/98 02:00	Questionable data (reading(s) greater than 1000)
12/30/98 03:30	Questionable data (reading(s) greater than 1000)
12/30/98 04:30 – 12/30/98 05:00	Questionable data (reading(s) greater than 1000)
12/30/98 06:00	Questionable data (reading(s) greater than 1000)
12/30/98 10:00	Questionable data (reading(s) greater than 1000)

1999

Note: On 07/19/99 the Thousand Acre sampling site was moved 30 meters down stream to the Thousand Acre Marsh Bridge, where the unit could be attached to the bridge itself. This change in methodology was made in an attempt to keep the probes from being buried in the mud during the deployment periods.

All Variables

05/25/99 14:30 – 06/14/99 12:00	Questionable data (probes were covered in mud, the turbidity wiper was parked over the lens, and the DO membrane was covered in barnacles at retrieval)
07/05/99 10:00	Questionable data (very low depth readings, probes may have been out of the water, reading(s) for other parameters appear reasonable)

07/22/99 14:00 – 08/11/99 10:30 Questionable data (probes were fouled by barnacles and filamentous algae at retrieval, there were also small crabs living in the probe cage)
 08/13/99 15:00 – 09/01/99 08:30 Questionable data (probes were heavily fouled at retrieval)
 11/03/99 14:00 – 11/04/99 11:00 2003 Data Manager removed erroneous data (probes out of water)

Specific Conductivity

09/15/99 04:00 – 09/16/99 23:30 The NIW NERR Weather Station recorded over 10 inches of rainfall on 9/14/99 and 9/15/99, SpCond and Salinity readings decline sharply over this period (see the NERRMET or RAINDAZE databases for rainfall data)

Salinity

09/15/99 04:00 – 09/16/99 23:30 The NIW NERR Weather Station recorded over 10 inches of rainfall on 9/14/99 and 9/15/99, SpCond and Salinity readings decline sharply over this period (see the NERRMET or RAINDAZE databases for rainfall data)

Dissolved Oxygen % and mg/L

01/18/99 19:30 – 02/03/99 11:30 2003 Data Manager removed erroneous data (large discontinuity, readings became very erratic and then drifted to extremely low values, sometimes readings remained at nearly the exact same value for long periods and other times exhibited large discontinuities, probable membrane puncture or mud contamination)
 04/02/99 12:00 – 04/19/99 09:30 NERR Technician removed erroneous data (mud contamination)
 05/06/99 15:30 – 05/21/99 06:00 NERR Technician removed erroneous data (mud contamination)
 05/21/99 11:30 – 05/22/99 06:30 NERR Technician removed erroneous data (mud contamination)
 05/22/99 11:00 – 05/24/99 09:30 NERR Technician removed erroneous data (mud contamination)
 05/27/99 01:30 NERR Technician removed erroneous data (negative readings)
 06/05/99 23:00 – 06/14/99 12:00 2003 Data Manager removed erroneous data (large discontinuity, readings became very erratic with very large values that often remained nearly the same, membrane was covered in barnacles at retrieval)
 06/17/99 13:00 – 06/30/99 23:30 NERR Technician removed erroneous data (mud contamination)
 07/01/99 00:00 – 07/05/99 10:00 NERR Technician removed erroneous data (mud contamination)
 07/07/99 13:00 – 07/19/99 08:00 NERR Technician removed erroneous data (mud contamination)
 08/03/99 19:00 – 08/11/99 10:30 NERR Technician removed erroneous data (erratic readings, greater than 500 and negative)
 08/21/99 15:00 – 08/21/99 16:00 NERR Technician removed erroneous data (negative readings)
 08/22/99 18:30 – 08/22/99 19:00 NERR Technician removed erroneous data (negative readings)

pH

06/07/99 12:00 – 06/14/99 12:00 Questionable data (very high readings, probes were covered in mud at retrieval)

Turbidity

01/20/99 15:00 – 01/22/99 09:30 2003 Data Manager removed erroneous data (almost all readings during this period were greater than 1000)
 01/22/99 14:00 Questionable data (reading(s) greater than 1000)
 01/22/99 17:00 Questionable data (reading(s) greater than 1000)
 01/23/99 03:30 Questionable data (reading(s) greater than 1000)
 01/23/99 06:00 Questionable data (reading(s) greater than 1000)
 01/24/99 06:00 Questionable data (reading(s) greater than 1000)
 01/25/99 06:00 – 02/03/99 11:30 2003 Data Manager removed erroneous data (readings during this period remained at the same value repeatedly, indicating a problem with the sensor)
 04/02/99 12:00 – 04/19/99 09:30 NERR Technician removed erroneous data (mud contamination)
 05/06/99 15:30 – 05/24/99 09:30 Questionable data (turbidity wiper motor was spinning uncontrollably and the probe guard was full of mud at retrieval)
 05/06/99 15:30 – 05/21/99 06:00 NERR Technician removed erroneous data (mud contamination)
 05/21/99 11:30 – 05/22/99 06:30 NERR Technician removed erroneous data (mud contamination)
 05/22/99 11:00 – 05/24/99 09:30 NERR Technician removed erroneous data (mud contamination)

05/25/99 14:30 – 06/14/99 12:00	Questionable data (probe was covered in mud and wiper was parked over the lens at retrieval)
05/27/99 02:30	Questionable data (reading(s) greater than 1000)
05/27/99 03:30	Questionable data (reading(s) greater than 1000)
05/27/99 12:00 – 05/27/99 15:30	Questionable data (reading(s) greater than 1000)
05/28/99 11:00	Questionable data (reading(s) greater than 1000)
05/28/99 15:00	Questionable data (reading(s) greater than 1000)
05/28/99 17:30	Questionable data (reading(s) greater than 1000)
05/28/99 23:30	Questionable data (reading(s) greater than 1000)
06/01/99 04:00	Questionable data (reading(s) greater than 1000)
06/01/99 08:30 – 06/01/99 09:30	Questionable data (reading(s) greater than 1000)
06/01/99 12:30 – 06/01/99 13:00	Questionable data (reading(s) greater than 1000)
06/01/99 17:00 – 06/01/99 20:00	Questionable data (reading(s) greater than 1000)
06/02/99 01:30	Questionable data (reading(s) greater than 1000)
06/02/99 05:00	Questionable data (reading(s) greater than 1000)
06/02/99 07:00 – 06/02/99 08:30	Questionable data (reading(s) greater than 1000)
06/02/99 09:30	Questionable data (reading(s) greater than 1000)
06/02/99 11:30 – 06/02/99 16:00	Questionable data (reading(s) greater than 1000)
06/03/99 21:00	Questionable data (reading(s) greater than 1000)
06/03/99 22:30 – 06/03/99 23:00	Questionable data (reading(s) greater than 1000)
06/04/99 00:30	Questionable data (reading(s) greater than 1000)
06/04/99 02:30 – 06/04/99 05:30	Questionable data (reading(s) greater than 1000)
06/04/99 06:30 – 06/04/99 07:30	Questionable data (reading(s) greater than 1000)
06/11/99 04:30	Questionable data (reading(s) greater than 1000)
06/12/99 03:30	Questionable data (reading(s) greater than 1000)
06/12/99 16:30	Questionable data (reading(s) greater than 1000)
06/12/99 19:00 – 06/12/99 20:30	Questionable data (reading(s) greater than 1000)
06/13/99 00:00	Questionable data (reading(s) greater than 1000)
06/13/99 01:00	Questionable data (reading(s) greater than 1000)
06/13/99 02:00	Questionable data (reading(s) greater than 1000)
06/13/99 03:30 – 06/13/99 06:30	Questionable data (reading(s) greater than 1000)
06/14/99 00:00	Questionable data (reading(s) greater than 1000)
06/17/99 13:00 – 06/30/99 23:30	NERR Technician removed erroneous data (mud contamination)
07/01/99 00:00 – 07/05/99 10:00	NERR Technician removed erroneous data (mud contamination)
07/07/99 13:00 – 07/19/99 08:00	NERR Technician removed erroneous data (mud contamination)
07/30/99 04:00	Questionable data (reading(s) greater than 1000)
08/10/99 04:00	Questionable data (reading(s) greater than 1000)
08/18/99 20:30 – 08/18/99 21:00	Questionable data (reading(s) greater than 1000)
08/19/99 00:00 – 08/19/99 01:00	Questionable data (reading(s) greater than 1000)
08/19/99 02:00	Questionable data (reading(s) greater than 1000)
08/19/99 11:30	Questionable data (reading(s) greater than 1000)
08/19/99 14:00 – 08/19/99 15:00	Questionable data (reading(s) greater than 1000)
08/19/99 16:30	Questionable data (reading(s) greater than 1000)
08/19/99 18:00	Questionable data (reading(s) greater than 1000)
08/19/99 21:30 – 08/19/99 22:00	Questionable data (reading(s) greater than 1000)
08/19/99 23:00 – 08/20/99 00:30	Questionable data (reading(s) greater than 1000)
08/20/99 01:30 – 08/20/99 02:00	Questionable data (reading(s) greater than 1000)
08/20/99 06:30	Questionable data (reading(s) greater than 1000)
08/20/99 07:30	Questionable data (reading(s) greater than 1000)
08/20/99 09:30	Questionable data (reading(s) greater than 1000)
08/20/99 13:00 – 08/20/99 13:30	Questionable data (reading(s) greater than 1000)
08/20/99 14:30	Questionable data (reading(s) greater than 1000)
08/20/99 17:30	Questionable data (reading(s) greater than 1000)
08/21/99 05:00 – 08/21/99 05:30	Questionable data (reading(s) greater than 1000)
08/21/99 10:00	Questionable data (reading(s) greater than 1000)
08/22/99 21:00 – 08/22/99 23:30	Questionable data (reading(s) greater than 1000)

08/23/99 02:00 – 08/23/99 03:00	Questionable data (reading(s) greater than 1000)
08/23/99 04:30	Questionable data (reading(s) greater than 1000)
08/23/99 06:30 – 08/23/99 09:30	Questionable data (reading(s) greater than 1000)
08/23/99 18:00	Questionable data (reading(s) greater than 1000)
08/23/99 22:30 – 08/23/99 23:30	Questionable data (reading(s) greater than 1000)
08/24/99 02:00	Questionable data (reading(s) greater than 1000)
08/24/99 04:00 – 08/24/99 05:30	Questionable data (reading(s) greater than 1000)
08/24/99 06:30	Questionable data (reading(s) greater than 1000)
08/24/99 07:30	Questionable data (reading(s) greater than 1000)
08/24/99 11:30	Questionable data (reading(s) greater than 1000)
08/24/99 20:00 – 08/24/99 22:00	Questionable data (reading(s) greater than 1000)
08/25/99 01:00	Questionable data (reading(s) greater than 1000)
08/25/99 02:30	Questionable data (reading(s) greater than 1000)
08/25/99 03:30	Questionable data (reading(s) greater than 1000)
08/25/99 07:00	Questionable data (reading(s) greater than 1000)
08/25/99 08:00	Questionable data (reading(s) greater than 1000)
08/25/99 10:30 – 08/25/99 11:00	Questionable data (reading(s) greater than 1000)
08/25/99 12:00 – 08/25/99 12:30	Questionable data (reading(s) greater than 1000)
08/25/99 14:00 – 08/25/99 16:00	Questionable data (reading(s) greater than 1000)
08/25/99 18:30	Questionable data (reading(s) greater than 1000)
08/25/99 20:30 – 08/25/99 22:00	Questionable data (reading(s) greater than 1000)
08/25/99 23:00 – 08/26/99 00:30	Questionable data (reading(s) greater than 1000)
08/26/99 09:00 – 08/26/99 09:30	Questionable data (reading(s) greater than 1000)
08/26/99 16:30 – 08/26/99 18:00	Questionable data (reading(s) greater than 1000)
08/26/99 19:00 – 08/26/99 19:30	Questionable data (reading(s) greater than 1000)
08/26/99 20:30	Questionable data (reading(s) greater than 1000)
08/26/99 21:30 – 08/26/99 23:00	Questionable data (reading(s) greater than 1000)
08/27/99 01:00	Questionable data (reading(s) greater than 1000)
08/27/99 02:30 – 08/27/99 04:00	Questionable data (reading(s) greater than 1000)
08/29/99 15:00 – 08/29/99 16:00	Questionable data (reading(s) greater than 1000)
08/29/99 20:30	Questionable data (reading(s) greater than 1000)
09/10/99 09:00	Questionable data (reading(s) greater than 1000)
09/10/99 20:30	Questionable data (reading(s) greater than 1000)
09/11/99 08:30	Questionable data (reading(s) greater than 1000)
09/14/99 18:30	Questionable data (reading(s) greater than 1000)
09/15/99 11:00	Questionable data (reading(s) greater than 1000)
11/03/99 14:00 – 11/03/99 16:00	Questionable data (negative reading(s), within known calibration error)
11/04/99 03:00	Questionable data (negative reading(s), within known calibration error)
11/04/99 06:00	Questionable data (negative reading(s), within known calibration error)
11/04/99 07:00 – 11/04/99 08:00	Questionable data (negative reading(s), within known calibration error)
11/04/99 11:00	Questionable data (negative reading(s), within known calibration error)
11/16/99 03:30	Questionable data (reading(s) greater than 1000)

2000

All Variables

08/22/00 15:00 – 08/30/00 09:00	NERR Technician corrected bad time stamp, off by nearly 4 minutes
10/05/00 13:00 – 10/19/00 10:00	NERR Technician corrected bad time stamp, off by nearly 4 minutes
10/20/00 14:30 – 11/08/00 10:30	NERR Technician corrected bad time stamp, off by nearly 5 minutes

Specific Conductivity

02/19/00 22:00 – 02/28/00 11:30	Questionable data (low DO readings, turbidity readings greater than 1000, SpCond, Salinity, and pH readings are also fairly low but reasonable, possible siltation event)
03/09/00 20:00 – 03/20/00 09:30	Questionable data (low DO readings, turbidity readings greater than 1000, SpCond, Salinity, and pH all appear reasonable, possible siltation event)

06/26/00 23:00 – 06/30/00 23:30 Questionable data (low DO readings, turbidity readings greater than 1000, SpCond and Salinity readings are fairly low but appear reasonable, possible siltation event)

09/18/00 16:30 – 09/28/00 09:00 Low SpCond, Salinity, and pH readings were attributed to several rain events that occurred during this period)

Salinity

02/19/00 22:00 – 02/28/00 11:30 Questionable data (low DO readings, turbidity readings greater than 1000, SpCond, Salinity, and pH readings are also fairly low but reasonable, possible siltation event)

03/09/00 20:00 – 03/20/00 09:30 Questionable data (low DO readings, turbidity readings greater than 1000, SpCond, Salinity, and pH all appear reasonable, possible siltation event)

06/26/00 23:00 – 06/30/00 23:30 Questionable data (low DO readings, turbidity readings greater than 1000, SpCond and Salinity readings are fairly low but appear reasonable, possible siltation event)

09/18/00 16:30 – 09/28/00 09:00 Low SpCond, Salinity, and pH readings were attributed to several rain events that occurred during this period)

Dissolved Oxygen % and mg/L

02/19/00 22:00 – 02/28/00 11:30 Questionable data (low DO readings, turbidity readings greater than 1000, SpCond, Salinity, and pH readings are also fairly low but reasonable, possible siltation event)

03/09/00 20:00 – 03/20/00 09:30 Questionable data (low DO readings, turbidity readings greater than 1000, SpCond, Salinity, and pH all appear reasonable, possible siltation event)

04/18/00 04:30 – 04/30/00 23:30 NERR Technician removed erroneous data (probe failure indicated by negative readings)

06/26/00 23:00 – 06/30/00 23:30 Questionable data (low DO readings, turbidity readings greater than 1000, SpCond and Salinity readings are fairly low but appear reasonable, possible siltation event)

07/18/00 10:30 – 07/18/00 14:30 2003 Data Manager removed erroneous data (the initial readings for this deployment were very high, probably due to change in temperature or sensor deployment)

08/01/00 09:00 – 08/10/00 16:30 NERR Technician removed erroneous data (probe failure indicated by negative readings)

09/26/00 16:30 – 09/28/00 21:00 2003 Data Manager removed erroneous data (very low and negative, large discontinuity when readings return to “normal”, high turbidity readings during this period as well, possible mud contamination or probe failure)

pH

02/19/00 22:00 – 02/28/00 11:30 Questionable data (low DO readings, turbidity readings greater than 1000, SpCond, Salinity, and pH readings are also fairly low but reasonable, possible siltation event)

03/09/00 20:00 – 03/20/00 09:30 Questionable data (low DO readings, turbidity readings greater than 1000, SpCond, Salinity, and pH all appear reasonable, possible siltation event)

06/26/00 23:00 – 06/30/00 23:30 Questionable data (low DO readings, turbidity readings greater than 1000, SpCond and Salinity readings are fairly low but appear reasonable, pH readings are reasonable, possible siltation event)

09/18/00 16:30 – 09/28/00 09:00 Low SpCond, Salinity, and pH readings were attributed to several rain events that occurred during this period)

Turbidity

02/19/00 22:00 – 02/28/00 11:30 Questionable data (low DO readings, turbidity readings greater than 1000, SpCond, Salinity, and pH readings are also fairly low but reasonable, possible siltation event)

02/19/00 22:30 – 02/19/00 23:30 Questionable data (reading(s) greater than 1000)

02/20/00 01:30 – 02/20/00 03:30 Questionable data (reading(s) greater than 1000)

02/20/00 05:00 – 02/20/00 07:00	Questionable data (reading(s) greater than 1000)
02/20/00 11:30 – 02/20/00 13:00	Questionable data (reading(s) greater than 1000)
02/20/00 14:30 – 02/20/00 15:00	Questionable data (reading(s) greater than 1000)
02/20/00 18:00	Questionable data (reading(s) greater than 1000)
02/22/00 12:30	Questionable data (reading(s) greater than 1000)
02/23/00 01:00 – 02/23/00 01:30	Questionable data (reading(s) greater than 1000)
02/23/00 13:00	Questionable data (reading(s) greater than 1000)
02/24/00 12:30 – 02/24/00 14:00	Questionable data (reading(s) greater than 1000)
02/27/00 16:00	Questionable data (reading(s) greater than 1000)
02/27/00 17:00 – 02/27/00 22:00	Questionable data (reading(s) greater than 1000)
02/27/00 23:00 – 02/28/00 00:00	Questionable data (reading(s) greater than 1000)
02/28/00 01:00 – 02/28/00 04:30	Questionable data (reading(s) greater than 1000)
03/09/00 20:00 – 03/20/00 09:30	Questionable data (low DO readings, turbidity readings greater than 1000, SpCond, Salinity, and pH all appear reasonable, possible siltation event)
03/09/00 20:30	Questionable data (reading(s) greater than 1000)
03/11/00 21:30	Questionable data (reading(s) greater than 1000)
03/11/00 22:30	Questionable data (reading(s) greater than 1000)
03/12/00 08:30 – 03/12/00 09:00	Questionable data (reading(s) greater than 1000)
03/12/00 10:00 – 03/12/00 17:30	Questionable data (reading(s) greater than 1000)
03/12/00 18:30 – 03/12/19:30	Questionable data (reading(s) greater than 1000)
03/12/00 21:00 – 03/13/00 00:30	Questionable data (reading(s) greater than 1000)
03/17/00 04:00	Questionable data (reading(s) greater than 1000)
03/17/00 05:00	Questionable data (reading(s) greater than 1000)
03/17/00 16:30 – 03/17/00 17:00	Questionable data (reading(s) greater than 1000)
03/18/00 03:00 – 03/18/00 03:30	Questionable data (reading(s) greater than 1000)
03/20/00 01:00	Questionable data (reading(s) greater than 1000)
03/20/00 07:30	Questionable data (reading(s) greater than 1000)
03/30/00 12:00	Questionable data (reading greater than 1000, possibly caused by crab found in probe guard)
04/02/00 07:00	Questionable data (reading(s) greater than 1000)
04/18/00 00:30	Questionable data (reading(s) greater than 1000)
04/18/00 20:30	Questionable data (reading(s) greater than 1000)
04/18/00 21:30 – 04/18/00 22:30	Questionable data (reading(s) greater than 1000)
04/21/00 10:30	Questionable data (reading(s) greater than 1000)
04/21/00 21:30	Questionable data (reading(s) greater than 1000)
04/22/00 01:30	Questionable data (reading(s) greater than 1000)
04/22/00 12:30	Questionable data (reading(s) greater than 1000)
04/22/00 18:00 – 05/01/00 14:30	NERR Technician removed erroneous data (wiper blade failure)
05/25/00 20:30 – 05/25/00 21:00	Questionable data (reading(s) greater than 1000)
05/26/00 21:30	Questionable data (reading(s) greater than 1000)
05/27/00 19:00	Questionable data (reading(s) greater than 1000)
05/29/00 05:00	Questionable data (reading(s) greater than 1000)
05/29/00 10:30	Questionable data (reading(s) greater than 1000)
05/30/00 02:00	Questionable data (reading(s) greater than 1000)
05/30/00 04:00	Questionable data (reading(s) greater than 1000)
05/30/00 12:30	Questionable data (reading(s) greater than 1000)
06/01/00 06:00	Questionable data (reading(s) greater than 1000)
06/20/00 20:00	Questionable data (reading(s) greater than 1000)
06/26/00 23:00 – 06/30/00 23:30	Questionable data (low DO readings, turbidity readings greater than 1000, SpCond and Salinity readings are fairly low but appear reasonable, possible siltation event)
06/26/00 23:00	Questionable data (reading(s) greater than 1000)
06/27/00 00:00	Questionable data (reading(s) greater than 1000)
06/27/00 23:00	Questionable data (reading(s) greater than 1000)
07/11/00 23:00	Questionable data (reading(s) greater than 1000)
07/25/00 13:00	Questionable data (reading(s) greater than 1000)

07/28/00 23:00	Questionable data (reading(s) greater than 1000)
07/29/00 03:00	Questionable data (reading(s) greater than 1000)
07/30/00 01:30	Questionable data (reading(s) greater than 1000)
07/31/00 01:00	Questionable data (reading(s) greater than 1000)
08/01/00 20:00	Questionable data (reading(s) greater than 1000)
09/27/00 07:00 – 09/28/00 21:00	Questionable data (very high readings, many are greater than 1000, erroneous DO data were removed during this period, possible mud contamination)
09/27/00 07:00	Questionable data (reading(s) greater than 1000)
09/27/00 08:00	Questionable data (reading(s) greater than 1000)
09/27/00 12:00 – 09/27/00 14:00	Questionable data (reading(s) greater than 1000)
09/27/00 15:00	Questionable data (reading(s) greater than 1000)
09/27/00 18:30 – 09/27/00 19:00	Questionable data (reading(s) greater than 1000)
09/27/00 20:00 – 09/28/00 01:30	Questionable data (reading(s) greater than 1000)
09/28/00 08:00	Questionable data (reading(s) greater than 1000)
09/28/00 09:00 – 09/28/00 10:00	Questionable data (reading(s) greater than 1000)
09/28/00 11:00 – 09/28/00 14:00	Questionable data (reading(s) greater than 1000)
09/28/00 20:00	Questionable data (reading(s) greater than 1000)
09/28/00 21:00	Questionable data (reading(s) greater than 1000)
09/29/00 08:30	Questionable data (reading(s) greater than 1000)
10/08/00 19:30	Questionable data (negative reading(s), within known calibration error)
10/10/00 08:00	Questionable data (negative reading(s), within known calibration error)
11/23/00 18:00	Questionable data (reading(s) greater than 1000)
11/24/00 21:30	Questionable data (reading(s) greater than 1000)
11/25/00 05:00 – 11/25/00 07:00	Questionable data (reading(s) greater than 1000)

2001

All Variables

05/01/01 10:50 – 05/01/01 11:10	NERR Technician replaced PVC casing (existing casing was heavily fouled (barnacles, algae, and mussels), depth and DO readings may have been affected prior to this date)
11/20/01 10:00 – 12/03/01 10:30	NERR Technician corrected bad time stamp, off by 14 minutes
12/04/01 10:30 – 12/01/01 11:00	NERR Technician corrected bad time stamp, off by 7 seconds
12/04/01 11:30 – 12/17/01 15:00	NERR Technician corrected bad time stamp, off by 6 minutes 44 seconds
12/18/01 10:00 – 12/31/01 23:30	NERR Technician corrected bad time stamp, off by 57 seconds

Specific Conductivity

03/20/01 03:00 – 03/21/01 04:00	Questionable data (high SpCond and Salinity spikes, consistent with high tides and period of high water levels)
07/20/01 20:30 – 07/24/01 03:00	Questionable data (high SpCond and Salinity spikes, consistent with high tides and period of high water levels)

Salinity

03/20/01 03:00 – 03/21/01 04:00	Questionable data (high SpCond and Salinity spikes, consistent with high tides and period of high water levels)
07/20/01 20:30 – 07/24/01 03:00	Questionable data (high SpCond and Salinity spikes, consistent with high tides and period of high water levels)

Dissolved Oxygen % and mg/L

04/01/01 14:00 – 04/10/01 11:00	NERR Technician removed erroneous data (possible membrane puncture/fouling, extreme change in readings and negative values)
07/01/01 06:00 – 07/17/01 14:00	Questionable data (readings drop and remain fairly low, then increase and become somewhat erratic, sonde was heavily fouled upon retrieval and post deployment readings were about ½ of normal)
09/25/01 06:00 – 10/02/01 11:30	Questionable data (consistently low readings during this period, may be the result of increased runoff from rain events in late September)

10/14/01 22:30 – 10/16/01 08:00 Questionable data (consistently low readings during this period, may be the result of increased runoff from rain events in mid-October)

11/01/01 11:00 – 12/03/01 09:00 Questionable data (readings for these deployments are fairly high and seem disjunct from the surrounding months, possible calibration or sensor error)

Depth

09/05/01 12:30 – 09/17/01 08:30 Questionable data (sonde appears to be at incorrect depth, data were retained)

Turbidity

04/02/01 21:30 Questionable data (reading(s) greater than 1000)

04/05/01 14:30 Questionable data (reading(s) greater than 1000)

04/06/01 10:30 – 04/10/01 11:00 NERR Technician removed erroneous data (wiper blade stuck, algal growth, elevated readings)

04/29/01 16:30 Questionable data (reading(s) greater than 1000)

04/30/01 17:00 – 04/30/01 18:00 Questionable data (reading(s) greater than 1000)

04/30/01 20:30 – 04/30/01 21:00 Questionable data (reading(s) greater than 1000)

05/01/01 00:30 – 05/01/01 01:00 Questionable data (reading(s) greater than 1000)

05/01/01 03:00 Questionable data (reading(s) greater than 1000)

05/01/01 04:30 – 05/01/01 05:00 Questionable data (reading(s) greater than 1000)

05/01/01 07:00 Questionable data (reading(s) greater than 1000)

05/01/01 08:30 – 05/01/01 09:00 Questionable data (reading(s) greater than 1000)

05/10/01 16:00 – 05/10/01 16:30 Questionable data (reading(s) greater than 1000)

06/12/01 23:30 Questionable data (reading(s) greater than 1000)

06/13/01 01:30 – 06/13/01 02:00 Questionable data (reading(s) greater than 1000)

06/13/01 03:30 Questionable data (reading(s) greater than 1000)

06/13/01 04:30 – 06/13/01 05:00 Questionable data (reading(s) greater than 1000)

06/13/01 06:30 – 06/13/01 07:30 Questionable data (reading(s) greater than 1000)

06/13/01 09:30 Questionable data (reading(s) greater than 1000)

06/13/01 10:30 Questionable data (reading(s) greater than 1000)

06/13/01 13:30 – 06/13/01 14:30 Questionable data (reading(s) greater than 1000)

06/13/01 15:30 – 06/13/01 16:00 Questionable data (reading(s) greater than 1000)

06/13/01 17:00 – 06/13/01 17:30 Questionable data (reading(s) greater than 1000)

06/13/01 20:00 – 06/13/01 20:30 Questionable data (reading(s) greater than 1000)

06/14/01 03:00 – 06/14/01 03:30 Questionable data (reading(s) greater than 1000)

06/14/01 04:30 Questionable data (reading(s) greater than 1000)

06/14/01 05:30 – 06/14/01 07:00 Questionable data (reading(s) greater than 1000)

06/14/01 09:30 Questionable data (reading(s) greater than 1000)

06/30/01 06:00 Questionable data (reading(s) greater than 1000)

07/02/01 05:30 Questionable data (reading(s) greater than 1000)

07/04/01 05:30 Questionable data (reading(s) greater than 1000)

07/05/01 09:00 Questionable data (reading(s) greater than 1000)

08/31/01 18:30 Questionable data (reading(s) greater than 1000)

10/01/01 00:00 – 10/02/01 11:30 Questionable data (high readings correspond with low DO values, may be the result of increased runoff from rain events in late September)

10/14/01 16:00 – 10/16/01 08:00 Questionable data (high readings correspond with low DO values, may be the result of increased runoff from rain events in mid-October)

12/09/01 23:30 Questionable data (reading(s) greater than 1000)

2002

Note: On 08/13/02 at 09:30 the NERR Technician moved the sample location approximately 6 feet closer to the middle of the creek. The sonde is still attached to the wooden bridge, but was moved in an attempt to get better flow over the sonde probes and prevent the excessive silt/mud deposition that was occurring at the old location. Prior to implementing this change, two sondes were run in tandem at the new and old locations and it was determined that there was no discernible difference in water quality measurements. The new sample location is approximately 3 feet deeper than the old site.

All Variables

01/01/02 00:00 – 01/02/02 09:30 NERR Technician corrected bad time stamp, off by 57 seconds

01/03/02 11:30 – 01/16/02 11:00 NERR Technician corrected bad time stamp, off by 14 minutes and 12 seconds

01/31/02 10:00 – 02/13/02 10:00 NERR Technician corrected bad time stamp, off by 2 minutes and 5 seconds

01/29/02 NERR Technician began wrapping bottom of sonde in a wet, white towel and transporting in a bucket with small amount of water upon retrieval, during post calibration of dissolved oxygen, and prior to deployment. Previous protocol involved using YSI-supplied calibration cup.

06/11/02 19:00 – 06/18/02 09:30 Questionable data (excessive fouling (mud, algae, and sea-squirts) of probes upon retrieval, all parameters are suspect)

08/18/02 18:00 – 08/25/02 01:30 Questionable data (fouling event may have prevented proper movement of water over the probes during sampling, evidence of hypoxic event during the deployment, heavy sulfide staining on the sonde and chum bag at retrieval, the 2003 Data Manager removed erroneous dissolved oxygen data for this period, all other parameters are suspect)

Conductivity

05/01/02 NERR Technician replaced conductivity/dissolved oxygen probe due to probe malfunction

07/02/02 09:30 – 07/15/02 12:00 NERR Technician noted possible calibration problems with the conductivity probe (readings during calibration jumped back and forth between 9.1 and 4.5 in a 10 siemens standard, calibration was accepted without an error message and set to 10, there were no apparent adverse effects on conductivity, salinity, DO mg/L, or depth data during the deployment)

Salinity

05/01/02 NERR Technician replaced conductivity/dissolved oxygen probe due to probe malfunction

07/02/02 09:30 – 07/15/02 12:00 NERR Technician noted possible calibration problems with the conductivity probe (readings during calibration jumped back and forth between 9.1 and 4.5 in a 10 siemens standard, calibration was accepted without an error message and set to 10, there were no apparent adverse effects on conductivity, salinity, DO mg/L, or depth data during the deployment)

Dissolved Oxygen % and mg/L

03/04/02 NERR Technician changed probe warm-up period to 60 seconds

03/21/02 11:30 – 04/03/02 10:00 Questionable data (readings for this deployment are disjunct from the previous and following deployments, it is unclear if these data are erroneous, if they represent a decline in DO, or if the surrounding deployments are incorrect, the probe was replaced shortly after)

04/19/02 09:30 – 05/01/02 08:00 NERR Technician removed erroneous data (suspected probe malfunction, unusually high readings, pre-deployment calibration was stable at a low of 58.4% with DO gain of 1.71, no sign of tears or fouling of the membrane at retrieval)

05/01/02 NERR Technician replaced conductivity/dissolved oxygen probe due to probe malfunction

05/09/02 12:30 – 05/14/02 09:00 Questionable data (readings dropped to fairly low values and remained low until retrieval, no evidence of excessive fouling or a problem with the membrane, post-calibration DO% was 122%, suspect fouling by mud that was washed away upon sonde retrieval, correspond to suspect pH data)

07/02/02 10:30 – 07/15/02 12:00 NERR Technician removed erroneous data (tear in membrane, data were removed beginning with the estimated point of failure)

07/16/02 13:00 – 07/29/02 08:00 Questionable data (readings are higher than normal, post-retrieval calibration was low at 61.1% with little fouling, possible tear/bubbles under membrane (none found at retrieval))

08/18/02 18:00 – 08/25/02 01:30 Questionable data (readings drop to fairly low values and show no typical signs of tidal fluctuation, suspect that fouling event during this period prevented proper water flow over the probes, evidence of a hypoxic event during the deployment, heavy sulfide staining on the sonde and chum bag at retrieval)

11/12/02 20:00 – 11/15/02 05:30 Questionable data (readings drop dramatically, possibly due to a fouling event following a heavy rainfall on 11/12/02)

Depth

05/01/02 NERR Technician replaced conductivity/dissolved oxygen probe due to probe malfunction

07/02/02 09:30 – 07/15/02 12:00 NERR Technician noted possible calibration problems with the conductivity probe (readings during calibration jumped back and forth between 9.1 and 4.5 in a 10 siemens standard, calibration was accepted without an error message and set to 10, there were no apparent adverse effects on conductivity, salinity, DO mg/L, or depth data during the deployment)

pH

05/09/02 12:30 – 05/14/02 09:00 Questionable data (pH readings did not follow the normal tidal trend for this period, there was no evidence of excessive fouling upon retrieval, post-calibration pH in 7.0 standard was 7.59, suspect fouling by mud that was washed away upon sonde retrieval, correspond to suspect DO data)

06/13/02 03:30 – 06/18/02 09:30 Questionable data (readings did not show typical signs of tidal fluctuation, excessive fouling (mud, algae, and sea-squirts) of probes upon retrieval)

06/22/02 00:00 – 07/01/02 08:30 Questionable data (readings did not show typical signs of tidal fluctuation)

08/21/02 00:00 – 08/23/02 06:00 Questionable data (readings did not show typical signs of tidal fluctuation, probable fouling event that prevented water flow over the probes, evidence of hypoxic event during the deployment, heavy sulfide staining on the sonde and chum bag at retrieval)

Turbidity

02/19/02 12:00 Questionable data (reading(s) greater than 1000)

02/20/02 17:30 Questionable data (reading(s) greater than 1000)

02/28/02 NERR Technician began using new YSI-approved turbidity standard to calibrate

03/08/02 01:30 – 03/12/02 16:30 Questionable data (data for this period were interspersed with readings greater than 1000, battery power dropped steadily over this deployment and the sonde was heavily fouled upon retrieval, data following this period were determined to be erroneous and deleted by the 2003 Data Manager)

03/09/02 03:30 Questionable data (reading(s) greater than 1000)

03/09/02 04:30 Questionable data (reading(s) greater than 1000)

03/10/02 15:30 Questionable data (reading(s) greater than 1000)

03/10/02 17:30 Questionable data (reading(s) greater than 1000)

03/10/02 18:30 Questionable data (reading(s) greater than 1000)

03/10/02 23:00 Questionable data (reading(s) greater than 1000)

03/11/02 01:00 Questionable data (reading(s) greater than 1000)

03/11/02 03:30 Questionable data (reading(s) greater than 1000)

03/11/02 05:00 Questionable data (reading(s) greater than 1000)

03/11/02 06:00 Questionable data (reading(s) greater than 1000)

03/11/02 07:00 Questionable data (reading(s) greater than 1000)

03/11/02 09:00 Questionable data (reading(s) greater than 1000)

03/11/02 10:30 Questionable data (reading(s) greater than 1000)

03/11/02 14:00 Questionable data (reading(s) greater than 1000)

03/11/02 15:00 Questionable data (reading(s) greater than 1000)

03/11/02 18:00 Questionable data (reading(s) greater than 1000)

03/12/02 00:00 Questionable data (reading(s) greater than 1000)

03/12/02 02:00 – 03/12/02 03:00 Questionable data (reading(s) greater than 1000)

03/12/02 05:00 Questionable data (reading(s) greater than 1000)

03/12/02 08:00	Questionable data (reading(s) greater than 1000)
03/12/02 09:30	Questionable data (reading(s) greater than 1000)
03/12/02 16:00	Questionable data (reading(s) greater than 1000)
03/12/02 17:00 – 03/17/02 19:30	2003 Data Manager removed erroneous data (most readings were greater than 1000 and often the same value, battery power dropped steadily over the deployment until the sonde quit logging data, the sonde was heavily fouled upon retrieval, YSI engineer Mike Lizotte suggested that these readings were typical of a severe fouling event preventing adequate flow through the mesh bag and probe guard)
04/27/02 16:00 – 05/01/02 08:00	NERR Technician removed erroneous data (most readings were greater than 1000, the turbidity wiper was parked partially over the optics at retrieval, data were deleted from the suspected point of malfunction)
05/15/02 13:00 – 05/29/02 08:30	A cloth chum bag was not placed over the sonde guard for this deployment, turbidity readings could have been affected by this difference in protocol
06/03/02 15:00 – 06/03/02 15:30	Questionable data (reading(s) greater than 1000)
06/06/02 20:00	Questionable data (reading(s) greater than 1000)
06/07/02 08:00 – 06/07/02 11:30	Questionable data (reading(s) greater than 1000)
06/07/02 18:00	Questionable data (reading(s) greater than 1000)
06/08/02 01:30 – 06/08/02 02:30	Questionable data (reading(s) greater than 1000)
06/08/02 12:30 – 06/08/02 16:30	Questionable data (reading(s) greater than 1000)
06/08/02 17:30	Questionable data (reading(s) greater than 1000)
06/09/02 18:30 – 06/09/02 19:00	Questionable data (reading(s) greater than 1000)
06/11/02 19:00 – 06/18/02 09:30	NERR Technician removed erroneous data (many readings were greater than 1000, the sonde was heavily fouled with mud upon retrieval, the wiper arm was parked over the optics, all probes were submerged in about 2.5” of mud built up in the bottom of the probe guard, data were deleted from the suspected point of fouling/malfunction)
06/22/02 06:00 – 06/22/02 07:00	Questionable data (reading(s) greater than 1000, probably due to runoff from rain events in mid-late June, no evidence of fouling upon retrieval)
06/22/02 08:00	Questionable data (reading(s) greater than 1000, probably due to runoff from rain events in mid-late June, no evidence of fouling upon retrieval)
06/22/02 11:00	Questionable data (reading(s) greater than 1000, probably due to runoff from rain events in mid-late June, no evidence of fouling upon retrieval)
06/22/02 15:00 – 06/22/02 17:30	Questionable data (reading(s) greater than 1000, probably due to runoff from rain events in mid-late June, no evidence of fouling upon retrieval)
06/23/02 08:30	Questionable data (reading(s) greater than 1000, probably due to runoff from rain events in mid-late June, no evidence of fouling upon retrieval)
06/23/02 11:30 – 06/23/02 19:00	Questionable data (reading(s) greater than 1000, probably due to runoff from rain events in mid-late June, no evidence of fouling upon retrieval)
06/24/02 17:30 – 06/24/02 18:00	Questionable data (reading(s) greater than 1000, probably due to runoff from rain events in mid-late June, no evidence of fouling upon retrieval)
06/25/02 16:30	Questionable data (reading(s) greater than 1000, probably due to runoff from rain events in mid-late June, no evidence of fouling upon retrieval)
06/25/02 20:30	Questionable data (reading(s) greater than 1000, probably due to runoff from rain events in mid-late June, no evidence of fouling upon retrieval)
06/26/02 00:00	Questionable data (reading(s) greater than 1000, probably due to runoff from rain events in mid-late June, no evidence of fouling upon retrieval)
06/26/02 01:30 – 06/26/02 18:30	Questionable data (reading(s) greater than 1000, probably due to runoff from rain events in mid-late June, no evidence of fouling upon retrieval)
06/26/02 20:00	Questionable data (reading(s) greater than 1000, probably due to runoff from rain events in mid-late June, no evidence of fouling upon retrieval)
06/27/02 19:00	Questionable data (reading(s) greater than 1000, probably due to runoff from rain events in mid-late June, no evidence of fouling upon retrieval)
06/27/02 20:00 – 06/28/02 07:00	Questionable data (reading(s) greater than 1000, probably due to runoff from rain events in mid-late June, no evidence of fouling upon retrieval)

06/28/02 17:30	Questionable data (reading(s) greater than 1000, probably due to runoff from rain events in mid-late June, no evidence of fouling upon retrieval)
06/28/02 20:00 – 06/29/02 00:00	Questionable data (reading(s) greater than 1000, probably due to runoff from rain events in mid-late June, no evidence of fouling upon retrieval)
07/11/02 02:30	Questionable data (reading(s) greater than 1000)
07/11/02 06:00 – 07/11/02 07:30	Questionable data (reading(s) greater than 1000)
07/11/02 09:30:00	Questionable data (reading(s) greater than 1000)
07/11/02 10:30 – 07/11/02 14:30	Questionable data (reading(s) greater than 1000)
07/13/02 09:00 – 07/13/02 11:00	Questionable data (reading(s) greater than 1000)
07/13/02 12:00 – 07/13/02 13:30	Questionable data (reading(s) greater than 1000)
07/21/02 22:00 – 07/21/02 22:30	Questionable data (reading(s) greater than 1000)
07/22/02 16:30 – 07/22/02 18:00	Questionable data (reading(s) greater than 1000)
07/22/02 19:00	Questionable data (reading(s) greater than 1000)
07/23/02 01:00	Questionable data (reading(s) greater than 1000)
07/23/02 04:00 – 07/23/02 04:30	Questionable data (reading(s) greater than 1000)
07/23/02 08:00	Questionable data (reading(s) greater than 1000)
07/23/02 09:00	Questionable data (reading(s) greater than 1000)
07/23/02 19:00	Questionable data (reading(s) greater than 1000)
07/24/02 14:00 – 07/24/02 17:30	Questionable data (reading(s) greater than 1000)
07/24/02 18:30	Questionable data (reading(s) greater than 1000)
07/25/02 08:00	Questionable data (reading(s) greater than 1000)
07/25/02 10:30	Questionable data (reading(s) greater than 1000)
07/25/02 11:30 – 07/25/02 12:00	Questionable data (reading(s) greater than 1000)
07/25/02 13:00	Questionable data (reading(s) greater than 1000)
07/25/02 14:00	Questionable data (reading(s) greater than 1000)
07/25/02 15:00	Questionable data (reading(s) greater than 1000)
07/25/02 16:00	Questionable data (reading(s) greater than 1000)
07/25/02 17:00	Questionable data (reading(s) greater than 1000)
07/26/02 12:00	Questionable data (reading(s) greater than 1000)
07/26/02 19:00	Questionable data (reading(s) greater than 1000)
07/26/02 20:00	Questionable data (reading(s) greater than 1000)
07/28/02 11:00	Questionable data (reading(s) greater than 1000)
07/28/02 12:30 – 07/28/02 13:30	Questionable data (reading(s) greater than 1000)
07/28/02 16:00 – 07/28/02 16:30	Questionable data (reading(s) greater than 1000)
07/28/02 19:30 – 07/28/02 20:00	Questionable data (reading(s) greater than 1000)
07/28/02 21:30	Questionable data (reading(s) greater than 1000)
07/28/02 22:30	Questionable data (reading(s) greater than 1000)
07/28/02 23:30	Questionable data (reading(s) greater than 1000)
07/29/02 00:30 – 07/29/02 01:00	Questionable data (reading(s) greater than 1000)
07/29/02 03:00	Questionable data (reading(s) greater than 1000)
07/29/02 05:00	Questionable data (reading(s) greater than 1000)
07/29/02 06:30	Questionable data (reading(s) greater than 1000)
07/29/02 07:30 – 07/29/02 08:00	Questionable data (reading(s) greater than 1000)
08/21/02 02:00	Questionable data (reading greater than 1000, corresponds to a drop in dissolved oxygen and pH, most likely due to a fouling event)
08/27/02 10:00 – 09/09/02 08:30	NERR Technician was unable to calibrate the turbidity for this deployment due to a suspected problem with the APS turbidity standard
12/17/02 04:30	Questionable data (reading(s) greater than 1000)