Chesapeake Bay Virginia (CBV) NERR Water Quality Metadata
January - December 2006
Latest update: December 5, 2007

I. Data Set and Research Descriptors

1. Principal investigators and contact persons

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2. Entry verification

Deployment data are uploaded from the YSI data logger to a Personal Computer (IBM compatible). Data plots are produced and examined and erroneous data are detected using the PC6000 or EcoWatch software from YSI. Notes are made of any unusual data during that deployment. Files are exported from EcoWatch in a comma-delimited format (.CSV) and opened in Microsoft Excel for pre-processing with the EQWin format macro that was developed by the CDMO to reformat the header columns, insert station codes, insert a corrected time column and allow the technician to remove any pre- and post-deployment data from the file. Where deployment overlap occurs between files, the data produced by the newly calibrated sonde is accepted as being the most accurate. The pre-processed file is then ready to be copied into the EQWin water.eqi file where the data are QA/QC checked and archived in the database. EQWin queries, reports and graphs are used to identify data set outliers (values which fall outside the range that the instrument is designed to measure) and large sudden changes in parameter values. EQWin is also used to generate statistics, view graphs, create customized queries and reports of the data,

cross query the water, weather and nutrient data and finally export the data to the CDMO. Joy Austin has been responsible for data management since January 2002.

3. Research objectives

Goodwin Islands (GI) component:
The Goodwin Islands represent marsh islands surrounded by intertidal flats, submerged aquatic vegetation (SAV) beds, oyster reefs, and shallow open estuarine waters. Because minimal human activities occur within upland portions, the Goodwin Islands are suitable as a reference or control site for non-point source water quality issues. Furthermore, due to extensive wetlands, intertidal, and submerged habitats, the Goodwin Islands are used extensively for SAV, material flux, fisheries science and trophic interaction research activities.

Claybank (CB) component:
The Claybank site represents a shallow (< 2m) littoral area approximately 300-400 meters in width and located within the mesohaline portion of the York River estuary. Prior to 1972, this area supported submersed aquatic vegetation (SAV) but current conditions are not conducive to SAV survival. This site is used extensively to study sediment dynamics and environmental stress on SAV.

Taskinas Creek (TC) component:
The Taskinas Creek watershed is representative of an inner coastal plain, rural watershed within the southern Chesapeake Bay system. This watershed is dominated by forested and agricultural land uses with an increasing urban land use component. The drainage basin is suited for investigating hydrologic and non-point source water quality issues associated with developing land use patterns.

Sweet Hall Marsh (SH) component:
Sweet Hall Marsh is the most downriver extensive tidal freshwater marsh located in the Pamunkey River, one of two major tributaries of the York River. Research activities are currently addressing the impacts of salinity intrusion due to relative sea level rise. In addition, Sweet Hall Marsh has been used extensively to study general ecology and material flux within tidal freshwater marshes.

4. Research methods

The following research methods apply for all stations.

A YSI 6600 EDS unvented datalogger was used to measure specific conductivity, pH, depth, percent dissolved oxygen saturation, temperature, and turbidity at 15-minute intervals throughout the 2006 deployment year (see Section 6 for deployment intervals). Salinity and dissolved oxygen concentration are calculated parameters. Water depth data for 2006 have been post-corrected for atmospheric pressure changes that occurred between time of calibration and field retrieval. CBNERRVA maintains atmospheric

pressure sensors at Gloucester Point, Taskinas Creek, and Sweet Hall Marsh. Atmospheric pressure information is collected at 15-minute intervals. Calibration pressure information was provided by measurements made within the laboratory at Gloucester Point, VA. At approximately one to two-week intervals, the datalogger was returned to the lab for downloading, cleaning, membrane replacement and recalibration. Maintenance intervals vary from year to year and site-to-site depending on the amount of biofouling and expected battery life. In general, YSI dataloggers were deployed for two-week intervals from mid October to the end of June and one-week intervals from the beginning of July through mid October. A second YSI datalogger was deployed following retrieval of the original YSI datalogger in order to maintain a continuous record.

Field verification samples for pH, dissolved oxygen, salinity, and temperature were taken during the deployment/retrieval procedure. Dissolved oxygen was determined by Winkler titrations in the field with a LaMotte kit. Temperature, pH, and salinity were determined in the field by using the YSI 600 XLM sonde. All YSI procedures are in accordance with the YSI operating manual methods, Sections 3 and 7. Standards for pH were purchased from Fisher. Standards for specific conductivity and turbidity were purchased from YSI. Data are reviewed and edited according to the YSI Data Review and Editing Protocol in Appendix C of the CDMO manual version 5.2.

Goodwin Islands (GI) component:
The Chesapeake Bay Virginia NERR maintains a long-term water quality monitoring station at Goodwin Islands. This station is located on the southeastern side of the main island in a shallow embayment, approximately 400 meters from shore. The station was established in 1997 and consisted of a stable structure composed of a 4 inch PVC pipe housed within a galvanized steel tower. The lower portion of the PVC pipe was milled to allow for water circulation within the pipe and around the datalogger sensors. The datalogger was suspended so that the sensors are maintained 0.5 m from the bottom substrate. On July 22, 2004 (12:15 EST), the station was moved approximately 25 meters southwest of the previous station in order to address sand shoaling and station maintenance issues. Other than the datalogger being suspended 0.25 m above the bottom substrate, the construction design of the new station is identical to the previous station.

Clay Bank (CB) component:
The Chesapeake Bay Virginia NERR maintains a long-term water quality monitoring station at Clay Bank. The station is located within a shallow (<2m) littoral area approximately 300-400 meters wide. A stable structure that consists of a 4 inch PVC pipe attached to a piling, was built in January 2001. The lower portion of the PVC pipe was milled to allow for water circulation within the pipe and around the datalogger sensors. The datalogger is suspended so that sensors are located 0.25 m from the bottom substrate. On June 17, 2004 (13:15 EST) the station was moved approximately 100 meters offshore of the previous station in order to address sand shoaling and station maintenance issues. The new structure is composed of a 4 inch PVC pipe, with the lower portion milled to allow for uninhibited water circulation, housed within a galvanized steel

tower. The datalogger is suspended 0.31 m above the bottom substrate. The new station results in sensors being maintained 9 cm deeper as compared to the previous station. Due to station stabilization issues, the Clay Bank station was reestablished on June 5, 2006 at 13:00. The new station coordinates: Lat 37.20800; Long 76.36673 is located approximately 3 meters down river of the old station coordinates: Lat 37.21739; Long 76.3954. The new station retained a similar water depth from the water surface to the bottom of the datalogger as the old station.

Taskinas Creek (TC) component:
The Chesapeake Bay Virginia NERR maintains a long-term water quality monitoring station at Taskinas Creek. The station is located near the mouth of Taskinas Creek where the tidal marsh creek converges with the York River estuary. A simple deployment, consisting of a suspended wire attached to an overhanging tree, was established in September 1995. The datalogger was suspended at a fixed depth approximately 0.5 m above the creek-bed. In September 1997, the deployment was modified so that the datalogger remained secure and stable at all times within a 4 inch PVC housing attached to a piling system. The lower portion of the PVC pipe was milled to allow for water circulation within the pipe and around the datalogger sensors. The datalogger was suspended so that the sensors are maintained 0.5 m above the bottom substrate.

Sweet Hall Marsh (SH) component:
The Chesapeake Bay Virginia NERR maintains a long-term water quality station at Sweet Hall Marsh. This station, established in 2000, is located adjacent to a low-use boathouse where a 6-inch PVC pipe is attached to an adjacent pier piling. The datalogger was suspended so that the sensors remained 0.7 m from the bottom substrate. In contrast to above stations, the Sweet Hall Marsh station is maintained on a two-week deployment interval throughout the year. In order to prepare the Sweet Hall Marsh station for telemetry equipment, a new station platform was installed on May 4, 2006 at the exact location of the old station. All elevations, height off the bottom and total water depth remained the same as the old station platform.

5. Site location and character

(a) Goodwin Islands (Lat 37.21739; Long 76.3954)

The Goodwin Islands component of CBNERRVA is located on the southern side of the mouth of the York River. The station is located approximately 400 meters from shore, with an average water depth on the order of 1 meter. MHW depth at the sample location is approximately 1.70 meters. Goodwin Islands are a 315 ha (777 acre) archipelago of salt-marsh islands surrounded by inter-tidal flats and extensive beds of submerged aquatic vegetation dominated by eelgrass (Zostera marina) and Widgeon grass (Ruppia maritime). Water circulation patterns around the island are influenced by York River discharge and wind patterns of the Chesapeake Bay. Tides at the Goodwin Islands are semi-diurnal and display an average range of 0.7 m (range: 0.4 - 1.1 m). Mean seasonal water temperature values ranged from 13.7-15.6 °C for spring (March-May), 25.7-27.2

°C for summer (June-August), 18.0-19.2 °C for fall (September-November), and 4.7-8.2 °C for winter (January-February, and December). Mean seasonal salinity values ranged from 13.9-23.0 psu for spring, 17.2-23.0 psu for summer, 16.5-24.0 for fall, and 15.9-23.3 psu for winter. Summary water quality statistics were derived from 15-minute interval data for the years 1998-2004. The data logger probes are located 0.5 m above the sandy substrate bottom. Potential activities that could impact the site included, light recreational and commercial boating activity.

(b) Claybank (Lat 37.34855; Long 76.61123 January 1, 2006 – June 5, 2006
Claybank (Lat 37.20800; Long 76.36673) June 5, 2006 – December 31, 2006

The Claybank station is loaded within a shallow (<2m) littoral area approximately 300-400 meters wide along the mesohaline portion of the York River estuary. The site is approximately 26 km upriver from the mouth of the estuary. The shoreline consists of a narrow fringe of salt marsh with some areas armored with bulkhead or stone. Tidal range is on the order of 0.85 meters and depth at MHW is approximately 2.25 meters. This station is located along the north shoreline of the estuary in an area that historically (prior to 1972) supported submersed aquatic vegetation. The sampling station is influenced by a secondary turbidity maximum that moves back and forth in a region of about 20-40 km from the mouth of the York River estuary. Substrate within the region varies from fine sediments to sand. The site is exposed to strong winds from the northwest and re-suspension of sediment during storm events can be high. There is no fresh water input at this site. Seasonal water quality conditions described here are from 2001 through 2003 (Spring: March-May; Summer: June-August; Fall: September-November; Winter: December-February). Mean seasonal water temperature ranged between 14.0-16.2 for spring, 26.1-27.7 for summer, 17.5-19.4 for fall, and 4.9-8.0 °C in winter. Mean seasonal salinity ranged between 15.7-20.3 for spring, 16.5-21.3 for summer, 13.2-21.6 for fall, and 14.3-20.0 ppt in winter.

(c) Taskinas Creek (Lat 37.41497; Long 76.71441)

Taskinas Creek Reserve, component of CBNERRVA, encompasses 397 ha (980 acres) and is located within the boundaries of York River State Park near the town of Croaker, Virginia. The small sub-estuary of the York River is located on the southern side of the river, approximately 37 km up river from the mouth of the York River. The Taskinas Creek watershed is representative of an inner coastal plain, rural watershed within the southern Chesapeake Bay system. The watershed is dominated by forested and agricultural land uses with an increasing residential land use component. The non-tidal portion of Taskinas Creek contains feeder streams that drain oak-hickory forests, maple-gum-ash swamps and freshwater marshes. Freshwater mixed wetlands are found in the upstream reaches of Taskinas Creek. The creek is roughly 2 meters deep and 20 meters wide towards the lower end of the creek where substrate is dominated by fine sediment. MHW depth at the sample location is approximately 2.0 meters and mean tide range is 0.85 meters. Mean seasonal water temperature values ranged from 15.2-19.0 °C for spring, 26.8-28.2 °C for summer, 15.7-18.3 °C for fall, and 3.6-9.0 °C for winter.

Located within the meso-polyhaline region of the York River estuary, mean seasonal salinity values ranged from 4.0-14.0 psu for spring, 7.0-18.2 psu for summer, 6.9-17.0 for fall, and 5.8-15.3 psu for winter. Summary water quality statistics were derived from 15-minute interval data for the years 1998-2004. Potential activities that could impact the site include residential development, selective hardwood logging, and light recreational boating activity. Wildlife populations have been shown to influence microbiological water quality within the watershed.

(d) Sweet Hall Marsh (Lat 37.57138; Long 76.88424)

Sweet Hall Marsh is the most downriver extensive tidal freshwater marsh located in the Pamunkey River, one of two major tributaries of the York River. The marsh is located approximately 77 km upriver from the mouth of the York River estuary. The reserve is 353 ha (871 acres) in area and includes 331 ha (818 acres) of emergent fresh-water marsh, 14 ha (35 acres) of permanently flooded broad-leaved forested wetlands and approximately 4 ha (9 acres) of scrub-shrub. The marsh community is classified as freshwater mixed. Mean tidal range at Sweet Hall Marsh is on the order of 0.9 meters and MHW depth at the sample location is approximately 1.5 meters. The Pamunkey River, which surrounds Sweet Hall Marsh, can reach depths up to 15 meters. Substrate within the littoral zone and channel is dominated by fine sediment. Mean seasonal water temperature values ranged from 14.7-16.7 °C for spring, 26.7-27.9 °C for summer, 18.6-19.1 °C for fall, and 4.7-6.3 °C for winter. Located within the oligohaline, lower freshwater reaches of the Pamunkey River, mean seasonal salinity values ranged from 0.1-3.4 psu for spring, 0.1-8.4 psu for summer, 0.3-8.4 psu for fall, and 0.1-3.2 psu for winter. Summary water quality statistics were derived from 15-minute interval data for the years 2002-2004. Potential activities that could impact the site include minor municipal point source discharges above and below river of Sweet Hall Marsh, a major industrial discharge site (pulp mill) in the town of West Point and significant groundwater withdrawal near the confluence of the Pamunkey and York Rivers.

6. Data collection period

Sampling at Claybank (CB), Goodwin Islands (GI), Sweet Hall Marsh (SH), and Taskinas Creek (TC) began January 2006. Sampling was continuous through December 2006. Occasional time skips occurred at all sites due to low batteries, water leakage into the battery compartment, and for no apparent reason.

Claybank (CB)

Deployment Date/Time		Retrieval Date/Time	
(MM/DD/YY)	(HH:MM:SS)	(MM/DD/YY)	(HH:MM:SS)
12/19/05	10:00:00	01/04/06	10:00:00
01/04/06	10:15:00	01/19/06	11:15:00
01/19/06	11:30:00	02/01/06	11:30:00
02/01/06	11:45:00	02/15/06	09:15:00
02/15/06	09:30:00	03/01/06	11:30:00
03/01/06	11:45:00	03/23/06	12:15:00

03/23/06	12:30:00	04/04/06	08:45:00
04/04/06	09:00:00	04/19/06	08:30:00
04/19/06	08:45:00	05/03/06	10:45:00
05/03/06	11:00:00	05/17/06	11:00:00
05/17/06	11:15:00	05/31/06	11:00:00
05/31/06	11:15:00	06/14/06	11:15:00
06/14/06	11:30:00	06/29/06	10:30:00
06/29/06	10:45:00	07/12/06	11:00:00
07/12/06	11:15:00	07/20/06	10:00:00
07/20/06	10:15:00	07/26/06	12:45:00
07/26/06	13:00:00	08/02/06	10:00:00
08/02/06	10:15:00	08/09/06	11:30:00
08/09/06	11:45:00	08/16/06	11:45:00
08/16/06	12:00:00	08/23/06	10:15:00
08/23/06	10:30:00	08/30/06	08:00:00
08/30/06	08:15:00	09/06/06	10:45:00
09/06/06	11:00:00	09/13/06	10:45:00
09/13/06	11:00:00	09/27/06	12:30:00
09/27/06	12:45:00	10/04/06	11:00:00
10/04/06	11:15:00	10/11/06	10:45:00
10/11/06	11:00:00	10/18/06	10:45:00
10/18/06	11:00:00	11/01/06	12:00:00
11/01/06	12:15:00	11/20/06	13:00:00
11/20/06	13:15:00	12/06/06	12:45:00
12/06/06	13:00:00	12/11/06	15:30:00
12/11/06	15:45:00	12/18/06	12:15:00
12/18/06	12:30:00	01/04/07	12:00:00

Goodwin Islands (GI)

Deployment Date/Time		Retrieval Date/Time	
(MM/DD/YY)	(HH:MM:SS)	(MM/DD/YY)	(HH:MM:SS)
12/19/05	11:45:00	01/04/06	12:00:00
01/04/06	12:15:00	01/19/06	10:00:00
01/19/06	10:15:00	02/01/06	09:45:00
02/01/06	10:00:00	02/15/06	11:30:00
02/15/06	11:45:00	03/01/06	09:15:00
03/01/06	09:30:00	03/23/06	09:45:00
03/23/06	10:00:00	04/04/06	11:15:00
04/04/06	11:30:00	04/19/06	10:15:00
04/19/06	10:30:00	05/03/06	08:15:00
05/03/06	08:30:00	05/17/06	08:30:00
05/17/06	08:45:00	05/31/06	08:30:00
05/31/06	08:45:00	06/14/06	08:30:00
06/14/06	08:45:00	06/29/06	08:15:00
06/29/06	08:30:00	07/12/06	08:15:00
07/12/06	08:30:00	07/20/06	07:45:00

07/20/06	08:00:00	07/26/06	10:45:00
07/26/06	11:00:00	08/02/06	07:45:00
08/02/06	08:00:00	08/09/06	09:00:00
08/09/06	09:15:00	08/16/06	09:15:00
08/16/06	09:30:00	08/23/06	08:30:00
08/23/06	08:45:00	08/30/06	10:00:00
08/30/06	10:15:00	09/06/06	08:30:00
09/06/06	08:45:00	09/13/06	08:15:00
09/13/06	08:30:00	09/27/06	09:00:00
09/27/06	09:15:00	10/04/06	08:00:00
10/04/06	08:15:00	10/11/06	08:00:00
10/11/06	08:15:00	10/18/06	08:15:00
10/18/06	08:30:00	11/01/06	08:45:00
11/01/06	09:00:00	11/20/06	09:45:00
11/20/06	10:00:00	12/06/06	09:00:00
12/06/06	09:15:00	12/18/06	09:30:00
12/18/06	09:45:00	01/04/06	09:15:00

Sweet Hall Marsh (SH)

Deployment Date/Time		Retrieval Date/Time	
(MM/DD/YY)	(HH:MM:SS)	(MM/DD/YY)	(HH:MM:SS)
12/20/05	11:15:00	01/04/06	10:30:00
01/04/06	10:45:00	01/17/06	13:00:00
01/17/06	13:15:00	01/31/06	10:00:00
01/31/06	10:15:00	02/14/06	11:45:00
02/14/06	12:00:00	03/02/06	11:30:00
03/02/06	11:45:00	03/21/06	13:00:00
03/21/06	13:15:00	04/05/06	12:00:00
04/05/06	12:15:00	04/18/06	11:15:00
04/18/06	11:30:00	05/04/06	11:45:00
05/04/06	12:00:00	05/16/06	11:30:00
05/16/06	11:45:00	05/30/06	13:00:00
05/30/06	13:15:00	06/12/06	11:45:00
06/12/06	12:00:00	06/27/06	11:30:00
06/27/06	11:45:00	07/10/06	11:45:00
07/10/06	12:00:00	07/25/06	11:45:00
07/25/06	12:00:00	08/08/06	14:15:00
08/08/06	14:30:00	08/22/06	11:15:00
08/22/06	11:30:00	09/05/06	14:00:00
09/05/06	14:15:00	09/20/06	13:15:00
09/20/06	13:30:00	10/03/06	11:45:00
10/03/06	12:00:00	10/16/06	13:30:00
10/16/06	13:45:00	10/31/06	12:45:00
10/31/06	13:00:00	11/15/06	14:15:00
11/15/06	14:30:00	11/29/06	12:45:00
11/29/06	13:00:00	12/13/06	13:00:00

12/13/06	13:15:00	01/03/07	13:45:00

Taskinas Creek (TC)

Deployment Date/Time		Retrieval Date/Time	
(MM/DD/YY)	(HH:MM:SS)	(MM/DD/YY)	(HH:MM:SS)
12/20/05	12:45:00	01/04/06	12:00:00
01/04/06	12:15:00	01/17/06	10:45:00
01/17/06	11:00:00	01/31/06	11:45:00
01/31/06	12:00:00	02/14/06	09:30:00
02/14/06	09:45:00	03/02/06	09:45:00
03/02/06	10:00:00	03/21/06	10:15:00
03/21/06	10:30:00	04/05/06	09:00:00
04/05/06	09:15:00	04/18/06	08:30:00
04/18/06	08:45:00	05/04/06	08:45:00
05/04/06	09:00:00	05/16/06	08:45:00
05/16/06	09:00:00	05/30/06	09:00:00
05/30/06	09:15:00	06/12/06	09:00:00
06/12/06	09:15:00	06/27/06	08:45:00
06/27/06	09:00:00	07/10/06	09:00:00
07/10/06	09:15:00	07/18/06	08:45:00
07/18/06	09:00:00	07/25/06	09:00:00
07/25/06	09:15:00	08/01/06	08:15:00
08/01/06	08:30:00	08/08/06	11:00:00
08/08/06	11:15:00	08/15/06	08:30:00
08/15/06	08:45:00	08/22/06	08:45:00
08/22/06	09:00:00	08/29/06	08:30:00
08/29/06	08:45:00	09/05/06	11:00:00
09/05/06	11:15:00	09/12/06	08:00:00
09/12/06	08:15:00	09/20/06	09:15:00
09/20/06	09:30:00	10/03/06	08:45:00
10/03/06	09:00:00	10/16/06	10:15:00
10/16/06	10:30:00	10/31/06	09:45:00
10/31/06	10:00:00	11/15/06	11:15:00
11/15/06	11:30:00	11/29/06	09:45:00
11/29/06	10:00:00	12/13/06	09:30:00
12/13/06	09:45:00	01/03/07	10:15:00

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 (s) retain the right to be fully credited for having collected and processed the data. Following academic courtesy standards, the PI and NERR site where the data were collected will be contacted and fully acknowledged in any subsequent publications in which any part of the data are used. Manuscripts resulting from this

NOAA/OCRM supported research that are produced for publication in open literature, including refereed scientific journals, will acknowledge that the research was conducted under an award from the Estuarine Reserves Division, Office of Ocean and Coastal Resource 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 enclosed metadata reporting statement. The user bears all responsibility for its subsequent use/misuse in any further analyses or comparisons. The Federal government does not assume 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 Principal investigators and contact persons), from the Data Manager at the Centralized Data Management Office (please see personnel directory under the general information link on the CDMO home page) and online at the CDMO home page http://cdmo.baruch.sc.edu/. Data are available in text tab-delimited format.

8. Associated researchers and projects

Additional water quality monitoring programs within the York River system include:

a) USEPA Chesapeake Bay Mainstem and Tributary Monitoring Program. Since 1984, biweekly to monthly water quality sampling at a series of sites located along the mid-river channel has been conducted as part of the Chesapeake Bay Program (www.chesapeakebay.net). Station ID's: York River proper (WE4.2, LE4.3, LE4.2, LE4.1, RET4.3), the Pamunkey River (RET4.1, TF4.2) and Mattaponi River (RET4.2 and TF4.4).

b) VIMS Shoal Survey. Since 1984, biweekly to monthly water quality sampling at a series of sites located along the shoal areas of the lower York River estuary has been conducted by the Biological Sciences Department at the Virginia Institute of Marine Science. Station ID's include: Guinea Marsh, Goodwin Island, VIMS, Yorktown, Mumfort Islands, Catlett Islands and Clay Bank.

c) Alliance for the Chesapeake Bay Volunteer Monitoring Program. Physical and chemical (limited nutrients) data are collected by a volunteer network along the York River system (www. Acb-online.org). Station ID's include: Thorofare Creek, Wormley Creek, Blackwell Landing, Pamunkey Trail, Timberneck Creek, Yorktown Naval Weapons Station, Gloucester Point, West Point and Croaker Landing. Note: Some stations may be inactive.

d) VIMS Juvenile Abundance Monitoring Survey. As part of their Juvenile Abundance Monitoring Surveys, water quality and hydrographic data has been collected since 1968 along a series of sites in the York River estuary (includes the Mattaponi and Pamunkey River systems) by the Fisheries Science Department

(www.fisheries.vims.edu/research.html) at the Virginia Institute of Marine Science. Surveys include the VIMS Trawl Survey, the Striped Bass Seine Survey and the Juvenile Shad/River Herring Pushnet Survey.

e) Virginia Department of Health. The Virginia Department of Health, Division of Shellfish Sanitation's (www.vdh.state.va.us/shellfish) Seawater Sampling Program collects microbial and general water quality and hydrographic data along a series of sites in the York River estuary (includes lower portions of the Mattaponi and Pamunkey River systems).

f) USEPA Chesapeake Bay Shallow Water Monitoring Program. Since May 2003, CBNERRVA has maintained additional continuous (15 minute) fixed water monitoring stations within the York, Piankatank, and James River estuary systems using YSI 6600 EDS Datasondes. Measurements for this program include: temperature, specific conductivity, dissolved oxygen, pH, turbidity, insitu fluorescence, and depth. York River stations are located at Gloucester Point and White House (Pamunkey River). Piankatank River stations are located at Burton's Point, Bland's Wharf, and Dragon Run. James River stations are located at Wythe Point, James River Country Club, 4H Club, Chickahominy Haven, Rice Center, Appomattox, and Osborne Landing. An additional surface water quality mapping program, which monitors the above stated parameters, at sub-surface depths of approximately 0.25 m along continuous cruise tracts, occurs on a monthly basis in the York River estuary (see www.VECOS.org). This sub-surface continuous sampling of water quality has been conducted since May 2003 on the York River until present, and for the Pamunkey and Mattaponi Rivers from May 2003 through October 2005.

II. Physical Structure Descriptors

9) Sensor specifications

YSI 6600EDS data logger

Parameter: Temperature
Units: Celsius (C)
Sensor Type: Thermistor
Model #: 6560
Range: -5 to 45 °C
Accuracy: +/-0.15 °C
Resolution: 0.01 °C

Parameter: Conductivity
Units: milli-Siemens per cm (mS/cm)
Sensor Type: 4-electrode cell with autoranging
Model #: 6560
Range: 0 to 100 mS/cm
Accuracy: +/-0.5% of reading + 0.001 mS/cm

Resolution: 0.001 mS/cm to 0.1 mS/cm (range dependent)

Parameter: Salinity
Units: parts per thousand (ppt)
Sensor Type: Calculated from conductivity and temperature
Range: 0 to 70 ppt
Accuracy: +/- 1.0% of reading or 0.1 ppt, whichever is greater
Resolution: 0.01 ppt

Parameter: Dissolved Oxygen % saturation
Units: percent air saturation (%)
Sensor Type: Rapid Pulse - Clark type, polarographic
Model #: 6562
Range: 0 to 500 % air saturation
Accuracy: 0-200 % air saturation, +/- 2 % of the reading or 2 % air saturation, whichever is greater; 200-500 % air saturation, +/- 6 % of the reading
Resolution: 0.1 % air saturation

Parameter: Dissolved Oxygen mg/L (Calculated from % air saturation, temperature and salinity)
Units: milligrams per Liter (mg/L)
Sensor Type: Rapid Pulse - Clark type, polarographic
Model #: 6562
Range: 0 to 50 mg/L
Accuracy: 0 to 20 mg/L, +/- 2 % of the reading or 0.2 mg/L, whichever is greater; 20 to 50 mg/L, +/- 6 % of the reading
Resolution: 0.01 mg/L

Parameter: Non-Vented Level - Shallow (Depth)
Units: feet or meters (ft or m)
Sensor Type: Stainless steel strain gauge
Range: 0 to 30 ft (9.1 m)
Accuracy: +/- 0.06 ft (0.018 m)
Resolution: 0.001 ft (0.001 m)

Parameter: pH (EDS probe)
Units: units
Sensor Type: Glass combination electrode
Model #: 6561
Range: 0 to 14 units
Accuracy: +/- 0.2 units
Resolution: 0.01 units

Parameter: Turbidity
Units: nephelometric turbidity units (NTU)
Sensor Type: Optical, 90 ° scatter, with mechanical cleaning

Model #: 6136
Range: 0 to 1000 NTU
Accuracy: +/- 5 % reading or 2 NTU (whichever is greater)
Resolution: 0.1 NTU

Dissolved Oxygen qualifier: The reliability of the dissolved oxygen (DO) data after 96 hours post-deployment for non-EDS (Extended Deployment System) data sondes may be problematic due to fouling which forms on the DO probe membrane during some deployments (Wenner et al. 2001). Many reserves have upgraded to the YSI 6600 EDS data sondes, which increases DO accuracy and longevity by reducing the environmental effects of fouling. The user is therefore advised to consult the metadata and to exercise caution when utilizing the DO data beyond the initial 96-hour time period. However, this potential drift is not always problematic for some uses of the data, i.e. periodicity analysis. It should also be noted that the amount of fouling is very site specific and that not all data are affected. The Research Coordinator at the specific NERR site should be contacted concerning the reliability of the DO data because of the site and seasonal variation in the fouling of the DO sensor. All sondes deployed at CBV NERR in 2006 were 6600 EDS models

Depth qualifier: The NERR System-Wide Monitoring Program utilizes YSI data sondes that can be equipped with either depth or water level sensors. Both sensors measure water depth, but by convention, level sensors refer to atmospherically vented measurements and depth refers to non-vented measurements. Standard calibration protocols for the non-vented sensor use the atmospheric pressure at the time of calibration. Therefore, changes in atmospheric pressure between calibrations appear as changes in water depth. The error is equal to approximately 1.03cm for every 1 millibar change in atmospheric pressure. This error is eliminated for level sensors because they are vented to the atmosphere throughout the deployment time interval. If proper atmospheric pressure data are available, non-vented sensor depth measurements can be corrected for deployments between calibrations. Water depth data for 2006 have been post-corrected for atmospheric pressure changes that occurred between time of calibration and field retrieval. Readings for both vented and non-vented are automatically compensated for water density changes due to variations in temperature and salinity.

10. Coded variable definitions

Sampling station:	Sampling site code:	Station code:
Claybank	CB	cbvcbwq
Goodwin Islands	GI	cbvgiwq
Sweet Hall Marsh	SH	cbvshwq
Taskinas Creek	TC	cbvtcwq

11. Anomalous/Suspect Data

Specific dates and time ranges of potentially influenced data are listed with each respective month. Starting with January, data were extracted in accordance with Version

5.2 of the CDMO Manual. Significantly elevated single point spike turbidity values which occurred between background values were considered to be a product of sensor interference**.**

JANUARY

Claybank:

a) For the following dates and times, turbidity readings are suspect. Data retained.

01/18/06 04:15:00 114 NTU
01/18/06 04:30:00 101 NTU
01/30/06 21:15:00 126 NTU

b) For the following dates and times, pH readings are suspect due to reasons unknown. Post calibration within specifications of probe. Data retained.

01/01/06 00:00:00 - 01/04/06 10:00:00
01/19/06 11:30:00 - 01/31/06 23:45:00

Goodwin Island:

a) For the following dates and times, pH readings are suspect due to reasons unknown. Post calibration within specifications of probe. Data retained.

01/04/06 12:15:00 – 01/19/06 10:00:00

b) For the following dates and times, DO % saturation and DO mg/L values are suspect but were retained. The remainder of the deployment was deleted due to a slow decrease in oxygen concentrations. Post calibration 67.0%.

01/19/06 10:15:00 - 01/22/06 17:45:00

c) For the following dates and times, temperature, DO% sat, DO mg/L, and pH data are suspect. Data retained.

01/11/06 03:30:00

d) For the following dates and times, turbidity readings are suspect. Data retained.

01/03/06 07:45:00 035 NTU

Sweet Hall Marsh:

a) For the month of January, depth values occasionally reported negative and/or zero due to sensor precision. Data retained.

b) For the following dates and times, specific conductance and salinity values were significantly different as compared to pre and post measurement, which occurred at low tide and may indicate probe exposure. Data retained.

01/15/06 05:15:00
01/15/06 09:30:00
01/15/06 20:30:00
01/18/06 19:45:00
01/18/06 20:45:00
01/19/06 21:15:00
01/19/06 22:45:00
01/20/06 09:15:00
01/20/06 11:30:00
01/20/06 22:00:00
01/26/06 15:15:00
01/26/06 17:45:00
01/27/06 03:30:00
01/27/06 04:45:00

c) For the following dates and times, pH readings are suspect due to reasons unknown. Post calibration within specifications of probe. Data retained.

01/04/06 10:45:00 - 01/17/06 13:00:00
01/31/06 10:15:00 - 01/31/06 23:45:00

d) For the following dates and times, turbidity readings are suspect due to station maintenance. Data retained.

01/15/06 09:30:00 - 01/15/06 13:00:00

Taskinas Creek:

a) For the following dates and times, DO% sat and DO mg/L data are suspect. Data retained.

01/21/06 21:00:00

b) For the following dates and times, specific conductance and salinity values are anomalous as compared to pre and post measurements. Data retained.

01/21/06 21:00:00

c) For the following dates and times, turbidity readings are suspect. Data retained.

01/31/06 02:15:00 651 NTU

FEBRUARY

Claybank:

a) For the following dates and times, DO% sat, DO mg/L, and pH data are suspect. Data retained.

02/08/06 15:15:00

b) For the following dates and times, pH readings are suspect due to reason unknown. Post calibration within specifications of probe. Data retained.

02/01/06 00:00:00 - 02/01/06 11:30:00
02/15/06 09:30:00 - 02/28/06 23:45:00

Goodwin Island:

a) For the following dates and times, DO % saturation and DO mg/L values were suspect due to a slow decrease in oxygen concentrations throughout the deployment. Post calibration 67.0%. Data retained.

02/01/06 00:00:00 - 02/01/06 09:45:00

b) For the following dates and times, DO % saturation and DO mg/L values were suspect due to a slow decrease in oxygen concentrations throughout the deployment. Post calibration 70.0%. Data retained.

02/01/06 10:00:00 - 02/15/06 11:30:00

c) For the following dates and times, DO % saturation and DO mg/L values are suspect but were retained. The remainder of the deployment was deleted due to a slow decrease in oxygen concentrations. Post calibration 72.0%.

02/15/06 11:45:00 - 02/22/06 17:00:00

Sweet Hall Marsh:

a) For the following dates and times, pH readings are suspect due to reasons unknown. Post calibration within specifications of probe. Data retained.

02/01/06 00:00:00 - 02/14/06 11:45:00

b) For the following dates and times, turbidity readings are suspect due to station maintenance. Data retained.

02/14/06 12:00:00 117 NTU
02/14/06 12:15:00 50 NTU

c) For the following dates and times, specific conductance and salinity values were significantly different as compared to pre and post measurement, which occurred at low tide and may indicate probe exposure. Data retained.

02/15/06 19:30:00
02/18/06 22:45:00
02/19/06 23:30:00

d) For the following dates and times, turbidity values were elevated which occurred at low tide. Post calibration within standard specifications. Data suspect, data retained.

02/18/06 22:45:00 - 02/19/06 01:45:00

Taskinas Creek:

a) For the following dates and times, turbidity readings are suspect. Data retained.

02/05/06 02:30:00 621 NTU
02/05/06 02:45:00 238 NTU

MARCH

Claybank:

a) For the following dates and times, turbidity readings are suspect. Data retained.

03/31/06 23:30:00 129 NTU

b) For the following dates and times, during the month of March, elevated turbidity values were observed on an incoming tide. No obvious storm activity, based on rainfall, was observed during this time period. Data suspect, data retained.

03/27/06 16:30:00 - 03/27/06 20:30:00
03/29/06 05:15:00 - 03/29/06 10:45:00
03/29/06 17:00:00 - 03/29/06 20:30:00

c) For the following dates and times, pH readings are suspect due to reason unknown. Post calibration within specifications of probe. Data retained.

03/01/06 00:00:00 - 03/01/06 11:30:00

Goodwin Island:

a) For the following dates and times, DO % saturation and DO mg/L values were suspect due to a slow decrease in oxygen concentrations throughout the deployment. Post calibration 72.0%. Data retained.

03/01/06 00:00:00 - 03/01/06 09:15:00

b) For the following dates and times, turbidity readings are suspect. Data retained.

03/31/06 07:15:00 016 NTU

c) For the following dates and times, DO % saturation and DO mg/L values are suspect due to a DO membrane puncture which occurred at some point over the deployment, but were retained. The remainder of the deployment was marked by a slow decrease in oxygen concentrations and deleted. Post calibration 81.3%.

03/23/06 10:00:00 - 03/329/06 19:00:00

Sweet Hall Marsh:

a) For the following dates and times, pH readings are suspect due to reasons unknown. Post calibration within specifications of probe. Data retained.

03/02/06 11:45:00 - 03/21/06 13:00:00

b) For the month of March, depth values occasionally reported negative and/or zero due to sensor precision. Data retained.

c) For the following dates and times, temperature readings are suspect due to station maintenance. Data retained.

03/02/06 11:45:00

Taskinas Creek:

a) For the following dates and times, turbidity readings are suspect. Data retained.

03/04/06 13:30:00 641 NTU

APRIL

Claybank:

a) For the following dates and times, turbidity readings are suspect. Data retained.

04/24/06 06:30:00 175 NTU
04/30/06 20:15:00 170 NTU

b) For the following dates and times, specific conductance and salinity values are anomalous as compared to pre and post measurements. Data retained.

04/21/06 14:00:00

Goodwin Island:

a) For the following dates and times, DO membrane puncture, no obvious point of puncture. Post calibration 81.3%, entire deployment suspect. Data retained.

04/01/06 00:00:00 - 04/04/06 11:15:00

b) For the following dates and times, turbidity readings are suspect. Data retained.

04/11/06 06:15:00 065 NTU

c) For the following dates and times, DO% sat and DO mg/L data are suspect. Data retained.

04/11/06 11:15:00 - 04/11/06 11:30:00

d) For the following dates and times, specific conductance and salinity values diminished throughout deployment due to heavy barnacle growth inside of conductivity cells. Entire deployment was flagged as suspect. Post calibration within standard specifications (9.595). Data suspect, data retained.

04/04/06 11:30:00 - 04/19/06 10:15:00

e) For the following dates and times, turbidity values were elevated due to heavy fouling on faces of probes. Data suspect, data retained.

04/11/06 13:30:00 - 04/19/06 10:15:00

Sweet Hall Marsh:

a) For the month of April, depth values occasionally reported negative and/or zero due to sensor precision. Data retained.

b) For the following dates and times, turbidity readings are suspect. Data retained.

04/21/06 16:30:00 148 NTU
04/29/06 19:30:00 142 NTU

c) For the following dates and times, turbidity readings are suspect due to station maintenance. Data retained.

04/05/06 12:15:00 - 04/05/06 15:15:00

Taskinas Creek:

a) For the following dates and times, DO% sat and DO mg/L data are suspect. Data retained.

04/25/06 05:45:00 - 04/25/06 06:45:00

b) For the following dates and times, specific conductance and salinity values data are suspect due to rain event which affected readings. Data retained.

04/22/06 19:00:00 - 04/23/06 00:45:00

MAY

Claybank:

a) For the following dates and times, specific conductance and salinity values are anomalous as compared to pre and post measurements. Data retained.

05/10/06 04:45:00
05/13/06 08:45:00

b) For the following dates and times, turbidity readings are suspect. Data retained.

05/01/06 01:30:00 213 NTU
05/26/06 04:15:00 345 NTU

c) For the following dates and times, elevated turbidity values were observed on an incoming tide. No obvious storm activity, based on rainfall, was observed during this time period. Data suspect, data retained.

05/08/06 16:15:00 - 05/08/06 20:00:00

Goodwin Island:

a) For the following dates and times, turbidity readings are suspect. Data retained.

05/01/06 00:30:00 156 NTU
05/29/06 02:15:00 187 NTU

b) For the following dates and times, depth readings were influenced by a storm event, sonde bouncing around inside of tube. Data retained.

05/08/06 01:30:00 - 05/08/06 03:15:00

Sweet Hall Marsh:

a) For the following dates and times, turbidity readings are suspect due to station being rebuilt in same location. Data retained.

05/04/06 12:00:00 104 NTU

b) For the following dates and times, turbidity readings are suspect. Data retained.

05/01/06 02:15:00 594 NTU
05/15/06 12:15:00 103 NTU
05/23/06 12:00:00 104 NTU

c) For the following dates and times, pH readings are slightly depressed due to exchange of datalogger. Post calibration within specifications of probe. Data suspect, data retained.

05/30/06 13:15:00 - 05/30/06 16:45:00

Taskinas Creek:

(No suspect data)

JUNE

Claybank:

a) For the following dates and times, turbidity readings are suspect. Data retained.

06/13/06 03:45:00 187 NTU
06/13/06 04:00:00 134 NTU

Goodwin Island:

a) For the following dates and times, turbidity readings are suspect. Data retained.

06/27/06 19:15:00 164 NTU

Sweet Hall Marsh:

a) For the following dates and times, turbidity readings are suspect. Data retained.

06/10/06 16:15:00 127 NTU
06/18/06 00:45:00 106 NTU

06/19/06 02:00:00 155 NTU
06/22/06 09:15:00 136 NTU
06/27/06 16:30:00 110 NTU
06/30/06 09:45:00 153 NTU

Taskinas Creek:

a) For the following dates and times, turbidity readings are suspect. Data retained.

06/07/06 23:30:00 538 NTU
06/07/06 23:45:00 498 NTU
06/14/06 04:30:00 140 NTU
06/14/06 15:30:00 466 NTU
06/14/06 16:30:00 561 NTU
06/21/06 13:15:00 213 NTU

b) For the following dates and times, pH readings diminished throughout the deployment due to heavy fouling of the probe. Post calibration within standard specifications. Data retained.

06/27/06 09:00:00 - 06/30/06 23:45:00

JULY

Claybank:

a) For the following dates and times, turbidity readings are suspect. Data retained.

07/06/06 15:30:00 139 NTU
07/10/06 08:00:00 463 NTU

b) For the following dates and times, depth values occasionally reported negative and/or zero due to sensor precision. Data retained.

07/11/06 03:15:00 - 07/11/06 04:45:00
07/11/06 15:15:00 - 07/11/06 16:30:00
07/12/06 03:30:00 - 07/12/06 05:45:00
07/23/06 02:15:00 - 07/23/06 02:30:00

Goodwin Island:

a) For the following dates and times, turbidity readings are suspect. Data retained.

07/04/06 18:45:00 48 NTU
07/05/06 00:30:00 80 NTU
07/05/06 07:15:00 128 NTU

Sweet Hall Marsh:

a) For the following dates and times, depth values occasionally reported negative and/or zero due to sensor precision. Data retained.

07/03/06 11:15:00
07/03/06 11:45:00
07/29/06 08:15:00 - 07/29/06 09:15:00

b) For the following dates and times, DO% sat and DO mg/L data are suspect. Data retained.

07/04/06 13:45:00

c) For the following dates and times, temperature, DO% sat, DO mg/L, and pH data are suspect. Data retained.

07/04/06 13:30:00

d) For the following dates and times, turbidity readings are suspect. Data retained.

07/15/06 11:00:00 101 NTU

Taskinas Creek:

a) For the following dates and times, turbidity readings are suspect. Data retained.

07/20/06 06:15:00 120 NTU
07/23/06 04:30:00 151 NTU

b) For the following dates and times, pH readings diminished throughout the deployment due to heavy fouling of the probe. Post calibration within standard specifications. Data retained.

07/01/06 00:00:00 – 07/10/06 09:00:00

AUGUST

Claybank:

a) For the following dates and times, turbidity readings are suspect. Data retained.

08/03/06 23:00:00 100 NTU
08/05/06 18:30:00 99 NTU
08/13/06 22:45:00 102 NTU

08/14/06 01:15:00 106 NTU
08/14/06 02:15:00 106 NTU
08/22/06 06:15:00 112 NTU

Goodwin Island:

a) For the following dates and times, turbidity readings are suspect. Data retained.

08/13/06 20:30:00 45 NTU
08/16/06 05:15:00 140 NTU
08/19/06 04:45:00 185 NTU
08/20/06 13:15:00 27 NTU
08/26/06 05:30:00 25 NTU

b) For the following dates and times, turbidity readings are suspect due to station maintenance. Data retained.

08/09/06 07:45:00 – 08/09/06 09:00:00

c) For the following dates and times, DO % saturation and DO mg/L values were suspect due to a slow decrease in oxygen concentrations throughout the deployment. Post calibration 83.7%. Data retained.

08/14/06 09:45:00 - 08/16/06 09:15:00

d) For the following dates and times, turbidity values were elevated compared to replacement sonde for the next deployment. Post calibration within standard specifications. Data suspect, data retained.

08/15/06 05:30:00 - 08/16/06 09:15:00

e) For the following dates and times, all data were influenced by Tropical Storm Ernesto. Data suspect, data retained.

08/31/06 08:30:00 - 08/31/06 23:45:00

Sweet Hall Marsh:

a) For the following dates and times, turbidity readings are suspect. Data retained.

08/04/06 10:00:00 153 NTU
08/04/06 14:00:00 162 NTU
08/08/06 23:30:00 143 NTU
08/09/06 06:15:00 159 NTU
08/16/06 05:00:00 136 NTU
08/23/06 11:15:00 105 NTU

08/25/06 17:15:00 131 NTU

b) For the following dates and times, all data values were influenced by Tropical Storm Ernesto. Data suspect, data retained.

08/31/06 17:30:00 - 08/31/06 23:45:00

Taskinas Creek:

a) For the following dates and times, turbidity readings are suspect due to station maintenance. Data retained.

08/22/06 09:00:00 – 08/22/06 09:30:00

b) For the following dates and times, turbidity readings are suspect. Data retained.

08/04/06 00:30:00 101 NTU
08/06/06 19:45:00 146 NTU
08/13/06 16:45:00 152 NTU
08/19/06 23:15:00 292 NTU
08/19/06 23:30:00 383 NTU
08/20/06 00:15:00 767 NTU
08/20/06 00:30:00 334 NTU
08/22/06 06:30:00 130 NTU
08/22/06 17:45:00 212 NTU
08/22/06 19:00:00 159 NTU
08/25/06 08:00:00 142 NTU
08/25/06 08:15:00 126 NTU
08/25/06 17:30:00 201 NTU
08/28/06 09:00:00 301 NTU
08/28/06 09:15:00 273 NTU
08/30/06 00:00:00 184 NTU

c) For the following dates and times, DO% sat, DO mg/L, and pH values are suspect. Data retained.

08/29/06 14:45:00

d) For the following dates and times, all data values were influenced by Tropical Storm Ernesto. Data suspect, data retained.

08/31/06 21:45:00 - 08/31/06 23:45:00

SEPTEMBER

Claybank:

a) For the following dates and times, all data values were influenced by Tropical Storm Ernesto. Data suspect, data retained.

09/01/06 01:45:00 - 09/01/06 18:30:00

Goodwin Island:

a) For the following dates and times, turbidity readings are suspect. Data retained.

09/01/06 18:15:00 406 NTU
09/25/06 20:30:00 147 NTU
09/25/06 20:45:00 101 NTU
09/26/06 22:30:00 108 NTU

b) For the following dates and times, specific conductance and salinity values diminished throughout deployment due to heavy barnacle growth inside of conductivity cells. Entire deployment was flagged as suspect. Post calibration not within standard specifications (9.272). Data suspect, data retained.

09/13/06 08:30:00 - 09/27/06 09:00:00

c) For the following dates and times, DO % saturation and DO mg/L values were suspect due to a slow decrease in oxygen concentrations throughout the deployment. Post calibration 87.5%. Data retained.

09/11/06 04:30:00 - 09/13/06 08:15:00

d) For the following dates and times, DO% sat, DO mg/L, and pH data are suspect. Data retained.

09/04/06 08:30:00 – 09/04/06 09:15:00

e) For the following dates and times, turbidity values were elevated compared to replacement sonde for the next deployment. Post calibration within standard specifications. Data suspect, data retained.

09/13/06 08:30:00 - 09/27/06 09:00:00

f) For the following dates and times, all data values were influenced by Tropical Storm Ernesto. Data suspect, data retained.

09/01/06 00:00:00 - 09/01/06 23:30:00

Sweet Hall Marsh:

a) For the following dates and times, turbidity readings are suspect. Data retained.

09/06/06 15:15:00 123 NTU
09/06/06 15:45:00 80 NTU
09/15/06 13:00:00 148 NTU

b) For the following dates and times, all data values were influenced by Tropical Storm Ernesto. Data suspect, data retained.

09/01/06 00:00:00 - 09/02/06 07:15:00

Taskinas Creek:

a) For the following dates and times, turbidity readings are suspect. Data retained.

09/05/06 05:00:00 153 NTU
09/10/06 15:00:00 215 NTU
09/10/06 15:15:00 107 NTU
09/12/06 14:15:00 423 NTU
09/12/06 14:30:00 409 NTU
09/13/06 22:45:00 354 NTU
09/13/06 23:00:00 318 NTU
09/13/06 23:30:00 321 NTU
09/14/06 07:30:00 471 NTU
09/14/06 10:30:00 152 NTU
09/15/06 00:30:00 158 NTU
09/15/06 17:30:00 306 NTU
09/15/06 17:45:00 158 NTU
09/15/06 18:45:00 167 NTU
09/15/06 17:30:00 306 NTU
09/15/06 17:45:00 158 NTU
09/15/06 18:45:00 167 NTU
09/15/06 20:15:00 292 NTU
09/15/06 20:30:00 449 NTU
09/15/06 22:00:00 188 NTU
09/15/06 22:15:00 185 NTU
09/16/06 00:30:00 608 NTU
09/17/06 02:45:00 128 NTU
09/18/06 09:00:00 140 NTU
09/19/06 17:00:00 155 NTU
09/21/06 13:00:00 164 NTU
09/23/06 15:15:00 124 NTU
09/25/06 11:00:00 447 NTU
09/25/06 11:15:00 383 NTU
09/25/06 21:15:00 228 NTU
09/25/06 21:30:00 152 NTU

09/26/06 02:30:00 179 NTU
09/26/06 02:45:00 145 NTU
09/26/06 13:30:00 364 NTU
09/29/06 10:30:00 137 NTU

b) For the following dates and times, DO% sat ,DO mg/L and pH data are suspect. Data retained.

09/05/06 21:15:00
09/06/06 22:15:00
09/08/06 23:45:00
09/09/06 12:15:00
09/10/06 13:15:00
09/11/06 14:15:00

c) For the following dates and times, specific conductance and salinity values are anomalous as compared to pre and post measurements. Data retained.

09/09/06 00:15:00

d) For the following dates and times, all data values were influenced by Tropical Storm Ernesto. Data suspect, data retained.

09/01/06 00:00:00 - 09/01/06 23:30:00

OCTOBER

Claybank:

a) For the following dates and times, depth and turbidity values are suspect due to a storm event. Data retained.

10/06/06 07:15:00 - 10/07/06 15:30:00

Goodwin Island:

a) For the following dates and times, turbidity readings are suspect. Data retained.

10/03/06 19:30:00 28 NTU
10/23/06 11:30:00 39 NTU

b) For the following dates and times, depth and turbidity values are suspect due to a storm event. Data retained.

10/06/06 08:45:00 - 10/08/06 23:15:00

Sweet Hall Marsh:

a) For the following dates and times, specific conductance and salinity values were significantly different as compared to pre and post measurement, which occurred at low tide and may indicate probe exposure. Data retained.

10/31/06 02:45:00

b) For the following dates and times, depth and salinity values are suspect due to a storm event. Data retained.

10/06/06 07:45:00 - 10/08/06 07:45:00

c) For the following dates and times, turbidity readings are suspect. Data retained.

10/05/06 23:00:00 157 NTU

Taskinas Creek:

a) For the following dates and times, turbidity readings are suspect. Data retained

10/01/06 14:45:00 104 NTU
10/01/06 16:15:00 127 NTU
10/01/06 16:30:00 179 NTU
10/02/06 15:45:00 165 NTU
10/03/06 08:45:00 114 NTU
10/08/06 08:00:00 370 NTU
10/08/06 08:15:00 347 NTU
10/11/06 05:00:00 111 NTU
10/29/06 12:15:00 143 NTU

b) For the following dates and times, depth and turbidity values are suspect due to a storm event. Data retained.

10/06/06 07:15:00 - 10/08/06 12:30:00

NOVEMBER

Claybank:

a) For the following dates and times, depth values are suspect due to a storm event. Data retained.

11/22/06 04:00:00 - 11/22/06 17:30:00

Goodwin Island:

a) For the following dates and times, DO % saturation and DO mg/L values were suspect due to a slow decrease in oxygen concentrations throughout the deployment. Post calibration 70.5%. Data retained.

11/01/06 09:00:00 - 11/20/06 09:45:00

b) For the following dates and times, depth values are suspect due to a storm event. Data retained.

11/21/06 07:15:00 - 11/23/06 01:00:00

c) For the following dates and times, turbidity readings are suspect. Data retained.

11/20/06 10:00:00 12 NTU
11/20/06 11:15:00 26 NTU
11/20/06 11:45:00 14 NTU
11/21/06 11:15:00 123 NTU
11/29/06 13:00:00 12 NTU

Sweet Hall Marsh:

a) For the following dates and times, depth values are suspect due to a storm event. Data retained.

11/22/06 12:30:00 - 11/22/06 18:45:00

b) For the following dates and times, turbidity readings are suspect. Data retained.

11/05/06 13:30:00 133 NTU
11/08/06 18:30:00 163 NTU
11/13/06 02:00:00 128 NTU

Taskinas Creek:

a) For the following dates and times, DO% sat, DO mg/L, and pH data are suspect. Data retained.

11/01/06 19:30:00

b) For the following dates and times, depth values are suspect due to a storm event. Data retained.

11/22/06 06:45:00 - 11/23/06 03:15:00

DECEMBER

Claybank:

a) For the following dates and times, specific conductance and salinity values are anomalous as compared to pre and post measurements. Data retained.

12/05/06 03:15:00

b) For the following dates and times, turbidity readings are suspect. Data retained.

12/13/06 10:30:00 064 NTU

c) For the following dates and times, temperature, specific conductance, salinity, DO% sat, DO mg/L, and pH data are suspect. Data retained.

12/03/06 15:00:00
12/03/06 15:15:00

d) For the following dates and times, depth values occasionally reported negative and/or zero due to sensor precision. Data retained.

12/03/06 00:45:00 - 12/03/06 02:45:00
12/03/06 14:30:00 - 12/03/06 16:00:00
12/05/06 03:45:00 - 12/05/06 04:45:00

Goodwin Island:

a) For the following dates and times, turbidity readings were elevated compared to replacement sonde for the next deployment. Post calibration within standard specifications. Data suspect, data retained.

12/03/06 02:45:00 - 12/06/06 09:00:00

b) For the following dates and times, turbidity readings are suspect. Data retained.

12/01/06 01:30:00 51 NTU
12/11/06 03:00:00 48 NTU
12/11/06 05:00:00 19 NTU
12/12/06 07:15:00 43 NTU

c) For the following dates and times, turbidity readings occasionally reported negative and/or zero due to wiper falling off during deployment. Entire deployment flagged as suspect. Data retained.

12/18/06 09:45:00 - 12/31/06 23:45:00

Sweet Hall Marsh:

a) For the following dates and times, DO% sat and DO mg/L data are suspect. Data retained.

12/24/06 09:45:00
12/24/06 16:15:00 - 12/24/06 16:30:00

b) For the following dates and times, specific conductance and salinity values were significantly different as compared to pre and post measurement, which occurred at low tide and may indicate probe exposure. Data retained.

12/08/06 09:30:00
12/08/06 20:30:00
12/09/06 08:45:00
12/09/06 10:30:00
12/09/06 21:00:00
12/09/06 23:00:00
12/10/06 09:30:00
12/10/06 11:15:00
12/10/06 22:00:00
12/11/06 00:00:00
12/11/06 10:30:00
12/11/06 23:00:00
12/12/06 00:15:00

c) For the following dates and times, turbidity readings were influenced by a large bryozoan growth attached to the turbidity wiper. Obvious impact on data was observed from 12/22/06 15:30:00 – 12/25/06 18:15:00, data were deleted for that period. Entire deployment suspect. Remaining data retained.

12/13/06 13:15:00 - 12/31/06 23:45:00

Taskinas Creek:

a) For the following dates and times, turbidity readings are suspect. Data retained.

12/05/06 06:45:00 134 NTU
12/05/06 07:00:00 118 NTU

12. Deleted data

JANUARY

Claybank:

a) For the following dates and times, DO % sat and DO mg/L data were deleted due to membrane puncture.

01/13/06 20:30:00 - 01/19/06 11:15:00

Goodwin Island:

a) For the following dates and times, DO % sal and DO mg/L data were deleted due to decreasing readings, low post-cal (65.2%), and stark contrast with new deployment.

01/01/06 00:00:00 – 01/04/06 12:00:00

b) For the following dates and times, DO % sal and DO mg/L data were deleted due to decreasing readings, low post-cal (67.0%), and stark contrast with new deployment.

01/22/06 18:00:00 – 01/21/06 23:45:00

Sweet Hall Marsh:

a) For the following dates and times, turbidity values greater than 1000 were deleted.

01/10/06 13:00:00 1167 NTU

b) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

01/22/06 17:15:00 637 NTU
01/29/06 04:00:00 519 NTU

c) For the following dates and times, all data were deleted due to datalogger being out of the water.

01/15/06 05:30:00 - 01/15/06 09:15:00
01/15/06 19:00:00 - 01/15/06 20:15:00
01/18/06 20:15:00 - 01/18/06 20:30:00
01/19/06 21:45:00 - 01/19/06 22:30:00
01/20/06 09:30:00 - 01/20/06 11:00:00
01/20/06 22:15:00 - 01/20/06 22:45:00
01/26/06 15:30:00 - 01/26/06 17:30:00
01/27/06 03:45:00 - 01/27/06 04:30:00

d) For the following dates and times, specific conductivity and salinity values (along with affected DO mg/L and Depth parameters) were deleted due to sensor being out of the water.

01/18/06 20:00:00
01/19/06 21:30:00
01/20/06 11:15:00

Taskinas Creek:

a) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

01/15/06 08:45:00 706 NTU
01/25/06 17:45:00 950 NTU
01/26/06 16:45:00 940 NTU
01/30/06 16:15:00 546 NTU

FEBRUARY

Claybank:

a) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

02/24/06 02:30:00 156 NTU

Goodwin Island:

a) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

02/10/06 07:30:00 508 NTU

b) For the following dates and times, DO % sal and DO mg/L data were deleted due to decreasing readings, low post-cal (67.0%), and stark contrast with new deployment.

02/01/06 00:00:00 – 02/01/06 09:45:00

c) For the following dates and times, DO % sal and DO mg/L data were deleted due to decreasing readings, low post-cal (72.0%), and stark contrast with new deployment.

02/22/06 17:15:00 – 02/28/06 23:45:00

Sweet Hall Marsh:

a) For the following dates and times, all data were deleted due to datalogger being out of the water.

02/15/06 07:15:00 - 02/15/06 08:30:00
02/15/06 19:45:00 - 02/15/06 20:45:00
02/18/06 20:45:00 - 02/18/06 22:30:00
02/19/06 21:45:00 - 02/19/06 23:15:00
02/27/06 18:15:00 - 02/27/06 19:00:00

b) For the following dates and times, specific conductivity and salinity values (along with affected DO mg/L and Depth parameters) were deleted due to sensor being out of the water.

02/07/06 01:30:00
02/07/06 01:45:00
02/15/06 07:00:00
02/18/06 20:30:00
02/19/06 21:30:00
02/27/06 18:00:00

c) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

02/24/06 13:30:00 418 NTU
02/25/06 19:00:00 407 NTU

Taskinas Creek:

a) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

02/19/06 11:30:00 892 NTU
02/19/06 23:45:00 893 NTU
02/26/06 04:30:00 908 NTU
02/26/06 08:30:00 908 NTU

MARCH

Claybank:

a) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

03/26/06 16:45:00 234 NTU
03/27/06 05:15:00 634 NTU
03/28/06 20:30:00 202 NTU
03/29/06 04:45:00 357 NTU

Goodwin Island:

a) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

03/15/06 06:00:00 640 NTU

b) For the following dates and times, DO % sal and DO mg/L data were deleted due to decreasing readings, low post-cal (72.0%), and stark contrast with new deployment.

03/01/06 00:00:00 – 03/01/06 09:15:00

c) For the following dates and times, DO % sal and DO mg/L data were deleted due to decreasing readings, low post-cal (81.3%), and stark contrast with new deployment.

03/29/06 19:15:00 – 03/31/06 23:45:00

Sweet Hall Marsh:

a) For the following dates and times, all data were deleted due to datalogger being out of the water.

03/05/06 10:30:00 - 03/05/06 11:15:00
03/15/06 07:00:00 - 03/15/06 08:00:00
03/15/06 17:15:00 - 03/15/06 20:00:00
03/16/06 07:00:00 - 03/16/06 07:45:00
03/16/06 19:00:00 - 03/16/06 19:45:00

b) For the following dates and times, specific conductivity and salinity values (along with affected DO mg/L and Depth parameters) were deleted due to sensor being out of the water.

03/05/06 10:15:00
03/05/06 11:30:00
03/15/06 06:45:00
03/16/06 06:45:00
03/16/06 08:00:00
03/16/06 20:00:00

c) For the following dates and times, specific conductivity, salinity, Depth, and DO readings were deleted due to sensor being out of the water.

03/04/06 21:30:00 – 03/04/06 22:00:00

d) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

03/01/06 05:15:00 377 NTU
03/02/06 02:00:00 414 NTU

Taskinas Creek:

a) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

03/22/06 15:00:00 938 NTU
03/23/06 01:45:00 915 NTU
03/31/06 23:00:00 964 NTU

b) For the following dates and times, DO % sat and DO mg/L data were deleted due to membrane puncture.

03/21/06 12:15:00 - 03/31/06 23:45:00

APRIL

Claybank:

a) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

04/21/06 14:00:00 421 NTU
04/27/06 01:30:00 352 NTU

b) For the following dates and times, DO % sat and DO mg/L data were deleted due to membrane puncture.

04/25/06 10:45:00 - 04/30/06 23:45:00

Goodwin Island:

a) For the following dates and times, DO % sal and DO mg/L data were deleted due to decreasing readings, low post-cal (81.3%), and stark contrast with new deployment.

04/01/06 00:00:00 – 04/04/06 11:15:00

b) For the following dates and times, DO % sat and DO mg/L data were deleted due to membrane puncture.

04/27/06 12:45:00 - 04/30/06 23:45:00

c) For the following dates and times, turbidity values greater than 1000 were deleted.

04/10/06 10:45:00 1007 NTU
04/13/06 20:45:00 1026 NTU
04/15/06 02:00:00 1019 NTU
04/29/06 16:45:00 1025 NTU

d) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

04/26/06 07:15:00 278 NTU

Sweet Hall Marsh:

a) For the following dates and times, turbidity values greater than 1000 were deleted.

04/21/06 17:15:00 1232 NTU
04/23/06 15:30:00 1232 NTU
04/29/06 08:30:00 1240 NTU

b) For the following dates and times, DO % sat and DO mg/L data were deleted due to membrane puncture.

04/23/06 15:00:00 - 04/30/06 23:45:00

Taskinas Creek:

a) For the following dates and times, DO % sat and DO mg/L data were deleted due to membrane puncture.

04/01/06 00:00:00 - 04/05/06 09:00:00

b) For the following dates and times, turbidity values greater than 1000 were deleted.

04/23/06 15:15:00 1008 NTU
04/23/06 18:15:00 1007 NTU
04/23/06 19:00:00 1009 NTU
04/23/06 19:15:00 1009 NTU
04/23/06 21:30:00 1004 NTU
04/23/06 22:00:00 1004 NTU
04/23/06 22:15:00 1005 NTU
04/23/06 22:30:00 1005 NTU
04/23/06 22:45:00 1005 NTU
04/23/06 23:00:00 1005 NTU
04/24/06 00:15:00 1005 NTU

04/26/06 01:45:00 1018 NTU

c) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

04/01/06 20:00:00 974 NTU
04/03/06 04:45:00 964 NTU
04/03/06 10:00:00 970 NTU
04/17/06 03:00:00 871 NTU
04/21/06 18:15:00 591 NTU
04/21/06 18:30:00 456 NTU
04/22/06 04:00:00 992 NTU
04/22/06 04:30:00 992 NTU
04/22/06 20:10:00 986 NTU
04/23/06 06:30:00 990 NTU
04/23/06 08:00:00 990 NTU
04/24/06 04:30:00 996 NTU

MAY

Claybank:

a) For the following dates and times, turbidity values greater than 1000 were deleted.

05/01/06 01:15:00 1032 NTU
05/14/06 00:15:00 1450 NTU
05/20/06 23:15:00 1031 NTU
05/21/06 06:15:00 1018 NTU
05/26/06 04:30:00 1031 NTU
05/26/06 11:45:00 1042 NTU

b) For the following dates and times, DO % sat and DO mg/L data were deleted due to membrane puncture.

05/01/06 00:00:00 - 05/03/06 10:45:00
05/27/06 03:30:00 - 05/31/06 11:00:00
05/31/06 13:15:00 - 05/31/06 23:45:00

c) For the following dates and times, all data were deleted due to exchange of datalogger.

05/31/06 11:15:00

Goodwin Island:

a) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

05/25/06 21:45:00 947 NTU
05/25/06 22:15:00 949 NTU
05/25/06 22:30:00 949 NTU

b) For the following dates and times, DO % sat and DO mg/L data were deleted due to membrane puncture.

05/01/06 00:00:00 - 05/03/06 08:15:00

Sweet Hall Marsh:

a) For the following dates and times, all data were deleted due to datalogger being out of the water due to station being rebuilt. Data deleted.

05/04/06 10:30:00 - 05/04/06 11:45:00

b) For the following dates and times, DO % sat and DO mg/L data were deleted due to membrane puncture.

05/01/06 00:00:00 - 05/04/06 10:15:00

c) For the following dates and times, turbidity values greater than 1000 were deleted.

05/08/06 08:30:00 1260 NTU

Taskinas Creek:

a) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

05/11/06 18:30:00 653 NTU
05/30/06 07:30:00 413 NTU

b) For the following dates and times, elevated turbidity values deleted due to wiper malfunction. Data deleted.

05/23/06 08:15:00 986 NTU
05/23/06 08:30:00 986 NTU
05/23/06 08:45:00 987 NTU
05/23/06 09:00:00 983 NTU
05/23/06 09:15:00 989 NTU
05/23/06 09:30:00 899 NTU
05/23/06 09:45:00 991 NTU
05/23/06 10:00:00 208 NTU
05/23/06 10:15:00 993 NTU

05/23/06 10:30:00 994 NTU

JUNE

Claybank:

a) For the following dates and times, all data were deleted due to datalogger being out of the water due to station being rebuilt. Data deleted.

06/05/06 12:30:00 - 06/05/06 12:45:00

b) For the following dates and times, elevated single point pH values deleted due to sensor interference. Data deleted.

06/02/06 11:30:00

c) For the following dates and times, DO % sat and DO mg/L data were deleted due to membrane puncture.

06/01/06 00:00:00 - 06/14/06 11:15:00

d) For the following dates and times, turbidity values greater than 1000 were deleted.

06/06/06 13:30:00 1416 NTU

e) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

06/13/06 13:00:00 707 NTU
06/16/06 16:45:00 389 NTU
06/18/06 06:00:00 839 NTU
06/21/06 13:00:00 220 NTU
06/25/06 15:15:00 868 NTU

f) For the following dates and times, specific conductance and salinity values (along with affected DO mg/L and Depth parameters) were deleted due to heavy fouling of the probe and the post calibration failed according to probe specifications (9.473). Data deleted.

06/27/06 00:15:00 -06/29/06 10:30:00

Goodwin Island:

a) For the following dates and times, DO % sat and DO mg/L data were deleted due to membrane puncture.

06/23/06 09:15:00 - 06/29/06 08:15:00

b) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

06/17/06 22:00:00 971 NTU

c) For the following dates and times, specific conductance and salinity values (along with affected DO mg/L and Depth parameters) were deleted due to heavy fouling of the probe and the post calibration failed according to probe specifications (9.419). Data deleted.

06/23/06 13:45:00 -06/29/06 08:15:00

Sweet Hall Marsh:

a) For the following dates and times, turbidity values greater than 1000 were deleted.

06/11/06 09:45:00 1273 NTU

b) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

06/13/06 21:15:00 463 NTU
06/16/06 11:15:00 316 NTU
06/22/06 05:00:00 227 NTU

Taskinas Creek:

a) For the following dates and times, turbidity values greater than 1000 were deleted.

06/05/06 12:45:00 1257 NTU
06/08/06 00:00:00 1084 NTU
06/08/06 00:15:00 1263 NTU
06/13/06 14:00:00 1016 NTU
06/14/06 15:45:00 1004 NTU
06/15/06 01:30:00 1005 NTU
06/15/06 01:45:00 1005 NTU
06/15/06 03:15:00 1001 NTU
06/17/06 06:00:00 1013 NTU
06/17/06 17:15:00 1053 NTU
06/21/06 02:45:00 1039 NTU
06/21/06 13:00:00 1055 NTU
06/30/06 02:45:00 1093 NTU

b) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

06/10/06 23:15:00 801 NTU
06/11/06 11:00:00 955 NTU
06/12/06 00:45:00 694 NTU
06/14/06 17:45:00 755 NTU
06/15/06 03:30:00 670 NTU
06/22/06 15:00:00 962 NTU
06/22/06 16:00:00 616 NTU

c) For the following dates and times, turbidity values were deleted due to wiper malfunction. Data deleted.

06/22/06 19:15:00 – 06/27/06 08:45:00

d) For the following dates and times, DO % sat and DO mg/L data were deleted due to membrane puncture.

06/12/06 11:45:00 - 06/27/06 08:45:00

e) For the following dates and times, all data were deleted due to exchange of datalogger.

06/12/06 09:15:00

JULY

Claybank:

a) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

07/09/06 14:30:00 214 NTU
07/10/06 07:45:00 782 NTU
07/10/06 11:45:00 885 NTU
07/31/06 14:45:00 219 NTU

b) For the following dates and times, all data were deleted due to datalogger being out of the water.

07/13/06 04:30:00 - 07/13/06 06:15:00

c) For the following dates and times, specific conductivity and salinity values (along with affected DO mg/L and Depth parameters) were deleted due to sensor being out of the water.

07/12/06 04:15:00
07/12/06 04:45:00

07/13/06 17:30:00

d) For the following dates and times, DO % sat and DO mg/L data were deleted due to membrane puncture.

07/10/06 19:30:00 - 07/12/06 11:00:00
07/13/06 20:30:00 - 07/20/06 10:00:00

e) For the following dates and times, elevated turbidity values deleted due to heavy bryozoan growth on turbidity wiper causing wiper to malfunction. Data deleted.

07/31/06 23:15:00 – 07/31/06 23:45:00

Goodwin Island:

a) For the following dates and times, all data were deleted due to exchange of datalogger.

07/12/06 08:30:00

b) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

07/09/06 22:15:00 208 NTU

c) For the following dates and times, specific conductance and salinity values (along with affected DO mg/L and Depth parameters) were deleted due to heavy fouling of the probe and the post calibration failed according to probe specifications (9.028). Data deleted.

07/05/06 21:30:00 - 07/12/06 08:15:00

Sweet Hall Marsh:

a) For the following dates and times, turbidity values greater than 1000 were deleted.

07/24/06 20:45:00 1328 NTU

Taskinas Creek:

a) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

07/04/06 05:30:00 715 NTU
07/04/06 12:45:00 908 NTU
07/12/06 10:45:00 232 NTU
07/13/06 08:30:00 962 NTU

07/16/06 03:30:00 325 NTU
07/16/06 18:45:00 981 NTU
07/24/06 12:30:00 685 NTU
07/31/06 10:30:00 803 NTU
07/31/06 19:00:00 283 NTU

b) For the following dates and times, elevated turbidity values deleted due to heavy bryozoan growth on turbidity wiper causing wiper to malfunction. Data deleted.

07/05/06 08:45:00 – 07/10/06 09:00:00

c) For the following dates and times, DO % sat and DO mg/L data were deleted due to membrane puncture.

07/13/06 19:00:00 - 07/18/06 08:45:00

d) For the following dates and times, all data were deleted due to exchange of datalogger.

07/25/06 09:15:00

AUGUST

Claybank:

a) For the following dates and times, elevated turbidity values deleted due to heavy bryozoan growth on turbidity wiper causing probe to malfunction. Data deleted.

08/01/06 00:00:00 - 08/02/06 10:00:00
08/08/06 07:30:00 - 08/09/06 11:30:00
08/12/06 08:45:00 - 08/16/06 11:45:00

b) For the following dates and times, elevated single point turbidity values deleted due to the turbidity wiper not parking correctly. Data deleted.

08/23/06 22:30:00 912 NTU
08/23/06 23:15:00 912 NTU
08/24/06 00:00:00 911 NTU
08/24/06 00:30:00 912 NTU
08/24/06 01:30:00 912 NTU
08/24/06 02:45:00 913 NTU
08/24/06 03:30:00 912 NTU
08/24/06 04:15:00 910 NTU
08/24/06 05:00:00 911 NTU
08/24/06 05:30:00 910 NTU
08/24/06 06:15:00 911 NTU
08/24/06 07:30:00 911 NTU

08/24/06 08:15:00 911 NTU
08/24/06 10:30:00 910 NTU
08/24/06 11:00:00 911 NTU
08/24/06 13:30:00 916 NTU
08/24/06 14:00:00 919 NTU
08/24/06 14:30:00 919 NTU
08/24/06 15:15:00 919 NTU
08/24/06 16:00:00 918 NTU
08/24/06 16:30:00 918 NTU
08/24/06 17:00:00 917 NTU
08/24/06 17:30:00 920 NTU
08/24/06 17:45:00 920 NTU
08/24/06 18:15:00 920 NTU
08/24/06 19:00:00 915 NTU
08/24/06 19:30:00 915 NTU
08/24/06 19:45:00 914 NTU
08/24/06 20:15:00 914 NTU
08/24/06 20:45:00 915 NTU
08/24/06 22:15:00 913 NTU
08/24/06 22:45:00 913 NTU
08/24/06 23:15:00 912 NTU
08/25/06 00:00:00 911 NTU
08/25/06 01:45:00 911 NTU
08/25/06 02:15:00 913 NTU
08/25/06 03:00:00 912 NTU
08/25/06 04:00:00 910 NTU
08/25/06 05:00:00 910 NTU
08/25/06 05:30:00 910 NTU
08/25/06 06:00:00 910 NTU
08/25/06 06:30:00 910 NTU
08/25/06 07:00:00 909 NTU
08/25/06 07:30:00 911 NTU
08/25/06 08:15:00 912 NTU
08/25/06 09:00:00 912 NTU
08/25/06 10:00:00 912 NTU
08/25/06 11:00:00 912 NTU
08/25/06 12:00:00 914 NTU
08/25/06 13:00:00 916 NTU
08/25/06 13:30:00 917 NTU
08/25/06 15:30:00 919 NTU
08/25/06 16:30:00 919 NTU
08/25/06 18:00:00 918 NTU
08/25/06 19:00:00 920 NTU
08/25/06 19:45:00 915 NTU
08/25/06 20:30:00 914 NTU
08/25/06 20:45:00 914 NTU

08/25/06 21:45:00 913 NTU
08/25/06 23:15:00 914 NTU
08/26/06 00:00:00 913 NTU
08/26/06 02:00:00 909 NTU
08/26/06 02:30:00 912 NTU
08/26/06 02:45:00 911 NTU
08/26/06 03:45:00 909 NTU
08/26/06 04:45:00 908 NTU
08/26/06 05:15:00 907 NTU
08/26/06 06:00:00 907 NTU
08/26/06 06:30:00 911 NTU
08/26/06 07:00:00 911 NTU
08/26/06 07:30:00 911 NTU
08/26/06 08:30:00 913 NTU
08/26/06 10:00:00 912 NTU
08/26/06 10:45:00 911 NTU
08/26/06 12:00:00 911 NTU
08/26/06 12:30:00 911 NTU
08/26/06 12:45:00 911 NTU
08/26/06 13:45:00 913 NTU
08/26/06 16:00:00 920 NTU
08/26/06 16:45:00 921 NTU
08/26/06 18:15:00 920 NTU
08/26/06 19:45:00 917 NTU
08/26/06 21:45:00 914 NTU
08/27/06 02:30:00 910 NTU
08/27/06 03:00:00 910 NTU
08/27/06 04:00:00 908 NTU
08/27/06 06:00:00 907 NTU
08/27/06 15:45:00 918 NTU
08/27/06 16:45:00 919 NTU
08/27/06 18:15:00 919 NTU

c) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

08/22/06 07:30:00 955 NTU
08/23/06 01:30:00 957 NTU
08/29/06 07:15:02 912 NTU

d) For the following dates and times, specific conductivity and salinity values (along with affected DO mg/L and Depth parameters) were deleted due to sensor being out of the water.

08/10/06 18:45:00
08/24/06 18:30:00

Goodwin Island:

a) For the following dates and times, turbidity values greater than 1000 were deleted.

08/07/06 18:30:00 1013 NTU
08/08/06 06:15:00 1008 NTU
08/08/06 21:45:00 1009 NTU
08/12/06 18:15:00 1149 NTU
08/15/06 21:15:00 1150 NTU
08/16/06 00:15:00 1144 NTU
08/16/06 01:45:00 1142 NTU
08/16/06 08:00:00 1144 NTU
08/16/06 12:00:00 1409 NTU
08/17/06 16:45:00 1590 NTU
08/17/06 17:00:00 1590 NTU
08/19/06 05:00:00 1584 NTU
08/19/06 05:15:00 1584 NTU
08/19/06 05:45:00 1584 NTU
08/20/06 07:00:00 1584 NTU
08/25/06 20:15:00 1139 NTU
08/25/06 21:45:00 1134 NTU
08/26/06 01:45:00 1130 NTU
08/26/06 03:00:00 1128 NTU
08/26/06 03:15:00 1128 NTU
08/27/06 18:45:00 1145 NTU

b) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

08/07/06 17:00:00 405 NTU
08/07/06 20:30:00 997 NTU
08/09/06 06:30:00 996 NTU
08/09/06 06:45:00 996 NTU
08/12/06 14:30:00 428 NTU

c) For the following dates and times, turbidity values were deleted due to sensor malfunction. Data deleted.

08/01/06 00:00:00 – 08/02/06 07:45:00

d) For the following dates and times, all data were deleted due to exchange of datalogger.

08/02/06 08:00:00

Sweet Hall Marsh:

a) For the following dates and times, DO % sat and DO mg/L data were deleted due to membrane puncture.

08/05/06 16:00:00 - 08/08/06 14:15:00

b) For the following dates and times, turbidity values greater than 1000 were deleted.

08/04/06 17:30:00 1377 NTU
08/05/06 06:15:00 1367 NTU
08/15/06 18:15:00 1345 NTU
08/15/06 22:45:00 1184 NTU

c) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

08/05/06 01:30:00 397 NTU
08/05/06 02:15:00 415 NTU
08/15/06 17:45:00 858 NTU
08/15/06 23:15:00 536 NTU
08/19/06 18:45:00 520 NTU
08/21/06 13:00:00 208 NTU
08/24/06 10:00:00 208 NTU
08/26/06 07:30:00 536 NTU

Taskinas Creek:

a) For the following dates and times, all data were deleted due to exchange of datalogger.

08/29/06 08:45:00

b) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

08/03/06 17:30:00 960 NTU
08/04/06 20:30:00 952 NTU
08/04/06 21:30:00 951 NTU
08/06/06 18:00:00 336 NTU
08/06/06 20:15:00 806 NTU
08/07/06 08:30:00 273 NTU
08/07/06 20:00:00 531 NTU
08/12/06 17:15:00 897 NTU
08/14/06 16:45:00 959 NTU
08/14/06 18:15:00 785 NTU
08/18/06 03:00:00 609 NTU
08/19/06 15:30:00 865 NTU

08/19/06 16:45:00 956 NTU
08/20/06 03:00:00 393 NTU
08/20/06 08:15:00 495 NTU
08/22/06 00:30:00 392 NTU
08/22/06 20:30:00 879 NTU
08/25/06 06:30:00 889 NTU
08/25/06 10:15:00 449 NTU
08/25/06 11:00:00 898 NTU
08/26/06 17:45:00 786 NTU
08/29/06 22:45:00 949 NTU
08/30/06 10:00:00 946 NTU
08/30/06 10:30:00 950 NTU
08/30/06 11:00:00 951 NTU
08/30/06 12:00:00 952 NTU
08/30/06 13:15:00 953 NTU
08/30/06 14:00:00 952 NTU
08/30/06 15:15:00 951 NTU
08/31/06 01:15:00 937 NTU
08/31/06 01:45:00 938 NTU
08/31/06 02:15:00 938 NTU
08/31/06 02:45:00 938 NTU
08/31/06 04:00:00 937 NTU
08/31/06 11:30:00 931 NTU
08/31/06 13:30:00 930 NTU
08/31/06 14:00:00 930 NTU
08/31/06 14:45:00 930 NTU
08/31/06 15:45:00 930 NTU

c) For the following dates and times, DO % sat and DO mg/L data were deleted due to membrane puncture.

08/04/06 13:15:00 - 08/08/06 11:00:00

SEPTEMBER

Claybank:

a) For the following dates and times, DO % sat and DO mg/L data were deleted due to membrane puncture.

09/05/06 19:45:00 - 09/06/06 10:45:00

b) For the following dates and times, specific conductivity and salinity values (along with affected DO mg/L and Depth parameters) were deleted due to sensor malfunction. Post calibration 8.735, not within specification of probe.

09/23/06 02:00:00 - 09/27/06 12:30:00

c) For the following dates and times, elevated single point turbidity values deleted due to the turbidity wiper not parking correctly. Data deleted.

09/07/06 03:45:00 894 NTU
09/07/06 10:30:00 896 NTU
09/07/06 14:45:00 905 NTU
09/07/06 16:15:00 906 NTU
09/07/06 18:45:00 900 NTU
09/07/06 20:30:00 898 NTU
09/07/06 22:15:00 897 NTU
09/07/06 23:15:00 897 NTU
09/08/06 00:00:00 897 NTU
09/08/06 00:45:00 898 NTU
09/08/06 01:15:00 897 NTU
09/08/06 01:45:00 897 NTU
09/08/06 03:00:00 896 NTU
09/08/06 04:30:00 895 NTU
09/08/06 05:45:00 895 NTU
09/08/06 06:15:00 895 NTU
09/08/06 08:00:00 896 NTU
09/08/06 08:45:00 895 NTU
09/08/06 09:15:00 895 NTU
09/08/06 10:00:00 896 NTU
09/08/06 10:30:00 896 NTU
09/08/06 11:15:00 896 NTU
09/08/06 12:00:00 897 NTU
09/08/06 12:30:00 899 NTU
09/08/06 13:15:00 901 NTU
09/08/06 14:00:00 903 NTU
09/08/06 14:30:00 905 NTU
09/08/06 15:00:00 906 NTU
09/08/06 15:30:00 907 NTU
09/08/06 16:00:00 907 NTU
09/08/06 16:30:00 907 NTU
09/08/06 17:00:00 905 NTU
09/08/06 18:00:00 903 NTU
09/08/06 18:30:00 901 NTU
09/08/06 19:00:00 901 NTU
09/08/06 19:30:00 899 NTU
09/08/06 20:00:00 899 NTU
09/08/06 20:30:00 898 NTU
09/08/06 21:00:00 897 NTU
09/08/06 21:30:00 899 NTU
09/08/06 22:00:00 898 NTU

09/08/06 22:30:00 898 NTU
09/08/06 23:00:00 898 NTU
09/08/06 23:30:00 898 NTU
09/09/06 00:00:00 896 NTU
09/09/06 00:30:00 897 NTU
09/09/06 01:00:00 897 NTU
09/09/06 01:30:00 897 NTU
09/09/06 02:00:00 897 NTU
09/09/06 02:30:00 897 NTU
09/09/06 03:00:00 897 NTU
09/09/06 03:30:00 896 NTU
09/09/06 04:00:00 895 NTU
09/09/06 04:30:00 895 NTU
09/09/06 05:00:00 894 NTU
09/09/06 05:30:00 895 NTU
09/09/06 06:00:00 894 NTU
09/09/06 06:30:00 895 NTU
09/09/06 07:00:00 896 NTU
09/09/06 07:30:00 896 NTU
09/09/06 08:00:00 896 NTU
09/09/06 08:30:00 897 NTU
09/09/06 09:00:00 897 NTU
09/09/06 09:30:00 896 NTU
09/09/06 10:00:00 896 NTU
09/09/06 10:30:00 897 NTU
09/09/06 11:00:00 897 NTU
09/09/06 11:30:00 897 NTU
09/09/06 12:00:00 897 NTU
09/09/06 12:30:00 899 NTU
09/09/06 13:00:00 899 NTU
09/09/06 13:30:00 900 NTU
09/09/06 14:00:00 901 NTU
09/09/06 15:00:00 903 NTU
09/09/06 15:30:00 904 NTU
09/09/06 16:00:00 904 NTU
09/09/06 16:30:00 904 NTU
09/09/06 17:00:00 904 NTU
09/09/06 17:30:00 903 NTU
09/09/06 18:00:00 902 NTU
09/09/06 18:30:00 902 NTU
09/09/06 18:45:00 901 NTU
09/09/06 20:15:00 900 NTU
09/09/06 21:00:00 899 NTU
09/09/06 21:30:00 898 NTU
09/09/06 22:00:00 899 NTU
09/09/06 22:30:00 899 NTU

09/09/06 22:45:00 899 NTU
09/10/06 04:15:00 895 NTU
09/10/06 08:15:00 897 NTU
09/10/06 08:45:00 899 NTU
09/10/06 09:15:00 899 NTU
09/10/06 10:00:00 898 NTU
09/10/06 10:30:00 898 NTU
09/10/06 11:00:00 898 NTU
09/10/06 11:45:00 899 NTU
09/10/06 12:30:00 899 NTU
09/10/06 13:15:00 900 NTU
09/10/06 14:30:00 901 NTU

d) For the following dates and times, elevated turbidity values deleted due to heavy bryozoan growth on turbidity wiper causing probe to malfunction. Data deleted.

09/27/06 20:45:00 – 09/27/06 12:30:00
09/28/06 02:30:00 896 NTU
09/28/06 04:45:00 890 NTU
09/28/06 07:30:00 891 NTU
09/28/06 07:45:00 892 NTU
09/28/06 08:30:00 890 NTU
09/28/06 09:00:00 891 NTU
09/28/06 09:30:00 894 NTU
09/28/06 10:00:00 895 NTU
09/28/06 11:00:00 895 NTU
09/28/06 11:30:00 896 NTU
09/28/06 12:15:00 896 NTU
09/28/06 13:00:00 896 NTU
09/28/06 13:30:00 897 NTU
09/28/06 14:00:00 898 NTU
09/28/06 14:30:00 898 NTU
09/28/06 15:00:00 897 NTU
09/28/06 15:30:00 897 NTU
09/28/06 16:00:00 897 NTU
09/28/06 16:30:00 897 NTU
09/28/06 17:00:00 898 NTU
09/28/06 17:30:00 898 NTU
09/28/06 18:00:00 897 NTU
09/28/06 18:30:00 897 NTU
09/28/06 19:00:00 896 NTU
09/28/06 19:30:00 896 NTU
09/28/06 19:45:00 896 NTU
09/28/06 20:15:00 896 NTU
09/28/06 21:00:00 894 NTU
09/28/06 21:30:00 894 NTU

09/28/06 22:00:00 894 NTU
09/28/06 22:30:00 893 NTU
09/28/06 23:00:00 890 NTU
09/28/06 23:30:00 895 NTU
09/29/06 00:00:00 894 NTU
09/29/06 00:30:00 894 NTU
09/29/06 01:00:00 895 NTU
09/29/06 01:30:00 896 NTU
09/29/06 02:00:00 896 NTU
09/29/06 02:30:00 895 NTU
09/29/06 03:00:00 894 NTU
09/29/06 03:30:00 893 NTU
09/29/06 04:00:00 892 NTU
09/29/06 04:30:00 888 NTU
09/29/06 05:00:00 889 NTU
09/29/06 05:30:00 890 NTU
09/29/06 05:45:00 890 NTU
09/29/06 06:15:00 890 NTU
09/29/06 07:00:00 887 NTU
09/29/06 07:30:00 888 NTU
09/29/06 08:00:00 886 NTU
09/29/06 08:30:00 887 NTU
09/29/06 09:00:00 886 NTU
09/29/06 09:30:00 885 NTU
09/29/06 10:00:00 886 NTU
09/29/06 10:30:00 886 NTU
09/29/06 11:00:00 888 NTU
09/29/06 11:30:00 889 NTU
09/29/06 12:00:00 892 NTU
09/29/06 12:30:00 893 NTU
09/29/06 13:00:00 893 NTU
09/29/06 13:30:00 894 NTU
09/29/06 14:00:00 894 NTU
09/29/06 14:30:00 894 NTU
09/29/06 15:00:00 895 NTU
09/29/06 15:30:00 895 NTU
09/29/06 16:00:00 895 NTU
09/29/06 16:30:00 893 NTU
09/29/06 17:00:00 893 NTU
09/29/06 17:30:00 894 NTU
09/29/06 18:00:00 893 NTU
09/29/06 18:30:00 893 NTU
09/29/06 19:00:00 893 NTU
09/29/06 19:30:00 892 NTU
09/29/06 20:00:00 892 NTU
09/29/06 20:30:00 891 NTU

09/29/06 21:00:00 891 NTU
09/29/06 21:30:00 891 NTU
09/29/06 22:00:00 890 NTU
09/29/06 23:00:00 888 NTU
09/29/06 23:30:00 887 NTU
09/30/06 00:00:00 888 NTU
09/30/06 00:30:00 887 NTU
09/30/06 01:00:00 889 NTU
09/30/06 01:30:00 889 NTU
09/30/06 02:00:00 889 NTU
09/30/06 02:30:00 891 NTU
09/30/06 03:15:00 889 NTU
09/30/06 04:15:00 892 NTU
09/30/06 05:00:00 885 NTU
09/30/06 05:30:00 882 NTU
09/30/06 06:00:00 884 NTU
09/30/06 06:30:00 885 NTU
09/30/06 07:00:00 883 NTU
09/30/06 07:30:00 883 NTU
09/30/06 08:00:00 887 NTU
09/30/06 08:30:00 887 NTU
09/30/06 09:00:00 888 NTU
09/30/06 09:30:00 889 NTU
09/30/06 10:00:00 889 NTU
09/30/06 10:30:00 889 NTU
09/30/06 11:00:00 887 NTU
09/30/06 11:30:00 892 NTU
09/30/06 12:00:00 892 NTU
09/30/06 12:30:00 893 NTU
09/30/06 13:00:00 893 NTU
09/30/06 13:30:00 894 NTU
09/30/06 14:00:00 895 NTU
09/30/06 14:30:00 894 NTU
09/30/06 15:15:00 895 NTU
09/30/06 16:00:00 896 NTU
09/30/06 16:30:00 896 NTU
09/30/06 17:00:00 896 NTU
09/30/06 17:30:00 895 NTU
09/30/06 17:45:00 895 NTU
09/30/06 19:00:00 894 NTU
09/30/06 19:30:00 893 NTU
09/30/06 20:00:00 893 NTU
09/30/06 20:30:00 892 NTU
09/30/06 21:15:00 892 NTU
09/30/06 22:00:00 891 NTU
09/30/06 23:15:00 890 NTU

09/30/06 23:45:00 890 NTU

e) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

09/18/06 15:15:00 940 NTU
09/25/06 11:00:00 921 NTU

Goodwin Island:

a) For the following dates and times, turbidity values greater than 1000 were deleted.

09/09/06 08:00:00 1117 NTU
09/09/06 19:00:00 1127 NTU
09/12/06 17:30:00 1106 NTU
09/13/06 08:15:00 1095 NTU
09/25/06 06:00:00 1437 NTU
09/25/06 21:45:00 1531 NTU
09/25/06 22:45:00 1523 NTU
09/29/06 18:15:00 1046 NTU

b) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

09/24/06 21:45:00 754 NTU
09/25/06 04:30:00 889 NTU
09/25/06 06:15:00 431 NTU
09/25/06 06:45:00 776 NTU

Sweet Hall Marsh:

a) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

09/01/06 04:30:00 515 NTU

b) For the following dates and times, turbidity values greater than 1000 were deleted.

09/01/06 06:15:00 1339 NTU
09/01/06 08:15:00 1338 NTU

Taskinas Creek:

a) For the following dates and times, all data were deleted due to exchange of datalogger.

09/12/06 08:15:00

b) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

09/01/06 02:00:00 919 NTU
09/04/06 02:15:00 918 NTU
09/11/06 04:30:00 292 NTU
09/11/06 18:00:00 872 NTU
09/11/06 18:30:00 682 NTU
09/11/06 19:30:00 870 NTU
09/12/06 04:30:00 862 NTU
09/12/06 12:45:00 241 NTU
09/14/06 05:30:00 542 NTU
09/14/06 07:15:00 913 NTU
09/14/06 08:15:00 574 NTU
09/14/06 11:15:00 717 NTU
09/14/06 11:45:00 706 NTU
09/15/06 05:00:00 231 NTU
09/15/06 08:45:00 912 NTU
09/15/06 12:45:00 930 NTU
09/15/06 13:45:00 766 NTU
09/15/06 21:00:00 931 NTU
09/16/06 00:45:00 926 NTU
09/16/06 13:45:00 923 NTU
09/16/06 23:30:00 364 NTU
09/17/06 09:30:00 918 NTU
09/25/06 12:45:00 319 NTU
09/25/06 15:15:00 224 NTU
09/26/06 01:45:00 861 NTU
09/26/06 13:15:00 869 NTU
09/27/06 07:30:00 859 NTU
09/27/06 11:45:00 864 NTU
09/27/06 13:30:00 869 NTU
09/28/06 07:00:00 568 NTU
09/28/06 13:00:00 778 NTU
09/29/06 06:45:00 327 NTU
09/29/06 09:30:00 631 NTU
09/29/06 11:45:00 328 NTU
09/29/06 13:00:00 866 NTU
09/29/06 15:15:00 839 NTU
09/30/06 04:15:00 218 NTU
09/30/06 06:30:00 246 NTU
09/30/06 09:15:00 229 NTU
09/30/06 14:45:00 208 NTU
09/30/06 16:15:00 309 NTU

c) For the following dates and times, pH values were deleted due to glass bulb broken during deployment. Data deleted.

09/03/06 02:15:00 - 09/05/06 11:00:00

OCTOBER

Claybank:

a) For the following dates and times, elevated single point turbidity values deleted due to the turbidity wiper not parking correctly. Data deleted.

10/01/06 01:00:00 889 NTU
10/01/06 01:30:00 889 NTU
10/01/06 01:45:00 890 NTU
10/01/06 02:45:00 889 NTU
10/01/06 03:30:00 889 NTU
10/01/06 03:45:00 889 NTU
10/01/06 04:30:00 889 NTU
10/01/06 05:15:00 888 NTU
10/06/06 10:30:00 920 NTU
10/06/06 11:15:00 919 NTU
10/06/06 13:30:00 918 NTU
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10/06/06 21:30:00 915 NTU
10/06/06 22:15:00 914 NTU
10/06/06 22:45:00 914 NTU
10/06/06 23:15:00 914 NTU
10/07/06 00:15:00 912 NTU
10/07/06 01:15:00 911 NTU
10/07/06 02:15:00 911 NTU
10/07/06 02:45:00 911 NTU
10/07/06 03:15:00 914 NTU
10/07/06 04:30:00 911 NTU
10/07/06 05:00:00 911 NTU
10/07/06 05:45:00 912 NTU
10/07/06 06:15:00 914 NTU
10/07/06 07:30:00 911 NTU
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10/07/06 15:15:00 907 NTU
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10/20/06 00:30:00 910 NTU
10/20/06 01:00:00 909 NTU
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10/20/06 03:15:00 909 NTU
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10/20/06 22:30:00 907 NTU
10/20/06 23:00:00 906 NTU
10/20/06 23:30:00 907 NTU
10/21/06 00:00:00 907 NTU
10/21/06 00:30:00 906 NTU
10/21/06 01:00:00 905 NTU
10/21/06 01:30:00 905 NTU
10/21/06 02:00:00 905 NTU
10/21/06 03:00:00 904 NTU
10/21/06 03:30:00 902 NTU
10/21/06 04:00:00 901 NTU
10/21/06 04:30:00 900 NTU
10/21/06 05:00:00 898 NTU
10/21/06 06:00:00 901 NTU
10/21/06 06:30:00 901 NTU
10/21/06 07:00:00 901 NTU
10/21/06 07:30:00 902 NTU
10/21/06 08:00:00 906 NTU
10/21/06 08:30:00 903 NTU
10/21/06 09:00:00 904 NTU
10/21/06 09:30:00 905 NTU
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10/21/06 11:00:00 901 NTU
10/21/06 11:30:00 903 NTU
10/21/06 11:45:00 904 NTU
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10/21/06 18:30:00 904 NTU
10/21/06 19:00:00 904 NTU
10/21/06 19:30:00 903 NTU
10/21/06 19:45:00 903 NTU
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10/21/06 22:00:00 905 NTU
10/21/06 22:30:00 906 NTU
10/21/06 23:00:00 901 NTU
10/21/06 23:30:00 901 NTU
10/22/06 00:00:00 902 NTU
10/22/06 00:30:00 901 NTU
10/22/06 01:00:00 901 NTU
10/22/06 01:30:00 900 NTU
10/22/06 02:00:00 899 NTU
10/22/06 02:30:00 900 NTU
10/22/06 03:00:00 900 NTU
10/22/06 03:30:00 899 NTU
10/22/06 04:00:00 899 NTU
10/22/06 04:30:00 898 NTU
10/22/06 05:00:00 893 NTU
10/22/06 05:30:00 894 NTU
10/22/06 06:00:00 896 NTU
10/22/06 06:30:00 898 NTU
10/22/06 06:45:00 898 NTU
10/22/06 07:15:00 899 NTU
10/22/06 08:00:00 903 NTU
10/22/06 08:30:00 903 NTU
10/22/06 09:00:00 903 NTU
10/22/06 09:30:00 901 NTU
10/22/06 10:00:00 901 NTU
10/22/06 10:30:00 902 NTU
10/22/06 11:00:00 901 NTU
10/22/06 11:30:00 901 NTU
10/22/06 12:00:00 900 NTU

10/22/06 12:30:00 900 NTU
10/22/06 13:00:00 897 NTU
10/22/06 13:30:00 895 NTU
10/22/06 14:00:00 897 NTU
10/22/06 14:30:00 898 NTU
10/22/06 14:45:00 897 NTU
10/22/06 15:15:00 896 NTU
10/22/06 16:00:00 895 NTU
10/22/06 16:30:00 897 NTU
10/22/06 17:00:00 897 NTU
10/22/06 17:30:00 896 NTU
10/22/06 17:45:00 897 NTU
10/22/06 18:15:00 897 NTU
10/22/06 19:00:00 897 NTU
10/22/06 19:30:00 897 NTU
10/22/06 20:00:00 897 NTU
10/22/06 20:30:00 897 NTU
10/22/06 21:00:00 897 NTU
10/22/06 21:30:00 897 NTU
10/22/06 22:00:00 899 NTU
10/22/06 22:30:00 900 NTU
10/22/06 22:45:00 899 NTU
10/22/06 23:15:00 897 NTU
10/23/06 00:00:00 897 NTU
10/23/06 00:30:00 896 NTU
10/23/06 01:15:00 893 NTU
10/23/06 02:15:00 895 NTU
10/23/06 03:00:00 895 NTU
10/23/06 03:30:00 895 NTU
10/23/06 04:00:00 893 NTU
10/23/06 05:00:00 889 NTU
10/23/06 06:15:00 891 NTU
10/23/06 09:45:00 899 NTU
10/23/06 10:30:00 898 NTU

b) For the following dates and times, all data were deleted due to datalogger being out of the water.

10/30/06 21:45:00 - 10/31/06 23:45:00

Goodwin Island:

a) For the following dates and times, elevated single point turbidity values deleted due to the turbidity wiper not parking correctly. Data deleted.

10/13/06 02:00:00 950 NTU

10/13/06 06:15:00 937 NTU
10/13/06 06:45:00 935 NTU
10/13/06 08:00:00 933 NTU
10/13/06 08:15:00 933 NTU
10/13/06 09:15:00 933 NTU
10/13/06 10:00:00 936 NTU
10/13/06 14:00:00 941 NTU
10/13/06 14:15:00 941 NTU
10/13/06 15:45:00 942 NTU
10/13/06 16:30:00 942 NTU
10/13/06 16:45:00 943 NTU
10/13/06 18:00:00 942 NTU
10/13/06 18:15:00 942 NTU
10/13/06 18:30:00 942 NTU
10/13/06 18:45:00 942 NTU
10/13/06 21:00:00 938 NTU
10/13/06 21:45:00 938 NTU
10/13/06 23:00:00 937 NTU
10/13/06 23:45:00 937 NTU
10/14/06 04:15:00 940 NTU
10/14/06 06:00:00 937 NTU
10/14/06 06:30:00 937 NTU
10/14/06 07:45:00 936 NTU
10/14/06 09:45:00 937 NTU
10/14/06 15:45:00 943 NTU
10/14/06 17:45:00 940 NTU
10/14/06 23:00:00 933 NTU
10/16/06 04:45:00 938 NTU
10/16/06 05:00:00 938 NTU
10/16/06 05:15:00 938 NTU
10/17/06 13:30:00 937 NTU
10/17/06 14:15:00 938 NTU
10/17/06 14:45:00 938 NTU
10/17/06 16:00:00 938 NTU
10/17/06 16:30:00 938 NTU
10/17/06 21:30:00 938 NTU
10/17/06 22:00:00 938 NTU
10/17/06 22:15:00 938 NTU
10/18/06 04:15:00 939 NTU
10/18/06 05:00:00 939 NTU
10/18/06 05:30:00 939 NTU
10/18/06 08:15:00 940 NTU

b) For the following dates and times, all data were deleted due to exchange of datalogger.

10/18/06 10:00:00

Sweet Hall Marsh:

a) For the following dates and times, all data were deleted due to datalogger being out of the water.

10/30/06 12:15:00 - 10/30/06 13:00:00
10/31/06 00:45:00 - 10/31/06 02:30:00

b) For the following dates and times, specific conductivity and salinity values (along with affected DO mg/L and Depth parameters) were deleted due to sensor being out of the water.

10/30/06 12:00:00
10/31/06 00:30:00

c) For the following dates and times, turbidity values greater than 1000 were deleted.

10/05/06 19:15:00 1284 NTU

Taskinas Creek:

a) For the following dates and times, elevated single point turbidity values deleted due to the turbidity wiper not parking correctly. Data deleted.

10/01/06 14:30:00 715 NTU
10/01/06 15:30:00 227 NTU
10/03/06 04:30:00 858 NTU
10/03/06 06:30:00 305 NTU
10/04/06 05:45:00 915 NTU
10/07/06 08:00:00 899 NTU
10/07/06 13:45:00 886 NTU
10/07/06 20:30:00 542 NTU
10/07/06 22:15:00 582 NTU
10/08/06 07:45:00 893 NTU
10/08/06 08:30:00 897 NTU
10/08/06 10:15:00 277 NTU
10/10/06 21:15:00 244 NTU
10/11/06 01:45:00 893 NTU
10/11/06 02:30:00 895 NTU
10/11/06 03:15:00 482 NTU
10/11/06 04:15:00 382 NTU
10/11/06 06:15:00 859 NTU
10/11/06 06:30:00 894 NTU
10/11/06 07:15:00 579 NTU

10/11/06 08:15:00 575 NTU
10/11/06 18:00:00 289 NTU
10/11/06 23:45:00 475 NTU
10/13/06 07:30:00 249 NTU

b) For the following dates and times, elevated single point turbidity values deleted due to the turbidity wiper not parking correctly. Data deleted.

10/17/06 04:15:00 860 NTU
10/17/06 04:30:00 860 NTU
10/17/06 05:15:00 861 NTU
10/17/06 05:45:00 860 NTU
10/17/06 06:15:00 859 NTU
10/17/06 06:30:00 859 NTU
10/17/06 06:45:00 859 NTU
10/17/06 07:00:00 859 NTU
10/17/06 07:15:00 858 NTU
10/17/06 07:30:00 859 NTU
10/17/06 08:15:00 859 NTU
10/17/06 08:45:00 859 NTU
10/17/06 09:15:00 859 NTU
10/17/06 09:45:00 859 NTU
10/17/06 10:00:00 859 NTU
10/17/06 10:15:00 859 NTU
10/17/06 10:45:00 858 NTU
10/17/06 11:15:00 855 NTU
10/17/06 11:45:00 850 NTU
10/17/06 12:15:00 847 NTU
10/17/06 12:45:00 846 NTU
10/17/06 13:15:00 846 NTU
10/17/06 13:45:00 847 NTU
10/17/06 14:15:00 847 NTU
10/17/06 14:30:00 850 NTU
10/17/06 15:00:00 857 NTU
10/17/06 15:30:00 860 NTU
10/17/06 16:00:00 861 NTU
10/17/06 16:30:00 861 NTU
10/17/06 17:00:00 861 NTU
10/17/06 17:15:00 861 NTU
10/17/06 17:30:00 861 NTU
10/17/06 17:45:00 861 NTU
10/17/06 18:00:00 861 NTU
10/17/06 18:15:00 861 NTU
10/17/06 18:45:00 861 NTU
10/17/06 19:15:00 861 NTU
10/17/06 19:45:00 861 NTU

10/17/06 20:15:00 861 NTU
10/17/06 20:30:00 856 NTU
10/17/06 20:45:00 861 NTU
10/17/06 21:15:00 861 NTU
10/17/06 21:30:00 861 NTU
10/17/06 21:45:00 861 NTU
10/17/06 22:00:00 860 NTU
10/17/06 22:15:00 860 NTU
10/17/06 22:45:00 859 NTU
10/17/06 23:15:00 857 NTU
10/17/06 23:45:00 853 NTU
10/18/06 00:15:00 850 NTU
10/18/06 00:45:00 849 NTU
10/18/06 01:15:00 849 NTU
10/18/06 01:45:00 849 NTU
10/18/06 02:15:00 849 NTU
10/18/06 02:45:00 856 NTU
10/18/06 03:15:00 860 NTU
10/18/06 03:30:00 860 NTU
10/18/06 03:45:00 861 NTU
10/18/06 04:15:00 861 NTU
10/18/06 04:45:00 862 NTU
10/18/06 05:00:00 862 NTU
10/18/06 05:15:00 862 NTU
10/18/06 05:45:00 862 NTU
10/18/06 06:00:00 862 NTU
10/18/06 06:15:00 862 NTU
10/18/06 06:30:00 862 NTU
10/18/06 06:45:00 858 NTU
10/18/06 07:00:00 862 NTU
10/18/06 07:30:00 862 NTU
10/18/06 08:00:00 862 NTU
10/18/06 08:30:00 863 NTU
10/18/06 08:45:00 863 NTU
10/18/06 09:00:00 863 NTU
10/18/06 09:30:00 863 NTU
10/18/06 10:00:00 863 NTU
10/18/06 10:15:00 863 NTU
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10/18/06 11:15:00 864 NTU
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10/18/06 14:30:00 862 NTU
10/18/06 15:00:00 863 NTU
10/18/06 15:30:00 875 NTU
10/18/06 15:45:00 870 NTU
10/18/06 16:15:00 879 NTU
10/18/06 16:30:00 862 NTU
10/18/06 16:45:00 879 NTU
10/18/06 17:15:00 877 NTU
10/18/06 17:45:00 876 NTU
10/18/06 18:15:00 875 NTU
10/18/06 18:45:00 876 NTU
10/18/06 19:15:00 877 NTU
10/18/06 19:45:00 876 NTU
10/18/06 20:15:00 876 NTU
10/18/06 20:45:00 876 NTU
10/18/06 21:15:00 875 NTU
10/18/06 21:45:00 876 NTU
10/18/06 22:15:00 875 NTU
10/18/06 22:45:00 873 NTU
10/18/06 23:15:00 872 NTU
10/18/06 23:45:00 870 NTU
10/19/06 00:15:00 867 NTU
10/19/06 00:30:00 866 NTU
10/19/06 00:45:00 865 NTU
10/19/06 01:15:00 863 NTU
10/19/06 01:45:00 862 NTU
10/19/06 02:15:00 862 NTU
10/19/06 02:45:00 863 NTU
10/19/06 03:15:00 863 NTU
10/19/06 03:45:00 868 NTU
10/19/06 04:00:00 868 NTU
10/19/06 04:15:00 869 NTU
10/19/06 04:45:00 869 NTU
10/19/06 05:15:00 869 NTU
10/19/06 05:45:00 869 NTU
10/19/06 06:15:00 869 NTU
10/19/06 06:30:00 869 NTU
10/19/06 06:45:00 870 NTU
10/19/06 07:15:00 870 NTU
10/19/06 07:45:00 871 NTU
10/19/06 08:00:00 869 NTU
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10/20/06 08:45:00 873 NTU
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10/21/06 02:30:00 862 NTU
10/21/06 02:45:00 862 NTU
10/21/06 03:00:00 862 NTU
10/21/06 03:15:00 861 NTU
10/21/06 03:30:00 861 NTU
10/21/06 04:00:00 862 NTU
10/21/06 04:30:00 862 NTU
10/21/06 05:00:00 859 NTU
10/21/06 05:30:00 852 NTU
10/21/06 06:00:00 850 NTU
10/21/06 06:30:00 852 NTU
10/21/06 07:00:00 851 NTU
10/21/06 07:30:00 851 NTU
10/21/06 08:00:00 852 NTU
10/21/06 08:30:00 854 NTU
10/21/06 09:00:00 855 NTU
10/21/06 09:30:00 856 NTU
10/21/06 09:45:00 856 NTU
10/21/06 10:00:00 857 NTU
10/21/06 10:45:00 857 NTU
10/21/06 11:15:00 856 NTU
10/21/06 12:00:00 855 NTU
10/21/06 12:45:00 856 NTU
10/21/06 13:15:00 857 NTU
10/21/06 13:30:00 857 NTU
10/21/06 14:15:00 860 NTU
10/21/06 14:45:00 862 NTU
10/21/06 15:15:00 862 NTU
10/21/06 15:45:00 862 NTU
10/21/06 16:15:00 862 NTU
10/21/06 16:45:00 862 NTU
10/21/06 17:15:00 861 NTU
10/21/06 17:30:00 860 NTU
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10/22/06 01:30:00 852 NTU
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10/22/06 02:30:00 851 NTU
10/22/06 03:00:00 850 NTU
10/22/06 03:30:00 849 NTU
10/22/06 04:00:00 848 NTU
10/22/06 04:30:00 848 NTU
10/22/06 05:15:00 849 NTU
10/22/06 05:45:00 843 NTU
10/22/06 06:15:00 841 NTU
10/22/06 06:30:00 841 NTU
10/22/06 06:45:00 841 NTU
10/22/06 07:15:00 840 NTU
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10/22/06 13:15:00 842 NTU
10/22/06 13:45:00 842 NTU
10/22/06 14:30:00 843 NTU
10/22/06 15:00:00 843 NTU
10/22/06 15:30:00 843 NTU
10/22/06 16:15:00 842 NTU
10/22/06 16:45:00 842 NTU
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10/23/06 02:00:00 844 NTU
10/23/06 02:45:00 843 NTU
10/23/06 03:15:00 841 NTU
10/23/06 03:45:00 840 NTU
10/23/06 04:15:00 839 NTU
10/23/06 04:45:00 838 NTU
10/23/06 05:00:00 837 NTU
10/23/06 05:15:00 837 NTU
10/23/06 05:45:00 840 NTU
10/23/06 06:30:00 837 NTU
10/23/06 07:00:00 840 NTU
10/23/06 07:30:00 840 NTU
10/23/06 08:00:00 839 NTU
10/23/06 08:30:00 839 NTU
10/23/06 08:45:00 839 NTU
10/23/06 09:15:00 840 NTU
10/23/06 09:45:00 839 NTU
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10/24/06 00:00:00 837 NTU
10/24/06 00:30:00 838 NTU
10/24/06 01:00:00 837 NTU
10/24/06 01:30:00 836 NTU
10/24/06 02:00:00 836 NTU
10/24/06 02:30:00 835 NTU
10/24/06 03:00:00 834 NTU
10/24/06 03:30:00 832 NTU
10/24/06 04:00:00 830 NTU
10/24/06 04:30:00 829 NTU
10/24/06 05:15:00 827 NTU
10/24/06 05:45:00 827 NTU
10/24/06 06:15:00 828 NTU
10/24/06 06:45:00 830 NTU
10/24/06 07:15:00 823 NTU
10/24/06 07:45:00 822 NTU
10/24/06 08:00:00 823 NTU
10/24/06 08:15:00 823 NTU
10/24/06 09:00:00 824 NTU
10/24/06 09:30:00 826 NTU
10/24/06 10:00:00 827 NTU
10/24/06 10:30:00 826 NTU
10/24/06 10:45:00 826 NTU
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10/24/06 18:30:00 829 NTU
10/27/06 12:30:00 825 NTU
10/27/06 12:45:00 825 NTU
10/27/06 13:15:00 826 NTU
10/27/06 13:30:00 826 NTU
10/27/06 13:45:00 827 NTU
10/27/06 14:15:00 827 NTU
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10/27/06 15:15:00 826 NTU
10/27/06 15:45:00 825 NTU
10/27/06 16:45:00 824 NTU
10/27/06 17:15:00 824 NTU
10/27/06 17:45:00 823 NTU
10/27/06 18:00:00 823 NTU
10/27/06 18:30:00 823 NTU
10/27/06 19:15:00 822 NTU
10/27/06 19:45:03 822 NTU
10/27/06 20:00:00 823 NTU
10/27/06 21:00:00 826 NTU
10/28/06 00:30:00 830 NTU
10/28/06 01:00:00 830 NTU
10/28/06 01:30:00 831 NTU
10/28/06 01:45:00 831 NTU
10/28/06 02:00:00 831 NTU
10/28/06 02:15:00 832 NTU
10/28/06 02:30:00 832 NTU
10/28/06 03:00:00 832 NTU
10/28/06 03:30:00 832 NTU
10/28/06 04:00:00 831 NTU
10/28/06 04:45:00 831 NTU
10/28/06 06:45:00 829 NTU
10/28/06 12:45:00 844 NTU
10/28/06 13:15:00 846 NTU
10/28/06 13:30:00 846 NTU
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10/28/06 19:45:00 840 NTU
10/28/06 21:00:00 840 NTU
10/28/06 21:30:00 839 NTU
10/28/06 22:15:00 839 NTU
10/28/06 23:45:00 839 NTU
10/29/06 00:00:00 839 NTU
10/29/06 00:45:00 840 NTU
10/29/06 01:15:00 839 NTU
10/29/06 01:30:00 838 NTU
10/29/06 02:00:00 835 NTU
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10/29/06 02:45:00 834 NTU
10/29/06 03:45:00 834 NTU
10/29/06 04:30:00 835 NTU
10/29/06 05:15:00 836 NTU
10/29/06 06:15:00 834 NTU
10/29/06 07:00:00 833 NTU
10/29/06 07:45:00 831 NTU
10/29/06 08:45:00 830 NTU
10/29/06 09:15:00 830 NTU
10/29/06 09:45:00 830 NTU
10/31/06 09:45:00 836 NTU

NOVEMBER

Claybank:

(No deleted data)

Goodwin Island:

a) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

11/23/06 19:30:00 674 NTU

Sweet Hall Marsh:

(No deleted data)

Taskinas Creek:

a) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

11/01/06 09:45:00 880 NTU

DECEMBER

Claybank:

a) For the following dates and times, all data were deleted due to datalogger being out of the water.

12/02/06 00:00:00 - 12/02/06 01:15:00

b) For the following dates and times, specific conductivity and salinity values (along with affected DO mg/L and Depth parameters) were deleted due to sensor being out of the water.

12/05/06 04:00:00

Goodwin Island:

a) For the following dates and times, all data were deleted due to datalogger being out of the water.

12/15/06 10:00:00 - 12/15/06 13:45:00

Sweet Hall Marsh:

a) For the following dates and times, all data were deleted due to datalogger being out of the water.

12/02/06 03:30:00 - 12/02/06 03:45:00
12/08/06 08:30:00 - 12/08/06 09:15:00
12/08/06 20:45:00 - 12/08/06 23:00:00
12/09/06 09:00:00 - 12/09/06 10:15:00
12/09/06 21:15:00 - 12/09/06 22:45:00
12/10/06 09:45:00 - 12/10/06 11:00:00
12/10/06 22:15:00 - 12/10/06 23:45:00
12/11/06 10:45:00 - 12/11/06 11:45:00
12/11/06 23:15:00 - 12/12/06 00:00:00

b) For the following dates and times, specific conductivity and salinity values (along with affected DO mg/L and Depth parameters) were deleted due to sensor being out of the water.

12/02/06 03:15:00
12/02/06 04:00:00
12/08/06 08:15:00

c) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

12/06/06 08:00:00 262 NTU
12/09/06 10:45:00 390 NTU

d) For the following dates and times, turbidity readings were deleted due to obvious impacts from a large bryozoan growth attached to the turbidity wiper. Remainder of deployment is suspect.

12/22/06 15:30:00 – 12/25/06 18:15:00

Taskinas Creek:

a) For the following dates and times, elevated single point turbidity values deleted due to sensor interference. Data deleted.

12/03/06 16:30:00 210 NTU

13. Missing data

Data are missing due to equipment failure, specific probes not being deployed, and time of maintenance or calibration of equipment. For more details on deleted data, see the Deleted Data Section (12.). If additional information on missing data are needed, contact the Research Coordinator at the reserve submitting the data.

DECEMBER

Claybank:

a) For the following dates and times, all data are missing due to an internal error within the sonde.

12/06/06 13:00:00 - 12/11/06 15:30:00

Taskinas Creek:

a) For the following dates and times, all data are missing due to an internal error within the sonde.

12/13/06 09:45:00 - 12/31/06 23:45:00

14. Post-deployment Information

End of deployment Post-calibration Readings in Standard Solutions:
NA = no data available for that particular standard

Claybank:

Date (post cal)	Cond (ms) (Std:10)	DO (AirSat) (Std: 100%)	pH (Std:7)	Turb (Std:0)	Depth (Std:0)
01/05/06	10.07	92.8	7.25	-0.3	-0.141
01/20/06	10.06	67.3	6.99	0.0	0.197
02/02/06	10.04	97.6	7.09	-0.1	0.007
02/16/06	9.947	101.2	7.05	0.5	0.223
03/02/06	10.08	97.3	7.13	0.1	-0.204
03/24/06	10.100	98.0	7.06	0.1	0.032
04/05/06	9.921	99.9	7.10	0.1	-0.084
04/20/06	9.656	97.8	7.08	0.6	0.139
05/04/06	9.779	24.8	7.13	-0.6	0.008
05/18/06	10.020	103.5	7.07	-0.1	-0.124
05/31/06	9.944	49.1	7.08	-0.2	0.108
06/15/06	9.981	27.9	7.09	0.2	-0.027
06/30/06	9.473	98.9	7.01	0.2	0.040
07/13/06	9.846	81.7	7.06	0.4	n/a
07/21/06	9.957	57.8	7.08	0.1	-0.058
07/27/06	9.920	100.6	7.07	-0.1	-0.012
08/03/06	9.952	97.7	7.02	-0.1	-0.060
08/10/06	9.908	100.3	7.03	0.0	-0.011
08/17/06	9.961	99.8	7.01	0.2	0.080
08/24/06	9.913	100.9	7.05	-0.7	0.027
08/31/06	9.965	98.0	7.04	-0.1	-0.022
09/07/06	9.986	43.5	7.13	0.0	0.125
09/14/06	9.959	100.3	7.08	-0.3	0.000
09/28/06	8.735	97.9	7.05	-0.4	-0.112
10/05/06	9.978	99.8	7.01	-0.7	0.001
10/12/06	9.981	98.5	7.12	-0.2	-0.197
10/19/06	10.020	99.4	6.99	0.1	-0.021
11/02/06	9.979	98.6	7.11	-0.1	0.007
11/21/06	10.000	101.4	7.11	-0.3	0.129
12/07/06	9.989	95.8	7.01	0.2	-0.041
12/19/06	10.030	99.7	7.00	0.3	-0.046

01/05/07	9.994	68.0	7.02	0.0	-0.046

Goodwin Island:

Date (post cal)	Cond (ms) (Std:10)	DO (AirSat) (Std: 100%)	pH (Std:7)	Turb (Std:0)	Depth (Std:0)
01/05/06	9.970	65.2	7.02	0.0	-0.169
01/20/06	9.909	92.2	7.18	0.2	0.167
02/02/06	10.020	67.0	7.02	0.0	0.036
02/16/06	9.989	70.3	7.08	0.2	0.210
03/02/06	9.963	72.0	7.05	-0.1	-0.186
03/24/06	9.920	90.7	7.14	0.0	0.051
04/05/06	10.020	81.3	7.07	0.3	-0.084
04/20/06	9.595	100.3	7.02	0.0	0.101
05/04/06	9.748	59.5	7.11	0.6	-0.002
05/18/06	9.971	100.6	7.08	0.1	-0.127
06/01/06	9.640	93.2	7.03	-0.8	0.097
06/15/06	9.782	101.6	6.94	0.4	-0.030
06/30/06	9.419	61.7	7.10	0.6	-0.009
07/13/06	9.028	101.7	7.03	0.4	-0.016
07/21/06	9.840	96.5	6.97	0.4	-0.056
07/27/06	9.953	99.8	7.02	-0.1	-0.013
08/03/06	9.920	98.2	7.00	0.1	-0.055
08/10/06	9.898	97.1	7.02	0.2	-0.021
08/17/06	9.880	83.4	7.01	-1.2	0.046
08/24/06	9.864	100.7	7.06	-0.1	0.028
08/31/06	9.940	88.7	7.04	-0.1	-0.036
09/06/06	9.971	100.4	7.02	-0.9	0.115
09/14/06	9.870	87.5	7.03	0.0	-0.034
09/28/06	9.272	89.8	7.13	0.0	-0.112
10/05/06	9.873	91.1	7.03	-0.2	0.001
10/12/06	10.050	96.7	7.06	0.2	-0.205
10/19/06	9.902	93.6	7.03	0.2	-0.027
11/02/06	9.980	97.0	7.02	-0.4	-0.001
11/21/06	10.010	70.5	7.03	-0.3	0.072
12/07/06	10.060	99.9	7.09	0.1	-0.005
12/19/06	9.965	95.1	7.03	-0.1	0.011
01/05/07	10.090	100.3	7.07	-1.0	-0.013

Sweet Hall Marsh:

Date (post cal)	Cond (ms) (Std:10)	DO (AirSat) (Std: 100%)	pH (Std:7)	Turb (Std:0)	Depth (Std:0)
01/05/06	10.040	100.8	7.00	0.0	-0.168
01/18/06	10.040	99.4	7.11	-0.2	-0.028

02/01/06	10.040	100.6	7.04	0.1	-0.001
02/15/06	10.200	101.9	7.04	0.5	0.171
03/03/06	10.080	101.0	7.02	0.0	-0.019
03/22/06	9.989	100.9	7.00	-0.2	0.021
04/06/06	10.020	100.1	7.08	0.0	-0.031
04/19/06	10.070	100.2	7.07	-0.2	-0.005
05/05/06	10.130	3.9	7.11	1.9	0.021
05/17/06	10.030	114.5	7.01	0.6	-0.067
05/31/06	9.970	100.1	7.06	0.0	0.127
06/13/06	9.955	104.1	7.12	0.1	-0.026
06/28/06	10.080	100.9	7.01	0.0	0.065
07/11/06	10.040	103.0	7.03	-0.7	0.043
07/26/06	10.090	102.0	7.05	0.0	- 0.044
08/09/06	10.060	68.8	6.94	0.0	0.010
08/23/06	10.030	103.6	7.06	0.1	- 0.042
09/06/06	10.020	98.7	7.07	2.0	- 0.018
09/21/06	9.956	112.1	6.96	0.1	0.044
10/04/06	10.040	104.1	7.09	-0.7	0.141
10/17/06	10.040	100.7	7.01	0.2	-0.089
11/01/06	10.030	101.9	7.03	0.2	-0.070
11/16/06	10.060	101.8	7.00	-0.1	-0.180
11/30/06	10.140	98.3	7.03	-0.2	0.173
12/14/06	10.030	103.3	7.00	-0.4	-0.055
01/04/07	10.100	87.9	7.01	0.0	-0.072

Taskinas Creek:

Date (post cal)	Cond (ms) (Std:10)	DO (AirSat) (Std: 100%)	pH (Std:7)	Turb (Std:0)	Depth (Std:0)
01/05/06	10.020	98.0	7.06	- 0.01	-0.173
01/18/06	10.040	94.7	7.03	- 0.20	0.030
02/01/06	10.150	98.5	7.01	0.10	0.000
02/15/06	10.050	97.3	7.06	0.1	0.165
03/03/06	10.040	97.5	7.20	- 0.2	-0.025
03/22/06	10.010	100.6	7.15	- 0.1	0.020
04/06/06	10.070	46.1	7.15	0.1	-0.040
04/19/06	10.050	97.1	7.16	- 0.1	-0.009
05/05/06	10.230	101.5	7.10	0.0	0.023
05/17/06	10.040	102.1	7.11	-0.1	-0.060
05/31/06	10.050	100.6	6.99	-0.1	0.126
06/13/06	10.090	104.3	7.15	-0.3	-0.018
06/28/06	9.925	57.8	7.04	0.0	0.067
07/11/06	10.170	99.0	7.07	-0.1	0.031
07/19/06	10.010	15.8	7.05	0.0	-0.017
07/26/06	9.971	96.2	7.01	0.3	-0.004
08/02/06	9.945	63.6	7.00	-0.1	-0.030

08/09/06	9.941	97.7	7.04	-0.6	0.069
08/16/06	10.010	99.6	7.03	0.5	-0.021
08/23/06	10.000	98.8	7.07	0.3	-0.016
08/30/06	9.940	97.7	7.04	0.4	-0.067
09/06/06	9.987	57.4	n/a	-0.1	0.064
09/13/06	9.992	100.2	7.03	-0.4	0.025
09/21/06	10.000	98.9	7.07	0.0	-0.048
10/04/06	9.979	97.9	6.98	0.0	0.146
10/17/06	9.966	99.3	7.01	0.2	-0.102
11/01/06	9.951	100.3	6.98	-0.1	-0.068
11/16/06	10.080	96.3	6.94	-0.1	-0.180
11/30/06	9.983	101.3	7.01	-0.3	0.154
12/14/06	9.980	101.1	6.99	-0.1	-0.059
01/04/07	10.080	101.3	6.99	-0.1	-0.068

Field verifications were recorded with a YSI 600 XLM, and LaMotte titration kit immediately prior to sonde retrieval.
na = no data available

Claybank:

Date	Salinity ppt	pH	Water Temp C	Secchi m	DO mg/L
12/19/05	13.24	7.90	5.55	0.80	11.4/11.6
01/04/06	15.50	7.82	6.69	0.80	11.1/11.2
01/19/06	13.18	8.46	7.08	0.55	13.3/13.5
02/01/06	16.25	8.02	7.06	0.70	10.5/10.5
02/15/06	13.02	7.87	5.70	0.50	11.1/11.2
03/01/06	17.26	8.03	6.11	0.65	11.6/11.6
03/23/06	17.82	7.85	10.04	0.60	10.6/10.6
04/04/06	16.20	7.78	13.79	0.35	9.0/8.9
04/19/06	16.84	7.79	15.70	0.40	8.2/8.3
05/03/06	15.87	6.62	18.83	0.55	8.1/8.2
05/17/06	14.54	7.71	20.21	0.60	7.1/7.1
05/31/06	16.16	7.80	25.45	1.00	7.2/7.3
06/14/06	20.16	7.68	22.30	0.50	6.2/6.2
06/29/06	16.94	7.75	27.52	0.90	7.1/6.6
07/12/06	16.77	7.77	27.44	0.60	6.4/6.3
07/20/06	17.75	7.72	28.56	0.60	6.0/NA
07/26/06	20.49	7.83	27.21	0.70	6.1/6.2
08/02/06	18.41	7.95	30.84	0.50	6.5/6.3
08/09/06	21.87	7.68	28.51	0.60	4.3/4.4
08/16/06	20.05	7.56	28.14	0.50	6.4/7.0
08/23/06	20.44	7.74	27.50	0.60	5.4/5.6
08/30/06	19.57	7.78	28.44	0.60	5.2/5.4
09/06/06	18.55	7.61	24.40	0.70	5.0/5.1

09/13/06	16.97	7.72	24.27	0.70	5.8/6.3
09/27/06	17.67	7.87	23.17	1.00	6.4/6.4
10/04/06	17.06	7.87	22.44	0.50	6.4/6.2
10/11/06	13.91	7.52	19.96	0.60	6.5/6.6
10/18/06	13.72	7.76	18.85	0.80	7.4/7.4
11/01/06	15.50	7.95	16.20	0.75	9.0/9.2
11/20/06	12.74	8.02	13.05	1.00	10.0/10.2
12/06/06	14.15	7.82	10.63	0.70	9.1/9.3
12/11/06	NA	NA	NA	NA	NA
12/18/06	13.36	8.31	9.94	0.90	11.8/11.8
01/04/07	13.91	8.32	10.43	0.50	12.0/12.0

Goodwin Island:

Date	Salinity ppt	pH	Water Temp C	Secchi m	DO mg/L
12/19/05	20.19	8.18	6.11	1.20	11.7/11.8
01/04/06	19.78	8.14	6.42	1.30	10.4/10.4
01/19/06	19.08	8.16	6.43	0.80	10.9/11.1
02/01/06	18.71	8.08	6.24	1.30	10.6/10.6
02/15/06	18.58	8.14	6.01	0.80	11.1/11.2
03/01/06	18.14	8.20	5.81	1.00	11.4/11.4
03/23/06	19.33	7.70	7.32	0.70	10.4/10.5
04/04/06	19.13	7.98	13.54	1.00	9.2/9.3
04/19/06	19.49	8.12	15.50	0.75	NA
05/03/06	18.43	8.01	6.30	1.00	8.9/8.9
05/17/06	18.68	7.99	18.85	0.80	7.1/7.2
05/31/06	20.09	8.07	24.60	0.80	7.4/7.4
06/14/06	20.21	8.05	22.27	0.85	7.3/7.4
06/29/06	20.27	8.02	26.45	0.90	7.5/7.4
07/12/06	19.84	8.02	26.36	0.85	6.5/6.5
07/20/06	20.29	8.15	27.83	1.00	6.8/6.8
07/26/06	20.99	8.24	27.10	1.00	7.4/7.5
08/02/06	21.11	8.15	29.70	0.70	5.4/5.7
08/09/06	19.74	8.05	27.48	1.00	5.4/5.4
08/16/06	18.88	8.02	26.74	0.60	6.2/6.4
08/23/06	20.29	8.09	27.61	1.00	5.6/5.4
08/30/06	22.51	8.03	27.91	0.70	5.8/5.6
09/06/06	21.54	8.08	24.24	0.90	6.8/6.8
09/13/06	20.87	8.03	22.08	0.90	7.2/6.8
09/27/06	20.49	8.19	22.14	1.20	8.1/8.1
10/04/06	21.06	8.01	21.38	0.90	6.8/6.8
10/11/06	19.71	7.82	20.34	1.00	7.2/7.1
10/18/06	19.14	8.02	18.32	1.40	7.7/7.6
11/01/06	20.28	8.06	14.76	0.90	8.6/8.7
11/20/06	17.19	7.99	12.56	1.50	9.6/9.8

12/06/06	17.32	8.03	9.50	1.20	10.5/10.4
12/18/06	17.75	8.19	9.47	0.90	10.6/10.8
01/04/07	18.01	8.12	10.18	1.10	10.6/10.4

Sweet Hall Marsh:

Date	Salinity ppt	pH	Water Temp C	Secchi m	DO mg/L
12/20/05	0.10	8.15	4.75	0.20	10.1/10.2
01/04/06	0.10	6.82	5.71	0.25	11.0/11.1
01/17/06	0.07	7.59	6.78	0.20	11.0/11.2
01/31/06	0.07	7.41	7.66	0.20	11.2/11.0
02/14/06	0.06	7.77	6.94	0.25	11.2/10.8
03/02/06	0.08	7.71	7.69	0.20	11.3/11.2
03/21/06	0.26	7.34	10.25	0.20	9.8/10.0
04/05/06	1.37	7.26	16.03	0.20	9.4/9.3
04/18/06	1.37	7.17	17.29	NA	7.8/8.0
05/04/06	0.82	7.11	20.16	0.20	8.0/7.9
05/16/06	0.49	7.16	21.67	0.30	7.5/7.5
05/30/06	1.00	7.16	24.80	0.30	6.0/5.6
06/12/06	2.26	7.04	23.85	0.30	6.0/6.0
06/27/06	2.36	7.21	27.86	0.30	6.5/6.6
07/10/06	0.65	7.06	27.49	0.30	5.1/5.4
07/25/06	2.60	7.14	28.90	0.25	5.1/5.2
08/08/06	5.06	7.24	NA	0.30	5.7/5.8
08/22/06	6.12	7.23	28.16	0.25	5.8/5.8
09/05/06	3.19	6.99	25.33	0.35	5.0/5.4
09/20/06	2.83	7.02	23.53	0.10	4.6/4.8
10/03/06	2.01	7.24	22.41	0.25	6.8/6.8
10/16/06	0.08	6.80	18.00	0.10	6.2/6.3
10/31/06	0.07	7.48	14.64	0.20	7.9/7.6
11/15/06	0.06	7.16	14.02	0.35	7.6/7.8
11/29/06	0.11	6.85	9.97	0.40	8.0/8.4
12/13/06	0.07	6.97	8.45	0.25	9.0/9.4
01/03/07	0.06	7.63	9.66	0.25	NA

Taskinas Creek:

Date	Salinity ppt	pH	Water Temp C	Secchi m	DO mg/L
12/20/05	9.67	7.39	3.78	0.60	9.2/9.6
01/04/06	10.86	7.70	6.30	0.20	10.9/11.0
01/17/06	10.33	7.78	5.58	0.25	10.6/10.8
01/31/06	10.93	7.68	7.97	0.10	10.6/10.6
02/14/06	11.36	7.47	4.40	0.20	10.5/10.5
03/02/06	11.98	7.64	6.20	0.15	10.4/10.3
03/21/06	12.07	7.55	8.76	0.15	10.5/9.8
04/05/06	10.56	7.14	14.36	0.25	6.8/4.7

04/18/06	7.03	7.21	13.48	0.15	5.4/5.6
05/04/06	8.87	7.02	18.75	0.35	6.2/6.3
05/16/06	12.33	7.12	19.48	0.30	5.2/5.0
05/30/06	13.73	7.25	25.46	0.20	5.0/5.0
06/12/06	15.08	7.36	21.51	0.10	6.4/6.2
06/27/06	16.06	7.34	27.05	0.15	5.0/4.6
07/10/06	13.31	7.57	25.78	0.20	6.2/6.1
07/18/06	11.19	7.27	29.13	1.20	4.1/4.0
07/25/06	15.92	7.57	27.19	0.15	5.2/5.2
08/01/06	11.99	7.46	31.01	0.35	4.2/4.0
08/08/06	18.00	7.43	29.63	0.35	5.1/4.8
08/15/06	14.29	7.33	26.05	0.30	5.0/4.6
08/22/06	17.71	7.76	27.36	0.30	6.1/5.8
08/29/06	12.16	7.17	28.32	0.20	2.0/2.0
09/05/06	13.29	7.20	24.57	0.15	5.6/5.4
09/12/06	12.34	7.10	21.10	0.30	4.8/4.8
09/20/06	13.33	7.70	22.36	0.10	7.4/7.2
10/03/06	13.19	7.89	20.53	0.40	8.1/8.2
10/16/06	4.49	7.37	13.91	0.40	7.8/6.9
10/31/06	5.78	7.01	13.69	0.40	6.8/7.6
11/15/06	5.44	7.35	13.29	0.35	6.8/6.6
11/29/06	4.29	7.47	10.05	0.30	9.4/9.4
12/13/06	5.97	7.31	6.90	0.50	10.0/10.2
01/04/07	9.21	7.97	7.80	0.25	10.2/10.2

15. Other remarks

a) Negative depth values can be due to extremely low water conditions, low-pressure systems, or probes being out of the water. In the event where probes were clearly out of the water, as verified by specific conductance values, data were deleted. When specific conductance values did not indicate probe exposure, negative depth values were retained and data was marked as suspect. Significant negative depth values were observed at Sweet Hall Marsh during the months of January through March; data reflects tidal patterns and were retained.

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) Latitudes and longitudes of the fixed monitoring stations reflect re-surveying of the sites conducted in 2004 using Trimble Real Time Kinenmatic (RTK) survey equipment.

d) Please note: Time skips can occur due to low batteries, water leakage into the battery compartment, and for no apparent reason.

e) A Sutron Sat-Link2 transmitter was installed at this station on 11/07/05 and transmits data to the NOAA GOES satellite, NESDIS ID #3B00816E. The transmissions are scheduled hourly and contain four (4) datasets reflecting fifteen minute data sampling intervals. The telemetry data is "Provisional" data and not the "Authentic" dataset used for long term monitoring and study. This data can be viewed by going to http://cdmo.baruch.sc.edu."

f) Water quality within the entire York River estuary, which includes the Goodwin Islands, Clay Bank, Taskinas Creek and Sweet Hall Marsh stations, were impacted by the passage of Tropical Storm Ernesto, September 1, 2006; Nor'easter, October 6, 2006; and Nor'easter, November 22, 2006. Short-term impacts (24-48 hrs in duration) from Tropical Storm Ernesto included elevated water depths, turbidity and salinity. Longer terms impacts (days-weeks), such as lower oxygen levels were observed in the more tidal freshwater regions of the estuary.