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# Ambient Rivers and Shellfish Tissue Monitoring in New Hampshire Estuarine Watersheds 2003

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# Ambient Rivers and Shellfish Tissue Monitoring in New Hampshire Estuarine Watersheds 2003

A Final Report to

The New Hampshire Estuaries Project

Submitted by

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# TABLE OF CONTENTS

## EXECUTIVE SUMMARY

The Department of Environmental Services received funding from the New Hampshire Estuaries Project (NHEP) to conduct monitoring activities in 2003. The activities involved water monitoring in tidal tributaries and contaminant analyses of mussel tissue. These monitoring activities were completed with the overall purpose of improving the understanding of water quality trends and the concentrations of toxic contaminants in shellfish tissue. The Department of Environmental Services, in cooperation with the University of New Hampshire Jackson Estuarine Lab and others, completed all tasks as planned. This report includes the sample collection information, field data, and laboratory data, with the exception of contaminant concentration data for shellfish tissue. The data for the mussel tissue contaminants will be available at a later date. Data summaries and interpretations will come at a later time in other New Hampshire Department of Environmental Services and New Hampshire Estuaries publications.

## LIST OF TABLES

# INTRODUCTION

On March 19, 2003, the New Hampshire Governor and the Executive Council approved a memorandum of agreement (MOA) between the Department of Environmental Services (DES) and the Office of State Planning (OSP) to implement aspects of the New Hampshire Estuaries Project *Management Plan* (NHEP, 2000) and *Monitoring Plan* (Trowbridge, 2002). This report covers the following monitoring aspects in the MOA:

1. Ambient River Monitoring of Coastal Tributaries
2. Gulfwatch Monitoring: Toxic Contaminant Monitoring of Shellfish Tissue

The NHEP accomplishes its monitoring program by promoting cooperation by all agencies and organizations who participate in monitoring activities, in order to maximize the usefulness of current monitoring efforts (Jones and Langan, 2001). The monitoring activities listed above are enhancements of existing monitoring programs. DES is responsible for the ambient rivers monitoring program and works in concert with the University of New Hampshire and the Gulf of Maine Council to monitor toxic contaminants through the Gulfwatch mussel monitoring program. These efforts were recommended in the *Monitoring Plan* as necessary actions to fill data and/or information gaps.

The purpose of this report is to provide a record of completed monitoring activities and the associated raw data. All data collected under these monitoring activities will be provided to the NHEP Coastal Scientist (Phil Trowbridge) for synthesis and interpretation. The NHEP Coastal Scientist will manage the data presented in this Final Report and will make conclusions under separate cover at a later time.

# PROJECT GOALS AND OBJECTIVES

The overall goal of the NHEP monitoring program is to develop a better understanding of the status and trends of estuarine environmental quality using scientifically credible information. The *Monitoring Plan* was also developed to evaluate the success of the NHEP *Management Plan* objectives and this was accomplished by converting the *Management Plan* objectives into monitoring questions.

The *Monitoring Plan* questions that pertain, at least in part, to the activities listed above are as follows:

**Ambient River Monitoring of Coastal Tributaries**

1. Have the fecal coliform, enterococci, and *E. coli* levels changed significantly over time?
2. Has dry weather bacterial contamination changed significantly over time?

3. Has wet weather bacterial contamination changed significantly over time?
4. Have levels of dissolved and particulate nitrogen and phosphorus significantly changed over time?
5. Have surface tidal or freshwaters shown a significant change in turbidity over time?
6. Do any surface tidal or freshwaters show less than 75% saturation of dissolved oxygen? For what period of time?

**Gulfwatch Monitoring: Toxic Contaminant Monitoring of Shellfish Tissue**

1. Are shellfish, lobsters, finfish, and other seafood species from New Hampshire coastal waters fit for human consumption?
2. Have the concentrations of toxic contaminants in estuarine biota significantly changed over time?

## SITE SELECTION AND METHODS

**Ambient River Monitoring of Coastal Tributaries**

Initial site selection for ambient tributary monitoring was based six existing DES Ambient River Monitoring Program sites at the Great Bay Estuary tidal dams on the Exeter, Lamprey, Oyster, Bellamy, Cocheco and Salmon Falls Rivers. Two new sites were established on the freshwater portions of two Little Harbor tributaries, Berry's Brook and Sagamore Creek. These two new site locations were added to broaden the spatial coverage of the ambient monitoring to ensure adequate coverage of tributaries that discharge into shellfish growing waters. An additional Great Bay Estuary site was established on the Winnicut River at the tidal dam in March 2002. This new site was added because the Winnicut River is a significant tributary to Great Bay that was not currently monitored for water quality. The relatively rural watershed has experienced recent and continuing development that could impact the quality of the water flowing into Great Bay; in addition, the tidal dam has been identified as a potential site for fish passage restoration.

Field and laboratory methods were conducted in accordance with the DES Ambient River Monitoring Program standard procedures. Samples were collected from the freshwater portion of the rivers at the downstream side of road crossings (except at Berry's Brook where the sampling location is on the upstream side) using a sampling bucket and rope. Field measurements were made for dissolved oxygen, temperature, conductivity, pH, and turbidity. River water was poured into sampling containers for laboratory analysis for TKN, ammonia, nitrate/nitrite, total phosphorus, biological oxygen demand, *E. coli*, and chlorophyll-a. Samples were transported to and analyzed by the DES Laboratory Services Unit and the Limnology Laboratory.

The DES Watershed Assistance Staff, with assistance from New Hampshire Coastal Program staff, collected samples on a pre-scheduled monthly basis from March through December 2003 at nine sampling locations. Due to the expanded quality assurance requirements of the Ambient River Monitoring Program in 2003 and the delivery time limitations of the Laboratory Services

Unit, the sampling was conducted over a two day period beginning in April. The sites and sampling dates are listed below in tables 1 and 2, respectively.

**Table 1 Sampling locations for ambient river monitoring 2003**

| Site Identification | River | Town |
|---|---|---|
| 05-Ber | Berry's Brook | Rye |
| 05-Sag | Sagamore Creek | Portsmouth |
| 02-Wnc | Winnicut River | Greenland |
| 09-Ext | Exeter River | Exeter |
| 05-Lmp | Lamprey River | Newmarket |
| 05-Oys | Oyster River | Durham |
| 05-Blm | Bellamy River | Dover |
| 07-Cch | Cocheco River | Dover |
| 05-Sfr | Salmon Falls River | Rollinsford |

**Table 2 Sampling dates for ambient river monitoring 2003**

| Date Sampled | Sampling Locations |
|---|---|
| March 19 | 05-Ber, 05-Sag, 02-Wnc, 09-Ext, 05-Lmp, 05-Oys, 05-Blm, 07-Cch, 05-Sfr |
| April 23 | 05-Ber, 05-Sag, 02-Wnc, 09-Ext, 05-Lmp, 05-Oys |
| April 24 | 05-Blm, 07-Cch, 05-Sfr |
| May 20 | 05-Ber, 05-Sag, 02-Wnc, 09-Ext, 05-Lmp, 05-Oys, 05-Blm |
| May 22 | 07-Cch, 05-Sfr |
| June 19 | 05-Ber, 05-Sag |
| June 20 | 05-Ber, 05-Sag (*E. coli* only) |
| June 30 | 02-Wnc, 09-Ext, 05-Lmp, 05-Oys, 05-Blm, 07-Cch, 05-Sfr |
| July 22 | 09-Ext, 05-Lmp, 05-Oys, 05-Blm, 07-Cch, 05-Sfr |
| July 24 | 05-Ber, 05-Sag, 02-Wnc |
| August 19 | 09-Ext, 05-Lmp, 05-Oys, 05-Blm, 07-Cch, 05-Sfr |
| August 20 | 05-Ber, 05-Sag, 02-Wnc, 05-Lmp (DO&Temp only), |
| September 16 | 05-Ber, 05-Sag, 02-Wnc, 09-Ext, |
| September 29 | 05-Lmp, 05-Oys, 05-Blm, 07-Cch, 05-Sfr |
| October 28 | 05-Ber, 05-Sag, 02-Wnc, 09-Ext, 05-Lmp |
| October 30 | 05-Oys, 05-Blm, 07-Cch, 05-Sfr |
| November 18 | 05-Ber, 05-Sag, 02-Wnc, 09-Ext, 05-Lmp |
| November 19 | 05-Oys, 05-Blm, 07-Cch, 05-Sfr |
| December 10 | 05-Ber, 05-Sag, 09-Ext, 05-Lmp |
| December 16 | 02-Wnc, 05-Oys, 05-Blm, 07-Cch, 05-Sfr |

### Gulfwatch Monitoring: Toxic Contaminant Monitoring of Shellfish Tissue

In 1991 the Gulf of Maine Council initiated a toxic contaminant monitoring program using the blue mussel as an indicator species. Each year, two sites in New Hampshire waters were monitored as part of this Gulf of Maine-wide program. In 1998, New Hampshire increased the spatial coverage of sampling locations by collecting mussels at six to eight sites each year. In

2001, New Hampshire again expanded Gulfwatch by collecting oysters and clams in Great Bay and Hampton Harbor, respectively. The purpose of the additional indicators was to collect data from other species that were harvested for human consumption. Samples were collected again in 2002, including oyster, clam and mussel collection at eight sampling locations.

In 2003, the NHEP funded the analytical costs of three mussel sites under the NH Gulfwatch Program (table 3). The sites were located at Hampton/Seabrook Harbor, Dover Point, and South Mill Pond. Two other sites were also monitored with support from the Gulf of Maine Council. These sites were located at Little Harbor and Clark's Cove.

On 10/1/03 and 10/2/03, DES managed the collection of mussel samples from the five sites. New Hampshire Coastal Program and Estuaries Project staff, in addition to community volunteers, assisted DES staff with the sample collection and laboratory preparation. The sites are listed in table 3. Maps for each site are provided in Appendix B. All shellfish were measured, shucked and prepared for transport within 24 hours of collection.

The sets of samples to be analyzed for inorganic contaminants were delivered to the State of Maine Health and Environment Testing Laboratory in Augusta, Maine. The mussels prepared for organic contaminant analysis were delivered to the Environment Canada, ECB Laboratory in Moncton, New Brunswick.

**Table 3 Gulfwatch mussel sampling sites and funding sources for 2003**

| Funding Source | Sampling Location | Site ID | Latitude (decimal degrees) | Longitude (decimal degree) |
|---|---|---|---|---|
| NHEP | Dover Point | NHDP | 43.1196 N | -70.8267 W |
| NHEP | Hampton Harbor | NHHS | 42.8972 N | -70.8164 W |
| GOMC | Little Harbor | NHLH | 43.0581 N | -70.7154 W |
| NHEP | South Mill Pond | NHSM | 43.0729 N | -70.7489 W |
| GOMC | Clark's Cove | MECC | 43.0774 N | -70.7244 W |

Several annual data reports on the results of the Gulf of Maine-wide Gulfwatch program have been published (Chase, et al., 1998; Chase et al., 1997; Chase et al., 1996a; Chase et al., 1996b), as well as a New Hampshire Gulfwatch report for the 1998 results (Jones and Landry, 2000). A review of the results, program and logistics of the first five years of the Gulfwatch Program was published in 1998 (Jones et al., 1998), and an in-depth analysis of scientific findings for the first seven years has been published (Chase et al., 2001). The use of the Gulfwatch approach for a smaller area like coastal New Hampshire has also been analyzed (Jones et al, 2001).

All field sampling was conducted as outlined in Sowles et al. (1997). Collection times were set to avoid collecting during or shortly after periods when stormwater runoff and wave re-suspension of bottom sediment could result in enhanced uptake and accumulation of sediment in the mussel gut. At each site, mussels were collected from four discrete areas within a segment of the shoreline that was representative of local water quality. Using a ruler to measure length, 45-

50 mussels of 50-60 mm shell length were collected. The mussels were cleaned of all sediment, epibiota, and other accretions in clean seawater from the collection site, placed in clean containers, and then transported to the lab in coolers with ice packs. Prior to shucking, mussels were thoroughly rewashed to minimize tissue contamination from any remaining surface debris, and residual seawater was drained from the shells.

In the laboratory, individual mussel lengths, widths and heights (as defined by Seed, 1968) were determined to the nearest 0.1 mm using calipers. Using plastic or stainless steel wedges, mussels were shucked directly into appropriately prepared Mason jars for metal and organic analysis, respectively (for details see Sowles et al., 1997). Composite samples (20 mussels/composite; 4 composites/station) were capped, labeled and stored at –15 degrees Celsius.

The analytical procedures used, followed those reported for the previous years (Sowles et al., 1994, 1996; Chase et al., 1996a, b, 1997, 1998). Table 4 contains a summary of trace metal (inorganic) and organic compounds that will be analyzed by the two laboratories.

**Table 4 Inorganic and organic contaminants analyzed in shellfish tissues for the New Hampshire Gulfwatch Program**

**INORGANIC CONTAMINANTS**

**Metals**

Ag Al Cd Cr Cu Fe Hg Ni Pb Zn

**ORGANIC CONTAMINANTS**

| **Aromatic Hydrocarbons** | **Chlorinated Pesticides** | **PCB Congeners** |
|---|---|---|
| | | PCB 8 |
| Naphthalene | Hexachlorobenzene (HCB) | PCB 18 |
| 1-Methylnaphthalene | gamma-hexachlorocyclohexane | PCB 28 |
| 2-Methynaphthalene | Heptachlor | PCB 29 |
| Biphenyl | Heptachlor epoxideAldrinMirex | PCB 44 |
| 2,6-Dimethylnaphthalene | cis-Chlordane | PCB 50 |
| Acenaphthylene | trans-Nonachlor | PCB 52 |
| Acenaphthene | Dieldrin | PCB 66 |
| 2,3,5-Trimethylnaphthalene | Alpha-endosulfan | PCB 77 |
| Fluorene | beta-Endosulfan | PCB 87 |
| Phenanthrene | | PCB 101 |
| Anthracene | **DDT and Homologues** | PCB 105 |
| 1-Methylphenanthrene | | PCB 118 |
| Flouranthene | 2,4'-DDE | PCB 126 |
| Pyrene | 2,4'-DDD | PCB 128 |
| Benzo [a] anthracene | 2,4'-DDT | PCB 138 |

| | | |
|---|---|---|
| Chrysene | 4,4'-DDE | PCB 153 |
| Benzo [b] flouranthene | 4,4'-DDD | PCB 169 |
| Benzo [k] flouranthene | 4,4'-DDT | PCB 170 |
| Benzo [a] pyrene | | PCB 180 |
| Benzo [e] pyrene | | PCB 187 |
| Perylene | | PCB 195 |
| Indeno [1,2,3-cd] pyrene | | PCB 206 |
| Dibenzo [a,h] anthracene | | PCB 209 |
| Benzo [g,h,l] perylene | | |

# FIELD AND LABORATORY DATA

## Ambient River Monitoring of Coastal Tributaries

Ambient river data for 2003 are in Appendix C. The data are organized by sampling site and date. Access to the data will soon be available at the DES website, which can be accessed by selecting the environmental monitoring database at http://www.des.state.nh.us/OneStop/.

Duplicate measures of field parameters were collected once per month at one of the nine sampling locations (see table 5) as required by the Quality Assurance Project Plan (Piszczek, 2002). Data retention for water quality assessment purposes is contingent on compliance with a parameter-specific relative percent difference (RPD) as described in the QAPP and table 6. Several data did not comply with the RPD and this is noted in the data tables (Appendix C). Duplicate sample analyses of laboratory parameters were not measured during the 2003 season based on budgetary limitations.

**Table 5 Field duplicate dates and sampling locations**

| Date | Sampling location |
|---|---|
| 3/19/03 | 07-Cch |
| 4/24/03 | 05-Sfr |
| 5/20/03 | 05-Oys |
| 6/30/03 | 05-Oys |
| 7/24/03 | 05-Sag |
| 8/19/03 | 07-Cch |
| 9/29/03 | 05-Oys |
| 10/30/03 | 05-Oys |
| 11/18/03 | 05-Sag |
| 12/16/03 | 07-Cch |

**Table 6 Field analytical QC sample table.**

| Water Quality Parameter | QC Check | QC Acceptance Limit |
|---|---|---|
| Dissolved Oxygen | Field duplicate; Measurement replicate | RPD < 5% |
| Temperature | Field duplicate; Measurement replicate | RPD < 5% |
| pH | Field duplicate; measurement replicate | RPD < 0.2 std units |
| Specific Conductance | Field duplicate; measurement replicate | RPD < 5% |
| Turbidity | Field duplicate; measurement replicate | RPD < 5% |

Certain problems were encountered during the field work that resulted in no changes to the sample collection methods or analytical analyses while other issues did result in changes (table 7). The most frequent change occurred when the field pH meter would not calibrate. In these cases, the water samples were analyzed for pH in the DES Laboratory Services Unit.

**Table 7 Field problems encountered during the 2003 field season.**

| Date | Site | Issue |
|---|---|---|
| 03/19/03 | 05-Ber | Sample collected downstream side of bridge due to ice cover upstream. |
| | All sites | The field pH meter would not calibrate. pH analyzed in the laboratory. |
| | 02-Wnc | Ice cover above dam. Made a hole in the ice to collect sample. |
| | 05-Oys | Field data lost. |
| 4/24/03 | 05-Oys | No water temperature measured. |
| 5/20/03 | 05-Oys | Preserved nutrient bottle overfilled. |
| 6/19/03 | 05-Ber, 05-Sag | The field pH meter would not calibrate. pH analyzed in the laboratory. |
| 7/22/03 | All sites | The field pH meter would not calibrate. pH analyzed in the laboratory. |
| | 05-Blm | Preserved nutrient bottle slightly overfilled. |
| 8/19/03 | 05-Lmp | Dissolved oxygen meter would not calibrate. |
| 10/28/03 | 02-Wnc | Drawdown in progress. Sample collected slightly upstream of usual site at dam. |
| 10/30/03 | 07-Cch | Preserved nutrient bottle slightly overfilled. |
| 11/19/03 | All sites | Turbidity not measured in the field. Measured in the laboratory. |
| 12/16/03 | 02-Wnc | River was frozen. No sample was collected. |
| | All sites | The field pH meter would not calibrate. pH analyzed in the laboratory. |

## Gulfwatch Monitoring: Toxic Contaminant Monitoring of Shellfish Tissue

Physical data on the mussels were transferred from hard copy datasheets to Excel spreadsheets. Data entry was checked twice for transcription errors following DES protocols. The physical data for the samples are provided in Appendix D. The original datasheets will be kept on file at DES.

The laboratory results have not yet been received from the two laboratories. The 2003Gulfwatch data are expected in December 2005. Once the data are received, a report will be written for all NH Gulfwatch data. The report will discuss the status and trends of toxic contaminants found in

mussel tissue for estuarine waters. Emphasis will be placed on the potential impact of risks associated with contaminants found in the shellfish growing waters.

## RECOMMENDATIONS

### Ambient River Monitoring of Coastal Tributaries

The following recommendations pertain to the ambient river monitoring of coastal tributaries.

1. Monitoring should continue on a monthly basis at the nine coastal river sites to establish trends in ambient river quality. Baseline conditions and trends will be important in regards to monitoring the success of the NHEP *Management Plan* implementation.
2. Steps should be taken to ensure all agencies and organizations that are interested in the data have access to it. DES plans to add environmental monitoring data to the OneStop web-based program on the DES website.
3. Duplicates of laboratory parameters should be added in 2004 to comply with the quality assurance project plan.
4. DES should consider modifying the RPD for dissolved oxygen and possibly pH to be less stringent. The coordinator of the Ambient Rivers Monitoring Program is currently considering these changes.

### Gulfwatch Monitoring: Toxic Contaminant Monitoring of Shellfish Tissue

The following recommendations pertain to the New Hampshire Gulfwatch program.

1. The NHEP should consider increasing the funds for Gulfwatch monitoring to cover the costs of price increases at the contract laboratories.
2. The Gulf of Maine Council Environmental Quality Monitoring Committee should continue to explore other laboratories in an effort to expedite the analyses of the shellfish tissue.
3. The *New Hampshire Estuaries Project Monitoring Plan* recommends annual mussel sampling at three locations (Portsmouth Harbor, Great Bay and Hampton/Seabrook Harbor) and semi-annual clam and oyster sampling at Hampton/Seabrook Harbor and Great Bay, respectively. The annual mussel monitoring appears to be funded through 2004 but, the oyster and clam monitoring support is unknown at this time.

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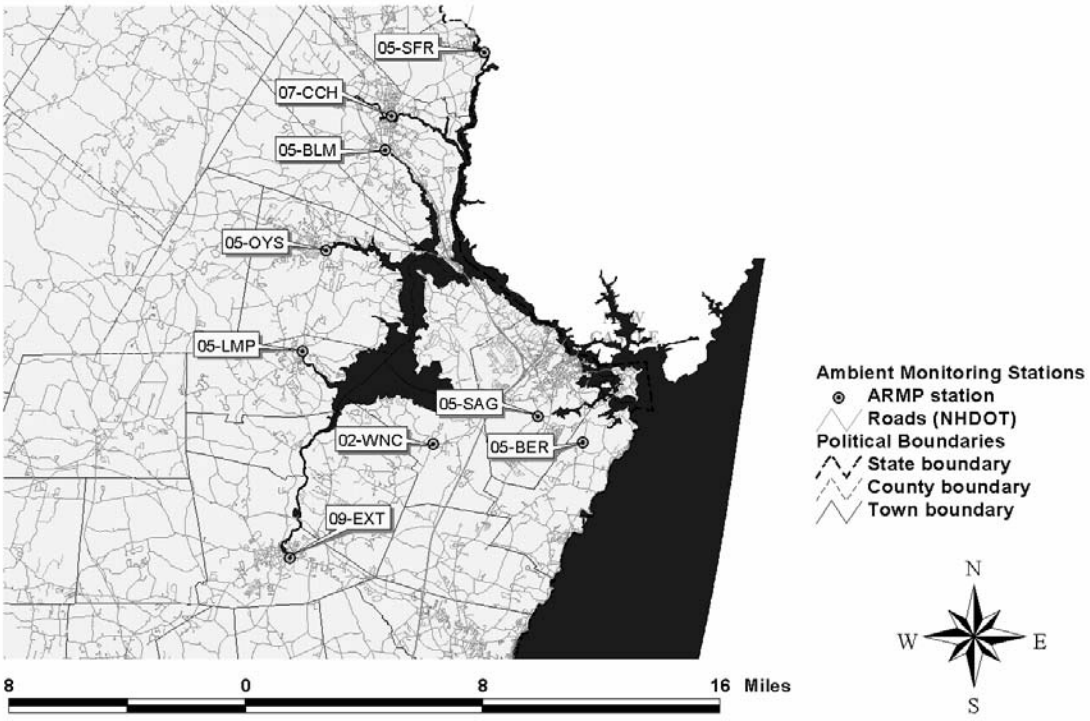
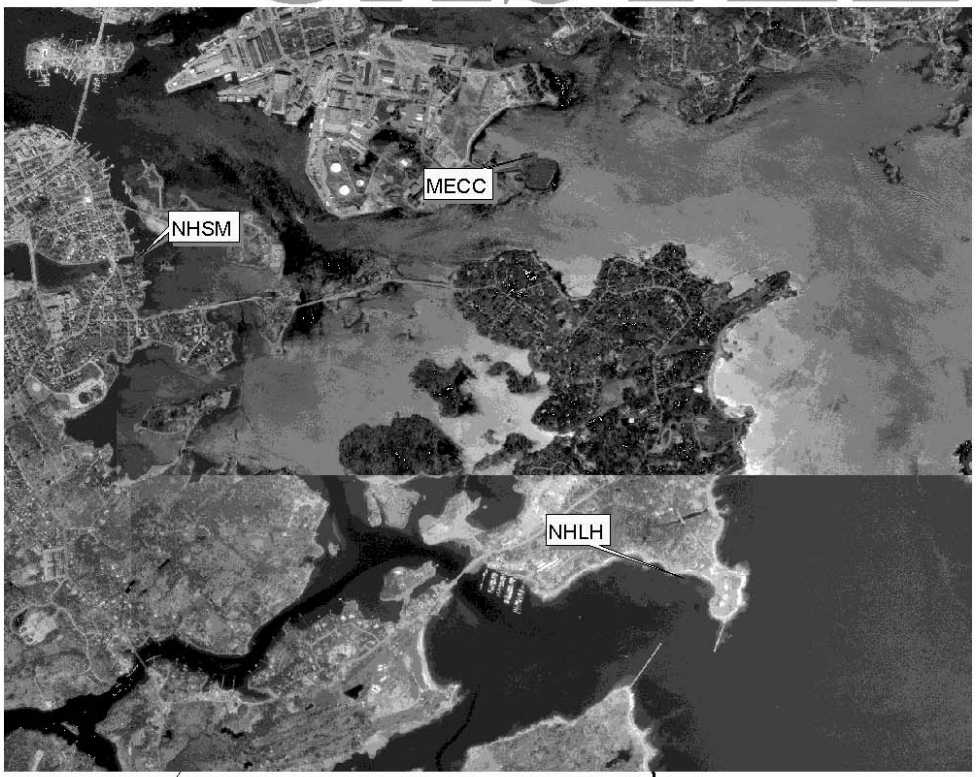
# APPENDIX A - AMBIENT RIVER SITE MAPS

# NHDES Enhanced Ambient Rivers Monitoring Program
# Tidal Tributary Monitoring Stations



# APPENDIX B - GULFWATCH SITE MAPS

# Gulfwatch 2003 Stations Near Portsmouth NH

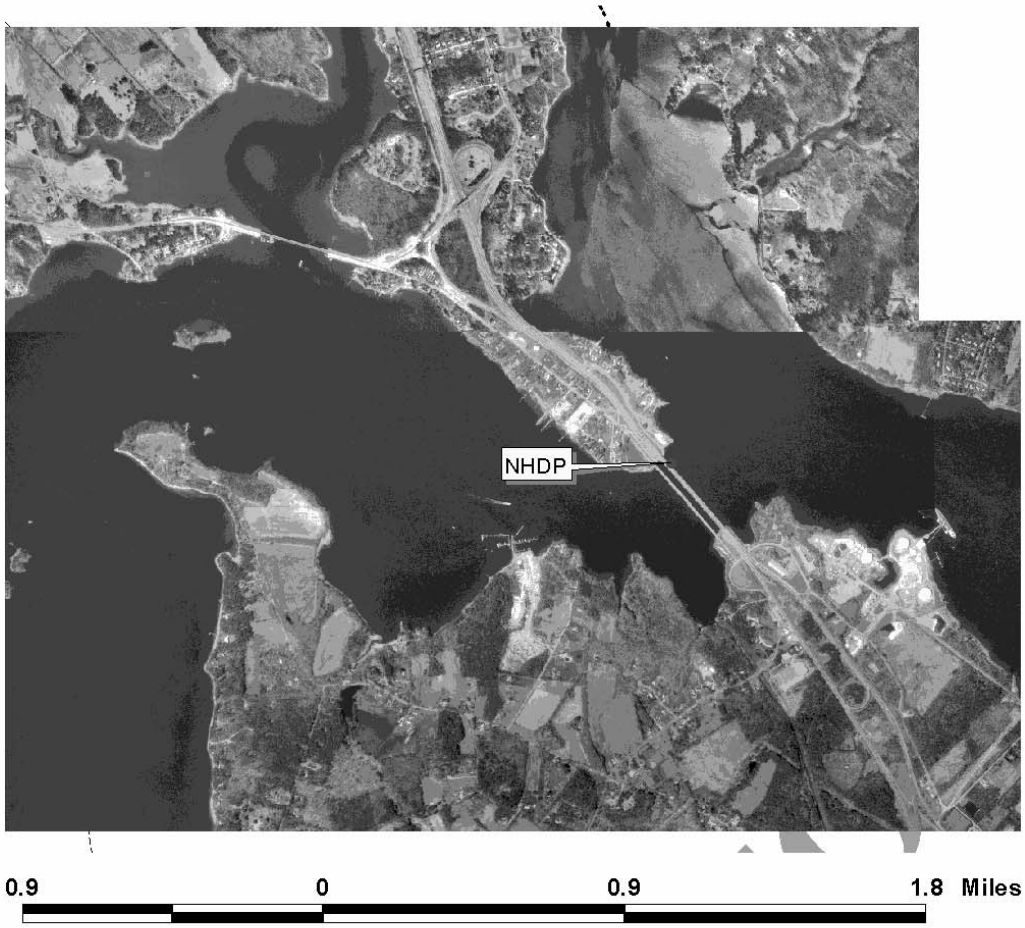



0.9 0 0.9 1.8 Miles

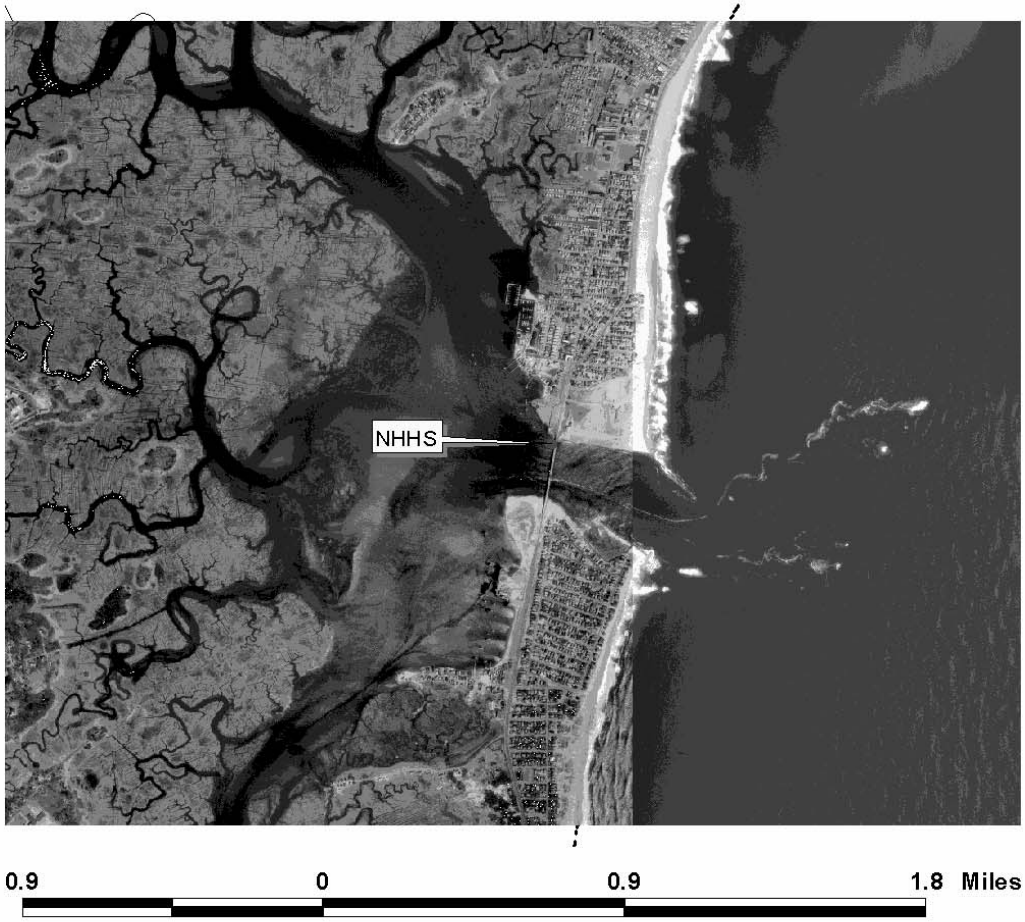
Political Boundaries
State boundary
County boundary
Town boundary
Text Town Names

N
W E
S

# 2003 Gulfwatch Station at Dover Point, Dover NH



# 2003 Gulfwatch Station at Hampton/Seabrook Harbor, Hampton, NH




Political Boundaries
State boundary
County boundary
Town boundary
Text Town Names

N
W
E
S

# APPENDIX C - AMBIENT RIVER DATA FOR COASTAL TRIBUTARIES

Berry's Brook at Sagamore Ave, Rye, 05-BER
Note: Data not meeting RPD are shaded.

| ACTIVITY CATEGORY | START DATE | START TIME | BOD RESULTS | BOD QUAL | BOD UNITS | CHL RESULTS | CHL UNITS | DO RESULTS | DO UNITS | DO SAT RESULTS | DO SAT UNITS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 9:31 | 2.4 | < | MG/L | 0.31 | MG/M3 | 7.36 | MG/L | 52 | % |
| ROUTINE SAMPLE | 4/23/2003 | 13:25 | 2.4 | < | MG/L | 1.64 | MG/M3 | 8.28 | MG/L | 72.3 | % |
| FIELD DUPLICATE | 4/23/2003 | 13:25 | nd | | MG/L | nd | MG/M3 | 8.31 | MG/L | 72.7 | % |
| ROUTINE SAMPLE | 5/20/2003 | 9:32 | 2.4 | < | MG/L | 1.23 | UG/L | 5.75 | MG/L | 57.3 | % |
| ROUTINE SAMPLE | 6/19/2003 | 13:55 | 2.4 | < | MG/L | 1.26 | MG/M3 | nd | nd | 61.5 | % |
| ROUTINE SAMPLE | 7/24/2003 | 9:28 | 3.96 | | MG/L | 5.28 | MG/M3 | 1.59 | MG/L | 18.1 | % |
| ROUTINE SAMPLE | 8/20/2003 | 9:30 | 2.88 | | MG/L | 1.99 | MG/M3 | 1.22 | MG/L | 13.6 | % |
| ROUTINE SAMPLE | 9/16/2003 | 9:10 | 2.4 | < | MG/L | 9.65 | UG/L | 5.55 | MG/L | 59 | % |
| ROUTINE SAMPLE | 10/28/2003 | 9:30 | 2.4 | < | MG/L | 0.92 | UG/L | 4.99 | MG/L | 45.2 | % |
| ROUTINE SAMPLE | 11/18/2003 | 9:30 | 2.4 | < | MG/L | 0.5 | UG/L | 10.43 | MG/L | 74.5 | % |
| ROUTINE SAMPLE | 12/10/2003 | 9:30 | 2.4 | < | MG/L | 0.71 | UG/L | 8.77 | MG/L | 60.8 | % |

| ACTIVITY CATEGORY | START DATE | START TIME | EC RESULTS | EC QUAL | EC UNITS | NITR RESULTS | NITR QUAL | NITR UNITS | TKN RESULTS | TKN UNITS |
|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 9:31 | 10 | < | CTS/100ML | 0.2 | < | MG/L | 0.4 | MG/L |
| ROUTINE SAMPLE | 4/23/2003 | 13:25 | 60 | | CTS/100ML | 0.2 | < | MG/L | 0.7 | MG/L |
| ROUTINE SAMPLE | 5/20/2003 | 9:32 | 80 | | CTS/100ML | 0.2 | < | MG/L | 0.9 | MG/L |
| ROUTINE SAMPLE | 6/19/2003 | 13:55 | nd | | CTS/100ML | 0.2 | < | MG/L | 0.9 | MG/L |
| ROUTINE SAMPLE | 6/20/2003 | 8:55 | 180 | | CTS/100ML | nd | | MG/L | nd | MG/L |
| ROUTINE SAMPLE | 7/24/2003 | 9:28 | 110 | | CTS/100ML | 0.2 | < | MG/L | 1.5 | MG/L |
| ROUTINE SAMPLE | 8/20/2003 | 9:30 | DELETE | | CTS/100ML | 0.2 | < | MG/L | 1.6 | MG/L |
| ROUTINE SAMPLE | 9/16/2003 | 9:10 | 750 | | CTS/100ML | 0.2 | < | MG/L | 1.2 | MG/L |
| ROUTINE SAMPLE | 10/28/2003 | 9:30 | 270 | | CTS/100ML | 0.2 | < | MG/L | 1.1 | MG/L |
| ROUTINE SAMPLE | 11/18/2003 | 9:30 | 30 | | CTS/100ML | 0.2 | < | MG/L | 0.8 | MG/L |
| ROUTINE SAMPLE | 12/10/2003 | 9:30 | 30 | | CTS/100ML | 0.2 | < | MG/L | 0.6 | MG/L |

| ACTIVITY CATEGORY | START DATE | START TIME | NO2NO3 RESULTS | NO2NO3 QUAL | NO2NO3 UNITS | PH RESULTS | PH UNITS | P RESULTS | P UNITS | COND RESULTS | COND UNITS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 9:31 | 0.05 | < | MG/L | 5.9 | UNITS | 0.011 | MG/L | 175.1 | US/CM |
| ROUTINE SAMPLE | 4/23/2003 | 13:25 | 0.05 | | MG/L | 6.44 | UNITS | 0.02 | MG/L | 194.5 | US/CM |
| FIELD DUPLICATE | 4/23/2003 | 13:25 | nd | | MG/L | 6.19 | UNITS | nd | MG/L | 195.9 | US/CM |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 5/20/2003 | 9:32 | 0.05 | < | MG/L | 6.4 | UNITS | 0.025 | MG/L | 223.7 | US/CM |
| ROUTINE SAMPLE | 6/19/2003 | 13:55 | 0.05 | < | MG/L | 6.5 | UNITS | 0.027 | MG/L | 221 | US/CM |
| ROUTINE SAMPLE | 7/24/2003 | 9:28 | 0.05 | < | MG/L | 6.4 | UNITS | 0.063 | MG/L | 275.1 | US/CM |
| ROUTINE SAMPLE | 8/20/2003 | 9:30 | 0.05 | < | MG/L | 6.46 | UNITS | 0.056 | MG/L | 344.2 | US/CM |
| ROUTINE SAMPLE | 9/16/2003 | 9:10 | 0.05 | < | MG/L | 6.47 | UNITS | 0.065 | MG/L | 302.4 | US/CM |
| ROUTINE SAMPLE | 10/28/2003 | 9:30 | 0.05 | < | MG/L | 5.97 | UNITS | 0.022 | MG/L | 261.6 | US/CM |
| ROUTINE SAMPLE | 11/18/2003 | 9:30 | 0.05 | | MG/L | 6.85 | UNITS | 0.012 | MG/L | 154.5 | US/CM |
| ROUTINE SAMPLE | 12/10/2003 | 9:30 | 0.05 | < | MG/L | 7.22 | UNITS | 0.013 | MG/L | 178.9 | US/CM |

| ACTIVITY CATEGORY | START DATE | START TIME | TEMP RESULTS | TEMP UNITS | TSS RESULTS | TSS QUAL | TSS UNITS | TURB RESULTS | TURB UNITS | WEATHER COMMENTS RESULTS |
|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 9:31 | 1.2 | DEG C | 1 | < | MG/L | 0.1 | NTU | CLEAR, SLIGHT BREEZE |
| ROUTINE SAMPLE | 4/23/2003 | 13:25 | 9.3 | DEG C | 1 | < | MG/L | 0.5 | NTU | OVERCAST |
| FIELD DUPLICATE | 4/23/2003 | 13:25 | 9.6 | DEG C | nd | | MG/L | 0.35 | NTU | |
| ROUTINE SAMPLE | 5/20/2003 | 9:32 | 15.3 | DEG C | 3.5 | | MG/L | 0.75 | NTU | CLEAR, WARM, NO WIND |
| ROUTINE SAMPLE | 6/19/2003 | 13:55 | 18.9 | DEG C | 1 | < | MG/L | 0.8 | NTU | CLOUDS, SLIGHT BREEZE |
| ROUTINE SAMPLE | 6/20/2003 | 8:55 | nd | DEG C | nd | | MG/L | nd | NTU | OVERCAST |
| ROUTINE SAMPLE | 7/24/2003 | 9:28 | 21 | DEG C | 8 | | MG/L | 4.6 | NTU | |
| ROUTINE SAMPLE | 8/20/2003 | 9:30 | 20.8 | DEG C | 2.5 | | MG/L | 4.4 | NTU | CLEAR, SLIGHT BREEZE |
| ROUTINE SAMPLE | 9/16/2003 | 9:10 | 18.5 | DEG C | 9.5 | | MG/L | 5.2 | NTU | |
| ROUTINE SAMPLE | 10/28/2003 | 9:30 | 11 | DEG C | 8.5 | | MG/L | 0.55 | NTU | CLEAR |
| ROUTINE SAMPLE | 11/18/2003 | 9:30 | 1.7 | DEG C | 1.5 | | MG/L | 0.3 | NTU | SUNNY, CLEAR |
| ROUTINE SAMPLE | 12/10/2003 | 9:30 | 0.6 | DEG C | 1.5 | | MG/L | 0.86 | NTU | OVERCAST |

Legend

| | | | |
|---|---|---|---|
| BOD | BIOCHEMICAL OXYGEN DEMAND | COND | SPECIFIC CONDUCTANCE |
| CHL | CHLOROPHYLL A, UNCORRECTED FOR PHEOPHYTIN | TEMP | TEMPERATURE WATER |
| DO | DISSOLVED OXYGEN | TSS | TOTAL SUSPENDED SOLIDS |
| DO SAT | DISSOLVED OXYGEN SATURATION | TURB | TURBIDITY |
| DELETED | LAB ACCIDENT | | |
| EC | ESCHERICHIA COLI | | |
| NITR | NITROGEN AMMONIA | | |
| TKN | NITROGEN KJELDAHL | | |
| nd | NO SAMPLE COLLECTED OR NO MEASUREMENT MADE | | |
| NO2NO3 | NITROGEN NITRATE + NITRITE | | |
| P | PHOSPHORUS AS P | | |
| QUAL | QUALIFIER | | |

Sagamore Creek at Peverly Hill Road, Portsmouth, 05-Sag
Note: Data not meeting RPD are shaded.

| ACTIVITY CATEGORY | START DATE | START TIME | BOD RESULTS | BOD QUAL | BOD UNITS | CHL RESULTS | CHL UNITS | DO RESULTS | DO UNITS | DO SAT RESULTS | DO SAT UNITS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 9:55 | 2.4 | < | MG/L | 0.57 | MG/L | 11.37 | MG/L | 81.5 | % |
| ROUTINE SAMPLE | 4/23/2003 | 12:46 | 2.4 | < | MG/L | 2.56 | UG/L | 10.41 | MG/L | 91.6 | % |
| ROUTINE SAMPLE | 5/20/2003 | 9:59 | 2.4 | < | MG/L | 2.54 | UG/L | 11.08 | MG/L | 119.3 | % |
| ROUTINE SAMPLE | 6/19/2003 | 14:27 | 2.4 | < | MG/L | 1.82 | UG/L | 8.24 | MG/L | 93.8 | % |
| ROUTINE SAMPLE | 6/20/2003 | 9:10 | nd | | MG/L | nd | UG/L | nd | MG/L | nd | % |
| ROUTINE SAMPLE | 7/24/2003 | 9:48 | 2.8 | | MG/L | 3.41 | MG/M3 | 5.68 | MG/L | 65.6 | % |
| FIELD DUPLICATE | 7/24/2003 | 9:48 | nd | | MG/L | nd | MG/M3 | 5.53 | MG/L | 64 | % |
| ROUTINE SAMPLE | 8/20/2003 | 10:00 | 2.4 | < | MG/L | 2.51 | MG/M4 | 6.04 | MG/L | 71.1 | % |
| ROUTINE SAMPLE | 9/16/2003 | 9:31 | 2.4 | < | MG/L | 4.88 | UG/L | 6.94 | MG/L | 76.7 | % |
| ROUTINE SAMPLE | 10/28/2003 | 10:10 | 2.6 | | MG/L | 4.74 | UG/L | 9.22 | MG/L | 86.1 | % |
| ROUTINE SAMPLE | 11/18/2003 | 10:03 | 2.4 | < | MG/L | 1.64 | UG/L | 13.04 | MG/L | 101.2 | % |
| FIELD DUPLICATE | 11/18/2003 | 10:03 | nd | | MG/L | nd | UG/L | 13.12 | MG/L | 102.4 | % |
| ROUTINE SAMPLE | 12/10/2003 | 9:59 | 2.4 | < | MG/L | 2.37 | UG/L | 11.75 | MG/L | 82.9 | % |

| ACTIVITY CATEGORY | START DATE | START TIME | EC RESULTS | EC QUAL | EC UNITS | NITR RESULTS | NITR QUAL | NITR UNITS | TKN RESULTS | TKN UNITS |
|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 9:55 | 10 | < | CTS/100ML | 0.2 | < | MG/L | 0.3 | MG/L |
| ROUTINE SAMPLE | 4/23/2003 | 12:46 | 270 | | CTS/100ML | 0.2 | < | MG/L | 0.5 | MG/L |
| ROUTINE SAMPLE | 5/20/2003 | 9:59 | 30 | | CTS/100ML | 0.2 | < | MG/L | 0.5 | MG/L |
| ROUTINE SAMPLE | 6/19/2003 | 14:27 | nd | | CTS/100ML | 0.2 | < | MG/L | 0.4 | MG/L |
| ROUTINE SAMPLE | 6/20/2003 | 9:10 | 80 | | CTS/100ML | nd | | MG/L | nd | MG/L |
| ROUTINE SAMPLE | 7/24/2003 | 9:48 | 150 | | CTS/100ML | 0.2 | < | MG/L | 0.5 | MG/L |
| FIELD DUPLICATE | 7/24/2003 | 9:48 | nd | | CTS/100ML | nd | | MG/L | nd | MG/L |
| ROUTINE SAMPLE | 8/20/2003 | 10:00 | DELETE | | CTS/100ML | 0.2 | < | MG/L | 1.2 | MG/L |
| ROUTINE SAMPLE | 9/16/2003 | 9:31 | 430 | | CTS/100ML | 0.2 | < | MG/L | 0.4 | MG/L |
| ROUTINE SAMPLE | 10/28/2003 | 10:10 | 350 | | CTS/100ML | 0.2 | < | MG/L | 0.7 | MG/L |
| ROUTINE SAMPLE | 11/18/2003 | 10:03 | 10 | | CTS/100ML | 0.2 | < | MG/L | 0.6 | MG/L |
| FIELD DUPLICATE | 11/18/2003 | 10:03 | nd | | CTS/100ML | nd | | MG/L | nd | MG/L |
| ROUTINE SAMPLE | 12/10/2003 | 9:59 | 50 | | CTS/100ML | 0.2 | < | MG/L | 0.7 | MG/L |

| ACTIVITY CATEGORY | START DATE | START TIME | NO2NO3 RESULTS | NO2NO3 QUAL | NO2NO3 UNITS | PH RESULTS | PH UNITS | P RESULTS | P UNITS | COND RESULTS | COND UNITS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 9:55 | 0.21 | | MG/L | 7.3 | UNITS | 0.046 | MG/L | 576 | US/CM |
| ROUTINE SAMPLE | 4/23/2003 | 12:46 | 0.1 | | MG/L | 7.36 | UNITS | 0.032 | MG/L | 581 | US/CM |
| ROUTINE SAMPLE | 5/20/2003 | 9:59 | 0.05 | < | MG/L | 7.8 | UNITS | 0.021 | MG/L | 1034 | US/CM |
| ROUTINE SAMPLE | 6/19/2003 | 14:27 | 0.05 | < | MG/L | 7.7 | UNITS | 0.016 | MG/L | 1125 | US/CM |
| ROUTINE SAMPLE | 6/20/2003 | 9:10 | nd | | MG/L | nd | UNITS | nd | MG/L | nd | US/CM |
| ROUTINE SAMPLE | 7/24/2003 | 9:48 | 0.05 | < | MG/L | 7.5 | UNITS | 0.014 | MG/L | 1447 | US/CM |
| FIELD DUPLICATE | 7/24/2003 | 9:48 | nd | | MG/L | nd | UNITS | nd | MG/L | 1455 | US/CM |
| ROUTINE SAMPLE | 8/20/2003 | 10:00 | 0.05 | < | MG/L | 6.59 | UNITS | 0.009 | MG/L | 1260 | US/CM |
| ROUTINE SAMPLE | 9/16/2003 | 9:31 | 0.05 | < | MG/L | 7.07 | UNITS | 0.022 | MG/L | 1694 | US/CM |
| ROUTINE SAMPLE | 10/28/2003 | 10:10 | 0.06 | | MG/L | 6.4 | UNITS | 0.043 | MG/L | 942 | US/CM |
| ROUTINE SAMPLE | 11/18/2003 | 10:03 | 0.05 | < | MG/L | 6.99 | UNITS | 0.023 | MG/L | 930 | US/CM |
| FIELD DUPLICATE | 11/18/2003 | 10:03 | nd | | MG/L | 7.16 | UNITS | nd | MG/L | 944 | US/CM |
| ROUTINE SAMPLE | 12/10/2003 | 9:59 | 0.1 | | MG/L | 7.28 | UNITS | 0.018 | MG/L | 799 | US/CM |

| ACTIVITY CATEGORY | START DATE | START TIME | TEMP RESULTS | TEMP UNITS | TSS RESULTS | TSS UNITS | TURB RESULTS | TURB UNITS | WEATHER COMMENTS RESULTS |
|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 9:55 | 1.7 | DEG C | 11.5 | MG/L | 22 | NTU | CLEAR, SLIGHT BREEZE |
| ROUTINE SAMPLE | 4/23/2003 | 12:46 | 9.9 | DEG C | 7 | MG/L | 12 | NTU | OVERCAST |
| ROUTINE SAMPLE | 5/20/2003 | 9:59 | 18.8 | DEG C | 3.5 | MG/L | 4.3 | NTU | CLEAR, WARM, NO WIND |
| ROUTINE SAMPLE | 6/19/2003 | 14:27 | 21.8 | DEG C | 1.5 | MG/L | 2.8 | NTU | SOME CLOUDS, SLIGHT BREEZE |
| ROUTINE SAMPLE | 6/20/2003 | 9:10 | nd | DEG C | nd | MG/L | nd | NTU | OVERCAST |
| ROUTINE SAMPLE | 7/24/2003 | 9:48 | 22.6 | DEG C | 4 | MG/L | 0.95 | NTU | |
| FIELD DUPLICATE | 7/24/2003 | 9:48 | 22.6 | DEG C | nd | MG/L | 0.95 | NTU | |
| ROUTINE SAMPLE | 8/20/2003 | 10:00 | 23.6 | DEG C | 1 | MG/L | 0.8 | NTU | CLEAR, SLIGHT BREEZE |
| ROUTINE SAMPLE | 9/16/2003 | 9:31 | 20.3 | DEG C | 3 | MG/L | 2.4 | NTU | |
| ROUTINE SAMPLE | 10/28/2003 | 10:10 | 12.1 | DEG C | 19 | MG/L | 19 | NTU | CLEAR |
| ROUTINE SAMPLE | 11/18/2003 | 10:03 | 4.8 | DEG C | 5 | MG/L | 2.9 | NTU | SUNNY, CLEAR |
| FIELD DUPLICATE | 11/18/2003 | 10:03 | 4.8 | DEG C | nd | MG/L | 3 | NTU | |
| ROUTINE SAMPLE | 12/10/2003 | 9:59 | 1.2 | DEG C | 4 | MG/L | 5.52 | NTU | OVERCAST |

Legend

| | |
|---|---|
| BOD | BIOCHEMICAL OXYGEN DEMAND |
| CHL | CHLOROPHYLL A, UNCORRECTED FOR PHEOPHYTIN |
| DO | DISSOLVED OXYGEN |

| | |
|---|---|
| DO SAT | DISSOLVED OXYGEN SATURATION |
| DELETED | LAB ACCIDENT |
| EC | ESCHERICHIA COLI |
| NITR | NITROGEN AMMONIA |
| TKN | NITROGEN KJELDAHL |
| nd | NO SAMPLE COLLECTED OR NO MEASUREMENT MADE |
| NO2NO3 | NITROGEN NITRATE + NITRITE |
| P | PHOSPHORUS AS P |
| QUAL | QUALIFIER |
| COND | SPECIFIC CONDUCTANCE |
| TEMP | TEMPERATURE WATER |
| TSS | TOTAL SUSPENDED SOLIDS |
| TURB | TURBIDITY |

Winnicut River at Rt. 33 Bridge, Greenland, 02-WNC
Note: Data not meeting RPD are shaded.

| ACTIVITY CATEGORY | START DATE | START TIME | BOD RESULTS | BOD QUAL | BOD UNITS | CHL RESULTS | CHL UNITS | DO RESULTS | DO UNITS | DO SAT RESULTS | DO SAT UNITS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 10:30 | 2.4 | < | MG/L | 0.69 | MG/M3 | 10.82 | MG/L | 77.8 | % |
| ROUTINE SAMPLE | 4/23/2003 | 11:40 | 2.4 | < | MG/L | 2.54 | UG/L | 9.17 | MG/L | 79.6 | % |
| ROUTINE SAMPLE | 5/20/2003 | 10:20 | 2.4 | < | MG/L | 3.27 | UG/L | 7.97 | MG/L | 84.5 | % |
| ROUTINE SAMPLE | 6/30/2003 | 9:50 | 2.4 | < | MG/L | 3.82 | MG/M3 | 3.68 | MG/L | 43.3 | % |
| ROUTINE SAMPLE | 7/24/2003 | 10:24 | 2.76 | | MG/L | 26.19 | MG/M3 | 5.12 | MG/L | 59.9 | % |
| ROUTINE SAMPLE | 8/20/2003 | 8:56 | 2.4 | < | MG/L | 2.89 | MG/M3 | 2.05 | MG/L | 23.7 | % |
| ROUTINE SAMPLE | 9/16/2003 | 10:05 | 2.4 | < | MG/L | 10.76 | UG/L | 7.48 | MG/L | 82.6 | % |
| ROUTINE SAMPLE | 10/28/2003 | 10:40 | 2.4 | < | MG/L | 3.63 | UG/L | 8.06 | MG/L | 75.4 | % |
| ROUTINE SAMPLE | 11/18/2003 | 10:44 | 2.4 | < | MG/L | 1.47 | UG/L | 10.08 | MG/L | 74.7 | % |

| ACTIVITY CATEGORY | START DATE | START TIME | EC RESULTS | EC QUAL | EC UNITS | NITR RESULTS | NITR QUALIFIER | NITR UNITS | TKN RESULTS | TKN UNITS |
|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 10:30 | 10 | < | CTS/100ML | 0.2 | < | MG/L | 0.3 | MG/L |
| ROUTINE SAMPLE | 4/23/2003 | 11:40 | 120 | | CTS/100ML | 0.2 | < | MG/L | 0.6 | MG/L |
| ROUTINE SAMPLE | 5/20/2003 | 10:20 | 30 | | CTS/100ML | 0.2 | < | MG/L | 0.6 | MG/L |
| ROUTINE SAMPLE | 6/30/2003 | 9:50 | 150 | | CTS/100ML | 0.2 | < | MG/L | 0.8 | MG/L |
| ROUTINE SAMPLE | 7/24/2003 | 10:24 | 140 | | CTS/100ML | 0.2 | < | MG/L | 0.8 | MG/L |
| ROUTINE SAMPLE | 8/20/2003 | 8:56 | DELETE | | CTS/100ML | 0.2 | < | MG/L | 0.4 | MG/L |
| ROUTINE SAMPLE | 9/16/2003 | 10:05 | 300 | | CTS/100ML | 0.2 | < | MG/L | 0.8 | MG/L |
| ROUTINE SAMPLE | 10/28/2003 | 10:40 | 120 | | CTS/100ML | 0.2 | | MG/L | 1.2 | MG/L |
| ROUTINE SAMPLE | 11/18/2003 | 10:44 | 40 | | CTS/100ML | 0.2 | < | MG/L | 0.8 | MG/L |

No December data-river was frozen

| ACTIVITY CATEGORY | START DATE | START TIME | NO2NO3 RESULTS | NO2NO3 QUALIFIER | NO2NO3 UNITS | PH RESULTS | PH UNITS | P RESULTS | P UNITS | COND RESULTS | COND UNITS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 10:30 | 0.34 | | MG/L | 6.7 | UNITS | 0.025 | MG/L | 69.8 | US/CM |
| ROUTINE SAMPLE | 4/23/2003 | 11:40 | 0.22 | | MG/L | 6.37 | UNITS | 0.026 | MG/L | 229.7 | US/CM |
| ROUTINE SAMPLE | 5/20/2003 | 10:20 | 0.05 | < | MG/L | 7.1 | UNITS | 0.029 | MG/L | 311.8 | US/CM |
| ROUTINE SAMPLE | 6/30/2003 | 9:50 | 0.07 | | MG/L | 7 | UNITS | 0.06 | MG/L | 311.1 | US/CM |
| ROUTINE SAMPLE | 7/24/2003 | 10:24 | 0.06 | | MG/L | 7.3 | UNITS | 0.056 | MG/L | 411.1 | US/CM |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 8/20/2003 | 8:56 | 0.05 | < | MG/L | 6.59 | UNITS | 0.073 | MG/L | 427.5 | US/CM |
| ROUTINE SAMPLE | 9/16/2003 | 10:05 | 0.05 | < | MG/L | 6.8 | UNITS | 0.03 | MG/L | 418.2 | US/CM |
| ROUTINE SAMPLE | 10/28/2003 | 10:40 | 0.05 | | MG/L | 6.38 | UNITS | 0.043 | MG/L | 355.6 | US/CM |
| ROUTINE SAMPLE | 11/18/2003 | 10:44 | 0.15 | | MG/L | 7.13 | UNITS | 0.023 | MG/L | 214.4 | US/CM |

No December data-river was frozen

| ACTIVITY CATEGORY | START DATE | START TIME | TEMP RESULTS | TEMP UNITS | TSS RESULTS | TSS QUAL | TSS UNITS | TURB RESULTS | TURB UNITS | WEATHER COMMENTS RESULTS |
|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 10:30 | 1.8 | DEG C | 2.5 | | MG/L | 3.5 | NTU | CLEAR, SLIGHT BREEZE |
| ROUTINE SAMPLE | 4/23/2003 | 11:40 | 9.2 | DEG C | 1 | | MG/L | 3.4 | NTU | OVERCAST |
| ROUTINE SAMPLE | 5/20/2003 | 10:20 | 18.2 | DEG C | 2 | | MG/L | 2.1 | NTU | SUNNY, WARM, NO WIND |
| ROUTINE SAMPLE | 6/30/2003 | 9:50 | 25.5 | DEG C | 3.5 | | MG/L | 4.1 | NTU | CLOUDY, HUMID |
| ROUTINE SAMPLE | 7/24/2003 | 10:24 | 23.5 | DEG C | 2.5 | | MG/L | 2.7 | NTU | |
| ROUTINE SAMPLE | 8/20/2003 | 8:56 | 23.4 | DEG C | 2.5 | | MG/L | 1.8 | NTU | CLEAR, CALM |
| ROUTINE SAMPLE | 9/16/2003 | 10:05 | 20.3 | DEG C | 1.5 | | MG/L | 1.4 | NTU | RAIN |
| ROUTINE SAMPLE | 10/28/2003 | 10:40 | 12.3 | DEG C | 7.5 | | MG/L | 4.6 | NTU | CLEAR |
| ROUTINE SAMPLE | 11/18/2003 | 10:44 | 3 | DEG C | 1 | < | MG/L | 2.9 | NTU | SUNNY, CLEAR |

No December data-river was frozen

| Legend | |
|---|---|
| BOD | BIOCHEMICAL OXYGEN DEMAND |
| CHL | CHLOROPHYLL A, UNCORRECTED FOR PHEOPHYTIN |
| DO | DISSOLVED OXYGEN |
| DO SAT | DISSOLVED OXYGEN SATURATION |
| DELETED | LAB ACCIDENT |
| EC | ESCHERICHIA COLI |
| NITR | NITROGEN AMMONIA |
| TKN | NITROGEN KJELDAHL |
| nd | NO SAMPLE COLLECTED OR NO MEASUREMENT MADE |
| NO2NO3 | NITROGEN NITRATE + NITRITE |
| P | PHOSPHORUS AS P |
| QUAL | QUALIFIER |
| COND | SPECIFIC CONDUCTANCE |
| TEMP | TEMPERATURE WATER |
| TSS | TOTAL SUSPENDED SOLIDS |
| TURB | TURBIDITY |

Exeter River at the Hight Street Bridge, Exeter, 09-EXT
Note: Data not meeting RPD are shaded.

| ACTIVITY CATEGORY | START DATE | START TIME | BOD RESULTS | BOD QUAL | BOD UNITS | CHL RESULTS | CHL UNITS | DO RESULTS | DO UNITS | DO SAT RESULTS | DO SAT UNITS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 11:01 | 2.4 | < | MG/L | 0.88 | MG/M3 | 12.33 | MG/L | 89.7 | % |
| ROUTINE SAMPLE | 4/23/2003 | 11:10 | 2.4 | < | MG/L | 1.64 | UG/L | 9.39 | MG/L | 83.7 | % |
| ROUTINE SAMPLE | 5/20/2003 | 10:52 | 2.4 | < | MG/L | 1.8 | UG/L | 8.26 | MG/L | 88.2 | % |
| ROUTINE SAMPLE | 6/30/2003 | 10:31 | 2.4 | < | MG/L | 8.39 | MG/M3 | 4.91 | MG/L | 59.6 | % |
| ROUTINE SAMPLE | 7/22/2003 | 10:25 | 2.4 | < | MG/L | 14.27 | UG/L | 7.46 | MG/L | 88.3 | % |
| ROUTINE SAMPLE | 8/19/2003 | 9:32 | 2.4 | < | MG/L | 4.2 | UG/L | 4.55 | MG/L | 53.2 | % |
| ROUTINE SAMPLE | 9/16/2003 | 10:37 | 2.4 | < | MG/L | 17.9 | UG/L | 7.72 | MG/L | 88.2 | % |
| ROUTINE SAMPLE | 10/28/2003 | 11:20 | 2.4 | < | MG/L | 1.45 | UG/L | 8.67 | MG/L | 79.5 | % |
| ROUTINE SAMPLE | 11/18/2003 | 11:30 | 2.4 | < | MG/L | 0.9 | UG/L | 13.3 | MG/L | 100.3 | % |
| ROUTINE SAMPLE | 12/10/2003 | 10:47 | 2.4 | < | MG/L | 1.07 | UG/L | 11.98 | MG/L | 82.4 | % |

| ACTIVITY CATEGORY | START DATE | START TIME | EC RESULTS | EC QUAL | EC UNITS | NITR RESULTS | NITR QUAL | NITR UNITS | TKN RESULTS | TKN UNITS |
|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 11:01 | 10 | | CTS/100ML | 0.2 | < | MG/L | 0.3 | MG/L |
| ROUTINE SAMPLE | 4/23/2003 | 11:10 | 180 | | CTS/100ML | 0.2 | < | MG/L | 0.4 | MG/L |
| ROUTINE SAMPLE | 5/20/2003 | 10:52 | 10 | | CTS/100ML | 0.2 | < | MG/L | 0.5 | MG/L |
| ROUTINE SAMPLE | 6/30/2003 | 10:31 | 60 | | CTS/100ML | 0.2 | < | MG/L | 0.61 | MG/L |
| ROUTINE SAMPLE | 7/22/2003 | 10:25 | 30 | | CTS/100ML | 0.2 | < | MG/L | 0.6 | MG/L |
| ROUTINE SAMPLE | 8/19/2003 | 9:32 | 20 | | CTS/100ML | 0.2 | < | MG/L | 0.7 | MG/L |
| ROUTINE SAMPLE | 9/16/2003 | 10:37 | 680 | | CTS/100ML | 0.2 | < | MG/L | 1.5 | MG/L |
| ROUTINE SAMPLE | 10/28/2003 | 11:20 | 100 | | CTS/100ML | 0.2 | < | MG/L | 0.7 | MG/L |
| ROUTINE SAMPLE | 11/18/2003 | 11:30 | 40 | | CTS/100ML | 0.2 | < | MG/L | 0.6 | MG/L |
| ROUTINE SAMPLE | 12/10/2003 | 10:47 | 10 | < | CTS/100ML | 0.2 | < | MG/L | 0.4 | MG/L |

| ACTIVITY CATEGORY | START DATE | START TIME | NO2NO3 RESULTS | NO2NO3 QUAL | NO2NO3 UNITS | PH RESULTS | PH UNITS | P RESULTS | P UNITS | COND RESULTS | COND UNITS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 11:01 | 0.21 | | MG/L | 6.5 | UNITS | 0.018 | MG/L | 100.7 | US/CM |
| ROUTINE SAMPLE | 4/23/2003 | 11:10 | 0.09 | | MG/L | 6.19 | UNITS | 0.2 | MG/L | 128.3 | US/CM |
| ROUTINE SAMPLE | 5/20/2003 | 10:52 | 0.06 | | MG/L | 6.9 | UNITS | 0.02 | MG/L | 158.8 | US/CM |
| ROUTINE SAMPLE | 6/30/2003 | 10:31 | 0.18 | | MG/L | 6.9 | UNITS | 0.052 | MG/L | 202.4 | US/CM |
| ROUTINE SAMPLE | 7/22/2003 | 10:25 | 0.05 | < | MG/L | 7.1 | UNITS | 0.04 | MG/L | 225.5 | US/CM |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 8/19/2003 | 9:32 | 0.08 | | MG/L | 6.62 | UNITS | 0.058 | MG/L | 208 | US/CM |
| ROUTINE SAMPLE | 9/16/2003 | 10:37 | 0.05 | < | MG/L | 6.63 | UNITS | 0.047 | MG/L | 220.8 | US/CM |
| ROUTINE SAMPLE | 10/28/2003 | 11:20 | 0.05 | | MG/L | 6.27 | UNITS | 0.029 | MG/L | 186.2 | US/CM |
| ROUTINE SAMPLE | 11/18/2003 | 11:30 | 0.07 | | MG/L | 7.26 | UNITS | 0.019 | MG/L | 111.8 | US/CM |
| ROUTINE SAMPLE | 12/10/2003 | 10:47 | 0.15 | | MG/L | 7.5 | UNITS | 0.011 | MG/L | 113.6 | US/CM |

| ACTIVITY CATEGORY | START DATE | START TIME | TEMP RESULTS | TEMP UNITS | TSS RESULTS | TSS QUAL | TSS UNITS | TURB RESULTS | TURB UNITS | WEATHER COMMENTS RESULTS |
|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 11:01 | 2.1 | DEG C | 4 | | MG/L | 2.6 | NTU | CLEAR, SLIGHT BREEZE |
| ROUTINE SAMPLE | 4/23/2003 | 11:10 | 10.3 | DEG C | 2.5 | | MG/L | 2.6 | NTU | OVERCAST |
| ROUTINE SAMPLE | 5/20/2003 | 10:52 | 18.4 | DEG C | 2 | | MG/L | 1.8 | NTU | CLEAR, WARM, NO WIND |
| ROUTINE SAMPLE | 6/30/2003 | 10:31 | 25.3 | DEG C | 1.5 | | MG/L | 4.6 | NTU | CLOUDY, HUMID |
| ROUTINE SAMPLE | 7/22/2003 | 10:25 | 24.5 | DEG C | 3 | | MG/L | 3.1 | NTU | OVERCAST, SHOWER |
| ROUTINE SAMPLE | 8/19/2003 | 9:32 | 25.1 | DEG C | 3.5 | | MG/L | 2.4 | NTU | CLEAR, SLIGHT BREEZE |
| ROUTINE SAMPLE | 9/16/2003 | 10:37 | 21.1 | DEG C | 2 | | MG/L | 2.2 | NTU | RAIN |
| ROUTINE SAMPLE | 10/28/2003 | 11:20 | 11.6 | DEG C | 4 | | MG/L | 3 | NTU | CLEAR |
| ROUTINE SAMPLE | 11/18/2003 | 11:30 | 3.6 | DEG C | 1 | < | MG/L | 1.86 | NTU | SUNNY, CLEAR |
| ROUTINE SAMPLE | 12/10/2003 | 10:47 | 3 | DEG C | 1 | | MG/L | 1.73 | NTU | OVERCAST |

| Legend | |
|---|---|
| BOD | BIOCHEMICAL OXYGEN DEMAND |
| CHL | CHLOROPHYLL A, UNCORRECTED FOR PHEOPHYTIN |
| DO | DISSOLVED OXYGEN |
| DO SAT | DISSOLVED OXYGEN SATURATION |
| DELETED | LAB ACCIDENT |
| EC | ESCHERICHIA COLI |
| NITR | NITROGEN AMMONIA |
| TKN | NITROGEN KJELDAHL |
| nd | NO SAMPLE COLLECTED OR NO MEASUREMENT MADE |
| NO2NO3 | NITROGEN NITRATE + NITRITE |
| P | PHOSPHORUS AS P |
| QUAL | QUALIFIER |
| COND | SPECIFIC CONDUCTANCE |
| TEMP | TEMPERATURE WATER |
| TSS | TOTAL SUSPENDED SOLIDS |
| TURB | TURBIDITY |

Lamprey River at Rt. 108 Bridge, Newmarket, 05-LMP
Note: Data not meeting RPD are shaded.

| ACTIVITY CATEGORY | START DATE | START TIME | BOD RESULTS | BOD QUAL | BOD UNITS | CHL RESULTS | CHL UNITS | DO RESULTS | DO UNITS | DO SAT RESULTS | DO SAT UNITS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 11:55 | 2.4 | < | MG/L | 0.9 | MG/M3 | 12.89 | MG/L | 92.8 | % |
| ROUTINE SAMPLE | 4/23/2003 | 10:27 | 2.4 | < | MG/L | 1.64 | MG/M3 | 10.62 | MG/L | 94.7 | % |
| ROUTINE SAMPLE | 5/20/2003 | 12:17 | 2.4 | < | MG/L | 3.08 | UG/L | 9.61 | MG/L | 100.8 | % |
| ROUTINE SAMPLE | 6/30/2003 | 11:08 | 2.4 | < | MG/L | 6.73 | MG/M3 | 7.93 | MG/L | 99.4 | % |
| ROUTINE SAMPLE | 7/22/2003 | 10:59 | 2.4 | < | MG/L | 31.34 | UG/L | 83.5 | MG/L | 101 | % |
| ROUTINE SAMPLE | 8/19/2003 | 10:23 | 2.4 | < | MG/L | 3.48 | UG/L | nd | MG/L | nd | % |
| ROUTINE SAMPLE | 8/20/2003 | 11:50 | nd | | MG/L | nd | UG/L | 7.59 | MG/L | 95.6 | % |
| ROUTINE SAMPLE | 9/29/2003 | 11:13 | 2.4 | < | MG/L | 2.35 | UG/L | 8.97 | MG/L | 97.4 | % |
| ROUTINE SAMPLE | 10/28/2003 | 12:09 | 2.4 | < | MG/L | 1.47 | UG/L | 10.59 | MG/L | 97.8 | % |
| ROUTINE SAMPLE | 11/18/2003 | 12:47 | 2.4 | < | MG/L | 1.09 | UG/L | 13.34 | MG/L | 102.8 | % |
| ROUTINE SAMPLE | 12/10/2003 | 11:45 | 2.4 | < | MG/L | 0.9 | UG/L | 13.98 | MG/L | 96.5 | % |

| ACTIVITY CATEGORY | START DATE | START TIME | EC RESULTS | EC QUAL | EC UNITS | NITR RESULTS | NITR QUAL | NITR UNITS | TKN RESULTS | TKN UNITS |
|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 11:55 | 10 | < | CTS/100ML | 0.2 | < | MG/L | 0.3 | MG/L |
| ROUTINE SAMPLE | 4/23/2003 | 10:27 | 20 | | CTS/100ML | 0.2 | < | MG/L | 0.4 | MG/L |
| ROUTINE SAMPLE | 5/20/2003 | 12:17 | 20 | | CTS/100ML | 0.2 | < | MG/L | 0.4 | MG/L |
| ROUTINE SAMPLE | 6/30/2003 | 11:08 | 20 | | CTS/100ML | 0.2 | < | MG/L | 0.4 | MG/L |
| ROUTINE SAMPLE | 7/22/2003 | 10:59 | 10 | | CTS/100ML | 0.2 | < | MG/L | 0.7 | MG/L |
| ROUTINE SAMPLE | 8/19/2003 | 10:23 | 10 | | CTS/100ML | 0.2 | < | MG/L | 0.5 | MG/L |
| ROUTINE SAMPLE | 8/20/2003 | 11:50 | nd | | CTS/100ML | nd | | MG/L | nd | MG/L |
| ROUTINE SAMPLE | 9/29/2003 | 11:13 | 30 | | CTS/100ML | 0.2 | < | MG/L | 0.4 | MG/L |
| ROUTINE SAMPLE | 10/28/2003 | 12:09 | 20 | | CTS/100ML | 0.2 | < | MG/L | 0.5 | MG/L |
| ROUTINE SAMPLE | 11/18/2003 | 12:47 | 10 | | CTS/100ML | 0.2 | < | MG/L | 0.5 | MG/L |
| ROUTINE SAMPLE | 12/10/2003 | 11:45 | 20 | | CTS/100ML | 0.2 | < | MG/L | 0.3 | MG/L |

| ACTIVITY CATEGORY | START DATE | START TIME | NO2NO3 RESULTS | NO2NO3 QUAL | NO2NO3 UNITS | PH RESULTS | PH UNITS | P RESULTS | P UNITS | COND RESULTS | COND UNITS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 11:55 | 0.31 | | MG/L | 6.8 | UNITS | 0.021 | MG/L | 94 | US/CM |
| ROUTINE SAMPLE | 4/23/2003 | 10:27 | 0.13 | | MG/L | 6.46 | UNITS | 0.014 | MG/L | 105.5 | US/CM |
| ROUTINE SAMPLE | 5/20/2003 | 12:17 | 0.05 | < | MG/L | 6.9 | UNITS | 0.018 | MG/L | 119 | US/CM |
| ROUTINE SAMPLE | 6/30/2003 | 11:08 | 0.15 | | MG/L | 7.3 | UNITS | 0.028 | MG/L | 171.4 | US/CM |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 7/22/2003 | 10:59 | 0.1 | | MG/L | 7.3 | UNITS | 0.048 | MG/L | 183.9 | US/CM |
| ROUTINE SAMPLE | 8/19/2003 | 10:23 | 0.08 | | MG/L | 6.55 | UNITS | 0.026 | MG/L | 158.6 | US/CM |
| ROUTINE SAMPLE | 8/20/2003 | 11:50 | nd | | MG/L | nd | UNITS | nd | MG/L | nd | US/CM |
| ROUTINE SAMPLE | 9/29/2003 | 11:13 | 0.07 | | MG/L | 6.35 | UNITS | 0.021 | MG/L | 188.1 | US/CM |
| ROUTINE SAMPLE | 10/28/2003 | 12:09 | 0.05 | | MG/L | 6.23 | UNITS | 0.019 | MG/L | 124.9 | US/CM |
| ROUTINE SAMPLE | 11/18/2003 | 12:47 | 0.06 | | MG/L | 7.27 | UNITS | 0.019 | MG/L | 68.5 | US/CM |
| ROUTINE SAMPLE | 12/10/2003 | 11:45 | 0.15 | | MG/L | 7.52 | UNITS | 0.01 | MG/L | 73.4 | US/CM |

| ACTIVITY CATEGORY | START DATE | START TIME | TEMP RESULTS | TEMP UNITS | TSS RESULTS | TSS QUAL | TSS UNITS | TURB RESULTS | TURB UNITS | WEATHER COMMENTS RESULTS |
|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 11:55 | 1.1 | DEG C | 3 | | MG/L | 2 | NTU | CLEAR, SLIGHT BREEZE |
| ROUTINE SAMPLE | 4/23/2003 | 10:27 | 10.3 | DEG C | 1 | < | MG/L | 1.2 | NTU | OVERCAST |
| ROUTINE SAMPLE | 5/20/2003 | 12:17 | 17.8 | DEG C | 2 | | MG/L | 1.4 | NTU | SUNNY, CLEAR, NO WIND |
| ROUTINE SAMPLE | 6/30/2003 | 11:08 | 27 | DEG C | 1 | < | MG/L | 1.8 | NTU | PARTLY CLOUDY, HUMID |
| ROUTINE SAMPLE | 7/22/2003 | 10:59 | 24.6 | DEG C | 4.5 | | MG/L | 3.3 | NTU | OVERCAST, WINDY |
| ROUTINE SAMPLE | 8/19/2003 | 10:23 | nd | DEG C | 1 | < | MG/L | 1.5 | NTU | CLEAR, SLIGHT BREEZE |
| ROUTINE SAMPLE | 8/20/2003 | 11:50 | 27.5 | DEG C | nd | | MG/L | nd | NTU | |
| ROUTINE SAMPLE | 9/29/2003 | 11:13 | 19.4 | DEG C | 2 | | MG/L | 1.3 | NTU | PARTLY CLOUDY |
| ROUTINE SAMPLE | 10/28/2003 | 12:09 | 11.8 | DEG C | 6 | | MG/L | 2.5 | NTU | CLEAR |
| ROUTINE SAMPLE | 11/18/2003 | 12:47 | 4.5 | DEG C | 2 | | MG/L | 1.48 | NTU | SUNNY, CLEAR |
| ROUTINE SAMPLE | 12/10/2003 | 11:45 | 0.5 | DEG C | 1 | | MG/L | 1.04 | NTU | OVERCAST |

LEDGEND

| | | | |
|---|---|---|---|
| BOD | BIOCHEMICAL OXYGEN DEMAND | TSS | TOTAL SUSPENDED SOLIDS |
| CHL | CHLOROPHYLL A, UNCORRECTED FOR PHEOPHYTIN | TURB | TURBIDITY |
| DO | DISSOLVED OXYGEN | | |
| DO SAT | DISSOLVED OXYGEN SATURATION | | |
| DELETED | LAB ACCIDENT | | |
| EC | ESCHERICHIA COLI | | |
| NITR | NITROGEN AMMONIA | | |
| TKN | NITROGEN KJELDAHL | | |
| nd | NO SAMPLE COLLECTED OR NO MEASUREMENT MADE | | |
| NO2NO3 | NITROGEN NITRATE + NITRITE | | |
| P | PHOSPHORUS AS P | | |
| QUAL | QUALIFIER | | |
| COND | SPECIFIC CONDUCTANCE | | |
| TEMP | TEMPERATURE WATER | | |

Oyster River at the Rt. 108 Bridge and Mill Pond, Durham, 05-OYS
Note: Data not meeting RPD are shaded.

| ACTIVITY CATEGORY | START DATE | START TIME | BOD RESULTS | BOD QUAL | BOD UNITS | CHL RESULTS | CHL UNITS | DO RESULTS | DO UNITS | DO SAT RESULTS | DO SAT UNITS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 12:18 | 2.4 | < | MG/L | 1.07 | MG/M3 | dl | MG/L | dl | % |
| ROUTINE SAMPLE | 4/23/2003 | 10:05 | 2.4 | < | MG/L | 2.39 | UG/L | 10.78 | MG/L | 95.5 | % |
| ROUTINE SAMPLE | 5/20/2003 | 12:40 | 2.4 | < | MG/L | 2.92 | UG/L | 9.52 | MG/L | 105.7 | % |
| FIELD DUPLICATE | 5/20/2003 | 12:40 | nd | | MG/L | nd | UG/L | 9.03 | MG/L | 98.2 | % |
| ROUTINE SAMPLE | 6/30/2003 | 11:30 | 2.4 | < | MG/L | 10.05 | MG/M3 | 7.96 | MG/L | 97.2 | % |
| FIELD DUPLICATE | 6/30/2003 | 11:30 | nd | | MG/L | nd | MG/M3 | 7.96 | MG/L | 97.1 | % |
| ROUTINE SAMPLE | 7/22/2003 | 11:20 | 2.4 | < | MG/L | 2.27 | UG/L | 9.29 | MG/L | 111.4 | % |
| ROUTINE SAMPLE | 8/19/2003 | 11:00 | 2.4 | < | MG/L | 6 | UG/L | 6.42 | MG/L | 76.7 | % |
| ROUTINE SAMPLE | 9/29/2003 | 10:35 | 2.4 | < | MG/L | 5.83 | UG/L | 7.97 | MG/L | 82.6 | % |
| FIELD DUPLICATE | 9/29/2003 | 10:35 | nd | | MG/L | nd | UG/L | 7.99 | MG/L | 83.6 | % |
| ROUTINE SAMPLE | 10/30/2003 | 10:20 | 2.5 | | MG/L | 2.73 | UG/L | 11.33 | MG/L | 104.4 | % |
| FIELD DUPLICATE | 10/30/2003 | 10:20 | nd | | MG/L | nd | UG/L | 10.84 | MG/L | 100.1 | % |
| ROUTINE SAMPLE | 11/19/2003 | 0:00 | na | | MG/L | 1.82 | UG/L | na | MG/L | na | % |
| ROUTINE SAMPLE | 12/16/2003 | 9:10 | 2.4 | < | MG/L | 1.26 | UG/L | 13.37 | MG/L | 91.9 | % |

| ACTIVITY CATEGORY | START DATE | START TIME | EC RESULTS | EC QUAL | EC UNITS | NITR RESULTS | NITR QUAL | NITR UNITS | TKN RESULTS | TKN UNITS |
|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 12:18 | 10 | | CTS/100ML | 0.2 | < | MG/L | 0.4 | MG/L |
| ROUTINE SAMPLE | 4/23/2003 | 10:05 | 30 | | CTS/100ML | 0.2 | < | MG/L | 0.4 | MG/L |
| ROUTINE SAMPLE | 5/20/2003 | 12:40 | 20 | | CTS/100ML | 0.2 | < | MG/L | 0.4 | MG/L |
| FIELD DUPLICATE | 5/20/2003 | 12:40 | nd | | CTS/100ML | nd | | MG/L | nd | MG/L |
| ROUTINE SAMPLE | 6/30/2003 | 11:30 | 40 | | CTS/100ML | 0.2 | < | MG/L | 0.6 | MG/L |
| FIELD DUPLICATE | 6/30/2003 | 11:30 | nd | | CTS/100ML | nd | | MG/L | nd | MG/L |
| ROUTINE SAMPLE | 7/22/2003 | 11:20 | 10 | | CTS/100ML | 0.2 | < | MG/L | 0.5 | MG/L |
| ROUTINE SAMPLE | 8/19/2003 | 11:00 | 10 | | CTS/100ML | 0.2 | < | MG/L | 0.6 | MG/L |
| ROUTINE SAMPLE | 9/29/2003 | 10:35 | 30 | | CTS/100ML | 0.2 | < | MG/L | 0.6 | MG/L |
| FIELD DUPLICATE | 9/29/2003 | 10:35 | nd | | CTS/100ML | nd | | MG/L | nd | MG/L |
| ROUTINE SAMPLE | 10/30/2003 | 10:20 | 560 | | CTS/100ML | 0.2 | < | MG/L | 0.9 | MG/L |
| FIELD DUPLICATE | 10/30/2003 | 10:20 | nd | | CTS/100ML | nd | | MG/L | nd | MG/L |
| ROUTINE SAMPLE | 11/19/2003 | 0:00 | na | | CTS/100ML | na | | MG/L | na | MG/L |
| ROUTINE SAMPLE | 12/16/2003 | 9:10 | 20 | | CTS/100ML | 0.2 | < | MG/L | 0.3 | MG/L |

| ACTIVITY CATEGORY | START DATE | START TIME | NO2NO3 RESULTS | NO2NO3 UNITS | PH RESULTS | PH UNITS | P RESULTS | P UNITS | COND RESULTS | COND UNITS |
|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 12:18 | 0.54 | MG/L | 6.9 | UNITS | 0.04 | MG/L | dl | US/CM |
| ROUTINE SAMPLE | 4/23/2003 | 10:05 | 0.18 | MG/L | 6.44 | UNITS | 0.024 | MG/L | 156.4 | US/CM |
| ROUTINE SAMPLE | 5/20/2003 | 12:40 | 0.07 | MG/L | 7.3 | UNITS | 0.028 | MG/L | 183.5 | US/CM |
| FIELD DUPLICATE | 5/20/2003 | 12:40 | nd | MG/L | nd | UNITS | nd | MG/L | 176.6 | US/CM |
| ROUTINE SAMPLE | 6/30/2003 | 11:30 | 0.18 | MG/L | 7.4 | UNITS | 0.043 | MG/L | 279.2 | US/CM |
| FIELD DUPLICATE | 6/30/2003 | 11:30 | nd | MG/L | nd | UNITS | nd | MG/L | 280.2 | US/CM |
| ROUTINE SAMPLE | 7/22/2003 | 11:20 | 0.07 | MG/L | 7.7 | UNITS | 0.037 | MG/L | 295.5 | US/CM |
| ROUTINE SAMPLE | 8/19/2003 | 11:00 | 0.16 | MG/L | 6.91 | UNITS | 0.036 | MG/L | 342.8 | US/CM |
| ROUTINE SAMPLE | 9/29/2003 | 10:35 | 0.16 | MG/L | 6.5 | UNITS | 0.032 | MG/L | 208.2 | US/CM |
| FIELD DUPLICATE | 9/29/2003 | 10:35 | nd | MG/L | 6.54 | UNITS | nd | MG/L | 207.5 | US/CM |
| ROUTINE SAMPLE | 10/30/2003 | 10:20 | 0.13 | MG/L | 6.33 | UNITS | 0.092 | MG/L | 113.3 | US/CM |
| FIELD DUPLICATE | 10/30/2003 | 10:20 | nd | MG/L | 6.35 | UNITS | nd | MG/L | 113.7 | US/CM |
| ROUTINE SAMPLE | 11/19/2003 | 0:00 | na | MG/L | na | UNITS | na | MG/L | na | US/CM |
| ROUTINE SAMPLE | 12/16/2003 | 9:10 | 0.24 | MG/L | 8.26 | UNITS | 0.017 | MG/L | 83.8 | US/CM |

| ACTIVITY CATEGORY | START DATE | START TIME | TEMP RESULTS | TEMP UNITS | TSS RESULTS | TSS UNITS | TURB RESULTS | TURB UNITS | WEATHER COMMENTS RESULTS |
|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 12:18 | dl | DEG C | 6 | MG/L | dl | NTU | CLEAR, SLIGHT BREEZE |
| ROUTINE SAMPLE | 4/23/2003 | 10:05 | nd | DEG C | 3.5 | MG/L | 3.8 | NTU | OVERCAST |
| ROUTINE SAMPLE | 5/20/2003 | 12:40 | 20.5 | DEG C | 3.5 | MG/L | 2.9 | NTU | SUNNY, CLEAR, NO WIND |
| FIELD DUPLICATE | 5/20/2003 | 12:40 | 19.5 | DEG C | nd | MG/L | 2.8 | NTU | SUNNY, CLEAR, NO WIND |
| ROUTINE SAMPLE | 6/30/2003 | 11:30 | 25.3 | DEG C | 2.5 | MG/L | 3.5 | NTU | PARTLY CLOUDY |
| FIELD DUPLICATE | 6/30/2003 | 11:30 | 25.5 | DEG C | nd | MG/L | 3.5 | NTU | PARTLY CLOUDY |
| ROUTINE SAMPLE | 7/22/2003 | 11:20 | 24.4 | DEG C | 4.5 | MG/L | 3.1 | NTU | OVERCAST |
| ROUTINE SAMPLE | 8/19/2003 | 11:00 | 24.2 | DEG C | 1 | MG/L | 2.6 | NTU | CLEAR, SLIGHT BREEZE |
| ROUTINE SAMPLE | 9/29/2003 | 10:35 | 17.4 | DEG C | 2 | MG/L | 5.5 | NTU | CLOUDY |
| FIELD DUPLICATE | 9/29/2003 | 10:35 | 17.7 | DEG C | nd | MG/L | 5.6 | NTU | |
| ROUTINE SAMPLE | 10/30/2003 | 10:20 | 11.8 | DEG C | 16 | MG/L | 24 | NTU | PARTLY CLOUDY, WINDY |
| FIELD DUPLICATE | 10/30/2003 | 10:20 | 11.9 | DEG C | nd | MG/L | 24 | NTU | |
| ROUTINE SAMPLE | 11/19/2003 | 0:00 | na | DEG C | na | MG/L | na | NTU | |
| ROUTINE SAMPLE | 12/16/2003 | 9:10 | 0.3 | DEG C | 3.5 | MG/L | 3.9 | NTU | PARTLY CLOUDY |

| Legend | |
|---|---|
| BOD | BIOCHEMICAL OXYGEN DEMAND |
| CHL | CHLOROPHYLL A, UNCORRECTED FOR PHEOPHYTIN |
| dl | DATA LOST |
| DO | DISSOLVED OXYGEN |
| DO SAT | DISSOLVED OXYGEN SATURATION |
| DELETED | LAB ACCIDENT |
| EC | ESCHERICHIA COLI |
| NITR | NITROGEN AMMONIA |
| TKN | NITROGEN KJELDAHL |
| na | ANAYSES NOT YET COMPLETED BY LAB |
| nd | NO SAMPLE COLLECTED OR NO MEASUREMENT MADE |
| NO2NO3 | NITROGEN NITRATE + NITRITE |
| P | PHOSPHORUS AS P |
| QUAL | QUALIFIER |
| COND | SPECIFIC CONDUCTANCE |
| TEMP | TEMPERATURE WATER |
| TSS | TOTAL SUSPENDED SOLIDS |
| TURB | TURBIDITY |

Bellamy River at Rt. 108 Bridge, Dover, 05-BLM
Note: Data not meeting RPD are shaded.

| ACTIVITY CATEGORY | START DATE | START TIME | BOD RESULTS | BOD QUAL | BOD UNITS | CHL RESULTS | CHL UNITS | DO RESULTS | DO UNITS | DO SAT RESULTS | DO SAT UNITS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 12:41 | 2.4 | < | MG/L | 0.88 | MG/M3 | 12 | MG/L | 89.4 | % |
| ROUTINE SAMPLE | 4/24/2003 | 9:45 | 2.4 | < | MG/L | 2.94 | UG/L | 10.68 | MG/L | 92.8 | % |
| ROUTINE SAMPLE | 5/20/2003 | 13:13 | 2.4 | < | MG/L | 6.59 | UG/L | 9.4 | MG/L | 112.1 | % |
| ROUTINE SAMPLE | 6/30/2003 | 12:08 | 2.4 | < | MG/L | 8.18 | MG/M3 | 8.44 | MG/L | 105.7 | % |
| ROUTINE SAMPLE | 7/22/2003 | 11:43 | 2.4 | < | MG/L | 9.84 | UG/L | 8.65 | MG/L | 105.9 | % |
| ROUTINE SAMPLE | 8/19/2003 | 11:25 | 2.4 | < | MG/L | 8.01 | UG/L | 8.1 | MG/L | 98.5 | % |
| ROUTINE SAMPLE | 9/29/2003 | 10:06 | 2.4 | < | MG/L | 6.02 | UG/L | 8.1 | MG/L | 86.6 | % |
| ROUTINE SAMPLE | 10/30/2003 | 9:16 | 2.4 | < | MG/L | 6.4 | UG/L | 10.4 | MG/L | 93.7 | % |
| ROUTINE SAMPLE | 11/19/2003 | 10:04 | 2.4 | < | MG/L | 3.63 | UG/L | 12.26 | MG/L | 94.8 | % |
| ROUTINE SAMPLE | 12/16/2003 | 9:52 | 2.4 | < | MG/L | 1.97 | UG/L | 13.33 | MG/L | 93.4 | % |

| ACTIVITY CATEGORY | START DATE | START TIME | EC RESULTS | EC QUAL | EC UNITS | NITR RESULTS | NITR QUAL | NITR UNITS | TKN RESULTS | TKN UNITS |
|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 12:41 | 30 | | CTS/100ML | 0.2 | < | MG/L | 0.4 | MG/L |
| ROUTINE SAMPLE | 4/24/2003 | 9:45 | 60 | | CTS/100ML | 0.2 | < | MG/L | 0.3 | MG/L |
| ROUTINE SAMPLE | 5/20/2003 | 13:13 | 5 | < | CTS/100ML | 0.2 | < | MG/L | 0.4 | MG/L |
| ROUTINE SAMPLE | 6/30/2003 | 12:08 | 20 | | CTS/100ML | 0.2 | < | MG/L | 0.5 | MG/L |
| ROUTINE SAMPLE | 7/22/2003 | 11:43 | 10 | < | CTS/100ML | 0.2 | < | MG/L | 0.5 | MG/L |
| ROUTINE SAMPLE | 8/19/2003 | 11:25 | 20 | | CTS/100ML | 0.2 | < | MG/L | 0.4 | MG/L |
| ROUTINE SAMPLE | 9/29/2003 | 10:06 | 10 | | CTS/100ML | 0.2 | < | MG/L | 0.3 | MG/L |
| ROUTINE SAMPLE | 10/30/2003 | 9:16 | 170 | | CTS/100ML | 0.2 | < | MG/L | 0.5 | MG/L |
| ROUTINE SAMPLE | 11/19/2003 | 10:04 | 40 | | CTS/100ML | 0.2 | < | MG/L | 1.6 | MG/L |
| ROUTINE SAMPLE | 12/16/2003 | 9:52 | 20 | | CTS/100ML | 0.2 | < | MG/L | 0.4 | MG/L |

| ACTIVITY CATEGORY | START DATE | START TIME | NO2NO3 RESULTS | NO2NO3 QUALIFIER | NO2NO3 UNITS | PH RESULTS | PH UNITS | P RESULTS | P UNITS | COND RESULTS | COND UNITS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 12:41 | 0.18 | | MG/L | 6.8 | UNITS | 0.023 | MG/L | 91 | US/CM |
| ROUTINE SAMPLE | 4/24/2003 | 9:45 | 0.07 | | MG/L | 6.9 | UNITS | 0.016 | MG/L | 81.9 | US/CM |
| ROUTINE SAMPLE | 5/20/2003 | 13:13 | 0.05 | < | MG/L | 7.1 | UNITS | 0.022 | MG/L | 120.5 | US/CM |
| ROUTINE SAMPLE | 6/30/2003 | 12:08 | 0.07 | | MG/L | 7.2 | UNITS | 0.045 | MG/L | 164.5 | US/CM |
| ROUTINE SAMPLE | 7/22/2003 | 11:43 | 0.05 | < | MG/L | 7.3 | UNITS | 0.036 | MG/L | 262.3 | US/CM |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 8/19/2003 | 11:25 | 0.05 | < | MG/L | 7.01 | UNITS | 0.032 | MG/L | 218.8 | US/CM |
| ROUTINE SAMPLE | 9/29/2003 | 10:06 | 0.05 | < | MG/L | 6.48 | UNITS | 0.019 | MG/L | 134.7 | US/CM |
| ROUTINE SAMPLE | 10/30/2003 | 9:16 | 0.05 | < | MG/L | 6.33 | UNITS | 0.039 | MG/L | 111.7 | US/CM |
| ROUTINE SAMPLE | 11/19/2003 | 10:04 | 0.05 | < | MG/L | 7.39 | UNITS | 0.018 | MG/L | 73.5 | US/CM |
| ROUTINE SAMPLE | 12/16/2003 | 9:52 | 0.08 | | MG/L | 6.7 | UNITS | 0.014 | MG/L | 66.1 | US/CM |

| ACTIVITY CATEGORY | START DATE | START TIME | TEMP RESULTS | TEMP UNITS | TSS RESULTS | TSS QUAL | TSS UNITS | TURB RESULTS | TURB UNITS | WEATHER COMMENTS RESULTS |
|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 12:41 | 2.2 | DEG C | 2 | | MG/L | 3.7 | NTU | CLEAR, SLIGHT BREEZE |
| ROUTINE SAMPLE | 4/24/2003 | 9:45 | 9.2 | DEG C | 1 | < | MG/L | 2 | NTU | |
| ROUTINE SAMPLE | 5/20/2003 | 13:13 | 25.2 | DEG C | 3 | | MG/L | 2 | NTU | CLEAR, SUNNY, BREEZE |
| ROUTINE SAMPLE | 6/30/2003 | 12:08 | 26.6 | DEG C | 1 | | MG/L | 3.7 | NTU | CLOUDY, BREEZY |
| ROUTINE SAMPLE | 7/22/2003 | 11:43 | 25.8 | DEG C | 4 | | MG/L | 2.9 | NTU | OVERCAST, WINDY |
| ROUTINE SAMPLE | 8/19/2003 | 11:25 | 27.1 | DEG C | 2 | | MG/L | 2.6 | NTU | CLEAR, SLIGHT BREEZE |
| ROUTINE SAMPLE | 9/29/2003 | 10:06 | 18.6 | DEG C | 1 | | MG/L | 3.1 | NTU | CLOUDY |
| ROUTINE SAMPLE | 10/30/2003 | 9:16 | 10.7 | DEG C | 5 | | MG/L | 7.4 | NTU | CLEAR, BREEZY |
| ROUTINE SAMPLE | 11/19/2003 | 10:04 | 4.8 | DEG C | 2 | | MG/L | 2.9 | NTU | OVERCAST |
| ROUTINE SAMPLE | 12/16/2003 | 9:52 | 1 | DEG C | 2 | | MG/L | 1.9 | NTU | PARTLY CLOUDY |

| Legend | |
|---|---|
| BOD | BIOCHEMICAL OXYGEN DEMAND |
| CHL | CHLOROPHYLL A, UNCORRECTED FOR PHEOPHYTIN |
| DO | DISSOLVED OXYGEN |
| DO SAT | DISSOLVED OXYGEN SATURATION |
| DELETED | LAB ACCIDENT |
| EC | ESCHERICHIA COLI |
| NITR | NITROGEN AMMONIA |
| TKN | NITROGEN KJELDAHL |
| nd | NO SAMPLE COLLECTED OR NO MEASUREMENT MADE |
| NO2NO3 | NITROGEN NITRATE + NITRITE |
| P | PHOSPHORUS AS P |
| QUAL | QUALIFIER |
| COND | SPECIFIC CONDUCTANCE |
| TEMP | TEMPERATURE WATER |
| TSS | TOTAL SUSPENDED SOLIDS |
| TURB | TURBIDITY |

Cocheco River at the Rt. 9 Bridge (Central Avenue), Dover, 07-CCH
Note: Data not meeting RPD are shaded.

| ACTIVITY CATEGORY | START DATE | START TIME | BOD RESULTS | BOD QUAL | BOD UNITS | CHL RESULTS | CHL UNITS | DO RESULTS | DO UNITS | DO SAT RESULTS |
|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 13:37 | 2.4 | < | MG/L | 1.26 | MG/M3 | 14.82 | MG/L | 107.7 |
| FIELD DUPLICATE | 3/19/2003 | 13:37 | nd | | MG/L | nd | MG/M4 | 14.63 | MG/L | 102.3 |
| ROUTINE SAMPLE | 4/24/2003 | 10:05 | 2.4 | < | MG/L | 1.99 | UG/L | 12.12 | MG/L | 105 |
| ROUTINE SAMPLE | 5/22/2003 | 9:30 | 2.4 | < | MG/L | 2.7 | MG/M3 | 8.92 | MG/L | 91.5 |
| ROUTINE SAMPLE | 6/30/2003 | 12:58 | 2.4 | < | MG/L | 11.47 | MG/M3 | 8.4 | MG/L | 105.3 |
| ROUTINE SAMPLE | 7/22/2003 | 12:35 | 2.4 | < | MG/L | 13.69 | UG/L | 9.44 | MG/L | 113.6 |
| ROUTINE SAMPLE | 8/19/2003 | 12:25 | 2.4 | < | MG/L | 3.27 | UG/L | 7.37 | MG/L | 94.3 |
| FIELD DUPLICATE | 8/19/2003 | 12:25 | nd | | MG/L | nd | UG/L | 6.88 | MG/L | 84.4 |
| ROUTINE SAMPLE | 9/29/2003 | 9:42 | 2.4 | < | MG/L | 1.99 | UG/L | 8.82 | MG/L | 92 |
| ROUTINE SAMPLE | 10/30/2003 | 8:48 | 2.4 | < | MG/L | 2.7 | UG/L | 13.26 | MG/L | 118.7 |
| ROUTINE SAMPLE | 11/19/2003 | 10:33 | 2.4 | < | MG/L | 0.88 | UG/L | 13.61 | MG/L | 100.3 |
| ROUTINE SAMPLE | 12/16/2003 | 10:40 | 2.4 | > | MG/L | 1.23 | UG/L | 14.05 | MG/L | 97.1 |
| FIELD DUPLICATE | 12/16/2003 | 10:40 | nd | | MG/L | nd | UG/L | 14.75 | MG/L | 101.4 |

| ACTIVITY CATEGORY | START DATE | START TIME | EC RESULTS | EC QUAL | EC UNITS | NITR RESULTS | NITR QUAL | NITR UNITS | TKN RESULTS | TKN UNITS |
|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 13:37 | 10 | < | CTS/100ML | 0.2 | < | MG/L | 0.3 | MG/L |
| FIELD DUPLICATE | 3/19/2003 | 13:37 | nd | | CTS/100ML | nd | | MG/L | nd | MG/L |
| ROUTINE SAMPLE | 4/24/2003 | 10:05 | 20 | | CTS/100ML | 0.2 | < | MG/L | 0.3 | MG/L |
| ROUTINE SAMPLE | 5/22/2003 | 9:30 | 30 | | CTS/100ML | 0.2 | < | MG/L | 0.4 | MG/L |
| ROUTINE SAMPLE | 6/30/2003 | 12:58 | 120 | | CTS/100ML | 0.2 | < | MG/L | 0.5 | MG/L |
| ROUTINE SAMPLE | 7/22/2003 | 12:35 | 40 | | CTS/100ML | 0.2 | < | MG/L | 0.5 | MG/L |
| ROUTINE SAMPLE | 8/19/2003 | 12:25 | 80 | | CTS/100ML | 0.2 | < | MG/L | 0.4 | MG/L |
| FIELD DUPLICATE | 8/19/2003 | 12:25 | nd | | CTS/100ML | nd | | MG/L | nd | MG/L |
| ROUTINE SAMPLE | 9/29/2003 | 9:42 | 30 | | CTS/100ML | 0.2 | < | MG/L | 0.3 | MG/L |
| ROUTINE SAMPLE | 10/30/2003 | 8:48 | 390 | | CTS/100ML | 0.2 | < | MG/L | 0.6 | MG/L |
| ROUTINE SAMPLE | 11/19/2003 | 10:33 | 10 | < | CTS/100ML | 0.2 | < | MG/L | 0.3 | MG/L |
| ROUTINE SAMPLE | 12/16/2003 | 10:40 | 70 | | CTS/100ML | 0.2 | < | MG/L | 0.3 | MG/L |
| FIELD DUPLICATE | 12/16/2003 | 10:40 | nd | | CTS/100ML | nd | | MG/L | nd | MG/L |

| ACTIVITY CATEGORY | START DATE | START TIME | NO2NO3 RESULTS | NO2NO3 UNITS | PH RESULTS | PH UNITS | P RESULTS | P UNITS | COND RESULTS | COND UNITS |
|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 13:37 | 0.53 | MG/L | 6.8 | UNITS | 0.031 | MG/L | 121.3 | US/CM |
| FIELD DUPLICATE | 3/19/2003 | 13:37 | nd | MG/L | nd | UNITS | nd | MG/L | 120.7 | US/CM |
| ROUTINE SAMPLE | 4/24/2003 | 10:05 | 0.41 | MG/L | 6.9 | UNITS | 0.021 | MG/L | 113.5 | US/CM |
| ROUTINE SAMPLE | 5/22/2003 | 9:30 | 0.37 | MG/L | 7 | UNITS | 0.029 | MG/L | 121.4 | US/CM |
| ROUTINE SAMPLE | 6/30/2003 | 12:58 | 0.76 | MG/L | 7.4 | UNITS | 0.09 | MG/L | 218 | US/CM |
| ROUTINE SAMPLE | 7/22/2003 | 12:35 | 1.16 | MG/L | 7.8 | UNITS | 0.073 | MG/L | 292.9 | US/CM |
| ROUTINE SAMPLE | 8/19/2003 | 12:25 | 0.57 | MG/L | 6.75 | UNITS | 0.085 | MG/L | 188.4 | US/CM |
| FIELD DUPLICATE | 8/19/2003 | 12:25 | nd | MG/L | 6.98 | UNITS | nd | MG/L | 185.7 | US/CM |
| ROUTINE SAMPLE | 9/29/2003 | 9:42 | 0.53 | MG/L | 6.46 | UNITS | 0.072 | MG/L | 160.5 | US/CM |
| ROUTINE SAMPLE | 10/30/2003 | 8:48 | 0.13 | MG/L | 6.59 | UNITS | 0.051 | MG/L | 108.7 | US/CM |
| ROUTINE SAMPLE | 11/19/2003 | 10:33 | 0.32 | MG/L | 7.52 | UNITS | 0.023 | MG/L | 72.6 | US/CM |
| ROUTINE SAMPLE | 12/16/2003 | 10:40 | 0.28 | MG/L | 6.6 | UNITS | 0.041 | MG/L | 55.1 | US/CM |
| FIELD DUPLICATE | 12/16/2003 | 10:40 | nd | MG/L | nd | UNITS | nd | MG/L | 54.3 | US/CM |

| ACTIVITY CATEGORY | START DATE | START TIME | TEMP RESULTS | TEMP UNITS | TSS RESULTS | TSS QUAL | TSS UNITS | TURB RESULTS | TURB UNITS | WEATHER COMMENTS RESULTS |
|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 13:37 | 2.3 | DEG C | 2.5 | | MG/L | 5 | NTU | CLEAR, SLIGHT BREEZE |
| FIELD DUPLICATE | 3/19/2003 | 13:37 | 0.8 | DEG C | nd | | MG/L | 5.9 | NTU | |
| ROUTINE SAMPLE | 4/24/2003 | 10:05 | 9 | DEG C | 1 | < | MG/L | 2.5 | NTU | |
| ROUTINE SAMPLE | 5/22/2003 | 9:30 | 16.4 | DEG C | 3.5 | | MG/L | 2.1 | NTU | OVERCAST, WINDY |
| ROUTINE SAMPLE | 6/30/2003 | 12:58 | 26.7 | DEG C | 3 | | MG/L | 3.5 | NTU | CLOUDY, BREEZY |
| ROUTINE SAMPLE | 7/22/2003 | 12:35 | 24.7 | DEG C | 4 | | MG/L | 3.4 | NTU | OVERCAST |
| ROUTINE SAMPLE | 8/19/2003 | 12:25 | 25.8 | DEG C | 1 | < | MG/L | 2 | NTU | CLEAR, SLIGHT BREEZE |
| FIELD DUPLICATE | 8/19/2003 | 12:25 | 25.7 | DEG C | nd | | MG/L | 2 | NTU | |
| ROUTINE SAMPLE | 9/29/2003 | 9:42 | 17.4 | DEG C | 2 | | MG/L | 3.5 | NTU | CLOUDY |
| ROUTINE SAMPLE | 10/30/2003 | 8:48 | 10.4 | DEG C | 12.5 | | MG/L | 11 | NTU | CLEAR, BREEZY |
| ROUTINE SAMPLE | 11/19/2003 | 10:33 | 2.8 | DEG C | 3.5 | | MG/L | 1.8 | NTU | OVERCAST |
| ROUTINE SAMPLE | 12/16/2003 | 10:40 | 0.3 | DEG C | 2 | | MG/L | 1.8 | NTU | PARTLY CLOUDY |
| FIELD DUPLICATE | 12/16/2003 | 10:40 | 0.3 | DEG C | nd | | MG/L | 1.8 | NTU | PARTLY CLOUDY |

| Legend | |
|---|---|
| BOD | BIOCHEMICAL OXYGEN DEMAND |
| CHL | CHLOROPHYLL A, UNCORRECTED FOR PHEOPHYTIN |
| DO | DISSOLVED OXYGEN |

| | |
|---|---|
| DO SAT | DISSOLVED OXYGEN SATURATION |
| DELETED | LAB ACCIDENT |
| EC | ESCHERICHIA COLI |
| NITR | NITROGEN AMMONIA |
| TKN | NITROGEN KJELDAHL |
| nd | NO SAMPLE COLLECTED OR NO MEASUREMENT MADE |
| NO2NO3 | NITROGEN NITRATE + NITRITE |
| P | PHOSPHORUS AS P |
| QUAL | QUALIFIER |
| COND | SPECIFIC CONDUCTANCE |
| TEMP | TEMPERATURE WATER |
| TSS | TOTAL SUSPENDED SOLIDS |
| TURB | TURBIDITY |

Salmon Falls River at Rt. 4, Rollinsford, 05-SFR
Note: Data not meeting RPD are shaded.

| ACTIVITY CATEGORY | START DATE | START TIME | BOD RESULTS | BOD QUAL | BOD UNITS | CHL RESULTS | CHL UNITS | DO RESULTS | DO UNITS | DO SAT RESULTS | DO SAT UNITS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 13:04 | 2.4 | < | MG/L | 0.86 | MG/M3 | 12.55 | MG/L | 88.7 | % |
| ROUTINE SAMPLE | 4/24/2003 | 10:29 | 2.4 | < | MG/L | 2.02 | UG/L | 10.93 | MG/L | 92.9 | % |
| FIELD DUPLICATE | 4/24/2003 | 10:29 | nd | | MG/L | nd | UG/L | 10.88 | MG/L | 92.5 | % |
| ROUTINE SAMPLE | 5/22/2003 | 9:30 | 2.4 | < | MG/L | 4.17 | MG/M3 | 8.94 | MG/L | 91.8 | % |
| ROUTINE SAMPLE | 6/30/2003 | 12:40 | 5.5 | | MG/L | 41.62 | MG/M3 | 9.75 | MG/L | 123.2 | % |
| ROUTINE SAMPLE | 7/22/2003 | 12:11 | 2.4 | < | MG/L | 14.29 | UG/L | 7.97 | MG/L | 96.4 | % |
| ROUTINE SAMPLE | 8/19/2003 | 13:06 | 2.76 | | MG/L | 18.65 | UG/L | 7.83 | MG/L | 102.5 | % |
| ROUTINE SAMPLE | 9/29/2003 | 9:04 | 2.4 | < | MG/L | 3.65 | UG/L | 7.77 | MG/L | 82.6 | % |
| ROUTINE SAMPLE | 10/30/2003 | 7:51 | 2.4 | < | MG/L | 1.99 | UG/L | 10.7 | MG/L | 95.5 | % |
| ROUTINE SAMPLE | 11/19/2003 | 10:50 | 2.4 | < | MG/L | 0.88 | UG/L | 13.01 | MG/L | 98.4 | % |
| ROUTINE SAMPLE | 12/16/2003 | 10:18 | 2.4 | < | MG/L | 1.26 | UG/L | 14.35 | MG/L | 98.6 | % |

| ACTIVITY CATEGORY | START DATE | START TIME | EC RESULTS | EC QUAL | EC UNITS | NITR RESULTS | NITR QUAL | NITR UNITS | TKN RESULTS | TKN UNITS |
|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 13:04 | 5 | | CTS/100ML | 0.2 | < | MG/L | 0.3 | MG/L |
| ROUTINE SAMPLE | 4/24/2003 | 10:29 | 50 | | CTS/100ML | 0.2 | < | MG/L | 0.3 | MG/L |
| FIELD DUPLICATE | 4/24/2003 | 10:29 | nd | | CTS/100ML | nd | | MG/L | nd | MG/L |
| ROUTINE SAMPLE | 5/22/2003 | 9:30 | 10 | | CTS/100ML | 0.2 | < | MG/L | 0.4 | MG/L |
| ROUTINE SAMPLE | 6/30/2003 | 12:40 | 20 | | CTS/100ML | 0.2 | < | MG/L | 1.3 | MG/L |
| ROUTINE SAMPLE | 7/22/2003 | 12:11 | 10 | < | CTS/100ML | 0.2 | < | MG/L | 0.7 | MG/L |
| ROUTINE SAMPLE | 8/19/2003 | 13:06 | 5 | | CTS/100ML | 0.2 | < | MG/L | 0.7 | MG/L |
| ROUTINE SAMPLE | 9/29/2003 | 9:04 | 50 | | CTS/100ML | 0.2 | < | MG/L | 0.4 | MG/L |
| ROUTINE SAMPLE | 10/30/2003 | 7:51 | 250 | | CTS/100ML | 0.2 | < | MG/L | 0.5 | MG/L |
| ROUTINE SAMPLE | 11/19/2003 | 10:50 | 10 | | CTS/100ML | 0.2 | < | MG/L | 0.4 | MG/L |
| ROUTINE SAMPLE | 12/16/2003 | 10:18 | 10 | < | CTS/100ML | 0.2 | < | MG/L | 0.3 | MG/L |

| ACTIVITY CATEGORY | START DATE | START TIME | NO2NO3 RESULTS | NO2NO3 QUAL | NO2NO3 UNITS | PH RESULTS | PH UNITS | P RESULTS | P UNITS | COND RESULTS | COND UNITS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 13:04 | 0.24 | | MG/L | 6.6 | UNITS | 0.044 | MG/L | 86.6 | US/CM |
| ROUTINE SAMPLE | 4/24/2003 | 10:29 | 0.13 | | MG/L | 6.6 | UNITS | 0.021 | MG/L | 74.7 | US/CM |
| FIELD DUPLICATE | 4/24/2003 | 10:29 | nd | | MG/L | nd | UNITS | nd | MG/L | 74.5 | US/CM |
| ROUTINE SAMPLE | 5/22/2003 | 9:30 | 0.15 | | MG/L | 6.7 | UNITS | 0.024 | MG/L | 98 | US/CM |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 6/30/2003 | 12:40 | 0.15 | | MG/L | 7.4 | UNITS | 0.075 | MG/L | 147.2 | US/CM |
| ROUTINE SAMPLE | 7/22/2003 | 12:11 | 0.26 | | MG/L | 7.2 | UNITS | 0.056 | MG/L | 200.8 | US/CM |
| ROUTINE SAMPLE | 8/19/2003 | 13:06 | 0.15 | | MG/L | 6.85 | UNITS | 0.036 | MG/L | 115.3 | US/CM |
| ROUTINE SAMPLE | 9/29/2003 | 9:04 | 0.22 | | MG/L | 6.62 | UNITS | 0.024 | MG/L | 135.7 | US/CM |
| ROUTINE SAMPLE | 10/30/2003 | 7:51 | 0.08 | | MG/L | 6.46 | UNITS | 0.026 | MG/L | 96 | US/CM |
| ROUTINE SAMPLE | 11/19/2003 | 10:50 | 0.05 | < | MG/L | 7.48 | UNITS | 0.011 | MG/L | 60.9 | US/CM |
| ROUTINE SAMPLE | 12/16/2003 | 10:18 | 0.1 | | MG/L | 6.7 | UNITS | 0.018 | MG/L | 46.2 | US/CM |

| ACTIVITY CATEGORY | START DATE | START TIME | TEMP RESULTS | TEMP UNITS | TSS RESULTS | TSS QUAL | TSS UNITS | TURB RESULTS | TURB UNITS | WEATHER COMMENTS RESULTS |
|---|---|---|---|---|---|---|---|---|---|---|
| ROUTINE SAMPLE | 3/19/2003 | 13:04 | 1 | DEG C | 4 | | MG/L | 2.3 | NTU | CLEAR, SLIGHT BREEZE |
| ROUTINE SAMPLE | 4/24/2003 | 10:29 | 8.3 | DEG C | 1 | < | MG/L | 0.95 | NTU | |
| FIELD DUPLICATE | 4/24/2003 | 10:29 | 8.2 | DEG C | nd | | MG/L | 1.8 | NTU | |
| ROUTINE SAMPLE | 5/22/2003 | 9:30 | 16.6 | DEG C | 4.5 | | MG/L | 1.5 | NTU | OVERCAST, BREEZY |
| ROUTINE SAMPLE | 6/30/2003 | 12:40 | 27.3 | DEG C | 6.5 | | MG/L | 2.1 | NTU | |
| ROUTINE SAMPLE | 7/22/2003 | 12:11 | 25 | DEG C | 5.5 | | MG/L | 2.6 | NTU | PARTLY CLOUDY |
| ROUTINE SAMPLE | 8/19/2003 | 13:06 | 29.2 | DEG C | 3.5 | | MG/L | 1.9 | NTU | CLEAR, BREEZY |
| ROUTINE SAMPLE | 9/29/2003 | 9:04 | 18.5 | DEG C | 2 | | MG/L | 2.3 | NTU | CLOUDY |
| ROUTINE SAMPLE | 10/30/2003 | 7:51 | 10.3 | DEG C | 2.5 | | MG/L | 4 | NTU | CLEAR, WINDY |
| ROUTINE SAMPLE | 11/19/2003 | 10:50 | 3.7 | DEG C | 3 | | MG/L | 1.5 | NTU | OVERCAST |
| ROUTINE SAMPLE | 12/16/2003 | 10:18 | 0.2 | DEG C | 2.5 | | MG/L | 1.7 | NTU | PARTLY CLOUDY |

| Legend | |
|---|---|
| BOD | BIOCHEMICAL OXYGEN DEMAND |
| CHL | CHLOROPHYLL A, UNCORRECTED FOR PHEOPHYTIN |
| DO | DISSOLVED OXYGEN |
| DO SAT | DISSOLVED OXYGEN SATURATION |
| DELETED | LAB ACCIDENT |
| EC | ESCHERICHIA COLI |
| NITR | NITROGEN AMMONIA |
| TKN | NITROGEN KJELDAHL |
| nd | NO SAMPLE COLLECTED OR NO MEASUREMENT MADE |
| NO2NO3 | NITROGEN NITRATE + NITRITE |
| P | PHOSPHORUS AS P |
| QUAL | QUALIFIER |
| COND | SPECIFIC CONDUCTANCE |

| | |
|---|---|
| TEMP | TEMPERATURE WATER |
| TSS | TOTAL SUSPENDED SOLIDS |
| TURB | TURBIDITY |

# APPENDIX D - GULFWATCH PHYSICAL DATA 2003

# NH-GOM 2003 Sample Jar Data Summary

Indigenous Mussels **Autumn, 2003** GOM

| | | | | TARE WEIGHT | | TOTAL WEIGHT | | TISSUE WEIGHT | |
|---|---|---|---|---|---|---|---|---|---|
| Site | Site # | Jar label | Location | ORGANICS | METALS | ORGANICS | METALS | ORGANICS | METALS |
| Clark Cove | MECC-1 | MECC1N031002 | 1 | 177.396 | 178.275 | 273.775 | 277.092 | 96.379 | 98.817 |
| on Seavey I. | MECC-2 | MECC2N021002 | 2 | 178.441 | 177.347 | 276.689 | 284.040 | 98.248 | 106.693 |
| in Portsmouth | MECC-3 | MECC3N031002 | 3 | 178.537 | 179.045 | 267.933 | 265.626 | 89.396 | 86.581 |
| Harbor, Maine | MECC-4 | MECC4N031002 | 4 | 178.061 | 178.005 | 278.240 | 274.764 | 100.179 | 96.759 |
| | Site # | Jar label | Location | | | | | | |
| South Mill | NHSM-1 | NHSM1N031002 | 1 | 177.587 | 177.365 | 296.728 | 290.663 | 119.141 | 113.298 |
| Pond | NHSM-2 | NHSM2N031002 | 2 | 177.918 | 177.415 | 308.937 | 315.227 | 131.019 | 137.812 |
| Portsmouth, | NHSM-3 | NHSM3N031002 | 3 | 177.588 | 177.527 | 310.552 | 301.625 | 132.964 | 124.098 |
| New Hampshire | NHSM-4 | NHSM4N031002 | 4 | 178.192 | 178.394 | 288.937 | 298.269 | 110.745 | 119.875 |
| | Site # | Jar label | Location | | | | | | |
| Hampton- | NHHS-1 | NHHS1N031001 | 1 | 177.873 | 178.147 | 288.839 | 298.243 | 110.966 | 120.096 |
| Seabrook Harbor | NHHS-2 | NHHS2N031001 | 2 | 177.572 | 177.579 | 273.317 | 293.618 | 95.745 | 116.039 |
| Hampton, | NHHS-3 | NHHS3N031001 | 3 | 178.875 | 177.525 | 296.510 | 304.880 | 117.635 | 127.355 |
| New Hampshire | NHHS-4 | NHHS4N031001 | 4 | 177.827 | 178.441 | 299.627 | 313.782 | 121.800 | 135.341 |
| | Site # | Jar label | Location | | | | | | |
| Dover Point | NHDP-1 | NHDP1N031001 | 1 | 177.960 | 177.381 | 269.627 | 260.952 | 91.667 | 83.571 |
| | NHDP-2 | NHDP2N031001 | 2 | 178.052 | 177.453 | 271.743 | 282.436 | 93.691 | 104.983 |
| Dover | NHDP-3 | NHDP3N031001 | 3 | 177.484 | 178.947 | 263.385 | 270.221 | 85.901 | 91.274 |
| New Hampshire | NHDP-4 | NHDP4N031001 | 4 | 177.526 | 177.415 | 272.827 | 267.438 | 95.301 | 90.023 |
| | Site # | Jar label | Location | | | | | | |
| Little Harbor | NHLH-1 | NHLH1N031001 | 1 | 179.040 | 177.158 | 259.200 | 261.943 | 80.160 | 84.785 |
| | NHLH-2 | NHLH2N031001 | 2 | 177.310 | 177.982 | 248.605 | 248.146 | 71.295 | 70.164 |
| New Castle | NHLH-3 | NHLH3N031001 | 3 | 177.770 | 178.144 | 256.632 | 256.333 | 78.862 | 78.189 |
| New Hampshire | NHLH-4 | NHLH4N031001 | 4 | 177.524 | 177.376 | 249.935 | 262.084 | 72.411 | 84.708 |

| | **MECC 2003 METALS** | | | | T= | sal= | pH= | | |
|---|---|---|---|---|---|---|---|---|---|
| Indigenous | Mussels | | | | | | Tared | Cumulative | Jar |
| Site | # | Length (mm) | | Length (mm) | Height (mm) | Width (mm) | Wet weight (g) | Wet weight (g) | Weight (g) |
| MECC-1 | 1 | 53.6 | 11 | 53.5 | 27.7 | 21.4 | 4.496 | 182.771 | 178.275 |
| MECC-1 | 2 | 53.5 | 12 | 57.7 | 30.6 | 25.4 | 10.989 | 189.264 | |
| MECC-1 | 3 | 56.9 | 13 | 54.0 | 30.3 | 22.5 | 15.293 | 193.568 | |
| MECC-1 | 4 | 52.7 | 14 | 57.7 | 27.8 | 25.0 | 21.441 | 199.716 | |
| MECC-1 | 5 | 51.3 | 15 | 52.7 | 28.9 | 22.0 | 26.401 | 204.676 | |
| MECC-1 | 6 | 56.1 | 16 | 50.7 | 26.9 | 19.2 | 30.213 | 208.488 | |
| MECC-1 | 7 | 57.1 | 17 | 53.2 | 29.0 | 21.2 | 34.312 | 212.587 | |
| MECC-1 | 8 | 57.7 | 18 | 51.7 | 26.9 | 22.7 | | | |
| MECC-1 | 9 | 56.1 | 19 | 51.7 | 27.7 | 22.8 | 42.098 | 220.373 | |
| MECC-1 | 10 | 56.1 | 20 | 57.9 | 31.9 | 24.3 | 48.593 | 226.868 | |
| | 1-20 tot | | | | | | 98.817 | 277.092 | |
| MECC-2 | 1 | 56.4 | 11 | 54.4 | 26.8 | 22.5 | 5.431 | 182.778 | 177.347 |
| MECC-2 | 2 | 57.0 | 12 | 50.9 | 26.5 | 23.9 | 9.716 | 187.063 | |
| MECC-2 | 3 | 50.4 | 13 | 56.8 | 30.3 | 22.0 | 15.353 | 192.700 | |
| MECC-2 | 4 | 55.6 | 14 | 52.5 | 24.8 | 20.7 | 19.623 | 196.970 | |
| MECC-2 | 5 | 56.4 | 15 | 52.7 | 29.6 | 22.4 | 25.272 | 202.619 | |
| MECC-2 | 6 | 57.1 | 16 | 54.2 | 26.6 | 20.5 | 29.474 | 206.821 | |
| MECC-2 | 7 | 51.5 | 17 | 53.4 | 26.0 | 22.7 | 35.184 | 212.531 | |
| MECC-2 | 8 | 56.5 | 18 | 54.6 | 29.4 | 22.0 | 40.522 | 217.869 | |
| MECC-2 | 9 | 52.1 | 19 | 50.4 | 28.5 | 21.4 | 45.445 | 222.792 | |
| MECC-2 | 10 | 50.7 | 20 | 54.3 | 26.1 | 27.9 | 52.586 | 229.933 | |
| | 1-20 total | | | | | | 106.693 | 284.040 | |
| MECC-3 | 1 | 57.7 | 11 | 55.5 | 29.2 | 22.9 | 3.709 | 182.754 | 179.045 |
| MECC-3 | 2 | 57.7 | 12 | 55.4 | 27.1 | 22.7 | 8.108 | 187.153 | |
| MECC-3 | 3 | 54.2 | 13 | 50.6 | 29.0 | 19.9 | 11.808 | 190.853 | |
| MECC-3 | 4 | 50.8 | 14 | 50.6 | 28.5 | 18.2 | 14.741 | 193.786 | |
| MECC-3 | 5 | 57.7 | 15 | 53.1 | 28.5 | 23.8 | 20.365 | 199.410 | |
| MECC-3 | 6 | 53.3 | 16 | 52.5 | 27.6 | 20.5 | 24.280 | 203.325 | |
| MECC-3 | 7 | 56.8 | 17 | 54.3 | 29.8 | 20.6 | 29.231 | 208.276 | |
| MECC-3 | 8 | 55.6 | 18 | 50.7 | 26.7 | 20.6 | 33.509 | 212.554 | |
| MECC-3 | 9 | 55.0 | 19 | 52.8 | 26.5 | 21.5 | 37.275 | 216.320 | |
| MECC-3 | 10 | 52.5 | 20 | 51.1 | 26.4 | 20.2 | 40.636 | 219.681 | |
| | 1-20 total | | | | | | 86.581 | 265.626 | |
| MECC-4 | 1 | 53.7 | 11 | 57.8 | 32.2 | 20.1 | | | 178.005 |
| MECC-4 | 2 | 50.8 | 12 | 57.9 | 28.1 | 25.2 | | | |
| MECC-4 | 3 | 52.2 | 13 | 53.2 | 28.6 | 19.6 | | | |
| MECC-4 | 4 | 58.1 | 14 | 55.9 | 28.8 | 24.0 | | | |
| MECC-4 | 5 | 55.7 | 15 | 53.7 | 27.5 | 23.3 | | | |
| MECC-4 | 6 | 52.2 | 16 | 56.6 | 29.5 | 25.4 | | | |
| MECC-4 | 7 | 52.1 | 17 | 55.3 | 28.4 | 24.7 | | | |
| MECC-4 | 8 | 57.2 | 18 | 58.4 | 31.9 | 23.8 | | | |
| MECC-4 | 9 | 55.4 | 19 | 52.4 | 30.4 | 22.0 | | | |
| MECC-4 | 10 | 55.4 | 20 | 52.4 | 28.4 | 20.6 | | | |
| | 1-20 total | | | | | | 96.759 | 274.764 | |
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| | **MECC 2003 ORGANICS** | | | | | | | | |
| Indigenous | Mussels | | | | | | Tared | Cumulative | Jar |
| Site | # | Length (mm) | | Length (mm) | Height (mm) | Width (mm) | Wet weight (g) | Wet weight (g) | Weight (g) |
| MECC-1 | 1 | 51.5 | 11 | 54.5 | | | | | 177.396 |
| MECC-1 | 2 | 52.8 | 12 | 58.6 | | | | | |
| MECC-1 | 3 | 55.0 | 13 | 56.0 | | | | | |
| MECC-1 | 4 | 57.3 | 14 | 50.9 | | | | | |
| MECC-1 | 5 | 51.3 | 15 | 58.2 | | | | | |
| MECC-1 | 6 | 51.3 | 16 | 55.3 | | | | | |
| MECC-1 | 7 | 56.6 | 17 | 52.2 | | | | | |
| MECC-1 | 8 | 50.6 | 18 | 59.2 | | | | | |
| MECC-1 | 9 | 56.2 | 19 | 54.7 | | | | | |
| MECC-1 | 10 | 53.5 | 20 | 52.8 | | | | | |
| | 1-20 tot | | | | | | 96.379 | 273.775 | |
| MECC-2 | 1 | 55.6 | 11 | 57.6 | | | | | 178.441 |
| MECC-2 | 2 | 53.7 | 12 | 54.1 | | | | | |
| MECC-2 | 3 | 51.3 | 13 | 56.3 | | | | | |
| MECC-2 | 4 | 57.0 | 14 | 53.7 | | | | | |
| MECC-2 | 5 | 51.3 | 15 | 51.5 | | | | | |
| MECC-2 | 6 | 51.9 | 16 | 55.0 | | | | | |
| MECC-2 | 7 | 55.6 | 17 | 55.5 | | | | | |
| MECC-2 | 8 | 51.4 | 18 | 56.4 | | | | | |
| MECC-2 | 9 | 56.9 | 19 | 55.4 | | | | | |
| MECC-2 | 10 | 57.8 | 20 | 51.4 | | | | | |
| | 1-20 total | | | | | | 98.248 | 276.689 | |
| MECC-3 | 1 | 55.3 | 11 | 52.0 | | | | | 178.537 |
| MECC-3 | 2 | 50.9 | 12 | 51.5 | | | | | |
| MECC-3 | 3 | 54.6 | 13 | 58.2 | | | | | |
| MECC-3 | 4 | 52.0 | 14 | 51.3 | | | | | |
| MECC-3 | 5 | 53.5 | 15 | 51.7 | | | | | |
| MECC-3 | 6 | 51.9 | 16 | 54.9 | | | | | |
| MECC-3 | 7 | 50.7 | 17 | 50.2 | | | | | |
| MECC-3 | 8 | 54.3 | 18 | 53.1 | | | | | |
| MECC-3 | 9 | 51.4 | 19 | 24.7 | | | | | |
| MECC-3 | 10 | 53.2 | 20 | 54.2 | | | | | |
| | 1-20 total | | | | | | 89.396 | 267.933 | |
| MECC-4 | 1 | 57.4 | 11 | 54.4 | | | | | 178.061 |
| MECC-4 | 2 | 54.2 | 12 | 53.3 | | | | | |
| MECC-4 | 3 | 56.2 | 13 | 57.9 | | | | | |
| MECC-4 | 4 | 55.9 | 14 | 53.9 | | | | | |
| MECC-4 | 5 | 52.1 | 15 | 56.3 | | | | | |
| MECC-4 | 6 | 57.6 | 16 | 56.6 | | | | | |
| MECC-4 | 7 | 58.6 | 17 | 50.9 | | | | | |
| MECC-4 | 8 | 56.9 | 18 | 56.9 | | | | | |
| MECC-4 | 9 | 53.5 | 19 | 54.7 | | | | | |
| MECC-4 | 10 | 58.0 | 20 | 54.6 | | | | | |
| | 1-20 total | | | | | | 100.179 | 278.240 | |

| | **NHSM 2003 METALS** | | | T= | sal= | pH= | | |
|---|---|---|---|---|---|---|---|---|
| Indigenous | Mussels | | | | | Tared | Cumulative | Jar |
| Site | # | Length (mm) | | Length (mm) | Height (mm) | Width (mm) | Wet weight (g) | Wet weight (g) | Weight (g) |
| NHSM-1 | 1 | 56.7 | 11 | 51.6 | 29.3 | 18.7 | 4.628 | 181.993 | 177.365 |
| NHSM-1 | 2 | 51.8 | 12 | 51.8 | 26.8 | 22.5 | 8.833 | 186.198 | |
| NHSM-1 | 3 | 58.2 | 13 | 58.0 | 32.3 | 21.0 | 15.923 | 193.288 | |
| NHSM-1 | 4 | 57.6 | 14 | 50.3 | 30.5 | 19.5 | 18.846 | 196.211 | |
| NHSM-1 | 5 | 59.9 | 15 | 52.1 | 31.0 | 19.3 | 23.791 | 201.156 | |
| NHSM-1 | 6 | 57.5 | 16 | 59.6 | 31.4 | 24.1 | 31.457 | 208.822 | |
| NHSM-1 | 7 | 54.5 | 17 | 56.1 | 29.9 | 24.2 | 37.804 | 215.169 | |
| NHSM-1 | 8 | 52.2 | 18 | 57.8 | 31.8 | 24.1 | 43.833 | 221.198 | |
| NHSM-1 | 9 | 51.5 | 19 | 57.9 | 33.7 | 24.2 | 49.703 | 227.068 | |
| NHSM-1 | 10 | 57.4 | 20 | 53.8 | 27.2 | 20.1 | 53.535 | 230.900 | |
| | 1-20 tot | | | | | | 113.298 | 290.663 | |
| NHSM-2 | 1 | 56.1 | 11 | 56.3 | 29.0 | 22.9 | 6.944 | 184.359 | 177.415 |
| NHSM-2 | 2 | 57.8 | 12 | 59.9 | 31.4 | 25.0 | 15.155 | 192.570 | |
| NHSM-2 | 3 | 56.4 | 13 | 58.5 | 28.3 | 30.7 | 22.564 | 199.979 | |
| NHSM-2 | 4 | 55.9 | 14 | 54.1 | 30.5 | 22.8 | 26.624 | 204.039 | |
| NHSM-2 | 5 | 58.1 | 15 | 59.9 | 31.6 | 27.9 | 37.216 | 214.631 | |
| NHSM-2 | 6 | 52.9 | 16 | 59.3 | 29.6 | 24.3 | 45.089 | 222.504 | |
| NHSM-2 | 7 | 55.2 | 17 | 58.8 | 31.6 | 24.8 | 52.658 | 230.073 | |
| NHSM-2 | 8 | 55.1 | 18 | 59.9 | 31.4 | 25.7 | 59.497 | 236.912 | |
| NHSM-2 | 9 | 54.8 | 19 | 58.2 | 32.1 | 22.4 | 65.513 | 242.928 | |
| NHSM-2 | 10 | 58.5 | 20 | 57.1 | 28.8 | 23.8 | 71.993 | 249.408 | |
| | 1-20 total | | | | | | 137.812 | 315.227 | |
| NHSM-3 | 1 | 56.7 | 11 | 57.8 | 33.7 | 22.5 | 6.920 | 184.447 | 177.527 |
| NHSM-3 | 2 | 56.0 | 12 | 58.5 | 31.0 | 23.0 | 14.200 | 191.727 | |
| NHSM-3 | 3 | 57.6 | 13 | 58.0 | 33.7 | 24.5 | 21.533 | 199.060 | |
| NHSM-3 | 4 | 52.1 | 14 | 58.9 | 31.4 | 23.6 | 27.896 | 205.423 | |
| NHSM-3 | 5 | 54.3 | 15 | 56.7 | 30.3 | 20.2 | 34.167 | 211.694 | |
| NHSM-3 | 6 | 56.7 | 16 | 58.9 | 30.2 | 25.7 | 40.797 | 218.324 | |
| NHSM-3 | 7 | 55.5 | 17 | 59.7 | 29.3 | 27.1 | 46.229 | 223.756 | |
| NHSM-3 | 8 | 56.5 | 18 | 55.9 | 31.0 | 22.5 | 51.853 | 229.380 | |
| NHSM-3 | 9 | 57.9 | 19 | 56.7 | 31.1 | 25.3 | 60.084 | 237.611 | |
| NHSM-3 | 10 | 56.3 | 20 | 52.5 | 26.5 | 20.5 | 64.360 | 241.887 | |
| | 1-20 total | | | | | | 124.098 | 301.625 | |
| NHSM-4 | 1 | 53.4 | 11 | 54.7 | 30.9 | 21.0 | | | 178.394 |
| NHSM-4 | 2 | 56.6 | 12 | 57.1 | 30.7 | 27.7 | | | |
| NHSM-4 | 3 | 55.6 | 13 | 58.2 | 30.9 | 22.9 | | | |
| NHSM-4 | 4 | 57.3 | 14 | 54.5 | 29.7 | 22.6 | | | |
| NHSM-4 | 5 | 53.1 | 15 | 56.5 | 29.0 | 26.5 | | | |
| NHSM-4 | 6 | 58.5 | 16 | 53.0 | 30.1 | 23.5 | | | |
| NHSM-4 | 7 | 54.9 | 17 | 55.6 | 28.9 | 26.1 | | | |
| NHSM-4 | 8 | 53.6 | 18 | 56.0 | 30.6 | 24.8 | | | |
| NHSM-4 | 9 | 57.2 | 19 | 53.8 | 29.1 | 22.1 | | | |
| NHSM-4 | 10 | 53.4 | 20 | 57.1 | 31.6 | 21.0 | | | |
| | 1-20 total | | | | | | 119.875 | 298.269 | |
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| | **NHSM 2003 ORGANICS** | | | | | | | | |
| Indigenous | Mussels | | | | | | Tared | Cumulative | Jar |
| Site | # | Length (mm) | | Length | Height | Width | Wet weight | Wet weight | Weight |
| NHSM-1 | 1 | 57.2 | 11 | 58.0 | | | | | 177.587 |
| NHSM-1 | 2 | 59.9 | 12 | 59.2 | | | | | |
| NHSM-1 | 3 | 52.7 | 13 | 57.1 | | | | | |
| NHSM-1 | 4 | 51.7 | 14 | 55.3 | | | | | |
| NHSM-1 | 5 | 57.0 | 15 | 53.1 | | | | | |
| NHSM-1 | 6 | 58.1 | 16 | 51.5 | | | | | |
| NHSM-1 | 7 | 58.2 | 17 | 58.5 | | | | | |
| NHSM-1 | 8 | 58.0 | 18 | 52.8 | | | | | |
| NHSM-1 | 9 | 51.9 | 19 | 51.2 | | | | | |
| NHSM-1 | 10 | 55.2 | 20 | 54.9 | | | | | |
| | 1-20 tot | | | | | | 119.141 | 296.728 | |
| NHSM-2 | 1 | 54.1 | 11 | 58.6 | | | | | 177.918 |
| NHSM-2 | 2 | 57.2 | 12 | 54.4 | | | | | |
| NHSM-2 | 3 | 56.0 | 13 | 55.6 | | | | | |
| NHSM-2 | 4 | 56.5 | 14 | 59.5 | | | | | |
| NHSM-2 | 5 | 57.0 | 15 | 56.4 | | | | | |
| NHSM-2 | 6 | 56.3 | 16 | 59.8 | | | | | |
| NHSM-2 | 7 | 59.2 | 17 | 56.5 | | | | | |
| NHSM-2 | 8 | 59.2 | 18 | 52.9 | | | | | |
| NHSM-2 | 9 | 55.0 | 19 | 58.2 | | | | | |
| NHSM-2 | 10 | 59.4 | 20 | 58.4 | | | | | |
| 1-20 total | | | | | | | 131.019 | 308.937 | |
| NHSM-3 | 1 | 59.9 | 11 | 56.3 | | | | | 177.588 |
| NHSM-3 | 2 | 59.6 | 12 | 57.6 | | | | | |
| NHSM-3 | 3 | 58.3 | 13 | 57.7 | | | | | |
| NHSM-3 | 4 | 59.3 | 14 | 57.5 | | | | | |
| NHSM-3 | 5 | 54.3 | 15 | 57.9 | | | | | |
| NHSM-3 | 6 | 56.1 | 16 | 53.7 | | | | | |
| NHSM-3 | 7 | 58.8 | 17 | 58.8 | | | | | |
| NHSM-3 | 8 | 56.4 | 18 | 59.6 | | | | | |
| NHSM-3 | 9 | 57.8 | 19 | 59.5 | | | | | |
| NHSM-3 | 10 | 58.2 | 20 | 58.0 | | | | | |
| 1-20 total | | | | | | | 132.964 | 310.552 | |
| NHSM-4 | 1 | 59.6 | 11 | 54.7 | | | | | 178.192 |
| NHSM-4 | 2 | 54.3 | 12 | 53.3 | | | | | |
| NHSM-4 | 3 | 57.1 | 13 | 55.8 | | | | | |
| NHSM-4 | 4 | 53.2 | 14 | 57.0 | | | | | |
| NHSM-4 | 5 | 56.6 | 15 | 56.9 | | | | | |
| NHSM-4 | 6 | 52.9 | 16 | 57.3 | | | | | |
| NHSM-4 | 7 | 51.8 | 17 | 50.5 | | | | | |
| NHSM-4 | 8 | 55.9 | 18 | 56.7 | | | | | |
| NHSM-4 | 9 | 56.6 | 19 | 54.7 | | | | | |
| NHSM-4 | 10 | 59.8 | 20 | 53.4 | | | | | |
| 1-20 total | | | | | | | 110.745 | 288.937 | |

| | **NHHS 2003 METALS** | | | T= | sal= | pH= | | |
|---|---|---|---|---|---|---|---|---|
| Indigenous | Mussels | | | | | Tared | Cumulative | Jar |
| Site | # | Length (mm) | | Length (mm) | Height (mm) | Width (mm) | Wet weight (g) | Wet weight (g) | Weight (g) |
| NHHS-1 | 1 | 56.0 | 11 | 57.2 | 30.1 | 22.3 | 5.478 | 183.625 | 178.147 |
| NHHS-1 | 2 | 52.9 | 12 | 52.3 | 27.9 | 24.4 | 11.505 | 189.652 | |
| NHHS-1 | 3 | 54.9 | 13 | 58.5 | 32.1 | 25.7 | 20.215 | 198.362 | |
| NHHS-1 | 4 | 52.4 | 14 | 55.1 | 29.6 | 22.8 | 25.973 | 204.120 | |
| NHHS-1 | 5 | 51.2 | 15 | 53.8 | 32.2 | 26.0 | 32.816 | 210.963 | |
| NHHS-1 | 6 | 59.7 | 16 | 56.6 | 33.7 | 24.8 | 40.310 | 218.457 | |
| NHHS-1 | 7 | 55.0 | 17 | 53.7 | 28.0 | 23.1 | 46.340 | 224.487 | |
| NHHS-1 | 8 | 53.8 | 18 | 55.4 | 29.9 | 24.2 | 52.727 | 230.874 | |
| NHHS-1 | 9 | 53.1 | 19 | 54.9 | 30.5 | 25.3 | 58.825 | 236.972 | |
| NHHS-1 | 10 | 53.5 | 20 | 58.6 | 28.9 | 22.1 | 65.685 | 243.832 | |
| | 1-20 tot | | | | | | 120.096 | 298.243 | |
| NHHS-2 | 1 | 52.6 | 11 | 58.6 | 33.6 | 26.5 | 9.062 | 186.641 | 177.579 |
| NHHS-2 | 2 | 53.8 | 12 | 53.6 | 28.0 | 21.2 | 14.696 | 192.275 | |
| NHHS-2 | 3 | 52.8 | 13 | 56.8 | 31.3 | 24.8 | 21.546 | 199.125 | |
| NHHS-2 | 4 | 53.3 | 14 | 56.0 | 28.5 | 27.4 | 28.736 | 206.315 | |
| NHHS-2 | 5 | 57.1 | 15 | 56.7 | 31.0 | 23.2 | 34.433 | 212.012 | |
| NHHS-2 | 6 | 54.1 | 16 | 57.0 | 30.4 | 25.7 | 41.735 | 219.314 | |
| NHHS-2 | 7 | 57.7 | 17 | 57.7 | 29.1 | 23.0 | 48.630 | 226.209 | |
| NHHS-2 | 8 | 54.4 | 18 | 56.7 | 29.4 | 22.1 | 54.839 | 232.418 | |
| NHHS-2 | 9 | 58.6 | 19 | 58.0 | 29.6 | 25.0 | 61.905 | 239.484 | |
| NHHS-2 | 10 | 51.1 | 20 | 57.7 | 29.0 | 22.2 | 67.745 | 245.324 | |
| | 1-20 total | | | | | | 116.039 | 293.618 | |
| NHHS-3 | 1 | 57.2 | 11 | 53.9 | 29.5 | 23.4 | 5.604 | 183.129 | 177.525 |
| NHHS-3 | 2 | 55.8 | 12 | 54.3 | 27.4 | 23.6 | 12.180 | 189.705 | |
| NHHS-3 | 3 | 56.8 | 13 | 52.1 | 26.7 | 19.8 | 16.074 | 193.599 | |
| NHHS-3 | 4 | 58.2 | 14 | 55.7 | 29.8 | 24.0 | 22.499 | 200.024 | |
| NHHS-3 | 5 | 58.8 | 15 | 57.1 | 29.1 | 21.7 | 28.558 | 206.083 | |
| NHHS-3 | 6 | 56.1 | 16 | 55.6 | 30.2 | 24.7 | 35.701 | 213.226 | |
| NHHS-3 | 7 | 53.8 | 17 | 53.0 | 29.5 | 19.6 | 40.229 | 217.754 | |
| NHHS-3 | 8 | 53.1 | 18 | 55.2 | 27.1 | 24.4 | 45.665 | 223.190 | |
| NHHS-3 | 9 | 55.3 | 19 | 59.3 | 34.4 | 25.5 | 54.047 | 231.572 | |
| NHHS-3 | 10 | 54.0 | 20 | 52.3 | 28.7 | 23.6 | 60.030 | 237.555 | |
| | 1-20 total | | | | | | 127.355 | 304.880 | |
| NHHS-4 | 1 | 54.3 | 11 | 57.5 | 31.2 | 24.5 | | | 178.441 |
| NHHS-4 | 2 | 56.8 | 12 | 58.2 | 27.0 | 25.4 | | | |
| NHHS-4 | 3 | 58.0 | 13 | 57.6 | 29.5 | 25.3 | | | |
| NHHS-4 | 4 | 54.4 | 14 | 57.4 | 31.6 | 26.5 | | | |
| NHHS-4 | 5 | 58.4 | 15 | 50.9 | 27.5 | 21.0 | | | |
| NHHS-4 | 6 | 56.6 | 16 | 52.3 | 53.5 | 27.7 | | | |
| NHHS-4 | 7 | 55.7 | 17 | 58.0 | 27.4 | 30.1 | | | |
| NHHS-4 | 8 | 58.0 | 18 | 58.2 | 33.0 | 24.3 | | | |
| NHHS-4 | 9 | 57.9 | 19 | 50.9 | 28.6 | 24.0 | | | |
| NHHS-4 | 10 | 58.9 | 20 | 56.3 | 31.9 | 22.5 | | | |
| | 1-20 total | | | | | | 135.341 | 313.782 | |
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| | **NHHS 2003 ORGANICS** | | | | | | | | |
| Indigenous | Mussels | | | | | | Tared | Cumulative | Jar |
| Site | # | Length (mm) | | Length (mm) | Height (mm) | Width (mm) | Wet weight (g) | Wet weight (g) | Weight (g) |
| NHHS-1 | 1 | 55.2 | 11 | 53.5 | | | | | 177.873 |
| NHHS-1 | 2 | 55.0 | 12 | 58.8 | | | | | |
| NHHS-1 | 3 | 53.9 | 13 | 53.9 | | | | | |
| NHHS-1 | 4 | 54.3 | 14 | 53.5 | | | | | |
| NHHS-1 | 5 | 54.2 | 15 | 53.3 | | | | | |
| NHHS-1 | 6 | 52.1 | 16 | 51.0 | | | | | |
| NHHS-1 | 7 | 57.1 | 17 | 54.7 | | | | | |
| NHHS-1 | 8 | 54.8 | 18 | 58.6 | | | | | |
| NHHS-1 | 9 | 59.5 | 19 | 56.7 | | | | | |
| NHHS-1 | 10 | 53.6 | 20 | 57.4 | | | | | |
| | 1-20 tot | | | | | | 110.966 | 288.839 | |
| NHHS-2 | 1 | 52.4 | 11 | 53.9 | | | | | 177.572 |
| NHHS-2 | 2 | 50.4 | 12 | 56.0 | | | | | |
| NHHS-2 | 3 | 55.5 | 13 | 54.4 | | | | | |
| NHHS-2 | 4 | 56.0 | 14 | 50.9 | | | | | |
| NHHS-2 | 5 | 54.3 | 15 | 52.9 | | | | | |
| NHHS-2 | 6 | 56.7 | 16 | 53.5 | | | | | |
| NHHS-2 | 7 | 54.2 | 17 | 52.2 | | | | | |
| NHHS-2 | 8 | 50.3 | 18 | 52.8 | | | | | |
| NHHS-2 | 9 | 52.4 | 19 | 54.6 | | | | | |
| NHHS-2 | 10 | 50.4 | 20 | 54.6 | | | | | |
| 1-20 total | | | | | | | 95.745 | 273.317 | |
| NHHS-3 | 1 | 50.6 | 11 | 58.6 | | | | | 178.875 |
| NHHS-3 | 2 | 55.6 | 12 | 54.3 | | | | | |
| NHHS-3 | 3 | 57.7 | 13 | 55.9 | | | | | |
| NHHS-3 | 4 | 56.7 | 14 | 56.0 | | | | | |
| NHHS-3 | 5 | 53.5 | 15 | 54.0 | | | | | |
| NHHS-3 | 6 | 51.6 | 16 | 57.3 | | | | | |
| NHHS-3 | 7 | 54.9 | 17 | 53.5 | | | | | |
| NHHS-3 | 8 | 51.1 | 18 | 50.3 | | | | | |
| NHHS-3 | 9 | 57.9 | 19 | 55.0 | | | | | |
| NHHS-3 | 10 | 55.9 | 20 | 55.4 | | | | | |
| 1-20 total | | | | | | | 117.635 | 296.510 | |
| NHHS-4 | 1 | 50.2 | 11 | 56.6 | | | | | 177.827 |
| NHHS-4 | 2 | 53.9 | 12 | 56.1 | | | | | |
| NHHS-4 | 3 | 54.4 | 13 | 57.5 | | | | | |
| NHHS-4 | 4 | 56.6 | 14 | 51.7 | | | | | |
| NHHS-4 | 5 | 55.1 | 15 | 54.2 | | | | | |
| NHHS-4 | 6 | 52.8 | 16 | 50.3 | | | | | |
| NHHS-4 | 7 | 57.9 | 17 | 57.0 | | | | | |
| NHHS-4 | 8 | 55.0 | 18 | 50.1 | | | | | |
| NHHS-4 | 9 | 52.9 | 19 | 54.9 | | | | | |
| NHHS-4 | 10 | 53.7 | 20 | 56.1 | | | | | |
| 1-20 total | | | | | | | 121.800 | 299.627 | |

| | **NHDP 2003 METALS** | | | | T= | sal= | pH= | | |
|---|---|---|---|---|---|---|---|---|---|
| Indigenous | Mussels | | | | | | Tared | Cumulative | Jar |
| Site | # | Length (mm) | | Length (mm) | Height (mm) | Width (mm) | Wet weight (g) | Wet weight (g) | Weight (g) |
| NHDP-1 | 1 | 55.9 | 11 | 57.2 | 28.9 | 22.3 | 5.831 | 183.212 | 177.381 |
| NHDP-1 | 2 | 54.7 | 12 | 51.6 | 24.0 | 21.7 | 8.871 | 186.252 | |
| NHDP-1 | 3 | 51.9 | 13 | 54.1 | 28.6 | 22.7 | 13.979 | 191.360 | |
| NHDP-1 | 4 | 55.2 | 14 | 54.2 | 28.2 | 19.3 | 18.034 | 195.415 | |
| NHDP-1 | 5 | 56.4 | 15 | 50.0 | 25.6 | 19.2 | 21.675 | 199.056 | |
| NHDP-1 | 6 | 53.2 | 16 | 53.3 | 28.5 | 22.6 | 27.288 | 204.669 | |
| NHDP-1 | 7 | 52.5 | 17 | 52.6 | 25.5 | 19.7 | 30.841 | 208.222 | |
| NHDP-1 | 8 | 58.2 | 18 | 52.1 | 27.5 | 21.9 | 35.041 | 212.422 | |
| NHDP-1 | 9 | 51.1 | 19 | 50.6 | 26.9 | 19.1 | 38.759 | 216.140 | |
| NHDP-1 | 10 | 57.5 | 20 | 51.8 | 26.9 | 23.9 | 43.065 | 220.446 | |
| | 1-20 tot | | | | | | 83.571 | 260.952 | |
| NHDP-2 | 1 | 55.6 | 11 | 54.7 | 27.6 | 22.8 | 4.835 | 182.288 | 177.453 |
| NHDP-2 | 2 | 57.5 | 12 | 54.9 | 26.7 | 22.7 | 9.956 | 187.409 | |
| NHDP-2 | 3 | 56.5 | 13 | 58.8 | 30.2 | 23.7 | 16.485 | 193.938 | |
| NHDP-2 | 4 | 53.5 | 14 | 55.4 | 26.5 | 25.1 | 21.368 | 198.821 | |
| NHDP-2 | 5 | 59.6 | 15 | 53.0 | 27.7 | 21.3 | 25.723 | 203.176 | |
| NHDP-2 | 6 | 53.7 | 16 | 51.7 | 25.0 | 22.7 | 30.721 | 208.174 | |
| NHDP-2 | 7 | 58.7 | 17 | 60.0 | 30.1 | 24.1 | 37.112 | 214.565 | |
| NHDP-2 | 8 | 51.2 | 18 | 54.7 | 27.9 | 21.9 | 41.599 | 219.052 | |
| NHDP-2 | 9 | 53.4 | 19 | 53.5 | 23.4 | 24.0 | 46.107 | 223.560 | |
| NHDP-2 | 10 | 53.7 | 20 | 57.6 | 30.2 | 24.3 | 52.060 | 229.513 | |
| | 1-20 total | | | | | | 104.983 | 282.436 | |
| NHDP-3 | 1 | 59.3 | 11 | 53.0 | 25.9 | 25.1 | 3.270 | 182.217 | 178.947 |
| NHDP-3 | 2 | 51.5 | 12 | 53.6 | 27.1 | 22.7 | 8.019 | 186.966 | |
| NHDP-3 | 3 | 52.7 | 13 | 52.6 | 25.3 | 22.7 | 12.467 | 191.414 | |
| NHDP-3 | 4 | 52.7 | 14 | 54.9 | 27.2 | 25.2 | 18.254 | 197.201 | |
| NHDP-3 | 5 | 57.7 | 15 | 55.1 | 29.0 | 22.1 | 25.349 | 204.296 | |
| NHDP-3 | 6 | 56.0 | 16 | 51.3 | 27.2 | 22.6 | 29.138 | 208.085 | |
| NHDP-3 | 7 | 55.6 | 17 | 50.2 | 25.0 | 21.5 | 30.994 | 209.941 | |
| NHDP-3 | 8 | 53.3 | 18 | 52.2 | 27.8 | 22.8 | 33.938 | 212.885 | |
| NHDP-3 | 9 | 54.4 | 19 | 51.1 | 26.4 | 22.0 | 37.849 | 216.796 | |
| NHDP-3 | 10 | 56.3 | 20 | 55.1 | 25.3 | 23.8 | 43.065 | 222.012 | |
| | 1-20 total | | | | | | 91.274 | 270.221 | |
| NHDP-4 | 1 | 54.8 | 11 | 55.4 | 27.8 | 22.3 | | | 177.415 |
| NHDP-4 | 2 | 53.1 | 12 | 57.1 | 27.1 | 22.7 | | | |
| NHDP-4 | 3 | 58.0 | 13 | 56.7 | 25.6 | 24.7 | | | |
| NHDP-4 | 4 | 52.9 | 14 | 57.1 | 29.0 | 24.2 | | | |
| NHDP-4 | 5 | 53.2 | 15 | 58.6 | 26.7 | 25.3 | | | |
| NHDP-4 | 6 | 54.6 | 16 | 54.9 | 27.8 | 20.8 | | | |
| NHDP-4 | 7 | 52.1 | 17 | 54.0 | 27.5 | 22.8 | | | |
| NHDP-4 | 8 | 55.1 | 18 | 54.9 | 27.6 | 23.0 | | | |
| NHDP-4 | 9 | 52.8 | 19 | 54.3 | 27.2 | 23.1 | | | |
| NHDP-4 | 10 | 55.2 | 20 | 54.3 | 26.5 | 23.3 | | | |
| | 1-20 total | | | | | | 90.023 | 267.438 | |
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| | **NHDP 2003 ORGANICS** | | | | | | | | |
| Indigenous | Mussels | | | | | | Tared | Cumulative | Jar |
| Site | # | Length (mm) | | Length (mm) | Height (mm) | Width (mm) | Wet weight (g) | Wet weight (g) | Weight (g) |
| NHDP-1 | 1 | 56.9 | 11 | 54.6 | | | | | 177.960 |
| NHDP-1 | 2 | 58.5 | 12 | 53.9 | | | | | |
| NHDP-1 | 3 | 56.8 | 13 | 54.2 | | | | | |
| NHDP-1 | 4 | 50.9 | 14 | 50.5 | | | | | |
| NHDP-1 | 5 | 55.5 | 15 | 50.6 | | | | | |
| NHDP-1 | 6 | 52.0 | 16 | 53.1 | | | | | |
| NHDP-1 | 7 | 52.4 | 17 | 54.6 | | | | | |
| NHDP-1 | 8 | 53.5 | 18 | 56.3 | | | | | |
| NHDP-1 | 9 | 57.3 | 19 | 54.4 | | | | | |
| NHDP-1 | 10 | 53.6 | 20 | 53.6 | | | | | |
| | 1-20 tot | | | | | | 91.667 | 269.627 | |
| NHDP-2 | 1 | 53.9 | 11 | 53.9 | | | | | 178.052 |
| NHDP-2 | 2 | 57.8 | 12 | 53.2 | | | | | |
| NHDP-2 | 3 | 53.5 | 13 | 54.5 | | | | | |
| NHDP-2 | 4 | 56.2 | 14 | 50.0 | | | | | |
| NHDP-2 | 5 | 56.6 | 15 | 54.3 | | | | | |
| NHDP-2 | 6 | 52.9 | 16 | 50.6 | | | | | |
| NHDP-2 | 7 | 54.2 | 17 | 57.5 | | | | | |
| NHDP-2 | 8 | 52.4 | 18 | 52.8 | | | | | |
| NHDP-2 | 9 | 54.9 | 19 | 54.8 | | | | | |
| NHDP-2 | 10 | 54.2 | 20 | 51.0 | | | | | |
| 1-20 total | | | | | | | 93.691 | 271.743 | |
| NHDP-3 | 1 | 53.3 | 11 | 51.5 | | | | | 177.484 |
| NHDP-3 | 2 | 57.9 | 12 | 50.1 | | | | | |
| NHDP-3 | 3 | 53.9 | 13 | 53.0 | | | | | |
| NHDP-3 | 4 | 51.1 | 14 | 54.3 | | | | | |
| NHDP-3 | 5 | 53.0 | 15 | 53.0 | | | | | |
| NHDP-3 | 6 | 55.0 | 16 | 50.3 | | | | | |
| NHDP-3 | 7 | 56.7 | 17 | 55.3 | | | | | |
| NHDP-3 | 8 | 57.2 | 18 | 54.6 | | | | | |
| NHDP-3 | 9 | 50.9 | 19 | 54.1 | | | | | |
| NHDP-3 | 10 | 52.0 | 20 | 59.4 | | | | | |
| 1-20 total | | | | | | | 85.901 | 263.385 | |
| NHDP-4 | 1 | 54.7 | 11 | 55.2 | | | | | 177.526 |
| NHDP-4 | 2 | 52.8 | 12 | 51.8 | | | | | |
| NHDP-4 | 3 | 55.4 | 13 | 52.6 | | | | | |
| NHDP-4 | 4 | 58.1 | 14 | 53.4 | | | | | |
| NHDP-4 | 5 | 53.4 | 15 | 53.6 | | | | | |
| NHDP-4 | 6 | 53.3 | 16 | 58.0 | | | | | |
| NHDP-4 | 7 | 55.1 | 17 | 53.5 | | | | | |
| NHDP-4 | 8 | 51.8 | 18 | 54.3 | | | | | |
| NHDP-4 | 9 | 60.0 | 19 | 56.8 | | | | | |
| NHDP-4 | 10 | 52.5 | 20 | 56.3 | | | | | |
| 1-20 total | | | | | | | 95.301 | 272.827 | |

| | **NHLH 2003 METALS** | | | | T= | sal= | pH= | | |
|---|---|---|---|---|---|---|---|---|---|
| Indigenous | Mussels | | | | | | Tared | Cumulative | Jar |
| Site | # | Length (mm) | | Length (mm) | Height (mm) | Width (mm) | Wet weight (g) | Wet weight (g) | Weight (g) |
| NHLH-1 | 1 | 58.5 | 11 | 54.3 | 30.3 | 23.3 | 3.803 | 180.961 | 177.158 |
| NHLH-1 | 2 | 52.4 | 12 | 51.0 | 27.3 | 22.6 | 7.995 | 185.153 | |
| NHLH-1 | 3 | 57.6 | 13 | 57.9 | 31.9 | 23.8 | 12.836 | 189.994 | |
| NHLH-1 | 4 | 51.2 | 14 | 50.3 | 23.6 | 25.3 | 16.275 | 193.433 | |
| NHLH-1 | 5 | 54.7 | 15 | 57.3 | 30.1 | 24.1 | 21.869 | 199.027 | |
| NHLH-1 | 6 | 56.0 | 16 | 54.8 | 29.5 | 22.6 | 25.648 | 202.806 | |
| NHLH-1 | 7 | 55.9 | 17 | 53.5 | 28.2 | 22.8 | 30.064 | 207.222 | |
| NHLH-1 | 8 | 57.6 | 18 | 53.6 | 28.7 | 24.9 | 34.183 | 211.341 | |
| NHLH-1 | 9 | 56.8 | 19 | 58.8 | 31.0 | 25.0 | 39.407 | 216.565 | |
| NHLH-1 | 10 | 55.2 | 20 | 50.8 | 29.6 | 20.2 | 43.252 | 220.410 | |
| | 1-20 tot | | | | | | 84.785 | 261.943 | |
| NHLH-2 | 1 | 52.9 | 11 | 52.2 | 27.3 | 21.8 | 3.341 | 181.323 | 177.982 |
| NHLH-2 | 2 | 56.3 | 12 | 50.7 | 27.2 | 21.5 | 6.706 | 184.688 | |
| NHLH-2 | 3 | 51.5 | 13 | 51.7 | 28.3 | 21.9 | 10.165 | 188.147 | |
| NHLH-2 | 4 | 52.3 | 14 | 50.4 | 28.2 | 20.9 | 13.470 | 191.452 | |
| NHLH-2 | 5 | 52.8 | 15 | 57.9 | 30.0 | 24.6 | 18.167 | 196.149 | |
| NHLH-2 | 6 | 56.9 | 16 | 55.3 | 27.4 | 25.0 | 21.923 | 199.905 | |
| NHLH-2 | 7 | 50.8 | 17 | 55.0 | 27.3 | 24.6 | 25.375 | 203.357 | |
| NHLH-2 | 8 | 51.8 | 18 | 56.5 | 30.0 | 25.2 | 25.597 | 203.579 | |
| NHLH-2 | 9 | 51.0 | 19 | 55.1 | 25.8 | 24.8 | 32.743 | 210.725 | |
| NHLH-2 | 10 | 50.7 | 20 | 56.8 | 28.6 | 25.8 | 37.126 | 215.108 | |
| | 1-20 total | | | | | | 70.164 | 248.146 | |
| NHLH-3 | 1 | 53.4 | 11 | 51.7 | 27.9 | 20.9 | 3.252 | 181.396 | 178.144 |
| NHLH-3 | 2 | 58.0 | 12 | 55.7 | 27.5 | 24.1 | 7.558 | 185.702 | |
| NHLH-3 | 3 | 55.2 | 13 | 58.3 | 30.5 | 24.3 | 12.859 | 191.003 | |
| NHLH-3 | 4 | 59.1 | 14 | 55.8 | 29.7 | 24.7 | 17.225 | 195.369 | |
| NHLH-3 | 5 | 58.7 | 15 | 51.5 | 28.3 | 21.2 | 20.092 | 198.236 | |
| NHLH-3 | 6 | 54.7 | 16 | 55.3 | 29.0 | 23.0 | 23.875 | 202.019 | |
| NHLH-3 | 7 | 55.7 | 17 | 58.2 | 30.0 | 24.9 | 28.501 | 206.645 | |
| NHLH-3 | 8 | 52.1 | 18 | 54.3 | 28.2 | 22.2 | 30.639 | 208.783 | |
| NHLH-3 | 9 | 58.5 | 19 | 53.4 | 28.0 | 21.4 | 34.155 | 212.299 | |
| NHLH-3 | 10 | 55.2 | 20 | 55.3 | 25.5 | 24.4 | 37.873 | 216.017 | |
| | 1-20 total | | | | | | 78.189 | 256.333 | |
| NHLH-4 | 1 | 57.7 | 11 | 57.9 | 28.5 | 22.7 | | | 177.376 |
| NHLH-4 | 2 | 54.8 | 12 | 53.0 | 26.0 | 23.2 | | | |
| NHLH-4 | 3 | 56.7 | 13 | 59.9 | 33.7 | 23.7 | | | |
| NHLH-4 | 4 | 56.7 | 14 | 59.0 | 29.8 | 23.0 | | | |
| NHLH-4 | 5 | 52.4 | 15 | 53.9 | 26.1 | 23.6 | | | |
| NHLH-4 | 6 | 52.3 | 16 | 59.8 | 29.3 | 26.3 | | | |
| NHLH-4 | 7 | 58.1 | 17 | 59.0 | 31.6 | 28.8 | | | |
| NHLH-4 | 8 | 52.8 | 18 | 52.2 | 26.6 | 22.4 | | | |
| NHLH-4 | 9 | 59.4 | 19 | 56.6 | 26.0 | 22.9 | | | |
| NHLH-4 | 10 | 55.9 | 20 | 51.5 | 28.0 | 21.6 | | | |
| | 1-20 total | | | | | | 84.708 | 262.084 | |
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| | **NHLH 2003 ORGANICS** | | | | | | | | |
| Indigenous | Mussels | | | | | | Tared | Cumulative | Jar |
| Site | # | Length (mm) | | Length (mm) | Height (mm) | Width (mm) | Wet weight (g) | Wet weight (g) | Weight (g) |
| NHLH-1 | 1 | 54.2 | | 58.0 | | | | | 179.040 |
| NHLH-1 | 2 | 51.9 | | 54.0 | | | | | |
| NHLH-1 | 3 | 58.7 | | 53.6 | | | | | |
| NHLH-1 | 4 | 52.4 | | 52.1 | | | | | |
| NHLH-1 | 5 | 53.1 | | 53.2 | | | | | |
| NHLH-1 | 6 | 52.3 | | 57.0 | | | | | |
| NHLH-1 | 7 | 57.6 | | 59.8 | | | | | |
| NHLH-1 | 8 | 55.3 | | 56.9 | | | | | |
| NHLH-1 | 9 | 54.4 | | 58.9 | | | | | |
| NHLH-1 | 10 | 52.5 | | 52.0 | | | | | |
| | 1-20 tot | | | | | | 80.160 | 259.200 | |
| NHLH-2 | 1 | 56.5 | | 58.2 | | | | | 177.310 |
| NHLH-2 | 2 | 50.8 | | 53.2 | | | | | |
| NHLH-2 | 3 | 52.4 | | 55.5 | | | | | |
| NHLH-2 | 4 | 52.7 | | 51.5 | | | | | |
| NHLH-2 | 5 | 56.8 | | 54.8 | | | | | |
| NHLH-2 | 6 | 53.3 | | 52.2 | | | | | |
| NHLH-2 | 7 | 57.0 | | 50.5 | | | | | |
| NHLH-2 | 8 | 54.0 | | 59.2 | | | | | |
| NHLH-2 | 9 | 50.3 | | 53.5 | | | | | |
| NHLH-2 | 10 | 51.0 | | 52.5 | | | | | |
| 1-20 total | | | | | | | 71.295 | 248.605 | |
| NHLH-3 | 1 | 53.7 | | 53.7 | | | | | 177.770 |
| NHLH-3 | 2 | 56.5 | | 58.0 | | | | | |
| NHLH-3 | 3 | 57.2 | | 56.5 | | | | | |
| NHLH-3 | 4 | 53.1 | | 58.8 | | | | | |
| NHLH-3 | 5 | 57.7 | | 58.5 | | | | | |
| NHLH-3 | 6 | 58.0 | | 53.0 | | | | | |
| NHLH-3 | 7 | 59.5 | | 56.0 | | | | | |
| NHLH-3 | 8 | 53.2 | | 57.6 | | | | | |
| NHLH-3 | 9 | 50.9 | | 56.0 | | | | | |
| NHLH-3 | 10 | 57.0 | | 52.9 | | | | | |
| 1-20 total | | | | | | | 78.862 | 256.632 | |
| NHLH-4 | 1 | 59.7 | | 52.6 | | | | | 177.524 |
| NHLH-4 | 2 | 51.7 | | 59.7 | | | | | |
| NHLH-4 | 3 | 57.8 | | 57.6 | | | | | |
| NHLH-4 | 4 | 50.7 | | 54.7 | | | | | |
| NHLH-4 | 5 | 58.1 | | 54.5 | | | | | |
| NHLH-4 | 6 | 52.5 | | 53.2 | | | | | |
| NHLH-4 | 7 | 54.9 | | 56.0 | | | | | |
| NHLH-4 | 8 | 50.5 | | 52.8 | | | | | |
| NHLH-4 | 9 | 56.8 | | 52.4 | | | | | |
| NHLH-4 | 10 | 56.6 | | 54.8 | | | | | |
| 1-20 total | | | | | | | 72.411 | 249.935 | |