The Summary Database contains water quality, sediment, benthic community, and fish data collected by several partners in the Northeast Region estuaries in the summer of 2000. The database currently consists of fourteen summary data sets and three lookup tables.

This document is in three sections: (1) a database overview, (2) detailed dataset descriptions, and (3) a discussion of key fields and commonly used codes (QACODE, LABCODE)

1) Database Overview

The data sets that make up the database are:

Date/Location Data:  
- STATIONS Sampling Station Location Data  
- EVENTS Station Visit Data

Water Quality Data:  
- WATRPHYS Water Quality Physical Measurements Data  
- ATTENCO Light Attenuation Data  
- NUTRNTS Water Quality Nutrients Data

Sediment Quality Data:  
- SEDGRAIN Sediment Grain Size Data  
- SEDTOX Sediment Toxicity Test Data  
- SEDCHEM Sediment Chemistry Data

Benthic Community Data:  
- BEN_ABUN Benthic Abundance Data

Fish Data:  
- FTRAWL Standard Trawl Data  
- FISH_CNT Fish Counts by Species per Trawl  
- FISHLEN Fish Length and Pathology Data  
- CRAB_LOB Crab and Lobster Measurements

Tissue Chemistry  
- TISSCHEM Fish crab and lobster Tissue Chemistry Data

Lookup Tables  
- BEN_TAX Benthic Taxonomy Information  
- FISH_TAX Fish Taxonomy Information  
- ANALYTES Chemical Analyte Information
2) **Data Set Descriptions:**

STATIONS - Sampling Station Location Data

This data set contains one record for each planned sampling station, with the planned latitude and longitude. The exact sampling location from each visit is recorded in the EVENTS data set, which may differ slightly from the planned locations. However, for analytical purposes, the station locations in the STATIONS data set should be used. The data set contains the following elements:

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATION</td>
<td>Coastal 2000 Station Name</td>
</tr>
<tr>
<td>STAT_ALT</td>
<td>Alternate Site Code (A,B,C)</td>
</tr>
<tr>
<td>STATE</td>
<td>State where Station is Located</td>
</tr>
<tr>
<td>ESTUARY</td>
<td>Estuary Name</td>
</tr>
<tr>
<td>STA_LAT</td>
<td>Latitude (decimal degrees, datum NAD83)</td>
</tr>
<tr>
<td>STA_LNG</td>
<td>Longitude (decimal degrees, datum NAD83)</td>
</tr>
<tr>
<td>ST_COOP</td>
<td>State Cooperative Agreement for Sampling</td>
</tr>
<tr>
<td>LOCAL_ID</td>
<td>Station Identifier Used by State</td>
</tr>
<tr>
<td>PROVINCE</td>
<td>EMAP Province Code</td>
</tr>
<tr>
<td>AREA</td>
<td>Statistical Area represented by Station (sq. m)</td>
</tr>
<tr>
<td>ST_AREA</td>
<td>Area Represented by Strata (sq. m)</td>
</tr>
<tr>
<td>STRATA</td>
<td>Strata Station is located in</td>
</tr>
<tr>
<td>SYSTEM</td>
<td>Esturine system or region name</td>
</tr>
<tr>
<td>SUBAREA</td>
<td>In-State Statistical Area (sq. km)</td>
</tr>
<tr>
<td>SUBSTRAT</td>
<td>Substrata Station is located in</td>
</tr>
<tr>
<td>SUBST_AR</td>
<td>Area Represented by Substrata (sq. km)</td>
</tr>
</tbody>
</table>

The variable ST_COOP defines the Cooperative Agreement that the stations were sampled under and describes the purpose of the sampling. Note that some agreements involved sampling across state boundaries, so this code does not necessarily identify the state in which the station is located. The codes used are:

<table>
<thead>
<tr>
<th>ST_COOP</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT</td>
<td>Connecticut</td>
</tr>
<tr>
<td>CT-FSH</td>
<td>Connecticut Fish Survey</td>
</tr>
<tr>
<td>DE</td>
<td>Delaware Inland Bays</td>
</tr>
<tr>
<td>MA</td>
<td>Massachusetts</td>
</tr>
<tr>
<td>MA-FSH</td>
<td>Massachusetts Fish Survey</td>
</tr>
<tr>
<td>ME</td>
<td>Maine</td>
</tr>
<tr>
<td>NH</td>
<td>New Hampshire</td>
</tr>
<tr>
<td>NJ-C</td>
<td>New Jersey Coast</td>
</tr>
<tr>
<td>NJ-DB</td>
<td>New Jersey/Delaware Bay</td>
</tr>
<tr>
<td>NY</td>
<td>New York</td>
</tr>
<tr>
<td>RI</td>
<td>Rhode Island</td>
</tr>
</tbody>
</table>
EVENTS - Station Visit Data

This data set contains one record for each sampling visit to a station. There may be multiple records per station. The actual latitude and longitude for a visit may differ slightly from the planned latitude and longitude included in the STATIONS data set. The two variables STATION and EVNTDATE make up the unique identifier for this data set.

Variables:

- **STATION**: Station Identifier
- **STAT_ALT**: Station Location (A,B or C)
- **EVNTDATE**: Event Date
- **VISNUM**: Number of Visit to this Station
- **STADEPTH**: Depth of Water at Station (m)
- **EVNT_LAT**: Event Latitude (decimal degrees, datum NAD83)
- **EVNT_LNG**: Event Longitude (decimal degrees, datum NAD83)
- **SAV**: Submerged Aquatic Vegetation visible
- **MACROALG**: Macro-Algae present at Station

WATRPHYS - Water Quality Data-Physical Measurements

This data set contains surface and bottom measurements of temperature, salinity, dissolved oxygen and pH collected in the field during sampling. At shallow stations, the surface and bottom values may be identical. The variables SL_DEPTH and BL_DEPTH provide the depth at where surface and bottom values were measured. Note: at shallow stations, the surface and bottom values may be from the same depth. Secchi Depth measurements are also present. This data set contains one record for each sampling event where CTD casts were performed.

Variables:

- **STATION**: Station Name
- **STAT_ALT**: Station Location (A,B or C)
- **EVNTDATE**: Date of Sampling Event
- **SECCHI_D**: Secchi Depth (meters)
- **SECC_BOT**: Secchi Disk on Bottom?
- **SL_TEMP**: Surface Layer-Temperature from CTD (deg. C)
- **SL_SAL**: Surface Layer-Salinity from CTD (ppt)
- **SL_OXY**: Surface Layer-Dissolved Oxygen from CTD (mg/l)
- **SL_PH**: Surface Layer-pH (pH units)
- **SL_DEPT**: Surface Reading Depth (m)
BL_TEMP Bottom Layer-Temperature from CTD (deg. C)
BL_SAL Bottom Layer-Salinity from CTD (ppt)
BL_OXY Bottom Layer-Dissolved Oxygen from CTD (mg/l)
BL_PH Bottom Layer-pH (pH units)
BL_DEPTH Bottom Reading Depth (m)
QACODE QA Qualifier Code

ATTENCO- Water Quality - Light Attenuation

This data set contains water a summary measure of PAR readings from the water column. The attenuation coefficient is computed from multiple Photo active Radiation (PAR) readings from different depths. PAR readings at depth should be normalized to surface PAR readings. In many cases this normalization was not possible because surface Par readings were not recorded. These cases are flagged with QACODE values of “PAR-A”.

The variable PAR_RECS indicates how many different measures were used to compute the coefficient. The coefficient cannot be computed for stations with less than two PAR readings. The coefficient is considered unreliable where there are fewer than four readings, so these cases are flagged with QACODE values of “PAR-B”. Attenuation coefficients less than zero are not valid. Cases where the regression equation resulted in a coefficient of less than zero are flagged with QACODE values of “PAR-C”. The coefficient was recoded to zero in these cases.

Variables:

STATION Station Identifier
STAT_ALT Station Location (A,B or C)
EVNTDATE Event Date
ATTENCO PAR Attenuation Coefficient
PAR_RECS Number of Par readings
QACODE QA Qualifier Code

NUTRNTS - Water Quality - Nutrients Data

This data set contains water chemistry measurements derived from laboratory analyses of water samples collected in the field. This dataset contains multiple records per station. Typical stations have both surface and bottom layer sample results and deep stations have additional mid-water sample results. The water layer is recorded in the variable LAYER. Shallow stations may have only one sample analyzed (LAYER=“Single”). Replicate samples collected for QA purposes have a REP_NUM value of “2”. There is one record for each analyte measured for each replicate at each water level. Most stations have at least 5 analytes measured.

Samples collected by different states were analyzed by different laboratories, for different analytes. The labs are identified by LABCODE.
Variables:

- STATION: Station Identifier
- STAT_ALT: Station Location (A,B or C)
- EVNTDATE: Event Date
- LAYER: Water Layer of Nutrients Sample
- REP_NUM: Replicate Sample Number
- ANALYTE: Analyte Code
- CONC: Concentration
- UNITS: Unit of Measure
- QACODE: QA Qualifier Code
- MDL: Method Detection Limit
- LABCODE: Lab identifier

The following analyte codes are used in this dataset. Lab Code columns indicate which laboratories reported these analytes. Several of the analytes reported by the Connecticut lab are included even though they are not NCA core indicators.

<table>
<thead>
<tr>
<th>ANALYTE</th>
<th>Description</th>
<th>Core Indicator?</th>
<th>Labs reporting data</th>
</tr>
</thead>
<tbody>
<tr>
<td>SI</td>
<td>Dissolved Silica</td>
<td>Y</td>
<td>EPA  CT  NJ  NY  MA</td>
</tr>
<tr>
<td>NH4</td>
<td>Dissolved Ammonia</td>
<td>Y</td>
<td>X      X  X     X</td>
</tr>
<tr>
<td>NO23</td>
<td>Dissolved Nitrite and Nitrate</td>
<td>Y</td>
<td>X      X  X     X</td>
</tr>
<tr>
<td>NO2</td>
<td>Dissolved Nitrite</td>
<td>Y</td>
<td>X      X</td>
</tr>
<tr>
<td>PO4F</td>
<td>Dissolved Orthophosphate</td>
<td>Y</td>
<td>X      X  X     X</td>
</tr>
<tr>
<td>TSS</td>
<td>Total Suspended Solids</td>
<td>Y</td>
<td>X      X  X     X</td>
</tr>
<tr>
<td>CHLA</td>
<td>Chlorophyll a</td>
<td>Y</td>
<td>X      X  X     X</td>
</tr>
<tr>
<td>TDN</td>
<td>Total Dissolved Nitrogen</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>TDP</td>
<td>Total Dissolved Phosphorous</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>PHOSP</td>
<td>Total Particulate Phosphorous</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>BIOSI</td>
<td>Biological Silica</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>DOC</td>
<td>Dissolved Organic Carbon</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>ORG-N</td>
<td>Organic Nitrogen</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>PC</td>
<td>Particulate Carbon</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>PN</td>
<td>Particulate Nitrogen</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>POC</td>
<td>Particulate Organic Carbon</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>PON</td>
<td>Particulate Organic Nitrogen</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

SEDGRAIN

This data set contains sediment grain size and moisture content measurements. The sediment analyzed for these measurements came from the same sediment homogenate that was analyzed for chemical contamination and toxicity.
This data set contains summary results from an ampelisca survival test. SRVPCCON represents the mean survival of animals in sample sediments as a percent of the survival of animals in clean control sediment. (Lower SRVPCCON values indicate higher toxicity). SRVPC_SG indicates whether the difference in survival between sample tests and controls is statistically significant. ATOX_SIG describes the biological significance of the results (“NT”= not toxic, “<80%”=toxic, “<60%”=very toxic).

<table>
<thead>
<tr>
<th>STATION</th>
<th>Station Identifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT_ALT</td>
<td>Station Location (A,B or C)</td>
</tr>
<tr>
<td>EVNTDATE</td>
<td>Event Date</td>
</tr>
<tr>
<td>SILTCLAY</td>
<td>Silt/Clay Content (%)</td>
</tr>
<tr>
<td>SAND</td>
<td>Sand Content (%)</td>
</tr>
<tr>
<td>MOISTURE</td>
<td>Moisture Content (%)</td>
</tr>
<tr>
<td>TOC</td>
<td>Total Organic Carbon (%)</td>
</tr>
<tr>
<td>LABCODE</td>
<td>Contract/Lab Identifier</td>
</tr>
</tbody>
</table>

SEDTOX - Sediment Toxicity

This data set contains sediment chemistry measures. There are multiple records for each event - one record for each concentration measured per station visit. Three variables make up the unique identifier for records in this data set: STATION, STAT_ALT, and ANALYTE.

A concentration value is provided for every analyte unless the concentration could not be detected by the lab instruments. In these cases, the detection limit is present (MDL), and the QACODE is set to “CHM-A”. If the analyte was detected but at a level below the detection limit, the concentration is reported and the QACODE is set to “CHM-B”. The detection limit is provided in this case also.

<table>
<thead>
<tr>
<th>STATION</th>
<th>Station Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT_ALT</td>
<td>Alternate Site Code (A,B,C)</td>
</tr>
<tr>
<td>EVNTDATE</td>
<td>Event Date</td>
</tr>
<tr>
<td>SRVPCCON</td>
<td>Ampelisca Survival as % of Control</td>
</tr>
<tr>
<td>SRVPC_SG</td>
<td>Statistical Significance (p&lt;.05)</td>
</tr>
<tr>
<td>ATOX_SIG</td>
<td>Ampelisca Toxicity Test Significance</td>
</tr>
<tr>
<td>QACODE</td>
<td>QA Qualifier Code</td>
</tr>
<tr>
<td>LABCODE</td>
<td>Lab identifier</td>
</tr>
</tbody>
</table>
**ANALYTE**  Chemical Analyte Code

**CONC**  Concentration

**QACODE**  QA Qualifier Code

**MDL**  Detection Limit

**CHMUNITS**  Concentration Unit of Measure

**LABCODE**  Contract/Lab Identifier

**BEN_ABUN - Benthic Abundance Data**

This data set contains benthic abundance measurements from a single sample collected at each station. It contains one record for each taxon found per grab. Three fields are needed to uniquely identify a record: STATION, STAT_ALT and LAT_NAME. The variable ID_LEVEL describes the level at which the organism was identified (SPECIES, GENUS, FAMILY, etc.) GRABSIZE defines the size of the grab sampler that collected the sample. Note that the results in this dataset have not been normalized to a uniform sample size. The TSN can be used to look up taxonomic information for the taxa in the table BEN_TAXA. This table includes the current scientific name for the taxa as used in the Integrated Taxonomic Information System (ITIS). The current name may differ from the Latin Name in this table if the organism has been renamed.

<table>
<thead>
<tr>
<th>STATION</th>
<th>Station Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT_ALT</td>
<td>Alternate Site Code (A,B,C)</td>
</tr>
<tr>
<td>EVNTDATE</td>
<td>Event Date</td>
</tr>
<tr>
<td>LAT_NAME</td>
<td>Taxa Latin Name</td>
</tr>
<tr>
<td>TSN</td>
<td>Taxonomic Serial Number</td>
</tr>
<tr>
<td>ABUNDANC</td>
<td>Taxa Abundance in sample</td>
</tr>
<tr>
<td>ID_LEVEL</td>
<td>Taxonomic Level of Identification</td>
</tr>
<tr>
<td>GRABSIZE</td>
<td>Size of Benthic Grab Sampler</td>
</tr>
<tr>
<td>LABCODE</td>
<td>Contract/Lab Identifier</td>
</tr>
</tbody>
</table>

**FTRAWL - Standard Trawl Data**

This data set contains one record for each standard fish trawl. Only one standard trawl was performed per station visit. Additional, non-standard trawls were sometimes performed at stations to catch fish for chemistry samples but those trawls are not recorded. The different states performed different types of trawls. The trawl type is identified by the variable FTRLTYPE. If the trawl could not be completed successfully, its status is recorded in the variable FTRLFLAG.

Two fields are needed to uniquely identify a record: STATION and EVNTDATE.

<table>
<thead>
<tr>
<th>STATION</th>
<th>Station Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT_ALT</td>
<td>Station Location (A,B or C)</td>
</tr>
</tbody>
</table>
EVNTPDATE  Event Date
FTRLTYPE   Type of Fish Trawl
FTRLFLAG   Status of Completed Fish Trawl
FSPECCNT   Total Fish Species in Trawl (#)
FT_DUR     Duration of Fish Trawl (mmss)
FWTR_SPD   Trawl Speed through Water (knots)
BEG_LAT    Fish Trawl Beginning Latitude (dd)
BEG_LNG    Fish Trawl Beginning Longitude (dd)
END_LAT    Fish Trawl End Latitude (dd)
END_LNG    Fish Trawl End Longitude (dd)

The following FTRLTYPE codes are used:

<table>
<thead>
<tr>
<th>FTRLTYPE</th>
<th>Description</th>
<th>Planned Trawl Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCA</td>
<td>EMAP Standard trawl</td>
<td>10 minutes</td>
</tr>
<tr>
<td>CT</td>
<td>Connecticut Fish Survey Trawl</td>
<td>30 minutes</td>
</tr>
<tr>
<td>RI</td>
<td>Rhode Island Fish Survey Trawl</td>
<td>20 minutes</td>
</tr>
<tr>
<td>MA</td>
<td>Massachuessets Fish Survey Trawl</td>
<td>20 minutes</td>
</tr>
<tr>
<td>NH</td>
<td>New Hampshire (modified Standard Trawl)</td>
<td>4 minutes</td>
</tr>
</tbody>
</table>

FISH_CNT - Fish Counts by Species per Trawl

This data set contains one record for each species of fish caught in the trawl, and provides a
count of individual fish, and their mean fork length. Four fields are needed to uniquely identify
a record: STATION, EVNTPDATE, FCOMNAME, and F_CLASS

<table>
<thead>
<tr>
<th>STATION</th>
<th>Station Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT_ALT</td>
<td>Station Location (A,B or C)</td>
</tr>
<tr>
<td>EVNTPDATE</td>
<td>Date of Sampling Event</td>
</tr>
<tr>
<td>FCOMNAME</td>
<td>Fish Taxa Common Name</td>
</tr>
<tr>
<td>F_CLASS</td>
<td>Fish Size Classification</td>
</tr>
<tr>
<td>F_COUNT</td>
<td>Number of this Fish Taxa caught</td>
</tr>
</tbody>
</table>

FISHLEN - Fish Length and Pathology Data

This dataset contains records on individual fish caught in standard trawls. Where large numbers
of fish were caught, a random sub-sample were measured. This dataset does not contain a
record for every fish caught. The record notes any pathologies noted by the field crew. Five
fields are needed to uniquely identify a record: STATION, EVNTPDATE, FCOMNAME, F_CLASS, AND FSEQNUM.

<table>
<thead>
<tr>
<th>STATION</th>
<th>Station Identifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT_ALT</td>
<td>Station Location (A,B or C)</td>
</tr>
</tbody>
</table>
This dataset contains records on invertebrates caught at stations by trawling or in traps. This dataset may not contain a record for every invertebrate caught. Five fields are needed to uniquely identify a record: STATION, EVNTDATE, FCOMNAME, SEX, and FSEQNUM.

CRAB_LOB- Crab and Lobster Measurements

TISSCHEM - Tissue Chemistry Data

This data set contains chemistry measures from fish, crab, and lobster composite tissue samples. There are multiple records for each event - one record for each concentration measured per composite sample replicate. There were up to three composite samples (different species)
collected at stations, and some samples were analyzed in replicate. Five variables make up the
unique identifier for records in this data set: STATION, STAT_ALT, FCOMNAME,
TISS_TYPE, REP_NUM and ANALYTE.

A concentration value is provided for every analyte unless the concentration could not be
detected by the lab instruments. In these cases, the detection limit is present (MDL), and the
QACODE is set to “CHM-A”. If the analyte was detected but at a level below the detection
limit, the concentration is reported and the QACODE is set to “CHM-B”. The detection limit is
provided in this case also.

<table>
<thead>
<tr>
<th>STATION</th>
<th>Station Identifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT_ALT</td>
<td>Station Location (A,B or C)</td>
</tr>
<tr>
<td>EVNTDATE</td>
<td>Event Date</td>
</tr>
<tr>
<td>FCOMNAME</td>
<td>Fish Taxa Common Name</td>
</tr>
<tr>
<td>TISS_TYPE</td>
<td>Type of Tissue analyzed</td>
</tr>
<tr>
<td>REP_NUM</td>
<td>Lab Replicate Number</td>
</tr>
<tr>
<td>MN_SIZE</td>
<td>Mean Size of Animals in Homogenate</td>
</tr>
<tr>
<td>NUM_HOM</td>
<td>Number of Animals in Homogenate</td>
</tr>
<tr>
<td>PCTLIPID</td>
<td>Percent Lipid Content</td>
</tr>
<tr>
<td>WETWGHT</td>
<td>Sample Wet Weight</td>
</tr>
<tr>
<td>ANALYTE</td>
<td>Analyte Code</td>
</tr>
<tr>
<td>CONC</td>
<td>Concentration of Analyte in Sample</td>
</tr>
<tr>
<td>CHMUNITS</td>
<td>Unit of Measure</td>
</tr>
<tr>
<td>QACODE</td>
<td>QA Code</td>
</tr>
<tr>
<td>MDL</td>
<td>Detection Limit</td>
</tr>
<tr>
<td>ANALMETH</td>
<td>Analysis Method Code</td>
</tr>
<tr>
<td>LABID</td>
<td>Laboratory Identifier</td>
</tr>
</tbody>
</table>

**BEN_TAX - Benthic Taxonomy Information**

<table>
<thead>
<tr>
<th>TSN</th>
<th>ITIS Taxonomic Serial Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSN_NAME</td>
<td>Latin Name</td>
</tr>
<tr>
<td>PHYLM</td>
<td>Taxonomic Phylum</td>
</tr>
<tr>
<td>CLASS</td>
<td>Taxonomic Class</td>
</tr>
<tr>
<td>ORDER</td>
<td>Taxonomic Order</td>
</tr>
<tr>
<td>FAMILY</td>
<td>Taxonomic Family</td>
</tr>
<tr>
<td>GENUS</td>
<td>Taxonomic Genus</td>
</tr>
<tr>
<td>SPECIES</td>
<td>Taxonomic Species</td>
</tr>
</tbody>
</table>

**FISH_TAX - Fish Taxonomy Information**

This dataset contains Latin names and Integrate Taxonomic Information System (ITIS)
Taxonomic Serial Numbers for the common names of fish, crabs and lobsters found in the
FISHLEN and CRAB_LOB datasets.
**FCOMNAME**  Common Name  
**FSCINAME**  Scientific (Latin) Name  
**TSN**  ITIS Taxonomic Serial Number  

**ANALYTES**  Chemical Analyte Information

This dataset provides full chemical names and Chemical Abstract Society (CAS) Numbers for the chemical analyte codes used in the SEDCHEM and TISSCHEM datasets.

<table>
<thead>
<tr>
<th>ANALYTE</th>
<th>Chemical Analyte Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEMNAME</td>
<td>Full Chemical Name</td>
</tr>
<tr>
<td>CASNUM</td>
<td>CAS Number</td>
</tr>
</tbody>
</table>

3) **Notes on Key fields and QACODE and LABCODE values**

**Key fields:**

Planned station locations are identified by two fields: STATION, and STAT_ALT. For most stations only one of three possible alternates was sampled (A, B or C). However for certain stations, two different alternate sites were sampled at different times. Therefore it is necessary to use the alternate site code (STAT_ALT) to accurately identify the site.

Some stations were visited more than once. The key field EVNTDATE, in conjunction with STATION and STAT_ALT, uniquely identifies a visit to a site.

**QACODE and LABCODE values**

The variable QACODE is present in several datasets. Records may have more than one code separated by commas in the field. The codes are explained below:

**SEDCHEM, TISSCHEM datasets:**

- CHM-A  Analyte not detected
- CHM-B  Analyte detected but below limit
- CHM-C  QA review indicates possible measurement problem

**NUTRNTS datasets:**

- NUT-A  Analyte not detected

**WATRPHYS dataset:**
WTR-A  Shallow station: SL and BL measures are from same depth

The variable LABCODE is used to identify the source of different lab measurements. The code identifies the contract or cooperative agreement the samples were processed under. The value “EPA” refers to national contracts administered by EPA and does not mean that samples were analyzed in EPA labs. This is also true of codes that refer to states- these states may have contracted the analyses out to private labs.

**NAT** National Contract Lab
- Sediment and tissue chemistry: AD Little
- Sediment Toxicity: Trac Labs
- Nutrients: EPA GED
- Sediment Grain size: AD Little

**CT** Connecticut Cooperative Agreement
**NJ** New Jersey Cooperative Agreement
**NY** New York Cooperative Agreement
**MA** Massachusetts Cooperative Agreement