Appendix C. Data Set Contents

Appendix C contains information on the EMAP National Coastal database structure. The data set contents provides attribute formats and descriptions. Groups are requested to provide all data sets and attributes within a data set that are relevant. Attributes listed in **bold** are mandatory fields.

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Stations

Geographic location and statistical information appear in the station location data set. Latitude and longitude are required for each station. Other geographic information aids in subsetting and analyzing the data. Statistical data (station area, strata) are also useful for statistical analyses. There is one record for each station. Descriptions followed by (code) should refer to the Geographic/Statistical Code data sets (Appendix D).

Data Set Name: STA_LOC   Station location data   Variables: 17

#	Variable	Type	Len	Format	Label
1	**STATION**	Char	12	$12.	Station identifier designated by sampling group
2	**DATA_GRP**	Char	4	$4.	Group conducting sampling (code)
3	**SAMPYEAR**	Num	8	4.	Year of sampling
4	**REG_CODE**	Char	4	$4.	EPA region code (code)
5	**SYS_CODE**	Char	6	$6.	Large water body where station located (code)
6	**STATE**	Char	2	$2.	FIPS State code (code)
7	CLASCODE	Char	18	$18.	Station class-determines sampling regime (code)
8	STRATA	Char	6	$6.	Design strata:large/small/tidal river (code)
9	ESTUARY	Char	50	$50.	Small water body where station located
10	STA_AREA	Num	8	7.2	Statistical area (sq. km.) of station
11	**LNGITUDE**	Num	8	9.3	Longitude of station
12	**LATITUDE**	Num	8	9.3	Latitude of station
13	RESOURCE	Char	20	$20.	Project conducting sampling (code)
14	EMAPSTAT	Char	20	$20.	EMAP station name
15	SEGMENT	Char	20	$20.	Segment in which station is located
16	MAIASTAT	Char	20	$20.	MAIA station name
17	PROVINCE	Char	4	$4.	EMAP Province (code)

Sortedby: SAMPYEAR STATION

Sampling Visits

Each visit to a station is recorded in the sampling visits data set. One station may have multiple records with a unique sample collection date and visit number. All other data sets must have a station and date combination that matches one in sampling visits.

Data Set Name: SAMP_VIS   Sampling Visit Information   Variables: 7

#	Variable	Type	Len	Format	Label
1	**STATION**	Char	12	$12.	Station identifier
2	**VST_DATE**	Num	8	DATE8.	Sample collection date
3	**DATA_GRP**	Char	4	$4.	Group conducting sampling
4	**SAMPYEAR**	Num	8	4.	Year during which data were collected
5	DEPTH	Num	8	5.1	Depth at station at time of sampling
6	D_UNITS	Char	4	$4.	Depth units (m, ft)
7	**VISNUM**	Num	8	2.	Number of visit to station

Sortedby: STATION VST_DATE VISNUM

Observed Objects

Data groups have recorded the presence of 'man-made' or 'natural' objects in trawls and visually from the sampling boats. Objects are recorded as present/absent (Y/N) in OBJ_PRES either seen from the working platform (Visually) or collected in a trawl (Trawl) in OBS_MADE. Man-made objects include balls, cans, bottles, metal, paper, man-made wood, among others and could be considered as 'trash'. Natural material includes objects like natural wood, algae or dead organisms. All information should be condensed to one record/station per visit or per trawl and should not be made quantitative.

Data Set Name: OBS_OBJ   Objects (man-made/natural) observed   Variables: 9

#	Variable	Type	Len	Format	Label
1	**STATION**	Char	12	$12.	Station identifier
2	**VST_DATE**	Num	8	DATE8.	Date of sample collection
3	**DATA_GRP**	Char	4	$4.	Group collecting data
4	**SAMPYEAR**	Num	4	4.	Year in which data were collected
5	**REPNUM**	Num	3	3.	Trawl replicate or visit number
6	**OBS_MADE**	Char	20	$20.	Object observed from: report as 'trawl' or 'visually'
7	**OBJ_PRES**	Char	3	$3.	Object present:Y/N
8	OBJ1	Char	20	$20.	Man-made object or natural material
9	OBJ2	Char	20	$20.	Man-made object or natural material

-----Sort Information-----

Sortedby: STATION EVNTDATE REPNUM

Benthic Macroinvertebrate Data

Results and field data from benthic samples can be provided at several levels: replicate abundance and biomass measurements, abundance data summarized by taxon and station or abundance and physical measurements summarized at the station level. Replicate results data are related to a benthic grab data set (BENGRABS) which provides one record for each replicate sample collected at a station. Even if sediment data are not available for each replicate, collection and gear information should be reported. For abundance and biomass data, the ITIS taxonomic serial number (TSN) for the Latin name should be used consistently throughout all data sets. A taxonomic code lookup table format follows (Appendix D).

Data Set Name: BENGRABS   Benthic grab replicate information   Variables: 12

#	Variable	Type	Len	Format	Label
1	**DATA_GRP**	Char	4	$4.	Group collecting data
2	**SAMPYEAR**	Num	4	4.	The year sampling occurred
3	**STATION**	Char	12	$12.	Station identifier
4	**VST_DATE**	Num	8	DATE8.	Date samples was conducted
5	**REP_NUM**	Num	8	2.	Benthic grab replicate number
6	BENDEPTH	Num	8	4.	Depth of grab penetration (mm)
7	SILTCLAY	Num	8	6.3	Silt-clay content (%)
8	MOISTURE	Num	8	5.2	Moisture content (%)
9	RPDDEPTH	Num	8	3.	Redox potential discontinuity depth (mm) by replicate
10	**GRABAREA**	Num	8	6.2	Area sampled by benthic grab
11	**AREAUNTS**	Char	8	$8.	Units of area sampled
12	**COL_GEAR**	Char	250	$30.	Name of benthic sampling gear

Sortedby: STATION VST_DATE REP_NUM

Replicate Abundance Data

The benthic replicate abundance measurements should be provided with one record for each taxon found in a replicate for each station visit. Sieve size may further subset the data, but is not mandatory. The species ignored codes (SPEC_IGN) should be resolved as shown in Appendix D.

Data Set Name: BEN_ABUN   Benthic Abundance by replicate   Variables: 9

#	Variable	Type	Len	Format	Label
1	**DATA_GRP**	Char	4	$4.	Group conducting sampling
2	**SAMPYEAR**	Num	4	4.	Year during which data were collected
3	**STATION**	Char	12	$12.	Station identifier
4	**VST_DATE**	Num	8	DATE8.	Sample collection date
5	**TSN**	Char	8	8.	ITIS Taxonomic Serial Number for taxon
6	**REP_ABN**	Num	8	6.	Taxon abundance (# / sample)
7	SPEC_IGN	Char	1	$1.	Flag: if ignore taxon for # taxon (total species richness)
8	**REP_NUM**	Num	8	1.	Replicate number
9	SIEVE_MM	Num	8	5.2	Sieve size (mm)

Sortedby: STATION VST_DATE REP_NUM TSN SIEVE_MM

Replicate Biomass Data

Benthic biomass measurements should be provided as one record for each taxonomic group weighed per sample. Sieve size may be a factor, but is not mandatory. Each station, visit date, replicate number combination should have a record in BENGRABS. The taxonomic code table is detailed in Appendix D.

Data Set Name: BIOMASS   Benthic biomass data by replicate   Variables: 9

#	Variable	Type	Len	Format	Label
1	**DATA_GRP**	Char	4	$4.	Group conducting sampling
2	**SAMPYEAR**	Num	4	4.	Year during which data were collected
3	**STATION**	Char	12	$12.	Station identifier
4	**VST_DATE**	Num	8	DATE8.	Sample collection date
5	**REP_NUM**	Num	3	3.	Sample replicate number
6	TSN	Char	8	8.	ITIS Taxonomic Serial Number for taxon
7	SIEVE_MM	Num	8	5.2	Sieve size (mm)
8	**BIOMASS**	Num	8	7.5	Biomass (g / Sample)
9	BIOM_ABN	Num	4	4.	Count (#) of organisms. in biomass sample

     Sortedby: STATION VST_DATE REP_NUM TSN SIEVE_MM

Summary Abundance Data by Taxon by Station

The benthic station abundance values should be provided with one record for each taxon found per station. Mean abundance is calculated across 'n' grabs collected at a station. The taxonomic code table is detailed in Appendix D.

Data Set Name: BEN_SPEC   Benthic Species by taxon and station   Variables: 8

#	Variable	Type	Len	Format	Label
1	**DATA_GRP**	Char	4	$4.	Group conducting sampling
2	**SAMPYEAR**	Num	4	4.	Year of sample collection
3	**STATION**	Char	12	$12.	Station identifier
4	**VST_DATE**	Num	8	DATE8.	Sample collection date
5	**TSN**	Char	8	8.	ITIS Taxonomic Serial Number for taxon
6	BSPECABN	Num	8	6.	Organisms of the taxon:total #
7	BSPEC_MA	Num	8	6.2	Organisms of the taxon:mean #/grab
8	BSPECSTD	Num	8	6.2	Organisms of the taxon:SD of mean/grab

     Sortedby: STATION VST_DATE TSN

Summary Abundance and Physical Data by Station

The benthic station summary values should be provided with one record for each station. Values are calculated across all grabs and all or a subset of taxa collected at a station.

Data Set Name: BENTHOS   Benthic Summary by Station   Variables: 24

#	Variable	Type	Len	Format	Label
1	**STATION**	Char	12	$12.	Station identifier
2	**VST_DATE**	Num	8	DATE8.	Sample collection date
3	**DATA_GRP**	Char	4	$4.	Group conducting sampling
4	**SAMPYEAR**	Num	8	4.	Year sampling conducted
5	**N_ABUN**	Num	8	3.	# grabs analyzed, abundance data
6	BSP_TOT	Num	8	6.	Total # benthic taxa in 'n' grabs
7	TNSP_INF	Num	8	4.	Total number of infauna taxa
8	TNSP_EPI	Num	8	4.	Total number of epifauna taxa
9	BSP_MEAN	Num	8	7.2	Mean # benthic taxa in 'n' grabs
10	MNSP_INF	Num	8	7.2	Mean number of infauna taxa per grab
11	MNSP_EPI	Num	8	7.2	Mean number of epifauna taxa per grab
12	BSP_TABN	Num	8	6.	Total abundance per grab, all organisms
13	INF_TABN	Num	8	6.	Total abundance per grab, all infauna
14	EPI_TABN	Num	8	6.	Total abundance per grab, all epifauna
15	BSP_MABN	Nu	8	7.2	Total abundance per grab, all organisms
16	INF_MABN	Num	8	7.2	Mean abundance per grab, all infauna
17	EPI_MABN	Num	8	7.2	Mean abundance per grab, all epifauna
18	BMAS_MN	Num	8	6.4	Mean biomass per grab, all species
19	BMAS_TOT	Num	8	6.4	Total biomass per grab, all species
20	SICL_B_M	Num	8	6.3	Mean silt/clay content (%) in 'n' cores
21	MOIS_M	Num	8	5.2	Mean moisture content (%) in 'n' cores
22	GRAB_PEN	Num	8	4.	Grab penetration: mean depth (mm)
23	RPD_MDEP	Num	8	3	Redox potential discontinuity:(RPD) mean depth (mm)
24	H_DIV_IND	Num	8	6.3	Mean infaunal H prime diversity per grab

Sortedby: STATION VST_DATE SAMPYEAR

Benthic Index Data

Some groups have established an algorithm to estimate if a station is considered in degraded or non-degraded condition. The values are presented by station and date. Each data group would have a separate table since algorithms would be different. All parameters associated with an index may be included in this data set.

Data Set Name: B_INDEX   Benthic Index Data   Variables: 5

#	Variable	Type	Len	Format	Label
1	**STATION**	Char	12	$12.	Station identifier
2	**VST_DATE**	Num	8	DATE8.	Sample collection date
3	**DATA_GRP**	Char	4	$4.	Group collecting data
4	**SAMPYEAR**	Num	4	4.	Year during which data were collected
5	**B_INDEX**	Num	8	9.5	Benthic index: VA94 algorithm

Sortedby: STATION VST_DATE

Water Measurements

Physical, chemical and nutrient measurements taken with instruments or under ambient conditions are presented in water measurements. Each measurement taken is defined under WM_NAME. The location in the water column where the sample was taken (COL_LOC) is recorded as well as the method. QA codes can be associated with individual measurements. A list of currently used water measurement names appears in Appendix D.

Data Set Name: WTR_MEAS   Water measurement data (physical, nutrient)   Variables: 13

#	Variable	Type	Len	Format	Label
1	**STATION**	Char	12	$12.	Station identifier
2	**VST_DATE**	Num	8	DATE8.	Sample collection date
3	**DATA_GRP**	Char	4	$4.	Group conducting sampling
4	**SAMPYEAR**	Num	4	4.	Year of sample collection
5	**WM_UNITS**	Char	10	$10.	Measurement units
6	**WM_NAME**	Char	25	$25.	Measurement name
7	**MEASURE**	Num	8	13.4	Measurement or concentration
8	**COL_LOC**	Char	10	$10.	Collection location (Surface, mid-depth, bottom, varies)
9	MEAS_DEP	Num	8	5.1	Measurement depth
10	DEP_UNIT	Char	2	$2.	Depth units (m, ft)
11	**COL_PROP**	Char	25	$25.	Collection property: vertical profile/ambient
12	**METHOD**	Char	25	$25.	Analysis method (CTD, Hydrolab surveyor,etc.)
13	QACODE	Char	15	$15.	Quality assurance code related to water measurement (code)

Sortedby: STATION VST_DATE WM_NAME COL_LOC

Alternatively, water quality data can be submitted in a more conventional manner with each parameter as an attribute in the data set. Nutrient data could also appear in this format.

```
#  Variable  Type  Len  Format      Label
-------------------------------------------------------------------------------------------------
 1 STATION    Char   8  8.          Station identifier
 2 VST_DATE   Num    8  YYMMDD6.    The date the sample was collected
 3 SRF_DO     Num    8  5.1         Dissolved oxygen (mg/l) at the surface
 4 SRF_TEMP   Num    8  5.2         Temperature (C) at the surface
 5 SRF_SAL    Num    8  5.2         Salinity (ppt) at the surface
 6 SRF_PH     Num    8  5.1         pH (units) at the surface
 7 SRF_PAR    Num    8  5.          PAR (mE/m2/s) at the surface
 8 SRF_TRNS   Num    8  4.          Transmissivity (%) at the surface
 9 SRF_FLR    Num    8  4.          Fluorescence at the surface
10 SRF_DENS   Num    8  5.2         Density (Sigma T) at the surface
11 BTM_DO     Num    8  5.1         Dissolved Oxygen (mg/l) at the bottom
12 BTM_TEMP   Num    8  5.2         Temperature (C) at the bottom
13 BTM_SAL    Num    8  5.2         Salinity (ppt) at the bottom
14 BTM_PH     Num    8  5.1         pH (units) at the bottom
15 BTM_PAR    Num    8  5.          PAR (mE/m2/s) at the bottom
16 BTM_TRNS   Num    8  4.          Transmissivity (%) at the bottom
17 BTM_FLR    Num    8  4.          Fluorescence at the bottom
18 BTM_DENS   Num    8  5.2         Density (Sigma T) at the bottom
19 MAX_FLR    Num    8  4.          Maximum fluorescence measured in VP file
20 K_PAR      Num    8  7.3         Rate of light extinction
21 AVG_K      Num    8  7.3         Average rate of light extinction
22 COMP_PAR   Num    8  5.1         Depth where PAR = 1 % of SRF PAR
23 TRNS_1MT   Num    8  4.          Transmissivity (%) at 1 meter
24 SS_CONC    Num    8  7.1         Total suspended solids conc. (mg/l)
25 SECCHI     Num    8  6.1         Secchi depth (m)
26 QACODE     Char  30  $30.        Quality Assurance code for data
```

-----Sort Information-----

Sortedby: STATION VST_DATE

Sediment
     Chemical Analyses

Results of sediment chemical analyses should be reported in a single file. It should contain one record for each analyte measured in a sample (multiple records per sample). Only one result (CONC) should be reported for each analyte for each sample. A value for the MDL (method detection limit) should be provided in the DETLIMIT field for every sample where the analyte is not detected or is detected at or below the detection limit.

Data Set Name: SED_CHEM   Sediment Chemistry analyte concentrations   Variables: 10

#	Variable	Type	Len	Format	Label
1	**STATION**	Char	12	$12.	Station identifier
2	**VST_DATE**	Num	8	DATE8.	Sample collection date
3	**DATA_GRP**	Char	4	$4.	Group conducting sampling
4	**SAMPYEAR**	Num	4	4.	Year of sample collection
5	**ANALYTE**	Char	8	$8.	Code for analyte measured
6	**CONC**	Num	8	13.6	Concentration of analyte in sample
7	**UNITS**	Char	15	$15.	Concentration units of measure
8	MDL	Num	8	13.6	Method detection limit
9	TOT_ANAL	Num	8	3.	Analytes (#) included in summed conc.
10	QACODE	Char	15	$15.	Quality assurance code related to sediment analyte (code)

Sortedby: STATION VST_DATE ANALYTE

Grain Size

Grain size measurements associated with a sediment chemistry sample should be provided in a data set with one record for each sample.

Data Set Name: SEDGRAIN   Sediment Grain Data   Variables: 17

#	Variable	Type	Len	Format	Label
1	**STATION**	Char	12	$12.	Station identifier
2	**VST_DATE**	Num	8	DATE8.	Sample collection date
3	**DATA_GRP**	Char	4	$4.	Group conducting sampling
4	**SAMPYEAR**	Num	4	4.	Year of sample collection
5	Q1_PHI	Num	8	5.1	25% Quartile diameter (Phi)
6	SKEWNESS	Num	8	5.1	Phi Quartile skewness (Folk 1974)
7	SILT_PC	Num	8	5.1	Silt content (%)
8	SICL_PC	Num	8	5.1	Silt-clay content (%)
9	SAND_PC	Num	8	5.1	Sand content (%)
10	CLAY_PC	Num	8	5.1	Clay content (%)
11	Q3_PHI	Num	8	5.1	75% Quartile diameter (Phi)
12	MED_DIAM	Num	8	5.1	Median diameter (Phi)
13	QUARDVTN	Num	8	5.1	Phi Quartile deviation (Folk 1974)
14	MOISTURE	Num	8	5.1	Moisture content (%)
15	TOC	Num	8	6.3	Total organic carbon (TOC) amount
16	TOC_UNITS	Num	8	6.3	Total organic carbon (TOC) units
17	QACODE	Char	15	$15.	Quality assurance code related to grain analyses (code)

Sortedby: STATION VST_DATE

Toxicity: Sediment/Microtox Test

Results of all toxicity tests should be reported in the toxicity test data set. These include sediment and Microtox tests and may be conducted on one or more organisms. Mortality or growth data can be summarized several ways.

Data Set Name: TOXICITY   Toxicity Test Data   Variables: 14

#	Variable	Type	Len	Format	Label
1	**STATION**	Char	12	$12.	Station identifier
2	**VST_DATE**	Num	8	DATE8.	Sample collection date
3	**DATA_GRP**	Char	4	$4.	Group conducting sampling
4	**SAMPYEAR**	Num	4	4.	Sample collection year
5	**TESTSPEC**	Char	60	$60.	Species (Latin name) used in test
6	**TESTTYPE**	Char	10	$10.	Type of test - sediment, Microtox
7	**RSLTMEAS**	Char	15	$40.	Unit of result (growth/survival/EC50)
8	**RESULT**	Num	8	5.1	Result value
9	STATCODE	Char	3	$3.	Sig diff from control (Y/N); toxic, non-toxic, etc.
10	MOISTURE	Num	8	11.1	Moisture content (%)
11	**TESTNUM**	Num	8	2.	Number of test if replicate of same species
12	P_VALUE	Num	8	7.4	P-value for statistical test
13	PW_UNAM	Num	8	8.3	Un-Ionized ammonia (mg/L) in pore water
14	QACODE	Char	15	$15.	Quality assurance code(s)

Sortedby: STATION VST_DATE TESTTYPE TESTSPEC

Alternatively, toxicity data from different tests can be submitted in a more conventional manner with each test parameter as an attribute in the data set.

#	Variable	Type	Len	Format	Label
1	STATION	Char	12	12.	The Station identifier
2	VST_DATE	Num	8	YYMMDD6.	The date the sample was collected
3	LAT_NAME	Char	8	$8.	Latin name
4	SURVIVAL	Num	8	5.1	Ampelisca % survival (samp mean as % of control)
5	SIG_CONT	Char	8	$3.	Ampelisca sig. diff. from control (sample mean as % mortality)
6	EC50_MC	Num	8	12.3	Microtox corrected mean EC50 (%)
7	MTOX_SIG	Char	3	$3	Microtox test significance
8	QACODE	Char	15	$15.	Quality assurance code(s)

-----Sort Information-----

Sortedby: STATION VST_DATE

Netted Organisms

Field data from trawl and seine samples can be provided at several levels: replicate abundance and length measurements, abundance and length data summarized by taxon and station or abundance measurements summarized at the station level. For abundance, length and biomass data, the ITIS taxonomic serial number (TSN) for the appropriate Latin name should be used consistently throughout all data sets. A taxonomic code lookup table format follows (Appendix D).

Replicate Abundance and Collection Information

Replicate trawl or seine data are presented as one record for each taxon collected in each replicate trawl or seine conducted at a station. Length can be reported as a mean for all organisms of a taxon or as multiple size classes for a taxon. The taxon information should be resolved in a code table. Gear description and type collection information are also reported.

Data Set Name: NET_ORG   Abundance of organisms collected by trawl/seine   Variables: 14

#	Variable	Type	Len	Format	Label
1	**STATION**	Char	12	$12.	Station identifier
2	**DATA_GRP**	Char	4	$4.	Group collecting data
3	**SAMPYEAR**	Num	4	4.	Year during which data were collected
4	**VST_DATE**	Num	8	DATE8.	Date of sample collection
5	**REP_NUM**	Num	3	3.	Replicate number
6	**TSN**	Char	8	8.	ITIS Taxonomic Serial Number for taxon
7	FSPECNUM	Num	8	6.	Total # of organisms in replicate
8	FSPEC_ML	Num	8	6.1	Mean length of organisms
9	FSPEC_SD	Num	8	6.1	Standard dev. length
10	LEN_UNITS	Char	8	$8.	Length units (mm, cm)
11	NUM_LENS	Num	8	3.	# organisms measured
12	**COL_TYPE**	Char	5	$5.	Type of collection: trawl/seine
13	**GEARTYPE**	Char	250	$250.	Gear type description
14	SIZECLAS	Num	8	4.	Size class length of organism

Sortedby: STATION VST_DATE REP_NUM TSN

Trawl Abundance Summary Data by Taxon by Station

Trawl abundance data by taxon and station are presented as one record for each taxon collected in each trawl conducted at a station. The taxon information and codes for measurement types are resolved in Appendix D.

Data Set Name: TRWLTSUM   Trawl Taxon summary   Variables: 12

#	Variable	Type	Len	Format	Label
1	**STATION**	Char	11	$11.	Station identifier
2	**VST_DATE**	Num	8	DATE8.	Sample collection date
3	**DATA_GRP**	Char	4	$4.	Group collecting data
4	**SAMPYEAR**	Num	4	4.	Year during which data were collected
5	**TSN**	Char	8	8.	ITIS Taxonomic Serial Number for taxon
6	**T_ABN**	Num	8	5.	Total taxon abundance in 'n' trawls
7	M_LEN	Num	8	5.2	Mean length of taxon in 'n' trawls
8	SDLEN	Num	8	5.2	SD length of taxon in 'n' trawls
9	LEN_UNIT	Char	3	$3.	Length unit (mm, cm)
10	MEASTYPE	Char	3	$3.	Code for measurement type
11	BIOMASS	Num	8	5.1	Biomass weight
12	BIOMUNIT	Char	3	$3.	Biomass weight unit

Sortedby: STATION VST_DATE TSN

Trawl Abundance Summary Data by Station

Trawl abundance data by station are presented as one record for all trawls conducted at a station.

Data Set Name: TRWL_SUM   Trawl Summary data by station   Variables: 11

#	Variable	Type	Len	Format	Label
1	**STATION**	Char	12	$12.	Station name
2	**VST_DATE**	Num	8	DATE8.	Sample collection date
3	**DATA_GRP**	Char	4	$4.	Group collecting data
4	**SAMPYEAR**	Num	4	4.	Year during which data were collected
5	**COL_TYPE**	Char	5	$5.	Type of collection - trawl or seine
6	**TOT_TRWL**	Num	3	2.	Number of trawls/seines conducted
7	F_TOTAL	Num	8	5.	Total organisms (#) trawl
8	FSPECCNT	Num	8	5.	Total taxa (#) in trawl
9	FSPMABN	Num	8	5.1	Mean # organisms in 'n' trawls at a station
10	F_MTOT	Num	8	5.1	Mean taxa (species) in 'n' trawls at a station
11	**GEARTYPE**	Char	250	$250.	Type of gear used

Sortedby: STATION VST_DATE

Tissues Chemistry Concentrations

Tissue Analyte Measurements

Results of tissue (fish, shrimp, crab) chemical analyses should be reported as one record for each analyte measured in a sample (multiple records per sample). Either a concentration or detection limit should appear in a record. It is important to include all relevant fields that identify a unique sample, such as: sample number, composite, sample type, tissue type, TSN.

Data Set Name: TISUCHEM   Tissue Chemistry Analyses   Variables: 19

#	Variable	Type	Len	Format	Label
1	**DATA_GRP**	Char	4	$4.	Group conducting sampling
2	**SAMPYEAR**	Num	4	4.	Year sampling was conducted
3	**STATION**	Char	12	$12.	Station identifier
4	**VST_DATE**	Num	8	DATE8.	Date samples were collected
5	**SAMP_NUM**	Num	8	3.	Sample number assigned to distinguish samples of the same species at a station
6	**COMPOSIT**	Char	1	$1.	Composite code (Y/N). Is this sample a composite?
7	**SAMPTYPE**	Char	10	$10.	Nature of sample material (fish, shrimp, crab)
8	TISUTYPE	Char	10	$10.	Type of tissue sampled (carcass, muscle)
9	**TSN**	Char	8	8.	ITIS Taxonomic Serial Number for taxon
10	**ANALYTE**	Char	8	$8.	Analyte code
11	**CONC**	Num	8	13.6	Concentration of analyte in sample
12	**UNITS**	Char	15	$15.	Concentration units
13	MDL	Num	8	13.6	Method detection limit for analyte
14	TOT_ANAL	Num	3	3.	Number of analytes in total measure
15	NUM_CMPT	Num	3	3.	Number of organisms/composite
16	FSPEC_MM	Num	8	6.1	Mean length (mm) of organisms in sample
17	FSPEC_SD	Num	8	6.1	SD of length (mm) of organisms in sample
18	WETWTCV	Num	8	5.3	Wet weight conversion factor
19	QACODE	Char	15	$15.	Quality assurance code(s)

Sortedby: STATION VST_DATE SAMP_NUM TSN COMPOSIT SAMPTYPE TISUTYPE ANALYTE

Fish Pathology

Pathology data from organisms collected in trawls/seines may be presented as presence/absence or as counts. These data should be reported by Latin name at the station level.

Data Set Name: FISHPATH   Fish Pathology Observations   Variables: 11

#	Variable	Type	Len	Format	Label
1	DATA_GRP	Char	4	$4.	Group conducting sampling
2	SAMPYEAR	Num	4	4.	Year sampling was conducted
3	STATION	Char	12	$12.	Station identifier
4	VST_DATE	Num	8	DATE8.	Date samples were collected
5	TSN	Char	8	8.	ITIS Taxonomic Serial Number for taxon
6	PATHPRES	Char	2	$2.	Y/N - pathology present
7	TYPEPATH	Char	30	$30.	Pathology description - ulcers, lumps, growths, finrot
8	PATH_CNT	Num	8	3.	Count (#) of pathologies present
9	PATH_LOC	Char	30	$30.	Area on fish where pathology observed - eyes, mouth, gills, body
10	QACODE	Char	15	$15.	Quality assurance code(s)

Sortedby: STATION VST_DATE TSN TYPEPATH PATH_LOC