Metadata Content:

Metadata:
- [Identification Information](#)
- [Data Quality Information](#)
- [Entity and Attribute Information](#)
- [Distribution Information](#)
- [Metadata Reference Information](#)

Identification Information:

Identification Information:

Citation:

Citation Information:

Originator: Stephanie Arsenault

Originator: Patricia Woodruff

Originator: Hsiao-Yun Chang

Originator: Yong Chen

Publication Date: 20230608

Title:

The Water Quality Survey (WQS): A Component of the Historical Hudson River Biological Monitoring Program (HRBMP)

Edition: First

Geospatial Data Presentation Form: spreadsheet

Other Citation Details:

Use the following citation:
The Water Quality Survey (WQS): A Component of the Historical Hudson River Biological Monitoring Program (HRBMP). HRBMP Metadata. The Chen Lab, School of Marine and Atmospheric Sciences, Stony Brook University, Stony Brook, NY, USA.

Description:

Abstract:

The Hudson River Biological Monitoring Program (HRBMP) is a large-scale comprehensive long-term survey program covering the Hudson River Estuary (HRE) from Battery Park (river mile [RM] 0) to Albany (RM 152), New York (NY). The historical HRBMP was gifted to and curated by the Chen Lab at Stony Brook University (https://you.stonybrook.edu/hrbmp/). The Water Quality Survey (WQS) was designed to determine the spatial and temporal

distribution of water temperature, dissolved oxygen, and conductivity measured along the 152 miles of the HRE. The WQS began in 1973 and continued through 2018.

Purpose:
Prior to 1982, water quality measurements were taken at depths associated with each Long River Survey (LRS) and Fall Juvenile Survey (FJS) tow sample. Beginning in 1982, and continuing through 2018, water quality measurements were dissociated from the sample collections of the LRS and FJS and instead were collected at 65 fixed stations at approximately three-mile intervals along the length of the HRE.

Time Period of Content:
   Time Period Information:
      Range of Dates/Times:
         Beginning Date: 19740416
         Ending Date: 20181129
   Currentness Reference: ground condition
Status:
   Progress: Complete
   Maintenance and Update Frequency: None planned
Spatial Domain:
   Description of Geographic Extent: Hudson River
   Bounding Coordinates:
      West Bounding Coordinate: -74.1900
      East Bounding Coordinate: -73.5700
      North Bounding Coordinate: 43.9400
      South Bounding Coordinate: 40.7000
Keywords:
   Theme:
      Theme Keyword Thesaurus: ISO 19115 Topic Category
      Theme Keyword: environment
      Theme Keyword: inlandWaters
   Theme:
      Theme Keyword Thesaurus: Coastal and Marine Ecological Classification Standard
      Theme Keyword: Estuarine Tidal Riverine Coastal
      Theme Keyword: Temperature
   Theme:
      Theme Keyword Thesaurus: USGS Thesaurus
      Theme Keyword: water temperature
      Theme Keyword: water quality

Theme Keyword: oxygen content (water)

Theme Keyword: water pH

Theme Keyword: salinity

Theme:

Theme Keyword Thesaurus: Marine Realms Information Bank (MRIB) keywords

Theme Keyword: water quality

Place:

Place Keyword Thesaurus: Common geographic areas

Place Keyword: New York

Place Keyword: Lower Hudson

Place Keyword: Middle Hudson

Place Keyword: Upper Hudson

Place:

Place Keyword Thesaurus: None

Place Keyword: Hudson River Estuary

Access Constraints: None. Please see 'Distribution Info' for details.

Use Constraints:

None. Users are advised to read the dataset's metadata thoroughly to understand appropriate use and data limitations.

Point of Contact:

Contact Information:

Contact Person Primary:

Contact Person: Patricia Woodruff

Contact Organization: Stony Brook University

Contact Position: Program Coordinator HRBMP

Contact Address:

Address Type: mailing and physical

Address: 155 Discovery Hall

City: Stony Brook

State or Province: NY

Postal Code: 11794

Country: United States

Contact Voice Telephone: 631-632-9411

Contact Electronic Mail Address: patricia.woodruff@stonybrook.edu

Data Set Credit:

Funding for this metadata development project is provided by the Hudson River Foundation.

Native Data Set Environment:

Data files collected in the field were originally "mapped" to Statistical Analysis System (SAS) compatible files. In 2021, the SAS files were converted to RDS (R Data Serialization) files using R. Additional processing steps were performed using R.

Data Quality Information:

Data Quality Information:

Attribute Accuracy:

Attribute Accuracy Report:
Water quality instrumentation was subjected to daily calibration and quality control against known laboratory standards.

Logical Consistency Report:
Data cover the area specified for this project without any known issues.

Completeness Report:
Dataset is considered complete for the information presented, as described in the abstract. Users are required to read the rest of the metadata record and accompanying documents.

Positional Accuracy:

Horizontal Positional Accuracy:

Horizontal Positional Accuracy Report:
Latitude and longitude data collected from 2002 to 2018 were measured by onboard GPS systems during sampling events. Prior to 2002, observations of latitude and longitude were not available.

Vertical Positional Accuracy:

Vertical Positional Accuracy Report: No formal positional accuracy tests were conducted.

Lineage:

Process Step:

Process Description:
Step 1- Sample Collection: For additional information on WQS implementation and sampling protocols, see the Description of the Water Quality Survey document and the Water Quality Survey Timeline.

Process Date: 20230426

Process Step:

Process Description:

Step 3- Data Analysis and Exploration: All data analysis and exploration were performed in R Studio. Various data quality issues were identified such as...

Process Date: 20230426

Entity and Attribute Information:

Entity and Attribute Information:
  Detailed Description:
    Entity Type:
      Entity Type Label: WaterQualitySurveyVariables
      Entity Type Definition:
      Description of all WQS variables, including column labels, column definitions, column content type (numeric, categorical, etc.), data ranges, and units of measure (where applicable). Variables are presented in alphabetical order.

      Entity Type Definition Source: Producer defined
    Attribute:
      Attribute Label: AIR.TEMPERATURE
      Attribute Definition: The measurement of air temperature in degrees Celsius.
      Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.
      Attribute Domain Values:
        Enumerated Domain:
          Enumerated Domain Value: NA
          Enumerated Domain Value Definition: No Data
          Enumerated Domain Value Definition Source: Producer defined
      Attribute Domain Values:
        Range Domain:
          Range Domain Minimum: -4.0
          Range Domain Maximum: 100.0
          Attribute Units of Measure: Degrees Celsius
    Attribute:
      Attribute Label: BEACH.NUMBER
      Attribute Definition: Number used to identify a particular beach.
      Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.
      Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: NA

Enumerated Domain Value Definition: No Data

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Range Domain:

Range Domain Minimum: 1

Range Domain Maximum: 285

Attribute:

Attribute Label: BOTTOM.TYPE

Attribute Definition:

Code used to classify the sediment composition at a sampling site on the river.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: NA

Enumerated Domain Value Definition: No Data

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 1

Enumerated Domain Value Definition: Sand

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 2

Enumerated Domain Value Definition: Mud

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 3

Enumerated Domain Value Definition: Vegetation

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 4

Enumerated Domain Value Definition: Debris

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: 5

        Enumerated Domain Value Definition: Brick

        Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: 6

        Enumerated Domain Value Definition: Gravel less than 3"

        Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: 7

        Enumerated Domain Value Definition: Gravel greater than 3"

        Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: 8

        Enumerated Domain Value Definition: Mussel/oyster bed

        Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: 9

        Enumerated Domain Value Definition: Other

        Enumerated Domain Value Definition Source: Producer defined

Attribute:

Attribute Label: CATCH_CD

Attribute Definition:

A code indicating whether the sample had catch or not. For ichthyoplankton, sampling will have a CATCH_CD = 2 (No catch) if for all taxa in the sample, the following are equal to 0 or missing values: CT_EGGS, CT_YSL, CT_PYSL, CT_UNID, and CT_YOY.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: NA

        Enumerated Domain Value Definition: No Data

        Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

   Enumerated Domain:

      Enumerated Domain Value: 1

      Enumerated Domain Value Definition: Catch

      Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

   Enumerated Domain:

      Enumerated Domain Value: 2

      Enumerated Domain Value Definition: No catch

      Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

   Enumerated Domain:

      Enumerated Domain Value: 3

      Enumerated Domain Value Definition: Catch not analyzed

      Enumerated Domain Value Definition Source: Producer defined

Attribute:

Attribute Label: CLOUD.COVER

Attribute Definition: A code to represent the percentage of the sky which is overcast.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

   Enumerated Domain:

      Enumerated Domain Value: NA

      Enumerated Domain Value Definition: No Data

      Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

   Enumerated Domain:

      Enumerated Domain Value: 0

      Enumerated Domain Value Definition: 0-9%

      Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

   Enumerated Domain:

      Enumerated Domain Value: 1

      Enumerated Domain Value Definition: 10-19%

      Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

   Enumerated Domain:

      Enumerated Domain Value: 2

      Enumerated Domain Value Definition: 20-29%

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

  Enumerated Domain:

   Enumerated Domain Value: 3

   Enumerated Domain Value Definition: 30-39%

   Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

  Enumerated Domain:

   Enumerated Domain Value: 4

   Enumerated Domain Value Definition: 40-49%

   Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

  Enumerated Domain:

   Enumerated Domain Value: 5

   Enumerated Domain Value Definition: 50-59%

   Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

  Enumerated Domain:

   Enumerated Domain Value: 6

   Enumerated Domain Value Definition: 60-69%

   Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

  Enumerated Domain:

   Enumerated Domain Value: 7

   Enumerated Domain Value Definition: 70-79%

   Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

  Enumerated Domain:

   Enumerated Domain Value: 8

   Enumerated Domain Value Definition: 80-89%

   Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

  Enumerated Domain:

   Enumerated Domain Value: 9

   Enumerated Domain Value Definition: 90-100%

   Enumerated Domain Value Definition Source: Producer defined

Attribute:

  Attribute Label: COMMENTS

  Attribute Definition: Remarks pertinent to the collection and/or handling of the sample.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

   Enumerated Domain:

      Enumerated Domain Value: NA

      Enumerated Domain Value Definition: No Data

      Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

   Range Domain:

      Range Domain Minimum: 0

      Range Domain Maximum: 2

Attribute:

  Attribute Label: CONDUCTIVITY

  Attribute Definition:

  The conductivity of the water expressed in microsiemens per centimeter at 25 degrees Celsius. Data prior to 1982 are observations, after 1982 are kriged data.

  Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

  Attribute Domain Values:

   Enumerated Domain:

      Enumerated Domain Value: NA

      Enumerated Domain Value Definition: No Data

      Enumerated Domain Value Definition Source: Producer defined

  Attribute Domain Values:

   Range Domain:

      Range Domain Minimum: 6

      Range Domain Maximum: 114109

      Attribute Units of Measure: Microsiemens/cm

Attribute:

  Attribute Label: DATE

  Attribute Definition:

  The date of sample collection. The date in MM/DD/YY format derived from SAS date function.

  Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

  Attribute Domain Values:

   Enumerated Domain:

      Enumerated Domain Value: NA

Enumerated Domain Value Definition: No Data

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Unrepresentable Domain: The date in MM/DD/YY format.

Attribute:

Attribute Label: DISSOLVED.OXYGEN

Attribute Definition:

The concentration of dissolved oxygen in the water expressed in milligram per liter at ambient temperature. Data prior to 1982 are observations, after 1982 are kriged data.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: NA

Enumerated Domain Value Definition: No Data

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Range Domain:

Range Domain Minimum: 0.0

Range Domain Maximum: 126.0

Attribute Units of Measure: Mg/L

Attribute:

Attribute Label: DURATION

Attribute Definition: The duration of sampling in minutes.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: NA

Enumerated Domain Value Definition: No Data

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Range Domain:

Range Domain Minimum: 2.0

Range Domain Maximum: 10.0

Attribute Units of Measure: Minutes

Attribute:

Attribute Label: FLOWMETER.DIFFERENCE

Attribute Definition: Flowmeter end minus flowmeter start equals flowmeter difference.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

   Enumerated Domain:

      Enumerated Domain Value: NA

      Enumerated Domain Value Definition: No Data

      Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

   Range Domain:

      Range Domain Minimum: 13

      Range Domain Maximum: 153396

Attribute:

  Attribute Label: FLOWMETER.END

  Attribute Definition:

The numbers read from the mechanical flowmeter at the end of each collection or calibration.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

   Enumerated Domain:

      Enumerated Domain Value: NA

      Enumerated Domain Value Definition: No Data

      Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

   Range Domain:

      Range Domain Minimum: 21

      Range Domain Maximum: 1012551

Attribute:

  Attribute Label: FLOWMETER.NUMBER

  Attribute Definition: A number assigned to each flowmeter for identification purposes.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

   Enumerated Domain:

      Enumerated Domain Value: NA

      Enumerated Domain Value Definition: No Data

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

  Range Domain:

    Range Domain Minimum: 0

    Range Domain Maximum: 99

Attribute:

  Attribute Label: FLOWMETER.START

  Attribute Definition:

The numbers read from the mechanical flowmeter before the collection or calibration starts.

  Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

  Attribute Domain Values:

    Enumerated Domain:

      Enumerated Domain Value: NA

      Enumerated Domain Value Definition: No Data

      Enumerated Domain Value Definition Source: Producer defined

  Attribute Domain Values:

    Range Domain:

      Range Domain Minimum: 0

      Range Domain Maximum: 999968

Attribute:

  Attribute Label: GEAR.CODE

  Attribute Definition: A code assigned to each type of sampling device used.

  Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

  Attribute Domain Values:

    Enumerated Domain:

      Enumerated Domain Value: NA

      Enumerated Domain Value Definition: No Data

      Enumerated Domain Value Definition Source: Producer defined

  Attribute Domain Values:

    Enumerated Domain:

      Enumerated Domain Value: 12

      Enumerated Domain Value Definition: 100' beach seine tow

      Enumerated Domain Value Definition Source: Producer defined

  Attribute Domain Values:

    Enumerated Domain:

Enumerated Domain Value: 17

Enumerated Domain Value Definition: 12' bottom try trawl (experimental prior to 09/01/78)

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 36

Enumerated Domain Value Definition: 3' x 6' box trap, without wings or leads, with two fykes (12/06/74)

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 64

Enumerated Domain Value Definition: 1-m epibenthic sled

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 65

Enumerated Domain Value Definition: 1-m Tucker trawl

Enumerated Domain Value Definition Source: Producer defined

Attribute:

Attribute Label: GEAR.NARRATIVE

Attribute Definition:

A code used to describe if a problem was encountered with the sampling device during a particular collection.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: NA

Enumerated Domain Value Definition: No Data

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 1

Enumerated Domain Value Definition: No sampling problems

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

>>> ***Enumerated Domain Value:*** 2
>>> ***Enumerated Domain Value Definition:***
>>> Sampling problems encountered. Partial or complete loss of sample probable.

>>> ***Enumerated Domain Value Definition Source:*** Producer defined

Attribute:

> *Attribute Label:* LAT.DEGREE

> *Attribute Definition:* Latitude in degrees.

> *Attribute Definition Source:* Producer defined- ASA Analysis and Communication, Inc.

> *Attribute Domain Values:*

>> *Enumerated Domain:*

>>> ***Enumerated Domain Value:*** NA

>>> ***Enumerated Domain Value Definition:*** No Data

>>> ***Enumerated Domain Value Definition Source:*** Producer defined

> *Attribute Domain Values:*

>> *Range Domain:*

>>> ***Range Domain Minimum:*** 40

>>> ***Range Domain Maximum:*** 42

>>> ***Attribute Units of Measure:*** Degrees

Attribute:

> *Attribute Label:* LAT.MINUTE

> *Attribute Definition:* Latitude in minutes.

> *Attribute Definition Source:* Producer defined- ASA Analysis and Communication, Inc.

> *Attribute Domain Values:*

>> *Enumerated Domain:*

>>> ***Enumerated Domain Value:*** NA

>>> ***Enumerated Domain Value Definition:*** No Data

>>> ***Enumerated Domain Value Definition Source:*** Producer defined

> *Attribute Domain Values:*

>> *Range Domain:*

>>> ***Range Domain Minimum:*** 0.197

>>> ***Range Domain Maximum:*** 59.998

>>> ***Attribute Units of Measure:*** Minutes

Attribute:

> *Attribute Label:* LON.DEGREE

> *Attribute Definition:* Longitude in degrees.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

  Enumerated Domain:

    Enumerated Domain Value: NA

    Enumerated Domain Value Definition: No Data

    Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

  Range Domain:

    Range Domain Minimum: 73

    Range Domain Maximum: 75

    Attribute Units of Measure: Degrees

Attribute:

  Attribute Label: LON.MINUTE.

  Attribute Definition: Longitude in minutes

  Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

  Attribute Domain Values:

    Enumerated Domain:

      Enumerated Domain Value: NA

      Enumerated Domain Value Definition: No Data

      Enumerated Domain Value Definition Source: Producer defined

  Attribute Domain Values:

    Range Domain:

      Range Domain Minimum: 0.078

      Range Domain Maximum: 59.919

      Attribute Units of Measure: Minutes

Attribute:

  Attribute Label: ND

  Attribute Definition: Latitude in degrees.

  Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

  Attribute Domain Values:

    Enumerated Domain:

      Enumerated Domain Value: NA

      Enumerated Domain Value Definition: No Data

      Enumerated Domain Value Definition Source: Producer defined

  Attribute Domain Values:

    Range Domain:

      Range Domain Minimum: 40

Range Domain Maximum: 42

Attribute Units of Measure: Degrees

Attribute:

Attribute Label: NET.LENGTH.OPENING.WIDTH.RATIO

Attribute Definition:

A code representing the net length (from mouth to cod end) divided by the net width (measured horizontally at the mouth). Codes 10, and 58 (used only in 1974) are not defined in the existing HRMBP data dictionaries.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: NA

Enumerated Domain Value Definition: No Data

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 5

Enumerated Domain Value Definition: 5:1

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 8

Enumerated Domain Value Definition: 8:1

Enumerated Domain Value Definition Source: Producer defined

Attribute:

Attribute Label: NET.MESH

Attribute Definition:

A code which indicates the ichthyoplankton net gear mesh size in microns. Codes 53, 58, 65, and 85 (used only in 1974) are not defined in the existing HRBMP data dictionaries.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: NA

Enumerated Domain Value Definition: No Data

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

    Enumerated Domain Value: 30

    Enumerated Domain Value Definition: 3000 microns

    Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: 50

        Enumerated Domain Value Definition: 500 microns

        Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: 55

        Enumerated Domain Value Definition: 505 microns

        Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: 500

        Enumerated Domain Value Definition: 500 microns

        Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: 3000

        Enumerated Domain Value Definition: 3000 microns

        Enumerated Domain Value Definition Source: Producer defined

Attribute:

    Attribute Label: NM

    Attribute Definition: Latitude in minutes.

    Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

    Attribute Domain Values:

        Enumerated Domain:

            Enumerated Domain Value: NA

            Enumerated Domain Value Definition: No Data

            Enumerated Domain Value Definition Source: Producer defined

    Attribute Domain Values:

        Range Domain:

            Range Domain Minimum: 0

            Range Domain Maximum: 59

            Attribute Units of Measure: Minutes

Attribute:

Attribute Label: NS

Attribute Definition: Latitude in seconds.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

   Enumerated Domain:

      Enumerated Domain Value: NA

      Enumerated Domain Value Definition: No Data

      Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

   Range Domain:

      Range Domain Minimum: 0.0

      Range Domain Maximum: 0.999

      Attribute Units of Measure: Seconds

Attribute:

   Attribute Label: NUMBER.OF.GEARS.USED

   Attribute Definition: Number of gears used.

   Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

   Attribute Domain Values:

      Enumerated Domain:

         Enumerated Domain Value: NA

         Enumerated Domain Value Definition: No Data

         Enumerated Domain Value Definition Source: Producer defined

   Attribute Domain Values:

      Range Domain:

         Range Domain Minimum: 1

         Range Domain Maximum: 1

Attribute:

   Attribute Label: PH

   Attribute Definition: The pH of the water measured in units of pH.

   Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

   Attribute Domain Values:

      Enumerated Domain:

         Enumerated Domain Value: NA

         Enumerated Domain Value Definition: No Data

         Enumerated Domain Value Definition Source: Producer defined

   Attribute Domain Values:

      Range Domain:

Range Domain Minimum: 0
Range Domain Maximum: 9.5

Attribute:

Attribute Label: PROCESSING.DATE

Attribute Definition: The date (derived from SAS date function) a sample was processed.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: NA

Enumerated Domain Value Definition: No Data

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Unrepresentable Domain: The date in MM/DD/YY format.

Attribute:

Attribute Label: PROJECT

Attribute Definition: A code assigned to each survey.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: NA

Enumerated Domain Value Definition: No Data

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: FS

Enumerated Domain Value Definition: Fall Juvenile Survey (FJS)

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: LR

Enumerated Domain Value Definition: Long River Survey (LRS)

Enumerated Domain Value Definition Source: Producer defined

Attribute:

Attribute Label: RELATIVE.DEPTH

Attribute Definition:

A code assigned to the depth where the water quality data are taken relative to the depth sampled. Variable from the 1984 LMS gear comparison.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: NA

        Enumerated Domain Value Definition: No Data

        Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: 1

        Enumerated Domain Value Definition: Surface

        Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: 2

        Enumerated Domain Value Definition: Mid-depth

        Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: 3

        Enumerated Domain Value Definition: Bottom

        Enumerated Domain Value Definition Source: Producer defined

Attribute:

    Attribute Label: RIVER.DEPTH

    Attribute Definition:

The depth, in meters, of the river from surface to bottom where sampling occurred.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: NA

        Enumerated Domain Value Definition: No Data

        Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

    Range Domain:

   Range Domain Minimum: 0.6

   Range Domain Maximum: 61.0

   Attribute Units of Measure: Meters

Attribute:

 Attribute Label: RIVER.MILE

 Attribute Definition:

 A segment of the Hudson River (approximately one mile) defined on the river charts. A river mile extends from the river mile line northward to the next successive river mile line.

 Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

 Attribute Domain Values:

  Enumerated Domain:

   Enumerated Domain Value: NA

   Enumerated Domain Value Definition: No Data

   Enumerated Domain Value Definition Source: Producer defined

 Attribute Domain Values:

  Range Domain:

   Range Domain Minimum: 1

   Range Domain Maximum: 152

   Attribute Units of Measure: Miles

Attribute:

 Attribute Label: RIVER.RUN

 Attribute Definition: A number assigned to each WQS sampling period.

 Attribute Definition Source: Producer defined- AASA Analysis and Communication, Inc.

 Attribute Domain Values:

  Enumerated Domain:

   Enumerated Domain Value: NA

   Enumerated Domain Value Definition: No Data

   Enumerated Domain Value Definition Source: Producer defined

 Attribute Domain Values:

  Range Domain:

   Range Domain Minimum: 0

   Range Domain Maximum: 40

Attribute:

 Attribute Label: SAM_NARR

 Attribute Definition:

A code used to describe the quality of the biological collection for ichthyoplankton. SAM_NARR codes will be the same as those for CATCH_CD (1983).

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

  Enumerated Domain:

    Enumerated Domain Value: NA

    Enumerated Domain Value Definition: No Data

    Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

  Enumerated Domain:

    Enumerated Domain Value: 1

    Enumerated Domain Value Definition: Fish caught (field) or processed (lab) as appropriate

    Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

  Enumerated Domain:

    Enumerated Domain Value: 2

    Enumerated Domain Value Definition: No fish caught

    Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

  Enumerated Domain:

    Enumerated Domain Value: 3

    Enumerated Domain Value Definition:

    Lab processing problems (spilled, deteriorated, misplaced), sample not processed

    Enumerated Domain Value Definition Source: Producer defined

Attribute:

  Attribute Label: SAMPLE.NUMBER

  Attribute Definition:

  A number assigned sequentially within a year and task which are used to identify a sample collection.

  Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

  Attribute Domain Values:

    Enumerated Domain:

      Enumerated Domain Value: NA

      Enumerated Domain Value Definition: No Data

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

    Range Domain:

        Range Domain Minimum: 1

        Range Domain Maximum: 984221

Attribute:

    Attribute Label: SITE

    Attribute Definition:

    Site indicates a more specific area or zone within a river mile from which the sample is taken. Code 8 (one record in 1978) is not defined in the existing HRBMP data dictionaries and is likely a typo.

    Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

    Attribute Domain Values:

        Enumerated Domain:

            Enumerated Domain Value: NA

            Enumerated Domain Value Definition: No Data

            Enumerated Domain Value Definition Source: Producer defined

    Attribute Domain Values:

        Enumerated Domain:

            Enumerated Domain Value: 4

            Enumerated Domain Value Definition: West of channel (<= 20 ft. depth)

            Enumerated Domain Value Definition Source: Producer defined

    Attribute Domain Values:

        Enumerated Domain:

            Enumerated Domain Value: 5

            Enumerated Domain Value Definition: Channel (>20 ft. depth)

            Enumerated Domain Value Definition Source: Producer defined

    Attribute Domain Values:

        Enumerated Domain:

            Enumerated Domain Value: 6

            Enumerated Domain Value Definition: East of channel (<= 20 ft. depth)

            Enumerated Domain Value Definition Source: Producer defined

Attribute:

    Attribute Label: SPLIT_CD

    Attribute Definition: Code indicating the portion of the sample which was worked up.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

  Enumerated Domain:

    Enumerated Domain Value: NA

    Enumerated Domain Value Definition: No Data

    Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

  Enumerated Domain:

    Enumerated Domain Value: 1

    Enumerated Domain Value Definition: None

    Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

  Enumerated Domain:

    Enumerated Domain Value: 8

    Enumerated Domain Value Definition: 1/8 split

    Enumerated Domain Value Definition Source: Producer defined

Attribute:

Attribute Label: STATION

Attribute Definition:

A code which defines the specific sampling location, ranges from stations 1 to 65 based on river region, river mile, and site.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

  Enumerated Domain:

    Enumerated Domain Value: NA

    Enumerated Domain Value Definition: No Data

    Enumerated Domain Value Definition Source: Producer

Attribute Domain Values:

  Range Domain:

    Range Domain Minimum: 1

    Range Domain Maximum: 65

Attribute:

Attribute Label: STRATA.CODE

Attribute Definition:

A code indicating a segment of the river characterized by specific depth criteria. Note, in regions where the shoal stratus is not formally sampled, samples collected in water <= 20 ft. depth should be assigned to the

bottom or channel structure, based on the difference between sample depth and river depth.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: NA

        Enumerated Domain Value Definition: No Data

        Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: 1

        Enumerated Domain Value Definition: Shoals- water of 20 ft (6m) or less

        Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: 2

        Enumerated Domain Value Definition:

        Bottom- water within 10 ft (3m) of the river bottom in more than 20 ft (6m depth)

        Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: 3

        Enumerated Domain Value Definition:

        Channel- water more than 10 ft (3m) from the river bottom in more than 20 ft (6m) depth

        Enumerated Domain Value Definition Source: Producer defined

Attribute:

Attribute Label: TASK.CODE

Attribute Definition:

A code uniquely identifying each survey from which a sample originated. Code 5 (used only in 1976) is not defined in the existing HRBMP data dictionaries.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

    Enumerated Domain:

Enumerated Domain Value: 3

Enumerated Domain Value Definition: Standard stations

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 13

Enumerated Domain Value Definition: Interregional trawl

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 23

Enumerated Domain Value Definition: Beach Seine Survey (BSS)

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 24

Enumerated Domain Value Definition: Beach seine efficiency

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 33

Enumerated Domain Value Definition: Mark recapture

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 39

Enumerated Domain Value Definition: Try trawl survey

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 43

Enumerated Domain Value Definition: Tomcod (box traps and trawl)

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 53

Enumerated Domain Value Definition: Adult striped bass

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: 88

        Enumerated Domain Value Definition: Long River Ichthyoplankton Survey

        Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: 89

        Enumerated Domain Value Definition: Long River Ichthyoplankton and Fall Shoals water quality (since 1982)

        Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: 98

        Enumerated Domain Value Definition: Fall Shoals Survey

        Enumerated Domain Value Definition Source: Producer defined

Attribute:

Attribute Label: TIDAL.METHOD

Attribute Definition:

A code identifying the source or method used to describe the tide stage

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: NA

        Enumerated Domain Value Definition: No Data

        Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: 1

        Enumerated Domain Value Definition: Subjective observation

        Enumerated Domain Value Definition Source: Producer defined

Attribute:

Attribute Label: TIDE.STAGE

Attribute Definition:

A code used to describe the direction of tidal flow. Code 9 (one record in 1980) is not in defined in the existing HRBMP data dictionary and is likely a typo.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

   Enumerated Domain:

      Enumerated Domain Value: NA

      Enumerated Domain Value Definition: No Data

      Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

   Enumerated Domain:

      Enumerated Domain Value: 1

      Enumerated Domain Value Definition: Low slack

      Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

   Enumerated Domain:

      Enumerated Domain Value: 2

      Enumerated Domain Value Definition: Flood

      Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

   Enumerated Domain:

      Enumerated Domain Value: 3

      Enumerated Domain Value Definition: High slack

      Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

   Enumerated Domain:

      Enumerated Domain Value: 4

      Enumerated Domain Value Definition: Ebb

      Enumerated Domain Value Definition Source: Producer defined

Attribute:

   Attribute Label: TIME

   Attribute Definition:

   The time at which sampling occurred. Time in hour: minute format derived from SAS time function.

   Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

   Attribute Domain Values:

      Unrepresentable Domain: The time in Hour:Minute format.

Attribute:

   Attribute Label: TOW.DIRECTION

Attribute Definition: Code for the direction toward which the gear was towed.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: NA

        Enumerated Domain Value Definition: No Data

        Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: 1

        Enumerated Domain Value Definition: North

        Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: 2

        Enumerated Domain Value Definition: South

        Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

    Enumerated Domain:

        Enumerated Domain Value: 3

        Enumerated Domain Value Definition: East

        Enumerated Domain Value Definition Source: Producer defined

Attribute:

    Attribute Label: TOW.SPEED

    Attribute Definition:

Boat speed, in meters per second, relative to the water during sampling.

    Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

    Attribute Domain Values:

        Enumerated Domain:

            Enumerated Domain Value: NA

            Enumerated Domain Value Definition: No Data

            Enumerated Domain Value Definition Source: Producer defined

    Attribute Domain Values:

        Range Domain:

            Range Domain Minimum: 0.0

            Range Domain Maximum: 8.9

   Attribute Units of Measure: M/s

Attribute:

 Attribute Label: TURBIDITY

 Attribute Definition: The turbidity of the water measured in Formazin turbidity units.

 Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

 Attribute Domain Values:

  Enumerated Domain:

   Enumerated Domain Value: NA

   Enumerated Domain Value Definition: No Data

   Enumerated Domain Value Definition Source: Producer defined

 Attribute Domain Values:

  Range Domain:

   Range Domain Minimum: 0.4

   Range Domain Maximum: 215.0

   Attribute Units of Measure: Formazin turbidity units

Attribute:

 Attribute Label: USE.CODE

 Attribute Definition: A code limiting the analytical use of a sample.

 Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

 Attribute Domain Values:

  Enumerated Domain:

   Enumerated Domain Value: NA

   Enumerated Domain Value Definition: No Data

   Enumerated Domain Value Definition Source: Producer defined

 Attribute Domain Values:

  Enumerated Domain:

   Enumerated Domain Value: 1

   Enumerated Domain Value Definition:

   Assigned to a sample when there are no sampling problems. Sample may be used for C/F analysis for all species.

   Enumerated Domain Value Definition Source: Producer defined

 Attribute Domain Values:

  Enumerated Domain:

   Enumerated Domain Value: 2

   Enumerated Domain Value Definition:

Assigned to a sample when sampling problems are encountered, but any markable or unusual species are caught. Sample not to be used for C/F analysis.

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 3

Enumerated Domain Value Definition:

Assigned to samples when only selected species from the catch are counted. Sample may be used for C/F for selected species only, dependent on task.

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 5

Enumerated Domain Value Definition:

Assigned to samples when sampling problems are encountered and no markable or unusual species are caught (i.e., void)

Enumerated Domain Value Definition Source: Producer defined

Attribute:

Attribute Label: VESSEL.CODE

Attribute Definition:

A code assigned to a boat used collect ichthyoplankton and commercial samples.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: NA

Enumerated Domain Value Definition: No Data

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 1

Enumerated Domain Value Definition: Liberty Belle

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 2

Enumerated Domain Value Definition: Celia Thaxter

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 3

Enumerated Domain Value Definition: Sametta Too

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 5

Enumerated Domain Value Definition: Robert Gabrielson's Boats

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 6

Enumerated Domain Value Definition: David White's Boats

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 9

Enumerated Domain Value Definition: Woody I

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: 10

Enumerated Domain Value Definition: Ecological Analyst's Pride

Enumerated Domain Value Definition Source: Producer defined

Attribute:

Attribute Label:
VOLUME.OF.WATER.SAMPLED.IN.CUBIC.METERS

Attribute Definition: Volume of water sampled in cubic meters

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: NA

Enumerated Domain Value Definition: No Data

Enumerated Domain Value Definition Source: Produce defined

Attribute Domain Values:
    Range Domain:
        Range Domain Minimum: 0
        Range Domain Maximum: 990.68
        Attribute Units of Measure: Cubic meters
Attribute:
    Attribute Label: WATER.QUALITY.SAMPLE.DEPTH.m
    Attribute Definition: Depth, in meters, from which a water quality sampled was collected.
    Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.
    Attribute Domain Values:
        Enumerated Domain:
            Enumerated Domain Value: NA
            Enumerated Domain Value Definition: No Data
            Enumerated Domain Value Definition Source: Producer defined
    Attribute Domain Values:
        Range Domain:
            Range Domain Minimum: 0.0
            Range Domain Maximum: 80.0
            Attribute Units of Measure: Meters
Attribute:
    Attribute Label: WATER.TEMPERATURE
    Attribute Definition: The measurement of the temperature of the water in degrees Celsius.
    Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.
    Attribute Domain Values:
        Enumerated Domain:
            Enumerated Domain Value: NA
            Enumerated Domain Value Definition: No Data
            Enumerated Domain Value Definition Source: Producer defined
    Attribute Domain Values:
        Range Domain:
            Range Domain Minimum: -0.5
            Range Domain Maximum: 99.9
            Attribute Units of Measure: Degrees Celsius
Attribute:
    Attribute Label: WAVE.HEIGHT
    Attribute Definition:

Code describing the condition of the surface of the water. Codes 5 and 8 (two records in 1974), are not in defined in the existing HRBMP data dictionaries and are likely a typo.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.
Attribute Domain Values:
    Enumerated Domain:
        Enumerated Domain Value: NA
        Enumerated Domain Value Definition: No Data
        Enumerated Domain Value Definition Source: Producer defined
Attribute Domain Values:
    Enumerated Domain:
        Enumerated Domain Value: 1
        Enumerated Domain Value Definition: Calm (0 to 0.5 ft.)
        Enumerated Domain Value Definition Source: Producer defined
Attribute Domain Values:
    Enumerated Domain:
        Enumerated Domain Value: 2
        Enumerated Domain Value Definition: Light chop (> 0.5 ft. to 1 ft.)
        Enumerated Domain Value Definition Source: Producer defined
Attribute Domain Values:
    Enumerated Domain:
        Enumerated Domain Value: 3
        Enumerated Domain Value Definition: Heavy chop (> 1 ft. to 2 ft.)
        Enumerated Domain Value Definition Source: Producer defined
Attribute Domain Values:
    Enumerated Domain:
        Enumerated Domain Value: 4
        Enumerated Domain Value Definition: Large waves (> 2 ft.)
        Enumerated Domain Value Definition Source: Producer defined
Attribute:
    Attribute Label: WD
    Attribute Definition: Longitude in degrees.
    Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.
    Attribute Domain Values:
        Enumerated Domain:
            Enumerated Domain Value: NA

>> ***Enumerated Domain Value Definition:*** No Data
>> ***Enumerated Domain Value Definition Source:*** Producer defined

> ***Attribute Domain Values:***
>> ***Range Domain:***
>>> ***Range Domain Minimum:*** 73
>>> ***Range Domain Maximum:*** 74
>>> ***Attribute Units of Measure:*** Degrees

Attribute:
> ***Attribute Label:*** WIND.DIRECTION
> ***Attribute Definition:*** A code for the direction from which the wind is blowing.
> ***Attribute Definition Source:*** Producer defined- ASA Analysis and Communication, Inc.
> ***Attribute Domain Values:***
>> ***Enumerated Domain:***
>>> ***Enumerated Domain Value:*** NA
>>> ***Enumerated Domain Value Definition:*** No Data
>>> ***Enumerated Domain Value Definition Source:*** Producer defined

> ***Attribute Domain Values:***
>> ***Enumerated Domain:***
>>> ***Enumerated Domain Value:*** 0
>>> ***Enumerated Domain Value Definition:*** No wind
>>> ***Enumerated Domain Value Definition Source:*** Producer defined

> ***Attribute Domain Values:***
>> ***Enumerated Domain:***
>>> ***Enumerated Domain Value:*** 1
>>> ***Enumerated Domain Value Definition:*** North
>>> ***Enumerated Domain Value Definition Source:*** Producer defined

> ***Attribute Domain Values:***
>> ***Enumerated Domain:***
>>> ***Enumerated Domain Value:*** 2
>>> ***Enumerated Domain Value Definition:*** South
>>> ***Enumerated Domain Value Definition Source:*** Producer defined

> ***Attribute Domain Values:***
>> ***Enumerated Domain:***
>>> ***Enumerated Domain Value:*** 3
>>> ***Enumerated Domain Value Definition:*** East
>>> ***Enumerated Domain Value Definition Source:*** Producer defined

> ***Attribute Domain Values:***
>> ***Enumerated Domain:***

Enumerated Domain Value: 4

Enumerated Domain Value Definition: West

Enumerated Domain Value Definition Source: Producer defined

Attribute:

Attribute Label: WIND.SPEED

Attribute Definition: The speed of the wind in knots.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: NA

Enumerated Domain Value Definition: No Data

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Range Domain:

Range Domain Minimum: 0

Range Domain Maximum: 35

Attribute Units of Measure: Knots

Attribute:

Attribute Label: WM

Attribute Definition: Longitude in minutes.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: NA

Enumerated Domain Value Definition: No Data

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Range Domain:

Range Domain Minimum: 0

Range Domain Maximum: 59

Attribute Units of Measure: Minutes

Attribute:

Attribute Label: WS

Attribute Definition: Longitude in seconds.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: NA

Enumerated Domain Value Definition: No Data

Enumerated Domain Value Definition Source: Producer defined

Attribute Domain Values:

Range Domain:

Range Domain Minimum: 0.0

Range Domain Maximum: 0.999

Attribute Units of Measure: Seconds

Attribute:

Attribute Label: YEAR.OF.DATA.COLLECTION

Attribute Definition: Year in which data was collected.

Attribute Definition Source: Producer defined- ASA Analysis and Communication, Inc.

Attribute Domain Values:

Range Domain:

Range Domain Minimum: 1974

Range Domain Maximum: 2018

Attribute Units of Measure: Years

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