

NHD Indexed locations for Water Quality Standards (WQS)

Metadata also available as

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Identification_Information:

Citation:

Citation_Information:

Originator: US EPA

Publication_Date: Initially 20011231 (see Maintenance_and_Update_Frequency)

Title: NHD Indexed locations for Water Quality Standards (WQS)

Geospatial_Data_Presentation_Form: vector digital data

Series_Information:

Series_Name: Water Quality Standards

Issue_Identification: 1

Publication_Information:

Publication_Place: Washington, DC

Publisher: US EPA

Online_Linkage: <<http://www.epa.gov/waters/data/downloads.html>>

Description:

Abstract:

State (also includes DC, tribes, and territories; i.e., "jurisdictions") Water Quality Standards' Designated Uses for river segments, lakes, and estuaries. The Water Quality Standards' Designated Uses are able to be linked to tables of water quality criteria which are located in EPA's Water Quality Standards Database. Water Quality Standards coded onto route.rch (Transport and Coastline Reach) feature of the National Hydrography Dataset (NHD) to create NHD Linear and Point Events. Point events are attached to a reach in NHD for many reasons: to represent an estuary; represent a drinking water intake point; or to represent a designated use when there is no reach in NHD to represent that reach. Water Quality Standards coded onto the National Hydrography Dataset (NHD) Waterbody Reaches (region.rch) to create Waterbody Shapefiles. In addition to NHD reach indexed data there may also be custom shapefiles (point, line, or polygon) that are not associated with NHD and are in an EPA standard format that is compatible with EPA's Reach Address Database. These custom shapefiles are used to represent Water Quality Standards that are not represented well in NHD.

Purpose:

To be used to identify the spatial extent of waters listed under State Water Quality Standards. These waters can be linked to EPA's Water Quality Standards Database for query and display.

Supplemental_Information:

Procedures Used: From time to time beginning with initial publication, selected State Water Quality Agencies supply EPA's Office of Water with lists of waters with Designated Uses under State Water Quality Standards. These lists contain text which identify the locations of individual waters on their list. Many states also submit GIS coverages and or maps that outlined the spatial extent of their listed waters. These base materials are used by EPA to code the spatial extent onto route.rch (Transport and Coastline Reach) feature of NHD to create NHD Linear and Point Events. These base materials are used by EPA to code the spatial extent onto NHD Waterbody Reaches (region.rch) to create Waterbody Shapefiles. Using the EPA's NHD-Reach Indexing Tool (NHD-RIT), event tables/shapefiles are created and the reaches are identified with the Designated Uses supplied by the states. These event tables/shapefiles are then sent to each state for review and comment. The format of the reviewed data are state dependent. Formats consist of hardcopy maps, shapefiles or coverages with events.

Revisions: Initial indexing is done and maps sent back to the state for review. In many cases, modifications are noted by the State and then corrections are made by RTI. These corrected event tables/shapefiles are then sent to each state for re-review and comment, or if correct, approval for display on the internet.

NHD Vintage: NHD (Flow-validated, Re-leveled) -- Current as of June, 2002 (compatible with EPA Reach Address Database Version 2.0)

*Time_Period_of_Content:**Time_Period_Information:**Single_Date/Time:**Calendar_Date:*

2001 (varies by and can vary within jurisdiction - from prior process date to most recent process date). See Maintenance_and_Update_Frequency

Currentness_Reference: see Maintenance_and_Update_Frequency

Status:

Progress: In work

Maintenance_and_Update_Frequency:

Publication to internet version of WQSDB every 6 months (April and October).
Continuous processing of updates of selected jurisdictions and partial jurisdiction (staged update) information.

*Spatial_Domain:**Bounding_Coordinates:*

West_Bounding_Coordinate: -180

East_Bounding_Coordinate: -60

North_Bounding_Coordinate: 80

South_Bounding_Coordinate: 0

*Keywords:**Theme:*

Theme_Keyword_Thesaurus: None

Theme_Keyword: designated uses

Theme_Keyword: reach indexing

Theme:

Theme_Keyword_Thesaurus: Metadata Service Theme Categories

Theme_Keyword: environment

Theme_Keyword: inlandWaters

Place:

Place_Keyword_Thesaurus: None

Place_Keyword: US

Place_Keyword: National

Access_Constraints: Password protected until review is complete.

Use_Constraints:

The reach indexing review is designed for state review of DRAFT Water Quality Standards (WQS) spatial data. Research Triangle Institute (RTI), under contract with EPA, georeferences (or indexes) states' Water Quality Standards to the National Hydrography Dataset (NHD). EPA requires each state to review and approve the indexing work for display on the internet version of the WQSDB. Reviewers are asked to assess the accuracy of WQS reach indexing (georeferencing) efforts. More specifically, reviewers are asked to evaluate whether designated uses are assigned to the appropriate reaches and to assess the accuracy of the locational information.

When using this data in a spatial query, errors in determining the overlap can occur. The errors can be grouped as follows: (1) False Positives occur when the locational information is either incorrect or not of sufficient quality to determine its exact location. (2) False Negatives occur when locational information is missing or not available. (3) In addition to the entity locational information, errors, although few, may also exist in the spatial network of rivers, streams, and other waterbodies that comprise the National Hydrography Dataset (NHD) jointly maintained by USGS and USEPA. Errors in the NHD may contribute both to false positive and false negative readings.

Point_of_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Person: Bill Kramer

Contact_Organization: US EPA Headquarters

Contact_Address:

Address_Type: mailing address

Address:

1200 Pennsylvania Avenue, NW Room 5233T, Mail Code 4305T EPA
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City: Washington

State_or_Province: DC

Postal_Code: 20460

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Security_Information:

Security_Classification_System: None

Security_Classification: Unclassified

Security_Handling_Description: None

Native_Data_Set_Environment:

ArcView 3.2 (used in conjunction with the Reach Indexing Tool (RIT) and the National Hydrography Dataset (NHD) - NHD (Flow-validated, Re-leveled) -- Current as of June,

2002 (compatible with EPA Reach Address Database Version 2.0), and/or EPA's Web-Based Reach Indexing Tool (WebRIT).

Data_Quality_Information:

Attribute_Accuracy:

Logical_Consistency_Report: Chain-node topology present

Completeness_Report: State review underway.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

Statements of horizontal positional accuracy are based on accuracy statements made for USGS topographic quadrangle maps. These maps were compiled to meet National Map Accuracy Standards. For horizontal accuracy, this standard is met if at least 90 percent of points tested are within 0.02 inch (at map scale) of their true positions. Additional offsets to positions may have been introduced where there are many features to improve the legibility of map symbols. In addition, the digitizing of maps is estimated to contain a horizontal positional error of less than or equal to 0.003-inch standard error (at map scale) in the two component directions relative to the source maps. Visual comparison between the map graphic (including digital scans of the graphic) and plots or digital displays of points, lines, and areas is used to assess the positional accuracy of digital data. Linear features of the same type along the adjoining edges of data sets are aligned if they are within a 0.02-inch tolerance (at map scale). To align the features, the midpoint between the end of the corresponding features is computed, and the ends of features are moved to this point. Features outside the tolerance are not moved; instead, a feature of the type connector was added to join the features.

For more information, see the National Hydrography Dataset Concepts and Contents document (February 2000) available at <http://nhd.usgs.gov/chapter1/index.html>.

Vertical_Positional_Accuracy:

Vertical_Positional_Accuracy_Report:

Statements of vertical positional accuracy for elevation of water surfaces are based on accuracy statements made for USGS topographic quadrangle maps. These maps were compiled to meet National Map Accuracy Standards. For vertical accuracy, this standard is met if at least 90 percent of well-defined points tested are within one-half contour interval of the correct value. Elevations of water surface printed on the published map meet this standard; the contour intervals of the maps vary. These elevations were transcribed into the digital data; the accuracy of this transcription was checked by visual comparison between the data and the map.

For more information, see the National Hydrography Dataset Concepts and Contents document (February 2000) available at <http://nhd.usgs.gov/chapter1/index.html>.

Lineage:

*Process_Step:**Process_Description:*

Selected states send RTI a marked up map or existing GIS coverage denoting the location and extent of each waterbody. Using the EPA's NHD Reach Indexing Tool, shapefiles/event tables are created by conflating the each State's data to NHD. Event identifiers are populated with State-provided designated use waterbody codes.

Process_Date: Initially 20011231 (see *Maintenance_and_Update_Frequency*)

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Geographic:

Latitude_Resolution: 1

Longitude_Resolution: 1

Geographic_Coordinate_Units: Decimal degrees

Geodetic_Model:

Horizontal_Datum_Name: North American Datum of 1983

Ellipsoid_Name: Geodetic Reference System 80

Semi-major_Axis: 6378137 meters

Denominator_of_Flattening_Ratio: 298.257222101

Entity_and_Attribute_Information:

Detailed_Description:

Entity_Type:

Entity_Type_Label:

Point and linear event themes, NHD waterbody shapefiles, and Custom Shapes (point, line, and polygon shapefiles that are not associated with NHD).

Entity_Type_Definition:

Each point event theme applies to a point along a section of the National Hydrography Dataset (NHD), which is a comprehensive set of digital spatial data that contains information about surface water features such as lakes, ponds, streams, rivers, springs and wells. Line event themes apply to linear positions along sections of the NHD. Each waterbody theme applies to whole or portions of NHD waterbody reaches. All other point, line, and polygon shapefiles represent geometries that do not fall on the NHD network of streams/coastline and lakes/ponds.

Entity_Type_Definition_Source:

EPA's Web-Based Reach Indexing Tool (WebRIT) and EPA's National Hydrography Dataset Reach Indexing Tool (NHD-RIT).

Attribute:

Attribute_Label: FID

Attribute_Definition: Internal feature number.

Attribute_Definition_Source: ESRI

Attribute_Domain_Values:

Unrepresentable_Domain:

Sequential unique whole numbers that are automatically generated.

Attribute:

Attribute_Label: Shape

Attribute_Definition: Feature geometry.

Attribute_Definition_Source: ESRI

Attribute_Domain_Values:

Unrepresentable_Domain: Coordinates defining the features.

Attribute:

Attribute_Label: EVENT_ID

Attribute_Definition:

Unique ID for an event created based on date and time when the event was created, and a sequential number to provide uniqueness for events created at the same time.

Attribute_Definition_Source: System created number (WebRIT or NHD-RIT)

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 2000010100000100001

Range_Domain_Maximum: 9999123124000099999

Attribute:

Attribute_Label: P_MEAS

Attribute_Definition:

Specifies the location of the point along a route. This field is only used for point event themes.

Attribute_Definition_Source: EPA's WebRIT or NHD-RIT

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 0

Range_Domain_Maximum: 200

Attribute:

Attribute_Label: EOFFSET

Attribute_Definition:

Offset distance of event from associated NHD route reach location. This field is only used for point and linear event themes.

Attribute_Definition_Source: User input

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 0

Range_Domain_Maximum: 999999

Attribute:

Attribute_Label: DUU_ID

Attribute_Definition:

Unique identifier of the digital update unit in the NHD database. This field is only used for point and linear events and NHD waterbody shapefiles.

Attribute_Definition_Source: NHD

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 0000000001
Range_Domain_Maximum: 9999999999

Attribute:

Attribute_Label: RCH_CODE

Attribute_Definition:

Numeric code that uniquely identifies a reach in NHD, consisting of two parts: the first eight digits are the hydrologic unit code of the cataloging unit in which the reach is located; the last six digits are a sequentially, arbitrarily-assigned number. This field is only used for point and linear events and NHD waterbody shapefiles.

Attribute_Definition_Source: NHD

Attribute_Domain_Values:

Codeset_Domain:

Codeset_Name: NHD Reach codes

Codeset_Source: USGS NHD

Attribute:

Attribute_Label: RCH_DATE

Attribute_Definition:

Date that the reach code (Rch_code) was assigned, displayed as YYYYMMDD. This field is only used for point and linear events and NHD waterbody shapefiles.

Attribute_Definition_Source: NHD

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 19970101

Range_Domain_Maximum: 99991231

Attribute:

Attribute_Label: ATTR_PRG

Attribute_Definition: Indicates the attribute type or program being indexed.

Attribute_Definition_Source: WebRIT or NHD-RIT

Attribute_Domain_Values:

Codeset_Domain:

Codeset_Name: Alphanumeric

Codeset_Source: ASCII

Attribute:

Attribute_Label: ATTR_VAL

Attribute_Definition:

Value associated with the attribute program in the field Attr_prg.

Attribute_Definition_Source: User Input

Attribute_Domain_Values:

Codeset_Domain:

Codeset_Name: Alphanumeric

Codeset_Source: ASCII

Attribute:

Attribute_Label: ENTITY_ID

Attribute_Definition:

Identifier used to aggregate reaches into homogenous units. It is also used to link the event table to external data sources.

Attribute_Definition_Source: Water Quality Standards Database

Attribute_Domain_Values:

Codeset_Domain:

Codeset_Name: Alphanumeric

Codeset_Source: ASCII

Attribute:

Attribute_Label: STATE

Attribute_Definition:

State abbreviation according to the FIPS standard. The state used in this field is the geographic area (state) that the event is located in.

Attribute_Definition_Source: User input

Attribute_Domain_Values:

Codeset_Domain:

Codeset_Name: Federal Information Processing Standard

Codeset_Source: Two digit FIPS state code (character).

Attribute:

Attribute_Label: META_ID

Attribute_Definition: Link to the metadata table

Attribute_Definition_Source: System created number (WebRIT or NHD-RIT)

Attribute_Domain_Values:

Codeset_Domain:

Codeset_Name: Alphanumeric

Codeset_Source: ASCII

Attribute:

Attribute_Label: F_MEAS

Attribute_Definition:

Specifies the start point of the event along a route. This field is only used for linear events.

Attribute_Definition_Source: EPA's WebRIT or NHD-RIT

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 0

Range_Domain_Maximum: 200

Attribute:

Attribute_Label: T_MEAS

Attribute_Definition:

Specifies to end point of the event along a route. This field is only used for linear events.

Attribute_Definition_Source: EPA's WebRIT or NHD-RIT

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 0

Range_Domain_Maximum: 200

Attribute:

Attribute_Label: METERS

Attribute_Definition:

Length along the reach (in meters). This field is only used for linear events.

Attribute_Definition_Source: EPA's WebRIT or EPA's NHD-RIT

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 0

Range_Domain_Maximum: 40,000,000

Attribute:

Attribute_Label: SQ_KM

Attribute_Definition:

Area of the waterbody shape (in square kilometers). This field is only used for NHD waterbody shapefiles.

Attribute_Definition_Source: EPA's WebRIT or EPA's NHD-RIT

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 0

Range_Domain_Maximum: 40,000,000

Overview_Description:

Entity_and_Attribute_Detail_Citation:

The WebRIT online help and tutorial can be found at

<<http://www.epa.gov/waters/webrit/training.htm>>. The NHD Reach Indexing Tool

Users's Guide - October 2002 can be found at

<<http://www.epa.gov/waters/georef/UserGuide.pdf>>

Distribution_Information:

Distributor:

Contact_Information:

Contact_Person_Primary:

Contact_Person: Bill Kramer

Contact_Organization: US EPA Headquarters

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Address_Type: mailing address

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West

City: Washington

State_or_Province: DC

Postal_Code: 20460

Contact_Voice_Telephone: 202-566-0385

Contact_Electronic_Mail_Address: kramer.bill@epa.gov

Resource_Description: Downloadable Data

Standard_Order_Process:

Digital_Form:

Digital_Transfer_Information:

Metadata_Reference_Information:

Metadata_Date: 20040608

Metadata_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Person: Bill Kramer

Contact_Organization: US EPA Headquarters

Contact_Address:

Address_Type: mailing address

Address:

1200 Pennsylvania Avenue, NW Room 5233T, Mail Code 4305T EPA

West

City: Washington

State_or_Province: DC

Postal_Code: 20460

Contact_Voice_Telephone: 202-566-0385

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Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998

Metadata_Time_Convention: local time

Metadata_Extensions:

Online_Linkage: <<http://www.esri.com/metadata/esriprof80.html>>

Profile_Name: ESRI Metadata Profile

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