USGS COLLECTION PROTOCOLS <https://my.usgs.gov/confluence/display/biodata/Supported+sample+collection+methods+and+protocols>  
  
USGS IGEN USER-DEFINED INVERTEBRATES

<https://my.usgs.gov/confluence/display/biodata/User-specified+Invertebrate+%28IGEN%29+Data+Entry+Form#User-specifiedInvertebrate(IGEN)DataEntryForm-SelectingaSamplingMethodReference(required)>

Data Dictionary for BioData Data Sets at http://aquatic.biodata.usgs.gov

downloaded on: 20180921.0920

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FILE: 20180921.0920.Project

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BioData Retrieval BioData Project Data Set Description

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Information about the BioData Project. Each row represents one project.

Each biological community sample in BioData belongs to one and only one

project. Includes information on the entity (Science Center) that has

principal responsibility for data management decisions, and metadata about

data collected (Project abstract).

Column Definitions

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Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectName

Description: Project name assigned by the project owner

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: ProjectID

Description: Unique, system-created project identifier

Column: ScienceCenter

Description: Science Center that has principle responsibility for managing

and executing the project

Column: ProjectAbstract

Description: Description of the scope, objectives, design, and methods of

the project

Column: Program

Description: Local, regional, or national program project for which data

were originally collected

Column: Cooperators

Description: Agencies and organizations cooperating on project

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FILE: 20180921.0920.SampleInv

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BioData Retrieval Sample Inventory Data Set Description

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Information about samples including the data type, where and when the

sample was collected, and the collecting entity or project. Each row

represents one community or physical sample. These data may be useful for

identifying samples of interest for a user-defined data analysis or for a

sample inventory. Also may be basis for a list of samples for a manuscript

or for project management.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: DataSource

Description: Database from which the sample was obtained (i.e. BioData,

BioTDB)

Column: DataSourceID

Description: Sample ID from the original DataSource

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: AnalysisStatusCode

Description: Analysis status specifies the level of security of the sample

(i.e. - unrestricted, internal-use only, and proprietary)

Column: ProjectName

Description: Project name assigned by the project owner

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: ProjectAssignedSampleLabel

Description: A unique label or code assigned to the Sample by the Project

(unique within a Project)

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: SiteType

Description: Code for hydrologic setting of the site such as ST = stream,

ST-CA = canal, ST-DCH = ditch, LK = lake, WE = wetland, etc

Column: SiteTypeName

Description: Name of hydrologic setting of the site such as stream, canal,

ditch, lake, wetland, etc

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: SiteVisitSampleNumber

Description: Sample number component of the composite logical sample key

(SiteNumber + CollectionDate + SampleType + SiteVisitSampleNumber).

Assigned by project staff

Column: Collection Protocol

Description: Protocol used for field sample collection

Column: DataCategoryName

Description: General type (category) of data

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* FISH - NAWQA Fish

\* FGEN - User-specified Fish

\* FISH-W - NRSA Fish, wadable

\* FISH-B - NRSA Fish, boatable (Large wadable or Boatable/Raftable)

\* IRTH - NAWQA Invertebrate Targeted Habitat

\* IQMH - NAWQA Invertebrate Multiple Habitat

\* IGEN - User-specified Invertebrate

\* BERW - NRSA Invertebrate, wadable, reach-wide benthos

\* ILGB-W - NRSA Invertebrate, wadable, low-gradient benthos

\* BETB - NRSA Invertebrate, boatable, transect benthos

\* ARTH - NAWQA Periphyton Richest Targeted Habitat

\* ADTH - NAWQA Periphyton Depositional Targeted Habitat

\* AQMH - NAWQA Periphyton Multiple Habitat

\* APHY - NAWQA Phytoplankton

\* APER - NRSA composite periphyton, wadable/boatable

\* RHAB - NAWQA Reach Habitat

\* SCOND - Physical site condition observations

\* SPATH - Solar Pathfinder solar radiation

\* LINT - Water column light intensity

\* PHAB-W - NRSA Physical Habitat Characterization, wadable

Column: ReplicateType

Description: Code to indicate whether sample is a field-collection

replicate

Column: SMCOD

Description: NAWQA sample identification code used to identify each

container (and sample)

Column: USGSProgram

Description: National USGS program sample was collected for

Column: NAWQAStudyUnit

Description: 4-letter abbreviation for NAWQA study unit

Column: SamplingMethodReference

Description: Reference (typically a publication) that documents the field

methods and procedures used to collect the sample

Column: SamplingMethodReferenceLink

Description: URL to web site with documentation about the sample collection

method. The National Environment Methods Index (NEMI) site is the primary

documentation source for BioData

Column: SamplingApproach

Description: The way geomorphic channel unit(s) or macrohabitat(s) were

selected for invertebrate sampling

Domain:

\* Targeted habitat - Sampling locations were in specific, selected

habitat(s). Used by: USGS NAWQA (2002, 1993) Invertebrate Targeted

Habitat; US EPA Rapid Bioassessment Protocols for Wadeable Streams

and Rivers (1999) Single Habitat Approach

\* Transect-based - Sampling locations were sampled along cross-section

transects. Typically this is a multiple-habitat sampling approach.

Used by: USEPA National Rivers and Streams Assessment (NRSA) (2013,

2009) invertebrate sampling methods

\* Multihabitat - Sampling was distributed among multiple habitats. Used

by: USGS NAWQA (2002, 1993) Invertebrate Multiple Habitat; US EPA

Rapid Bioassessment Protocols for Wadeable Streams and Rivers (1999)

Multihabitat Approach

Column: SamplerPlacement

Description: How sampler placement was determined

Domain:

\* Representative/Best judgment - Biologist chooses spots which are

representative of combinations of conditions, such as depth,

substrate size, and location (forward, middle, back) within a chosen

habitat. Used by: USGS NAWQA (2002, 1993) Invertebrate Targeted

Habitat

\* Random - Each net placement determined by random numbers, often used

in conjunction with an implicit grid or length and width estimates

\* Systematic - Net placement determined by a pattern, often with the

beginning samplng point chosen at random. Examples: Left, center,

right positions along cross-section transects used in USEPA National

Rivers and Streams Assessment (NRSA) (2013, 2009) invertebrate

sampling methods; Traveling kick used in Canadian Aquatic

Biomonitoring Network (CABIN)(2012)

\* Other

Column: SampleInfoReviewStatus

Description: Code indicating review status and outcome

Column: TaxonomicResultReviewStatus\_S

Description: Number of taxonomic records that are presumed satisfactory

Column: TaxonomicResultReviewStatus\_I

Description: Number of taxonomic records that are awaiting review

Column: TaxonomicResultReviewStatus\_R

Description: Number of taxonomic records that have been reviewed and

accepted

Column: TaxonomicResultReviewStatus\_Q

Description: Number of taxonomic records that have been reviewed and

rejected

Column: DataReceivedFromLab

Description: The date when taxonomic results were loaded into database

Column: Comments

Description: Comments

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FILE: 20180921.0920.SiteInfo

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BioData Retrieval Site Information Data Set Description

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Information about locations (sites) where samples were collected. Each row

represents one site. Site data are from the USGS National Water Information

System (NWIS), and they include a unique identifier (Site number) and

descriptive information.

Column Definitions

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Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: AgencyCode

Description: Code designating agency responsible for site

Column: SiteWebCode

Description: Code indicating the status and availability of a record for

display on the World Wide Web

Column: State

Description: Name of State in which the site is located

Column: StateFIPSCode

Description: Federal Information Processing Standards (FIPS) code for the

state in which the site is located

Column: County

Description: Name of the county or county equivalent (parish, borought,

etc.) in which the USGS site is located

Column: CountyFIPSCode

Description: Federal Information Processing Standards (FIPS) code for the

county in which the site is located

Column: Latitude\_dd

Description: Latitude of the site location, in decimal degrees

Column: Longitude\_dd

Description: Longitude of the site location, in decimal degrees

Column: CoordinateDatum

Description: Datum of site location coordinates

Column: Elevation\_ft

Description: Elevation of site location, in feet

Column: VerticalDatum

Description: Vertical datum used for elevation measurement at site location

Column: HUCCode

Description: Hydrologic unit code (HUC) in which the site is located.

Hydrologic units are geographic areas representing part or all of a surface

drainage basin or distinct hydrologic feature and are delineated on the

State Hydrologic Unit Maps. Each hydrologic unit is identified by a unique

number (HUC), and a name. Additional information is available from the USGS

Hydrologic Unit web site http://water.usgs.gov/GIS/huc.html

<http://water.usgs.gov/GIS/huc.html>

Column: Ecoregion\_NA\_L1CODE

Description: Ecoregions of North America, Level I code. Ecoregions (or

Ecological Regions) denote areas of general similarity in ecosystems and in

the type, quality, and quantity of environmental resources. For more

information see U.S. Environmental Protection Agency Ecoregions of North

America web site http://www.epa.gov/wed/pages/ecoregions/na\_eco.htm

<http://www.epa.gov/wed/pages/ecoregions/na\_eco.htm>

Column: Ecoregion\_NA\_L1NAME

Description: Ecoregions of North America, Level I name. Ecoregions (or

Ecological Regions) denote areas of general similarity in ecosystems and in

the type, quality, and quantity of environmental resources. For more

information see U.S. Environmental Protection Agency Ecoregions of North

America web site http://www.epa.gov/wed/pages/ecoregions/na\_eco.htm

<http://www.epa.gov/wed/pages/ecoregions/na\_eco.htm>

Column: Ecoregion\_NA\_L2CODE

Description: Ecoregions of North America, Level II code. Ecoregions (or

Ecological Regions) denote areas of general similarity in ecosystems and in

the type, quality, and quantity of environmental resources. For more

information see U.S. Environmental Protection Agency Ecoregions of North

America web site http://www.epa.gov/wed/pages/ecoregions/na\_eco.htm

<http://www.epa.gov/wed/pages/ecoregions/na\_eco.htm>

Column: Ecoregion\_NA\_L2NAME

Description: Ecoregions of North America, Level II name. Ecoregions (or

Ecological Regions) denote areas of general similarity in ecosystems and in

the type, quality, and quantity of environmental resources. For more

information see U.S. Environmental Protection Agency Ecoregions of North

America web site http://www.epa.gov/wed/pages/ecoregions/na\_eco.htm

<http://www.epa.gov/wed/pages/ecoregions/na\_eco.htm>

Column: Ecoregion\_NA\_L3CODE

Description: Ecoregions of North America, Level III code. Ecoregions (or

Ecological Regions) denote areas of general similarity in ecosystems and in

the type, quality, and quantity of environmental resources. For more

information see U.S. Environmental Protection Agency Ecoregions of North

America web site http://www.epa.gov/wed/pages/ecoregions/na\_eco.htm

<http://www.epa.gov/wed/pages/ecoregions/na\_eco.htm>

Column: Ecoregion\_NA\_L3NAME

Description: Ecoregions of North America, Level III name. Ecoregions (or

Ecological Regions) denote areas of general similarity in ecosystems and in

the type, quality, and quantity of environmental resources. For more

information see U.S. Environmental Protection Agency Ecoregions of North

America web site http://www.epa.gov/wed/pages/ecoregions/na\_eco.htm

<http://www.epa.gov/wed/pages/ecoregions/na\_eco.htm>

Column: Ecoregion\_US\_L3CODE

Description: Ecoregions of the Continental United States, Level III code.

Ecoregions (or Ecological Regions) denote areas of general similarity in

ecosystems and in the type, quality, and quantity of environmental

resources. For more information see U.S. Environmental Protection Agency

Level III and IV Ecoregions of the Continental United States web site

http://www.epa.gov/wed/pages/ecoregions/level\_iii\_iv.htm

<http://www.epa.gov/wed/pages/ecoregions/level\_iii\_iv.htm>

Column: Ecoregion\_US\_L3NAME

Description: Ecoregions of the Continental United States, Level III name.

Ecoregions (or Ecological Regions) denote areas of general similarity in

ecosystems and in the type, quality, and quantity of environmental

resources. For more information see U.S. Environmental Protection Agency

Level III and IV Ecoregions of the Continental United States web site

http://www.epa.gov/wed/pages/ecoregions/level\_iii\_iv.htm

<http://www.epa.gov/wed/pages/ecoregions/level\_iii\_iv.htm>

Column: Ecoregion\_US\_L4CODE

Description: Description: Ecoregions of the Continental United States,

Level IV code. Ecoregions (or Ecological Regions) denote areas of general

similarity in ecosystems and in the type, quality, and quantity of

environmental resources. For more information see U.S. Environmental

Protection Agency Level III and IV Ecoregions of the Continental United

States web site http://www.epa.gov/wed/pages/ecoregions/level\_iii\_iv.htm

<http://www.epa.gov/wed/pages/ecoregions/level\_iii\_iv.htm>

Column: Ecoregion\_US\_L4NAME

Description: Ecoregions of the Continental United States, Level IV name.

Ecoregions (or Ecological Regions) denote areas of general similarity in

ecosystems and in the type, quality, and quantity of environmental

resources. For more information see U.S. Environmental Protection Agency

Level III and IV Ecoregions of the Continental United Statesweb site

http://www.epa.gov/wed/pages/ecoregions/level\_iii\_iv.htm

<http://www.epa.gov/wed/pages/ecoregions/level\_iii\_iv.htm>

Column: DrainageArea\_mi2

Description: Area enclosed by a topographic divide from which direct

surface runoff drains to the site, in square miles

Column: SiteType

Description: Code for hydrologic setting of the site such as ST = stream,

ST-CA = canal, ST-DCH = ditch, LK = lake, WE = wetland, etc

Column: SiteTypeName

Description: Name of hydrologic setting of the site such as stream, canal,

ditch, lake, wetland, etc

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FILE: 20180921.0920.StudyReach

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BioData Retrieval Study Reaches Data Set Description

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Information about the length of stream delineated (established) for

sampling purposes. Each row represents one study reach, which is uniquely

named for a BioData project and site. The physical location of the reach

may be described in one more ways, including relation to a reference point,

upstream and downstream boundaries, narrative, and geographic coordinates

(latitude and longitude). The reach is a principal sampling unit for

collecting (and analyzing) physical, chemical, and biological data.

Typically the reach is selected to be representative of the stream's

condition and the length sampled is usually proportional to the channel

dimensions (i.e. channel width), however, for a particular sampling program

the reach length may have a minimum or maximum value (domain range) or be a

fixed length within a certain range of values.

Column Definitions

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Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ReviewStatus

Description: Descriptive term or phrase for the status of a data record in

the BioData system: S = Presumed satisfactory; I = Awaiting review; R =

Reviewed and accepted; Q = Reviewed and rejected

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: ProjectName

Description: Project name assigned by the project owner

Column: StudyReachID

Description: An arbitrary, unique integer that identifies the reach

characterization sample, in BioTDB called Reach Sample ID

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: NarrativeDescription

Description: Narrative description of the study reach

Column: ReferenceLocDescription

Description: Narrative description of the study reach reference location

Column: ReferenceLocLatitude

Description: Latitude of reference location in decimal degrees

Column: ReferenceLocLongitude

Description: Longitude of reference location in decimal degrees

Column: ReferenceLocCoordDatum

Description: Datum used for coordinates of the reference location

Column: ReferenceLocCoordSource

Description: Source of reference location coordinates

Column: CurvilinearReachLength\_m\_Rmk

Description: Remark for curvilinear reach length

Column: CurvilinearReachLength\_m

Description: Curvilinear length of stream reach, in meters

Column: DistanceToUSBboundary\_m\_Rmk

Description: Remark for distance to upstream boundary marker field

Column: DistanceToUSBboundary\_m

Description: Curvilinear distance from reference location to upstream end

of reach in meters. Negative values indicate distance upstream of the

reference, positive values indicate distance downstream

Column: DistanceToDSBboundary\_m\_Rmk

Description: Remark for distance to downstream boundary marker field

Column: DistanceToDSBboundary\_m

Description: Curvilinear distance from reference location to downstream end

of reach in meters. Negative values indicate distance upstream of the

reference, positive values indicate distance downstream

Column: UpstreamBoundaryLatitude\_dd

Description: Latitude of upstream boundary of the study reach, in decimal

degrees

Column: UpstreamBoundaryLongitude\_dd

Description: Longitude of upstream boundary of the study reach, in decimal

degrees

Column: USBoundaryCoordinateDatum

Description: Datum used for recording latitude/longitude of the upstream

reach boundary

Column: USBoundaryMarkerLocation

Description: Location of upstream boundary marker

Column: USBoundaryMarkerDescription

Description: Narrative description of upstream boundary marker location

Column: DownstreamBoundaryLatitude\_dd

Description: Latitude of downstream boundary marker location in units,

decimal degrees

Column: DownstreamBoundaryLongitude\_dd

Description: Longitude of downstream boundary marker location in units,

decimal degrees

Column: DSBoundaryCoordinateDatum

Description: Datum of downstream boundary location coordinates

Column: DSBoundaryMarkerLocation

Description: Location of downstream boundary marker

Column: DSBoundaryMarkerDescription

Description: Narrative description of downstream boundary marker location

Column: ProjectStudyReachNotes

Description: Comments about the Project study reach

Column: DelineationDate

Description: Date that study reach was delineated in the field, when the

curvilinear reach length, reference and boundary locations were defined

(YYYYMMDD)

Column: EstablishmentMethod

Description: Protocol used to select location and length of study reach

Column: OtherEstablishmentMethod

Description: Other method or protocol used to select the location and

length of the study reach

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FILE: 20180921.0920.InvertSamp

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BioData Retrieval Invertebrate Sampling Information Data Set Description

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Information about invertebrate samples including the sample type and

collection protocol, where and when the sample was collected, and some

sampling details, for example, sampler, mesh size, and sampling area. Each

row represents a single community sample.

Column Definitions

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Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* IRTH - NAWQA Invertebrate Targeted Habitat

\* IQMH - NAWQA Invertebrate Multiple Habitat

\* IGEN - User-specified Invertebrate

\* BERW - NRSA Invertebrate, wadable, reach-wide benthos

\* ILGB-W - NRSA Invertebrate, wadable, low-gradient benthos

\* BETB - NRSA Invertebrate, boatable, transect benthos

Column: SiteVisitSampleNumber

Description: Sample number component of the composite logical sample key

(SiteNumber + CollectionDate + SampleType + SiteVisitSampleNumber).

Assigned by project staff

Column: ProjectAssignedSampleLabel

Description: A unique label or code assigned to the Sample by the Project

(unique within a Project)

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code used to identify each

container (and sample)

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: SamplingMethodReference

Description: Reference (typically a publication) that documents the field

methods and procedures used to collect the sample

Column: SamplingMethodReferenceLink

Description: URL to web site with documentation about the sample collection

method. The National Environment Methods Index (NEMI) site is the primary

documentation source for BioData

Column: SamplingApproach

Description: The way geomorphic channel unit(s) or macrohabitat(s) were

selected for invertebrate sampling

Domain:

\* Targeted habitat - Sampling locations were in specific, selected

habitat(s). Used by: USGS NAWQA (2002, 1993) Invertebrate Targeted

Habitat; US EPA Rapid Bioassessment Protocols for Wadeable Streams

and Rivers (1999) Single Habitat Approach

\* Transect-based - Sampling locations were sampled along cross-section

transects. Typically this is a multiple-habitat sampling approach.

Used by: USEPA National Rivers and Streams Assessment (NRSA) (2013,

2009) invertebrate sampling methods

\* Multihabitat - Sampling was distributed among multiple habitats. Used

by: USGS NAWQA (2002, 1993) Invertebrate Multiple Habitat; US EPA

Rapid Bioassessment Protocols for Wadeable Streams and Rivers (1999)

Multihabitat Approach

Column: SamplerPlacement

Description: How sampler placement was determined

Domain:

\* Representative/Best judgment - Biologist chooses spots which are

representative of combinations of conditions, such as depth,

substrate size, and location (forward, middle, back) within a chosen

habitat. Used by: USGS NAWQA (2002, 1993) Invertebrate Targeted

Habitat

\* Random - Each net placement determined by random numbers, often used

in conjunction with an implicit grid or length and width estimates

\* Systematic - Net placement determined by a pattern, often with the

beginning sampling point chosen at random. Examples: Left, center,

right positions along cross-section transects used in USEPA National

Rivers and Streams Assessment (NRSA) (2013, 2009) invertebrate

sampling methods; Traveling kick used in Canadian Aquatic

Biomonitoring Network (CABIN)(2012)

\* Other

Column: MeshSize\_um\_Rmk

Description: Remark code for MeshSize\_um. (< (less than); > (greater than);

e (estimated))

Column: MeshSize\_um

Description: Size of sieve and net mesh size used in sample processing, in

micrometers

Column: AreaSampTot\_m2\_Rmk

Description: Remark code for total area sampled

Column: AreaSampTot\_m2

Description: Total area sampled, in square meters

Column: NbrDiscreteCollectionComposite

Description: Number of discrete collections composited. Sample not

composited = 1

Column: SamplingDeviceCode

Description: Code indicating the type of sampling device used; multiple

devices are separated by a comma

Column: SamplingDeviceName

Description: Name of sampling device used; multiple device names are

separated by a comma

Column: EqualSamplingEffortProcedure

Description: Procedure used to allocate or distribute effort within the

reach for qualitative sample collection effort, sampling time, number of

samples, or area

Column: EqualSamplingEffortDetail

Description: Total sampling effort for the specified qualitative sample

collection procedure (see EqualSamplingEffortProcedure)

Column: MultihabitatSamplingApproach

Description: How the sampling effort was distributed among multiple

habitats: Proportional effort weighted by habitat type; Equal effort in

each habitat type, or; Other procedure

Column: MultihabitatSamplingEffort

Description: Quantification of the total multiple-habitat sampling effort,

by time, area, or number of samples (e.g. jabs, kicks)

Column: ElutriationMethod

Description: Method used to separate organic matter from inorganic debris

(elutriation) during sample field processing

Column: SampleSplittingMethod

Description: Method used to subdivide (split) sample during field

processing

Column: FieldSorting

Description: Indication of whether entire sample was sorted and picked at

field site. Preliminary separation of large/rare specimens in the field is

NOT considered field sorting

Column: GeomorphicChannelUnit

Description: The types of geomorphic channel units where sample was

collected

Column: ChannelBoundaries

Description: General areas within the channel where sample was collected

Column: ChannelFeatures

Description: Channel feature(s) where sample was taken

Column: SubstrateSampled

Description: The substrate types (channel features) sampled. Domain list

was created from several sources

Column: TypicalDepthSampledArea\_m

Description: Typical water column depth in the places invertebrates were

collected

Column: ArtificalSubstrateDeployDate

Description: Date (MM/DD/YYYY) that samplers were set out (deployed) in the

stream

Column: ArtificalSubstrateDeployTime

Description: Time (HH:MM) that samplers were set out in the stream.

Typically this value is entered only if it is important for the system

calculate Total Hours Deployed

Column: ArtificalSubstrateRetrieveDate

Description: Date (MM/DD/YYYY) that samplers were retrieved from the

stream. This is the same date as Sample Collection Date (CollectionDate)

Column: ArtificalSubstrateRetrieveTime

Description: Time (HH:MM) that samplers were retrieved from the stream.

Typically this value is entered only if it is important for the system

calculate Total Hours Deployed

Column: ArtificialSubstrateNumDeploy

Description: The number of artificial substrate samplers that were set out

in the stream

Column: ArtificialSubstrateNumRetrieve

Description: The number of artificial substrate samplers that were set out

in the stream. This is the same number as "Number of discrete collections

composited."

Column: ArtificSubstrTotalDaysDeploy

Description: The total number of days that artificial substrate samplers

were deployed in the stream. The calculation is

(ArtificalSubstrateRetrieveDate - ArtificalSubstrateDeployDate), in whole

days

Column: ArtificSubstrTotalHoursDeploy

Description: The total number of hours that artificial substrate samplers

were deployed in the stream. The BioData system calculates this value ONLY

if Deploy Time (ArtificalSubstrateDeployTime) AND Retrieve Time

(ArtificalSubstrateRetrieveTime) are entered. Calculation is

(ArtificalSubstrateRetrieveDate + ArtificalSubstrateRetrieveTime) -

(ArtificalSubstrateDeployDate + ArtificalSubstrateDeployTime), in hours

===================================

FILE: 20180921.0920.InvertResults

===================================

BioData Retrieval Invertebrate Results Data Set Description

-------------------------------------------------------------

Finest data detail for invertebrate community samples. Each row represents

a taxonomic identification and life stage for a given field or laboratory

sample component and taxonomic determination/assertion notes. Taxonomic

identifiers, abundance (for quantitative analyses), and various

identification details may be present. Sample identifying (type, location,

date) and taxonomic hierarchy information columns are included.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* IRTH - NAWQA Invertebrate Targeted Habitat

\* IQMH - NAWQA Invertebrate Multiple Habitat

\* IGEN - User-specified Invertebrate

\* BERW - NRSA Invertebrate, wadable, reach-wide benthos

\* ILGB-W - NRSA Invertebrate, wadable, low-gradient benthos

\* BETB - NRSA Invertebrate, boatable, transect benthos

Column: SiteVisitSampleNumber

Description: Sample number component of the composite logical sample key

(SiteNumber + CollectionDate + SampleType + SiteVisitSampleNumber).

Assigned by project staff

Column: ProjectAssignedSampleLabel

Description: A unique label or code assigned to the Sample by the Project

(unique within a Project)

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code that uniquely defines the

sample. The NAWQA-SMCOD is comprised of the following information

concatenated into a single code (NAWQA 4 digit study unit, 2 digit

collection month, 2 digit year, 3 characters representing sample type, 4

character sample number, bottle sequence number). For example:

WMIC0902ADE0008\*

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: LabOrderID

Description: Identification number that uniquely identifies lab order

Column: LabRecordID

Description: Unique record identification number generated and provide by

the analytical lab

Column: FieldComponent

Description: Sample component in which the specimens were found

Column: LabComponent

Description: A subset (component) of the sample created by the lab during

processing

Column: LabProcName

Description: Short name of the lab procedure used

Column: TaxonomicResultReviewStatus

Description: Data review status of taxonomic data record

Column: PublishedSortOrder

Description: Numeric code used to sort data according to taxonomic order

Column: BioDataTaxonName

Description: Taxon according to BioData current taxonomic system

Column: BioDataShortName

Description: Short, coded version of a TaxonName useful for column headers

in a table or when graphing

Column: BenchTaxonName

Description: The taxon name assigned by a taxonomist in the lab (at the

"bench") or in the field. May be a conditional, provisional, or operational

name. Serves as a root name for crosswalks to other taxonomic systems

Column: BenchTaxonNameReferenceCode

Description: Code for the reference having the taxonomic description of

BenchName. In combination with BenchName it forms a composite logical key

that uniquely identifies a Taxon Concept

Column: Density\_m2

Description: Areal density of organisms captured (Density\_m2 =

Abundance/AreaSampTot\_m2)

Column: Abundance

Description: Number of individuals captured

Column: AdjRawCount

Description: The number of individuals received by the lab. Derived from

the bench tally (RawCount) multiplied to account for lab subsampling

(LabSubsamplingRatio)

Column: RawCount

Description: The tally of individuals found at the bench level (for lab

data) or during field count

Column: TotAreaSampled\_m2

Description: Total area sampled, in square meters

Column: FieldSplitRatio

Description: Proportion of all of the material collected that was sent to

lab for analysis

Column: LabSubsamplingRatio

Description: The proportion of the shipped material that was actually

analyzed by the lab. Used to convert the bench level tally (RawCount) to

the number of individuals that were in the material sent to lab

(AdjRawCount)

Column: Lifestage

Description: Code that identifies life stage of organism(s). P, Pupae; A,

Adult; NULL, unknown

Column: UniqueTaxonFlag

Description: Flag indicating that taxon is unique within the context of the

specified lab order. Use when more than one instance of a taxon name is

used, but taxonomist determines that one instance is not the same taxon as

the other instances of that name in the data

Column: TargetLevelNotReachedReason

Description: The reason why a specimen could not be identified to the

specified target level

Column: Artifact

Description: Flag to identify result that is not supported by a specimen

thought to be alive at the time of collection. For example, an empty

mollusk shell

Column: BenchNotes

Description: Notes recorded by taxonomist regarding a specimen

Column: TaxonRecordSource

Description: Organization or entity that provided the taxon identification

and enumeration records; either a laboratory, science center, museum or

field identification

Column: IdentificationEntity

Description: Organization or entity that identified the specimens

Column: IdentificationDate

Description: Date that specimens were identified

Column: VerificationEntity

Description: Organization or entity that verified the taxonomic

identification; either a laboratory, science center, or museum or field

identification

Column: VerificationDate

Description: Date taxonomic identity was verified

Column: CurationEntity

Description: Organization or entity that is storing the specimen(s) for

long-term archival and curation

Column: CurationDate

Description: Date specimen was sent to or received by the Curation Entity

Column: ITIS\_TSN

Description: Integrated Taxonomic Information System (ITIS) Taxonomic

Serial Number (TSN). A TSN is a unique, persistent, non-intelligent

identifier for a scientific name in the context of ITIS <

http://www.itis.gov <http://www.itis.gov/> >

Column: ITIS\_MatchCode

Description: How well the PublishedTaxonName corresponds to the ITIS name <

http://www.itis.gov <http://www.itis.gov/> > represented by the ITIS\_TSN

Column: PublishedTaxonNameLevel

Description: The taxonomic rank (e.g. Phylum, Class, Order, Genus, etc.) of

the PublishedTaxonName

Column: PublishedTaxonName

Description: The nearest TaxonName that has been published following

International Commission of Zoological Nomenclature (ICZN) for inverts and

fish or International Code of Botanical Nomenclature (ICBN) for algae,

convention; authority is not included. Provisional names cannot be used in

this field

Column: PublishedTaxonNameAuthority

Description: Taxonomic authority for PublishedTaxonName

Column: ScientificName

Description: Complete name of the Taxon, with Authority

Column: Phylum

Description: Taxonomic Phylum name

Column: Subphylum

Description: Taxonomic subphylum name

Column: Class

Description: Taxonomic Class name

Column: Subclass

Description: Taxonomic subclass name

Column: Infraclass

Description: Taxonomic infraclass name

Column: Superorder

Description: Taxonomic Superorder name

Column: Order

Description: Taxonomic Order name

Column: Suborder

Description: Taxonomic suborder name

Column: Infraorder

Description: Taxonomic infraorder name

Column: Superfamily

Description: Taxonomic Superfamily name

Column: Family

Description: Taxonomic Family name

Column: Subfamily

Description: Taxonomic subfamily name

Column: Tribe

Description: Taxonomic Tribe name

Column: Genus

Description: Taxonomic Genus name

Column: Subgenus

Description: Taxonomic genus name

Column: Species

Description: Taxonomic species name

Column: Subspecies

Description: Taxonomic subspecies name

Column: TaxonVersionNumber

Description: Version of the taxonomic system represented in the retrieval

dataset. BioData maintains separate Taxonomic Systems for each community

(fish, invertebrate, algae) to manage taxonomic data

===================================

FILE: 20180921.0920.InvertResultsTaxa

===================================

BioData Retrieval Invertebrate Results Taxa List Data Set Description

-------------------------------------------------------------

List of taxa in the Invertebrate Results data set. Each row represents a

BenchTaxonName. The same taxonomic resolution as reported in the

Invertebrate Results data set.

Column Definitions

------------------

Column: PublishedSortOrder

Description: Numeric code used to sort data according to taxonomic order

Column: BioDataTaxonName

Description: Taxon according to BioData current taxonomic system

Column: BioDataShortName

Description: Short, coded version of a TaxonName useful for column headers

in a table or when graphing

Column: BenchTaxonName

Description: The taxon name assigned by a taxonomist in the lab (at the

"bench") or in the field. May be a conditional, provisional, or operational

name. Serves as a root name for crosswalks to other taxonomic systems

Column: BenchTaxonNameReferenceCode

Description: Code for the reference having the taxonomic description of

BenchName. In combination with BenchName it forms a composite logical key

that uniquely identifies a Taxon Concept

Column: ITIS\_TSN

Description: Integrated Taxonomic Information System (ITIS) Taxonomic

Serial Number (TSN). A TSN is a unique, persistent, non-intelligent

identifier for a scientific name in the context of ITIS <

http://www.itis.gov <http://www.itis.gov/> >

Column: ITIS\_MatchCode

Description: How well the PublishedTaxonName corresponds to the ITIS name <

http://www.itis.gov <http://www.itis.gov/> > represented by the ITIS\_TSN

Column: PublishedTaxonNameLevel

Description: The taxonomic rank (e.g. Phylum, Class, Order, Genus, etc.) of

the PublishedTaxonName

Column: PublishedTaxonName

Description: The "nearest" TaxonName that has been published following

International Commission of Zoological Nomenclature (ICZN) for inverts and

fish or International Code of Botanical Nomenclature (ICBN) for algae,

convention; authority is not included. Provisional names cannot be used in

this field

Column: PublishedTaxonNameAuthority

Description: Taxonomic authority for PublishedTaxonName

Column: ScientificName

Description: Complete name of the Taxon, with Authority

Column: Phylum

Description: Taxonomic Phylum name

Column: Subphylum

Description: Taxonomic subphylum name

Column: Class

Description: Taxonomic Class name

Column: Subclass

Description: Taxonomic subclass name

Column: Infraclass

Description: Taxonomic infraclass name

Column: Superorder

Description: Taxonomic Superorder name

Column: Order

Description: Taxonomic Order name

Column: Suborder

Description: Taxonomic suborder name

Column: Infraorder

Description: Taxonomic infraorder name

Column: Superfamily

Description: Taxonomic Superfamily name

Column: Family

Description: Taxonomic Family name

Column: Subfamily

Description: Taxonomic subfamily name

Column: Tribe

Description: Taxonomic Tribe name

Column: Genus

Description: Taxonomic Genus name

Column: Subgenus

Description: Taxonomic genus name

Column: Species

Description: Taxonomic species name

Column: Subspecies

Description: Taxonomic subspecies name

Column: TaxonVersionNumber

Description: Version of the taxonomic system represented in the retrieval

dataset. BioData maintains separate Taxonomic Systems for each community

(fish, invertebrate, algae) to manage taxonomic data

===================================

FILE: 20180921.0920.InvertMicro

===================================

BioData Retrieval Invertebrate Collection Point Microhabitat Data Set

Description

-------------------------------------------------------------

Data describing the physical microhabitat at sampling locations (collection

points) where discrete collections are made and later composited to form an

invertebrate sample. Each row represents one collection point (sampling

location), which is denoted by a location number or transect identifier.

Samples are usually represented by multiple rows. Data may include dominant

substrate, habitat type, water column depth and current velocity.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* IRTH - NAWQA Invertebrate Targeted Habitat

\* IQMH - NAWQA Invertebrate Multiple Habitat

\* IGEN - User-specified Invertebrate

\* BERW - NRSA Invertebrate, wadable, reach-wide benthos

\* ILGB-W - NRSA Invertebrate, wadable, low-gradient benthos

\* BETB - NRSA Invertebrate, boatable, transect benthos

Column: SiteVisitSampleNumber

Description: Sample number component of the composite logical sample key

(SiteNumber + CollectionDate + SampleType + SiteVisitSampleNumber).

Assigned by project staff

Column: ProjectAssignedSampleLabel

Description: A unique label or code assigned to the Sample by the Project

(unique within a Project)

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code that uniquely defines the

sample. The NAWQA-SMCOD is comprised of the following information

concatenated into a single code (NAWQA 4 digit study unit, 2 digit

collection month, 2 digit year, 3 characters representing sample type, 4

character sample number, bottle sequence number). For example:

WMIC0902ADE0008\*

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: LocationNumber

Description: Number used to identify location of macroinvertebrate

collection

Column: ArtificalSubstrate\_event

Description: Indication of whether the measurements on this data row were

made when the artificial substrate sampler was deployed or retrieved

Column: WaterColumnDepth\_m\_Rmk

Description: Remark code for WaterColumnDepth\_m (< (less than); > (greater

than); e (estimated))

Column: WaterColumnDepth\_m

Description: Water depth from surface to bottom, in meters

Column: SurfaceToSamplerDepth\_m\_Rmk

Description: Remark code for SurfaceToSamplerDepth\_m (< (less than); >

(greater than); e (estimated))

Column: SurfaceToSamplerDepth\_m

Description: Depth from water surface to point where the scollection was

made, in meters

Column: MnWaterColumnVelocity\_ft\_s\_Rmk

Description: Remark code for mean current velocity at the sampling location

(< (less than); > (greater than); e (estimated))

Column: MnWaterColumnVelocity\_ft\_s

Description: Mean current velocity of the water column at the sampling

location, in feet per second

Column: VelocitySamplerDepth\_ft\_s\_Rmk

Description: Remark code for VelocityAtSamplerDepth\_ft\_s (< (less than); >

(greater than); e (estimated))

Column: VelocityAtSamplerDepth\_ft\_s

Description: Current velocity at the point where the collection was made,

in feet per second

Column: VelocityMeter

Description: Type of velocity meter used for measurement

Column: NAWQADominantSubstrate

Description: Dominant substrate at the sampling location - NAWQA protocol

Column: NAWQACodominantSubstrate

Description: Co-dominant substrate at the sampling location - NAWQA

protocol

Column: Embeddedness\_pct

Description: Percentage of the surface area of larger substrate particles

(boulder, cobble, or gravel) that is surrounded or covered by fine grained

sediment (sand, or finer). Embeddedness is 0% if there are no fines

surrounding or covering the larger particles, and is 100% if they are

completely covered by sand or finer substrate

Column: TransectLetter

Description: NSRA Invertebrate transect sequence letter

Column: NRSA\_DominantSubstrate

Description: Dominant substrate at the sampling location - NRSA sampling

protocol

Column: NRSA\_ChannelHabitat

Description: Channel habitat at transect where sample was collected (NRSA

wadeable reach-wide benthos protocol)

Column: NRSA\_TransectLocationLCR

Description: Location on transect where sample was collected (L, Left; C,

center; R, right). NRSA low-gradient benthos sampling protocol

Column: NRSA\_DominantEdge

Description: Dominant channel-edge type (NRSA low-gradient benthos

protocol)

Column: NRSA\_DominantHabitat

Description: Dominant habitat type category identified within the plot (C

(coarse substrate/LWD), F (organic fine mud/sand), L (leaf pack), M

(macrophyte beds), OT (other))

Column: NRSA\_SecondaryHabitat

Description: Secondary habitat type category identified within the plot (C

(coarse substrate/LWD), F (organic fine mud/sand), L (leaf pack), M

(macrophyte beds), OT (other))

===================================

FILE: 20180921.0920.InvertSnagMicro

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BioData Retrieval Invertebrate Snag Microhabitat Data Set Description

-------------------------------------------------------------

Data describing the the "snag" (branch, wood) substrates where discrete

collections are made and later composited to form an invertebrate sample.

Each row represents one snag, which is denoted by snag number and a

location number. Data are typically used in conjunction with collection

point microhabitat, and a single invertebrate sample is typically

represented in multiple rows. Data may include snag length and diameter,

and depth and velocity at the snag.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* IRTH - NAWQA Invertebrate Targeted Habitat

\* IQMH - NAWQA Invertebrate Multiple Habitat

\* IGEN - User-specified Invertebrate

\* BERW - NRSA Invertebrate, wadable, reach-wide benthos

\* ILGB-W - NRSA Invertebrate, wadable, low-gradient benthos

\* BETB - NRSA Invertebrate, boatable, transect benthos

Column: SiteVisitSampleNumber

Description: Sample number component of the composite logical sample key

(SiteNumber + CollectionDate + SampleType + SiteVisitSampleNumber).

Assigned by project staff

Column: ProjectAssignedSampleLabel

Description: A unique label or code assigned to the Sample by the Project

(unique within a Project)

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code used to identify each

container (and sample)

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: LocationNumber

Description: Number used to identify location of macroinvertebrate

collection

Column: SnagNumber

Description: Unique number (integer) of the snag (branch) sampled. Expect a

snag for each of the discrete collections constituting composite sample

Column: SnagLength\_mm\_Rmk

Description: Remark code for invertebrate SnagLength\_mm (< (less than); >

(greater than); e (estimated))

Column: SnagLength\_mm

Description: Length of woody snag sampled, in millimeters

Column: SnagDiameter\_mm\_Rmk

Description: Remark code for invertebrate SnagDiameter\_mm (< (less than); >

(greater than); e (estimated))

Column: SnagDiameter\_mm

Description: Diameter of woody snag sampled, in millimeters

Column: SurfaceToSnagDepth\_m\_Rmk

Description: Remark code for SurfaceToSnagDepth\_m

Column: SurfaceToSnagDepth\_m

Description: Depth from water surface to snag that was collected, in meters

Column: VelocityAtSnag\_ft\_sec\_Rmk

Description: Remark code for VelocityAtSnag\_ft\_sec

Column: VelocityAtSnag\_ft\_sec

Description: Current velocity at the point where the snag was collected, in

feet per second

===================================

FILE: 20180921.0920.CPPebbleCnt

===================================

BioData Retrieval Invertebrate Collection Point Pebble Count Data Set

Description

-------------------------------------------------------------

Data describing the particle size where discrete collections are made and

later composited to form an invertebrate sample. Each row represents one

sampling location which is denoted by a location number. Data are comprised

of counts (tallies) of stream-substrate particles (typically twenty per

location) in particle-size categories.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* IRTH - NAWQA Invertebrate Targeted Habitat

\* IQMH - NAWQA Invertebrate Multiple Habitat

\* IGEN - User-specified Invertebrate

\* BERW - NRSA Invertebrate, wadable, reach-wide benthos

\* ILGB-W - NRSA Invertebrate, wadable, low-gradient benthos

\* BETB - NRSA Invertebrate, boatable, transect benthos

Column: SiteVisitSampleNumber

Description: Sample number component of the composite logical sample key

(SiteNumber + CollectionDate + SampleType + SiteVisitSampleNumber).

Assigned by project staff

Column: ProjectAssignedSampleLabel

Description: A unique label or code assigned to the Sample by the Project

(unique within a Project)

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code that uniquely defines the

sample. The NAWQA-SMCOD is comprised of the following information

concatenated into a single code (NAWQA 4 digit study unit, 2 digit

collection month, 2 digit year, 3 characters representing sample type, 4

character sample number, bottle sequence number). For example:

WMIC0902ADE0008\*

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: LocationNumber

Description: Number used to identify location of pebble count measurement

Column: 1\_SmoothBedrock

Description: The number of particles classified as smooth bedrock,

concrete, or hardpan

Column: 2\_SiltClay

Description: The number of particles classified as

Silt/clay/marl/muck/organic detritus

Column: 3\_Sand

Description: The number of particles classified as sand (> 0.062 - 2 mm)

Column: 4\_FineMedGravel

Description: The number of particles classified as fine/medium gravel (> 2

- 16 mm)

Column: 5\_CoarseGravel

Description: The number of particles classified as coarse gravel (> 16 - 32

mm)

Column: 6\_VeryCoarseGravel

Description: The number of particles classified as very coarse gravel (> 32

- 64 mm)

Column: 7\_SmallCobble

Description: The number of particles classified as small cobble (> 64 - 128

mm)

Column: 8\_LargeCobble

Description: The number of particles classified as large cobble (> 128 -

256 mm)

Column: 9\_SmallBoulder

Description: The number of particles classified as small boulder (> 256 -

512 mm)

Column: 10\_LargeBoulder

Description: The number of particles classified as large boulder, irregular

bedrock, irregular hardpan or irregular artificial surface (> 512 mm)

===================================

FILE: 20180921.0920.InvertInstrHabType

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BioData Retrieval Invertebrate Instream Habitat Types Sampled Data Set

Description

-------------------------------------------------------------

Samplers used and habitat types encountered during collection of the

composited invertebrate samples. Fifty-one habitat types are defined by

combinations of Geomorphic Channel Unit, Channel Boundary, and Channel

Feature. Each row represents on invertebrate sample. Data include

presence/absence of and samplers used for each habitat type.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* IRTH - NAWQA Invertebrate Targeted Habitat

\* IQMH - NAWQA Invertebrate Multiple Habitat

\* IGEN - User-specified Invertebrate

\* BERW - NRSA Invertebrate, wadable, reach-wide benthos

\* ILGB-W - NRSA Invertebrate, wadable, low-gradient benthos

\* BETB - NRSA Invertebrate, boatable, transect benthos

Column: SiteVisitSampleNumber

Description: Sample number component of the composite logical sample key

(SiteNumber + CollectionDate + SampleType + SiteVisitSampleNumber).

Assigned by project staff

Column: ProjectAssignedSampleLabel

Description: A unique label or code assigned to the Sample by the Project

(unique within a Project)

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code that uniquely defines the

sample. The NAWQA-SMCOD is comprised of the following information

concatenated into a single code (NAWQA 4 digit study unit, 2 digit

collection month, 2 digit year, 3 characters representing sample type, 4

character sample number, bottle sequence number). For example:

WMIC0902ADE0008\*

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: SmplrPOCMBA

Description: Sampler(s) used in a pool habitat, channel margin, bar

Column: SmplrPOCMMACB

Description: Sampler(s) used in a pool habitat, channel margin, macrophyte

bed

Column: SmplrPOCMMB

Description: Sampler(s) used in a pool habitat, channel margin,

manufactured bed

Column: SmplrPOCMNB

Description: Sampler(s) used in a pool habitat, channel margin, natural bed

Column: SmplrPOCMSL

Description: Sampler(s) used in a pool habitat, channel margin, slough

Column: SmplrPOCMWS

Description: Sampler(s) used in a pool habitat, channel margin, woody snag

Column: SmplrPOIMBA

Description: Sampler(s) used in a pool habitat, island margin, bar

Column: SmplrPOIMMACB

Description: Sampler(s) used in a pool habitat, island margin, macrophyte

bed

Column: SmplrPOIMMB

Description: Sampler(s) used in a pool habitat, island margin, manufactured

bed

Column: SmplrPOIMNB

Description: Sampler(s) used in a pool habitat, island margin, natural bed

Column: SmplrPOIMSL

Description: Sampler(s) used in a pool habitat, island margin, slough

Column: SmplrPOIMWS

Description: Sampler(s) used in a pool habitat, island margin, woody snag

Column: SmplrPOMCBA

Description: Sampler(s) used in a pool habitat, island margin, bar

Column: SmplrPOMCMACB

Description: Sampler(s) used in a pool habitat, main channel, macrophyte

bed

Column: SmplrPOMCMB

Description: Sampler(s) used in a pool habitat, main channel, manufactured

bed

Column: SmplrPOMCNB

Description: Sampler(s) used in a pool habitat, main channel, natural bed

Column: SmplrPOMCWS

Description: Sampler(s) used in a pool habitat, main channel, woody snag

Column: SmplrRICMBA

Description: Sampler(s) used in a riffle habitat, channel margin, bar

Column: SmplrRICMMACB

Description: Sampler(s) used in a riffle habitat, channel margin,

macrophyte bed

Column: SmplrRICMMB

Description: Sampler(s) used in a riffle habitat, channel margin,

manufactured bed

Column: SmplrRICMNB

Description: Sampler(s) used in a riffle habitat, channel margin, natural

bed

Column: SmplrRICMSL

Description: Sampler(s) used in a riffle habitat, channel margin, slough

Column: SmplrRICMWS

Description: Sampler(s) used in a riffle habitat, channel margin, woody

snag

Column: SmplrRIIMBA

Description: Sampler(s) used in a riffle habitat, island margin, bar

Column: SmplrRIIMMACB

Description: Sampler(s) used in a riffle habitat, island margin, macrophyte

bed

Column: SmplrRIIMMB

Description: Sampler(s) used in a riffle habitat, island margin,

manufactured bed

Column: SmplrRIIMNB

Description: Sampler(s) used in a riffle habitat, island margin, natural

bed

Column: SmplrRIIMSL

Description: Sampler(s) used in a riffle habitat, island margin, slough

Column: SmplrRIIMWS

Description: Sampler(s) used in a riffle habitat, island margin, woody snag

Column: SmplrRIMCBA

Description: Sampler(s) used in a riffle habitat, main channel, bar

Column: SmplrRIMCMACB

Description: Sampler(s) used in a riffle habitat, main channel, macrophyte

bed

Column: SmplrRIMCMB

Description: Sampler(s) used in a riffle habitat, main channel,

manufactured bed

Column: SmplrRIMCNB

Description: Sampler(s) used in a riffle habitat, main channel, natural bed

Column: SmplrRIMCWS

Description: Sampler(s) used in a riffle habitat, main channel, woody snag

Column: SmplrRUCMBA

Description: Sampler(s) used in a run habitat, channel margin, bar

Column: SmplrRUCMMACB

Description: Sampler(s) used in a run habitat, channel margin, macrophyte

bed

Column: SmplrRUCMMB

Description: Sampler(s) used in a run habitat, channel margin, manufactured

bed

Column: SmplrRUCMNB

Description: Sampler(s) used in a run habitat, channel margin, natural bed

Column: SmplrRUCMSL

Description: Sampler(s) used in a run habitat, channel margin, slough

Column: SmplrRUCMWS

Description: Sampler(s) used in a run habitat, channel margin, woody snag

Column: SmplrRUIMBA

Description: Sampler(s) used in a run habitat, island margin, bar

Column: SmplrRUIMMACB

Description: Sampler(s) used in a run habitat, island margin, macrophyte

bed

Column: SmplrRUIMMB

Description: Sampler(s) used in a run habitat, island margin, manufactured

bed

Column: SmplrRUIMNB

Description: Sampler(s) used in a run habitat, island margin, natural bed

Column: SmplrRUIMSL

Description: Sampler(s) used in a run habitat, island margin, slough

Column: SmplrRUIMWS

Description: Sampler(s) used in a run habitat, island margin, woody snag

Column: SmplrRUMCBA

Description: Sampler(s) used in a run habitat, main channel, bar

Column: SmplrRUMCMACB

Description: Sampler(s) used in a run habitat, main channel, macrophyte bed

Column: SmplrRUMCMB

Description: Sampler(s) used in a run habitat, main channel, manufactured

bed

Column: SmplrRUMCNB

Description: Sampler(s) used in a run habitat, main channel, natural bed

Column: SmplrRUMCWS

Description: Sampler(s) used in a run habitat, main channel, woody snag

Column: SmplrNOLOCATE

Description: Sampler(s)used in an unspecified channel location

===================================

FILE: 20180921.0920.SiteCond

===================================

BioData Retrieval Site Conditions Data Set Description

-------------------------------------------------------------

The physical conditions associated with a visit to a location on a single

day. Each row represents one set of observations. The data concern the

setting under which sampling takes place and are typically associated one

or more field samples collected for the same BioData Project, Site, Reach,

and Date. Data may include observations of the weather and water, and

assessments of watershed activities and other site characteristics.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* SCOND - Physical site condition observations

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: SiteConditionsComments

Description: Comments on site conditions at time of sampling

Column: Clouds

Description: Percent (%) cloud cover at time of sampling

Column: Wind

Description: Wind conditions at time of sampling

Domain:

\* Calm

\* Light

\* Moderate

\* Gusty

Column: Precipitation

Description: Type of precipitation at time of sampling

Domain:

\* None

\* Rain

\* Sleet

\* Snow

Column: PrecipitationIntensity

Description: Intensity of precipitation at time of sampling

Domain:

\* N/A

\* Light

\* Moderate

\* Heavy

Column: WeatherComments

Description: Comments about weather at time of sampling

Column: RiparianShading

Description: Riparian shading at sampling site

Domain:

\* Shaded

\* Partial

\* Full Sun

Column: WaterClarity

Description: Water clarity at sampling site

Domain:

\* Clear

\* Slightly Turbid

\* Turbid

\* Very Turbid

Column: WaterColor

Description: Water color at sampling site

Domain:

\* Black

\* Brown

\* Clear

\* Dark Green

\* Light Green

\* Yellow

Column: RiparianWaterComments

Description: Comments about site conditions riparian shading, water color,

and water clarity of water

Column: StreamStage\_1\_ft\_Rmk

Description: Remark code for first stream stage measurement (StreamStage\_1)

Column: StreamStage\_1\_ft

Description: First stream stage measurement recorded, in feet

Column: StreamStageTime\_1

Description: Time of first stream stage measurement (24 hour time, HH:MM)

Column: StreamStageMethod\_1

Description: Method used to record stream stage for first measurement

Column: InstDischarge\_1\_ft3\_Rmk

Description: Remark code for first instantaneous discharge measurement

(InstantaneousDischarge\_1)

Column: InstDischarge\_1\_ft3

Description: First stream instantaneous discharge measurement, in cubic

feet per second (ft^3/s)

Column: InstDischargeTime\_1

Description: Time of first discharge measurement (24 hour time, HH:MM)

Column: InstDischargeMethod\_1

Description: Method used to record instantaneous discharge for first

measurement (InstantaneousDischarge\_1)

Column: StreamStage\_2\_ft\_Rmk

Description: Remark code for second stream stage measurement

(StreamStage\_2)

Column: StreamStage\_2\_ft

Description: Second stream stage measurement recorded in feet

Column: StreamStageTime\_2

Description: Time of second discharge measurement (24 hour time, HH:MM)

Column: StreamStageMethod\_2

Description: Method used to record stream stage for second measurement

Column: InstDischarge\_2\_ft3\_Rmk

Description: Remark code for second instantaneous discharge measurement

(InstantaneousDischarge\_2)

Column: InstDischarge\_2\_ft3

Description: Second stream instantaneous discharge measurement recorded in

cubic feet per second (ft^3/s)

Column: InstDischargeTime\_2

Description: Time of second discharge measurement (24 hour time, HH:MM)

Column: InstDischargeMethod\_2

Description: Method used to record instantaneous discharge for second

measurement

Column: Residences

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: MaintainedLawns

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: Construction

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: Pipes\_Drains

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: Dumping

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: Roads

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: Bridge\_Culverts

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: SewageTreatment

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: HikingTrails

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: Parks\_Campgrounds

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: PrimitiveParks\_Campgrounds

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: Trash\_Litter

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: SurfaceFilms

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: Cropland

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: Pasture

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: LivestockUse

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: Orchards

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: Poultry

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: IrrigationEquipment

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: WaterWithdrawal

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: IndustrialPlants

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: Mines\_Quarries

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: Oil\_GasWells

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: PowerPlants

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: Logging

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: EvidenceOfFire

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: Odors

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: Commercial

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: Liming

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: ChemicalTreatment

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: AnglingPressure

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: Dredging

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: Channelization

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: WaterLevelFluctuations

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: FishStocking

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: Dams

Description: NC (not characterized); None; L (low); M (medium); H (high)

Column: WaterbodyDisturbance

Description: NC (not characterized); integers 1-5, where 1=highly disturbed

and 5=pristine

Column: WaterbodyAppeal

Description: NC (not characterized); integers 1-5, where 1=highly disturbed

and 5=pristine

Column: BeaverSigns

Description: NC (not characterized); Absent; Rare; Common

Column: BeaverFlowModifications

Description: NC (not characterized); None; Minor; Major

Column: DominantLandUse

Description: NC (not characterized); Forest; Agriculture; Range; Urban;

Suburban/Town

Column: DominantAgeClass

Description: NC (not characterized); 0-25 Years; 25-75 Years; >75 Years

Column: GeneralAssessment

Description: Comment field

Column: InvasiveSpecies

Description: A semi-colon separated list of invasive species found at the

sampling site, including the confidence in identification (Low, High), the

prevalence (Dominant, Common, Sparse), and comments separated by commas

===================================

FILE: 20180921.0920.FishSamp

===================================

BioData Retrieval Fish Sampling Information Data Set Description

-------------------------------------------------------------

Information about fish samples including the sample type and collection

protocol, where and when the sample was collected, and some sampling

details, for example, reach length sampled and a list of the collection

gear. Each row represents a single community sample.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* FISH - NAWQA Fish

\* FGEN - User-specified Fish

\* FISH-W - NRSA Fish, wadable

\* FISH-B - NRSA Fish, boatable (Large wadable or Boatable/Raftable)

Column: SiteVisitSampleNumber

Description: Sample number component of the composite logical sample key

(SiteNumber + CollectionDate + SampleType + SiteVisitSampleNumber).

Assigned by project staff

Column: ProjectAssignedSampleLabel

Description: A unique label or code assigned to the Sample by the Project

(unique within a Project)

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code that uniquely defines the

sample. The NAWQA-SMCOD is comprised of the following information

concatenated into a single code (NAWQA 4 digit study unit, 2 digit

collection month, 2 digit year, 3 characters representing sample type, 4

character sample number, bottle sequence number). For example:

WMIC0902ADE0008\*

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: ReachLengthFished\_Rmk

Description: Remark that modifies ReachLengthFished

Column: ReachLengthFished\_m

Description: Length of stream (distance along thalweg) covered by fishing

activities conducted for this sample. Typically this will be equal to the

curvilinear reach length of the assigned study reach

Column: WaterVisibility

Description: Water clarity description

Column: WaterTemperature\_C

Description: Temperature, water, unfiltered, degrees centigrade

Column: SpecificConductivity\_¬µS

Description: Specific conductance, water, unfiltered, 25 deg c, field,

microsiemens per centimeter

Column: NRSAReachesFished

Description: Number of subreaches sampled for fish community

Column: NRSAMultipleMethodsUsed

Description: Indication if multiple methods were used in sampling fish

community

Column: GearUsed

Description: Type of equipment used to collect fish sample

Column: SamplingMethodReference

Description: Reference (typically a publication) that documents the field

methods and procedures used to collect the sample

Column: SamplingMethodReferenceLink

Description: URL to web site with documentation about the sample collection

method. The National Environment Methods Index (NEMI) site is the primary

documentation source for BioData

Column: SamplingTarget

Description: The goal or target of the fish capture methods for this

sample. "Sampling Target Comments" may provide additional detail

Domain:

\* Entire fish assemblage

\* Taxa specific - Goal is to evaluate targeted species, for example,

sport fish or endangered species

\* Other (Describe)

Column: SamplingTargetComments

Description: Additional detail about the sampling goal or target of the

fish capture methods

Column: BlockNet\_PhysicalBarrier\_US (Block Net or Physical Barrier

Upstream)

Description: Indication of block nets used or physical barriers (such as

shallow riffles) present at the upstream boundary during electrofishing to

prevent fish from entering or leaving the sampling area

Column: BlockNet\_PhysicalBarrier\_DS (Block Net or Physical Barrier

Downstream)

Description: Indication of block nets used or physical barriers (such as

shallow riffles) present at the downstream boundary during electrofishing

to prevent fish from entering or leaving the sampling area

===================================

FILE: 20180921.0920.FishMethodAndSubreachInfo

===================================

BioData Retrieval Fish Methods And Subreaches Data Set Description

-------------------------------------------------------------

Information about all methods (gear, pass, subreach) used to collect a fish

community sample. A sample may have been collected using more than one

method and therefore may be represented by more than one row. Data include

sampling gear, and pass or subreach, and electrofishing and seining

collection details that document the sampling event.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* FISH - NAWQA Fish

\* FGEN - User-specified Fish

\* FISH-W - NRSA Fish, wadable

\* FISH-B - NRSA Fish, boatable (Large wadable or Boatable/Raftable)

Column: SiteVisitSampleNumber

Description: Sample number component of the composite logical sample key

(SiteNumber + CollectionDate + SampleType + SiteVisitSampleNumber).

Assigned by project staff

Column: ProjectAssignedSampleLabel

Description: A unique label or code assigned to the Sample by the Project

(unique within a Project)

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code that uniquely defines the

sample. The NAWQA-SMCOD is comprised of the following information

concatenated into a single code (NAWQA 4 digit study unit, 2 digit

collection month, 2 digit year, 3 characters representing sample type, 4

character sample number, bottle sequence number). For example:

WMIC0902ADE0008\*

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: MethodCode

Description: Code that identifies method used to collect the specimen(s).

Electrofishing MethodCodes indicate gear type used and pass number or

subreach (e.g. Backpack-P1)

Column: Gear

Description: Type of equipment used to collect fish sample

Column: BeginningTime

Description: Time when fish sampling begins; for electrofishing this is the

time when sampling crew enters the water

Column: EndingTime

Description: Time when fish sampling ends; for electrofishing this is the

time when sampling crew leaves the water

Column: Comments

Description: Sampling comments

Column: Pass

Description: Number of passes sampled within a sampling reach.

Electrofishing may be conducted in separate efforts or passes through the

reach. The fish collected from each pass are usually processed separately

Column: ChannelCoverage

Description: General region, section, or area of the channel sampled

Column: DirectionFished

Description: Electrofishing direction relative to streamflow

Column: Model

Description: Model of electrofishing gear used for fish sampling

Column: OutputVoltage

Description: Voltage set on electrofisher

Column: SecondsShockTime

Description: Actual time that electrofisher is on; the time electricity is

being transmitted to the water

Column: NumberSeineHauls

Description: Number of times a seine was set and retrieved from the water

Column: NumberStationarySetsKicks

Description: Number of times a stationary kick-seine method was used

Column: SeineMeshSize\_mm

Description: Mesh size of seine, in millimeters

Column: SeineLength\_m

Description: Length of seine that was used, in meters

Column: NumberSnorkelingTransects

Description: Number of transects snorkeled within a reach

Column: NumberNetters

Description: Number of netters assisting in electrofishing

Column: AnodesNumber

Description: Number of anodes used

Column: AnodesDiameter\_In

Description: Electrofisher anode diameter, inches

Column: WaveForm

Description: Electrical wave form used

Column: Watts

Description: Number of watts of electricity used in electrofishing effort;

energy per unit of time measured in watts; Watts = Amps X Volts; likely

values: 400 for Backpack (BP); 2500 or 5000 for Boat/Raft

Column: PulseRate\_Hz

Description: The frequency of the electric pulse, in hertz. 1 Hz = 1 cycle

per second

Column: Amps

Description: Average number of amps of output current

Column: PulseWidth\_ms

Description: Percent of the time pulse of electricity is transmitted

Column: TotalFishingTime\_min

Description: Beginning time minus ending time

Column: AvgSubreachLength\_m

Description: Average length of the subreaches sampled

Column: Subreach

Description: Project-assigned name of subreach sampled

Column: SubreachShockTime\_s

Description: Actual time that electrofisher was on while collecting sample

in subreach

Column: SubreachDistanceSample\_m

Description: Actual distance sampled within subreach, in meters

Column: SubReachSubstrate

Description: Substrate type - NSRA boatable protocol

Column: SubReachCover

Description: Subreach cover type - NRSA boatable protocol

Column: SubReachDepth

Description: Water depth to bottom, in meters

Column: SubReachBank

Description: Bank type - NSRA boatable protocol

===================================

FILE: 20180921.0920.FishCount

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BioData Retrieval Fish Count Data Set Description

-------------------------------------------------------------

Fish community sample data. Each row represents the total abundance (count)

of each taxon within a sample. Data from all methods (gear, pass, subreach)

are aggregated. Sample identifying (type, location, date) and taxonomic

hierarchy information columns are included.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* FISH - NAWQA Fish

\* FGEN - User-specified Fish

\* FISH-W - NRSA Fish, wadable

\* FISH-B - NRSA Fish, boatable (Large wadable or Boatable/Raftable)

Column: SiteVisitSampleNumber

Description: Sample number component of the composite logical sample key

(SiteNumber + CollectionDate + SampleType + SiteVisitSampleNumber).

Assigned by project staff

Column: ProjectAssignedSampleLabel

Description: A unique label or code assigned to the Sample by the Project

(unique within a Project)

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code that uniquely defines the

sample. The NAWQA-SMCOD is comprised of the following information

concatenated into a single code (NAWQA 4 digit study unit, 2 digit

collection month, 2 digit year, 3 characters representing sample type, 4

character sample number, bottle sequence number). For example:

WMIC0902ADE0008\*

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: CommonName

Description: Common or vernacular name of taxon

Column: PublishedSortOrder

Description: Numeric code used to sort data according to taxonomic order

Column: BioDataTaxonName

Description: Taxon according to BioData current taxonomic system

Column: HybridFlag

Description: Field indicating hybrid taxon (Yes, No)

Column: Abundance

Description: Number of individuals captured

Column: ITIS\_TSN

Description: Integrated Taxonomic Information System (ITIS) Taxonomic

Serial Number (TSN). A TSN is a unique, persistent, non-intelligent

identifier for a scientific name in the context of ITIS <

http://www.itis.gov <http://www.itis.gov/> >

Column: ITIS\_MatchCode

Description: How well the PublishedTaxonName corresponds to the ITIS name <

http://www.itis.gov <http://www.itis.gov/> > represented by the ITIS\_TSN

Column: PublishedTaxonNameLevel

Description: The taxonomic rank (e.g. Phylum, Class, Order, Genus, etc.) of

the PublishedTaxonName

Column: PublishedTaxonName

Description: The "nearest" TaxonName that has been published following

International Commission of Zoological Nomenclature (ICZN) for inverts and

fish or International Code of Botanical Nomenclature (ICBN) for algae,

convention; authority is not included. Provisional names can not be used in

this field

Column: PublishedTaxonNameAuthority

Description: Taxonomic authority for PublishedTaxonName

Column: ScientificName

Description: Complete name of the Taxon, with Authority

Column: Phylum

Description: Taxonomic Phylum name

Column: Subphylum

Description: Taxonomic subphylum name

Column: Superclass

Description: Taxonomic Superclass name

Column: Class

Description: Taxonomic Class name

Column: Subclass

Description: Taxonomic subclass name

Column: Superorder

Description: Taxonomic Superorder name

Column: Order

Description: Taxonomic Order name

Column: Superfamily

Description: Taxonomic Superfamily name

Column: Family

Description: Taxonomic Family name

Column: Subfamily

Description: Taxonomic subfamily name

Column: Genus

Description: Taxonomic Genus name

Column: Species

Description: Taxonomic species name

Column: Subspecies

Description: Taxonomic subspecies name

Column: TaxonVersionNumber

Description: Version of the taxonomic system represented in the retrieval

dataset. BioData maintains separate Taxonomic Systems for each community

(fish, invertebrate, algae) to manage taxonomic data

===================================

FILE: 20180921.0920.FishCountTaxa

===================================

BioData Retrieval Fish Count Taxa List Data Set Description

-------------------------------------------------------------

List of taxa in Fish Count data set. Each row represents a

BioDataTaxonName, the same resolution reported in the Fish Count data set.

Column Definitions

------------------

Column: CommonName

Description: Common or vernacular name of taxon

Column: PublishedSortOrder

Description: Numeric code used to sort data according to taxonomic order

Column: BioDataTaxonName

Description: Taxon according to BioData current taxonomic system

Column: HybridFlag

Description: Field indicating hybrid taxon (Yes, No)

Column: ITIS\_TSN

Description: Integrated Taxonomic Information System (ITIS) Taxonomic

Serial Number (TSN). A TSN is a unique, persistent, non-intelligent

identifier for a scientific name in the context of ITIS <

http://www.itis.gov <http://www.itis.gov/> >

Column: ITIS\_MatchCode

Description: How well the PublishedTaxonName corresponds to the ITIS name <

http://www.itis.gov <http://www.itis.gov/> > represented by the ITIS\_TSN

Column: PublishedTaxonNameLevel

Description: The taxonomic rank (e.g. Phylum, Class, Order, Genus, etc.) of

the PublishedTaxonName

Column: PublishedTaxonName

Description: The "nearest" TaxonName that has been published following

International Commission of Zoological Nomenclature (ICZN) for inverts and

fish or International Code of Botanical Nomenclature (ICBN) for algae,

convention; authority is not included. Provisional names cannot be used in

this field

Column: PublishedTaxonNameAuthority

Description: Taxonomic authority for PublishedTaxonName

Column: ScientificName

Description: Complete name of the Taxon, with Authority

Column: Phylum

Description: Taxonomic Phylum name

Column: Subphylum

Description: Taxonomic subphylum name

Column: Superclass

Description: Taxonomic Superclass name

Column: Class

Description: Taxonomic Class name

Column: Subclass

Description: Taxonomic subclass name

Column: Superorder

Description: Taxonomic Superorder name

Column: Order

Description: Taxonomic Order name

Column: Superfamily

Description: Taxonomic Superfamily name

Column: Family

Description: Taxonomic Family name

Column: Subfamily

Description: Taxonomic subfamily name

Column: Genus

Description: Taxonomic Genus name

Column: Species

Description: Taxonomic species name

Column: Subspecies

Description: Taxonomic subspecies name

Column: TaxonVersionNumber

Description: Version of the taxonomic system represented in the retrieval

dataset. BioData maintains separate Taxonomic Systems for each community

(fish, invertebrate, algae) to manage taxonomic data

===================================

FILE: 20180921.0920.FishResults

===================================

BioData Retrieval Fish Results Data Set Description

-------------------------------------------------------------

Finest data detail for fish community samples. Each row represents a method

(gear, pass, subreach) and one or more specimens for a given taxon.

Identification, abundance, morphometric (length, weight), and anomaly data

may be present. Sample identifying (type, location, date) and taxonomic

hierarchy information columns are included.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* FISH - NAWQA Fish

\* FGEN - User-specified Fish

\* FISH-W - NRSA Fish, wadable

\* FISH-B - NRSA Fish, boatable (Large wadable or Boatable/Raftable)

Column: SiteVisitSampleNumber

Description: Sample number component of the composite logical sample key

(SiteNumber + CollectionDate + SampleType + SiteVisitSampleNumber).

Assigned by project staff

Column: ProjectAssignedSampleLabel

Description: A unique label or code assigned to the Sample by the Project

(unique within a Project)

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code that uniquely defines the

sample. The NAWQA-SMCOD is comprised of the following information

concatenated into a single code (NAWQA 4 digit study unit, 2 digit

collection month, 2 digit year, 3 characters representing sample type, 4

character sample number, bottle sequence number). For example:

WMIC0902ADE0008\*

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: MethodCode

Description: Code that identifies method used to collect the specimen(s).

Electrofishing MethodCodes indicate gear type used and pass number or

subreach (e.g. Backpack-P1)

Column: Page

Description: Field sheet page associated with data entered

Column: Line

Description: Field sheet line number (use with Page)

Column:TaxonomicResultReviewStatus

Description: Data review status of taxonomic data record

Column: CommonName

Description: Common or vernacular name of taxon

Column: PublishedSortOrder

Description: Numeric code used to sort data according to taxonomic order

Column: BioDataTaxonName

Description: Taxon according to BioData current taxonomic system

Column: HybridFlag

Description: Field indicating hybrid taxon (Yes, No)

Column: BenchTaxonName

Description: The taxon name assigned by a taxonomist in the lab (at the

"bench") or in the field. May be a conditional, provisional, or operational

name. Serves as root name for crosswalks to other taxonomic systems

Column: BenchTaxonNameReferenceCode

Description: Code for the reference having the taxonomic description of

BenchName. In combination with BenchName it forms a composite logical key

that uniquely identifies a Taxon Concept

Column: Abundance

Description: Number of individuals captured

Column: IDLocation

Description: Flag indicating whether specimens were identified in a lab or

field setting

Column: TotalLength\_mm

Description: Maximum length of fish measured with mouth closed and caudal

fin pinched together, in millimeters

Column: StandardLength\_mm

Description: Length of the fish body; measurement from head to posterior

end of the last vertebrae

Column: Weight\_g

Description: Weight of the fish in grams

Column: DELTCount (DELT anomaly count)

Description:Number of individual fish, for this row, exhibiting any of the

DELT (Deformities, Eroded Fins, Lesions, Tumors) anomalies. Zero (0)

indicates anomalies were checked for but not found. Blank (no value)

indicates that fish were not examined for anomalies or column does that

apply to the sample collection method

Column: DeformFlag

Description: Field indicating presence of external deformities (Yes, No,

Not Characterized)

Column: ErodeFinFlag

Description: Field indicating presence of eroded fin(s) (Yes, No, Not

Characterized)

Column: LesionFlag

Description: Field indicating presence of external lesion(s) (Yes, No, Not

Characterized)

Column: TumorFlag

Description: Field indicating presence of external tumor(s) (Yes, No, Not

Characterized)

Column: VoucherLocationName

Description: Museum or location where voucher specimens are stored

Column: VoucherCount

Description: Total number of fish retained and stored at the indicated

museum or other storage facility

Column: MinimumLength\_mm

Description: Total Length of the smallest specimen in group, in millimeters

Column: MaximumLength\_mm

Description: Total Length of the largest specimen in group, in millimeters

Column: AnomalyCount

Description: Number of fish that are affected by NRSA external fish

anomalies. These include missing organs (eye, fin), skeletal deformities,

shortened operculum, eroded fins, irregular fin rays or scales, tumors,

lesions, ulcerous sores, blisters, cysts, blackening, white spots, bleeding

or reddening, excessive mucus, and fungus

Column: MortalityCount

Description: Number of mortalities that occurred during field processing

Column: PhotoFlag

Description: flag indicating a photo was taken of a specimen

Column: FishFlag

Description: System standard and user-defined designations (flags) to apply

consistent comments to multiple fish records

System-defined Flags:

\* K No measurement made

\* U Suspect measurement

\* DE Deformities

\* ER Eroded fins

\* LE Lesions

\* TU Tumors

\* HAT Hatchery or Stocked

\* YOY Young-of-the-year

\* PHT Photo

Column: FishComment

Description: Comments about fish in this result row

Column: SamplingUnit\_Subreach

Description: Subreach or other spatial designation for where the fish for

this row were collected

Column: ITIS\_TSN

Description: Integrated Taxonomic Information System (ITIS) Taxonomic

Serial Number (TSN). A TSN is a unique, persistent, non-intelligent

identifier for a scientific name in the context of ITIS <

http://www.itis.gov <http://www.itis.gov/> >

Column: ITIS\_MatchCode

Description: How well the PublishedTaxonName corresponds to the ITIS name <

http://www.itis.gov <http://www.itis.gov/> > represented by the ITIS\_TSN

Column: PublishedTaxonNameLevel

Description: The taxonomic rank (e.g. Phylum, Class, Order, Genus, etc.) of

the PublishedTaxonName

Column: PublishedTaxonName

Description: The "nearest" TaxonName that has been published following

International Commission on Zoological Nomenclature (ICZN) for inverts and

fish or International Code of Botanical Nomenclature (ICBN) for algae,

convention; authority is not included. Provisional names cannot be used in

this field

Column: PublishedTaxonNameAuthority

Description: Taxonomic authority for PublishedTaxonName

Column: ScientificName

Description: Complete name of the Taxon, with Authority

Column: Phylum

Description: Taxonomic Phylum name

Column: Subphylum

Description: Taxonomic subphylum name

Column: SuperClass

Description: Taxonomic Superclass name

Column: Class

Description: Taxonomic Class name

Column: Subclass

Description: Taxonomic subclass name

Column: SuperOrder

Description: Taxonomic Superorder name

Column: Order

Description: Taxonomic Order name

Column: Superfamily

Description: Taxonomic Superfamily name

Column: Family

Description: Taxonomic Family name

Column: SubFamily

Description: Taxonomic subfamily name

Column: Genus

Description: Taxonomic Genus name

Column: Species

Description: Taxonomic species name

Column: Subspecies

Description: Taxonomic subspecies name

Column: TaxonVersionNumber

Description: Version of the taxonomic system represented in the retrieval

dataset. BioData maintains separate Taxonomic Systems for each community

(fish, invertebrate, algae) to manage taxonomic data

===================================

FILE: 20180921.0920.FishResultsTaxa

===================================

BioData Retrieval Fish Results Taxa List Data Set Description

-------------------------------------------------------------

List of taxa in Fish Results data set. Each row represents a

BenchTaxonName, the same taxonomic resolution as reported in the Fish

Results data set.

Column Definitions

------------------

Column: CommonName

Description: Common or vernacular name of taxon

Column: PublishedSortOrder

Description: Numeric code used to sort data according to taxonomic order

Column: BioDataTaxonName

Description: Taxon according to BioData current taxonomic system

Column: HybridFlag

Description: Field indicating hybrid taxon (Yes, No)

Column: BenchTaxonName

Description: The taxon name assigned by a taxonomist in the lab (at the

"bench") or in the field. May be a conditional, provisional, or operational

name. Serves as root name for crosswalks to other taxonomic systems

Column: BenchTaxonNameReferenceCode

Description: Code for the reference having the taxonomic description of

BenchName. In combination with BenchName it forms a composite logical key

that uniquely identifies a Taxon Concept

Column: ITIS\_TSN

Description: Integrated Taxonomic Information System (ITIS) Taxonomic

Serial Number (TSN). A TSN is a unique, persistent, non-intelligent

identifier for a scientific name in the context of ITIS <

http://www.itis.gov <http://www.itis.gov/> >

Column: ITIS\_MatchCode

Description: How well the PublishedTaxonName corresponds to the ITIS name <

http://www.itis.gov <http://www.itis.gov/> > represented by the ITIS\_TSN

Column: PublishedTaxonNameLevel

Description: The taxonomic rank (e.g. Phylum, Class, Order, Genus, etc.) of

the PublishedTaxonName

Column: PublishedTaxonName

Description: The "nearest" TaxonName that has been published following

International Commission on Zoological Nomenclature (ICZN) for inverts and

fish or International Code of Botanical Nomenclature (ICBN) for algae,

convention; authority is not included. Provisional names can not be used in

this field

Column: PublishedTaxonNameAuthority

Description: Taxonomic authority for PublishedTaxonName

Column: ScientificName

Description: Complete name of the Taxon, with Authority

Column: Phylum

Description: Taxonomic Phylum name

Column: Subphylum

Description: Taxonomic subphylum name

Column: SuperClass

Description: Taxonomic Superclass name

Column: Class

Description: Taxonomic Class name

Column: Subclass

Description: Taxonomic subclass name

Column: SuperOrder

Description: Taxonomic Superorder name

Column: Order

Description: Taxonomic Order name

Column: Superfamily

Description: Taxonomic Superfamily name

Column: Family

Description: Taxonomic Family name

Column: SubFamily

Description: Taxonomic subfamily name

Column: Genus

Description: Taxonomic Genus name

Column: Species

Description: Taxonomic species name

Column: Subspecies

Description: Taxonomic subspecies name

Column: TaxonVersionNumber

Description: Version of the taxonomic system represented in the retrieval

dataset. BioData maintains separate Taxonomic Systems for each community

(fish, invertebrate, algae) to manage taxonomic data

===================================

FILE: 20180921.0920.AlgSamp

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BioData Retrieval Algae Sampling Information Data Set Description

-------------------------------------------------------------

Information about algae samples including the sample type and collection

protocol, where and when the sample was collected, and some sampling

details, for example, sampler, sample volume and habitat sampled. Each row

represents a single community sample.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* ARTH - NAWQA Periphyton Richest Targeted Habitat

\* ADTH - NAWQA Periphyton Depositional Targeted Habitat

\* AQMH - NAWQA Periphyton Multiple Habitat

\* APHY - NAWQA Phytoplankton

\* APER - NRSA composite periphyton, wadable/boatable

Column: SiteVisitSampleNumber

Description: Sample number component of the composite logical sample key

(SiteNumber + CollectionDate + SampleType + SiteVisitSampleNumber).

Assigned by project staff

Column: ProjectAssignedSampleLabel

Description: A unique label or code assigned to the Sample by the Project

(unique within a Project)

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code that uniquely defines the

sample. The NAWQA-SMCOD is comprised of the following information

concatenated into a single code (NAWQA 4 digit study unit, 2 digit

collection month, 2 digit year, 3 characters representing sample type, 4

character sample number, bottle sequence number). For example:

WMIC0902ADE0008\*

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: TargetedHabitat

Description: Code for type of targeted sampling

Column: PeriphytonHabitatSampled

Description: Choose the benthic habitat upon which the organisms were

attached or loosely associated (Epilithic, Epidendric, Epiphytic,

Epipsammic, Epipelic, Artificial substrate)

Column: SamplingMethodOrDevice

Description: Method or device for collecting sample

Column: SubsurfaceGrabDepth\_m

Description: Depth of subsurface grab sample, in meters

Column: AreaSampTot\_cm2

Description: Total area sampled, in square centimeters (this is the same as

TotAreaSampled\_cm2)

Column: OriginalVolume\_ml\_rmk

Description: Remark code for original volume of composited algal sample

Column: OriginalVolume\_ml

Description: The total volume of a composited algal sample before any

preservative is added or subsamples are taken in milliliters. All of the

material harvested + any rinse water used to transfer material while

compositing

Column: NumberTransectsSampled

Description: Number of transects sampled

Column: RecogHabitatEpilithic\_pct

Description: Percent recognizable periphyton habitat that is epilithic

(coarse substrate or rocks)

Column: RecogHabitatEpidendric\_pct

Description: Percent recognizable periphyton habitat that is epidendric

(woody substrate)

Column: RecogHabitatEpiphytic\_pct

Description: Percent recognizable periphyton habitat that is epiphytic

(plant serving as substrate)

Column: RecogHabitatEpipsammic\_pct

Description: Percent recognizable periphyton habitat that is epipsammic

(sand-sized particles as substrate)

Column: RecogHabitatEpipelic\_pct

Description: Percent recognizable periphyton habitat that is epipelic

(silt-sized particles as substrate)

Column: RecogHabitatOther\_pct

Description: Percent recognizable periphyton habitat of type other, serving

as substrate

Column: PeriphytonAbundanceDescription

Description: Describe periphyton abundance at sampling location

Column: RecogAlgaeTaxa

Description: List types of recognizable algal taxa

===================================

FILE: 20180921.0920.AlgMicro

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BioData Retrieval Algae Collection Point Microhabitat Data Set Description

-------------------------------------------------------------

Data describing the physical microhabitat at sampling locations (collection

points) where discrete collections are made and later composited to form an

algae sample. Each row represents one collection point (sampling location),

which is denoted by a location number or transect identifier. Samples are

usually represented by multiple rows. Data may include water column depth

and current velocity, secchi depth measurements and riparian shading

categorization.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* ARTH - NAWQA Periphyton Richest Targeted Habitat

\* ADTH - NAWQA Periphyton Depositional Targeted Habitat

\* AQMH - NAWQA Periphyton Multiple Habitat

\* APHY - NAWQA Phytoplankton

\* APER - NRSA composite periphyton, wadable/boatable

Column: SiteVisitSampleNumber

Description: Sample number component of the composite logical sample key

(SiteNumber + CollectionDate + SampleType + SiteVisitSampleNumber).

Assigned by project staff

Column: ProjectAssignedSampleLabel

Description: A unique label or code assigned to the Sample by the Project

(unique within a Project)

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code that uniquely defines the

sample. The NAWQA-SMCOD is comprised of the following information

concatenated into a single code (NAWQA 4 digit study unit, 2 digit

collection month, 2 digit year, 3 characters representing sample type, 4

character sample number, bottle sequence number). For example:

WMIC0902ADE0008\*

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: LocationNumber

Description: Number used to identify location of algae collection

Column: WaterColumnDepth\_m\_Rmk

Description: Remark code for WaterColumnDepth\_m (< (less than); > (greater

than); e (estimated))

Column: WaterColumnDepth\_m

Description: Water depth from surface to bottom, in meters

Column: MnWaterColumnVelocity\_ft\_s\_Rmk

Description: Remark code for mean current velocity at the sampling location

Column: MnWaterColumnVelocity\_ft\_s

Description: Mean current velocity of the water column at the sampling

location, in feet per second

Column: SecchiDepth\_m

Description: Secchi depth for algae microhabitat point locations in meters

Column: RiparianShading

Description: Amount of riparian shading description

Column: MacroAlgaeNotes

Description: Notes regarding macroalgae presence

===================================

FILE: 20180921.0920.AlgSnagMicro

===================================

BioData Retrieval Algae Snag Microhabitat Data Set Description

-------------------------------------------------------------

Data describing the "snag" (branch, wood) substrates where discrete

collections are made and later composited to form an algae sample. Each row

represents one snag, which is denoted by snag number and a location number.

Data are typically used in conjunction with collection point microhabitat,

and a single algae sample is typically represented in multiple rows. Data

may include snag length and diameter.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* ARTH - NAWQA Periphyton Richest Targeted Habitat

\* ADTH - NAWQA Periphyton Depositional Targeted Habitat

\* AQMH - NAWQA Periphyton Multiple Habitat

\* APHY - NAWQA Phytoplankton

\* APER - NRSA composite periphyton, wadable/boatable

Column: SiteVisitSampleNumber

Description: Sample number component of the composite logical sample key

(SiteNumber + CollectionDate + SampleType + SiteVisitSampleNumber).

Assigned by project staff

Column: ProjectAssignedSampleLabel

Description: A unique label or code assigned to the Sample by the Project

(unique within a Project)

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code that uniquely defines the

sample. The NAWQA-SMCOD is comprised of the following information

concatenated into a single code (NAWQA 4 digit study unit, 2 digit

collection month, 2 digit year, 3 characters representing sample type, 4

character sample number, bottle sequence number). For example:

WMIC0902ADE0008\*

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: LocationNumber

Description: Number used to identify location of algae collection

Column: SnagNumber

Description: Sequence number for snag

Column: SnagLength\_mm\_Rmk

Description: Remark code for algae Snag\_Length\_mm (< (less than); >

(greater than); e (estimated))

Column: SnagLength\_mm

Description: Length of woody snag sampled, in millimeters

Column: SnagDiameter\_mm\_Rmk

Description: Remark code for algae Snag\_Diameter\_mm (< (less than); >

(greater than); e (estimated))

Column: SnagDiameter\_mm

Description: Diameter of woody snag sampled, in millimeters

===================================

FILE: 20180921.0920.AlgResults

===================================

BioData Retrieval Algae Results Data Set Description

-------------------------------------------------------------

Finest data detail for algae community samples. Each row represents a

taxonomic identification for a given sample component and taxonomic

determination/assertion notes. Taxonomic identifiers, cell or biovolume

counts and abundance (for quantitative analyses), and various

identification details may be present. Sample identifying (type, location,

date) and taxonomic hierarchy information columns are included.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: LabOrderID

Description: Identification number that uniquely identifies lab order

Column: LabSampleID

Description: Sample identifier used by lab

Column: LabRecordID

Description: Unique record identification number generated and provide by

the analytical lab

Column: FieldComponent

Description: Discrete collections of algae that are composited according to

growth form (for example, micro- or macroalgae) to represent a particular

sample or subsample

Column: LabProcName

Description: Short name of the lab procedure used

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* ARTH - NAWQA Periphyton Richest Targeted Habitat

\* ADTH - NAWQA Periphyton Depositional Targeted Habitat

\* AQMH - NAWQA Periphyton Multiple Habitat

\* APHY - NAWQA Phytoplankton

\* APER - NRSA composite periphyton, wadable/boatable

Column: SiteVisitSampleNumber

Description: Sample number component of the composite logical sample key

(SiteNumber + CollectionDate + SampleType + SiteVisitSampleNumber).

Assigned by project staff

Column: ProjectAssignedSampleLabel

Description: A unique label or code assigned to the Sample by the Project

(unique within a Project)

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code that uniquely defines the

sample. The NAWQA-SMCOD is comprised of the following information

concatenated into a single code (NAWQA 4 digit study unit, 2 digit

collection month, 2 digit year, 3 characters representing sample type, 4

character sample number, bottle sequence number). For example:

WMIC0902ADE0008\*

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: TaxonomicResultReviewStatus

Description: Data review status of taxonomic data record

Column: PublishedSortOrder

Description: Numeric code used to sort data according to taxonomic order

Column: BioDataTaxonName

Description: Taxon according to BioData current taxonomic system

Column: BioDataShortName

Description: Short, coded version of a TaxonName useful for column headers

in a table or when graphing

Column: BenchTaxonName

Description: Taxon name assigned by bench analyst

Column: BenchTaxonNameReferenceCode

Description: Code for reference that describes context of BenchTaxonName

Column: BenchTaxonNADEDID

Description: North American Diatom Ecological Database identification

number

Column: Cells\_cm2

Description: Number of cells per square centimeter. AdjLabCount divided by

the proportion (i.e. >0 and ‚â§1) of the sample sent to the lab (i.e.

subsample volume divided by original volume) and then divided by

TotAreaSampled\_cm2. Calculated for Periphyton samples only

Column: Cells\_mL

Description: Number of cells per milliliter. AdjLabCount divided by

subsample volume (before decanting, if any). Calculated for Phytoplankton

samples only

Column: Biovolume\_um3\_cm2

Description: Biovolume in cubic micrometers per square centimeter.

Cells\_cm2 is multiplied by BiovolumePerCell\_um3 for this record

\* USE WITH CAUTION - BiovolumePerCell\_um3 is provided by the lab when

data is uploaded and is either based on an average value for the

taxon OR an actual sample measurement. This value (1) may change over

time, and (2) may NOT be based on actual biovolume measurements from

the particular sample. Data users should check BiovolumePerCellMethod

and examine the range of values for BiovolumePerCell\_um3 within their

dataset to determine fitness for use

Column: Biovolume\_um3\_mL

Description: Biovolume in cubic micrometers per milliliter. Cells\_mL is

multiplied by BiovolumePerCell\_um3 for this record

\* USE WITH CAUTION - BiovolumePerCell\_um3 is provided by the lab when

data is uploaded and is either based on an average value for the

taxon OR an actual sample measurement. This value (1) may change over

time, and (2) may NOT be based on actual biovolume measurements from

the particular sample. Data users should check BiovolumePerCellMethod

and examine the range of values for BiovolumePerCell\_um3 within their

dataset to determine fitness for use

Column: NumberOfCellsCounted

Description: Number of Cells Counted. Actual number of cells counted during

laboratory procedures. Records from soft algae counts

(NumberOfCellsCounted) and diatom counts (NumDiaCellsCounted\_LiveOrDead)

are not directly comparable

Column: NumDiaCellsCounted\_LiveOrDead

Description: Number of living or dead diatom cells determined by analyst.

Calculated based on count of valves and frustules, but NOT adjusted for any

subsample dilution or concentration

Column: ProportionExamined

Description: Proportion (i.e. >0 and ‚â§1) of the total volume received

(VolumeReceivedByLab\_mL) that was actually inspected (counted) by the lab

Column: NormalizedCellCount

Description: Normalized Cell Count. Computed abundance that puts soft algae

counts and diatoms counts on the same scale. For soft algae taxa

NormalizedCellCount equals NumberOfCellsCounted; however, for diatom taxa

NormalizedCellCount is derived by multiplying the relative abundance of

each diatom taxon found in the diatom count lab component by the total of

"live" (i.e. cytoplasm present) diatom cells found soft algae count lab

component

Column: AdjLabCount

Description: Adjusted Lab Count. Estimate of number of live cells that were

in the container sent to lab. NormalizedCellCount divided by

ProportionExamined

Column: TotAreaSampled\_cm2

Description: Total area sampled, in square centimeters (this is the same

AreaSampTot\_cm2)

Column: BiovolumePerCell\_um3

Description: Biovolume per cell in cubic micrometers

\* USE WITH CAUTION - BiovolumePerCell\_um3 is provided by the lab when

data is uploaded and is either based on an average value for the

taxon OR an actual sample measurement. This value (1) may change over

time, and (2) may NOT be based on actual biovolume measurements from

the particular sample. Data users should check BiovolumePerCellMethod

and examine the range of values for BiovolumePerCell\_um3 within their

dataset to determine fitness for use

Column: BiovolumePerCellMethod

Description: Method used to determine BioVolumePerCell\_um3

Domain:

\* taxon average - average value for a particular taxon; may be based on

a lab-maintained average or published source

\* sample measurement - actual biovolume measurement taken within the

sample

Column: BenchNotes

Description: Notes recorded by taxonomist regarding a specimen

Column: TaxonRecordSource

Description: Source of Taxonomic record identification

Column: IdentificationEntity

Description: Organization or institution that provided the taxonomic

identification

Column: IdentificationDate

Description: Date that identification was performed

Column: IdentifiedBy

Description: Name of person making the identification

Column: VerificationEntity

Description: Organization or institution that verified the taxonomic

identification

Column: VerificationDate

Description: Date that taxonomic verification was performed

Column: CurationEntity

Description: Organization or institution that maintains curated specimen(s)

referred to by the data record

Column: CurationDate

Description: Date that curation of the specimen(s) was initiated

Column: LabTaxonID

Description: Taxonomic identifier used by the lab in their system

Column: PublishedTaxonNameLevel

Description: The taxonomic rank (e.g. Phylum, Class, Order, Genus, etc.) of

the PublishedTaxonName

Column: PublishedTaxonName

Description: The "nearest" TaxonName that has been published following

International Commission of Zoological Nomenclature (ICZN) for inverts and

fish or International Code of Botanical Nomenclature (ICBN) for algae,

convention; authority is not included. Provisional names cannot be used in

this field

Column: PublishedTaxonNameAuthority

Description: Taxonomic authority for PublishedTaxonName

Column: ScientificName

Description: Complete name of the Taxon, with Authority

Column: Group

Description: Code indicating diatom (D) or non-diatom (N) algal taxon

Column: AlgaeGroup

Description: Taxon membership in one of the following: Blue-Green Algae;

Brown Algae; Cryptophytes; Diatoms; Dinoflagellates; Euglenoids; Green

Algae; Red Algae; Unknown Phyla; Yellow-Green Algae; Red Algae;

Yellow-Green Algae; Green Algae; Blue-Green Algae; Unknown Phyla;

Euglenoids; Cryptophytes; Dinoflagellates

Column: Phylum

Description: Taxonomic Phylum name

Column: Class

Description: Taxonomic Class name

Column: Order

Description: Taxonomic Order name

Column: Family

Description: Taxonomic Family name

Column: Genus

Description: Taxonomic Genus name

Column: Species

Description: Taxonomic species name

Column: Variety

Description: Taxonomic variety name

Column: Form

Description: Taxonomic form name

Column: TaxonVersionNumber

Description: Version of the taxonomic system represented in the retrieval

dataset. BioData maintains separate Taxonomic Systems for each community

(fish, invertebrate, algae) to manage taxonomic data

===================================

FILE: 20180921.0920.AlgResultsTaxa

===================================

BioData Retrieval Algae Results Taxa List Data Set Description

-------------------------------------------------------------

List of taxa in Algae Results data set. Each row represents a

BenchTaxonName, the same taxonomic resolution as reported in the Algae

Results data set.

Column Definitions

------------------

Column: PublishedSortOrder

Description: Numeric code used to sort data according to taxonomic order

Column: BioDataTaxonName

Description: Taxon according to BioData current taxonomic system

Column: BioDataShortName

Description: Short, coded version of a TaxonName useful for column headers

in a table or when graphing

Column: BenchTaxonName

Description: The taxon name assigned by a taxonomist in the lab (at the

"bench") or in the field. May be a conditional, provisional, or operational

name. Serves as a root name for crosswalks to other taxonomic systems

Column: BenchTaxonNameReferenceCode

Description: Code for the reference having the taxonomic description of

BenchName. In combination with BenchName it forms a composite logical key

that uniquely identifies a Taxon Concept

Column: BenchTaxonNADEDID

Description: North American Diatom Ecological Database ID; master list of

names maintained by the Academy of Natural Sciences of Drexel University;

http://diatom.acnatsci.org/ <http://diatom.acnatsci.org/>

Column: PublishedTaxonNameLevel

Description: The taxonomic rank (e.g. Phylum, Class, Order, Genus, etc.) of

the PublishedTaxonName

Column: PublishedTaxonName

Description: The "nearest" TaxonName that has been published following

International Commission of Zoological Nomenclature (ICZN) for inverts and

fish or International Code of Botanical Nomenclature (ICBN) for algae,

convention; authority is not included. Provisional names cannot be used in

this field

Column: PublishedTaxonNameAuthority

Description: Taxonomic authority for PublishedTaxonName

Column: ScientificName

Description: Complete name of the Taxon, with Authority

Column: Group

Description: Code indicating diatom (D) or non-diatom (N) algal taxon

Column: AlgaeGroup

Description: Taxon membership in one of the following: Blue-Green Algae;

Brown Algae; Cryptophytes; Diatoms; Dinoflagellates; Euglenoids; Green

Algae; Red Algae; Unknown Phyla; Yellow-Green Algae; Red Algae;

Yellow-Green Algae; Green Algae; Blue-Green Algae; Unknown Phyla;

Euglenoids; Cryptophytes; Dinoflagellates

Column: Phylum

Description: Taxonomic Phylum name

Column: Class

Description: Taxonomic Class name

Column: Order

Description: Taxonomic Order name

Column: Family

Description: Taxonomic Family name

Column: Genus

Description: Taxonomic Genus name

Column: Species

Description: Taxonomic species name

Column: Variety

Description: Taxonomic variety name

Column: Form

Description: Taxonomic form name

Column: TaxonVersionNumber

Description: Version of the taxonomic system represented in the retrieval

dataset. BioData maintains separate Taxonomic Systems for each community

(fish, invertebrate, algae) to manage taxonomic data

===================================

FILE: 20180921.0920.LightIntensity

===================================

BioData Retrieval Light Intensity Data Set Description

-------------------------------------------------------------

Sets (or series) of measurements of the photosynthetically active radiation

(PAR, 400-700 nm wavelength), or light intensity, taken with light meters

and underwater sensors to obtain a direct measure of the solar energy

available for algal growth. Each row represents a single light-intensity

measurement. Each measurement is part of a set or series of measurements in

a single vertical transect that begins just below the water surface and

extends further below the water surface. A light extinction co-efficient is

typically calculated from each set of measurements. Multiple replicate sets

of measurements may be taken at a location on a single day, but a single

light extinction co-efficient is typically used to represent conditions at

a site on a single day. A given Sample in this data set, may have one or

more replicate sets of measurements. The amount of light available for

algal growth influences the structure of algal, invertebrate, and fish

communities, therefore, quantitative measurements of water clarity are

important for evaluating the biological community structure of streams in

relation to water quality.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* LINT - Water column light intensity

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code that uniquely defines the

sample. The NAWQA-SMCOD is comprised of the following information

concatenated into a single code (NAWQA 4 digit study unit, 2 digit

collection month, 2 digit year, 3 characters representing sample type, 4

character sample number, bottle sequence number). For example:

WMIC0902ADE0008\*

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: LightMeterUsed

Description: Light meter model used

Column: LightSensorType

Description: Underwater light sensor model used

Column: Location

Description: The location number for a set of light intensity measurements.

Multiple locations at a single site and date typically represent replicate

sets of measurements

Column: LocationTime

Description: Time that a the set of the light intensity measurement was

taken at a numbered location

Column: LightReadingNumber

Description: The sequence number of the light intensity measurement within

a set of measurement at a numbered location

Column: DepthBelowSurface\_cm

Description: Distance below water surface of the light intensity

measurement, in centimeters

Column: LightIntensity\_umol\_s\_m2

Description: Light intensity measurement, in ¬µmol s-1 m-2 (micromoles (of

photons) per second per square meter)

===================================

FILE: 20180921.0920.SolarPathfinder

===================================

BioData Retrieval Solar Pathfinder Data Set Description

-------------------------------------------------------------

Estimates of the amount of solar radiation received at a site, for each

month, made using the Solar Pathfinder instrument. Each row represents a

single placement of the Solar Pathfinder and the values derived from that

placement. Data include monthly estimates of the percent unshaded area and

the amount of solar radiation received per unit area based on a values from

reference station for average solar radiation values for flat-plate and

concentrating collectors. It is typical to perform solar pathfinder

instrument placements at multiple locations at a site on a single day.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* SPATH - Solar Pathfinder solar radiation

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code that uniquely defines the

sample. The NAWQA-SMCOD is comprised of the following information

concatenated into a single code (NAWQA 4 digit study unit, 2 digit

collection month, 2 digit year, 3 characters representing sample type, 4

character sample number, bottle sequence number). For example:

WMIC0902ADE0008\*

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: RefLocState

Description: State where reference station for average solar radiation

values for flat-plate and concentrating collectors is located

Column: RefLocCity

Description: City where reference station for average solar radiation

values for flat-plate and concentrating collectors is located

Column: StationType

Description: Type of reference station for average solar radiation values

for flat-plate and concentrating collectors

Column: WBANCode

Description: Weather Bureau Army Navy (WBAN) identification number for

reference station for average solar radiation values for flat-plate and

concentrating collectors

Column: TransectNo

Description: Transect number or location where the solar pathfinder was

placed

Column: SolPPotRadJan\_%

Description: Solar pathfinder, average percent of the sun's path that is

unobstructed, for January, percent

Column: SolPPotRadFeb\_%

Description: Solar pathfinder, average percent of the sun's path that is

unobstructed, for February, percent

Column: SolPPotRadMar\_%

Description: Solar pathfinder, average percent of the sun's path that is

unobstructed, for March, percent

Column: SolPPotRadApr\_%

Description: Solar pathfinder, average percent of the sun's path that is

unobstructed, for April, percent

Column: SolPPotRadMay\_%

Description: Solar pathfinder, average percent of the sun's path that is

unobstructed, for May, percent

Column: SolPPotRadJune\_%

Description: Solar pathfinder, average percent of the sun's path that is

unobstructed, for June, percent

Column: SolPPotRadJuly\_%

Description: Solar pathfinder, average percent of the sun's path that is

unobstructed, for July, percent

Column: SolPPotRadAug\_%

Description: Solar pathfinder, average percent of the sun's path that is

unobstructed, for August, percent

Column: SolPPotRadSept\_%

Description: Solar pathfinder, average percent of the sun's path that is

unobstructed, for September, percent

Column: SolPPotRadOct\_%

Description: Solar pathfinder, average percent of the sun's path that is

unobstructed, for October, percent

Column: SolPPotRadNov\_%

Description: Solar pathfinder, average percent of the sun's path that is

unobstructed, for November, percent

Column: SolPPotRadDec\_%

Description: Solar pathfinder, average percent of the sun's path that is

unobstructed, for December, percent

Column: SolPSolRadJan\_kWh\_m2

Description: Solar radiation that is realized, kWh\_m2, January. To convert

kilowatt-hours per square meter (kWh/m2) into megajoules per square meter

(MJ/m2) multiply by 3.60

Column: SolPSolRadFeb\_kWh\_m2

Description: Solar radiation that is realized, kWh\_m2, February. To convert

kilowatt-hours per square meter (kWh/m2) into megajoules per square meter

(MJ/m2) multiply by 3.60

Column: SolPSolRadMar\_kWh\_m2

Description: Solar radiation that is realized, kWh\_m2, March. To convert

kilowatt-hours per square meter (kWh/m2) into megajoules per square meter

(MJ/m2) multiply by 3.60

Column: SolPSolRadApr\_kWh\_m2

Description: Solar radiation that is realized, kWh\_m2, April. To convert

kilowatt-hours per square meter (kWh/m2) into megajoules per square meter

(MJ/m2) multiply by 3.60

Column: SolPSolRadMay\_kWh\_m2

Description: Solar radiation that is realized, kWh\_m2, May. To convert

kilowatt-hours per square meter (kWh/m2) into megajoules per square meter

(MJ/m2) multiply by 3.60

Column: SolPSolRadJune\_kWh\_m2

Description: Solar radiation that is realized, kWh\_m2, June. To convert

kilowatt-hours per square meter (kWh/m2) into megajoules per square meter

(MJ/m2) multiply by 3.60

Column: SolPSolRadJuly\_kWh\_m2

Description: Solar radiation that is realized, kWh\_m2, July. To convert

kilowatt-hours per square meter (kWh/m2) into megajoules per square meter

(MJ/m2) multiply by 3.60

Column: SolPSolRadAug\_kWh\_m2

Description: Solar radiation that is realized, kWh\_m2, August. To convert

kilowatt-hours per square meter (kWh/m2) into megajoules per square meter

(MJ/m2) multiply by 3.60

Column: SolPSolRadSept\_kWh\_m2

Description: Solar radiation that is realized, kWh\_m2, September. To

convert kilowatt-hours per square meter (kWh/m2) into megajoules per square

meter (MJ/m2) multiply by 3.60

Column: SolPSolRadOct\_kWh\_m2

Description: Solar radiation that is realized, kWh\_m2, October. To convert

kilowatt-hours per square meter (kWh/m2) into megajoules per square meter

(MJ/m2) multiply by 3.60

Column: SolPSolRadNov\_kWh\_m2

Description: Solar radiation that is realized, kWh\_m2, November. To convert

kilowatt-hours per square meter (kWh/m2) into megajoules per square meter

(MJ/m2) multiply by 3.60

Column: SolPSolRadDec\_kWh\_m2

Description: Solar radiation that is realized, kWh\_m2, December. To convert

kilowatt-hours per square meter (kWh/m2) into megajoules per square meter

(MJ/m2) multiply by 3.60

===================================

FILE: 20180921.0920.Reach

===================================

BioData Retrieval Habitat Reach Level Detail Description

-------------------------------------------------------------

Measurements and observations describing characteristics of the entire

study reach. Each row represents a set of measurements and observations for

a single study reach. Data may include gradients, channel modifications,

channel constraints, and torrent evidence.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* RHAB - NAWQA Reach Habitat

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code that uniquely defines the

sample. The NAWQA-SMCOD is comprised of the following information

concatenated into a single code (NAWQA 4 digit study unit, 2 digit

collection month, 2 digit year, 3 characters representing sample type, 4

character sample number, bottle sequence number). For example:

WMIC0902ADE0008\*

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: HabSampQuality

Description: Quality of the habitat sampling effort as determined by the

collector (Excellent, Good, Fair, Poor, or Not characterized)

Column: ChnMod

Description: Type(s) of channel modification observed at the reach (Not

modified; Lightly affected; Concrete lined; Stabilized; Dredged;

Channelized, not stabilized; Wing dams; Not characterized)

Column: DistBtwTr\_m

Description: Distance between transects measured along the thalweg (meters)

Column: WaterSurfGrad\_rmk

Description: Remark code for water surface gradient

Column: WaterSurfGrad

Description: Difference between the water-surface elevation at the top and

bottom of the reach divided by the curvilinear reach length

Column: GradMethod

Description: Method used to measure water surface gradient [Survey (any

type); Clinometer, Hand level, Other]

Column: ThalwegGradient\_rmk

Description: Remark code for thalweg gradient (< (less than); > (greater

than); e (estimated))

Column: ThalwegGradient

Description: Difference between the channel bed elevation at the top and

bottom of the reach divided by the curvilinear reach length

Column: ThalwegGradientMethod

Description: Method used to measure thalweg gradient Survey (any type);

Clinometer, Hand level, Other]

Column: ChannelPattern

Description: Channel pattern for stream reach (One channel; Anastomosing

(complex) channel; Braided channel; NC - not characterized)

Column: ChannelConstraint

Description: Description of channel valley constraints (V-shaped valley,

very constrained; Broad valley, constrained by incision; Narrow valley, not

very constrained; Broad valley, unconstrained; NC - not characterized)

Column: ConstrainingFeatures

Description: Feature(s) constraining channel (Bedrock, Hillslope, Terrace,

Human bank alterations, No constraining features, NC - not characterized)

Column: ConstrainingFeatureContact\_pct

Description: Percent of channel length in contact with channel constraint

Column: Valley width\_m

Description: Average width of valley floor, based on visual estimation, in

meters

Column: ChannelConstraintComments

Description: Comments regarding channel constraints

Column: TorrentEvidence

Description: Visual evidence of torrent scouring and deposits (1-recently

devegetated channel, 2-stream substrate not imbricated, 3-lack of

pool-riffle structure, 4-scoured channel, 5-small levees, 6-downstream

scouring, 7-riparian trees scarred, 8-riparian trees uprooted, 9-massive

torrent deposits of sediment, logs or other debris, 10-erosion of newly

laid deposits, 11-no evidence of torrent scouring or deposits)

Column: TorrentEvidenceComments

Description: Comments regarding torrent scouring and deposits

===================================

FILE: 20180921.0920.GCU\_NAWQA

===================================

BioData Retrieval Habitat Longitudinal Detail GCU NAWQA Description

-------------------------------------------------------------

Identification and length of the geomorphic channel units (GCU) that occur

longitudinally along a steam channel within a stream reach. Each row

represents one GCU (riffle, run, or pool). Data include GCU type and width.

This data set only contains data collected with the National Water-Quality

Assessment Program (NAWQA) habitat protocols.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* RHAB - NAWQA Reach Habitat

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code that uniquely defines the

sample. The NAWQA-SMCOD is comprised of the following information

concatenated into a single code (NAWQA 4 digit study unit, 2 digit

collection month, 2 digit year, 3 characters representing sample type, 4

character sample number, bottle sequence number). For example:

WMIC0902ADE0008\*

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: GCUNUM

Description: Geomorphic channel unit number

Column: GCUType

Description: Geomorphic channel unit type (riffle, run, or pool)

Column: GCULength\_m\_rmk

Description: Remark code for geomorphic channel unit length

Column: GCULength\_m

Description: Length of each geomorphic channel unit within each reach,

measured in meters

===================================

FILE: 20180921.0920.TransectNAWQA

===================================

BioData Retrieval Habitat Transect Level Detail NAWQA Description

-------------------------------------------------------------

Measurements characterizing transects (channel cross-sections), which span

the wetted channel, banks, and floodplain. Each row represents a set of

measurements and observations about a single transect, including the left

and right banks. Data include measurements of transect and bank dimensions,

channel aspect, and riparian canopy characteristics. This data set only

contains data collected with the National Water-Quality Assessment Program

(NAWQA) habitat protocols.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: ProjectAssignedSampleLabel

Description: A unique label or code assigned to the Sample by the Project

(unique within a Project)

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* RHAB - NAWQA Reach Habitat

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code that uniquely defines the

sample. The NAWQA-SMCOD is comprised of the following information

concatenated into a single code (NAWQA 4 digit study unit, 2 digit

collection month, 2 digit year, 3 characters representing sample type, 4

character sample number, bottle sequence number). For example:

WMIC0902ADE0008\*

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: TransectNumber

Description: The sequential number recorded for each transect

Column: HabitatType

Description: Habitat type at location of transect (riffle, pool, or run)

Column: WettedChannelWidth\_m\_rmk

Description: Remark code for wetted channel width (< (less than); >

(greater than); e (estimated))

Column: WettedChannelWidth\_m

Description: Wetted-channel width, along transect measured in meters

Column: WettedChannelWidthMethod

Description: Wetted-channel width measurment method (tape, rangefinder,

map, estimated)

Column: BankfullChannelWidth\_m\_rmk

Description: Remark code for bankfull channel width (< (less than); >

(greater than); e (estimated))

Column: BankfullChannelWidth\_m

Description: Bankfull channel width, measured along transect in meters

Column: BankfullChannelWidthMethod

Description: Bankfull channel width measurement method (tape, rangefinder,

map, estimated)

Column: Aspect\_deg

Description: Aspect of downstream flow collected at midpoint of transect,

facing downstream and parallel to flow

Column: CanAngEyeHt\_m

Description: Eye height of collector measuring canopy angle, in meters

Column: CanAngLB\_deg

Description: Left canopy angle collected at midpoint of transect, facing

left bank, in degrees

Column: CanAngRB\_deg

Description: Right canopy angle collected at midpoint of transect, facing

right bank, in degrees

Column: USSHAD

Description: Upstream shade, a measure of riparian canopy closure. Count of

the number of line intersections surrounded by vegetation on a modified

concave spherical densiometer (17 possible points). Measurement taken at

the midpoint of transect, facing upstream

History: 2012 December. Parameter name was changed from CanClosrUS

Column: DSSHAD

Description: Downstream shade, a measure of riparian canopy closure. Count

of the number of line intersections surrounded by vegetation on a modified

concave spherical densiometer (17 possible points). Measurement taken at

the midpoint of transect, facing upstream

History: 2012 December. Parameter name was changed from CanClosrDS

Column: LandCoverLB

Description: Left bank dominant riparian land use/cover (CR, PA, FM, SI,

UR, UI, RR, RW, GR, SW, WE, OT)

Column: LandCoverRB

Description: Right bank dominant riparian land use/cover (CR, PA, FM, SI,

UR, UI, RR, RW, GR, SW, WE, OT)

Column: BankAngleLB\_deg

Description: Left bank angle measured from left bank to stream bottom in

degrees

Column: BankAngleRB\_deg

Description: Right bank angle measured from right bank to stream bottom in

degrees

Column: BankVegCovLB\_pct

Description: Left bank vegetated cover, percentage recorded to nearest 10

percent

Column: BankVegCovRB\_pct

Description: Right bank vegetated cover, percentage recorded to nearest 10

percent

Column: BankSubLB

Description: Left bank dominant substrate

Column: BankSubRB

Description: Right bank dominant substrate

Column: BankErosFlagLB

Description: Left bank erosion flag (yes, no, not characterized)

Column: BankErosFlagRB

Description: Right bank erosion flag (yes, no, not characterized)

Column: LBSHAD

Description: Left bank shade, a measure of riparian canopy closure. Count

of the number of line intersections surrounded by vegetation on a modified

concave spherical densiometer (17 possible points). Measurement taken

facing the left bank, at the water's edge, with the densiometer held along

the transect line perpendicular to the bank 30 cm from and 30 cm above the

shoreline

History: 2012 December. Parameter name was changed from CanClosrLB

Column: RBSHAD

Description: Right bank shade, a measure of riparian canopy closure. Count

of the number of line intersections surrounded by vegetation on a modified

concave spherical densiometer (17 possible points). Measurement taken

facing the left bank, at the water's edge, with the densiometer held along

the transect line perpendicular to the bank 30 cm from and 30 cm above the

shoreline

History: 2012 December. Parameter name was changed from CanClosrRB

Column: BankfullHeightLB\_m\_rmk

Description: Remark code for left bankfull height (< (less than); >

(greater than); e (estimated))

Column: BankfullHeightLB

Description: Left bankfull height, vertical distance from channel bottom at

thalweg to top of left bank

Column: BankfullHeightRB\_m\_rmk

Description: Remark code for right bankfull height

Column: BankfullHeightRB

Description: Right bankfull height, vertical distance from channel bottom

at thalweg to top of right bank

===================================

FILE: 20180921.0920.TransectPointNAWQA

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BioData Retrieval Habitat Transect Point Level Detail NAWQA Description

-------------------------------------------------------------

Data collected at distinct edge-of-water and instream points (transect

points) along a cross-section transect. Each row represents measurements

taken from a single transect point. Data include water column depth and

velocity, categorization of the bed substrate, and habitat cover present.

This data set only contains data collected with the National Water-Quality

Assessment Program (NAWQA) habitat protocols.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* RHAB - NAWQA Reach Habitat

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code that uniquely defines the

sample. The NAWQA-SMCOD is comprised of the following information

concatenated into a single code (NAWQA 4 digit study unit, 2 digit

collection month, 2 digit year, 3 characters representing sample type, 4

character sample number, bottle sequence number). For example:

WMIC0902ADE0008\*

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: Transect

Description: Transect number

Column: TransectPointNumber

Description: Transect Point Identifying Number

Column: TransPointType

Description: Location of point along transect within stream channel

Column: ThalwegFlag

Description: Indicates that TransectPoint is on the thalweg

Column: LEWDis\_m

Description: Distance from left edge of water, in meters

Column: Depth\_m\_rmk

Description: Remark code for transect point depth (Depth\_m) (< (less

than); > (greater than); e (estimated))

Column: Depth\_m

Description: Water depth to bottom, in meters

Column: MnWaterColumnVelocity\_ft\_s\_rmk

Description: Remark code for mean current velocity at the sampling location

Column: MnWaterColumnVelocity\_ft\_s

Description: Mean current velocity of the water column at the sampling

location, in feet per second

Column: BedSubstrate

Description: Substrate of streambed at transect point

Column: Particle\_Size\_Rmk

Description: Remark code for ParticleSize\_mm (< (less than); > (greater

than); e (estimated)). This column was added to the Habitat Transect Point

Level Detail NAWQA data set in March 2014 (BioData Retrieval Version 3.2.1)

Column: Particle\_Size\_mm

Description: Measurement of a single substrate particle determined by the

length of the intermediate axis. This column was added to the Habitat

Transect Point Level Detail NAWQA data set in March 2014 (BioData Retrieval

Version 3.2.1)

Column: Embeddedness\_pct

Description: Percentage of the surface area of larger substrate particles

(boulder, cobble, or gravel) that is surrounded or covered by fine grained

sediment (sand, or finer). Embeddedness is 0% if there are no fines

surrounding or covering the larger particles, and is 100% if they are

completely covered by sand or finer substrate

Column: SiltCov

Description: Indicate presence or absence of significant areas of silt at

each of the instream points Indicate presence or absence of significant

areas of silt at each of the instream points

Column: MphyMalgCvr\_pct

Description: Macrophytes or macroalgae present, Macrophyte or macroalgae >

3 cm long, area of streambed covered, percent

Column: HabWDFlag

Description: Habitat Cover - Natural woody debris pile; flag indicates

presence/absence

Column: HabOVFlag

Description: Habitat Cover - Overhanging vegetation; flag indicates

presence/absence

Column: HabUBFlag

Description: Habitat Cover - Undercut bank; flag indicates presence/absence

Column: HabBOFlag

Description: Habitat Cover - Boulders; flag indicates presence/absence

Column: HabMSFlag

Description: Habitat Cover - Manmade structure; flag indicates

presence/absence

Column: HabAMFlag

Description: Habitat Cover - Emergent, submergent, and floating aquatic

macrophytes; flag indicates presence/absence

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FILE: 20180921.0920.TransectChannelFeatureNAWQA

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BioData Retrieval Habitat Transect Channel Feature NAWQA Description

-------------------------------------------------------------

Data about bars, islands, and shelves (channel features) along a stream

cross-section transect. Each row represents one channel feature, which is

identified by a transect number (identifier) and a channel feature number.

Data include channel feature type and width. This data set only contains

data collected with the National Water-Quality Assessment Program (NAWQA)

habitat protocols.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* RHAB - NAWQA Reach Habitat

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code that uniquely defines the

sample. The NAWQA-SMCOD is comprised of the following information

concatenated into a single code (NAWQA 4 digit study unit, 2 digit

collection month, 2 digit year, 3 characters representing sample type, 4

character sample number, bottle sequence number). For example:

WMIC0902ADE0008\*

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: Transect

Description: Transect number

Column: ChnFeatNo

Description: Channel feature number

Column: ChnFeatType

Description: Type(s) of channel feature(s) (bar, shelf, island) that

intersect with transect

Column: ChnFeatWidth\_m\_rmk

Description: Remark code for channel feature width

Column: ChnFeatWidth\_m

Description: Width of channel feature measured in meters

Column: DomSub

Description: Dominant bed substrate at transect point

Column: SubSub

Description: Subdominant bed substrate at transect point

Column: WVArea

Description: Area covered by woody vegetation recorded in percent

Column: HVArea

Description: Area covered by herbaceous vegetation recorded in percent

===================================

FILE: 20180921.0920.CrossSectionNRSA

===================================

BioData Retrieval Habitat Channel Riparian Cross Section Level Detail NRSA

Description

-------------------------------------------------------------

Measurements characterizing transects (channel cross-sections), which span

the wetted channel and are typically placed at equal intervals along a

stream reach. Each row represents a set of measurements and observations

along a single transect. Data include measurements of channel cross-section

and bank dimensions, and riparian canopy density; classifications of areal

cover of riparian vegetation and fish concealment features; and presence of

human influence features, large trees, and invasive riparian plants.

Usually substrate size classifications and channel widths are recorded at

more transects than other data. This data set only contains data collected

with the National Rivers and Streams Assessment (NRSA) habitat protocols.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* PHAB-W - NRSA Physical Habitat Characterization, wadable

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code that uniquely defines the

sample. The NAWQA-SMCOD is comprised of the following information

concatenated into a single code (NAWQA 4 digit study unit, 2 digit

collection month, 2 digit year, 3 characters representing sample type, 4

character sample number, bottle sequence number). For example:

WMIC0902ADE0008\*

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: Transect

Description: The sequential number recorded for each transect

Column: DistLBLeft\_m

Description: Distance from left bank to leftmost point in cross-section, or

0 m

Column: DistLBLCtr\_m

Description: Distance from left bank to left-center point in cross-section

Column: DistLBCtr\_m

Description: Distance from left bank to center point in cross-section

Column: DistLBRCtr\_m

Description: Distance from left bank to right-center point in cross-section

Column: DistLBRight\_m

Description: Distance from left bank to rightmost point in cross-section

Column: DepthLeft\_m

Description: Depth at the leftmost point in the cross-section

Column: DepthLCtr\_m

Description: Depth at the left-center point in the cross-section

Column: DepthCtr\_m

Description: Depth at the center point in the cross-section

Column: DepthRCtr\_m

Description: Depth at the right-center point in the cross-section

Column: DepthRight\_m

Description: Depth at the rightmost point in the cross-section

Column: SizeClsCdLeft

Description: Substrate size class at the leftmost point in the

cross-section. Categories include: RS - Bedrock (smooth) - (Larger than

car), RR - Bedrock (rough) - (Larger than car), RC - Concrete/Asphalt, XB -

Large boulder (1000-4000 mm) - (Meterstick to car), SB - Small boulder

(250-1000 mm) - (Basketball to meterstick), CB - Cobble (64-250 mm) -

(Tennis ball to basketball), GC - Coarse gravel (16-64 mm) - (Marble to

tennis ball), GF - Fine gravel (2-16 mm) - (Ladybug to marble), SA - Sand

(0.16-2 mm) - (Gritty - up to ladybug size), FN - Silt/clay/muck - (Not

gritty), HP - Hardpan - (Firm, consolidated fine substrate), WD - Wood -

(Any size), OT - Other, NC - Not characterized

Column: SizeClsCdLCtr

Description: Substrate size class at the left-center point in the

cross-section. Categories include: RS - Bedrock (smooth) - (Larger than

car), RR - Bedrock (rough) - (Larger than car), RC - Concrete/Asphalt, XB -

Large boulder (1000-4000 mm) - (Meterstick to car), SB - Small boulder

(250-1000 mm) - (Basketball to meterstick), CB - Cobble (64-250 mm) -

(Tennis ball to basketball), GC - Coarse gravel (16-64 mm) - (Marble to

tennis ball), GF - Fine gravel (2-16 mm) - (Ladybug to marble), SA - Sand

(0.16-2 mm) - (Gritty - up to ladybug size), FN - Silt/clay/muck - (Not

gritty), HP - Hardpan - (Firm, consolidated fine substrate), WD - Wood -

(Any size), OT - Other, NC - Not characterized

Column: SizeClsCdCtr

Description: Substrate size class at the center point in the cross-section.

Categories include: RS - Bedrock (smooth) - (Larger than car), RR - Bedrock

(rough) - (Larger than car), RC - Concrete/Asphalt, XB - Large boulder

(1000-4000 mm) - (Meterstick to car), SB - Small boulder (250-1000 mm) -

(Basketball to meterstick), CB - Cobble (64-250 mm) - (Tennis ball to

basketball), GC - Coarse gravel (16-64 mm) - (Marble to tennis ball), GF -

Fine gravel (2-16 mm) - (Ladybug to marble), SA - Sand (0.16-2 mm) -

(Gritty - up to ladybug size), FN - Silt/clay/muck - (Not gritty), HP -

Hardpan - (Firm, consolidated fine substrate), WD - Wood - (Any size), OT -

Other, NC - Not characterized

Column: SizeClsCdRCtr

Description: Substrate size class at the right-center point in the

cross-section. Categories include: RS - Bedrock (smooth) - (Larger than

car), RR - Bedrock (rough) - (Larger than car), RC - Concrete/Asphalt, XB -

Large boulder (1000-4000 mm) - (Meterstick to car), SB - Small boulder

(250-1000 mm) - (Basketball to meterstick), CB - Cobble (64-250 mm) -

(Tennis ball to basketball), GC - Coarse gravel (16-64 mm) - (Marble to

tennis ball), GF - Fine gravel (2-16 mm) - (Ladybug to marble), SA - Sand

(0.16-2 mm) - (Gritty - up to ladybug size), FN - Silt/clay/muck - (Not

gritty), HP - Hardpan - (Firm, consolidated fine substrate), WD - Wood -

(Any size), OT - Other, NC - Not characterized

Column: SizeClsCdRight

Description: Substrate size class at the rightmost point in the

cross-section. Categories include: RS - Bedrock (smooth) - (Larger than

car), RR - Bedrock (rough) - (Larger than car), RC - Concrete/Asphalt, XB -

Large boulder (1000-4000 mm) - (Meterstick to car), SB - Small boulder

(250-1000 mm) - (Basketball to meterstick), CB - Cobble (64-250 mm) -

(Tennis ball to basketball), GC - Coarse gravel (16-64 mm) - (Marble to

tennis ball), GF - Fine gravel (2-16 mm) - (Ladybug to marble), SA - Sand

(0.16-2 mm) - (Gritty - up to ladybug size), FN - Silt/clay/muck - (Not

gritty), HP - Hardpan - (Firm, consolidated fine substrate), WD - Wood -

(Any size), OT - Other, NC - Not characterized

Column: EmbedLeft\_pct

Description: Substrate embeddedness at leftmost point of the cross-section

Column: EmbedLCtr\_pct

Description: Substrate embeddedness at left-center point of the

cross-section

Column: EmbedCtr\_pct

Description: Substrate embeddedness at center point of the cross-section

Column: EmbedRCtr\_pct

Description: Substrate embeddedness at right-center point of the

cross-section

Column: EmbedRight\_pct

Description: Substrate embeddedness at rightmost point of the cross-section

Column: SubFlagLeft

Description: Qualifier of a substrate observation or measurement recorded

at leftmost point in cross-section

Column: SubFlagLCtr

Description: Qualifier of a substrate observation or measurement recorded

at left-center point in cross-section

Column: SubFlagCtr

Description: Qualifier of a substrate observation or measurement recorded

at center point in cross-section

Column: SubFlagRCtr

Description: Qualifier of a substrate observation or measurement recorded

at right-center point in cross-section

Column: SubFlagRight

Description: Qualifier of a substrate observation or measurement recorded

at rightmost point in cross-section

Column: SubstrateFlag

Description: Qualifier of a substrate observation or measurement

Column: BankAngleL\_deg

Description: The measured angle of the left bank

Column: UndercutDistL\_m

Description: The distance from the water's edge to a point where a vertical

plumb line from the left bank would hit the water's surface

Column: BankFlagLeft

Description: Qualifier of an observation or measurement recorded at left

bank

Column: BankAngR\_deg

Description: The measured angle of the right bank

Column: UndercutDistR\_m

Description: The distance from the water's edge to a point where a vertical

plumb line from the right bank would hit the water's surface

Column: BankFlagRight

Description: Qualifier of an observation or measurement recorded at right

bank

Column: WettedWidth\_m

Description: The width of the channel containing free-standing water,

including mid-channel gravel or sand bars, if present

Column: WettedWidthFlag

Description: Qualifier of wetted width observation or measurement

Column: BarWidth\_m

Description: Width of exposed mid-channel bars of gravel or sand, if

present

Column: BarWidthFlag

Description: Qualifier of bar width observation or measurement

Column: BankfullHeight\_m

Description: A measure of the height of bankfull flow above the present

water level

Column: BankfullHeightFlag

Description: Qualifier of bankfull height observation or measurement

Column: IncisedHeight\_m

Description: A measure of the height from the water's surface to the

elevation of the first terrace of the valley floodplain

Column: IncisedHeightFlag

Description: Qualifier of incised height observation or measurement

Column: CanCovCenUp

Description: A measure of the canopy cover using a densiometer while

standing mid-channel and facing upstream

Column: CanCovCenUpFlag

Description: Qualifier of canopy cover observation or measurement, recorded

at mid-channel facing upstream

Column: CanCovCenL

Description: A measure of the canopy cover using a densiometer while

standing mid-channel and facing the left bank

Column: CanCovCenLFlag

Description: Qualifier of canopy cover observation or measurement, recorded

at mid-channel facing the left bank

Column: CanCovCenDown

Description: A measure of the canopy cover using a densiometer while

standing mid-channel and facing downstream

Column: CanCovCenDownFlag

Description: Qualifier of canopy cover observation or measurement, recorded

at mid-channel facing downstream

Column: CanCovCenR

Description: A measure of the canopy cover using a densiometer while

standing mid-channel and facing the right bank

Column: CanCovCenRFlag

Description: Qualifier of canopy cover observation or measurement, recorded

at mid-channel facing the right bank

Column: CanCovLeft

Description: A measure of the canopy cover using a densiometer while

standing at the water's edge and facing the left bank

Column: CanCovLeftFlag

Description: Qualifier of canopy cover observation or measurement, recorded

at water's edge and facing left bank

Column: CanCovRight

Description: A measure of the canopy cover using a densiometer while

standing at the water's edge and facing the right bank

Column: CanCovRightFlag

Description: Qualifier of canopy cover observation or measurement, recorded

at water's edge and facing right bank

Column: FilAlgae

Description: An areal estimate of the fish cover provided by long-streaming

algae. Categories include: 0 - Absent (0%), 1 - Sparse (<10%), 2 - Moderate

(10-40%), 3 - Heavy (40-75%), 4 - Very Heavy (>75%), NC - Not characterized

Column: FilAlgaeFlag

Description: Qualifier of long-streaming algae, fish cover observation or

measurement

Column: Macrophyte

Description: An areal estimate of the fish cover provided by water-loving

plants and mosses. Categories include: 0 - Absent (0%), 1 - Sparse (<10%),

2 - Moderate (10-40%), 3 - Heavy (40-75%), 4 - Very Heavy (>75%), NC - Not

characterized

Column: MacrophyteFlag

Description: Qualifier of water-loving plants and mosses, fish cover

observation or measurement

Column: BrushWoodDebrisLarge

Description: An areal estimate of the fish cover provided by larger pieces

of wood that influence both cover and morphology. Categories include: 0 -

Absent (0%), 1 - Sparse (<10%), 2 - Moderate (10-40%), 3 - Heavy (40-75%),

4 - Very Heavy (>75%), NC - Not characterized

Column: BrushWoodDebrisLFlag

Description: Qualifier of large woody debris fish cover observation or

measurement

Column: BrushWoodDebrisSmall

Description: An areal estimate of the fish cover provided by smaller pieces

of wood that influence cover, but not morphology. Categories include: 0 -

Absent (0%), 1 - Sparse (<10%), 2 - Moderate (10-40%), 3 - Heavy (40-75%),

4 - Very Heavy (>75%), NC - Not characterized

Column: BrushWoodDebrisSFlag

Description: Qualifier of small woody debris fish cover observation or

measurement

Column: LiveTreeRoot

Description: An areal estimate of the fish cover provided by live trees or

roots. Categories include: 0 - Absent (0%), 1 - Sparse (<10%), 2 - Moderate

(10-40%), 3 - Heavy (40-75%), 4 - Very Heavy (>75%), NC - Not characterized

Column: LiveTreeRootFlag

Description: Qualifier of live tree or root, fish cover observation or

measurement

Column: OverhangVeg

Description: An areal estimate of the fish cover provided by tree branches,

brush, twigs, and other small debris not in the water, but close to the

stream. Categories include: 0 - Absent (0%), 1 - Sparse (<10%), 2 -

Moderate (10-40%), 3 - Heavy (40-75%), 4 - Very Heavy (>75%), NC - Not

characterized

Column: OverhangVegFlag

Description: Qualifier of Overhanging vegetation, fish cover observation or

measurement

Column: UndercutBank

Description: An areal estimate of the fish cover provided by undercut bank.

Categories include: 0 - Absent (0%), 1 - Sparse (<10%), 2 - Moderate

(10-40%), 3 - Heavy (40-75%), 4 - Very Heavy (>75%), NC - Not characterized

Column: UndercutBankFlag

Description: Qualifier of undercut bank, fish cover observation or

measurement

Column: Boulder

Description: An areal estimate of the fish cover provided by basketball- to

car-sized particles. Categories include: 0 - Absent (0%), 1 - Sparse

(<10%), 2 - Moderate (10-40%), 3 - Heavy (40-75%), 4 - Very Heavy (>75%),

NC - Not characterized

Column: BoulderFlag

Description: Qualifier of boulder, fish cover observation or measurement

Column: ArtStrct

Description: An areal estimate of the fish cover provided by artificial

structures for fish habitat enhancement, as well as structures that have

been discarded or deliberately placed for diversion, impoundment, channel

stabilization, or other purposes. Categories include: 0 - Absent (0%), 1 -

Sparse (<10%), 2 - Moderate (10-40%), 3 - Heavy (40-75%), 4 - Very Heavy

(>75%), NC - Not characterized

Column: ArtStrctFlag

Description: Qualifier of artificial substrate, fish cover observation or

measurement

Column: CanWoodyVegLB

Description: Dominant vegetation type for the canopy layer (>5 m high) of

woody vegetation on the left bank. Categories include: D - Deciduous, C -

Coniferous, E - Broadleaf evergreen, M - Mixed, N - None, NC - Not

characterized

Column: CanWoodyVegRB

Description: Dominant vegetation type for the canopy layer (>5 m high) of

woody vegetation on the right bank. Categories include: D - Deciduous, C -

Coniferous, E - Broadleaf evergreen, M - Mixed, N - None, NC - Not

characterized

Column: CanWoodyVegFlag

Description: Qualifier of canopy cover woody vegetation observation or

measurement

Column: CanBigTreeLB

Description: An estimate of the areal cover of large trees with a diameter

greater than 0.3 m at breast height on the left bank. Categories include: 0

- Absent (0%), 1 - Sparse (<10%), 2 - Moderate (10-40%), 3 - Heavy

(40-75%), 4 - Very Heavy (>75%), NC - Not characterized

Column: CanBigTreeRB

Description: An estimate of the areal cover of large trees with a diameter

greater than 0.3 m at breast height on the right bank. Categories include:

0 - Absent (0%), 1 - Sparse (<10%), 2 - Moderate (10-40%), 3 - Heavy

(40-75%), 4 - Very Heavy (>75%), NC - Not characterized

Column: CanBigTreeFlag

Description: Qualifier of canopy big tree observation or measurement

Column: CanSmallTreeLB

Description: An estimate of the areal cover of large trees with a diameter

less than 0.3 m at breast height on the left bank. Categories include: 0 -

Absent (0%), 1 - Sparse (<10%), 2 - Moderate (10-40%), 3 - Heavy (40-75%),

4 - Very Heavy (>75%), NC - Not characterized

Column: CanSmallTreeRB

Description: An estimate of the areal cover of large trees with a diameter

less than 0.3 m at breast height on the right bank. Categories include: 0 -

Absent (0%), 1 - Sparse (<10%), 2 - Moderate (10-40%), 3 - Heavy (40-75%),

4 - Very Heavy (>75%), NC - Not characterized

Column: CanSmallTreeFlag

Description: Qualifier of canopy small tree observation or measurement

Column: USWoodyVegLB

Description: An estimate of the dominant vegetation type for the understory

layer (0.5 to 5 m high) on the left bank. Categories include: D -

Deciduous, C - Coniferous, E - Broadleaf evergreen, M - Mixed, N - None, NC

- Not characterized

Column: USWoodyVegRB

Description: An estimate of the dominant vegetation type for the understory

layer (0.5 to 5 m high) on the right bank. Categories include: D -

Deciduous, C - Coniferous, E - Broadleaf evergreen, M - Mixed, N - None, NC

- Not characterized

Column: USWoodyVegFlag

Description: Qualifier of understory woody vegetation type observation or

measurement

Column: USWoodyShrubSapLB

Description: An estimate of the areal cover of the woody shrubs and

saplings for the understory layer (0.5 to 5 m high) on the left bank.

Categories include: 0 - Absent (0%), 1 - Sparse (<10%), 2 - Moderate

(10-40%), 3 - Heavy (40-75%), 4 - Very Heavy (>75%), NC - Not characterized

Column: USWoodyShrubSapRB

Description: An estimate of the areal cover of the woody shrubs and

saplings for the understory layer (0.5 to 5 m high) on the right bank.

Categories include: 0 - Absent (0%), 1 - Sparse (<10%), 2 - Moderate

(10-40%), 3 - Heavy (40-75%), 4 - Very Heavy (>75%), NC - Not characterized

Column: USWoodyShrubSapFlag

Description: Qualifier of understory woody shrub and sapling observation or

measurement

Column: USHerbGrassForbLB

Description: An estimate of the areal cover of the non-woody herbs,

grasses, and forbs for the understory layer (0.5 to 5 m high) on the left

bank. Categories include: 0 - Absent (0%), 1 - Sparse (<10%), 2 - Moderate

(10-40%), 3 - Heavy (40-75%), 4 - Very Heavy (>75%), NC - Not characterized

Column: USHerbGrassForbRB

Description: An estimate of the areal cover of the non-woody herbs,

grasses, and forbs for the understory layer (0.5 to 5 m high) on the right

bank. Categories include: 0 - Absent (0%), 1 - Sparse (<10%), 2 - Moderate

(10-40%), 3 - Heavy (40-75%), 4 - Very Heavy (>75%), NC - Not characterized

Column: USHerbGrassForbFlag

Description: Qualifier of nonwoody herbaceous understory observation or

measurement

Column: GCWoodyShrubSapLB

Description: An estimate of the areal cover of the woody shrubs and

saplings for the ground cover (<0.5 m high) on the left bank. Categories

include: 0 - Absent (0%), 1 - Sparse (<10%), 2 - Moderate (10-40%), 3 -

Heavy (40-75%), 4 - Very Heavy (>75%), NC - Not characterized

Column: GCWoodyShrubSapRB

Description: An estimate of the areal cover of the woody shrubs and

saplings for the ground cover (<0.5 m high) on the right bank. Categories

include: 0 - Absent (0%), 1 - Sparse (<10%), 2 - Moderate (10-40%), 3 -

Heavy (40-75%), 4 - Very Heavy (>75%), NC - Not characterized

Column: GCWoodyShrubSapFlag

Description: Qualifier of woody shrub and sapling ground cover observation

or measurement

Column: GCHerbGrassForbLB

Description: An estimate of the areal cover of the non-woody herbs,

grasses, and forbs for the ground cover (<0.5 m high) on the left bank.

Categories include: 0 - Absent (0%), 1 - Sparse (<10%), 2 - Moderate

(10-40%), 3 - Heavy (40-75%), 4 - Very Heavy (>75%), NC - Not characterized

Column: GCHerbGrassForbRB

Description: An estimate of the areal cover of the non-woody herbs,

grasses, and forbs for the ground cover (<0.5 m high) on the right bank.

Categories include: 0 - Absent (0%), 1 - Sparse (<10%), 2 - Moderate

(10-40%), 3 - Heavy (40-75%), 4 - Very Heavy (>75%), NC - Not characterized

Column: GCHerbGrassForbFlag

Description: Qualifier of nonwoody herbaceous ground cover observation or

measurement

Column: GCBarrenBareDuffLB

Description: An estimate of the areal cover of the Barren, Bare Dirt, or

Duff for the ground cover (<0.5 m high) on the left bank. Categories

include: 0 - Absent (0%), 1 - Sparse (<10%), 2 - Moderate (10-40%), 3 -

Heavy (40-75%), 4 - Very Heavy (>75%), NC - Not characterized

Column: GCBarrenBareDuffRB

Description: An estimate of the areal cover of the Barren, Bare Dirt, or

Duff for the ground cover (<0.5 m high) on the right bank. Categories

include: 0 - Absent (0%), 1 - Sparse (<10%), 2 - Moderate (10-40%), 3 -

Heavy (40-75%), 4 - Very Heavy (>75%), NC - Not characterized

Column: GCBarrenBareDuffFlag

Description: Qualifier of barren ground cover observation or measurement

Column: HIWallLB

Description: An estimate of the areal cover of walls, dikes, revetments,

riprap, and dams on the left bank. Categories include: 0 - Not present, P

- >10 m, C - Within 10 m, B - On bank, NC - Not characterized

Column: HIWallRB

Description: An estimate of the areal cover of walls, dikes, revetments,

riprap, and dams on the right bank. Categories include: 0 - Not present, P

- >10 m, C - Within 10 m, B - On bank, NC - Not characterized

Column: HIWallFlag

Description: Qualifier of HI wall observation or measurement

Column: HIBuildingLB

Description: An estimate of the areal cover of buildings on the left bank.

Categories include: 0 - Not present, P - >10 m, C - Within 10 m, B - On

bank, NC - Not characterized

Column: HIBuildingRB

Description: An estimate of the areal cover of buildings on the right bank.

Categories include: 0 - Not present, P - >10 m, C - Within 10 m, B - On

bank, NC - Not characterized

Column: HIBuildingFlag

Description: Qualifier of HI building observation or measurement

Column: HIPaveLB

Description: An estimate of the areal cover of pavement or cleared lots on

the left bank. Categories include: 0 - Not present, P - >10 m, C - Within

10 m, B - On bank, NC - Not characterized

Column: HIPaveRB

Description: An estimate of the areal cover of pavement or cleared lots on

the right bank. Categories include: 0 - Not present, P - >10 m, C - Within

10 m, B - On bank, NC - Not characterized

Column: HIPaveFlag

Description: Qualifier of HI pavement observation or measurement

Column: HIRoadLB

Description: An estimate of the areal cover of roads and railroads on the

left bank. Categories include: 0 - Not present, P - >10 m, C - Within 10 m,

B - On bank, NC - Not characterized

Column: HIRoadRB

Description: An estimate of the areal cover of roads and railroads on the

right bank. Categories include: 0 - Not present, P - >10 m, C - Within 10

m, B - On bank, NC - Not characterized

Column: HIRoadFlag

Description: Qualifier of HI road observation or measurement

Column: HIPipeLB

Description: An estimate of the areal cover of inlet and outlet pipes on

the left bank. Categories include: 0 - Not present, P - >10 m, C - Within

10 m, B - On bank, NC - Not characterized

Column: HIPipeRB

Description: An estimate of the areal cover of inlet and outlet pipes on

the right bank. Categories include: 0 - Not present, P - >10 m, C - Within

10 m, B - On bank, NC - Not characterized

Column: HIPipeFlag

Description: Qualifier of HI pipe observation or measurement

Column: HILandfillLB

Description: An estimate of the areal cover of landfills and trash on the

left bank. Categories include: 0 - Not present, P - >10 m, C - Within 10 m,

B - On bank, NC - Not characterized

Column: HILandfillRB

Description: An estimate of the areal cover of landfills and trash on the

right bank. Categories include: 0 - Not present, P - >10 m, C - Within 10

m, B - On bank, NC - Not characterized

Column: HILandfillFlag

Description: Qualifier of HI landfill observation or measurement

Column: HIParkLB

Description: An estimate of the areal cover of parks and lawns on the left

bank. Categories include: 0 - Not present, P - >10 m, C - Within 10 m, B -

On bank, NC - Not characterized

Column: HIParkRB

Description: An estimate of the areal cover of parks and lawns on the right

bank. Categories include: 0 - Not present, P - >10 m, C - Within 10 m, B -

On bank, NC - Not characterized

Column: HIParkFlag

Description: Qualifier of HI park observation or measurement

Column: HIRowCropLB

Description: An estimate of the areal cover of row crops on the left bank.

Categories include: 0 - Not present, P - >10 m, C - Within 10 m, B - On

bank, NC - Not characterized

Column: HIRowCropRB

Description: An estimate of the areal cover of row crops on the right bank.

Categories include: 0 - Not present, P - >10 m, C - Within 10 m, B - On

bank, NC - Not characterized

Column: HIRowCropFlag

Description: Qualifier of HI row crop observation or measurement

Column: HIPastLB

Description: An estimate of the areal cover of pastures, ranges, and hay

fields on the left bank. Categories include: 0 - Not present, P - >10 m, C

- Within 10 m, B - On bank, NC - Not characterized

Column: HIPastRB

Description: An estimate of the areal cover of pastures, ranges, and hay

fields on the right bank. Categories include: 0 - Not present, P - >10 m, C

- Within 10 m, B - On bank, NC - Not characterized

Column: HIPastFlag

Description: Qualifier of HI pasture observation or measurement

Column: HILogLB

Description: An estimate of the areal cover of logging operations on the

left bank. Categories include: 0 - Not present, P - >10 m, C - Within 10 m,

B - On bank, NC - Not characterized

Column: HILogRB

Description: An estimate of the areal cover of logging operations on the

right bank. Categories include: 0 - Not present, P - >10 m, C - Within 10

m, B - On bank, NC - Not characterized

Column: HILogFlag

Description: Qualifier of HI logging observation or measurement

Column: HIMineLB

Description: An estimate of the areal cover of mining activities on the

left bank. Categories include: 0 - Not present, P - >10 m, C - Within 10 m,

B - On bank, NC - Not characterized

Column: HIMineRB

Description: An estimate of the areal cover of mining activities on the

right bank. Categories include: 0 - Not present, P - >10 m, C - Within 10

m, B - On bank, NC - Not characterized

Column: HIMineFlag

Description: Qualifier of HI mine observation or measurement

Column: TreesVisible

Description: An indicator whether trees are visible or not within the

cross-section. Trees visible, Trees not visible, Not characterized

Column: DBH

Description: An estimated diameter at breast height (DBH) of the potential

legacy tree. Categories include: 0 - 0.1 m, 0.1 - 0.3 m, 0.3 - 0.75 m, 0.75

- 2 m, >2 m, NC - Not characterized

Column: Height

Description: An estimated height of the potential legacy tree. Categories

include: <5 m, 5 -15 m, 15 - 30 m, >30 m, NC - Not characterized

Column: DistWetMarg\_m

Description: An estimated distance from the wetted margin of the stream to

the potential legacy tree

Column: TreeType

Description: A classification of the potential legacy tree. Categories

include: Deciduous, Coniferous, Broadleaf Evergreen

Column: TaxonCat

Description: The species or taxonomic group of the potential legacy tree.

Categories include: Acacia/Mesquite, Alder/Birch, Ash,

Cedar/Cypress/Sequoia, Fir (including Douglas Fir, Hemlock), Juniper,

Maple/Boxelder, Oak, Pine, Poplar/Cottonwood, Snag (dead tree of any

species), Spruce, Sycamore, Willow, Unknown, or other broadleaf evergreen,

Unknown, or other conifer, Unknown, or other deciduous

Column: AlienPlantSpecies

Description: The list of all alien plant species found. Categories include:

None- None - None; W Wtrmlf - Eurasian water milfoil - Myriophyllum

spicatum; Hydrilla - Hydrilla - Hydrilla verticillata; E Wtrchest -

European water chestnut - Trapa natans; W Hyacinth - Water hyacinth -

Eichhornia crassipes; Ylw Fltheart - Yellow floating heart - Nymphoides

peltata; P Lstrife - Purple loosestrife - Lythrum salicaria; G reed - Giant

reed - Arundo donax; Flwr rush - Flowering rush - Butomus umbellatus; Salt

ced - Salt cedar - Tamarix spp; MF rose - Multiflora rose - Rosa

multiflora; Spurge - Leafy spurge - Euphorbia esula; NC - Not characterized

Column: LegacyTreeComment

Description: Comments about Riparian "Legacy" Trees and Invasive Plants

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FILE: 20180921.0920.ThalwegProfileNRSA

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BioData Retrieval Habitat Thalweg Profile Level Detail NRSA Description

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Measurements taken at equally spaced intervals along the thalweg between

each pair of transects (channel cross-sections). Each row represents a set

of measurements for a pair of transects. Data include include depth,

classification of habitat and pool-forming features, and presence of

backwaters, side channels and loose, soft deposits of sediment particles.

This data set only contains data collected with the National Rivers and

Streams Assessment (NRSA) habitat protocols.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* PHAB-W - NRSA Physical Habitat Characterization, wadable

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code that uniquely defines the

sample. The NAWQA-SMCOD is comprised of the following information

concatenated into a single code (NAWQA 4 digit study unit, 2 digit

collection month, 2 digit year, 3 characters representing sample type, 4

character sample number, bottle sequence number). For example:

WMIC0902ADE0008\*

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: Transect

Description: The sequential number recorded for each transect

Column: Station

Description: Sample Station Number

Column: ThalwegDepth\_cm

Description: The channel depth at the deepest point, from the substrate

surface to the water surface measured in centimeters

Column: SoftSmallSediment

Description: An indicator of the presence of soft or small sediments in the

channel, such as fine gravel, sand, silt, clay, or muck (Yes, No, NC (not

characterized))

Column: BarPresent

Description: Indicates whether the station cross-section intersects a

mid-channel bar (Yes, No, NC (not characterized))

Column: ChannelUnitCode

Description: Codes describing the habitat type of the channel (PP - Pool,

Plunge; PT - Pool, Trench; PL - Pool, Lateral Scour; PB - Pool, Backwater;

PD - Pool, Impoundment; GL - Glide; RI - Riffle; RA - Rapid; CA - Cascade;

FA - Falls; DR - Dry Channel; NC - Not Characterized)

Column: PoolFormCode

Description: Codes describing pool forming elements in the channel (N - Not

a pool, not applicable, habitat unit is not a pool; W - Large woody debris;

R - Rootwad; B - Boulder or bedrock; F - Unknown, fluvial; NC - Not

characterized)

Column: SideChannel

Description: An indicator of the presence or absence of a side channel at

the station's cross-section (Yes, No, NC (not characterized))

Column: Backwater

Description: An indicator of the presence or absence of quiescent

off-channel aquatic habitats, including sloughs, alcoves, and backwater

pools (Yes, No, NC (not characterized))

Column: ThalwegProfileComments

Description: Comments describing the thalweg profile of a channel

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FILE: 20180921.0920.WoodyDebrisNRSA

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BioData Retrieval Habitat Woody Debris Level Detail NRSA Description

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Tally of large woody debris between pairs of transect (channel

cross-sections) within and above the bankfull channel according to

specified length and diameter classes. Each row represents a set of counts

(tallies) between transects.This data set only contains data collected with

the National Rivers and Streams Assessment (NRSA) habitat protocols.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* PHAB-W - NRSA Physical Habitat Characterization, wadable

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code that uniquely defines the

sample. The NAWQA-SMCOD is comprised of the following information

concatenated into a single code (NAWQA 4 digit study unit, 2 digit

collection month, 2 digit year, 3 characters representing sample type, 4

character sample number, bottle sequence number). For example:

WMIC0902ADE0008\*

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: Transect

Description: The sequential 2 - letter code recorded for each transect

Column: WETSDSL

Description: Tally of woody debris within the channel with a small diameter

(0.1 - < 0.3 m) and short length (1.5 - 5 m)

Column: WETSDML

Description: Tally of woody debris within the channel with a small diameter

(0.1 - < 0.3 m) and medium length (5 - 15 m)

Column: WETSDLL

Description: Tally of woody debris within the channel with a small diameter

(0.1 - < 0.3 m) and long length (>15 m)

Column: WETMDSL

Description: Tally of woody debris within the channel with a medium

diameter (0.3 - 0.6 m) and short length (1.5 - 5 m)

Column: WETMDML

Description: Tally of woody debris within the channel with a medium

diameter (0.3 - 0.6 m) and medium length (5 - 15 m)

Column: WETMDLL

Description: Tally of woody debris within the channel with a medium

diameter (0.3 - 0.6 m) and long length (>15 m)

Column: WETLDSL

Description: Tally of woody debris within the channel with a large diameter

(0.6 - 0.8 m) and short length (1.5 - 5 m)

Column: WETLDML

Description: Tally of woody debris within the channel with a large diameter

(0.6 - 0.8 m) and medium length (5 - 15 m)

Column: WETLDLL

Description: Tally of woody debris within the channel with a large diameter

(0.6 - 0.8 m) and long length (>15 m)

Column: WETXDSL

Description: Tally of woody debris within the channel with a very large

diameter (> 0.8 m) and short length (1.5 - 5 m)

Column: WETXDML

Description: Tally of woody debris within the channel with a very large

diameter (> 0.8 m) and medium length (5 - 15 m)

Column: WETXDLL

Description: Tally of woody debris within the channel with a very large

diameter (> 0.8 m) and long length (>15 m)

Column: DRYSDSL

Description: Tally of woody debris above the channel with a small diameter

(0.1 - < 0.3 m) and short length (1.5 - 5 m)

Column: DRYSDML

Description: Tally of woody debris above the channel with a small diameter

(0.1 - < 0.3 m) and medium length (5 - 15 m)

Column: DRYSDLL

Description: Tally of woody debris above the channel with a small diameter

(0.1 - < 0.3 m) and long length (>15 m)

Column: DRYMDSL

Description: Tally of woody debris above the channel with a medium diameter

(0.3 - 0.6 m) and short length (1.5 - 5 m)

Column: DRYMDML

Description: Tally of woody debris above the channel with a medium diameter

(0.3 - 0.6 m) and medium length (5 - 15 m)

Column: DRYMDLL

Description: Tally of woody debris above the channel with a medium diameter

(0.3 - 0.6 m) and long length (>15 m)

Column: DRYLDSL

Description: Tally of woody debris above the channel with a large diameter

(0.6 - 0.8 m) and short length (1.5 - 5 m)

Column: DRYLDML

Description: Tally of woody debris above the channel with a large diameter

(0.6 - 0.8 m) and medium length (5 - 15 m)

Column: DRYLDLL

Description: Tally of woody debris above the channel with a large diameter

(0.6 - 0.8 m) and long length (>15 m)

Column: DRYXDSL

Description: Tally of woody debris above the channel with a very large

diameter (> 0.8 m) and short length (1.5 - 5 m)

Column: DRYXDML

Description: Tally of woody debris above the channel with a very large

diameter (> 0.8 m) and medium length (5 - 15 m)

Column: DRYXDLL

Description: Tally of woody debris above the channel with a very large

diameter (> 0.8 m) and long length (>15 m)

Column: WoodyDebrisFlag

Description: Qualifier of an observation or measurement (K = no measurement

made, U = suspect measurement)

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FILE: 20180921.0920.SlopeBearingNRSA

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BioData Retrieval Habitat Slope and Bearing Level Detail NRSA Description

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Water-surface slope and channel bearing measurements for pairs of transects

(channel cross-sections). Each row represents a set of measurements for a

pair of transects. This data set only contains data collected with the

National Rivers and Streams Assessment (NRSA) habitat protocols.

Column Definitions

------------------

Column: SIDNO

Description: Sample ID number - a unique, immutable sample identifier. BDB

prefix indicates that BioData system is source of the identifier

Column: ReleaseCategory

Description: Category to indicate who can view or retrieve the data

(Public, Project Staff, Data Steward)

Column: ProvisionalData

Description: Provisional data are data that have not completed the review

process. Subsequent review may result in significant revisions. Data users

are cautioned to consider carefully the provisional nature of the

information before using it

Column: ProjectLabel

Description: Project short name assigned by the project owner

Column: SiteNumber

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD)

Column: StartTime

Description: Time sampling activities started in 24-hour format (HH:MM)

Column: SampleTypeCode

Description: Code indicating the type of sample collected

Domain:

\* PHAB-W - NRSA Physical Habitat Characterization, wadable

Column: SiteVisitSampleNumber

Description: Sample number component of the composite logical sample key

(SiteNumber + CollectionDate + SampleType + SiteVisitSampleNumber).

Assigned by project staff

Column: ProjectAssignedSampleLabel

Description: A unique label or code assigned to the Sample by the Project

(unique within a Project)

Column: SiteName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: StudyReachName

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: TimeDatum

Description: Code that indicates time zone and seasonal time

standardization at time of sample collection, such as: CST (Central

Standard Time) or CDT (Central Daylight Time)

Column: CollectionYear

Description: Year in which sample was collected (YYYY)

Column: CollectionMonth

Description: Month in which sample was collected (MM)

Column: CollectionDayOfYear

Description: Day-of-year when sample was collected. The number of days

since the beginning of the year

Column: NAWQA-SMCOD

Description: NAWQA sample identification code that uniquely defines the

sample. The NAWQA-SMCOD is comprised of the following information

concatenated into a single code (NAWQA 4 digit study unit, 2 digit

collection month, 2 digit year, 3 characters representing sample type, 4

character sample number, bottle sequence number). For example:

WMIC0902ADE0008\*

Column: NAWQAStudyUnitCode

Description: 4-letter abbreviation for NAWQA study unit

Column: Transect

Description: The sequential number recorded for each transect

Column: Method

Description: Method used for collecting measurement: CL = Clinometer; HL =

Hand Level; LA = Laser rangefinder with electronic clinometer; TR =

Transit, surveyors level or total station; WT = Water Tubing; NC - Not

characterized

Column: MainWaterSurfaceSlop\_pct

Description: Elevation difference with instrument measuring percent slope

Column: MainWaterSurfaceElevDiff\_cm

Description: Elevation difference with instrument measuring elevation

change, in cm

Column: MainBearing\_deg

Description: Main bearing, in degrees

Column: MainProportion\_pct

Description: The proportion of the stream segment between transects

included in the measurement, as a percent

Column: FirstSupWaterSurfaceSlope\_pct

Description: Elevation difference with instrument measuring percent slope

Column: FirstSupWaterSurfElevDiff\_cm

Description: Elevation difference with instrument measuring elevation

change, in cm

Column: FirstSupBearing\_deg

Description: First supplementary bearing, in degrees

Column: FirstSupProportion\_pct

Description: The proportion of the stream segment between transects

included in the measurement, as a percent

Column: SecondSupWaterSurfaceSlope\_pct

Description: Elevation difference with instrument measuring percent slope

Column: SecondSupWaterSurfElevDiff\_cm

Description: Elevation difference with instrument measuring elevation

change, in cm

Column: SecondSupBearing\_deg

Description: Second supplementary bearing, in degrees

Column: SecondSupProportion\_pct

Description: The proportion of the stream segment between transects

included in the measurement, as a percent

Column: SlopeBearingFlag

Description: Qualifier of an observation or measurement

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FILE: 20180921.0920.IDASResult

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BioData Retrieval Invertebrate Data Analysis System Data Set Result

Description

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First of two files used with the National Water-Quality Assessment Program

Invertebrate Data Analysis System (IDAS) software (

http://pubs.usgs.gov/tm/7c4/ <http://pubs.usgs.gov/tm/7c4/> ), version

5.0.28 and above. The file contains invertebrate abundance information to

be directly imported into the IDAS software without the IDAS Import Data

function. Each row represents a taxonomic identification and life stage for

a given field or laboratory sample component and taxonomic

determination/assertion notes.

Column Definitions

------------------

Column: SampleID

Description: Sample ID number - a unique, immutable sample identifier. This

number is identical to SIDNO, excluding the prefix BDB

Column: SMCOD

Description: Project assigned sample label for BioData samples; Sample

level SMCOD for BioTDb samples

Column: STAID

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: StationName

Description: USGS National Water Information System (NWIS) name for the

place where sample was collected

Column: Reach

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD) and time (hh:mm)

Column: Phylum

Description: Taxonomic Phylum name

Column: Subphylum

Description: Taxonomic Subphylum name

Column: Class

Description: Taxonomic Class name

Column: Order

Description: Taxonomic Order name

Column: Suborder

Description: Taxonomic suborder name

Column: Family

Description: Taxonomic Family name

Column: Subfamily

Description: Taxonomic subfamily name

Column: Tribe

Description: Taxonomic Tribe name

Column: Genus

Description: Taxonomic Genus name

Column: Species

Description: Taxonomic species name

Column: BU\_ID

Description: Taxon according to BioData current taxonomic system

Column: SortCode

Description: Numeric code used to sort data according to taxonomic order

Column: LifeStage

Description: Code that identifies life stage of organism(s). L, Larvae; P,

Pupae; A, Adult; NULL, unknown

Column: Notes

Description: The reason why a speciman could not be identified to the

specified target level

Column: LabCount

Description: Number of individuals counted in the subsample

Column: Abundance

Description: Number of individuals captured in the whole sample

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FILE: 20180921.0920.IDASSample

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BioData Retrieval Invertebrate Data Analysis System Data Set Sample

Description

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Second of two files used with the National Water-Quality Assessment Program

Invertebrate Data Analysis System (IDAS) software (

http://pubs.usgs.gov/tm/7c4/ <http://pubs.usgs.gov/tm/7c4/> ), version

5.0.28 and above. The file contains sample area information to be directly

imported into the IDAS software without the IDAS Import Data function. Each

row represents a single community sample.

Column Definitions

------------------

Column: SampleID

Description: Sample ID number - a unique, immutable sample identifier. This

number is identical to SIDNO, excluding the prefix BDB

Column: SUID

Description: 4-letter abbreviation for NAWQA study unit

Column: STAID

Description: USGS National Water Information System (NWIS) 8 to 15-digit

identifier for the place for where sample was collected

Column: Reach

Description: Name given to identify the longitudinal section of a stream

that was selected for sampling

Column: CollectionDate

Description: Date sample was collected (YYYYMMDD) and time (hh:mm)

Column: SampleMediumCode

Description: General type (category) of data

Column: SampleType

Description: Code indicating the type of sample collected

Column: AreaSampTot

Description: Total area sampled, in square centimeters