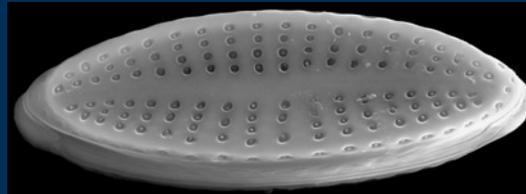


# BioData

<http://aquatic.biodata.usgs.gov>  
[pmruhl@usgs.gov](mailto:pmruhl@usgs.gov)





# What Is BioData?

An internet-accessible database application for managing, storing, and distributing USGS aquatic bioassessment data

# Current Data Holdings

- 2726 fish community samples
- 7620 invertebrate samples
- 8971 algae samples
- From over 2000 sites
- NAWQA and NRSA protocols





# We Spend A Lot of Time Thinking About

- **BioData as a data management tool for field biologists**

Sampling Information

Curvilinear Reach Length from assigned Study Reach: 237 m

Reach Length Fished: \* 237 m Water Temperature: 19.6 °C

Water Visibility: Poor Specific Conductivity: 654 µS

Collection Method(s) used for this Sample

Click buttons below to add all collection methods for this sample.

Electrofishing Methods:

- Backpack: Add Pass
- Towed Barge: Add Pass
- Boat: Add Pass

Seining Methods:

- Minnow Seine: Add Method
- Bag Seine: Add Method
- Beach Seine: Add Method

Visual Collection Methods:

- Snorkeling: Add Method

Backpack - NA

Towed - P1

Gear: Towed Barge Output Voltage: 325

Pass: \* Pass 1 Seconds: 2948

Channel Coverage: Entire width Start Time: 1100

Direction Fished: Upstream End Time: 1300

Model: MLES Infinity Comments: Poor visibility, netting efficiency low

No Fish Were Captured:

Delete Method

Fish Taxonomic Results

Defaults for newly added taxonomic result



# Quality management features

## Auto data validation

✓ Last saved at 01:12:37 pm CDT - What a good looking sample!

⚠ The value 450000.0 cm<sup>2</sup> is greater than the maximum value 10.0 m<sup>2</sup> for field Total area of sample - ([Fix it](#))

⚠ Click again to hide the error list

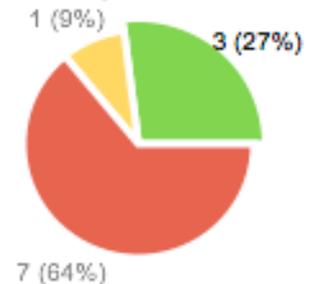
## Data Review tools

Sample List

Page 1 of 1 Page Size: 15 Release Factor Icon Legend Displaying Found 1

Release Categ...	SIDNO	Site Number	Collection Date	Data Category	Sample Type	Site W... Flag	Project Profile Review	Project Profile Valid	Reach Review	Reach Valid	Analysis Status	Sample Review	Sample Valid	Taxa Present	Taxa Review
🟡	<a href="#">BDB-000051321</a>	01435000	2011-08-09	Algae	ARTH	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟡	-
🟢	<a href="#">BDB-000051323</a>	01435000	2011-08-09	Invertebrate	IRTH	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
🟡	<a href="#">BDB-000051326</a>	01435000	2011-08-09	Invertebrate	IQMH	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟡	-
🟡	<a href="#">BDB-000051327</a>	01466500	2011-08-01	Algae	ARTH	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟡	-
🟢	<a href="#">BDB-000051328</a>	01466500	2011-08-01	Invertebrate	IRTH	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
🟡	<a href="#">BDB-000051329</a>	01466500	2011-08-01	Invertebrate	IQMH	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟡	-
🟢	<a href="#">BDB-000051336</a>	01466500	2011-08-04	Fish	FISH	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
🟢	<a href="#">BDB-000051337</a>	01435000	2011-08-11	Fish	FISH	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
🟢	<a href="#">BDB-000051319</a>	01435000	2011-08-09	Physical	SCOND	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	N/A	N/A
🟢	<a href="#">BDB-000051320</a>	01435000	2011-08-09	Physical	LINT	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	N/A	N/A
🟢	<a href="#">BDB-000051325</a>	01466500	2011-08-01	Physical	SCOND	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	N/A	N/A
🟢	<a href="#">BDB-000051425</a>	01435000	2011-08-10	Physical	RHAB	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	N/A	N/A
🟢	<a href="#">BDB-000051437</a>	01466500	2011-09-21	Physical	RHAB	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	N/A	N/A
🟢	<a href="#">BDB-000051590</a>	01466500	2011-08-01	Physical	LINT	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	N/A	N/A

### Invertebrate (11 total samples)



### Summary

#### Taxonomic Result Summary

443 Total records.  
Sum of abundance - 877  
22 distinct taxa

554 (63%) Cyprinidae specimens  
134 (15%) Catostomidae specimens  
2 (0%) Ictaluridae specimens  
0 (0%) Salmonidae specimens  
0 (0%) Cottidae specimens  
144 (16%) Centrarchidae specimens  
42 (5%) Percidae specimens

# Laboratory Data

12 | RESULTS OFFICIAL.Memo\_1210.20130723.13171... | 2013-07-23 | TABLE\_VALIDATION

Summary | Detail Information | Taxa Summary Report

	Validation Message	Validation Name	Run Count	Valid Count	Error C...	Warnin...
1	Submitting Lab: USGS National Water Quality Laboratory		0	0	0	0
2	File Upload Name: RESULTS_OFFICIAL.Memo_1210.20130723.13171...		0	0	0	0
3	File Upload Time: Tue Jul 23 14:18:38 CDT 2013		0	0	0	0
4	File Validation Time: Tue Jul 23 14:18:39 CDT 2013		0	0	0	0
5	There were 219 rows.		0	0	0	0
6	The File upload was successful.		0	0	0	0
7	Number of Validations Run per Row = 38		0	0	0	0
8		Column Count Check	219	219	0	0
9		Domain Curation Date	219	219	0	0
10		Domain Identification Date	219	219	0	0
11		Domain Verification Date	219	219	0	0
12		Validate Artifact	219	219	0	0
13		Validate Curation Date Format	219	219	0	0
14		Validate Curation Entity	219	219	0	0
15		Validate Identification Date Format	219	219	0	0
16		Validate ImageLink	219	219	0	0
17		Validate Lab Order	219	219	0	0
18		Validate Lab Record Id Length	219	219	0	0
19		Validate Large Rare was reported	1	1	0	0
20		Validate Life Stage Outlines 4	219	219	0	0



<http://aquatic.biodata.usgs.gov>



# We Spend A Lot of Time Thinking About

- BioData as a data management tool for field biologists
- **BioData as a national data repository**



# We Spend A Lot of Time Thinking About

- BioData as a data management tool for field biologists
- BioData as a national data repository
- **BioData as a data distribution channel**
  - Easy to get data you can use
  - Easy to use the data you get

## BioData - Aquatic Bioassessment Data for the Nation



### Select Filter Criteria

[Contact The BioData Team](#) | [About Public Data Retrieval](#) | [Help with this page](#)

The U.S. Geological Survey (USGS) collects fish-, aquatic macroinvertebrate-, and algae-community samples and conducts stream physical habitat surveys as part of its fundamental mission to describe and understand the Earth. Download your data in three steps: 1) On this page select filter criteria; 2) on the next page, choose data set(s), and; 3) on the third page, preview your data and select a download format.

Upload saved filter set:


Choose filters and set filter criteria from one or more sections, then select the "Next" button to go to the Select Data Set(s) page.




Filter(s) "**Sample Type AND State**" will return **78** samples.

#### Biological Community/Data Type and Sample Type Filter

No filter selected in this section Show Sample Types:  All  Fish  Invertebrate  Algae  Physical Measurements [Filter Definition Help](#)

Biological Community/  
Data Type

Sample Type

Select Sample Type to filter by:

##### Available Sample Types

NRSA Fish, wadable (FISH-W)

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



##### Selected Sample Types

NAWQA Fish (FISH)

#### Geographic Location Filter

No filter selected in this section Add States to the filter: [Filter Definition Help](#)

State

County

Latitude/Longitude

Drainage Basin/  
Hydrological Unit  
Code (HUC)

Ecoregion

Sites

##### States to add to filter

FLORIDA

GEORGIA

HAWAII

IDAHO

INDIANA

IOWA

KANSAS



##### States currently on filter

ILLINOIS

#### Site Characteristic Filter



# FY14 Directions

- **Data Management**
  - Additional sampling and laboratory protocols
- **Data Repository**
  - Batch loading toolset
- **Data Distribution**
  - **Web services?**
    - for WaterSmart
    - for QW Portal?
  - **Map interface for discovering and retrieving data**



# BioData

<http://aquatic.biodata.usgs.gov>

For more information:

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Mitch Harris	<a href="mailto:maharris@usgs.gov">maharris@usgs.gov</a>	217-328-9716