

Appendix B: Fish Index of Biotic Integrity for Selected Headwaters in NW Indiana

Metadata:

Identification_Information:

Citation:

Citation_Information:

Originator: Openlands

Publication_Date: 2015

Title: LocationsShapefile

Geospatial_Data_Presentation_Form: ESRI Shapefile

Online_Linkage:

Description:

Abstract:

The goal of this project was to determine species richness in selected headwater streams in the Lake Michigan Watershed of Northwest Indiana and make suggestions about how best to protect these headwaters and the aquatic life they support. The biological health of headwaters has a great impact on the biological health of downstream waters, including Lake Michigan. The species inventories and suggested protection actions are intended to add value to the protection, restoration and planning efforts of local groups such as the Shirley Heinze Land Trust, Coffee Creek Conservancy, Save the Dunes, and Northwestern Indiana Regional Planning Commission. Seventeen sites were inventoried in headwater areas where there was an interested landowner and where there was either a lack of information about the aquatic species supported at the site or where restoration to enhance the habitat or water quality had been undertaken. Taxa inventoried were fish, macroinvertebrates, and mussels. The condition of the creek was also assessed using the Qualitative Habitat Evaluation Index (QHEI) and processes that might be expected to have a negative effect on aquatic species were noted. Where we noted problems or potential problems we suggest possible sources and make suggestions to protect the headwaters

This shapefile represents the sites sampled for the study and summary information about was found there.

The project was funded by the Illinois Coastal Management Program.

Purpose:

The species inventories and suggested protection actions are intended to add value to the protection, restoration and planning efforts of local groups such as the Shirley Heinze Land Trust, Coffee Creek Conservancy, Save the Dunes, and Northwestern Indiana Regional Planning Commission.

Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 20130806

Ending_Date: 20141027

Currentness_Reference: ground condition

Status:

Progress: Complete

Maintenance_and_Update_Frequency: None planned

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -87.089950

East_Bounding_Coordinate: -86.718117

North_Bounding_Coordinate: 41.743656

South_Bounding_Coordinate: 41.535567

Keywords:

Theme:

Theme_Keyword_Thesaurus: none

Theme_Keyword: sampling locations

Theme_Keyword: stream quality

Theme_Keyword: Aquatic species inventories

Theme:

Theme_Keyword_Thesaurus: ISO 19115 Topic Category

Theme_Keyword: environment

Theme_Keyword: inlandWaters

Theme_Keyword: 007

Theme_Keyword: 012

Theme_Keyword: geoscientificInformation

Theme_Keyword: 008

Place:

Place_Keyword_Thesaurus:

Department of Commerce, 1995, Countries, Dependencies, Areas of Special Sovereignty, and Their Principal Administrative Divisions, Federal Information

Processing Standard (FIPS) 10-4, Washington, DC, National Institute of Standards and Technology

Place_Keyword: United States

Place_Keyword: US

Place:

Place_Keyword_Thesaurus:

U.S. Department of Commerce, 1987, Codes for the identification of the States, the District of Columbia and the outlying areas of the United States, and associated areas (Federal Information Processing Standard 5-2): Washington, DC, NIST

Place_Keyword: Indiana

Place_Keyword: IN

Place:

Place_Keyword_Thesaurus:

Department of Commerce, 1990, Counties and Equivalent Entities of the United States, Its Possessions, and Associated Areas, FIPS 6-3, Washington, DC, National Institute of Standards and Technology

Place_Keyword: LaPorte County

Place_Keyword: Porter County

Place:

Place_Keyword_Thesaurus: none

Place_Keyword: Shirley Heinze Meadowbrook

Place_Keyword: Coffee Creek Conservancy

Place_Keyword: Moraine Nature Preserve

Place_Keyword: Suman Fen

Place_Keyword: Springfield Fen

Place_Keyword: Ambler Flatwoods

Place_Keyword: Red Mill County Park

Temporal:

Temporal_Keyword_Thesaurus: none

Temporal_Keyword: none

Access_Constraints: none

Use_Constraints: none

Point_of_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Person: Laura Barghusen

Contact_Organization: Openlands

Contact_Position: Associate Greenways Director

Contact_Address:

Address_Type: mailing address

Address: 25 E. Washington St., Suite 1650
City: Chicago
State_or_Province: IL
Postal_Code: 60602
Contact_Voice_Telephone: 312-863-6253
Contact_Facsimile_Telephone: 312-863-6251
Contact_Electronic_Mail_Address: lbarghusen@openlands.org
Browse_Graphic:
Browse_Graphic_File_Name:
Browse_Graphic_File_Description:
Browse_Graphic_File_Type:
Data_Set_Credit:
Project personnel include Laura Barghusen, Openlands and Roger Klocek, Huff&Huff.
Native_Data_Set_Environment: Data are available in ESRI Shapefile format (.shp files)
Cross_Reference:
Citation_Information:
Originator:
Klocek, Roger, Barghusen, Laura
Publication_Date: 2015
Title:
Biological Richness of Selected Headwater Streams of Northwest Indiana: 2013 through 2014
Geospatial_Data_Presentation_Form: report
Series_Information:
Series_Name: *Issue_Identification:*
Publication_Information:
Publication_Place: Chicago, IL
Publisher: Openlands
Online_Linkage:
Cross_Reference:
Citation_Information:
Originator: Laura Barghusen, Roger Klocek
Publication_Date: 2015

Data_Quality_Information:
Logical_Consistency_Report: not applicable
Completeness_Report: not available
Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

Positions of sampling sites were determined by global positioning (GPS) with a garmin unit, or in some cases using aerial photography through Google Earth and using land marks to position the sampling sites. The location of measuring points are reported with reference to the WGS_1984 datum. In all cases the accuracy is expected to be better than +/- 100 feet, which is sufficient for this project.

Vertical_Positional_Accuracy:

Vertical_Positional_Accuracy_Report: not applicable.

Lineage:

Process_Date:

Process_Step:

Process_Description:

Process_Date: 2014

Process_Step:

Process_Description:

Process_Date:

Process_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Person: Laura Barghusen

Contact_Organization: Openlands

Contact_Position: Associate Greenways Director

Contact_Address:

Address_Type: mailing address

Address: 25 E. Washington St., Suite 1650

City: Chicago

State_or_Province: IL

Postal_Code: 60602

Contact_Voice_Telephone: 312-863-6253

Contact_Facsimile_Telephone: 312-863-6253

Contact_Electronic_Mail_Address: lbarghusen@openlands.org

Spatial_Data_Organization_Information:

Indirect_Spatial_Reference: NW Indiana

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Geographic:

Latitude_Resolution: 0.001

Longitude_Resolution: 0.001
Geographic_Coordinate_Units: Decimal Degrees
Geodetic_Model:
Horizontal_Datum_Name: WGS1984
Ellipsoid_Name:
Semi-major_Axis:
Denominator_of_Flattening_Ratio:
Vertical_Coordinate_System_Definition:
Altitude_System_Definition:
Altitude_Datum_Name:
Altitude_Resolution:
Altitude_Distance_Units:
Altitude_Encoding_Method:

Entity_and_Attribute_Information:

Overview_Description:

Entity_and_Attribute_Overview:

Attributes include: site number, site name, name of preserve in which site is located, watershed, latitude, longitude, Qualitative Habitat Evaluation Index score (QHEI), Macroinvertebrate Index of Biotic Integrity Score (mIBI), EPT Metric score (EPT taxa are members of the orders of Ephemeroptera (mayfly), Plecoptera (stonefly), and Trichoptera (caddisfly), which are generally environmentally sensitive. Sites received a score of either 1,3, or 5) depending on the quality of the assemblage of EPT taxa at the site. EPT taxa is one of the metrics used to calculate the mIBI score), and Fish Index of Biotic Integrity score (IBI).

Distribution_Information:

Distributor:

Contact_Information:

Contact_Person_Primary:

Contact_Person: Laura Barghusen

Contact_Organization: Openlands

Contact_Address:

Address_Type: mailing address

Address: 25 E. Washington St., Suite 1650

City: Chicago

State_or_Province: IL

Postal_Code: 60602
Country: USA
Contact_Voice_Telephone: 312-863-6253
Contact_Facsimile_Telephone: 312-863-6253
Contact_Electronic_Mail_Address: lbarghusen@openlands.org
Resource_Description: NW Indiana fish data
Distribution_Liability: The data have no implied or explicit guarantees
Standard_Order_Process:
Digital_Form:
Digital_Transfer_Information:
Format_Name: ESRI Shapefile
Format_Version_Number:
Format_Information_Content:
Transfer_Size:
Digital_Transfer_Option:
Online_Option:
Computer_Contact_Information:
Network_Address:
Network_Resource_Name:
Access_Instructions: Data may be obtained through contact person
Fees: none

Metadata_Reference_Information:
Metadata_Date: 20150515
Metadata_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Laura Barghusen
Contact_Organization: Openlands
Contact_Address:
Address_Type: mailing and physical address
Address: 25 E. Washington St., Suite 1650
City: Chicago
State_or_Province: IL
Postal_Code: 60602
Country: USA
Contact_Voice_Telephone: 312-863-6253
Contact_Facsimile_Telephone: 312-863-6251
Contact_Electronic_Mail_Address: lbarghusen@openlands.org
Metadata_Standard_Name:
Metadata_Standard_Version:

Metadata_Access_Constraints: none
Metadata_Use_Constraints: none

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