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The Great Lakes
Information Management and Delivery System

Advancing Shared Goals and Collaborative Solutions

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NCER
July 31, 2013

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The Mission of the Nature Conservancy

To conserve the lands and waters on which all life depends

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The Nature Conservancy *facts*

- Formed in 1951, committee of ESA
- Science-based approach, more than 700 staff scientists
- 119 million acres protected globally; protected thousands of miles of rivers and operate more than 100 marine conservation projects
- Over 1 million members
- Work in all 50 states and over 30 countries

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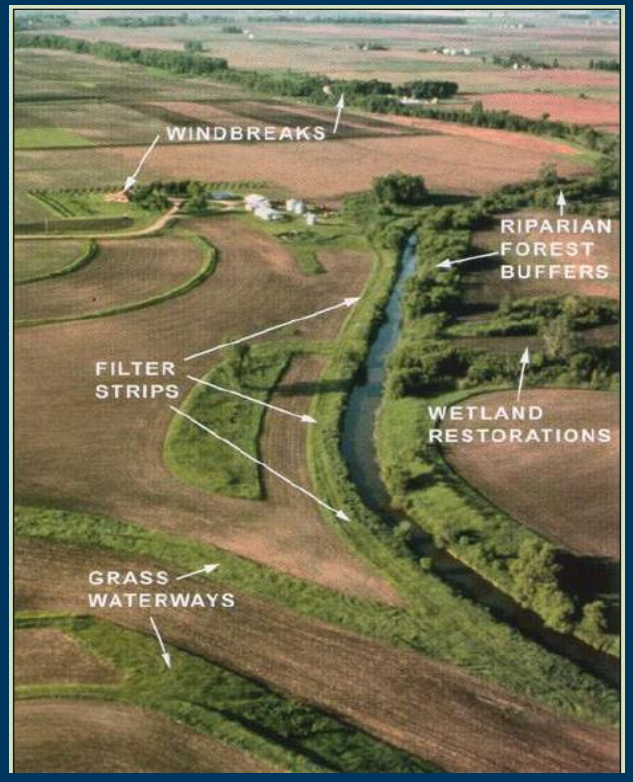
Strategic Conservation

Getting the right conservation practices to the right places in the right amount at the right time, as efficiently as possible, to achieve realistic goals



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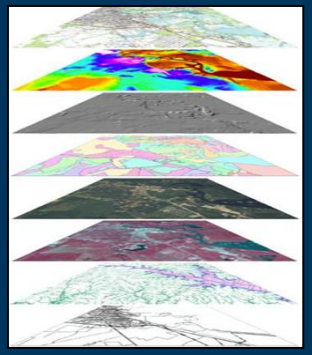
The Problem

- Scope and complexity of the issues

- So many “cooks” in the kitchen without true collaboration

- Focus on “wrong” solutions



- Lack of expertise for right solution

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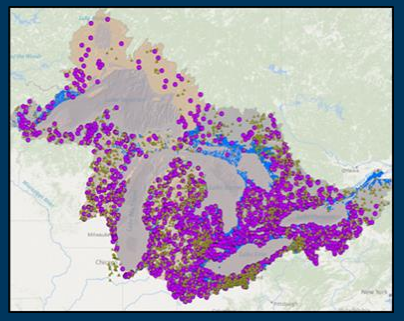
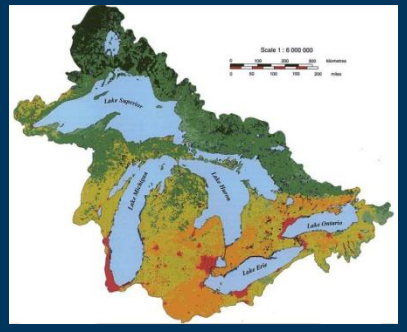
Landscape-scale issues present major challenges





Success requires setting shared goals and collaborative solutions –

The Great Lakes Information Management and Delivery System facilitates both.

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What is an IMDS?

An **information supply chain** supporting core decisions of strategic habitat conservation

1. What are realistic desired conditions?
2. What are current conditions; is there a problem?
3. Can we, and how can we, strategically achieve our desired conditions?
4. Are our actions leading to desired improvements?

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GL IMDS Vision

- **Get the right information to the right people in the right format at the right time to facilitate strategic conservation**

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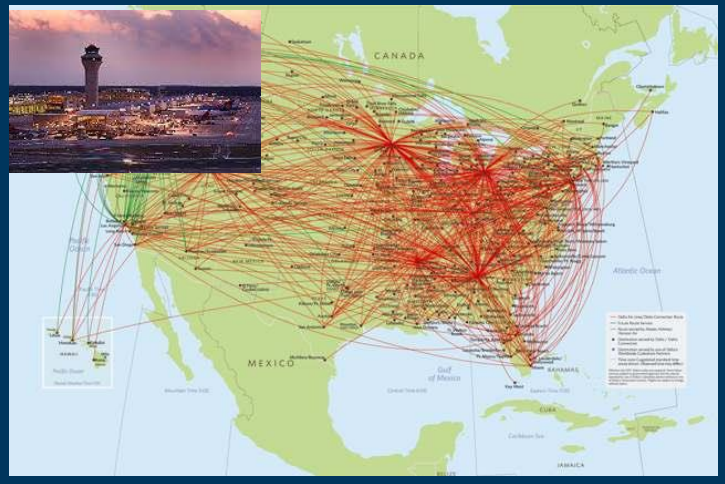
Learn from others: business sector

- **Information supply chains provide industries with…**
  - **Signals to respond rapidly to needs**
  - **Match supply and demand**



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Serving the conservation enterprise

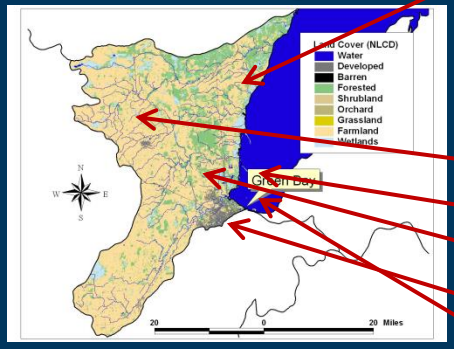
Store Manager

Supply Chain Managers

- Produce
- Clothing
- Electronics
- Health and Beauty
  - Proctor & Gamble
  - Johnson and Johnson
- Etc.

Supply Chain Managers

Site Manager



Supply Chain Managers?

- Connectivity
  - USFS
  - State DOT
  - Counties, Townships
  - TNC (Strategy Manager)
- AG runoff
- Invasive sp
- Residential development
- Urban runoff
- Sewage effluent

Supply Chain Managers?

The Nature Conservancy IMDS ...

www.imds.greenlitestaging.com

Google

Great Lakes Information Management & Delivery System

Advancing shared goals and collaborative solutions to complex conservation problems facing the Great Lakes region

Login Username Password GO

Search Type a keyword to Search

Great Lakes IMDS

Welcome to the Great Lakes Information Management and Delivery System (IMDS) - an integrated set of websites designed to facilitate the development and sharing of data, knowledge, and information to support strategic conservation of the Great Lakes.

Learn More

Search Site

Take a Tour

Modules

Knowledge Network

Learn about Great Lakes ecosystems and become a more informed member of the

Data Catalog

Share or find data to help answer your questions and advance our knowledge of

Featured Content

Featured Project Tracking Content

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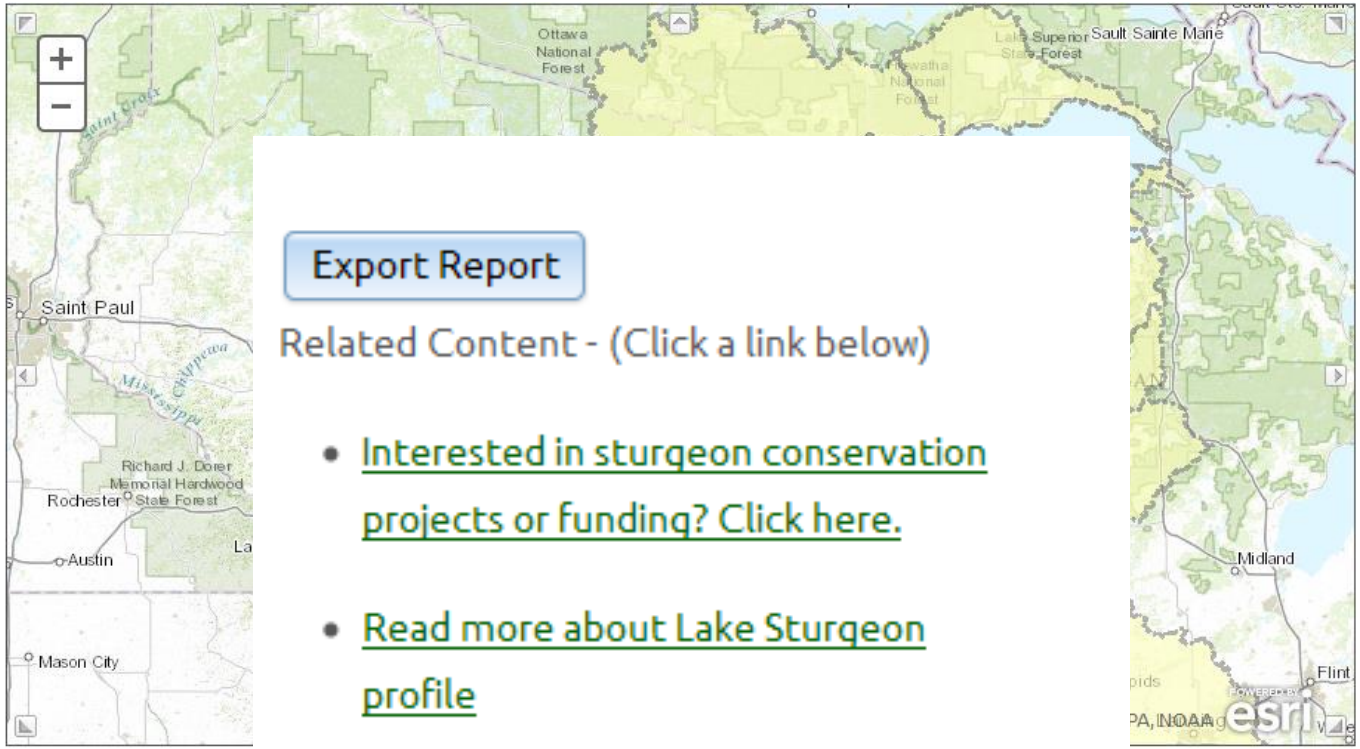


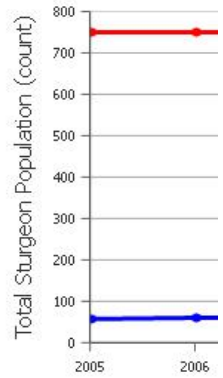
Export Report

Related Content - (Click a link below)

- Interested in sturgeon conservation projects or funding? Click here.
- Read more about Lake Sturgeon profile
- Get data related to stream connectivity
- View maps related to stream connectivity issue
- Get tools related to stream connectivity

Fox River – Southern

Sturgeon Population



Goal Sturgeon Population

ck a link below)

geon conservation

g? Click here.

Lake Sturgeon

o stream

l to stream

to stream

connectivity

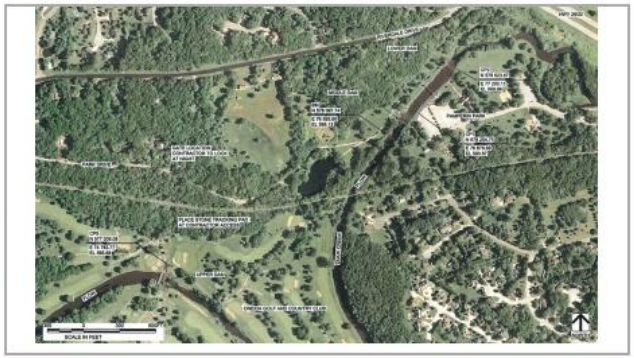
Related Content

Return to Search Results

- About this Module
- Search by Keywords
- Search by Geography
- Contribute Content

Dam Removals & Modifications on Duck Creek at Pamperin Park & the OGCC

Dam Removals & Modifications on Duck Creek at Pamperin Park & the OGCC



Project Summary

Members of Oneida Environmental Health & Safety worked with WIDNR, Brown County, US Fish and Wildlife Service, and the Oneida Golf and Country Club (OGCC) to restore connectivity for fish passage on Duck Creek by removing two dams at Pamperin Park and modifying a third dam at the OGCC.

The two larger dams at Pamperin Park needed major repairs and were a potential liability because of direct public access to the area. Both Pamperin Park dams contributed to destructive ice jams in the spring and neither prevented the spread of Viral Hemorrhagic Septicemia (VHS) upstream, as several larger fish species known to be affected could pass over them. While the upper Pamperin Park dam restricted the upstream migration of invasive round goby and potentially sea lamprey, it also restricted the movement of most desirable species. Additionally, the deep pools created by the dams in Pamperin Park contained degraded natural habitat and slow, warm water of low quality. Although spring fish populations historically flourished in these impoundments, the dams restricted the distribution of many fish species from better feeding, spawning, and nursery habitat upstream.

The OGCC dam was more conducive to fish passage than the dams at Pamperin Park, so it needed modification to stop the upstream movement of invasive round gobies that would have occurred after the Pamperin Park dams were removed.

Project Objectives

1. Remove the upper and lower dams at Pamperin Park, but retain existing roadway due to park maintenance

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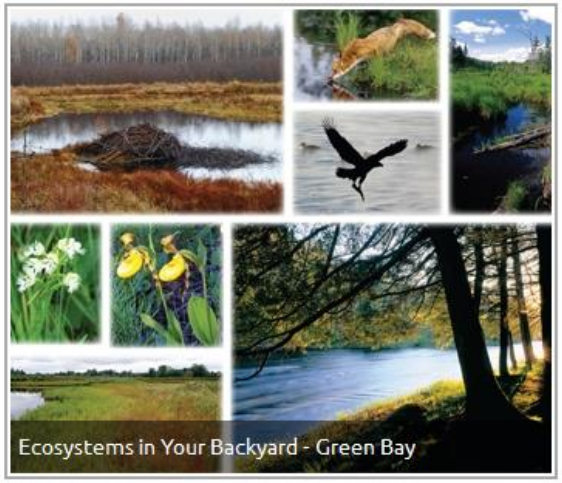
Knowledge Network

Sharing Knowledge to Increase Understanding



Ecosystems in Your Backyard - Green Bay

The development of knowledge for the benefit of society is the core purpose of science. Knowledge encompasses our gained understanding of the patterns and processes underlying simple to complex phenomena.

Knowledge is critical to the sustainable management of the Great Lakes in many ways. First, understanding patterns and underlying processes is what turns data, like that found in our Data Catalog or Dynamic Maps modules, into valuable information to guide decisions. Knowledge empowers individuals or societies to make informed decisions based on the likely benefits and costs or risks of various choices. This is why scientists develop models or decision tools, like those in our Decision Tools module, to apply to complex natural processes like climate and complex social processes like land use planning. Knowledge also allows resource professionals to develop conservation tools and techniques, like those highlighted in our Project Tracking module. Finally, knowledge is what builds understanding among competing interests and fosters the effective communication and compromise needed to develop realistic shared goals, like those presented in our Assess & Adapt module. The sustainable conservation of natural resources poses some of the most important and complex decisions facing society. Expanding our knowledge and using it effectively are essential to develop the innovative policies needed to sustainably manage the socioeconomic and ecological health of the Great Lakes.

General Resources

Technical Resources

twork

Riverine Ecosystems

Digest

Rivers are more than ju
from clean drinking wa
about how rivers vary n
planning have altered
to achieve desirable riv

Contents

Introduction to River E
Ecological Condition o
Essential Ecological At
Human Activities and F
Conservation Strategie
Jurisdiction and Respo

Introduction to

(back to top)

Lake Michigan Basin Inland Aquatic Ecosystems Integrated Assessment

Digest

The Lake Michigan basin is the second largest Great Lake by volume and the third largest basin by surface area. The inland aquatic habitats of this magnificent basin range from
watersheds, including the Mer
farther upland occur wet mea
modify the flow of water throu
Great Lakes basins and genera
considerable chemical, physic
managers, conservation practi

Content

Introduction to Lake

(back to top)

The Lake Michigan basin is the
Lake Michigan is the second la
45,000 square miles, including
miles from north to south, the
inland aquatic ecosystems, inc
streambed characteristics; div

Fox River–Southern Green Bay Basin Inland Aquatic Ecosystems Integrated Assessment

Digest

The Fox River-Southern Green Bay subbasin comprises the lower portion of the Green Bay watershed. This region supports numerous important warm and cool water streams and rivers, an abundance of lake habitat, including Green Bay's largest lake, Lake Winnebago, and some of the richest coastal marshes in northern Lake Michigan. Some of the largest populations of lake sturgeon still use the tributaries of the Wolf, Oconto and Peshtigo watersheds. Even the more developed areas of the Lower Fox River have critical wetlands, lakes and streams that support native migratory fish and a remarkable number of wetland birds, including osprey, bald eagles, great egrets and more. Yet, the degraded state of many inland aquatic habitats from the Fox River Lower Green Bay Area of Concern to the eutrophic lakes in the Lake Winnebago Pools is a serious issue for Green Bay communities. Agriculture and urban development are dominant throughout the watershed. Runoff from agriculture, industrial and urban sources affects wildlife and landowners alike. Hydrologic modifications like dams, channels, dikes and levees are blocking fish passage for northern pike, walleye, sturgeon and yellow perch, while invasive species are altering community structures in many systems. Learn more about the status and trends of southern Green Bay inland aquatic ecosystems and how natural resource professionals, landowners, and decision makers at various levels are working hard to manage southern Green Bay rivers, wetlands and lakes for the benefit of people through enhanced ecosystem structure and function.

Contents

Introduction to the Fox River-Southern Green Bay Inland Aquatic Ecosystems

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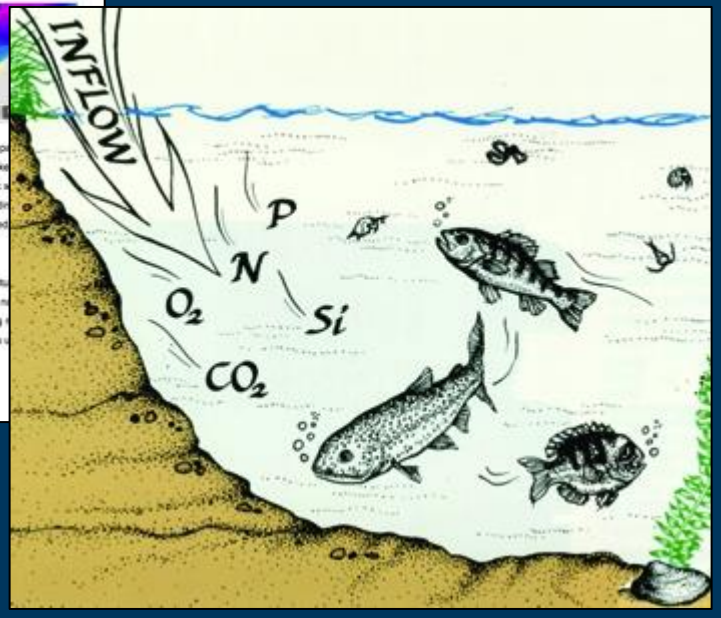
The 3 D's

Data

Dynamic Maps



Decision Tools

Catalogs of:

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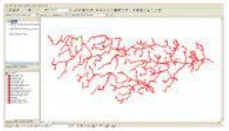
Integrated Information

Supports users and contributors telling complete stories

Related Content

Decision Tools Content

Title ▾

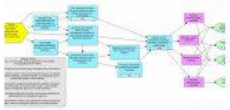


How to Reconnect a Watershed

An approach to decision-making intended for situations where restoring fish passage is the main objective, there are many small barriers that may have cumulative effects, and there are too many barriers to remove all of them.

Knowledge Network Conceptual Model Content

Title ▾



Chain of Results for Increasing Connectivity at Road-Stream Crossings at a Large Scale (Lake Michigan)

This strategy was developed for the Lake Michigan Biodiversity Conservation Strategy, a plan being led by The Nature Conservancy and Michigan Natural Features Inventory. The purpose of the strategy is to expand work being done to address fragmentation of streams by inadequate road-stream crossings.

Project Tracking Content

Title ▾

Assessing Road-Stream Crossings for Barriers to Fish Passage in the Green Bay Watershed

Roads and streams intersect in thousands of places across the 10.6-million-acre Green Bay watershed. At these crossings, culverts and bridges disrupt fish migration by blocking access to miles of feeding and spawning habitat. Wisconsin DNR aquatic ecologist Matt Diebel has worked with a team of partners to inventory road-stream crossings throughout the entire Duck-Pensaukee river system, which meant visiting more than 1,400 locations to compile a database that will be used to assess which crossings pose the greatest barriers to fish passage, and which, if replaced, would restore the greatest amount of northern pike spawning habitat.

Building Better Road-Stream Crossings: Inventory, Assessment, Design & Construction

What is next?

- Build out issues
- Build contribution interface
- Build governance structure

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Questions?

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