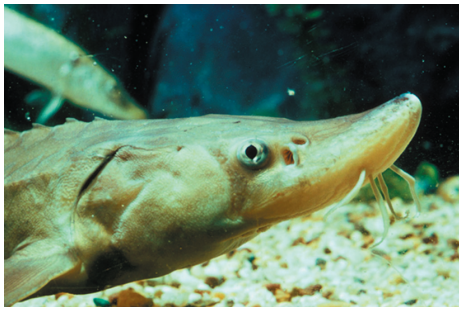
NBII Fisheries and Aquatic Resources Node

The NBII Fisheries and Aquatic Resources Node will provide seamless access to fisheries information resources from across the world.

Background

The National Biological Information Infrastructure (NBII) <www.nbii.gov> is an electronic information network that provides access to biological data and information on our nation's plants, animals, and ecosystems. Data and information maintained by federal, state, and local government agencies; non-government organizations; and private-sector organizations are linked through the NBII gateway and made accessible to a variety of audiences including researchers, natural resource managers, decision-makers, educators, students, and other private citizens.

Implementation of the NBII is being accomplished through the development of nodes that serve as interconnected entry points to the NBII and the information held by partners. These nodes function as fully digital, distributed, and interactive systems that focus on developing, acquiring, and managing content on a defined subject area (thematic nodes) or a geographic region (regional nodes). One of the initial thematic nodes created in 2001 was the Fisheries and Aquatic Resources (FAR) Node.

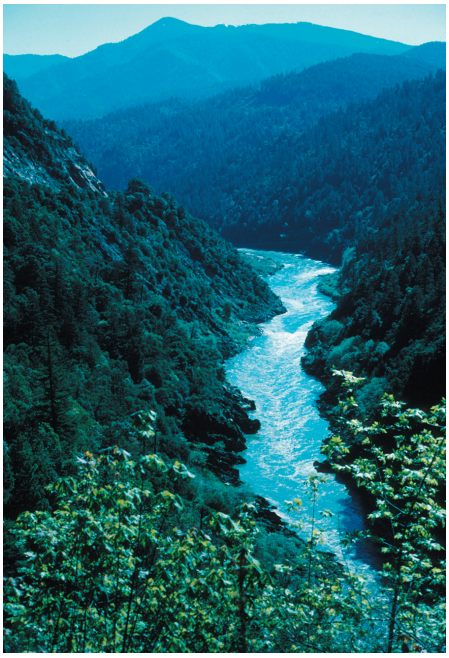


Sturgeon

The Node

Fisheries and aquatic resources are economically, recreationally, and aesthetically important to the nation. Many of these resources are in decline due to factors such as habitat alteration, degrading water quality, invasive species, and inadequate stock management. As a result, the FAR Node was established to serve as an information system to aid in the conservation and restoration of aquatic ecosystems and their fisheries. The FAR Node will accomplish this by providing seamless access to fisheries information sources from across the Internet and the world. The information provided will encompass fish biology, population dynamics, aquaculture, water quality, aquatic habitat, and ecosystems. Potential users range from scientists and managers to environmentalists, educators, and the general public.

The FAR Node is being developed under the direction of the USGS BRD Northern Appalachian Research Lab (NARL) located in Wellsboro, Pennsylvania. The NARL maintains a diversified research program in ecology, conservation technology, genetics, and environmental chemistry to develop scientifically sound approaches to the management of aquatic ecosystems. As the technical lead for FAR, NARL provides guidance in the direction of node development and structure, the identification of data and informational resources for inclusion in the node, and its own valuable aquatic data to be served through the node. The Environmental Resources Research Institute of the Pennsylvania State University is the home of Pennsylvania Spatial Data Access (PASDA), which serves as Pennsylvania's official geospatial information clearinghouse. As NARL's primary partner, PASDA provides access to data sets within the clearinghouse, technical expertise by hosting the FAR Web site and data node, developing the Web site and database infrastructure, and creating Web-based mapping applications and interactive mapping and database capabilities.



Klamath River, California

National Fish Strain Registry summary table for brook trout broodstocks.

Table 3. Brook trout broodstocks - information on reproductive performance and stress tolerance (relative rating). USE SORT BUTTON TO SORT ON COLUMN

Codes: Stress tolerance: 1 = poor, 2 = below average, 3 = average, 4 = above average, 5 = superior.

Strain--- Broodstock	Spawning period			Hatch-ability (%)	Weight		Survival to 90 days (%)	Stress tolerance*			
	Earliest mm/dd	Latest mm/dd			90 days (No/lb)	1 year (No/lb)		Handling stress		Crowding	Transportation
								Swim up	1 year		
SORT	SORT	SORT		SORT	SORT	SORT	SORT	SORT	SORT	SORT	SORT
Armstrong---ARM BKT											
	10/01	11/30	μ	89	323.00	6.000	87	3.0	3.0	3.0	3.0
			n	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Assinica---Assinica (ME)											
	11/01	12/31	μ	89	1273.00	7.950	94	3.0	3.5	3.5	3.5
			n	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Assinica---Assinica (MI)											
	10/01	10/31	μ	89	431.50	18.150	89	3.5	3.0	2.5	3.0
			n	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Bellefonte---Oswego (GA)											
	10/01	11/30	μ	50	300.00	12.000	50	3.0	3.0	3.0	3.0
			n	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Bellefonte---Oswego (PA)											

Products

Since its inception in 2001, the FAR Node has focused on inland freshwater fisheries resources, and developed the tools necessary for future growth: online mapping and database capabilities; methods for Web-enabling management tools; and a process for cataloguing existing online fisheries resources. Some of the current node-supported products are:

- The Pennsylvania Fisheries Explorer: An ArcIMS application that provides an interactive, Web-based GIS system to access, display, and view both base and environmental data sets in the region.
- National Fish Strain Registry: A database that provides fisheries personnel the strain characterization information (i.e., life history, genetic, reproductive, and behavioral characteristics) needed to make informed decisions on the appropriate fish strains to be used under specific production and management programs. The online version allows managers to research strains of stock according to disease resistance, stress tolerances, and other performance traits, via queries, summary tables, and distribution maps.
- Delaware River Mapping Application: A prototype ArcIMS application that provides access to a NARL fisheries survey data set.
- Recreational Fishing Resources and Conditions by State: Links providing quick access to fishing recommendations, seasons, regulations, and access areas as well as to regional stocking and catch statistics. Local water conditions, tide tables, climate forecasts, and travel information are also accessible to let individuals assess conditions prior to leaving the house.

Node-supported projects for 2003 include:

- Chesapeake Bay Watershed Information Application: Under an agreement between PASDA and the Chesapeake Bay Program, a tool will be developed to facilitate metadata searches across both sites using one simple search interface.
- Prototype Internet Mapping Service for the John Day Digital Atlas: The USGS Columbia River Research Laboratory (CRRL) and the Upper Midwest Environmental Sciences Center jointly constructed the John Day Digital Atlas as a prototype decision support system for large rivers. The Atlas integrates biological and environmental data layers, providing policymakers and resource managers with a suite of spatial analysis tools for examining the potential impact of different water levels upon the availability of salmon and sturgeon spawning habitats within portions of the Columbia River. Presently available only on CD as an ArcView tool, CRRL will Web-enable the application, thereby increasing its accessibility and its value to resource management.
- Enhancements to FishBase: FishBase is an online, searchable global database containing information on over 25,000 species. FishBase proposes to repackage its existing Western Hemisphere information (on both fresh- and marine species) to integrate regional search capabilities, and translate the English version into both Spanish and Portuguese.

Partnerships

As the node grows, we seek collaborations with organizations that produce, maintain, and publish fisheries and aquatic resources information from local to international levels. We invite you to contact us to explore opportunities for partnerships.

For More Information

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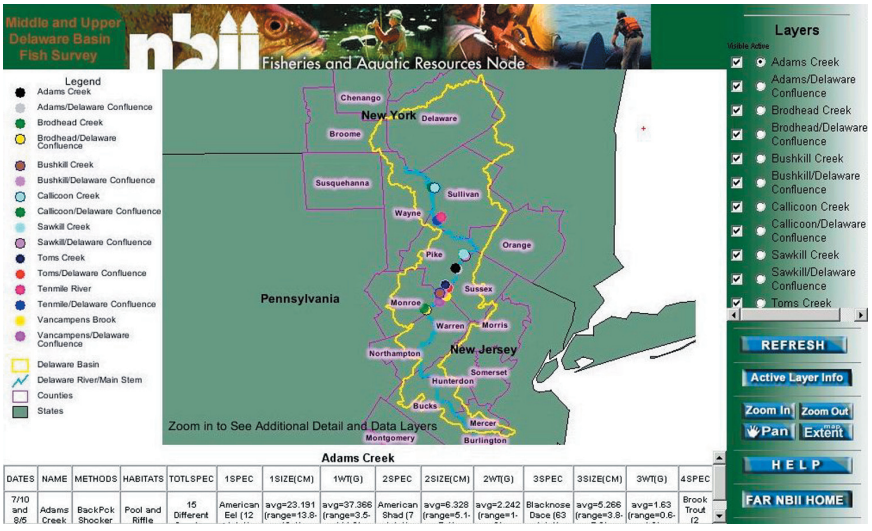
Find us on the Web at <http://far.nbii.gov>.



Delaware River basin mapping application showing field sites and summary fisheries data.