

May 9, 2024

Thinking About Aquatic Habitat from Afar

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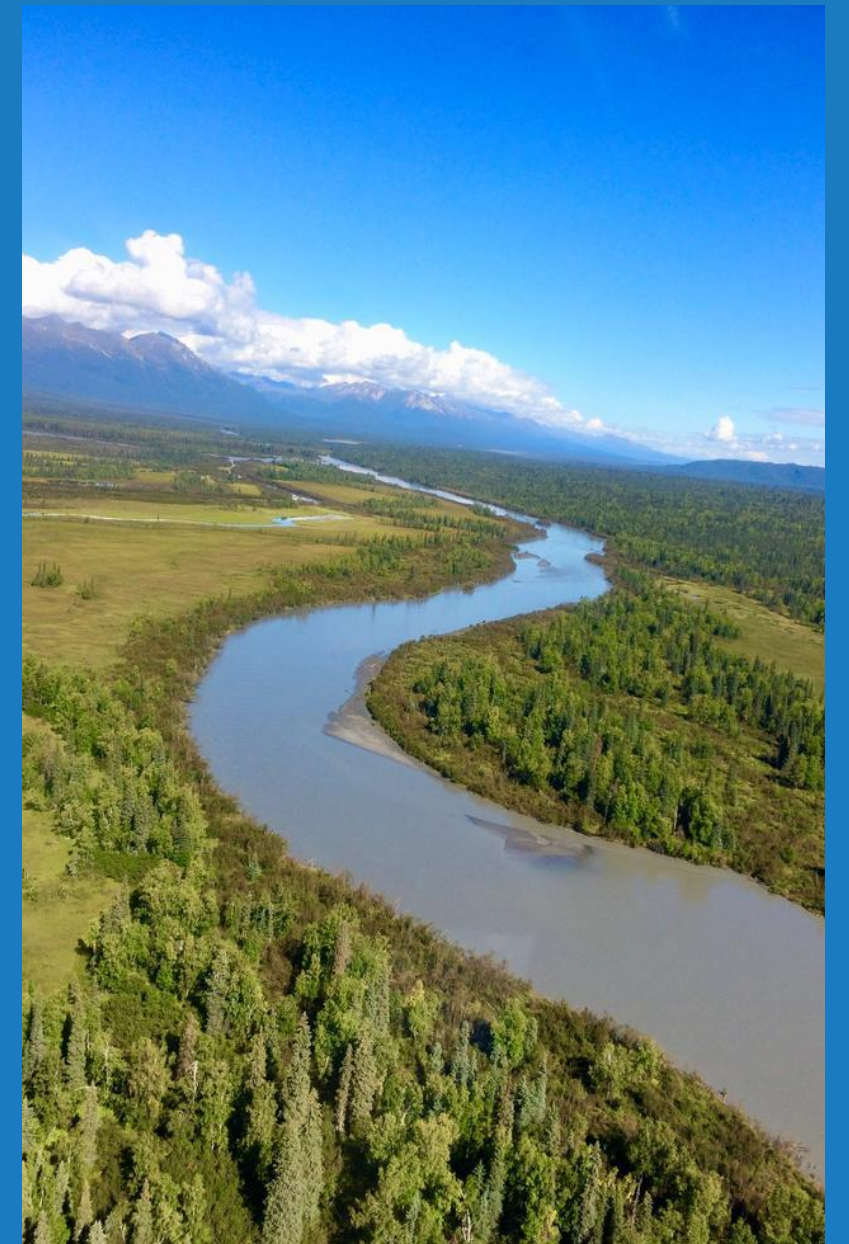
MI DNR – Fisheries Division (retired)

NFHP Board Staff and Science and Data Committee Co-Chair



Outline

- **NFHP Background**
- **Aquatic Habitat Factors**
- **Measurement Options**

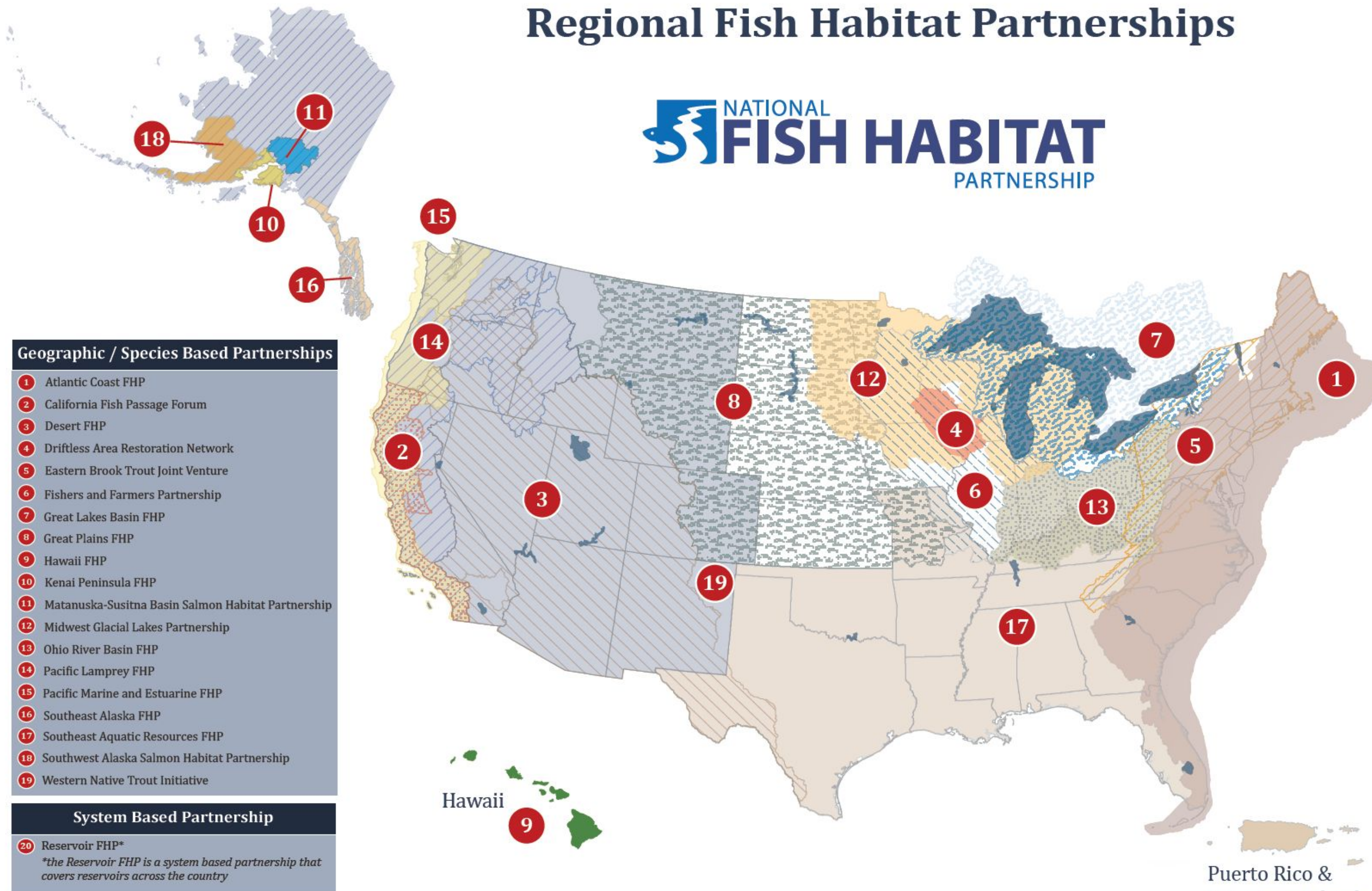




OUR MISSION SINCE 2006

To **protect, rehabilitate, and improve** the nation's fish and aquatic communities through partnerships that foster fish habitat conservation and improve the quality of life for the American people.

Regional Fish Habitat Partnerships



Geographic / Species Based Partnerships

- 1 Atlantic Coast FHP
- 2 California Fish Passage Forum
- 3 Desert FHP
- 4 Driftless Area Restoration Network
- 5 Eastern Brook Trout Joint Venture
- 6 Fishers and Farmers Partnership
- 7 Great Lakes Basin FHP
- 8 Great Plains FHP
- 9 Hawaii FHP
- 10 Kenai Peninsula FHP
- 11 Matanuska-Susitna Basin Salmon Habitat Partnership
- 12 Midwest Glacial Lakes Partnership
- 13 Ohio River Basin FHP
- 14 Pacific Lamprey FHP
- 15 Pacific Marine and Estuarine FHP
- 16 Southeast Alaska FHP
- 17 Southeast Aquatic Resources FHP
- 18 Southwest Alaska Salmon Habitat Partnership
- 19 Western Native Trout Initiative

System Based Partnership

- 20 Reservoir FHP*
*the Reservoir FHP is a system based partnership that covers reservoirs across the country

Note: Alaska and islands not to scale

Includes current fish habitat partnerships, approved by the NFHP Board, June 2016.

Puerto Rico &
U.S. Virgin Islands

Proposed projects

199

Active Projects

290

Completed Projects

1.1k

NFHP Investment

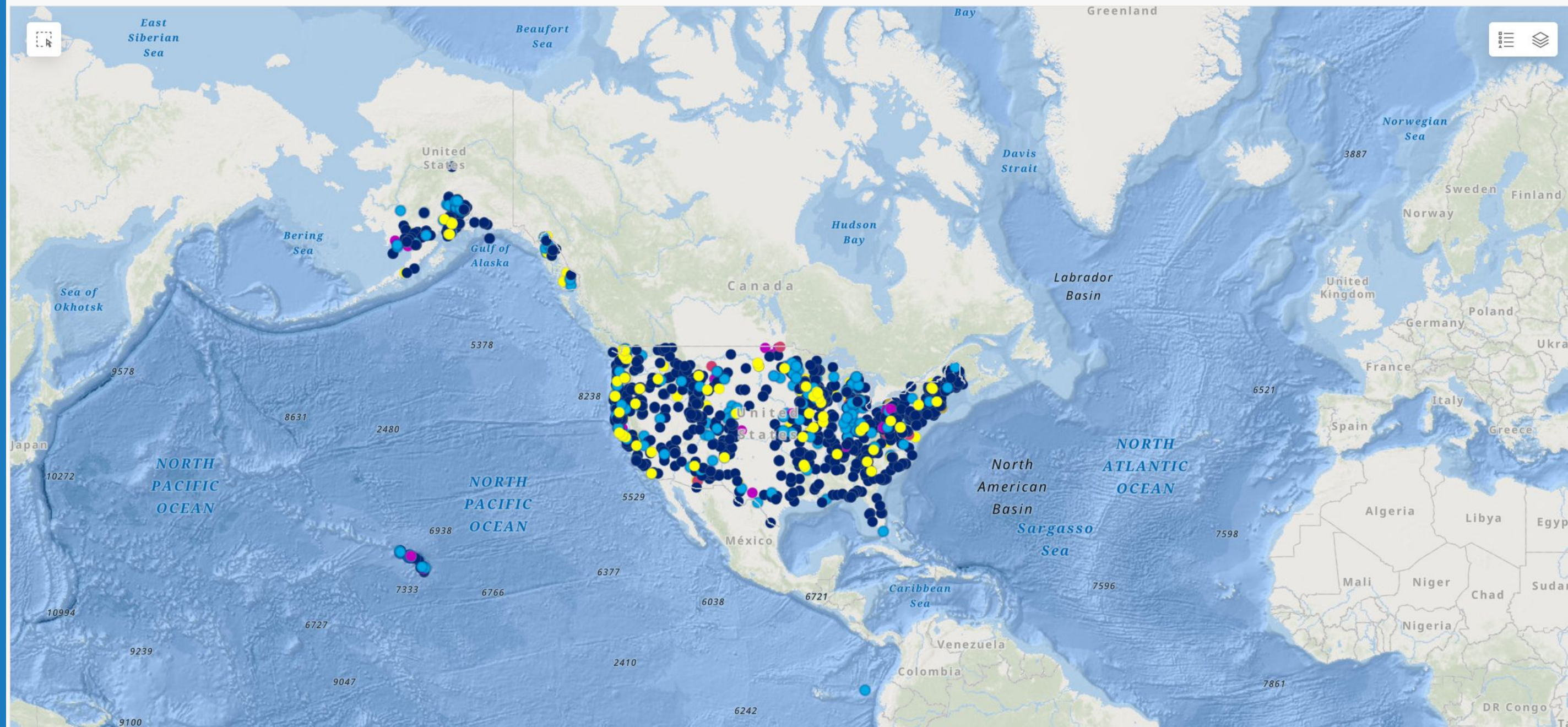
\$54.9M

Total Projects

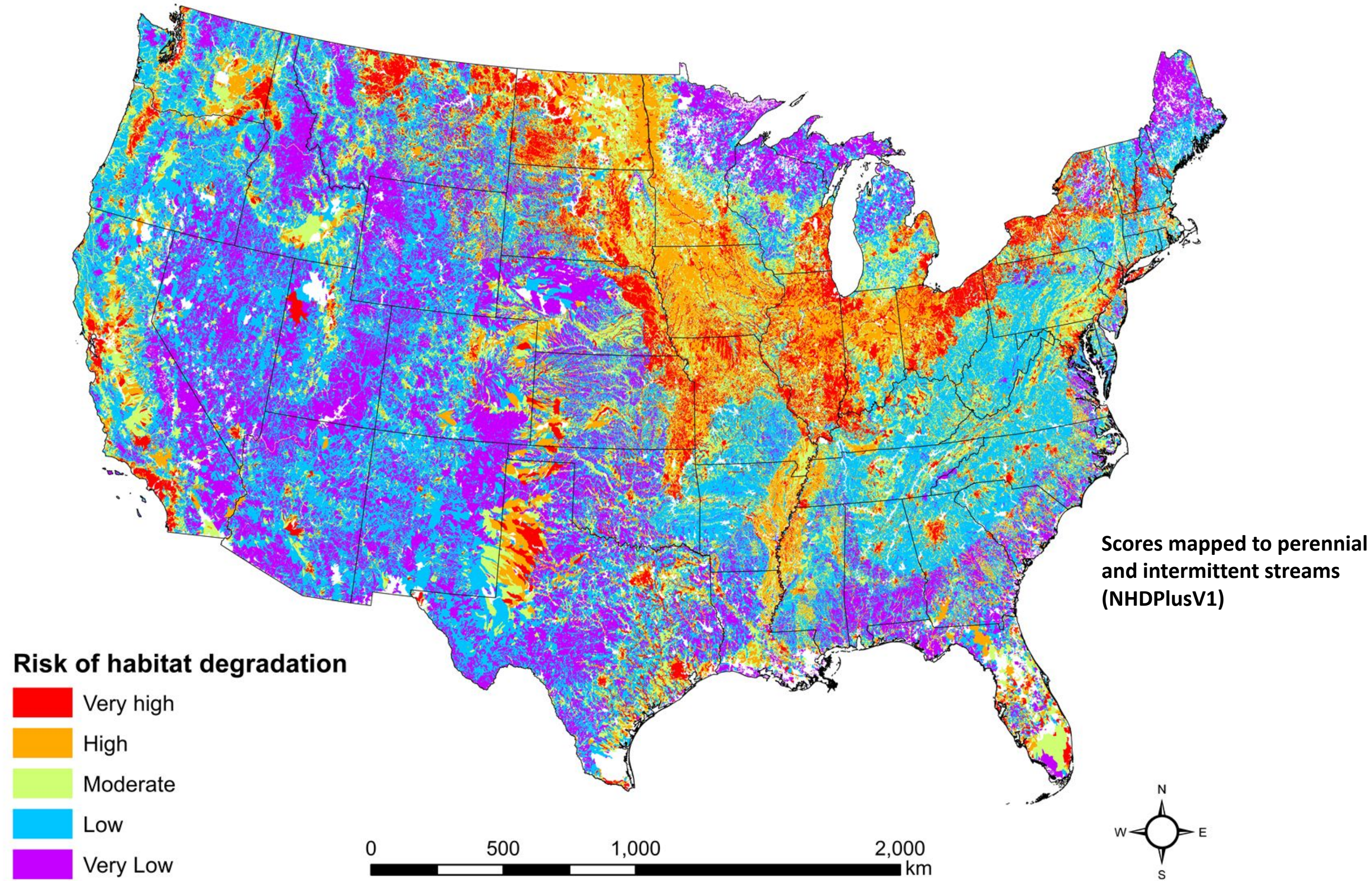
1.7k

Total Leveraged Funds

\$398.8M



2015 ASSESSMENT OF STREAM FISH HABITATS FOR THE CONTERMINOUS UNITED STATES USING MINIMUM SCORE



Key Factors and Measures

- Hydrology
 - Water surface elevation of flowing waters, inshore marine, and lakes
 - Current velocity
- Connectivity – Dams and Culverts
 - Abrupt changes in water surface elevation
- Material Transport
 - Logs and debris jams
 - Sediment inputs and changes



Key Factors and Measures

- Water Quality
 - Turbidity
 - Nutrients – Chl A surrogate
 - Dissolved oxygen
 - Salinity
- Geomorphology
 - Rapid measure of shape for lakes, inshore marine and rivers/streams
 - Bathymetry
 - Hidden geology



Key Factors and Measures

- Living Habitat
 - Submerged aquatic vegetation
 - Mussel and oyster beds
 - Harmful algal blooms
 - Red tides
 - Cyanobacteria
- Legacy issues – Mines, wells, and landfills
- When
 - Static in time
 - Real time changes
 - Land use – urban, mines.....



Thanks Much



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