



The Construction of the DOI Northeast Climate and Wildlife Science Center – Introduction and Update

Upper Midwest and
Great Lakes LCC
And Midwest
Association of Fish and
Wildlife Agencies

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Northeast Climate
Science Center
June 24-25, 2012

Managing Natural Resources in A Changing Climate

Climate Change



Resource Manager



DOI Launches Climate Change Response

- Signing of Secretarial Order No. 3289 on Sept. 14, 2009 by Interior Secretary Ken Salazar
- Created two initiatives – **DOI Climate Science Centers and the Landscape Conservation Cooperatives** – the cornerstones of this integrated approach to climate-change science and adaptation.

Secretarial Order (continued)

“...development of an integrated strategy across Department agencies and bureaus to respond to the impacts of climate change on tribes and on the land, water, ocean, fish and wildlife, and cultural heritage that the Department manages.”

Secretarial Order – (continued)

“Provide natural resource managers with the tools and information they need to develop and execute management strategies that address the impact of climate change on fish wildlife and their habitats”

Climate Science Center Mission

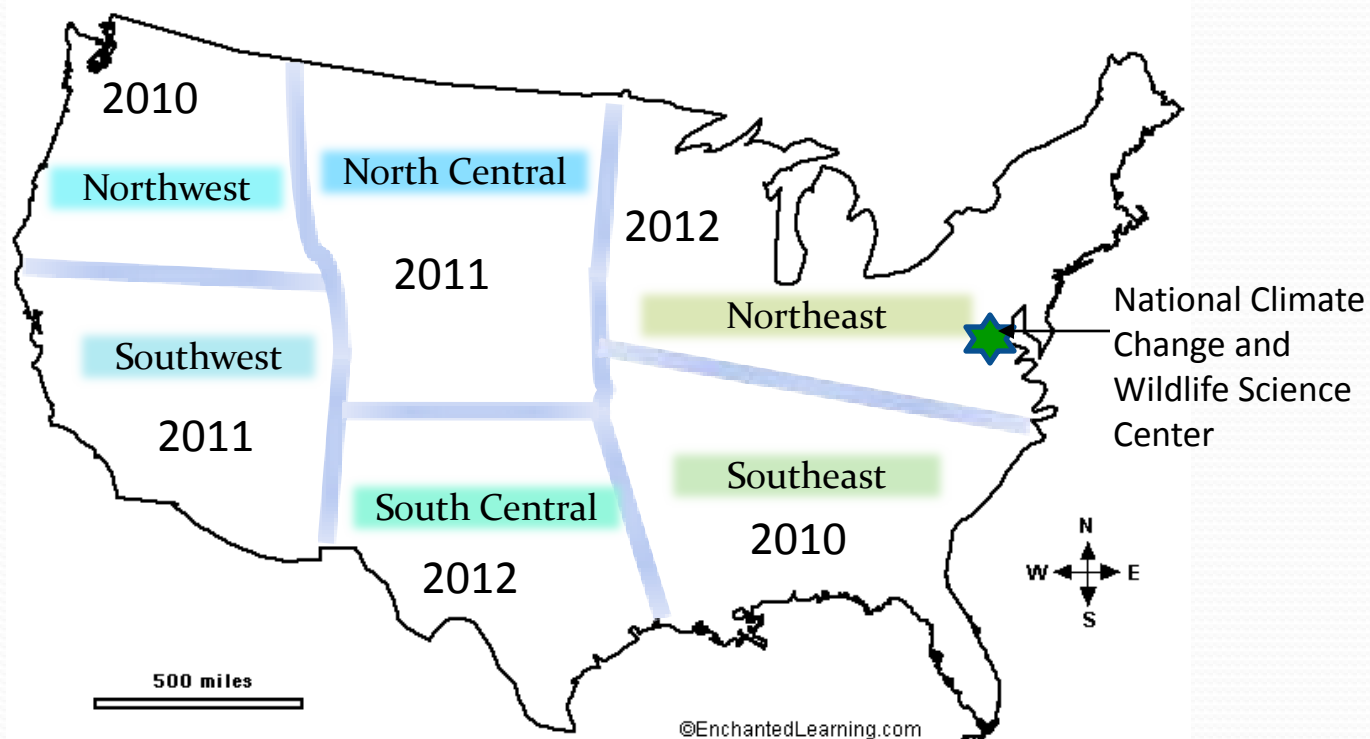
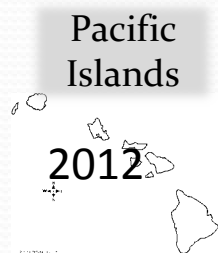
- Provide natural resource managers with the tools and information they need to develop and execute management strategies that address the impact of climate change on fish wildlife and their habitats.

What and Where is the NECSC

- Northeast, Midwest and Mid-Atlantic States;
- Large number of jurisdictions;
- Diverse landscapes, ecosystems and land and water use.



Climate Science Centers—Regions



“Fuzzy Boundaries”

NESCS – Part of a National Network



NECSC – A Large and Diverse Center

- over 130 million people and multiple ecoregions and about 40% of U.S. population
 - **Limited federal lands**, pattern of ownership and management dominated by small and private parcels;
 - **Complex history** of species extirpations, invasions, range extensions, and restorations;
 - **Complex climate predictions** of regional impacts;
 - **Wide array** of jurisdictions and stakeholders.

Federal Land Ownership Patterns

WHO OWNS THE WEST?

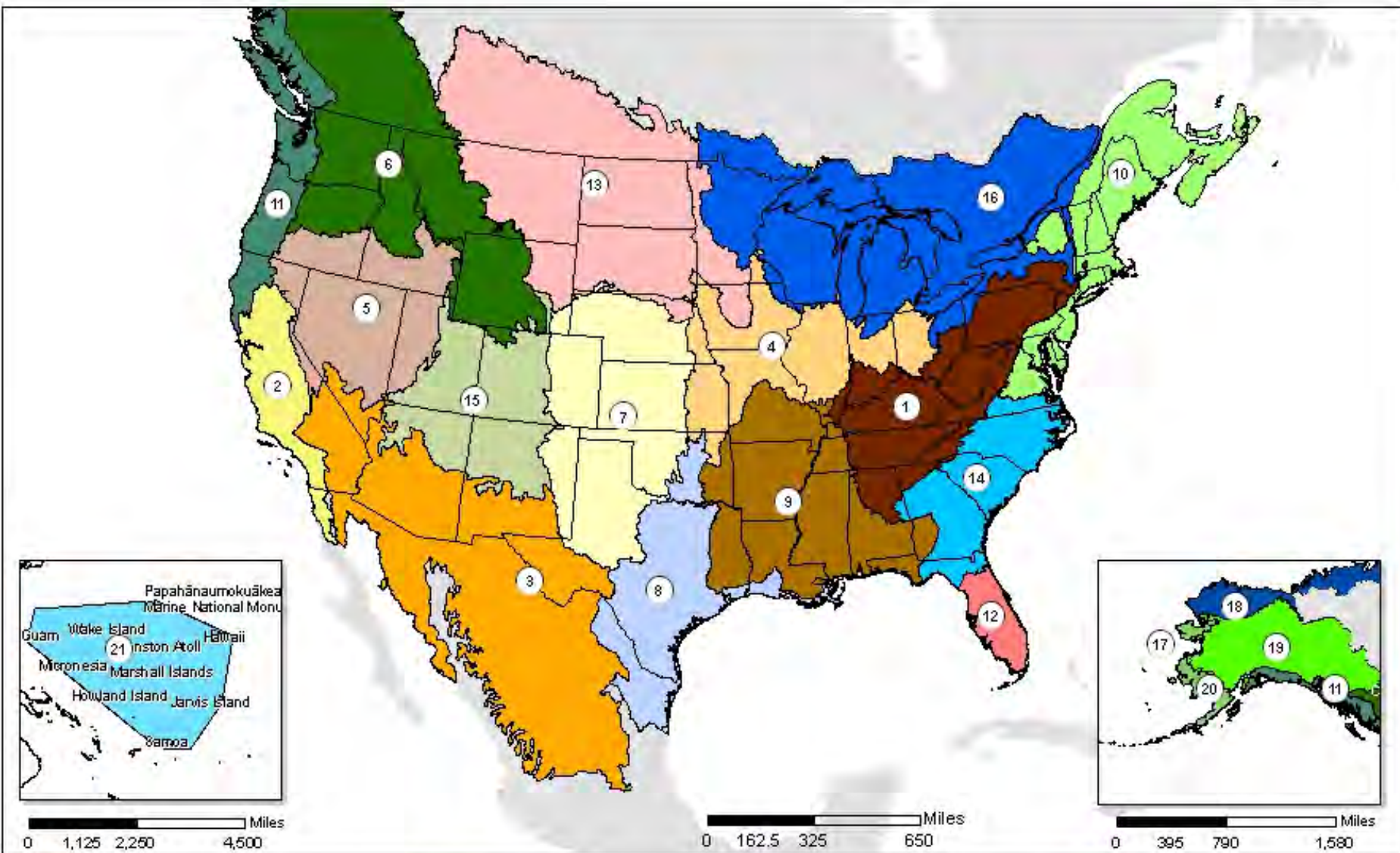
Federal Land as a Percentage of Total State Land Area



Data source: U.S. General Services Administration, Federal Real Property Profile 2004, excludes trust properties

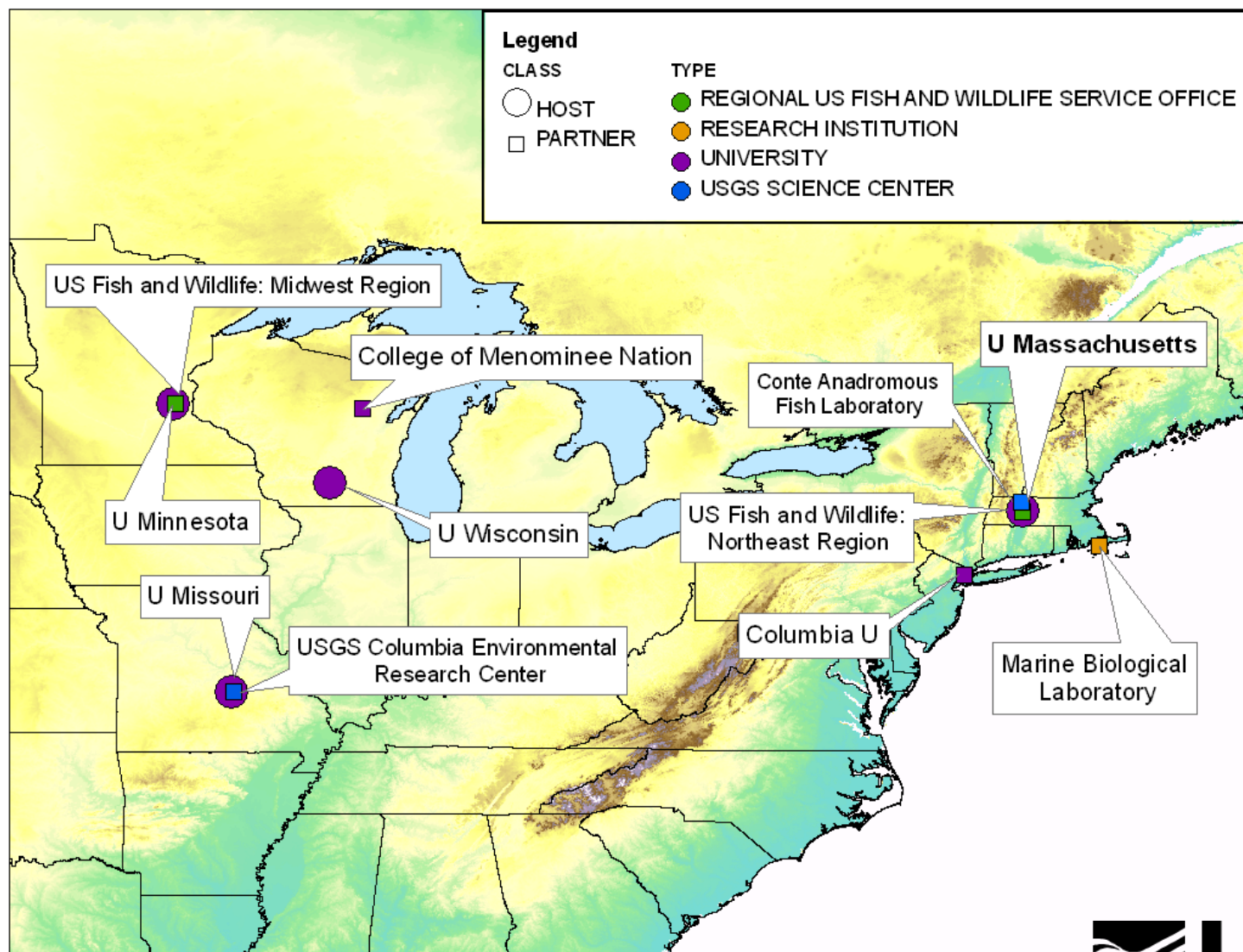
TNC Ecoregions and Divisions of the Lower 48 United States





- | | | | |
|---|-----------------------------------|-------------------------------------|----------------------------------|
| 1. Appalachian | 7. Great Plains | 13. Plains and Prairie Potholes | 19. Northwestern Interior Forest |
| 2. California | 8. Gulf Coast Prairie | 14. South Atlantic | 20. Western Alaska |
| 3. Desert | 9. Gulf Coastal Plains and Ozarks | 15. Southern Rockies | 21. Pacific Islands |
| 4. Eastern Tallgrass Prairie and Big Rivers | 10. North Atlantic | 16. Upper Midwest and Great Lakes | Unclassified |
| 5. Great Basin | 11. North Pacific | 17. Aleutian and Bering Sea Islands | |
| 6. Great Northern | 12. Peninsular Florida | 18. Arctic | |

Geographic Extent of the DOI Northeast Climate Science Center



Palmyra Islands

UNIVERSITY OF MASSACHUSETTS AMHERST

Richard Palmer (Lead PI)



COLLEGE OF MENOMINEE NATION

Melissa Cook (Lead PI)

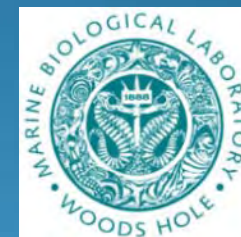
COLUMBIA UNIVERSITY

Radley Horton (Lead PI)



MARINE BIOLOGICAL LABORATORY

Linda Deegan (Lead PI)



UNIVERSITY OF MINNESOTA

Anthony W. D'Amato (Lead PI)

UNIVERSITY OF MISSOURI COLUMBIA

Frank R Thompson III (Lead PI)



UNIVERSITY OF WISCONSIN-

MADISON (Lewis Gilbert (Lead PI)

Key CSC Characteristics

- University/federal cooperative – access capabilities in both science communities;
- Training of grad students – pipeline to future climate opportunities and science products;
- Small federal research staff addressing filling regional gaps, and synthesis / assessment / aggregation;
- \$3-4 m/year, majority in flexible federal funds;
- Will build significant cyber infrastructure network



U.S. Department of the
Interior

Climate Science Center

An Existing Model for Climate Science Centers – Fish and Wildlife Cooperatives

Fish and Wildlife Cooperatives

- University Based with USGS Scientists on site
- Access to both government and university resources
- Serves primarily State agencies, JVs – state-based
- Applied and basic science, often species specific

Climate Change Centers

- University Based with USGS Scientists on site
- Access to both government and university resources
- Serves a region of states on a specific topic – climate science
- Basic and Applied science, often systems level

Principal Partners and Customers

- Landscape Conservation Cooperators (7)
- DOI Natural Resource Agencies
- State Fish and Wildlife Agencies
- Multi-agency partnerships (Fish Habitat Partners and Joint Ventures, Regional AFWA and others)



Science Focus Areas and Planning

Development of science plan that addresses a large and diverse landscape :

- Agro-ecosystems
- Coastal and Marine Ecosystems (including Great Lakes)
- Forested and Forested Ecosystems
- Freshwater Ecosystems
- Prairie and Grassland Ecosystems
- Urban Ecosystems

Science Focus Areas -2012

- Classification of ecosystems within the Region and nationally;
- Interaction of land use and climate change, (energy development);
- Identify ecosystems, biological communities and vulnerable species;
- Impacts on of Climate Change on Ecological Flows
- Science to aid in adaptation for terrestrial and aquatic management;
- Sea level rise and extreme events;
- Impacts on Great Lakes fisheries – and others.

Upcoming Events – Stakeholder Meetings

- August 22nd-23rd University of Minnesota, St. Paul campus.
- September 25th-26th University of Massachusetts, Amherst, MA.
- **Purpose:** gaining insights into the climate science needs;
 - **Introduce and Educate** regarding the Northeast Climate Science Center's mission and goals, science capacity and research agenda. (**You are invited – some travel funds available to States**).

Tasks and Challenges (continued)

- **Governance:**
- Create an Advisory Council and Science Committee that can direct this large region;
- AFWA has responded with representatives from MAFWA (Katherine Don Carlos, MN) and NEAFWA (John O'Leary –MA);
- Members that reflect multiple communities of practice that manage natural resources – federal, state, local, urban, rural, agricultural and others,

Challenges and Possible Solutions

Careful consideration was given to the appropriate size of this consortium

- **Coordination** of research is essential;
- Provide adequate resources to ensure **sustainable relationships** (Buy-in);
- Leverage our resources – small compared to the climate change challenge
- **Adaptively manage** Consortium size and composition

Points of Contact

Points of Contact for DOI – NE –CSC:

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Goggle Northeast Climate Science Center



Thank you!

Now start talking and
We will start listening!