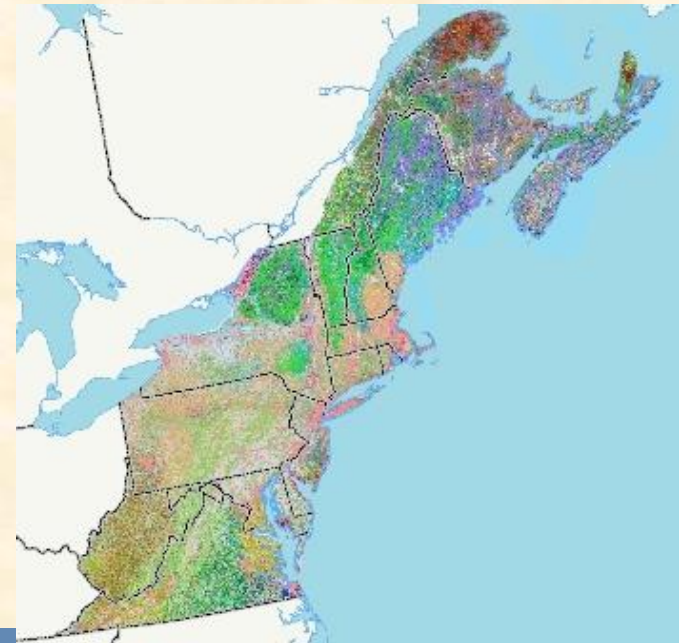


Update on North Atlantic LCC Science Projects and Products

Steering Committee Meeting

April 6, 2016

Scott Schwenk & Megan Tyrrell



North Atlantic  Landscape Conservation Cooperative

New! “Products” Site - NALCC webpage



You are here: [Home](#) / [Products](#)

Products

Our searchable database provides access to a range of different products designed to help partners across the North Atlantic region make decisions, prioritize actions, and address conservation challenges at multiple scales based on the best available science.

Search Products

Search by typing in keywords or by selecting terms below.

submit

reset

Focused Product Search

Select all that apply

PRODUCT TYPE

Foundation Information

- Maps, Spatial Datasets, and Databases

Assessments and Research Results

- Model-Based Assessments
- Publications and Journal Articles
- Reports

Decision Support Tools

- Conservation designs, blueprints, and plans

Search Results

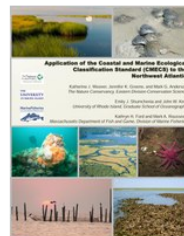
Sort by: Alphabetical Most recent Oldest first



Brook Trout in the Chesapeake Bay Watershed: On-line Decision Support Tool to Assess Current and Future Habitat

To effectively manage vital freshwater resources across large geographic areas, resource managers need the capacity to assess the status of aquatic species, their habitats, and the threats they face. This on-line decision support tool provides that capability for Eastern brook trout across the Chesapeake Bay watershed. The tool

allows users to characterize current and potential future aquatic conditions, target and prescribe restoration and conservation actions, set strategic priorities, evaluate management efforts, and support science-based sustainable management plans on behalf of brook trout and associated species. The tool is accompanied by a user-friendly summary report and a technical report providing details on how the tool was created.



Coastal and Marine Ecological Classification Standards (CMECS) pilot studies

The Coastal and Marine Ecological Classification Standard (CMECS) provides a comprehensive national framework for organizing information about coasts, oceans, and their living systems. But when integrating these data across different scales, is anything lost in translation? This report uses three pilot projects to assess how well the framework functions for classifying estuarine and marine environments at different scales.

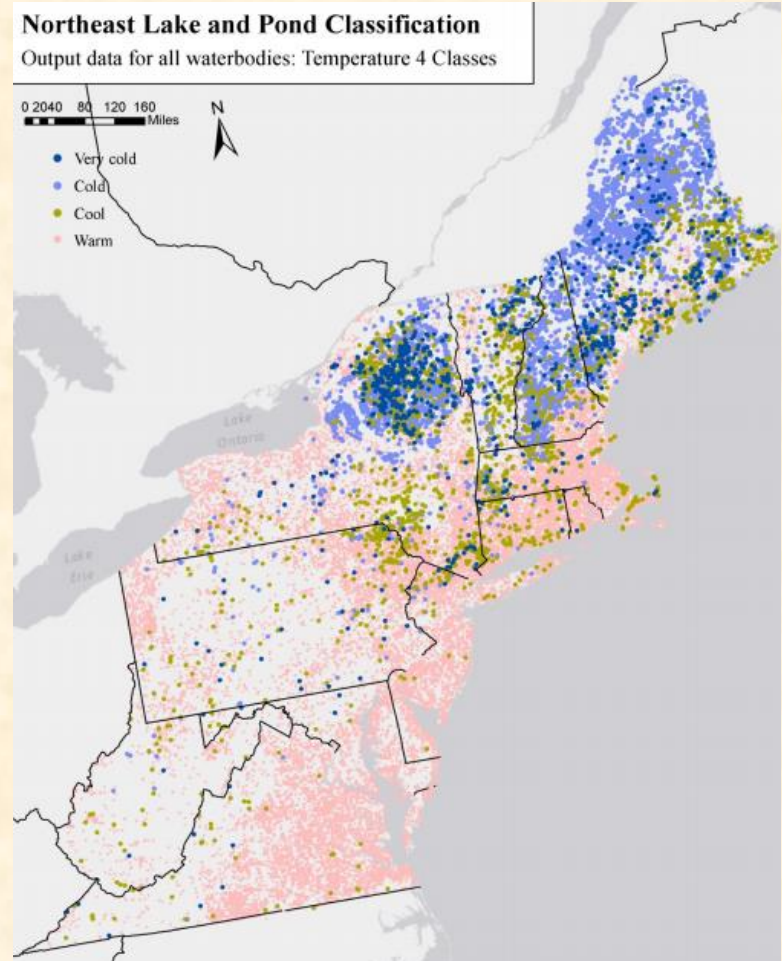
Foundational Mapping: Northeast Aquatic Classification (TNC)

**Final Revised Lakes &
Pond Classification
January 2016**



Northeast Lake and Pond Classification

The Nature Conservancy Eastern Conservation Science
Arlene Olivero Sheldon and Mark G. Anderson

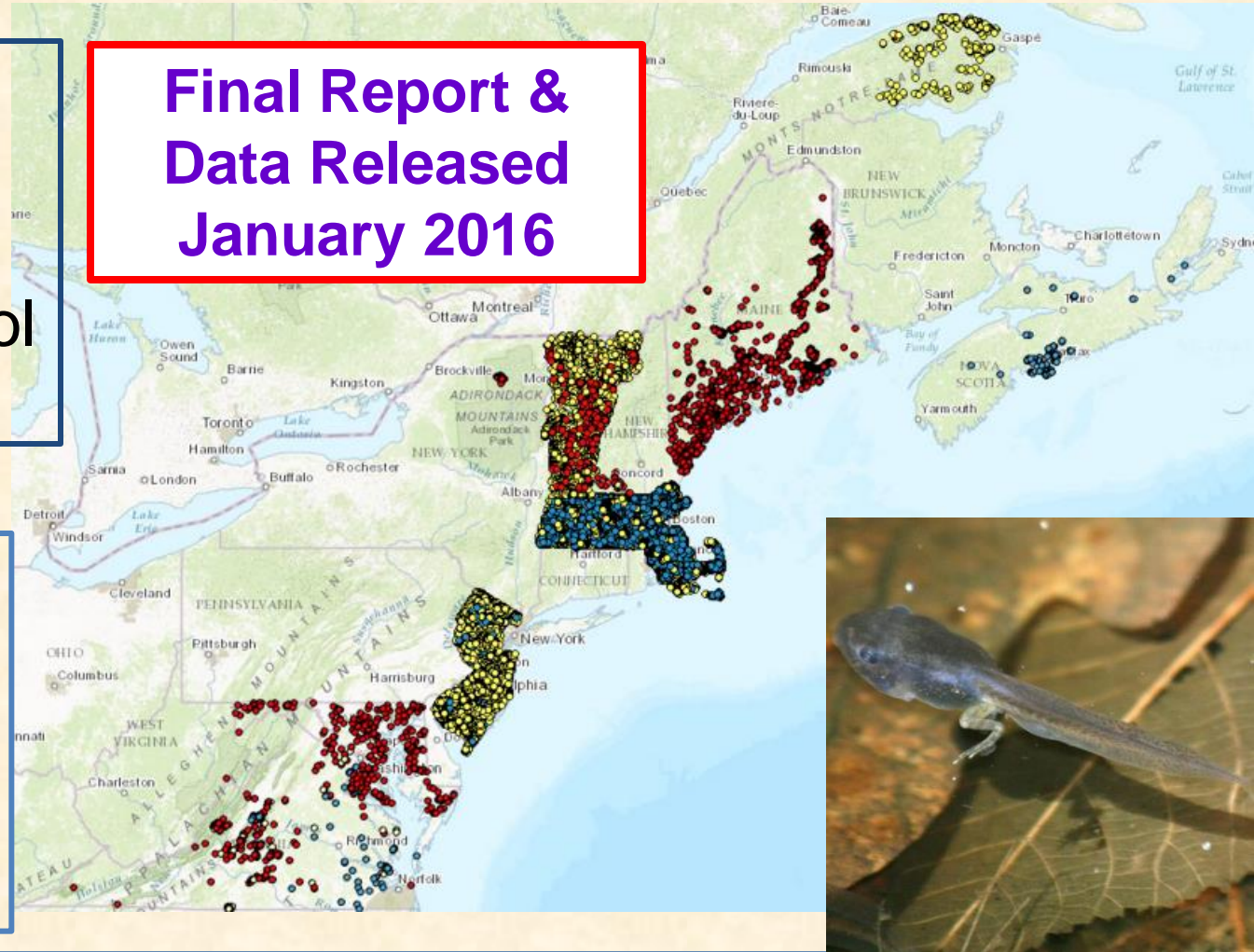


North Atlantic Landscape Conservation Cooperative

Foundational Mapping: Compilation of Regional Vernal Pool Data

1) Vernal pool partnership and compilation of existing vernal pool mapping efforts

**Final Report &
Data Released
January 2016**



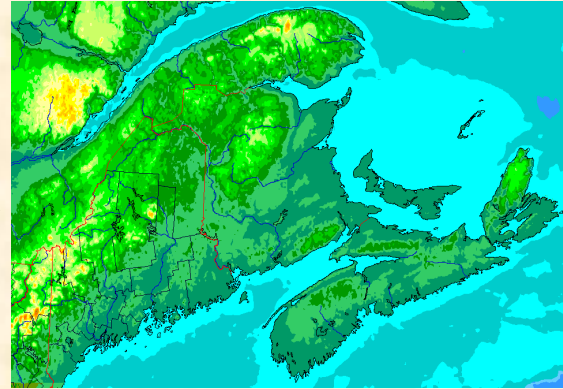
2) Demonstration of automated methods for finding vernal pools



Vermont Center for Ecostudies,
University of Vermont

New Science Projects (FY 2016)

1. Northeast Aquatic Classification – Canada (NCC-TNC)



2. Rare Plant Prioritization (NatureServe)



3. River Corridor Assessment (UMass et al.)



Decision Support Tools: Fish Habitat Decision Support Tool



Brook trout – Chesapeake Bay watershed



River herring & Amer. shad – Atlantic seaboard

**Fish Habitat Tool
Roll-out
March 2016
fishhabitattool.org**

- Downstream Strategies
- West Virginia U.
- EBTJV
- ACFHP
- USFWS
- TNC



Winter flounder – Long I. Sound & Narragansett Bay

A screenshot of the Fish Habitat Decision Support Tool interface. The interface features a map of the Atlantic seaboard with various colored overlays representing different habitat types. A central panel displays the tool's name, "FISH HABITAT DECISION SUPPORT TOOL", and three main analytical tools: "VISUALIZATION", "RANKING", and "FUTURING". Below this, there is a brief description of the tool's purpose and funding sources.

Welcome

FISH HABITAT DECISION SUPPORT TOOL

**VISUALIZATION
RANKING
FUTURING**

This Fish Habitat Decision Support tool provides resource managers and the general public access to data, models, and prioritization tools for use with multiple fish habitat assessments performed for specific regions across the United States.

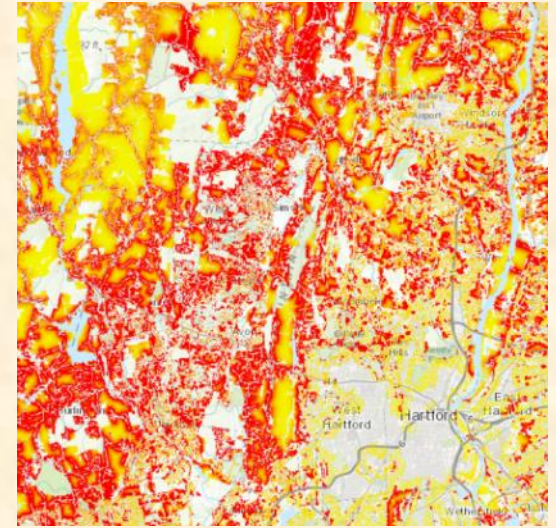
Three main analytical tools (visualization, ranking, and futuring) are combined with intuitive basemaps and mapping features to allow users to explore the details of the assessments and perform subsequent analyses.

This tool was developed with funding from the United States Fish and Wildlife Service and the Midwest Fish Habitat Partnerships. Additional data and models were developed through funding and coordination by the North Atlantic LCC, the Atlantic Coastal Fish Habitat Partnership, and The Nature Conservancy.

Conservation Design: *Designing Sustainable Landscapes*

(UMass Amherst)

- New: region-wide map of probability of future development (urban growth)
- Landscape (habitat) capability maps for 26 of 30 representative species completed
- Regional **Index of Ecological Integrity** & many other products



North Atlantic  Landscape Conservation Cooperative



Growing Applications of *Designing Sustainable Landscapes*

For example:

- *Connect the Connecticut*
- Regional Conservation Opportunity Areas
- New Hampshire Wildlife Action Plan
- Mass. Wildlife Climate Action Tool



Ecology and Vulnerability Ruffed Grouse



Photo credit: Bill Byrne, MassWildlife

Scientific name:

Bonasa umbellus

Species stressors:

Temperature changes

Precipitation changes

Changes in winter

Development and habitat loss

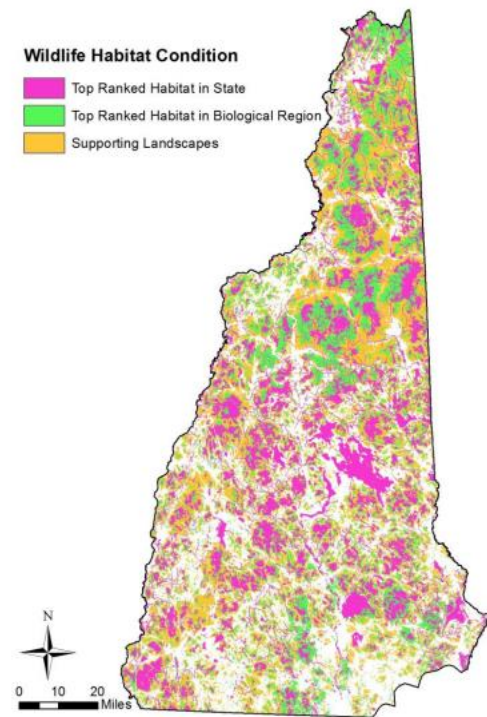
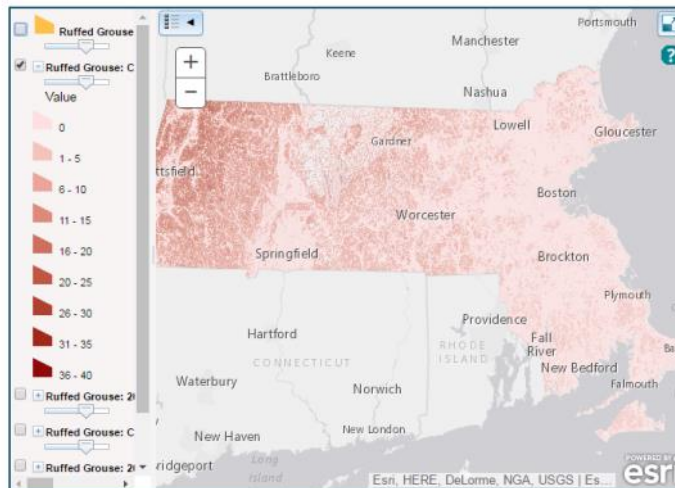


Figure 3-3. Highest Ranked Wildlife Habitat

Multi-LCC projects

Atlantic and Gulf Coast Resiliency Project

Compilation of coastal resilience related tools and resources in Coastal Resilience workspace



Emily Powell,
Coastal Resilience
Research Associate

ORGANIZATION	NAME OF TOOL	DESCRIPTION	VIEW THE TOOL
LCCs			
South Atlantic LCC	Southeast Conservation Blueprint	A spatially explicit plan describing the places and actions needed to meet shared conservation objectives in the face of future change to sustain natural and cultural resources.	http://www.southatlanticlcc.org/page/
		Facilitate partner-driven	http://nalcc.databasin.org
		East and Midwest where the greatest impact.	
		Information from the North Atlantic	http://www.fishhabitattool.org/
			atlanticlcc.org/projects/dec
			csc.umass.edu/projects/research-impacts-northeastern-us
CSCs			
NE CSC	Massachusetts Wildlife Climate Action Tool	Designed to inform and inspire local action to protect the Commonwealth's natural resources in a changing climate. This Tool focuses on providing information for a range of local decision-makers, including conservation practitioners, landowners, municipal agencies, and community leaders, seeking to conduct on-the-ground climate change adaptation efforts. With this tool, users can: 1) access information on climate change impacts and vulnerabilities of fish and wildlife species and associated habitats; 2) explore adaptation strategies and actions to help maintain healthy, resilient natural communities based on location and area of interest; and find additional resources to help guide decision-making and actions. Initial development of the tool is focused on fish and wildlife species, forests and forestry practices, aquatic and terrestrial connectivity (with a focus on roads and culverts), land protection, and conservation planning. Although it was designed for MA, it provides broadly relevant climate and adaptation information, and can serve as a model for related efforts across the entire Northeast.	http://climateactiontool.org
SE CSC	The Global Change Monitoring Portal	the existence and operation of programs that monitor the effects of global change processes, such as climate and land use change, on important air, land, and water resources. This is a public service project intended to support both education and decision making by providing comprehensive "one stop" access to information about hundreds of monitoring programs in North Carolina and throughout the Southeast. This work will provide additional development of the Global Change Monitoring Portal, which is currently in the pilot phase.	https://my.usgs.gov/gcmp/
USGS			
		Organizes relevant products and information under three specific coastal hazard themes: extreme storms, shoreline change, and sea level rise. The products fulfill critical needs for information that is scientifically	

Conservation Design: Increasing Aquatic Connectivity & Flood Resiliency



Structure condition module
under development



Road Stream Crossings:

Location:	Other:	Dates:
All States [9549]	Survey ID: <input type="text"/>	Last updated from ... <input type="text" value="2/22/2005"/>
All Streams	Crossing Code: <input type="text"/>	Last updated until ... <input type="text" value="6/16/2015"/>
All Watersheds	All Evaluations	Date observed from ... <input type="text" value="8/5/2002"/>
Personnel:	25 per page	Date observed until ... <input type="text" value="6/16/2015"/>
Any Observer	<input type="button" value="Search"/>	
Any Coordinator		

Search Help

- NI
- A
- C
- S
- T
- NI
- S
- If
- T
- T
- F
- b
- If

Map

- If
- If
- If you zoom in far enough.
- If you choose a town within a state, only the unsurveyed points within that town will appear along with your search results.
- Otherwise, the map will show surveyed and unsurveyed road/stream crossings that are within the smallest bounding box that contains the surveyed points returned by your search. The surveyed and unsurveyed points outside this bounding box will not show on the map.
- To display unsurveyed crossings for a town that has no (0) surveyed crossings, select the town and click "Search".
- Please note that you may need to zoom in quite closely to view unsurveyed points.
- **NEW!** Please note that unsurveyed points will not appear when displaying all crossing surveys for all states. Since we now cover the 13 states of the North Atlantic Region, there are over 700,000 unsurveyed points, and it is not possible to display them all at once.
- For a detailed explanation of the map functions and symbols, click "Map information" in the map window.

Shapefile Help



Conservation Design: Increasing Aquatic Connectivity & Flood Resiliency



Upper Midwest and Great Lakes LCC/
North Atlantic LCC coordination

Collaboration between infrastructure &
natural resource priorities

- Midwest to explore use of NAACC database
- Surveys in western NY/PA for 2016



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New Science Projects (FY 2016)

4) Tidally Influenced Road Stream Crossings

- Coordination with NH Coastal Program/TNC
- Draft tidal crossing module & scoring system by July 2017



Conservation Design: Increasing Resiliency of Tidal Marsh Habitats and Species in the Face of Storms & Sea Level Rise

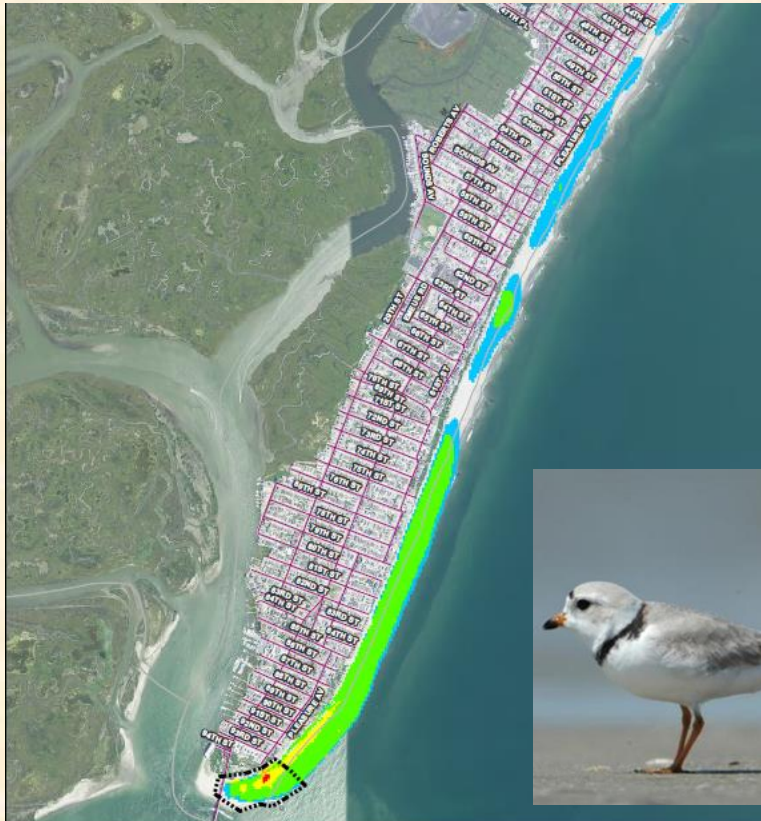


– Hurricane Sandy Tidal Marsh Coordination Workshop II, December 2015

- Great Marsh Resiliency Modeling workshop, Parker River NWR
- Need to leverage investments w. longer term monitoring, commit to common metrics
- Marsh migration predictions

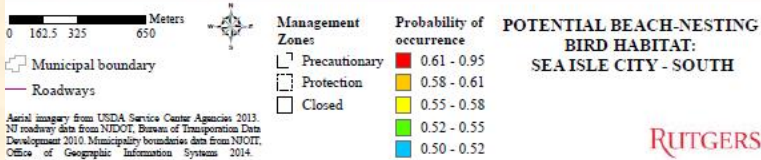


Increasing Resiliency of Beach Habitats and Species in the Face of Storms & Sea Level Rise



Final Report:
Rutgers University and Conserve Wildlife NJ

Identification of Potential Beach-nesting Bird
Habitat to be Set Aside in Municipal Beach
Management Plans



North Atlantic LCC FY 16 Project Budget Allocation

FY 16 Project Allocation (FY 15 = \$744,953)	\$ 637,922
Staff Salaries for Science Management and Delivery	\$ 205,300
Balance for Projects	\$ 432,622
<u>RCOA Version 1.0</u>	
UMass - Data Development Running Model	\$ 221,182
NatureServe - RSGCN Data	\$ 30,000
Western PA Conservancy - Habitat Class Attribution	\$ 7,500
Chesapeake Conservancy - online restoration prioritization tool \$25,000 paid with FY 15 Science Delivery Funds	\$ -
RCOA Version 1.0 total to date	\$ 258,682
Balance after Version 1.0	\$ 173,940
Additional RCOA needs, Version 1.0 & 2.0	\$ 75,000
Support for Review Process	\$ 10,000
Additional funds for Existing Projects	\$ 20,000
Balance for FY 16 Science Delivery	\$ 68,940
Balance	\$ -