

Project FY11/12 - #1 - Foundational



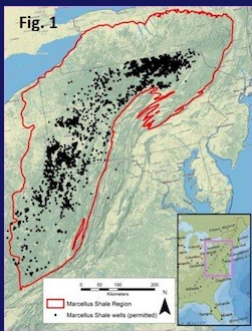
A Stream Classification System for the Appalachian Landscape Conservation Cooperative

<http://applcc.org/projects>

PI (Organization):
Anderson (TNC)
Olivier (ORNL)
2-yr

- This project will develop a **hierarchical classification for stream and river systems** and a GIS map for aquatic ecosystems within the Appalachian LCC.
- The study will include a report **describing the methods** used to **evaluate and develop** the classification system,
- a literature **review of existing stream classifications**, and
- a GIS stream **data set**.

Project FY11/12 - #2 – Regional Impacts



<http://applcc.org/projects>

PI (Organization):
Fisher (Cornell)
2-yr

Development of a Hydrologic Foundation and Flow-ecology Relationships for Monitoring Riverine Resources in the Marcellus Shale Region

- The study will provide a report **assessing** availability of hydrologic and ecological flow **model(s) suitable** for the region,
- a **georeference** assessment of **available ecological data** to inform the ecological flow model(s),
- the application of the model(s) to anticipate **how altered flow regimes** will affect critical conditions,
- and a report that **forecasts changes in hydrology** and associated **predicted biological responses** in relation to different water resource development scenarios for critical watersheds.

Project FY11/12 - #3 – Regional Impacts



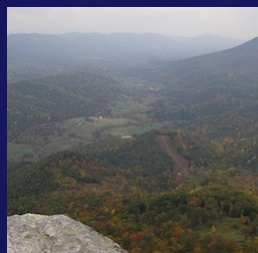
<http://applcc.org/projects>

PI (Organization):
Kiesecker (TNC)
Dunscomb (TNC)
 1-yr

Assessing Future Impacts of Energy Extraction in the Appalachian Mountains

- Maps of wind, oil and gas, and coal development potential for the entire study area will be created. These **maps and published projections** from federal and state land management agencies will be **used to model future build-out scenarios**.
- Impacts of the build-out scenarios will be measured regarding **habitat fragmentation of forest resources** with a focus on the effects to **biodiversity and water production** for human populations.
- The study will also create a **probability surface for land disturbance** associated with large area surface coal mining and create a public web-based map server.

Project FY11/12 - #4 - Climate Change

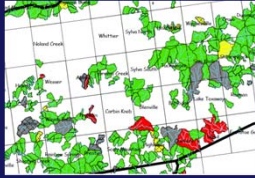


<http://applcc.org/projects>

PI (Organization):
Young (NatureServe)
Sneddon (NatureServe)
 2-yr

Support for Understanding Land Use and Climate Change in the Appalachian Landscape

- Project will **compile climate change vulnerability assessments** and other relevant information on vulnerable species and habitats,
- use a **team of expert peer reviewers to recommend** the most efficient, effective, and appropriate methods for adoption by the Appalachian LCC for conservation and adaptation planning.
- Recommended method will then be deployed, **resulting in vulnerability assessments for a suite of key species/habitats** selected in consultation with partners of the AppLCC
- A **database** will be created of the vulnerability assessments of selected species and habitat.

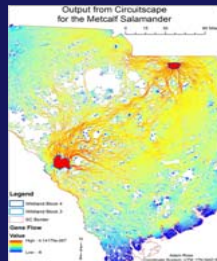
Project FY11/12 - #5 – Decision Support Tool

<http://applcc.org/projects>

PI (Organization):
 Nislow (USFS)
 Hudy (USGS)
 1-yr

Web-Based Tool for Riparian Restoration Prioritization to Promote Climate Change Resilience in Eastern US Streams

- This project will develop and implement a user-friendly web-based tool to identify priority areas for riparian restoration in the context of predicted climate change at the appropriate scale needed by practitioners.
- First, a 'shovel ready' prioritization tool for managers facing immediate on-the-ground decisions will be developed.
- The project will then link directly to ongoing and future stream flow, temperature, and biological response modeling projects and decision support tools.
- A peer-reviewed journal article, detailing this project will be published.



PI (Organization):
 Baldwin (Clemson)
 1-yr

Project FY12 - #6 – [Building Work Plan (Goal 1 – Data)]

Data Needs Assessment to Support Conservation Planning for the AppLCC

- Assess the data needs related to the Appalachian LCC region, assemble available data sets and post to the AppLCC cloud server, and design the appropriate data architecture to support the landscape-level conservation planning and modeling to achieve the stated vision of the AppLCC Partnership.

[5-Year Work Plan Tasks]

- 1.1.5 Identify and analyze available data sets, methodologies relative to landscape conservation planning
- 1.1.6 Create a "crosswalk" report to and validate identified science and data needs with member organizational priorities and AppLCC science needs portfolio.
- 1.4.1 Create inventory, summarize, and maintain key information from all relevant SWAPs, AppLCC Regional initiatives, resource management plans, and partnership efforts
- 1.7.1 Assemble common set of spatially explicit data layers based on LCC-consistent standards and definitions
- 2.8.1 Consult with end-users/resource managers to determine what predictive tools are needed to support their work