### **Appalachian Landscape Conservation Cooperative (LCC) – Requests for Proposal (2013)**

Through this solicitation the Appalachian LCC is seeking investigators interested in accomplishing the following project in support of stated **Top Science Needs** (*see Appendix I*).

**Due Date:** April 10, 2013 – all application materials uploaded to

Appalachian LCC web portal, link below

**Submit To:** Appalachian Landscape Conservation Cooperative at

http://applcc.org/projects/upload-project-applications/

**NOTE:** non-electronic submissions will not be accepted and it is the sole

responsibility of the applicant to upload all application materials.

**Direct Inquiries To:** Bridgett Costanzo

Acting Science Coordinator, Appalachian LCC

bridgett\_costanzo@fws.gov Phone #757-817-5803

### **Evaluation Criteria for Applications**

Applications will be reviewed and rated by staff from the AppLCC, a team of anonymous technical reviewers, and the Executive Subcommittee of the AppLCC Steering Committee. Preliminary assessments will ensure alignment of the application with the stated intent of this RFP and the goals of the AppLCC (see <a href="http://applcc.org/">http://applcc.org/</a> for this RFP announcement and <a href="http://applcc.org/our-work/5-year-work-plan/work-plan-section-a">http://applcc.org/our-work/5-year-work-plan/work-plan-section-a</a> for a summary of the AppLCC's mission, vision, and 5-year Work Plan Goals), as well as a review the qualifications of the applicant and their statements of compliance with AppLCC Data Requirements. Ratings will be based on scientific merit, a history of acceptable contractual performance, time and financial budgets, commitment to stakeholder involvement, and direct applicability of the deliverables to adaptive resource management decisions, policy, and other actions; additional consideration will be given with evidence of partnership support and ability to leverage matching funds or in-kind services to support the application, and/or any efforts to reduce overhead/indirect.

Please note that there are page limits to content size as indicated in the Application Template. Applicants should be aware that an application will only be rated based on content included within the page limits. The review and rating process will stop at the indicated limit.

### **2013 Anticipated Timeline**

MARCH 11<sup>th</sup> – This RFP announced.

Two conference calls to respond to questions about this RFP are scheduled for March 25<sup>th</sup> and April 3rd as indicated in the timeline. To maintain fairness, no individual additional communication will be allowable. Incomplete submissions will not be considered. Directions for uploading application materials can be found at <a href="http://applec.org/projects/upload-project-applications/">http://applec.org/projects/upload-project-applications/</a>.

# MARCH 25<sup>th</sup> 2pm

First of two Q&A conference calls hosted by the Appalachian LCC staff and the Wildlife Management Institute (WMI) financial manager for potential applicants to get clarifications on any issues related to the RFP (call 1-866-832-8172, passcode 4951847#).

# APRIL 3<sup>rd</sup> 2pm

Second of two Q&A conference calls hosted by the Appalachian LCC staff and the Wildlife Management Institute (WMI) financial manager for potential applicants to get clarifications on any issues related to the RFP (call 1-866-832-8172, passcode 4951847#).

# APRIL 10<sup>th</sup>, 5pm

RFP Applications due to AppLCC (application materials uploaded by the applicant onto AppLCC website in designated folders <a href="http://applcc.org/projects/upload-project-applications">http://applcc.org/projects/upload-project-applications</a>). Website access will be discontinued as of 5pm and no further or late applications will be accepted.

### WEEK OF APRIL 29th

AppLCC Science Coordinator and WMI Contractor notify successful applicants that their applications were selected and host call to discuss any details, requested clarifications or changes.

### **REQUEST FOR PROPOSALS – 2013**

**Title and Number:** Preliminary Assessment and Inventory of Ecosystem Services and Environmental Threats across the Appalachian Landscape (#2013-04)

**Problem Statement:** The resources and ecosystems of the Appalachians provide a rich bounty of ecosystem services that benefit humans and natural systems well beyond the borders of the Appalachian Landscape Cooperation Cooperative (AppLCC). Ecosystem services in this context relates to natural assets and the goods both monetized (such as food, fiber, and other natural products) and non-monetized (such as aesthetics and recreational value), and services (such as soil richness, water filtration and availability, and air quality) that benefit or are valued by society. These are often linked to the conservation and sustainable management of natural resources and biological diversity. Multiple efforts to assess ecosystem services within the Appalachian region have been conducted previously; these have been implemented at smaller scales or for specific subsets of ecosystem services. Furthermore, these efforts often have lacked input from stakeholders such as energy, forestry, and other industry experts or representatives of the general public's interests and values. Thus, the AppLCC seeks to support an effort to conduct an ecosystem services inventory and mapping effort for the AppLCC geographic boundary area.

The resources and ecosystem services provided within the Appalachians are not without risk. Many face historic and emerging challenges from expanding landscape-level threats. These include the transformational development surges of energy sectors in the north, urbanization and agricultural land conversion in the south, and the growing demands for energy, infrastructure, and water across the region. As a complicating factor, progressive climatic changes increase instability and uncertainty. Thus the challenges to land and resource managers are increasing in scope and complexity. The effects of known stressors are not well documented at landscape scales, and synergistic effects are even less well documented or understood. Therefore, current conservation actions often are based on temporally and geographically limited assessments of threats/risks, which are less effective against the increasingly larger dimensions of stressors faced in the region. Recognizing these limitations, regional partnerships are being formed to document and assess stressors within a cumulative impacts framework. Although many studies have focused on specific stressors or components (e.g. urbanization, brook trout status and threats assessments, Appalachian forest pests), no comprehensive assessment of stressors affecting the Appalachian's natural resources is available.

**Project Description:** Knowing which ecosystem services are provided and who benefits from these services will allow resource managers, scientists, industries, and the public to explore new institutional, market, and policies to encourage protection of and investments in these resources. Objectives of this project are to 1) link the environmental and economic values of the region's natural assets in a way that establishes a common language for resource managers, scientists, industry, local government and the public to substantively engage in landscape-level conservation planning and 2) to explore different development or management strategies and examine trade-offs to support improved and informed decision-making.

Similarly, a first step in determining the cumulative effects of stressors on Appalachian ecosystem integrity, functionality, and endemic or trust species, is having access to and appreciation of existing knowledge and data. A comprehensive status assessment will be conducted of pre-existing or ongoing work that could contribute to better understanding of individual or cumulative impacts, and further design of a landscape-scale assessment of environmental threats for the Appalachian LCC-defined landscape. The assessment will: (1) summarize existing threat assessment efforts of major stressors—including measures of ecosystems integrity, function, or sustainability, and identification of endemic species or trust species affected, (2) identify knowledge gaps and/or limitations to existing tools, methodology, and approaches, and (3) through on a critical analysis and consultation based on expert-opinion, identify a framework and propose a process to facilitate the AppLCC systematically moving forward on a comprehensive threats assessment.

Note on Data Access Restriction [Appendix II]: Applicants should be thoroughly familiar and in agreement with the terms specified in the AppLCC Data Requirement as of March 2013 and posted with this Request of Proposals.

**Project Narrative:** The Project reflects a hierarchical approach in its design: it builds off of existing partner commitments, synthesizes underlying research and state of our understanding, and provides a comprehensive stock-taking or review of existing categorization, methodologies, and tools to assess both the resources (environmental services, and social values) and potential threats or stressors to the health, viability, and resilience of those resources or systems.

This project is viewed as a synergistic effort, leveraging the resources of both the vendor/grantee and the Appalachian LCC. The Appalachian LCC (AppLCC) brings to this collaborative effort a background assessment of the Cooperative members' institutional support and coordination among the AppLCC Steering Committee (SC) as identified in its 5-Year Work Plan and supporting SC Work Groups; existing collaborative data and information sharing content management system or Web Portal; and builds upon the information and data generated through other projects funded by the Appalachian LCC RFAs (FY11/12 grants).

Preliminary Assessment and Inventory will include four major components.

### A. [GOALS] Goals and Conservation Objectives or Targets

A clear understanding of the AppLCC Member organizations common goals and shared commitments must serve as the starting foundation of this Project. It is expected that an examination and synthesis of the primary goals of the Appalachian LCC and its members, as assessed from a review of supporting materials generated over the past few years since the AppLCC was first launched, and the results of on-going consultation, should provide a better understand the AppLCC Membership's conservation objectives and targets. (Additional work will be forthcoming as generated following the April 2013 SC Work Group meeting to advance the work as identified in the AppLCC 5-Year Work Plan.)

#### **B.** [MEASURES] Identification and Measures

Working with the Member organizations of the AppLCC to help identify and direct researchers to key resources, the investigators will systematically review available information to identify and describe ecosystem integrity, functionality, and sustainability; key endemic species viability; recreational values and uses; energy for a growing population; and ecosystem services, including market and non-market products.

### It is anticipated that this work will be executed in three areas of study:

**Study Area #1** will involve an inventory of existing ecosystem services assessments, products, and decision-support or visualization tools conducted within the AppLCC boundary. The inventory will document and assess the classification or categorizations, methodology used, describe the priority ecosystem services and how they were identified, and provide economic valuations if available.

**Study Area #2** will be supported by information obtained in Study Area #1, and involve a regional survey and workshops within the AppLCC boundary to:

- 1) Assemble a list of high priority economic goods and services and non-monetized values and benefits that are dependent on Appalachia's natural assets; and
- 2) Using this list of priority goods, services, and values, identify the associated natural assets/resources that support these services and benefits (e.g. intact forests, clean rivers, etc.)

**Study Area #3** would produce a geo-referenced assessment of the location of key ecosystem services that are linked to specific priority economic products or uses. This would include assembling datasets and generating visualization/base maps that depict relevant natural assets and identify locations of key products and issues. This information would then be used to produce a spatial interpretation of areas within Appalachia that serve critical social and environmental functions, as well as identify those that are highly vulnerable to losses associated with key ecosystem stressors.

The resulting geospatial data or intermediate data and derivative GIS products from Study Area #3 would be assembled from existing sources to depict locales of priority goods and products or areas representing expressed values and benefits for the region and priority ecosystem services supporting these products (all data and derived information are subject to data requirements of the AppLCC grant application criterion for FY13 funding). Final efforts, examine high priority issues and services for how potential land use, climate and other changes will affect these priority ecosystem services and attempt to establish an economic value for services lost or mitigated.

### C. [THREATS] Systematic Review of Previous Efforts to Assess Potential Threats

Working with the Appalachian LCC Members and staff for guidance, to systematically review previous and ongoing efforts to predict, detect, and assess environmental threats to Appalachian landscapes. For example, potential threats could include the following: urban development; energy development; climate change; altered disturbance regimes; and spread of disease and range expansion of invasive species.

It is anticipated that the review will examine published reports, articles, websites, databases and GIS datasets and will work closely with the AppLCC funded project with Clemson University that is assessing data sets and data architecture needs to support landscape-level planning and modeling (see Data Needs Assessment <a href="http://applcc.org/projects/data-needs-and-gis-team">http://applcc.org/projects/data-needs-and-gis-team</a>). The data and a synthesis will be summarized or cataloged and integrated into a web-based relational database to be made available using on-line advanced technologies and deployed on the AppLCC.Org Web Portal.

### D. [FRAMEWORK] Organizing Framework and Process

Using goals, measures, and threats as an organizing framework, results of the above reviews will be made available to the broadest reach and accessible to the management and research partners of the AppLCC community. It is anticipated that the most appropriate way to achieve this level of access and deployment will be via an organized and cataloged database delivered in an interactive web-enabled, searchable dataset in a manner that identifies their relevance to the missions and values of the AppLCC member organizations and keyed to individual or cumulative threat/stressors and resources affected.

In order to assemble such a database, this element of the project is thought to involve directed workshops with a variety of key stakeholders to review the goals and threats, discuss previous assessment efforts, and examine available data. The primary purpose of these consultations, reviews, and analyses is to clearly delineate which assessment needs can be met with existing information, versus those that will require additional work. Working with the Appalachian LCC Members and staff to identify appropriate stakeholders or representatives and designing the workshops will be critical. Given the geographic extent and diversity of resources and threats, it is anticipated that three workshops may be required to adequately address the needs of this element: one in the southern, central, and northern Appalachian regions.

#### **Deliverables:**

[Deliverable A. GOALS] Goals and Conservation Objectives/Targets - Review and consultation as described above and production of a summary of significant findings that will substantially guide the remaining work under the Project.

[Deliverable B. MEASURES] Identification and Measures – Delivery of a searchable database to be deployed via the AppLCC web portal (applcc.org). The database design will allow additions and updates in the future by the AppLCC staff and partner-users after the completion of this Project. This web-based, searchable database will include the inventory and summarize reviews of the literature/databases/products and tools completed or under development. The summaries will include methods and conclusions—especially those that would assist the AppLCC in characterizing priority ecosystem services and their economic or social values. Information from the survey and workshops from Study Area #2 will synthesized and presented as a comparative matrix and supporting narrative that can be displayed in an interactive format that cross-references goods, services and values with societal categories, sectors, governance and economic interest or constituency.

In Study Area #3, the GIS layers developed will depict locales of priority goods and products or areas representing expressed values/benefits for the region and priority ecosystem services supporting these products. These layers will be integrated into the information systems developed elsewhere in this proposal (*see funding under Budget option below*).

[Deliverable C. THREATS] Systematic Review of Previous Efforts to Assess Potential Threats - The resulting data and a critical synthesis will be summarized or cataloged and integrated into a web-based relational database to be made available on-line using advanced technologies and deployed on the AppLCC.Org web portal. A written evaluation of the overall status of threats assessments in Appalachia, with recommendations for stressors/topics identified as priorities needing more focused investigations, as well as priority data or products that are of high value but limited availability at this time will be included.

[Deliverable D. FRAMEWORK] Organizing Framework and Process - Building on outcomes of Deliverable C. above, and using goals, measures, and threats as an organizing framework, results will be organized and cataloged in a web-enabled, searchable dataset in a manner that identifies their relevance to the missions and values of the AppLCC Member organizations (i.e. Deliverable A.) and keyed to individual or cumulative threat/stressors and resources affected (in part, as related to Deliverable B.) Outcome products, reports, and materials from the workshops with key stakeholders selected in consultation with AppLCC Staff will be generated to review the goals and threats, critically evaluate previous assessment efforts, and examine available data.

### **APPLICATION:**

### **COVER PAGE**

**RFP Title and Number:** Preliminary Assessment and Inventory of Ecosystem Services and Environmental Threats across the Appalachian Landscape (#2013-04)

**Primary Investigator(s) (name, title, organization):** 

Organization's Background/Purpose:

Brief description of qualifications and statement of investigator(s) past performance (do not exceed 250 words):

### PROPSAL STATEMENT OF WORK (SOW)

(In filling out this template describing the Proposal Scope of Work, the page length is limited and may not to exceed 4 pages, Times New Roman 11 pt font, and use line spacing at least 1.15)

**Proposal Title** and Number:

**Project (SOW) Narrative** (include all relevant phases by area of study, steps or sequencing of Project elements, and benchmarks or milestones linked to proposed timeline):

Step-by-Step Process to Completion (and if any deviation from that suggested in the Project Description is proposed, provide full justification):

**Specific Deliverables** (products, services, etc.) with proposed completion dates:

Explain any information needs or coordination that must be accomplished first before work can begin, indicate date available to commence project after May 1, 2013, and estimate timeline for this activity (also include this estimate in Timeline attachment):

**Timeline:** Table with distinct milestones, dates, and deliverables for each milestone; include exact proposed start and completion dates for interim and final deliverables assuming contract obligating funds is signed NLT May of 2013.

Applicant must include in your completed timetable the quarterly reporting due dates of March 31<sup>st</sup>, June 30<sup>th</sup>, September 30<sup>th</sup>, and December 31<sup>st</sup> for each year of project activities continue, as these will be built into your final contract and payment schedule.

IMPORTANT NOTE: Completion of milestones and deliverables can exceed one year's timeframe, however significant milestones/deliverables must be well demonstrated by end of first12 months, and timeline commitments must be adhered to unless written approval is obtained at least 4 months in advance from the Appalachian LCC Coordinator.

**Budget:** Detailed Budget Table with separate categories for direct costs such as salary, equipment, travel, etc. and indirect/overhead costs.

Maximum funding range \$80-140 (inclusive of all overhead and indirect costs) (range reflects scope of work.) Cost effectiveness of proposal will be a selection factor (see "enhanced ranking criteria" below).

**Note:** Indirect/overhead costs have been capped with a published overhead limit of 15% with one exception: overhead rates for signatory institutions covered under the federal-university CESU Agreements may request the rate of 17.5% by providing proof the organization qualifies.

(*Enhanced Ranking Criteria*): Applicants are not required to provide a financial or inkind match but relative ranking between applications may be enhanced based on the amount of match and requested overhead rate. Include narrative on cost-effectiveness measures, including match or reduced overhead offerings.

List any planned or potential sub-awards and explain associated tasks/expenses.

**Investigator(s) and Capacity:** Describe any pre-existing infrastructure, activities or accomplishments, training, staff expertise, etc. that demonstrate your organization's or investigator(s) readiness to successfully implement this Project.

List of all key staff that will be involved in the work, including a brief descriptive vitae for each including contact information for Project Manager, Primary Investigator, and the individual who will be providing financial oversight for implementation. (Full CVs may be included as appendices but do not replace the descriptive narrative required in this section.)

Note any similar or related work undertaken for any other LCC or large regional partnerships within or adjacent to the Appalachian LCC boundary and/or if the investigator(s) have formal affiliation/participation with such efforts.

**Partner Contribution(s):** List partner(s) who have a commitment to the investigator(s) or organization to contribute expertise, other in-kind services or financial support to the activities under this Project, and provide a Letter of Support from each partner(s) named.

**Related (SOW) Peer-reviewed publications** that applicant deems relevant for reviewer to consider in evaluating the capacity or experience, of the investigator and possible efficacy or validity of the proposed approach (no more than 5, please):

### Required Acknowledgement/Proposal Attachments

- 1) A signed "No Conflict Declaration" regarding personal or organizational conflict of interest. If your organization does not have one, please use the following: "I certify that to the best of my knowledge and belief no actual or potential conflict of interest exists with regard to our participation in the Appalachian LCC's #2013-04 RFP. Furthermore, I agree to report any potential conflicts which may arise during the performance of this project." and include signatory's name, title, organization, and date.
- 2) Acknowledgement of the Data Requirements indicating specific approach of applicant to comply with any provisions as noted in the Appalachian LCC Data Requirements posted as part of this March 2013 RFP.
- 3) Statement outlining the Commitment of Resources from principal investigator's organization or grant source.

**Completeness of the Application:** Applicants are encouraged to submit their materials early to allow resubmission should the application be incomplete. Only complete applications will be forwarded on for review and ranking. Failure to submit a complete application will exclude application from being considered. It is the responsibility of the applicant to ensure completeness of their submission.

### Appendix I. Top Science Needs – 2012 Science Needs Portfolio

#### BUILDING FROM THE APPLCC SCIENCE NEEDS PORTFOLIO

Thematic Area: Human Dimensions (Environmental Benefits, Ecosystem Services, Social Expectations)

**MISSION:** [Advance] a new paradigm: where ecosystem services become an important and accepted "part of the equation" when land management and other decisions are made that impact natural resource conservation.

(science objective): [Conduct research to gain a better understanding and management of lands and resources to deliver valued] ecosystem services (in order to)

(management objective): [incorporate ecosystem services considerations into all important resource management decisions] to meet public and local resident needs, preferences and conservation goals [with the best information available].

#### C. Heading: System Level

3. PROGRAM: Ecological Functions of Natural/Intact Systems

(Grouping) - Foundational/Stock-taking Assessment/Classification System

**Project Description:** Map major ecosystem services provided in the [Appalachians]. **Project Description:** Map [the significant] beneficiaries of ecosystem services.

#### BUILDING FROM THE APPLCC SCIENCE NEEDS PORTFOLIO

**Thematic Area: Terrestrial (Forests)** 

**MISSION:** Identify and prioritize regional forest habitats and natural communities to foster resiliency in the face of current and future threats while supporting a larger multi-jurisdictional framework for planning and management.

(science objective): Inventory significant regional forest habitats [while evaluating] present and future conditions (including threats), importance, and connectivity of these habitats (in order to)

(management objective): [carry-out conservation planning, based on landscape-scale scientific assessments,] so that LCC partners and stakeholders can develop and implement cohesive regional management strategies to protect and manage forest resources across jurisdictions.

#### A. Heading: Regional Level

1. PROGRAM: Landscape-level Disturbances & System-level Response

[PROGRAM DESCRIPTION: Describes how forested systems respond to large-scale transformation of biotic and/or abiotic conditions] [Examines major disturbances (includes climate change) as well as the impacts associated with these, regardless of ecological organization (e.g., community, species, population)]

(Grouping) – *Cumulative Impacts* 

**Project Description:** [Determine the cumulative] effects of stressors (e.g. urbanization, energy development, etc.) on forest integrity/functionality and endemic species.

### **Appendix II. Data Requirements**

Applicants will be required to follow the **Data Requirements** below, as approved by the Executive Subcommittee for this March 2013 RFP solicitation:

[**Definition**] The term "data" may refer to unprocessed products (e.g., notes, observations, instrument readouts), final products (e.g., published information, software code/applications, GIS data, maps), or derivative products (e.g., simulations, models, supporting materials).

[Data Sharing] The Appalachian LCC (AppLCC) is committed to assembling all key information/data derived from LCC-supported projects that may be foundational in further landscape-leveling modeling and conservation planning efforts. The LCC is also committed to openly distributing information/data derived from LCC-supported projects as appropriate, but reserves the right to include relevant data in the foundational data layer archives. The AppLCC assumes the responsibility of data access restriction, as warranted, and to safeguard sensitive data (e.g., certain endangered or trust species locations or cultural sites, historic data). As such, any data or information derived from AppLCC-funded activities that has not been made available through the AppLCC may not be released to any other party without the written consent from the Chair of the AppLCC Steering Committee or designate. Access to all data will be managed by the AppLCC staff in close consultation with its Executive Subcommittee to authorize access to sensitive data and restrictions regarding its use and further display or dissemination (see additional comments under "Restrictions/Data Access" below).

[Software] Applicants should clearly state within their application materials whether any software required to work with project deliverable(s) is/are proprietary or open source format. The Appalachian LCC (AppLCC) is committed to using open source software. This reflects a Programmatic commitment to ensure maximum access to any tools, analyses, or visualization delivered by and/or funded-through the Cooperative to our members, partners, and broader stakeholder community. As such, applications that rely on proprietary software products must be delivered in an appropriate open source format, acceptable for integration to the established webbased delivery currently funded by the AppLCC. Applications should note if proposals do not include provision to deliver open source software (i.e., conversion of proprietary data or derivative products, etc.) and these may receive less favorable review by the project selection committee.

[Data Delivery] The principal investigator(s) must submit an electronic copy of any data funded by the AppLCC for its development or assembly. The AppLCC staff or web contractor will make available to the PIs a secure file transfer system (SFTP) to upload and transfer all data, products, or software coded products and will help provide instruction on the procedure. It is the responsibility of the PI(s) to upload the data and data products (including key intermediate data if requested) to the LCC, in commonly accepted formats needed for long-term science research. A

complete metadata record (stored in one of the three following widely-recognized metadata protocols; FGDC, CSDGM, or ISO) is required for the project as a whole (Project Metadata) and for each data product (Dataset Metadata) delivered and in compliance with National LCC Data Management Guidelines (copy or url available upon request).

[Restrictions/Data Access] Applications should note if legal requirements dictate restriction to public access of delivered data, and such information and data access issues must be clearly stated in the project proposal. Some State Agencies with management authority and responsibilities may have additional requirements regarding access to locational data for sensitive species and habitats that must be addressed in any application. Requests from university researchers to delay the public release of data, pending publication considerations, must be expressly made in the project proposal. It will be the decision of the AppLCC Executive Subcommittee to consider such restrictions and how the AppLCC will negotiate such restrictions if a favorable decision is made to fund a project or contract. However, proposals may receive less favorable review by the project selection committee if such restrictions result in the data used in an AppLCC-funded project not being included in the foundational data set the LCC is committed to building (see Data Sharing section above). In accepting AppLCC-funding, the applicant agrees to respect intellectual and commercial property rights as applicable.

[Project Proposal Scope of Work] Furthermore, each approved applicant will be required to prepare a summary for insertion within their contract regarding what types of data (as defined above) will be generated, any restrictions associated with distribution of the data, as well as formats and protocols that will be used for data and metadata. Finally, these aspects of the project must be fully reflected in both the timeline and the budget of any proposal application submitted to the LCC for consideration. Before final payment will be authorized, all data and data products (including key intermediate data if requested) and other supporting materials must be delivered no later than 90 days after the project contract date ends unless prior approval for an extension has been granted in writing by the AppLCC staff. An extension may be granted for delivery but final payment will still be withheld until all data and data products are posted onto the AppLCC.Org website in an acceptable format and quality.