

**Attachment 1-FY14: Reimbursable Support Agreement**

**Description of Cost of Goods and/or Services to be Provided**

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| Project Title   | Assessment and Inventory of Ecosystem Services and Environmental Threats across the Appalachian Landscape |
| <p><b>Description of Services:</b> 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.</p> <p>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) identify a framework and propose a process to facilitate the AppLCC systematically moving forward on a comprehensive threats assessment.</p> <p><b>It is anticipated that this work will be executed in three areas of study:</b></p> <p><b>Area #1</b> 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.</p> <p><b>Area #2</b> will be supported by information obtained in Area #1, and involve a regional survey and workshops within the AppLCC boundary to:</p> <ul style="list-style-type: none"><li>a.) 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</li><li>b.) 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.)</li></ul> <p><b>Area #3</b> 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.</p> <p><b>[Deliverable A. Goals and Conservation Objectives/Targets]</b> - Review and consultation as described above and production of a summary of significant findings that will substantially guide the remaining</p> |   |

work under the Project.

**[Deliverable B. 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 Area #2 will be 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 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.

**[Deliverable C. 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. 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.

**Services: Science and Conservation Delivery Liaison Position** – It is anticipated that the Center will dedicate the necessary staff research to provide both the research oversight to the project from a technical landscape/ecological modeling and planning perspective. Coordination of this work will be tasked to The Eastern Forest Environmental Threat Assessment Center Director but that the Center team will work closely with the AppLCC Coordinator. Project staff will also serve as an Adjunct to the AppLCC in helping to “translate” the science and help to “deliver” the resulting decision-support tools via training opportunities, meeting presentations, and outreach to serve the broader AppLCC resource and conservation community. The FWS, Appalachian LCC staff, will have substantial involvement including but not limited to: collaborative planning, on-going review and approval work plans, and selection of project staff. In addition, the AppLCC staff will support the EFETAC research team in working with Cooperative members from the management and conservation community, introducing and developing industry relationships, and linking to other scientific investigators conducting complimentary research.