

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.

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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 <http://applcc.org/> for this RFP announcement and <http://applcc.org/our-work/5-year-work-plan/work-plan-section-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 11th – This RFP announced.

Two conference calls to respond to questions about this RFP are scheduled for March 25th 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 <http://applcc.org/projects/upload-project-applications/>.

MARCH 25th 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 3rd 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 10th, 5pm

RFP Applications due to AppLCC (application materials uploaded by the applicant onto AppLCC website in designated folders <http://applcc.org/projects/upload-project-applications/>). 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: Classification and Georeferencing Cave/Karst Resources across the Appalachian LCC (#2013-03)

Problem Statement: Developing a consistent classification system and mapping for karst habitats is a foundational need for this highly unique habitat type. Despite other efforts to classify and map karst systems of the US based on surficial expression and geology (<http://pubs.usgs.gov/sir/2008/5023/07weary.htm>), the more fine-scale classification and mapping needs for biodiversity and resource management remain fundamentally unmet. Existing mapping efforts are either geographically restricted, incongruent, of inadequate scale, and/or completely lacking. Lacking this basic information creates a significant impediment to conservation of karst systems, their contribution to water quality, and stability of the rich and unique biotic diversity they support, and will limit the Appalachian LCC's ability to conduct landscape conservation planning for these resources. (Support for this work has been recognized as an important partnership objective under the 2012-2016 5-Year Work Plan, Objective 1.7 *Develop and deliver landscape-level (scalable) planning tools.*)

Project Description: The project will assemble georeferenced data, identify key intermediate (classification) data, and develop supporting science products that depict and map karst habitats and biotic resources across the Appalachian LCC based on the most appropriate method of classification to facilitate landscape-level planning objectives and address conservation and management needs. The Project will synthesize pre-existing efforts to collect and present karst resource information, and make these widely available via the AppLCC web portal as appropriate (see note on data access restrictions). Based on the critical review of earlier efforts, to then propose and adaptation of pre-existing efforts or develop a more appropriate classification system for karst habitats within Appalachia, to map the physical and biological resources then develop and distribute via the applcc.org content management system, key science products and tools that will support cave/karst conservation efforts.

Such products will include, but are not limited to: (a) a review of the existing literature and critical synthesis and evaluation of previous efforts and methodology to collect data and create georeference cave/karst classification and maps, including biotic and abiotic resources; (b) based on an appropriate peer-review that include both scientists and resource managers, to identify the most appropriate habitat classification system that includes supplemental hydrology and fauna GIS layers to facilitate landscape-level planning objectives and address conservation and management needs, (c) create a geo-spatially referenced data set and associated meta data of the key variables and resources associated with classification of cave/karst systems across the AppLCC, and (d) develop an interactive GIS-based decision support tool to be deployed on the AppLCC.org open-source (Plone) web-content management system.

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. In addition, it will be important for the successful applicant to be familiar with and demonstrate what steps will be taken to ensure compliance with the provisions for cave confidentiality identified under the Federal Cave Resource Protection Act which states that “Information concerning the specific location of any significant cave may not be made available to the public..... unless the Secretary determines that disclosure of such information will further the purposes of this Act and would not create a substantial risk of harm, theft, or destruction of such cave.” Although the Secretary can make exceptions it is only upon written request by Federal and state government agencies or bona fide educational and research institutions.

Project Narrative: The goal of this project is to fill an important science need identified by the cave/karst community of practice to establish a standard classification system and develop an Appalachian-wide map depicting where these cave/karst habitats and resources occur across the landscape. Synthesize and develop cave/karst data and georeferenced suite of products that are consistent in methodology in order to support larger-scale planning efforts, yet usable at scales that will support local resource decision-makers. Make these widely available via the AppLCC web portal in order to facilitate easy access and support coordinated conservation efforts throughout the Appalachians. Consult with cave/karst resource management authorities outside the Appalachian LCC boundary to help inform and possibly integrate now, or in the future, similar efforts in karst formation areas outside the Appalachian LCC boundary.

It is anticipated that this Project may be executed in multiple phases and applicants are encouraged to evaluate the scope of work and to prepare the proposal to execute any or all of these Phases with the funds available and timeline.

Phase I: is anticipated to include: (a) a review of the existing literature and critical synthesis and evaluation of previous efforts and methodology; (b) identify and synthesis the most appropriate habitat classification system and critique each; and (c) geo-spatially referenced data set and associated metadata of the key variables and resources as outlined (see Deliverables).

Phase II: Resource Managers and Experts consultation to review all materials generated in Phase I with the objective of helping to identify content or design criteria of a management decision support tool.

Phase III: Based on the consultation in Phase II (and review of output from Phase I) to design an interactive GIS-based decision support tool.

Deliverables: Description: Numerous factors determine the physical structure of karst systems in the Appalachian region, including bedrock geology, quaternary geology (e.g. glacial deposits, flood plains), geological structure (e.g. folded versus flat-lying bedrock), local topography, cave density and climatic variables. Distinctive types of caves and karst are present throughout the

Appalachians as a result of the interplay of these factors, with correspondingly variable ecological functionality, particularly in terms of hydrology.

[Deliverables: Phase I]

(1) review of the existing literature and critical synthesis and evaluation of previous efforts and methodology

Development of the proposed classification system should include a status review of other local, regional or national systems developed to date, and establishment of an independent peer review team who will be substantially involved and ultimately approve the final classification framework presented as a Deliverable to the LCC.

(2) identify the most appropriate habitat classification system

Develop a physiographic classification system for cave and karst areas in the Appalachians. The different types of cave/karst landscapes present in the LCC should be defined using a combination of these variables based on characteristics of actual karst areas present within the LCC. The physiographic divisions should when possible correspond to differences in ecological functionality. All data, intermediate data will be delivered in open-source format, and all maps, derivative products, or visualization products will be delivered via the AppLCC.Org open-source web site.

(3) geo-spatially referenced data set and associated metadata of the key variables and resources as outlined below to be part of Deliverable 2 above include but are not limited to:

3a: distribution of the different types of karst/caves in the LCC as classified under Deliverable 2.

Description: Karst areas throughout the Appalachian LCC are analyzed in terms of the classification scheme developed under Deliverable 2, and a GIS data set and resulting map of these karst subdivisions is created. Based on the Status Review of existing products conducted under Deliverable 2, primary investigators may incorporate elements of existing mapping efforts such as the national karst map recently created by the USGS, as well as other efforts.

Building on the Status Review, the Project will facilitate an Experts Consultation to engage both scientist and science-based natural resource management agents to critical evaluate and recommend or develop the most appropriate classification system for the AppLCC region. Prior consultation with surrounding LCCs and Resource Managers should augment this Review and Consultation before a final system is proposed by-way of ensuring future integration with other cave/karst resources in existence or in development.

3b: cave density throughout the LCC as determined by on-the-ground surveys.

Description: Data from state cave surveys within the LCC will be used to generate cave density maps so that the relative concentration of subterranean habitat in general can be analyzed without reliance on specific cave entrance location information, which is generally not shared within the LCC.

3c: karst hydrology and/or an assessment of data needs to support future mapping.

Description: Existing data from LCC states will be integrated into regional coverage showing the distribution of karst springs and the delineation of subterranean flow paths (e.g.

results of dye tracing). Attempts will be made through focused field work in small sub-areas of the LCC to assess the degree of completeness of these data, and recommendations will be developed regarding procedures to facilitate karst hydrology inventories and mapping LCC wide. Currently, such mapping is incomplete within most LCC states and spring attributes collected in different states vary wildly. This approach would include development of spring assessment protocols for inclusion in the LCC wide database.

3d: subterranean invertebrate biological diversity for cave-limited terrestrial and aquatic species.

Description: Data on cave-limited species occurrences will be compiled and georeferenced. The vendor(s) will develop an interpretive approach to represent the richness of subterranean fauna without disclosing specific sampling locations. Species richness density will be calculated based on this data for cave-limited terrestrial and aquatic species, as well as species richness maps for the aquatic and terrestrial cave limited fauna combined.

3e: cave-limited, troglobitic, and stygobitic fauna within the LCC, including an attribute for each range designation that will quantify the degree of certainty that species occurs within appropriate habitat within the range boundary.

Description: Known locations for each species will be obtained from throughout the LCC. Locations will be plotted against karst coverage (Deliverable 1) and watershed boundaries to delineate approximate range boundaries. Designation of boundary confidence will be determined in part by the degree of inventory effort expended for the particular taxonomic group to which the species belongs (e.g. diplopoda, coleoptera, planaria, et cetera).

3f: all critical subterranean bat habitats (e.g. mines, hibernacula, maternity roosts, etc.) within the AppLCC boundary.

Description: Known locations for critical subterranean bat habitats will be obtained from throughout the LCC including data from state and private agencies and non-profit organizations such as caving grottos and conservation organizations. Authors will develop an approach to represent the foraging habitat around these locations based upon species-specific data without disclosing specific locations.

[Deliverables: Phase II] Execute a consultative process (e.g., host a facilitated meeting or series of meetings, or develop or deploy a consultative process or survey, or alternate proposal) to engage key resource managers as the End-User/Community served, and generate a report of their expert/End-User review of all materials generated in Phase I with the objective of helping to identify content or design criteria of a management decision support tool. Such a tool should seek to best integrate and use the assembled or derived information in a way to assist land and resource manager make decisions relative to conservation objectives. This is envisioned as an extensive End-User consultative process, with the objective to identify key decisions, criteria, and thresholds germane to cave/karst lands and natural resource managers' decision-making and development of management strategies etc. that will enhance their large-scale conservation planning and resource management.

[Deliverables: Phase III] Based on the consultation in Phase II to design and deliver on the AppLCC.Org web portal, an interactive GIS-based decision support tool.

Description: the development of a web-based decision-support tool to help expedite and more systematically chronicle decisions to address management needs. Final tool must be seamlessly integrated and fully functional within open source software as supported on the AppLCC.Org web site and content management system.

Integration of software to ensure updating data sets following completion of this project.

In order for deliverables to continue to be useful, they must be dynamic. Applicant will develop a mechanism for individuals and organizations within the AppLCC to update all GIS layers, and data sets, containing element occurrences. This process needs to be clearly identified with minimal lag time between the submission of data and updated coverage. Mechanism must be fully integrated and compatible with the AppLCC.org open-source software and data policy related to the FY13 AppLCC Project Proposal solicitation.

APPLICATION:

COVER PAGE

RFP Title and Number: Classification and Georeferencing Cave/Karst Resources across the Appalachian LCC (#2013-03)

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):

PROPOSAL 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 31st, June 30th, September 30th, and December 31st 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 first 12 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 \$80-125 (inclusive of all overhead and indirect costs) (range reflects the number of Phases pursued and 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 in-kind 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 #2013-03 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

FROM THE APPLCC SCIENCE NEEDS PORTFOLIO

Thematic Area: Cave/Karst and Mine lands

MISSION: -Conserve and manage cave/karst and restored mine land (CKM) communities across jurisdictions.

Science Objective: Inventory significant regional subterranean/cave/karst systems and communities, evaluate the condition and importance of those communities, and identify regional threats impacting these (in order)

Management Objective: Develop and implement cohesive regional strategies to protect and manage these resources across jurisdictions.

A. HEADING: REGIONAL LEVEL

PROGRAM: Landscape-level Disturbances & System-level Response

PROGRAM DESCRIPTION: Develop and compile data regarding the status and distribution of subterranean resources, threats impacting associated species, and work with partners to develop management strategies needed to address habitat threats and assist in the recovery of threatened and endangered species. [*Examines major disturbances (includes climate change) as well as the impacts associated with these, regardless of ecological organization (e.g., community, species, population)*]

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

Project Description: *Develop a classification system for karst systems in the Appalachian region (to help prioritize conservation strategies).*

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 web-based 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.