

Science Delivery Recommendations for 2015

Need	Improved user-interface for Data Basin
Rank (100=best)	100
Description of Need	<p>Access to the landscape data and other science products can be challenging due to the sheer number of datasets available and the great diversity of their applications. It can be difficult to navigate and search without an awareness of what is available. Transfer of data can be challenging due to file size, and version management is an ongoing challenge. Version updates need to be readily apparent; material needsw to be updated and users need routine updates to stay informed. Improvements to the user-interface on DataBasin are needed to make it easier for users to locate and explore spatial data. Users need a clear topical organization so they can intuitively explore data, either based on data categories, such as "soils", or areas of practice, such as "land management", or both. Users also request more advanced tools for querying and viewing spatial data, but more assessment of needs and capabilities is required before tool development specifications can be defined. Both areas of improvement will benefit from engagement of users to better define needs and develop solutions.</p>
Relevance to Users, networks, and Conservation Decisions	<p>Addressing this need will better enable users of all kinds to locate NALCC science products relevant to their decisions and to perform simple investigations of spatial data in support of decisions. Data Basin is accessible to users and decision-makers without GIS skill, and provide opportunity for them to explore spatial data.</p>
Status and Relation to Other Work	<p>Data Basin is already operational and this need derives largely from user-feedback. The system provides access for a wide range of users to all spatial data being generated by NALCC partners and science projects. Improved ability to browse and query data will increase accessibility and adoption of science the NALCC has invested in.</p>
Potential Project Type	<p>This need will be best served under NLACC staff oversight, by contracted capacity to gather input, develop and implement a new interface, prescribe and/or test next steps for web tools, and provide updates on available data. Deployment of changes in Data BAsion may incur service charges.</p>
Resources and expertise	<p>This need requires knowledge of systems for cataloguing GIS data, general knowledge about spatial data and conservation planning, methods for engaging users and translating input into system development. Capacity is need to provide routine updates.</p>
Deliverables	<p>The needed deliverables include a new interface for exploring spatial data on Data Basin, specifications and/or testing for new online data query/analysis tools, and regular updates on data uploads.</p>
LCC Funding	\$75,000

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Need	Initial knowledge transfer
Rank (100=best)	93
Description of Need	<p>LCC staff are often the first and only individuals to learn how to use emerging science products—until the knowledge is transferred to others. LCC staff must train the earliest adopters of science products, including partner GIS staff, LCC grantees, and other technical assistance providers with the intention that some will become formal or informal conduits of science products within their own organizations or partner networks. This frontline of knowledge transfer is challenging because the science products are new and often require development of supplemental materials in order to effectively transfer knowledge. Transfer involves development of initial training materials and curricula and other quality learning media. This requires development of initial training materials and curricula. Workshops designed for a variety of users is a key mode of initial information transfer; partner networks and GIS experts are priority audiences. Collecting input from partner networks is a critical component of prioritizing information transfer and developing effective learning strategies. Capacity to deliver training workshops is a critical part of this need.</p>
Relevance to Users, networks, and Conservation Decisions	<p>The development of initial training materials and curricula will provide quality learning media that can be somewhat tailored to the needs and skills of specific groups. Other modes of technical assistance cannot function to transfer the breadth of NALCC science if staff do not have resources to develop and provide training.</p>
Status and Relation to Other Work	<p>As new projects are finished, NALCC staff are the first to process the new knowledge, beginning with posting it on Data Basin. Next, technical information needs to be drafted or mapped in simple formats, then transferred to quality media and “taught” to users.</p>
Potential Project Type	<p>Contract assistance to support NALCC staff delivering science: writers, graphics, surveys and evaluations, media, facilitation for training, assistance coordinating workshops.</p>
Resources and expertise	<p>Training efforts need the support from diverse educational and creative skill sets to develop training media, training modules, and facilitation to support “train the trainer” events/workshops and on-demand assistance to partners. Training often involves a combination of GIS, ecology, and conservation practice expertise.</p>
Deliverables	<p>Deliverables include training media, learning modules, workshops, surveys to assess science adoption and user needs, and ultimately a better-connected networks of users.</p>
LCC Funding	\$150,000

Need	Facilitation of multi-scale planning
Rank (100=best)	68
Description of Need	LCC staff are engaged in facilitating, developing, and communicating multi-scale landscape conservation designs that leverage the full spectrum of science investments into prioritized maps depicting networks of connected habitats. The interpretation and application of multi-scale landscape conservation designs will demand increased technical assistance from LCC staff and partners across the Northeast region as products emerge from the Connecticut River Pilot, Regional Conservation Opportunity Areas, and Envision the Susquehanna. Added capacity for technical assistance is needed to support decision processes and follow-up to convey emerging information to potential implementation audiences; specifically, existing extension and land use planning technical assistance providers may benefit from new science. NALCC activity and science must be coordinated with ongoing local activities and distributed through local networks of partners. An indirect benefit is that participation in landscape design decision processes provides hands-on training to develop future technical assistance providers.
Relevance to Users, networks, and Conservation Decisions	Large watersheds & states need help applying NALCC conservation design tools to ongoing planning across scales. Multiple tools and scales of planning need to be considered by implementers.
Status and Relation to Other Work	Guidance is needed to assist integration of work in CT River, Susquehanna, Chesapeake with RCOAs and SWAPs and vice versa.
Potential Project Type	Contract capacity to facilitate delivery of results and lessons across scales. Products need to be integrated with land use/municipal assistance networks, but first coordinated with state and other agencies with jurisdiction in the relevant landscapes.
Resources and expertise	General experience in implementing conservation is needed, ideally xperience with landuse planning, applied conservation planning, and stakeholder or commuity engagement. These skills need to be supported with strong science and awareness of NALCC data.
Deliverables	The primary deliverable is engagement with conservation practitioners who actually use conservation design to inform strategies for engaging people in priority landscapes. Feedback from practitioners and stakeholders will benefit future conservation design efforts.
LCC Funding	\$50,000

Need	Focused science applications for terrestrial/ aquatic/coastal systems
Rank (100=best)	81/63/31
Description of Need	Demonstrating specific applications of science is a powerful way to show the overall utility of landscape science investments. It is also a way to immediately improve conservation performance for high priority decisions that are meaningful for specific user groups. Both of these aspects adoption of science through specific applications. NALCC science is available now for specific applications, but applications need to be supported with training for the target audience of users. Specific data and applications must be prioritized within areas of practice.
Relevance to Users, networks, and Conservation Decisions	Results from science investments need further work to be applied to specific problems relevant to specific decisions. The scope of need varies widely across groups, ranging from data-processing and tool development, to user engagement, partnership development, and training.
Status and Relation to Other Work	Terrestrial datasets such as Ecological Systems Maps, wetland complexes, connectivity models, representative species models, and Index of Ecological Integrity have many applications to inform specific land protection and restoration needs. Applications could include identification of optimal sites to restore agricultural lands to wetland or forest, evaluating management options on conserved land, and identifying priorities for restoring connectivity in fragmented landscapes. Aquatic connectivity and fish passage data are currently available to help triage road crossings for culvert replacement or plan other forms of restoration for in-stream connectivity. Water temperature modeling, brook trout data, fish migrations, lake and pond classification, and riparian indices are available to help prioritize protection and restoration of aquatic buffers. Includes workshops to deliver applications. For coastal systems , sea level rise models are available to plan coastal adaptation strategies, such as marsh migration and triage for road crossings and culverts, but guidance is needed to apply the right models in the right places. Other coastal data, including wildlife habitats, seabirds, anadromous fish, and piping plover may benefit adaptation planning, especially when considered in conjunction with SLR scenarios.
Potential Project Type	Grant RFP will identify specific datasets, products, and decisions within terrestrial/aquatic/coastal systems and request development and/or training on applications for users.
Resources and expertise	Landscape data and other science products require specialized interpretation, querying, and other processing to inform very specific management decisions—these steps require expert knowledge of both science and management, but these skills must transfer to training others.
Deliverables	Demonstration of applications is not enough, specific tools, translated data, and stepwise training and guidance are needed to help managers effectively apply science products. Development of applications will require engaging relevant networks of practitioners and gathering input, then teaching the user how to implement the application.
LCC Funding	\$100,000

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Need	Technical assistance provider grants
Rank (100=best)	47
Description of Need	In accompaniment to the development of initial training materials and curricula under "Initial Knowledge Transfer", incentives are needed to develop skills in a cohort of technical assistance providers in partner organizations. New capacity will need funding to travel to and participate in training, develop new technical skills, and engage in strategic and on-demand delivery of technical assistance.
Relevance to Users, networks, and Conservation Decisions	Technical assistance needs to be multiplied beyond staff in order to reach decision-makers.
Status and Relation to Other Work	Providers need training, support, and media from NALCC staff, but data and landscape designs are ready for dissemination now.
Potential Project Type	Contract staff or provide small grants to partner organizations to build lasting "on demand" technical assistance capacity.
Resources and expertise	Providers need strong conservation planning skills, GIS skills, and experience providing training and hosting workshops.
Deliverables	The deliverable for providers is "on-demand" technical assistance events and coordinated workshops
LCC Funding	\$100,000

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Need	Coordination of conservation networks
Rank (100=best)	47
Description of Need	Many large landscape conservation initiatives develop as a collaborative of organizational staff with full-time organizational responsibilities. When capacity is created to coordinate such partnerships, it is often part time and grant-funded. Nonetheless, these initiatives create a lasting network of practitioners with a common purpose and a need for the best available landscape science. Supporting coordination capacity for conservation initiatives to foster networks of focused practitioners may serve as a potent and <i>explicit conduit to deliver NALCC science</i> to a much broader network—with purpose.
Relevance to Users, networks, and Conservation Decisions	Existing networks have specific decision problems that can be supported through delivery of NALCC science.
Status and Relation to Other Work	Existing networks can be leveraged to expand delivery of NALCC science products beyond NALCC staff. Examples of coordinated networks that might use NALCC science include SWAP coordinators, Regional Conservation Partnerships (RCPs), Staying Connected Initiative, Land Trust Alliance, Envision the Susquhanna, New England Cottontail Initiative, Young Forest Initiative, NEPARC.
Potential Project Type	RFP for small grants to partner organizations to dedicate coordinating capacity to application of NALCC science products via their networks.
Resources and expertise	Funding from NALCC would need to be matched by coordination capacity from other sources and organizations. Qualifications of the supported capacity must include experience coordinating networks, convening workshops, and familiarity with the application of NALCC science products to conservation issues for their network.
Deliverables	The primary deliverable of these capacity grants would be series of workshops developed in concert with NALCC and well established networks for future science delivery.
LCC Funding	\$100,000