**North Atlantic LCC Science Delivery Team**

**Summary of Progress, Recommendations and Timeline for Steering Committee**

**November 6, 2013**

**Requested Actions**

1.  Pursuant to recommending an allocation of FY13 funds, the Science Delivery team convened three well-attended meetings since June and designed a framework to advance the translation, adoption, and delivery of landscape science; the team now requests concurrence on 3 inter-dependent categories of Science Delivery, each with prioritized needs intended to put emerging science in the hands of the intended users and provide the assistance they need to put it in use:

* Science Delivery Program Development and Capacity;
* Science Delivery Partner Support Grants and Demonstration Projects;
* Science Delivery Information Support and Access Needs.

2.  The team requests approval of prioritized needs in all three categories and a corresponding allocation of FY13 funds. Upon approval of allocations, staff will commence implementation tasks including strategic planning, technical assistance, and development of RFPs;

3. The team requests approval to issue RFPs and subsequently recommend proposals for approval at the January/February 2014 LCC Steering Committee meeting call.

4. Pursuant to recommending an allocation of FY14 funds, the team requests a continuing charge to convene as a technical sub-committee of the NALCC Steering Committee and to further develop, guide, and amend Science Delivery needs as necessary.

**Background**

The goal of the Science Delivery Team is to develop a framework to support the implementation and application of science products at multiple scales across the NALCC region.

The North Atlantic LCC Science Delivery team met three times via conference call between June and October 2013. The team is an expansion of the demonstration projects team and now includes over 30 members each representing different delivery functions in federal agencies, state agencies, national NGOs, regional NGOs, watershed groups and others. Their discussions are summarized in this document. Their recommendations are summarized here.

The team recommends that similar to LCC funded science projects, the LCC allocate funding, including both capacity and grants, for Science Delivery in the following areas: Science Delivery Program Development; Partner Support Grants and Demonstration Projects; and Information Support and Access Needs. In order to effectively deliver NALCC science, the categories require concurrent funding and implementation—to some extent each area is underway, but focus, planning, and partner engagement are required to fully integrate delivery.

**Science Delivery Program Development and Capacity**

* **Develop a NALCC Science Delivery Technical Committee, staff capacity and contracts sufficient to develop and implement a program of science delivery** that develops and implements a strategy employing translation, technical assistance, training, targeted outreach, and demonstration projects to ensure the delivery and adoption of landscape conservation science;
* **Translate science and data to meet user needs and provide technical assistance on landscape conservation science** including training (including training the trainers), workshops, and facilitated application of tools;
* **Conduct workshops with users to provide information and get feedback** on the most effective way to integrate information and to provide training on tools. Workshops may be oriented to train users on final products, or to facilitate decisions and gather input to direct intermediate phases of conservation design or both.

**Science Delivery Partner Support Grants and Demonstration Projects**

* **Provide grants to encourage partners/partnerships to use, test, or develop applications of data/tools** and disseminate to others in their geographic areas via demonstration projects, training, or other applied uses of landscape science;
* **Identify and support state, NGO, university and federal partners already working with regional and local communities** and provide grants to partners to provide technical assistance to key audiences including land trusts, NGOs, communities, states, and local agencies.

**Science Delivery Information Support and Access Needs**

* **Maintain and advertise catalog of available regional data layers and tools;**
* **Maintain information management system** hosted on the LCC Data Basin site providing access to all available relevant spatial data layers, integrated results and tools for various scales and audiences.

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| **Prioritized Science Delivery Need Recommendations** | | | | | |
| **Need 1: Science Delivery Program Development and Capacity** | | | **Who/ How** | **Capacity/Grant** | **Score** |
| **1.0** | | All scales: **Maintain NALCC Science Delivery Technical Committee, staff capacity and contracts sufficient to develop and implement a program of science delivery** employing translation, technical assistance, training, targeted outreach, and demonstration projects to ensure the delivery and adoption of landscape conservation science. The program needs to utilize and enhance existing networks of partners and partnerships to help translate and integrate science products, put them in the hands of users, and demonstrate how to use them. Immediate next steps include prioritization of landscape science products for initial delivery, targeting of audiences, assessment of existing networks for delivery, development of a timeline, drafting RFPs for grants, and drafting a strategic plan. | LCC staff, trained technical assistance partners | Capacity and contracts | 13 |
| **1.1** | | All scales: **Translate science and data to meet user needs and provide technical assistance on landscape conservation science** including training (training the trainers), workshops, and facilitated application of tools. This activity is part technical and part interactive, involving custom GIS, data summary, synthesis of science results, and tailoring technical assistance to meet the needs of and learn from specific audiences and applications. | LCC staff, trained partners | Capacity and contracts | 13 (note: split from 1.0) |
| **1.2** | | Regional and Sub-regional: **Conduct workshops with users to provide information and get feedback** on the most effective way to integrate information and to provide training on tools. Workshops may be oriented to train users on final products, or to facilitate decisions and gather input to direct intermediate phases of conservation design or both. Two specific immediate actions are to 1) work with the U.S. Fish and Wildlife Service to host a workshop or workshops in the Connecticut River Watershed to test, demonstrate and seek feedback on integrated landscape conservation design; and 2) to plan and deliver a workshop at NEAFWA to deliver regional information for SWAP updates with Northeast Fish and Wildlife Diversity Technical Committee and State Planners. | LCC staff, partners, facilitators | Capacity and contracts | 6 |
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| **Need 1 (continued): Science Delivery Program Development and Capacity** | | | **Who/ How** | **Capacity/Grant** | **Score** |
| **1.3** | | All Scales: **Actively seek input from species partnerships and conservation initiatives** and provide them with data, maps, and other regionally-consistent spatial information that meet their needs. | LCC staff, science project PIs | Capacity | 6 |
| **1.4** | | All Scales: **Develop or enhance networks of people to deliver science** to address specific resource questions, needs, and audiences such as land use, fisheries, species mgmt, forestry, water resources. Identify state and NGO partners already working with those audiences, and identify key adopters and strategies for adoption. | LCC staff | Capacity | 5 |
| **1.5** | | Regional: **Conduct outreach on the availability of information**, including instructions on how to access and use available information. | LCC staff with partners | Capacity | 3 |
|  | | | | | |
| **Need 2: Science Delivery Partner Support Grants and Demonstration Projects** | | | **Who/ How** | **Capacity/Grant** | **Score** |
| **2.0** | All Scales: **Provide grants to encourage partners/partnerships to use, test, or develop applications of data/tools** and train others in their geographic areas via demonstration projects or other applied uses of landscape science. Specific examples include ongoing demonstration projects. Next steps should demonstrate application of latest information and tools. Additional applications could include the demonstration of applying tools to conserve cultural resources and a pilot to demonstrate applications for environmental review and other permit applications for Army Corps, EPA, and other regulators. | | Partners | Grants | 10 |
| **2.1** | State/local: **Identify and support state, NGO, university and federal partners already working with local communities**. Provide grants to partners to provide technical assistance to key audiences including land trusts, communities, states, and local agencies. | | Partners | Grants | 8 |
| **2.2** | **Develop or enhance networks of people to deliver science to address specific resource questions** or needs including land use, fisheries, species management, forestry, and water resources. | | Partners | Grants | 5 |
| **Need 3: Science Delivery Information Support and Access Needs** | | | **Who/ How** | **Capacity/Grant** | **Score** |
| **3.0** | Regional: **Organize, make available, maintain and advertise catalog of available regional data layers and tools** (from RCN, LCC and other sources) on the LCC website with links from other regional websites. **Maintain information management system hosted on the LCC Data Basin site** providing access to all available relevant spatial data layers and integrated results and customize galleries of spatial data and visualizations (maps and tools) for specific uses or partnerships. | | LCC Staff with links to and contributions from partners | Capacity and PIs | 9 |
| **3.1** | Species range: **Compile information and maps on range-wide distribution, abundance and habitat suitability for focal species** (or portion of species range in region), provide habitat maps and other relevant regionally-consistent spatial information to species partnerships | | Species partnerships, Project P.I.s, LCC staff | Capacity | 6 |
| **3.2** | Sub-regional/State/local: **Provide spatial information at regional, sub-regional (watershed and ecoregion) and state scale** organized by sub-region and state in Data Basin and for state websites as well as partnership sites (e.g. LandScope Chesapeake, TPL Data Basin site). | | LCC staff, state staff | Capacity and Grants | 5 |

**Draft Timeline for Science Delivery Tasks**

**Summer 2013 - ongoing**

**Catalog and spatial data platform of information and tools –**

* Develop and maintain regularly updated catalog of available and anticipated spatial data layers and tools on LCC website and link to it from other regional websites;
* Explore alternative modes of disseminating data;
* Develop and maintain information management system including spatial data platform for links to downloads and visualizations hosted on LCC Data Basin site linked to from LCC and RCN (and other) websites;
  + LCC staff will continue development of site with input from partners, e.g., to design the site meet specific partners needs such as specific galleries and visualizations (maps and tools) for State Wildlife Action Plan updates and sub-regional partnerships;
  + Require project P.I.s to provide data and metadata in format needed for posting;
  + Include documentation describing use of the data – users, guides, examples, etc.

**Fall 2013 – ongoing**

**Outreach on available information and tools including examples of how information and tools have been or are being used**

* Use website, blogs, webinars, presentations, workshops and other approaches to publicize available information and show how tools are being or can be used;
* Organize page on LCC website that shows and links to applications of tools;
* Record webinars and presentations and post on LCC website.

**Identify Opportunities for presentations and/or workshops**

* Northeast Fish and Wildlife Diversity Technical Committee Meeting, September 2013, 2014;
* North Atlantic LCC Steering Committee Meeting, November 2013;
* Northeast Fish and Wildlife Conference, April 2014;
* Land Trust Alliance Rally, Providence, September 2014;
* Northeast Natural History Conference;
* State based conferences such as land trust conferences, conservation commission annual meetings, etc.;
* Others.

**Workshops to get feedback on tools –** Host workshops in different sub-regions to meet with partners, show them the available information and get feedback on how these individual tools and the integration of those tools could be most useful for them.

* Workshops focused on the Connecticut River Watershed hosted by U.S. Fish and Wildlife Service are planned for fall 2013/winter 2014;
* Workshop at Northeast F&W Conference, April 2014 targeting SWAP planners and others;
* Additional sub-regional workshops could be conducted in the spring and summer 2014 in the Gulf of Maine, Chesapeake Bay and other locations.

**Winter 2014 - ongoing**

**Network of partner agency and organization staff** **–** build a network of trained partner staff that are familiar with information and tools and willing and available to work with partners in their state or area.

**Provide training on use of tools –** training for network of partner staff on how to use available information and tools;

**Provide competitive grants** to states, NGOs, field offices to translate information to local level and work with communities and land trusts to use information.

**Additional Background and Preliminary Strategy:**

**Proposed Approaches by Scale for North Atlantic LCC Science Delivery**

***LCC Science Delivery Team draft, October 28, 2013***

**Key points:**

* Certain audiences or applications of science may be best served with one delivery approach over another, therefore, approaches and allocations need to cover the breadth of approaches: media to translate and access complex data, technical assistance to users, and projects to demonstrate applications;
* As a new program of action, the LCC needs a strategy that summarizes and prioritizes key science products and approaches for delivery to specific audiences to meet their needs and support their decisions;
* Science delivery needs and audiences vary by scale, therefore a multi-scaled approach is necessary;
* Certain activities will be best addressed with additional capacity and others with science delivery grants to partners via requests for proposals (RFPs);
* The Science Delivery Team recommends needs for allocations for Science Delivery under the following headings: Science Delivery Program Development and Capacity; Partner Support Grants and Demonstration Projects; and Information Support and Access Needs;
* As next steps, we will provide recommendations on capacity and grant needs to the LCC Steering Committee; issue RFPs for science delivery grant proposals, then review and recommend projects.

**Scales, Audiences, Current and Anticipated Applications of Science Delivery**

1. **Northeast Region or North Atlantic LCC Scale Applications**

**Science Delivery Audiences:**  Federal and state agencies, NGOs and partnerships working across the region or LCC. Includes the Northeast Association of Fish and Wildlife Agencies (NEAFWA) regional collaboration of northeast states through the Regional Conservation Needs (RCN) program.

**Information and Tools:** Regionally-consistent spatial data and maps, vulnerability assessments, landscape-change assessments, species-habitat models, coarse-filter assessments and decision support tools that prioritize geographic areas and actions across the region.

**Decisions Supported and Applications of Information with Examples:**  **Assessing regional context and priorities for species, habitats, ecosystems and other conservation features at the scale of the Northeast Region or North Atlantic LCC for conservation planning and to prioritize land protection, restoration and management for allocation and leveraging of federal, state and private funds.**

***Examples*:**

* **Provide regional data to support identifying** regional Conservation Opportunity Areas (COAs) based on integrating the results from LCC and Regional Conservation Needs maps and tools including species-habitat suitability/capability, ecological integrity and resiliency. Regional COAs can be made available as regional priorities for State Wildlife Action Plan updates and other conservation plans. These COAs could then guide the acquisition or management of areas using state, federal and private funds;
* **Use regional wetland, species and ecological integrity data to prioritize areas for environmental reviews for permits (e.g. section 404);**
* **Using regional information and tools for transportation planning that achieves transportation goals while maintaining connectivity and resiliency.**

**Science Delivery Needs:**

* Organize, make available and maintain catalog of available regional data layers and tools (from RCN, LCC and other sources);
* Make individual spatial data layers and integrated results available for download and visualization through information management system (LCC Data Basin site);
* Develop and post regional maps and conservation design tools showing relative priority of species, habitats, ecosystems, cultural resources and other conservation features both individually and combined;
* Provide “basic training” to state federal and NGO partners on the spectrum of regional data layers available, access, and use;
* Conduct workshops with users to get feedback on the most effective way to integrate information and provide technical assistance to facilitate key decisions;
* Identify existing networks and/or develop or strengthen other networks of science users to assist in dissemination and application of tools;
* Conduct outreach on the availability of this information.

1. **Sub-regional Landscape-scale Initiative Applications**

**Science Delivery Audiences:**  Landscape-scale conservation partnerships and initiatives, such as multi-state, ecoregional, or watershed partnerships, e.g. Chesapeake Bay Program, Americas Great Outdoors/Blueway partnerships, multi-state NWRs (Conte NFWR, North Atlantic Shrublands NWR), Staying Connected, Susquehanna River Partnership, Delaware Bay Program, Gulf Of Maine Council, regional networks of users (land trusts, regional commissions and planners).

**Information and Tools**: Regionally-consistent mapping and decision support tools scaled to the sub-region (watershed, ecoregion or other partnership area) integrated with specific mapping and tools already developed or being developed for the ecoregion or watershed (e.g., information assembled for the Northern Forest through *2 Countries, 1 Forest*).

**Decisions Supported and Applications of Information with Examples:**  Watershed or ecoregional partnerships stepping down regional scale data to a watershed, ecoregion or multi-state area and **integrating regional, sub-regional and state datasets for specific planning and conservation (land protection, land use, habitat restoration, habitat management, recreation, education, transportation and sustainable economic development) decisions.**

***Examples*:**

* **Planning for conservation, recreation and sustainable uses in the Connecticut River Watershed with the U.S. Fish and Wildlife Service and Friends of Conte Refuge using LCC information and tools such as LCC *Designing Sustainable Landscapes* products scaled to the Connecticut River Watershed combined with state information (e.g. Massachusetts Biomap) that can provide decision support for land protection, habitat management and ecological restoration at regional and sub-regional scales;**
* ***Staying Connected* partners determining priority areas for restoration and protection to enhance connectivity and ecological integrity in the northern forest by using regional and ecoregional connectivity information and tools;**
* **Developing a North Atlantic Shrubland Preliminary Project Proposal for National Wildlife Refuge expansion using species and habitat data in the refuge planning area.**

**Science Delivery Needs:**

* Provide information at watershed and regional scales to existing partnerships through LCC Data Basin site as well as partnership sites (e.g. LandScope Chesapeake, Trust for Public Land Data Basin site) and demonstrate how these tools can be used to make decisions that achieve conservation;
* Provide technical assistance (i.e. conduct workshops and provide training) to partnerships and get feedback on how to best deliver information. *Note: U.S. Fish and Wildlife Service and partners will be using the Connecticut River Watershed as a pilot area for watershed-scale conservation planning using representative species and complementary approaches in the late fall 2013/winter 2014. This effort will test approaches to deliver results from multiple NALCC and RCN projects in support of landscape conservation design, and is largely funded through the Designing Sustainable Landscapes project;*
* Provide grants to encourage partnerships to use and test these tools and train others in their geographic areas.

1. **State and Local Applications**

**Science Delivery Audiences:**  State agencies, State and federal land managers, planning commissions, land trusts and communities

**Information and Tools:** Regional, landscape-scale, state and local tools integrated for prioritization of conservation and management actions at state and local scales

**Decisions Supported and Applications of Information with Examples:** State fish and wildlife agencies integrating regional and landscape-scale information into their State Wildlife Action Plan updates to prioritize conservation actions with regional context. State, federal and private land managers integrating regional and landscape-scale information into planning and decisions for managing their lands. States and NGOs working with local land managers, towns or land trusts to help them understand regional context and **fit localities into the big picture for local land use planning and open space protection and assist in prioritizing where and how to integrate conservation development ordinances into local land use planning such that they protect important habitat and species**.

*Examples*:

* Integrated maps and other large scale analyses of regional, sub-regional and state priority areas simplified and applied to the local scale to achieve local open space planning, stewardship, showing regional context and connectivity with neighboring projects, and prioritizing locations (parcels) for conservation used by towns and land trusts;
* Incorporation of landscape level information for species and habitats for National Wildlife Refuge Comprehensive Conservation Plans and Forest Service Management Plans.

**Science Delivery Needs:**

* Work with partners to develop and deliver integrated conservation designs that meet local user’s needs;
* Provide information at regional, sub-regional (watershed and ecoregion) and state scale organized by sub-region and state in Data Basin;
* Identify network of state and NGO partners already working with local communities;
* Provide grants and/or training for states and NGOs to translate regional information and large scale analyses to the local scale; support grantees’ time and expertise to provide training and other technical assistance to land trusts and communities in their area in order to apply this information at the local level.

1. **Species Range Applications**

**Science Delivery Audiences:**  Species/multi-species conservation groups including focused conservation for single species or groups of species such as American Woodcock Initiative, Eastern Brook Trout Joint Venture, New England Cottontail, Piping Plover Recovery Team , Atlantic Coast Joint Venture, Northeast Partners in Amphibian and Reptile Conservation, Northeast Fish and Wildlife Diversity Technical Committee.

**Information and Tools:** Baseline data on species distribution; range-wide species-habitat models combined with other regional conservation information, tools and assessments of change; consistent habitat maps and other spatial data for range of species or portion of range in region/LCC; information management support for project-specific information and species data.

**Decisions Supported and Applications of Information with Examples: Setting (or testing existing) spatially-explicit goals for species under current and predicted future conditions and translating those goals to conservation designs to most efficiently sustain species at goal levels. Identifying priority conservation areas for focal species and assessing how they overlap with priority areas for other species and ecosystems. Focusing regulatory and recovery actions for listed species on most important locations and actions.**

***Examples:***

* **Identification of priority catchments for eastern brook trout conservation (for riparian management and restoration, fish passage restoration) related to population habitat goals for brook trout and predicted future conditions in the face of climate change;**
* **Identification of priority beaches for achieving piping plover recovery goals based on predicted persistence in the face of sea level rise and storms;**
* Using range-wide models to support planning and actions to preempt listing for candidate species or target Section 7 consultations and recovery actions for listed species.

**Science Delivery Needs:**

* Compile and provide information and maps on range-wide distribution, abundance and habitat suitability for focal species (or portion of species range in region);
* Provide supporting habitat maps and other relevant regionally-consistent spatial information to species partnerships.