

North Atlantic Landscape Conservation Cooperative Steering Committee
April 20, 2011, Manchester, New Hampshire
DRAFT minutes

Action Items

Jad Daley (Trust for Public Land) will make the National Conservation Easement Database developed collaboratively by five NGOs available to the LCC.

Steering Committee members will distribute the invitation to that Northeast Conservation Framework Workshop pre-workshop survey. (done)

Andrew will develop a webinar series on LCC-funded projects.

Rachel Muir will distribute fact sheet on USGS funded LCC projects.

Action items on science needs

LCC staff and technical committee will bring key partners together to understand the state of the science related to sea level rise and coastal vulnerability assessments and define additional projects focused on coastal habitats and species.

Hector Galbraith (Manomet) and Lesley Sneddon (NatureServe) will work together to incorporate the NatureServe vulnerability index into the ongoing regional vulnerability assessment project.

LCC staff and technical committee will work with NEPARC to determine projects that address the landscape needs of amphibians and reptiles that the North Atlantic LCC could support.

LCC staff, technical committee and key partners will move forward with defining and supporting cold water stream science needs beginning with a workshop and assessment of ongoing work.

LCC staff will continue to communicate with the Division of Migratory Birds and Northwestern Atlantic Birds at Sea Cooperative to assess value-added roles related to data needs on marine bird distribution and migration patterns.

LCC staff will work with the University of Vermont and University of Massachusetts to determine needs for additional modeling of representative species based on the outcome of the representative species workshops and utilize existing agreements to provide support.

LCC staff will pursue a detail by an invasive species expert in the Fish and Wildlife Service to determine the highest priority LCC needs related to invasive species.

George Gay and Ken Elowe will coordinate on the development of a work group to further define what types of demonstration projects the LCC would support.

LCC staff will coordinate with the Black Duck Joint Venture to determine their needs for the adaptive management framework for American black duck habitat conservation in the LCC

LCC staff and technical committee will develop a scope of work for an information needs assessment after the Albany workshop.

Andrew will summarize the discussions and next steps and indicate any projects that could go forward.

Ellen Mecray will continue to communicate with the steering committee about their role addressing northeast region natural resources as part of the Global Climate Change Impacts report.

Tai-ming Chang will summarize the National Ocean Plan for the Steering Committee to review and comment on.

Fish and Wildlife Service, Science Applications will move forward with advertising for a North Atlantic LCC science coordinator once the final FY 2011 budget allocations are made available.

Mary Foley will send the link for the National Park Service Coastal Adaptation Specialist position advertisement when advertised. (done)

LCC staff will make the LCC website (northatlanticlcc.org) live.

Ken Elowe will seek vice-chair nominations and report back to the Steering Committee on the next call.

LCC staff will plan for an in-person meeting of the LCC Steering Committee in the late fall in conjunction with the Northeast Association of Fish and Wildlife Agencies Directors meeting.

LCC staff will send out a poll in June for a conference call in early August to review the results of the Albany II workshop and discuss next steps for the framework, science needs and projects.

Introductions and Review Agenda

Ken Elowe (U.S. Fish and Wildlife Service) welcomed everyone to the North Atlantic Landscape Conservation Cooperative (LCC) meeting and attendees introduced themselves. A total of 36 steering committee members, staff and guests were present in the room or on the phone representing a quorum (attendance sheet at the end of the notes).

Ken introduced the meeting theme by indicating that at the last couple of meetings we have been going over the mission, vision and governance for the LCC and that today we're going to focus more on science needs and projects and the framework that they fit into.

Minutes and action items from last meeting

Ken asked for any additions or corrections to the minutes from the last meeting (January

conference call). Hearing none he proposed a motion to accept the minutes. Minutes were accepted.

Andrew Milliken (North Atlantic LCC) reviewed the following action items from the last meeting noting most were complete or to be addressed in this meeting.

- Tai-Ming Chang (EPA Region III liaison) will be updating the committee on marine issues.
- Ken Elowe will review governance issues.
- Additional members have been added to the technical committee to bring a better taxonomic balance.
- The invitation for the Northeast Regional Conservation Framework Workshop (Albany II) was sent to LCC committees and partners.
- The boundary of the North Atlantic LCC was revised as discussed at last two meetings bridging the gap between main part of the North Atlantic LCC, the Adirondacks, the Champlain Valley and the Hudson Valley and removing the finger of the Appalachian LCC that had extended into New England. No official concurrence has been received from steering committees of neighboring LCCs.

Ellen Mecray (National Oceanic and Atmospheric Administration) asked if there is anyone from Canada represented and said that NOAA will be able to provide some help with that.

Andrew said that Doug Bliss (Canadian Wildlife Service) is on the steering committee, and that he will be going to Canada in two weeks to visit with the Canadian Wildlife Directors including the provincial wildlife directors from Quebec, New Brunswick, Prince Edward Island and Nova Scotia

- The final action item will be covered this afternoon as a discussion between the LCC, NOAA and NEAFWA about how the LCC interacts with various climate efforts in the northeast and how we can be more efficient.

Federal budget summary

Marvin Moriarty (U.S. Fish and Wildlife Service) gave a quick overview of the national budget for LCCs. The continuing resolution from this year (FY 2011) cut a lot from the Fish and Wildlife Service budget but LCCs were identified as priority and have been funded. The Service is providing additional funds to initiate or more fully develop additional LCCs. Those LCCs that were funded in FY 2010 will receive a similar amount in FY 2011 and previously unfunded LCCs will receive funding. The discussion is now shifting to the FY 2012 and 2013 budgets. As we move forward, we need to identify those programs that are critical to keep fully funded. The LCCs, State Wildlife Grant funding and joint venture funding are very high on the list as far as budget discussions going on in Washington now.

Rachel Muir (U.S. Geological Survey) added that LCCs and Climate Science Centers are considered a package in the Department; are still priority; and will likely remain that way in the next few budgets.

Presentation and discussion on LCC mission, components and goals and conservation frame work

Ken Elowe gave a presentation linking the North Atlantic and national LCC vision with what the conservation community needs to design and deliver conservation. The LCCs address the next stage of conservation to preserve natural and cultural resources. The challenge we face ahead is how make the LCCs work and be value-added to conservation partners - not just a program that disappears with a change of administration. Landscape conservation is a way of approaching conservation that makes so much sense; we need to embed it in what we do. Ken spent a few minutes talking about the things happening nationally to put LCCs in context to set the stage for where we want to go.

The first is our vision for the LCC – we want landscapes that sustain natural and cultural resources. About two weeks ago there was a meeting in Georgia with LCC staff and ARDs. Staff got together to create a common context beyond shared science. They agreed that the LCC fundamental objective is to design, define, and deliver landscapes that can sustain natural and cultural resources at desired levels nationwide. The LCC’s role is not to achieve all of that as a partnership because we are not an implementing body but that LCC partner agencies and organizations would collectively deliver conservation. The LCC needs to lead through facilitation, work together to develop conservation targets and design tools that allow agencies and organizations to go home and achieve that fundamental objective through their actions.

We’ve done a lot in the Northeast with the Regional Conservation Needs process by defining and completing a lot of research and conservation tool needs along with the LCC, joint ventures and other partnerships.

So, how do we translate all these tools and science to something that actually works to guide conservation? We need to define some kind of translation tool. We’re at the stage where we’re defining and creating tools define what we want the landscapes to look like as a whole.

Ken indicated that there are a number of tools out there already – he will provide an example he is familiar with - the *Beginning with Habitat* approach in Maine. This approach layers habitats to conserve landscapes as a whole including riparian zones, high priority species and habitats, undeveloped habitat blocks and conservation lands. The resulting tool gives you a pattern or design that communities can use.

What tools do we need in this LCC to guide conservation delivery in agencies and organizations? Are we creating the tools that you need? Science without context or translation will not be as useful.

Ken then opened the topic up for discussion.

Randy Pomponio (U.S. EPA) Stated that he has experimented with two concepts in addition to building using layers. If you keep your development in white (vs. Green) areas, your service

budgets are lower and economically better fit, because existing infrastructure is there. The other concept is projecting the impact of current regulations and statutes and what this might mean for an area in the future, and then projecting different scenarios (example was in Monroe County, Pennsylvania)

Ken asks if this type of translation tool is something the committee is interested in pursuing.

Karen Bennett (Delaware Division of Fish and Wildlife) said that there are other states that are using similar tools. She wants the committee to look from a regional prospective - while a tool like this is useful, something that would be helpful would be regional priorities that are identified so things that are done at home can contribute to those priorities.

Ken agreed that regional context it is a critical need that the LCC can help to address.

Jad Daley (Trust for Public Land) agreed with and had two additional comments. He was familiar with a process called green printing and noted that process depends on facilitators and communicators as much as GIS to engage communities in the development of the process, not just presenting them an idea. One area that Jad has had trouble with is the private lands in part because it's hard to get GIS data on private lands. However, there is a new database called the National Conservation Easement Database developed collaboratively by five NGOs and it has 90% of the easements available including land trusts in a database that launches in May. Jad will make this available to this group in the future.

Steve Fuller (Wildlife Management Institute) pointed out that it is critical to translate science to relevant units for land control. It's also important for the information to be translatable to other scales of data and media but the work of selling that is multifaceted – even down to the parcel level and all the way up to the regional level. Steve says that knocking on someone's door and saying "you're important" is really big for local, private landowners.

Hector Galbraith (Manomet Center for Conservation Sciences) mentioned that this approach is useful and important; however, when trying to convince locals, the North Atlantic LCC shouldn't assume that designing landscapes is so simple. There is another dimension which is time. The challenge is how build dynamism into landscape models. Hector states that we can sell these patterns to communities by saying if we conserve these lands, they'll be fine, but the truth is due to time, climate change etc, we may have to approach things differently in the future.

Marvin Moriarty (U.S. Fish and Wildlife Service) noted that communities are pretty savvy and they have a fair idea of what they're sitting on in terms of resources. The committee needs to facilitate conversations to build the themes on the map and involve the people. We need to ask them what they have and what they know. He thinks that this is probably more important than us showing up and throwing a map on the wall.

Milliken agreed with both Marvin and Hector. He said that the challenge the committee needs to discuss is the role of the LCC in engaging communities vs. the role of LCC agencies and organizations. The LCC partnership may not need to get down to the local level, but that the products need to so that others can use them.

Ken asked the committee what they think they need to make conservation work. He wants to know if they need to share information in this community about best practices.

Rachel Muir commented in reference to Marvin, that one of the needs that local community has is the information on human infrastructure. Rachel says that there are two communities the committee deals with; the natural resource management community and the human infrastructure community. She says that infrastructure is a very important data layer that needs to be included. Rachel thinks that in order to build landscape data bases, the committee needs to consider how to gather this information.

John O'Leary (Massachusetts Division of Fisheries and Wildlife) pointed out that one thing that was done in Massachusetts, was to pass a community preservation act. This is a funding mechanism where they tax themselves so that they can build a bigger money base from which they can preserve lands. John indicated that this is an important example that can be used elsewhere.

Ralph Abele (US EPA) Ralph mentioned a non-regulatory approach that Maine has taken. They spent a lot of time developing biological criteria in water management. Impervious cover is important and using an aquatic health layer in to tie it to the work that states are doing on water quality and storm water. If the goal for a water body is known it can be tied into the landscape end of things. Maine developed a storm water utility.

Ken mentioned that the whole tool bag is necessary when entering these social forums. The scope needs to be broadened to include what is needed for this to work on a local level. Translation and implementation tools will be needed.

Steve Fuller pointed out that thinking that we can come to towns with information and lead them to a decision is a mistake. Towns need to be included in these decisions. We need to say, these are the important areas for wildlife. In his experience in New Hampshire, he found that the community is accepting of telling them what areas are important, but the sales pitch is important.

Steve Walker (Maine Department of Inland Fisheries and Wildlife) - following up with what John said, there need for requirements that this data get utilized in local planning efforts. Steve feels that the LCC's role is translating region priorities to local priorities. The LCC also needs to help incentivize conservation plans.

Zoe Smith (Wildlife Conservation Society) - for us, what would be helpful is to learn what those lessons are from across the region. Knowing what those incentives and lessons are would be very useful tools for us to use. Need the science to link back in to what's been completed.

Marvin said he went to Chesapeake Bay conference and saw the "Choose Clean Water Coalition." This program focuses on community action. Marvin wants to know what the role of the LCC is in getting that information out to communities so they can make informed decisions.

Ellen Mecray asked the committee if, when they're reaching out to communities, are they using the land or sea grant extension agencies? This might be another opportunity for the LCC as a means of reaching out. Extensions are meant to educate the communities on scientist's work.

Ken Elowe (US Fish and Wildlife Service) answered that it varies regionally.

Ellen brought up a partnership between land grant and sea grant foundations. The Preserve America foundation is another area where the LCC can pursue community incentives. Ellen also

mentioned what she called “user pull vs. NOAA push” which is what tools are the communities asking for vs. tools NOAA (or the LCC) are telling them they need?

Mike Slattery (US Fish and Wildlife Service) mentioned that other watersheds and communities have that kind of tool or data available to them. Mike mentioned that Peter Claggett has worked on a vulnerability assessment that stops short of the multifaceted consideration Rachel mentioned but does look at climate change, regulatory, landscape, resources trends and use changes. It’s more sophisticated than a build-out scenario. Once the LCC engages in these conversations, it needs to persuade them that it’s not going to go into those communities and manipulate them.

Wayne MacCallum (Massachusetts Division of Fisheries and Wildlife) following up on Steve’s comment asks what should the LCC be addressing? Wayne said that he thinks one of the fundamental things that would be helpful would be to have a regional understanding of what the conservation community thinks the habitats we need are, on a regional basis. Wayne gave the example of red pine. Regionally there is a lot of it but in Massachusetts there are few sites that it occurs in naturally and it is a state endangered species. After it was looked at it on our level, it didn’t make sense to worry about it because we only owned 9% of the habitat and because it’s plentiful across the region. Wayne also brought up a second point relevant to the Northeast which was that habitats aren’t static. When the LCC goes into some of the areas it goes into, people think these areas are going to stay the same when they’re preserved but the opposite is the case. Wayne believes that what is needed is for someone to figure out across the landscape what are the habitats that are needed in terms of a relative composition. What is known is that what we’ve got today isn’t what we’re going to have in the future. Massachusetts is trying for a relative distribution across the landscape and trying to find out what that really means. If this came out of the LCC, that is something that could be taken back to the states.

Hector Galbraith (Manomet) said the LCC delivers scientific evidence to debate about landscape conservation. Does the LCC just deliver the evidence and stand back or does it get down into the trenches? Hector then asked if the latter is the case, does the LCC have a societal process.

David Whitehurst (Virginia Department of Game and Inland Fisheries) agreed with Wayne in that the LCC needs to focus on getting that regional information and describing the challenges that are happening. If this information is given to agencies it can then be taken to the states. David said that the LCC shouldn’t waste time about what is going to happen at the community level, because the LCC doesn’t work at the community level. The LCC should focus on what is needed to gain entrance into those communities.

Jad Daley (Climate Conservation Program) pointed out that this group could be a science collaborative that could fill science gaps. Jad thought that the idea of creating a community of practice, sharing models, would be a very valuable service for LCC to provide. He wanted to know if the rest of the group thought there was anything else that the LCC should be doing to catalyze information on the ground. Jad mentioned something interesting that the LCC could do and that was to endorse or support a demonstration project, bigger than a town, but much smaller than the LCC. It would be most challenging, but potentially interesting to explore

Mitch Hartley said that the LCC is about defining, designing and delivering landscapes. The partners do the delivering but the LCC puts their state into regional context. The LCC is also in

charge of making tough calls in terms of defining. Mitch pointed out that there are already lots of priorities, but what does the LCC do with them? Taking one habitat and making it a priority everywhere won't work. It's not just the FWS that should be making those decisions; they should be made as a group.

Gwen Brewer stated that the critical role of LCC related to discussion when going from a larger level to state level. Gwen thought it was important to operate at a landscape level to help states integrate all these things that they're doing. She also said this conversation was valuable and necessary because the LCC needs this kind of focus to drive where it goes and where it puts dollars and how to drive the Albany (Conservation Framework) meeting.

Randy Pomponio expressed his frustration from the other end, he has heard that folks want a tool or assessment to look at regional needs – in EPA Region III they have that and they've been screaming for someone to use them. Randy voiced his concern in how the LCC can help people get their hands on these tools and educate them on their use. How does the LCC create trust, incentives, and measure success? Randy said the science is easy but how does the LCC translate and get people to use these things?

Ken mentioned that the LCC needs to work on translating all these needs into something that can be used. This conversation about the role of the LCC in translating information for communities was needed. It was necessary to figure out what the role of the LCC will be and what will be used as guidance for the Albany meeting.

Ken stated that it's very difficult to set regional targets and those decisions can't be made unless species level goals are looked at. He also said that in order to get at what to do locally, the LCC needs to set higher elevation goals and if those aren't set, the LCC will be grabbing at conservation straws. They need to look at multi-species landscape compilations that will accomplish species goals. Ken adds he hoped this would start the conversation about how to compile landscapes.

Jennifer Higbie (Brookhaven National Laboratory) said she would like to see LCC look at landscape function and restoration, not just protecting the landscapes but bringing them back.

Cathy Sparks (Rhode Island Department of Environmental Management) stated that Jennifer made an excellent point. She said that all politics are local and local people have the greatest opportunity for success. The LCC, as it embarks upon grand design of where conservation should be and what is needed should have some element of humility. Cathy stated that damage causing agents did a lot to integrate diversity. The LCC will have damage causing agents that will change future regimes and take what the LCC thinks things should be and redirect it. She said some nimbleness is needed in decisions we make as we go along.

Ken thanked everyone for the conversation. Ken wanted to initiate the discussion about science needs upon returning from the morning break.

Northeast Conservation Framework and Workshop

Ken began talking about the LCC needs that he heard from the morning discussion and previous conversations: 1) conservation targets, 2) species habitat relationships and needs, 3) landscape designs, 4) conservation translation tools, 5) information management, and 6) community of

practice. He said he will add and delete from this list throughout the day and to feel free to come and talk to him about what you want on the list.

Andrew started the discussion of a conservation framework by noting that the LCC needs to agree on some kind of conservation framework that links together planning, design, interpretation, delivery and evaluation. He thinks the LCC needs can and should link to NEAFWA Regional Conservation Needs topics. He said one way to think about a framework is to help the LCC as a group think about sustaining species, habitats, landscapes and systems at desired levels (goals). These goals should be based on understanding past and current conditions as well as predicting future conditions. Conservation design and translation will help partner agencies and organizations to help achieve these goals through various approaches including protection, restoration, management, communication, policies and regulations.

Andrew then went on to explain the Northeast Regional Conservation Framework (Albany II) workshop. He said that the goal of workshop is to come to consensus about the framework and highest priorities. Andrew asked Eric Palmer, Karen Bennett and Steve Fuller for their thoughts and hope for the work shop.

Eric Palmer (Vermont Department of Fisheries and Wildlife) said that Handout 8 captures the goals of the Albany II meeting. The group started out with a bunch of regional collaboration ideas and now has a good consensus about ideas for conservation. He said that in reviewing the RCN process and talking about regional conservation needs, there was a feeling that it was time to have another meeting of the minds. Eric stated that the RCN process is great for regional success and the regional conservation needs topics were the foundation for that process. Eric stated that this group has a double opportunity of looking at not only the RCN projects but also the LCC needs and organizing the information into a conservation framework.

Karen Bennett (Delaware Division of Fish and Wildlife) said that as a member of the Northeast Fish and Wildlife Diversity Technical Committee, the first year of proposal review was easy because they were guided by fresh ideas. Karen said as the years went on she began to question whether or not they were representing the highest priority regional needs. The RCN process needs to be assessed based on the last five years. Karen said she wants to be able to take the RCN products back home and figure out how to manage wildlife areas, talk to state parks, manage refuges etc. not just throw maps and data out and say "do it this way." She did point out that the technical committee is made up of scientists that can focus regional efforts based on the best available science.

Steve Fuller mentioned that there has been a lot of data generated and wants to know how to get it out to people that need it. The focus of Albany II is partly about how to integrate all the information and tools into an information management system that meets the needs of partners and can deliver information effectively.

Mary Foley (National Park Service) mentioned that she is not familiar with FWS planning and wanted to know if RCNs and LCCs are one and the same. Andrew answered that, no they are not. He said that the RCN was about bringing the states together to identify and meet regional needs. Each state puts 4% of their State Wildlife Grant funds into an account to meet regional needs. There is no formal relationship to LCCs, but as LCCs are forming in the Northeast, they

have a great opportunity to work with states and the RCN process and guide where both groups need to go collaboratively. The RCN is a state process, LCC is this broad partnership.

David Whitehurst said the RCN has spent all this time developing habitat classifications, but hasn't agreed to take action to use these classification systems. He said that across the landscape this offers the opportunity for linkage. Andrew agreed with David. He said it's about making sure there is understanding about and access to these products.

Ralph Abele said that the EPA has its Healthy Watersheds Initiative and he has used the coldwater data from an RCN project as a template. He said it's been hugely helpful, especially for people that don't understand the importance of water temperature. The data on stream flow from USGS in the Connecticut River basin has also been very helpful. He stated that the RCN funding has been huge with three states that weren't previously looking at that.

Andrew showed the group the RCN funded report on the Conservation Status of Fish, Wildlife and Natural Habitats in the Northeast Landscape prepared for NEAFWA by The Nature Conservancy. He said it's an example of regional information that we need to make sure is available so that people can use it.

Karen Bennett asked if this is what Albany II is all about; making sure people can dive right in and use the tools?

Scot Williamson (Wildlife Management Institute) pointed out that equal investment creates the perception of equal benefit. Most of the projects applied to all 13 states and provided benefits to all agencies. He said that Albany II may look at regional priorities that may not apply everywhere but are still important to invest in as a region. David Whitehurst stated that was an excellent statement and a very critical element to have. He mentioned that, when those needs are seen, all the partners can understand how that fits into the framework. If that structure isn't in place, there could lead to disagreements about how to use the resources. Andrew pointed out that this is an issue that should be explicitly addressed in the workshop.

Mary Foley asked if the coastal states do something similar to when it comes to marine systems. Andrew said it varies state by state and marine environments are just coming into the RCN topics. He wants to make sure that coastal and marine expertise is represented at the workshop.

John O'Leary mentioned that Marvin said how important state funding is for the LCCs and RCNs. John thought that maybe an outcome of Albany II could be highlighting how important state funding is. This is a stellar example of how states came together to use money for conservation.

Andrew mentioned that the invitation to that conference and pre-workshop survey is in the handouts, and asked everyone to please distribute them widely. He wants people to ask their staff to be involved in identifying what they need. He will send a link to everyone.

Cathy Sparks asked if the survey goes to all staff, do they want all staff to respond or one person per agency; Steve Fuller said they want everyone to respond; Megan Nagel (North Atlantic LCC Communications Coordinator) said that with the survey it should be pushed to all employees as well as identifying certain people that need to respond; Andrew said he thinks the directors can decide on that; they don't want answers from only people who go to the meeting; Roger

Simmons (U.S. Forest Service) asked what the date was for the surveys to be returned; Andrew said they wanted them back by May 6th because they need some time to analyze results; Rachel Muir (U.S. Geological Survey) asked if they only want resource managers; Andrew said they want a broader response.

Ongoing LCC Projects

Andrew referred to handout 11 on ongoing RCN and LCC projects. He indicated that the common theme for the FY 10 LCC projects was understanding current and predicted future capability of landscapes to support fish and wildlife; specifically understanding how land use change and climate change will affect future landscapes and providing information to guide conservation decisions in the face of these changes and uncertainty.

Projects that were supported included:

- *Evaluating the Vulnerabilities of Ecological Resources to Climate Change in the Northeast;*
- *Forecast Effects of Accelerating Sea-level Rise on the Habitat of Atlantic Coast Piping Plovers and Identify Responsive Conservation Strategies;*
- *Forecasting changes in aquatic systems and resilience of aquatic populations in the North Atlantic Landscape Conservation Cooperative: Decision-support tools for conservation;* and
- *Providing Science and Tools in Support of the North Atlantic Landscape Conservation Cooperative: Designing Sustainable Landscapes for Wildlife in the North Atlantic Landscape Conservation Cooperative.*

Evaluating the Vulnerabilities of Ecological Resources to Climate Change in the Northeast

Hector Galbraith (Manomet) gave a status update saying that one of the goals of the project is to enhance the ability of agencies to respond to habitat change. They have not yet built a formal model for fish and wildlife habitat change. He said they developed model for vulnerability assessments of habitats. There is a list of 22 habitats to evaluate initially using the model. Right now they are working on selecting habitat groups to evaluate them. That phase is expected to be done in a few months. Hector continued saying that additional phases will evaluate more habitats to get a more comprehensive group. They will then look at vulnerability of fish and wildlife species (SGCN). They have not yet started but will be starting to begin to identify management options and preserve habitats under climate change.

Andrew said that they are having discussions about bringing NatureServe's species vulnerability index model into this project.

Forecast Effects of Accelerating Sea-level Rise on the Habitat of Atlantic Coast Piping Plovers and Identify Responsive Conservation Strategies

The other three projects look at changing habitats and impacts on species. The first forecasts effects of accelerating sea level rise on habitat of Atlantic coast piping plovers and identifies responsive conservation strategies by looking at both sea level rise and plover behavior models at

the same time. Focusing on plovers initially but plan to look at all beach species. In order to get a better idea of what's going to happen, need good elevation data including LiDAR. First phase is to understand species-habitat relationships, then turn them into decision making framework. Initial pilot area is on Assateague Island.

Forecasting changes in aquatic systems and resilience of aquatic populations in the North Atlantic Landscape Conservation Cooperative: Decision-support tools for conservation

The third project focuses on aquatic habitats. Aquatic habitats have already been highly fragmented (e.g. roads and dams), now climate change is adding additional impacts. The LCC needs to get a better idea of how these impacts interact. Cold water systems and brook trout are being looked at through this project being led by U.S. Geological Survey (USGS), University of Massachusetts (UMass) and U.S. Forest Service (USFS) using brook trout as a representative species to understand impact of climate change on cold water stream systems. Ultimately the question that is being addressed is, how do we make decisions about fish passage, water withdrawal, land protection in the watershed and other management decisions with an understanding of likely climate change and land use impacts on flow, temperature and other factors.

Providing Science and Tools in Support of the North Atlantic Landscape Conservation Cooperative: Designing Sustainable Landscapes for Wildlife in the North Atlantic Landscape Conservation Cooperative

The final project involves designing sustainable landscapes for wildlife. The goal is to try to guide decisions about where we protect and manage lands. The project is being led by UMass and builds off of the Designing Sustainable Landscapes project developed by the Atlantic Coast Joint Venture working with North Carolina State and Auburn Universities in the South Atlantic. The North Atlantic project uses a coarse and fine filter approach. The fine-filter is based on habitat capability - how well do existing landscapes and habitats and predicted future landscapes and habitats support the needs of representative species? The LCC needs to select and model several representative species to guide decisions about landscapes for multiple species. The modeling approach relates species to habitat as well as landscape factors. The coarse filter - ecological integrity index approach - looks at landscape metrics that relate to how likely areas are to be resilient over time. The fine and coarse filter approaches will be compared.

UMass is now building a landscape change model to predict changes driven by urban growth and climate change that can then be related to habitats and species. Pilot studies are underway in three watersheds (Kennebec in Maine, Connecticut River tributaries in Massachusetts and James River in Virginia) and will be completed in about a year. The project can then be expanded to the North Atlantic LCC. A science advisory committee is overseeing this project and user and manager's groups will look at the project starting this fall.

There is another important project done by The Nature Conservancy which isn't North Atlantic LCC funded but will provide important complementary assessments. The Nature Conservancy looks at physical (geology, elevation, landforms, and latitude) and climatic factors on species distribution to help guide conservation by ensuring good representation of these factors. They are also looking at regional connectivity and identifying pinch points.

Andrew indicated that we should have webinars on the LCC projects open to all interested partners. There will also be posters developed for the Albany II meeting.

Rachel Muir said that there is a fact sheet about related projects specifically funded with USGS funds. She will distribute them after the meeting.

Ralph Abele said that the EPA used the USGS and RCN work to pitch cold water resources protection, and got money to fund an analysis of all the temperature data in half the New England states. These projects set a framework for the EPA to step in to a piggy back off of and they hope that they can step in to that model as much as possible. Hopefully it can be expanded throughout the LCC.

George Gay (National Wildlife Federation) asked if there was one easy way for this group to access those deliverables. Andrew said that the RCN project on hydrology (and other RCN projects) can be found on rcn.org.

Scot Williamson mentioned that it's a recognized need that the RCN website needs to be more user friendly and more up to date than it is. NEAFWA and WMI will be working to update it.

Andrew indicated that this discussion was an example of why information management will be increasingly important.

Jad Daley stated that he recently learned of a data sharing website called databasin.org. Jad said it is very user friendly and allows users to take information away to do their own analysis.

Randy Pomponio (Environmental Protection Agency) said that the Environmental Protection Agency has tons of information management projects that are similar to what was just described; they need to be shared. Randy also mentioned that there are yearly opportunities as a region to inspire research.

David Whitehurst pointed out that the group has been illustrating a huge need for communication, to connect the things that aren't currently connected. Whitehurst thinks that communication needs are more than just a website.

Andrew agreed and mentioned the idea of an information needs assessment that will help us understand intended uses and audiences before developing websites or other approaches.

Recommended Priority Science Needs for Fiscal Year 2011

Rachel Muir then introduced the next topic which was the technical committee's science needs assessment process. She said that there were 207 total science needs submitted in response to the science needs request. She asked everyone to look at the Science Needs Priorities, Criteria and Process (handout 10a) and Summarized Science Needs Data (handout 12) showing the needs by component and system.

Andrew thanked Rachel for being the technical liaison for the Steering Committee. He said he was pleased by the initial product that came out of the assessment. He asked the group to take a look at the table of needs (handout 13). He noted that everything in that table is a high priority and that the ranking system isn't perfect, it was just another way to organize the information.

The table organizes needs and projects received into common science needs. He will walk the group through each project and they can stop and discuss them as they go.

Note - common needs are listed here in bold, specific needs and projects are in parentheses.

Vulnerability of coastal wetlands and beaches to sea level rise and other anthropogenic stressors – ranked number 1 (Assessment of the current state and greatest needs for sea level rise models related to coastal wetlands and beaches; comprehensive assessment of tidal wetlands that unifies existing work).

The highest ranked need that emerged is the vulnerability of coastal wetlands and systems to sea level rise and other anthropogenic stressors.

Karen Bennett (Delaware Div. of Fish and Wildlife) noted that they are looking at what models are available and what people are doing and how it's working out.

Steve Walker asked if these needs addressed storm surge and Andrew replied that they did.

Ellen Mecray noted that this is a huge need that a number of agencies within NOAA are trying to address. They are trying to combine data to get a single sea level rise viewer. Mecray mentioned that there are lots of different places where these are available. She is concerned about duplication of efforts and indicated that the North Atlantic LCC has to be careful how deep they go into the coastal realm.

Andrew indicated that the focus for the North Atlantic LCC is on habitats and species dynamics. The North Atlantic LCC needs to make sure the information is available to support that level of analysis.

Jean Brennan (USFWS, Appalachian LCC) said that the issue is that outputs from one model are the inputs for other models. Brennan also stated that the issue is the role of the North Atlantic LCC in setting up a process in which the representatives are at this table ensure seamless data integration for what they need.

Ellen agrees that it is a coupling of what's out there with what is needed for this result. Sea level rise impacts are a top need. She thinks it would be helpful for this group to say 'this is what we need.' She stated that the specific questions will help to narrow the field.

Andrew asked for agreement that coastal vulnerability assessments were a clear need and that a first step is to bring key partners together to understand the state of the science and define additional projects focused on habitats and species. The group agreed.

General vulnerability assessments to northeastern fish and wildlife habitats and species - ranked number 2 (assessment of the impacts of climate change on northeastern fish & wildlife habitats and species through expert-driven model; complement expert-driven approach with data, models and maps).

This need addresses general vulnerability assessments to Northeast fish and wildlife habitats and species from climate change. It is a need that is being addressed by the RCN project and complementary LCC project funded earlier.

David Whitehurst asked what the scope of this project is.

Andrew stated that it is the funded RCN and LCC project. Both phases of this have been funded and convergence has been accepted.

Karen Bennett mentioned that this project does not include coastal habitats. Hector Galbraith responded that coastal habitats and species will be addressed.

The group agreed that there was no need for an additional project but a need to ensure the convergence of habitat and species based (NatureServe) approaches. Andrew agreed to work with Hector on this convergence.

Specific vulnerability assessments of northeastern amphibians and reptiles - ranked number 3 (identification of highest priorities and gaps in distribution data for amphibians; vulnerability assessments including vernal pools, migratory barriers, sea level rise).

Andrew mentioned that several projects and needs related to amphibians and reptiles were included in this need that the North Atlantic LCC should go back to the Northeast Partners for Amphibian and Reptile Conservation (NEPARC) to help prioritize landscape needs that the North Atlantic LCC can best add value to.

Hector asked if this need focuses on specific habitat or on the organisms themselves. Andrew responded that it focused on habitat and priority areas more than on the organisms.

Rick Bennett (U.S. Fish and Wildlife Service) mentioned that part of what Partners for Amphibian and Reptile Conservation is doing is identifying priority habitats and looking at vulnerability.

Rachel Muir said that in other areas of the country, amphibians are indicator species of human and climate impacts. Muir thinks this is why they rose to the top.

Hector stated that many of the habitats of these series in the Northeast are iconic, and he thinks that would rise to the top of his list of things to conserve.

Randy Pomponio said that a lot of the things the EPA uses end up on the shelf because they didn't think of the end customer. He said it helps to know who is going to use it and what their purpose is.

Andrew agreed with Randy and went on to say that the North Atlantic LCC needs to go to the next step and say what kind of decision support is needed.

Mary Foley asked if the representative species should rise from this (amphibians being a top group).

Andrew said that at the representative species workshop, it is likely that some amphibians will be selected but he thinks we need to engage the amphibian and reptile communities in this.

John O'Leary said that since there are these other projects that focus on other species and habitats, the North Atlantic LCC should at least wait for these projects to play out.

Rachel mentioned that amphibians are particularly susceptible to landscape fragmentation at a landscape level. Rachel Muir also said that Mary is right, that the North Atlantic LCC needs to go through a rigorous process to select species.

Karen Bennett stated that NEPARC has done a lot of work on northeast regional species of concern; it's likely they are closer to ready than those of other taxonomic groups and would hate to see them set aside to wait on ongoing projects.

Steve Fuller said that it's important to place each project in overarching conservation framework; the end user might be the conservation design mechanism. Fuller pointed out that in that context, it's important to not be separating off groups of species; they need to be considered in the whole suite of species.

Ken Elowe stated that this conversation is very useful in determining the North Atlantic LCC's role vs. PARC's role in all of this. Elowe also said that there are obvious holes in any species group in the North Atlantic LCC's knowledge of habitat distribution etc. The North Atlantic LCC can't affect all of those individual species needs. Elowe pointed out that the North Atlantic LCC's job is to take what is known about these habitats and compile it into a landscape view.

The group agreed that the next step was to work with NEPARC to determine projects that address the landscape needs of amphibians and reptiles that the North Atlantic LCC could help with.

Specific vulnerability assessments of cold water stream habitats and species including brook trout - ranked number 4 (bring together multiple approaches to assessing habitat and population factors for brook trout and other coldwater species including: habitat modeling to predict distribution; vulnerability assessments to altered stream temperature and hydrology; identification of resilient habitat; barrier identification in headwater streams; population genomics).

Andrew said that there were a large number of projects that came in related to cold water habitats and brook trout and the role for the North Atlantic LCC is to understand what is already going on and what the most important next step is to advance and converge these ongoing efforts.

Ralph Abele mentioned that there is already a lot of this work underway. He said the EPA has a kickoff meeting coming up to define the Connecticut River Watershed stream temperature project.

Patty Riexinger (New York Dept. of Environmental Conservation) suggested that this is a really important thing to do. Riexinger pointed out that LCCs have been touted for pulling together needs and in order to show the values of this LCC, it needs to be made clear that they can play this role.

Roger Simmons (U.S. Forest Service) stated that when this LCC has workshops, it's really important that a component be transfer of knowledge. Simmons also said that sharing a snapshot of what knowledge the North Atlantic LCC has now is very useful for land managers.

John O'Leary said that when he thinks about cold water habitat, he thinks it's really the watershed that matters. He referred back to the vision statement saying that landscapes must sustain both natural resources and human uses. If citizens are put at the front end, it brings in the other services. It makes it about keeping clean water for people and animals.

Ralph Abele pointed out that the University of New Hampshire put up a website on thermal impact and on that website it shows the impact of thermal changes in three scenarios related to management practices.

David Whitehurst referred back to what John said that the North Atlantic LCC needs to look at the larger scale. The North Atlantic LCC should always be looking for the larger view and the approach that interconnects components of the landscape.

Andrew asked the group if they should move forward with defining and supporting cold water stream science needs beginning with a workshop and/or assessment of ongoing work – the group agreed.

Habitat mapping and modeling of marine bird distributions and coastal migration of birds and bats – ranked number 5 (spatial mapping of nearshore and offshore marine bird hotspots in the Atlantic Flyway and migration routes and distributions of birds and bats along the Atlantic Coast)

Andrew indicated that a marine bird database has been developed by the Division of Migratory Birds with partners as part of the Northwestern Atlantic Birds at Sea Cooperative.

Karen Bennett pointed out that the problem here is there are states that are just starting that work; it hasn't been put together.

Marvin Moriarty stated that there is very little science to work with in permitting wind power development. He gave the example of Cape Wind getting their permit with the need for ongoing monitoring. The North Atlantic LCC needs to make sure that the monitoring has value.

Sherry Morgan (U.S. Fish and Wildlife Service) pointed out that the FWS is talking about doing a workshop with the states to talk about science needs related to this topic.

Andrew mentioned that in those communications, it has to be determined whether or not there is a role for the North Atlantic LCC.

Tai Ming-Chang (EPA region III liaison) pointed out that this need was specifically reported as a data gap, state coastal organizations are saying they need this.

Randy Pomponio said that the EPA does three cruises a year looking at benthic ocean data, but they could possibly tie in bird surveys.

Andrew suggested that due to the ongoing efforts of the Division of Migratory Birds and Northwestern Atlantic Birds at Sea Cooperative, the LCC does not have a value-added role at this point but should continue to communicate with this group to assess needs. The group agreed.

Species habitat modeling and mapping of aquatic species - ranked number 6 (refine tools to classify and map aquatic habitat including hydrology, temperature and connectivity; develop habitat occupancy models; identify priority areas for conservation)

Ralph Abele pointed out that there are ecological limits of hydrological alteration but the best example in the country comes from the Massachusetts Fish & Wildlife data on fluvial fish. Abele said that at National level, EPA is working with USGS to put together research for flow criteria in all the states.

Ellen Mecray said that there are integrated water, ship and resource sciences that partners can work with.

Rachel Muir mentioned having a Northeast workshop on eco-hydrology. This is information that needs to be done for a regional assessment. It needs to be compiled in a way that it's not site or state specific. Rachel said this is on the agenda for the fall.

Ellen Mecray pointed out that there is a big gap in lower 48 states coverage in precipitation and stream flow. There is a data web site that is still in its beta version, precip.net, which has data that might be helpful.

Karen Bennett asked if priority number 4 is a sub project of this need. Andrew replied that number 4 was really focused on cold water systems and brook trout, this one addresses broader needs.

Andrew indicated that the need seemed to be hydrology and temperature mapping as well as the selection and modeling of representative species. The next step would be to select species based on the representative species workshop and develop models for those species.

Species habitat modeling and mapping of terrestrial and wetland species - ranked number 7 (Model and map the current and predicted future distributions and extents of representative habitats and species).

Andrew indicated that the Designing Sustainable Landscapes project being developed with UMass and the University of Vermont is developing species-habitat models for terrestrial and wetland species.

John O'Leary asked if these were static or dynamic models. Andrew said that the way they are being developed in this project, the models are basically static but projected landscape change and habitat change will be related to projected changes in habitat capability for species. Future models are likely to be occupancy models that allow for estimates of the probability of persistence over time.

Ken Elowe said that this is one of those foundational pieces that are going to help the North Atlantic LCC to address a lot of stressors. Questions like how much and where? When this kind of work is done, how much conservation is needed to sustain a representative species. What might the LCC's role be in compiling these conservation targets?

Rachel Muir said this approach, also developed in the South Atlantic, provides continuity with other LCCs.

Andrew indicated that there was a need to support additional modeling through the Designing Sustainable Landscapes project based on the outcome of the representative species workshops and recommended that the LCC support that additional modeling. The group agreed.

Assessment of forest condition and management - ranked number 8 (Assessment of the influence of forest condition and forest management on regional habitat capability and connectivity).

Andrew noted that this need arose from the challenge of being able to assess forest condition at regional scales and the importance of understanding forest age, structure and management in order to understand its habitat capability.

Marvin Moriarty said to look into what Bill Krohn has done at the University of Maine.

Scot Williamson said that the need should cover a wider range than just Northern forests since conditions and management are worse in the South than they are in the North.

Lora Mathers (U.S. Fish and Wildlife) said that a good place to find this information would be at colleges and universities where graduate students are working on this sort of thing. For example, at the University of Massachusetts Amherst there is a PhD student mapping the forest type and condition on the whole state of Massachusetts to study moose habitat.

Cathy Sparks (Rhode Island Dept. of Fish and Wildlife) mentioned that using LiDAR data could give a vegetation structure layer.

Jad Daley pointed out that the Trust for Public Land is working with the Great Lakes to do modeling of this habitat. The North Atlantic LCC should be able to take that template and try to apply it to some of the large forest plots in the LCC. Daley added that the study is being coordinated by Chris Swanston and he would be happy to volunteer his efforts to support this.

Roger Simmons (U.S. Forest Service) said that from a forest perspective, he agrees with the comment that was made about southern forests being more at risk. The southern part of the North Atlantic LCC needs to be involved. Simmons added to not depend too much on LiDAR data; it is expensive and often overpromised and under-delivered.

John O'Leary went back to the habitat-species analysis. He said he has all these facts saying that species or habitats are shifting so why would the North Atlantic LCC spend

all this money on static models. Andrew replied that landscape change models are being built into the analysis.

Ken Elowe mentioned that species habitat models give a threshold index for habitat and that a habitat is never static; they just indicate what the species needs.

Randy Pomponio asked for the forests, is the focus is on the trees or the systems? He thinks that forest soils are extremely important in ecosystem services. Rachel Muir pointed out that from a climate change perspective, it's the whole package.

Climate model downscaling – ranked number 9 (Climate model downscaling at scales useful for stream flow and temperatures)

Andrew noted that this work is underway nationally and also through the ongoing LCC projects at the University of Massachusetts.

Hector Galbraith mentioned that he heard rumors that Catherine Hayhoe's climate downscaling will be completed and wanted to know if it was true. Jean Brennan replied that it will be done this summer.

No action was identified for this priority since ongoing work may address the needs and the Climate Science Center should be able to address future needs.

Assessments of landscape connectivity - ranked number 10 (Assess the current and future status of connectivity and regional and local scales).

Andrew said that there are connectivity projects already being worked on through The Nature Conservancy, but the North Atlantic LCC could support pilot projects that need attention. He asked Barbara Vickery (The Nature Conservancy), if there is work in TNC to focus on.

Barbara Vickery replied that their main concerns are with the fact that connectivity data relies heavily on road data, which is very poor. Barbara asked the group now that they have some mapping and ideas where the important places are, what do they do about it?

The group agreed that we should revisit connectivity as a potential pilot project.

Analysis of recent landscape change - ranked number 11 (Contemporary land-cover change in the North Atlantic LCC for guiding management decisions).

Andrew stated said he doesn't think the North Atlantic LCC has enough information to make a recommendation on this need; they need more information on what is proposed.

Anne Kuhn (EPA) mentioned that landscape change is partly an issue of scale. She's working with 30m resolution and she's got it from 1972 to 2006 in 8-10 yr. blocks.

Randy Pomponio indicated that EPA is working on a prototype in the Chesapeake/mid-Atlantic region. May help to link to and enhance that project.

Scot Williamson said they've been working with Mark Nelson (U.S. Forest Service in Milwaukie), using FIA data and LandsAT to detect change in forest structure.

Andrew agreed that this type of fine-scale monitoring will be important but the North Atlantic LCC needs more articulation on this.

Rachel Muir suggested looking at rapid landscape change in relation to Marcellus shale.

No action was recommended to address this need.

Identifying focal areas for conservation – ranked number 12 (Advancing landscape-scale conservation for Northeastern herpetofauna through support of the Priority Amphibian and Reptile Conservation Area (PARCA) system); and **best management practices – ranked number 13** (developing conservation and management strategies for vernal pool dependent herpetofauna of the northeast including best management practices and model regulations).

Andrew asked that in identifying focal areas for conservation PARCA (12), BMP for vernal pools (13) is this sector one that the North Atlantic LCC should be involved in? If the best way to address this issue is local regulation, does the LCC get involved?

Steve Walker asked why not?

Karen Bennett said she agrees, NEPARC has their act together with what they want to do and what they need to do. When thinking about what the appropriate funding source for them, LCCs and RCNs seem perfect.

Andrew said this issue needs to be wrapped in the larger conversation about what the role of the North Atlantic LCC would be.

Pomponio said that the North Atlantic LCC needs to discuss vernal pools in relation to town jurisdiction and water regulation.

These needs will also be discussed with NEPARC to determine projects that address the landscape needs of amphibians and reptiles that the North Atlantic LCC could help with.

Detecting changes in species distribution – ranked number 14 (rapid assessment and response to coastal marine invasive species)

Milliken said that in relation to invasive species, there is an invasive species expert in the Fish and Wildlife Service who offered to do a detail with the LCC to determine the highest LCC priorities for invasive species and suggested that we defer any recommendation on invasive species projects until her detail is complete. The group agreed.

Adaptation planning pilot projects - ranked number 15 (project the impacts of climate change and identify adaptation options at specific pilot sites; e.g., Chincoteague National Wildlife Refuge/Assateague National Seashore Complex).

Andrew asked the group in reference to adaptation planning pilot projects- what is the role of the North Atlantic LCC in these projects and does this LCC want to be involved at that scale.

Hector Galbraith said that in adaptation research, this group needs to implement some of its ideas at resilient sites and provide a spotlight on sites and systems that would emphasize that it can do

something about climate change. Manomet and NWF are already doing this in about 8-10 sites. But does the North Atlantic LCC want to focus on the sites and take away from the landscape scale?

Jean Brennan asked if in terms of deployment, can the North Atlantic LCC characterize them and say will it change if it is put it here, or if this dimension is changed. As a strategy to look at any demonstration project, can the North Atlantic LCC test it in any adaptive framework? Brennan said this is the role of the LCC she sees. Milliken agreed and mentioned that this needs more discussion at the next meeting or call.

Jad Daley pointed out that the Trust for Public Land received a grant from Wildlife Conservation Society last year that allowed them to work on cold water fish adaptation. The projects are different enough from the science needs efforts that it would need some careful thought about how to design them.

Mike Slattery pointed out that the group often talks about the added value of LCCs at the local level.

Rachel Muir stated that the North Atlantic LCC's partners in the joint venture put projects on the ground.

The group agreed that on the next call, they need to think through what the LCC role is in relation to demonstration projects based on input from Jad Daley and others that agreed to work with him on this issue.

Habitat mapping and modeling at NALCC scale – ranked number 16 (a characterization and "GAP" analysis of the LCC).

Milliken asked the group if they thought the gap analysis of habitat in North Atlantic LCC (habitat mapping and modeling in NALCC scale) was necessary, stating that he thought it was redundant to ongoing work. The group agreed that no action was needed at this time.

Adaptive Management Frameworks for Representative Species ranked number 17 (Developing an adaptive management framework for American black duck habitat conservation in the LCC).

Andrew mentioned that this project is being developed by the Black Duck Joint Venture. They need a little more funding to push it across the line. This project dropped to the bottom because of the single species focus, but it's a key species in the Chesapeake Bay area.

Mike Slattery said that it's viewed as a single species initiative, like brook trout in cold water habitat but is intended to be a representative species and an indicator of the integrity of the coastal land marsh.

Jad Daley said he thought the project was great. He believes the more demonstration-oriented the North Atlantic LCC can be, the better and that projects like this one that get

the North Atlantic LCC to that point of real places on the ground and real species, is great.

Roger Simmons said that the challenge for land managers is to step up to the mark and take adaptive steps.

Mike gave his congratulations to Marvin and others for successfully showcasing habitats and species in the Chesapeake Bay areas. There is a socio-political consideration in this as well, thanks to Marvin and others for having species be highlighted in way they never were before.

Wayne McCallum mentioned that he thinks this confuses the issue. McCallum said he's trying to see, relevant to the LCC, how they would functionally interact with the Black Duck Joint Venture as we are a landscape science based organization. Are we saying the LCC puts it up there as science need, funding the science that the JV can't get done? Andrew said yes, the LCC could fill that role.

Wayne indicated that black duck is a significant concern for the Canadians as well. We can all use the information

Andrew will coordinate with the Black Duck Joint Venture on this project to see if they still need help from the LCC.

Long-term data management system - information management rank number 1(Overall project; Phase 1: Data needs assessment; Phase 2: Technical alternatives assessment; Phase 3: Pilot database)

Andrew said this need is about long term data management needs. He pointed out that what the North Atlantic LCC needs is to start with "what is it that we need" "who needs it" and "what audiences". Before this group can decide on data management projects it needs to go through a needs assessment.

Scot Williamson mentioned that Regional Conservation Needs and LCCs are independent of each other, but displaying RCN products in a place that's different than the LCC doesn't make sense.

The group agreed with the idea of a needs assessment. This needs assessment can be developed after the Albany Workshop.

Discussion

Andrew asked the group for feedback on if this needs table was useful and what they think of this process.

Ken Elowe thanked Andrew and the rest of the Technical Committee for summarizing all these ideas.

Ken mentioned that the LCC has been pressured to show progress and get money out the door which leads to the impression that the LCC is all about an RFP process. But this discussion was a good reframing of what it is that we are trying to do and how we are being proactive across the

landscape and an intentional process to get science on the ground within contracting restraints. We can use this morning's discussion as guidance to decide what we can do to go forward in a step-wise manner.

The North Atlantic LCC is now working with Wildlife Management Institute on an agreement that will allow the LCC to make funding decisions over a longer period of time. Ken asked, using this meeting as guidance, what are the nuts and bolts of how the North Atlantic LCC wants to move forward with this.

David Whitehurst said he wants to hear the need, how it fits into the framework and what the staff's recommendation is for moving forward. What does the North Atlantic LCC need to fill in and how does it adapt. The North Atlantic LCC needs to have a way to monitor the success of what it has done.

Mary Foley mentioned that she thinks the Regional Conservation Needs and LCC process are different but the needs of non-fish and wildlife resources will be underrepresented in this process because the Regional Conservation Needs is not meant to address all issues.

Andrew said that the framework is intended to address more than just fish and wildlife but will have a pretty big focus on sustaining natural resources, and may not explicitly assess issues such as cultural resources.

Elowe said that the framework will address more than natural resources; a lot of what was heard today, does not center on natural resources.

Mary Foley said she's not concerned with the cultural resources; she's concerned about the coastal habitats but noted that with an agreement with WMI there is less urgency.

Ken noted that we are here because we need to show progress but the Albany meeting can help feed this process and these issues. It does take a bit of the urgency out because we can carefully consider what comes out of Albany along with the results of this needs assessment. We need to show results to both those funding us and to partner agencies.

Wayne pointed out that when looking at table 13 he doesn't see anyone objecting to the ranking. Wayne asked if this whole table coming to Albany II or just a select few that the North Atlantic LCC is thinking about soliciting contractors for.

Ken said that when the Steering Committee met last time it was believed that the money had to be out the door by this month. He said that this process was a necessary step to make that happen and now, this can help format the workshop discussion that was already scheduled for June. Ken said he thinks Albany can help give further information if necessary but if a decision can be made now that's up to this group.

Rick Bennett pointed out that if that time isn't needed to make a decision on some of the projects, that's great. Putting the money in an agreement would provide time once the North Atlantic LCC does make the decision on what it wants to go for.

Ken said that the North Atlantic LCC's ability to slow the process down will be an advantage. These general needs to be reduced to specific needs that can be targeted to a contractor if

appropriate or used to develop a targeted Request for Proposals.

Jad Daley stated that he doesn't have any idea how long that's going to take, but that struck him as an important part of making a decision.

Elowe asked what the group wants to do to achieve the goals discussed this morning - 1) conservation targets, 2) species habitat relationships and needs, 3) landscape designs, 4) conservation translation tools, 5) information management, and 6) community of practice. The North Atlantic LCC wants to work towards the large goal of conserving all landscapes for all species and take out the most important next steps.

David Whitehurst said that we need to really look at those species that are at risk at a regional scale and take a critical look at what is at risk in our landscapes because something that may be at risk in my state many not in the region. It is important to figure out those species that may wink out and that may be before climate change hits us. Wayne MacCallum agreed that is what he needs at the state level.

Andrew said there's been this huge exchange of information that's very overwhelming. His suggestion is to take it, condense it and articulate a way to move forward including next steps that don't need further assessment that we can move forward with. The North Atlantic LCC needs to build on this science needs assessment and learn more through the Albany workshop. He thinks the North Atlantic LCC can do a little more work to make this decision-making easier.

Randy said this set of goals only appeals only to a select group of people, not everyone. Pompino said this is too narrow to attract all people such as those most concerned about clean watersheds.

Ken Elowe said this has been an excellent and necessary discussion. He mentioned the struggle that the North Atlantic has had is coming up with some kind of unified "what does wildlife need," and that addressing that question is the next step.

Marvin said that at certain times during the year, he goes to the Capitol Hill to talk to the big guys. He wants to know what he can tell them about the LCCs, make a connection to science, joint ventures, state wildlife grants, need to be able to market it as a process that spends the money and develops products and products that get targeted at problems on the ground.

Zoe Smith asked if these priorities are focusing on science and tools, how much room is there for application of these tools. She said she knows the need is to assess landscape connectivity, but there are groups doing that on the ground, so she's wondering if it's flexible.

Ken pointed out that two things didn't come up 1) conservation targets and 2) implementation or translation tools – what does the individual need to take the science to the community level so that it can be incorporated into planning processes.

Zoe stated that a demonstration project might be a way to do that. Smith said the North Atlantic LCC might want to think of the pilot project as something that can bring that to the ground.

George Gay stated that the North Atlantic LCC should support demonstration projects. Gay said that as the North Atlantic LCC starts up that conversation it shouldn't go back and look at

whether or not it is important because obviously it is. Gay suggested the North Atlantic LCC has some sort of sub team that works out how it might engage in demonstration projects.

Elowe asked how the North Atlantic LCC wants to proceed to be able to take this home to our organizations. Steve Walker pointed out that it's important for pilot projects to make fundamental change to land trust processes.

Mitch Hartley pointed out that some of these needs are yet to be fully articulated. He said that today the technical committee put forward general recommendations but the Steering Committee may not be really sure what it means.

Rachel Muir said the North Atlantic LCC may need some focus groups to sort out some of these needs. Ken agreed.

George and Ken agreed to create a sub team on demonstration projects.

Steve Fuller indicated that there may be some basic infrastructure needs that we need to do and get into place before Albany.

Andrew agreed to summarize the discussion and next steps and indicate any projects that could go forward.

National Oceanic and Atmospheric Administration Efficiency and Effectiveness in the Northeast region – Presentation by Ellen Mecray

NOAA has to provide the relevance of their regional work. It's all user driven, so how does NOAA ensure this is all rolled up to make it usable for the people on the ground. Mecray pointed out that she covers 16 states (The Northeast region more or less). Mecray said that users demand products and NOAA then figures out how to get them the product (data). NOAA tries to link all this up with partners that are doing these things. Mecray asked if it's possible to combine a bunch of steering committees to reduce user fatigue. NOAA has a portal for delivering data-climate.gov. There is an "understanding climate" section for policy makers. There is also a dashboard to show long term and past climate data. This is meant to be an interagency resource.

Mecray stated that no single agency can provide answers; it takes help from everyone to get the answers users want. The North Atlantic LCC needs to tie everything together- Risk management, Research modeling & assessments, Climate services, Adaptation and Mitigation and Observations & Monitoring. Mecray asks the group how this can be done. She suggests that the North Atlantic LCC use some of its academic partnerships to do this (since they are an unbiased agent). Mecray said that one model is that the North Atlantic LCC can go with is state coordination; another is the NGOs, by sector (air, water, wildlife etc.).

Every 4 years, NOAA scientists have to interpret and evaluate climate change effect on everything and present it to the President. The Global Change Research Act was passed in 1990 and the first report on was presented in 2000. They did it by region first, and then used Synthesis and Assessment products which led to the Global Climate Change Impacts Report (looked regionally and by sectors). That was released in 2009. The next one is scheduled for June 2013.

Jad Daley pointed out that maybe this is too soon. This group is barely figuring out how to be an LCC so trying to figure out how to get a bunch of different representatives from every state is hard.

Rick Bennett pointed out that in Northeast Regional Ocean Council you have two groups under the same umbrella that weren't talking – it could get confrontational if this group doesn't figure out how to communicate and coordinate between groups. He said that this group can keep the pulse on the states needs and then bring this back to the federal level but how does the North Atlantic LCC interface with the national assessment but interface with the tools on the ground too?

Steve Walker asked where state adaptation plans fit in. Ellen said she has someone who reads all of those and puts together a document for her to look at when NOAA is rolling this up.

Ken Elowe pointed out that there are a lot of levels and products and the North Atlantic LCC doesn't yet know what it needs.

John O'Leary pointed out that the North Atlantic LCC has information, an idea of where it is going, and it makes decisions. He does like the idea of having climate needs and assessments. He said there is also an element of coordination that is more than just needs.

Andrew Milliken asked what the LCC's intersection with the climate world is. The North Atlantic LCC can be the Northeast Natural Resources sector. He said it's the sectoral part of the regional approach that the North Atlantic LCC can potentially bring to the table as one group.

Rachel Muir said they will be well positioned to move the information up to the climate science centers.

Rick Bennett asked is the roll up this group is looking for, more in terms of science or more related to climate related impacts and ecological forecasting, or is it all of that?

Ellen said the New England chapter of the Global Climate Change Impacts Report was climate impacts; it was piece by piece the impacts that have been seen.

Ellen will continue to communicate with the steering committee about their role addressing northeast region natural resources as part of the Global Climate Change Impacts report.

The National Oceans Plan - Tai-Ming Chang (EPA Region III liaison) Presentation

The National Ocean policy came out in July 2009. The good thing is that some of the things that have come up in today's discussions are some of the things the regional ocean agencies need, including marine mammal migration, stopover sites etc. One of the things Tai proposed to help the LCCs understand is that perhaps with the LCCs that are focused on marine environments, a document could be synthesized that provides support. Regional ecosystem aspects, which is what Fish & Wildlife Service has the lead on, the Environmental Protection Agency is looking at carbon sequestration and standardizing estuarine monitoring. When the document comes out, the EPA will pull something together and give it to Steering Committee to look at and comment on. What is the North Atlantic LCC looking at for and how does it play with the Northeast Regional Ocean Council (NROC) and Mid Atlantic Council on the Oceans (MARCO)?

Tai said the Oceans Plan is due out at the end of Jan 2012. Tai mentioned that at the end of that, the North Atlantic LCC can see how the feds want to implement this. He noted that NOAA will be handing out grants for coastal marine spatial planning.

Moriarty said it's too early to know the best role for the LCC that because things aren't solid. He said that MARCO and NROC aren't likely going to regional planners. Moriarty said he sees the LCC in a far simpler sense, informing activities of the national ocean plan.

Staffing Needs

Milliken pointed out that the Steering Committee needs to have a thorough discussion about staffing and science capacity. He said what's abundantly clear is that the North Atlantic LCC needs to have full time core staff thinking about science and science needs. Milliken stated that most LCCs have science coordinator and he thinks this LCC needs to move in that direction. They will move forward with advertising for a science coordinator once the budget was available. However, this LCC should also be thinking about partner capacity as it moves toward this goal. Milliken mentioned a specific example of this being the position offered by the National Park System in Rhode Island.

Mary Foley gave an overview of the aforementioned position saying it's for GS-13 or GS-14 level focusing on these meetings and NROC and MARCO meetings. It will have a small research component at University of Rhode Island. All duties will be on USAJobs on Monday. NPS doesn't have anyone in mind for this position – the LCC partnership can help guide what this position is. Mary will provide the link for the advertisement.

Communications

Megan Nagel said if anyone has problems with sharepoint site, call her and she will sit with you on the phone. She'll do whatever to get everyone oriented.

She said that there is a draft communications plan in the packets; this is based on the past meeting.

The website (northatlanticlcc.org) is ready to go live. The group agreed that we should make it live.

Governance

Ken Elowe mentioned that he is looking for a vice chair. He informed the group that the next meeting will be in the fall and he is working to tag it onto New England Fish and Wildlife Association meeting and the fall directors meetings. Elowe said to anticipate one or two conference calls in between then as well as the June meeting, which will be action packed.

Andrew said that he will be turning all the meeting stuff around to the group all very quickly, while it's still fresh and get their feedback.

Ken thanked everyone for their level of engagement and substance. He said this group is philosophically quite far ahead of the rest of the country.

Marvin said that he's pretty jazzed about what he's heard here and he's also starting to gear up and think about what he'll be telling others about what this group is doing. Moriarty thinks the North Atlantic LCC's decision to fund RCNs early on was very good.

Ken thanked everyone again for the conceptual framework that was provided for the Albany meeting. He thinks the North Atlantic LCC has dispelled some fears about how other LCCs are handling things.

Meeting was adjourned.

Meeting Attendees

Andrew Milliken	North Atlantic LCC
Rachel Muir	U.S. Geological Survey
George Gay	National Wildlife Federation
Roger Simmons	U.S. Forest Service
Ellen Mecray	National Oceanic and Atmospheric Administration
John O'Leary	Massachusetts Division of Fisheries and Wildlife
Karen Bennett	Delaware Division of Fish and Wildlife
Mitch Hartley	U.S. Fish and Wildlife Service, Atlantic Coast Joint Venture
Anne Kuhn	Environmental Protection Agency
Mike Slattery	U.S. Fish and Wildlife Service
David Whitehurst	Virginia Department of Game and Inland Fisheries
Sherry Morgan	U.S. Fish and Wildlife Service, Division of Migratory Birds
Jean Brennan	U.S. Fish and Wildlife Service, Appalachian LCC
Rick Bennett	U.S. Fish and Wildlife Service, Science Applications
Hector Galbraith	Manomet Center for Conservation Sciences
Mary Foley	National Park Service
Carol Pollio	U.S. Fish and Wildlife Service, Ecological Services
Zoe Smith	Wildlife Conservation Society
Wayne MacCallum	Massachusetts Division of Fisheries and Wildlife
Scot Williamson	Wildlife Management Institute
Greg Moore	Delaware Division of Fish and Wildlife
Jennifer Higbie	Brookhaven National Laboratory
Eric Palmer	Vermont Fish and Wildlife Department
Jad Daley	Trust for Public Land
Marvin Moriarty	U.S. Fish and Wildlife Service, Northeast Regional Director
Tai-Ming Chang	EPA Region III liaison to Northeast LCCs
Ralph Abele	Environmental Protection Agency
Cathy Sparks	Rhode Island Department of Environmental Protection
Lora Mathers	U.S. Fish and Wildlife Service, Science Applications
Megan Nagel	U.S. Fish and Wildlife Service, Science Applications
Gwen Brewer (phone)	Maryland Department of Natural Resources
Barbara Vickery (sitting in for Lise Hanner, phone)	The Nature Conservancy
Steve Fuller	Contractor to Wildlife Management Institute and North Atlantic LCC
Patty Rixinger (phone)	New York State Department of Environmental Conservation
Bill Hyatt (phone)	Connecticut Department of Environmental Protection
Randy Pomponio	Environmental Protection Agency