

Moderator: Courtney Chambers
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12:30 pm CT

Courtney Chambers: Okay, now I'll give you today's speaker on Landscape Conservation Cooperatives, Dr. Doug Austin. Doug is the National Coordinator for the Landscape Conversation Cooperative and is located in the Office of the Science Advisor of the US Fish and Wildlife Service. In that capacity he works with a broad and diverse array of Federal and State agencies, non-governmental organizations, tribes, universities, and others to implement a landscape conversation approach to management of our natural and cultural resources.

Doug has been working in the conservation field for over 25 years. And prior to his current position he worked for a short period with the Pennsylvania Department of Conversation and Natural Resources and served six years as an Executive Director of the Pennsylvania Fish and Boat Commission. Before moving to Pennsylvania Doug worked for ten years each with the Illinois' Department of Natural Resources with the Illinois Natural History Survey where he was involved with a wide variety of fishery issues, ecosystem management, and Illinois' River Conservation Reserve Enhancement Program as well as Stream and Watershed Restoration. He was also an adjunct faculty member with the University of Illinois.

More information about Doug can be found in his bio posted on the Learning Exchange with the rest of today's meeting documents. And if you'll watch your chat feature I'll post the link to the website where this recorded meeting will be posted for your access at a later date or for you to share with those who were unable to attend today.

And we're very thankful to you, Doug, for your willingness to share with us today. So at this time I'm going to give you the presenter rights and then we can begin.

Doug Austin: Great, thank you very much and welcome everybody to the presentation. Happy to spend an hour with you all this afternoon or morning depending on where you're at. And what I want to do today is just give you an introduction to the LCCs - a little bit about what the web - the development of them, the philosophical basis of them, how they're structured, relationship with the Climate Science Centers and some examples of the work that's going on within the LCCs. So hopefully we'll have enough time here at the end for some questions and dialog and as Courtney said, more than happy to follow up with you later with any additional questions you have or if you want to engage in a more in-depth question or to link you to some of the LCCs staff so you can follow up with them.

Courtney, does it sound fine? Everything good on your end?

Courtney Chambers: Yes, sir. Sounds great, thank you.

Doug Austin: Okay, thank you. Okay, so the LCCs were a response to what obviously are a set of extensive issues that are threatening our resources. None of these terribly new. Land use change, population growth, climate change issues, energy development; a variety of these issues that stress the resources, many of them acting in very large landscape level impacts. These are the things that we've been dealing with for quite some time but I think it's become increasingly clear that in order to address these effectively the Conservation Community, and by that term I mean not just the agency's who's primary mission is conservation, but any entity who deals with how we interact with

the land and the people who interact with the land as well, it's obviously a tightly woven net.

How we deal with these is really incredibly relevant given State resources declining generally gone through very difficult times, Federal agencies are not going to see growth, recognizing that these issues are often challenging all of us in similar ways. So our effort is to try to build a more collaborative approach to these things where we can jointly address these issues using the resources that we have.

Okay, so I'll address this through five different sort of chapters within this presentation. A little bit about what the LCCs are, talk about the science centers that we work with quite a bit. I'll just touch on partnerships because we do address a lot of partnerships in this effort, a few examples. And then just end with some challenges and hopefully it will lead us to some dialog and some good Q&A after that.

So what are these LCCs? From the administrative point of view the LCCs were initiated by Secretary of Interior, Ken Salazar back in 2010. They've now entered the third year of their existence. The LCCs as I'll show you in a little bit have been ramping up from initially nine in FY2010 adding on another nine or so on 2011 and then FY2012 has rounded out the full segment of 22 LCCs.

Secretary Salazar recognized that Interior simply doesn't have the capacity to do this on its own. Clearly we've known that for quite some time, that's not a new realization on his part certainly, but what this did was formalize the process to address this across the community of entities; Federal, State, tribal, NGOs that deal with landscape level issues.

So what are these LCCs? We'll describe them in a couple different ways. First of all, they're applied conservation science partnerships. These are groups of these partners, the Federal, State, tribes, conservation organizations, universities and others within these areas who are dealing with these issues collectively. So bringing to bear the most effective targeted science to address the conservation challenges that we're facing.

What are those science issues, information issues, things that are preventing conservation managers from doing the work that they need to be doing, doing it in a most effective and efficient sort of way? There are fundamentally planning and adaptive science. What these entities do, these LCCs - and again, I'll talk about how they're structured in a little bit here, what they do is provide a forum for these partners to jointly identify conservation challenges, develop a landscape vision, and as they mature to utilize the capacities of those various organizations to target on those resources so that it can have the greatest possible impact.

So in the very early stage that we're at now it's been a lot of development of organizational structure, development of decision making processes, fundamental stuff of putting these groups together, moving more and more so into this planning and adaptive science framework. And they create a national and international network. The LCCs do cross into Canada and Mexico, they cover the entire continental US, and Alaska, Hawaii, and the Caribbean now.

The basic vision of this, which is not a surprise, sustains cultural and natural resources for generations to come; a vision that's not dissimilar from a number of conservation organizations. But the function is to network cooperatives to provide this forum for this shared vision of landscapes, to work collaboratively to address these issues across the various political and jurisdictional boundaries.

So a couple of notes about this, this adaption to things such as climate change and land use and energy development requires that we work across multiple sectors, vast geographic scales, and levels of government. It's really not just to challenge the resource; it's how we address this challenge.

I think increasingly recognizing, again, that we need to do this in a more collaborative manner, adopting a science based adaptive management approach, capitalizing on our strengths, leveraging our resources in ways that we've learned how to do. And not to say that we haven't been doing this, because there's many examples of excellent collaborative conservation, resource management issues, but we need to advance this. So we need to move the needle on this to a higher plane. And do it in a way that's consistent across the continent.

So what this led to was a delineation of these LCCs, and this is the current map of the LCCs, and a couple things about this map. First of all, these LCC boundaries were defined primarily based upon what's called bird conservation regions, a joint team of scientists from the US Geological Survey and the US Fish and Wildlife Surveys looked at a variety of ecosystem mapping options, eco regions, watersheds, a whole number of these and tried to evaluate which one was - which one best built upon existing structures incorporated the greatest amount of ecological integrity but yet recognized that no single mapping scheme would address all the concerns out there.

So this is what they came up with. There's 22 of these now. I think the important things to recognize are, first of all, that these boundaries are simply meant as a vehicle for administrative purposes and how we deploy staff, how we allocate some resources out. They by no means should represent boundaries or borders that prevent one LCC from working with the next, from

looking at this as a national network of LCCs. We really tried to describe this as a seamless network where these boundaries really should be irrelevant in terms of how we look at the resource.

In fact, and as I'll show you in some examples online here, most all of the LCCs are working at least with the adjacent LCCs in addressing issues, defining resource needs, science needs. And there's a variety of issues that are developing nationally to try to address fundamental needs for information, science, and other support at the national level.

Note also that on the map these boundaries seem to end at the coast line, that's just an artifact of the map that was crafted. The LCCs do work, in fact, in marine systems. Many of them work out to the 200 mile EEZ. Some of them - the LCCs in fact, the Pacific Islands for example, Lucia, Bering Sea Islands, Caribbean's are defined by marine systems. The predominant impact either marine or on the land is the marine influence on the terrestrial systems. So they do deal with marine systems and there's a lot of work in fact with NOAA and other partners that work in near shore and offshore marine settings.

And feel free - if people have questions feel free to jump in. I think we should have time for those questions or as Courtney said, shoot them up to the chat line and we'll try to address them as they come.

Okay, let me just tell you a little bit about how these things are structured. And this is important so people know how to engage in them. And just to let you know, I did try to do a quick look at the LCCs and there are a number of these LCCs where the Army Corp of Engineers, and again, I don't have the details on this but where the Corp of Engineers is involved whether it's folks from your shop or the districts or I'm not sure the exact people, but Arctic and Western Alaska LCC for example, Appalachian, Gulf Coastal Plains, and

Ozarks which is the lower Mississippi; the Prairie Plains and (unintelligible), which is the upper Midwest; South Atlantic which is along the Eastern seashore.

Those at least are specifically noted that Corps staff are involved in the steering committees of the LCCs. And I'll tell you what that means here in a second. There's probably a number of others but my list is just a little bit out of date.

So the map I have on here right now is the Great Northern LCC. The Great Northern LCC was one of the earlier LCCs, those nine that started in FY2010. As you can see, the LCC encompasses significant parts of five states, Washington, Oregon, Idaho, Montana, Wyoming, and just a smidgen of Utah and Colorado. And also contains a substantial chunk of British Columbia and a smaller part of Alberta. So it's fairly significant in its size. These are big areas. Again, this is primarily a rocky mountain although it contains a number of other associated sort of ecosystems along with it.

So within this LCC they've developed a structure and we'll sort of go through this really quickly here. There is an executive council of the steering committee and the steering committee itself represents all of the key resource organizations that work in that area. These would be the Federal organizations, the Federal agencies.

The five States are all sitting on this LCC. There's a series of tribal groups of three or four of those. And there's a series of NGOs. Generally, they select NGOs that are relevant in the extent of the LCC or nationally. They won't deal with NGOs that work with smaller subsets, individual watersheds, things like that.

We have the LCC staff, which is generally a coordinator and a science coordinator. The staff of the LCCs come from a variety of sources, primarily the staff come from the Fish and Wildlife Service but there's also staff from National Parks, US Geologic Survey, Bureau of Reclamation, Bureau of Land Management, and US Forest Service, and NOAA.

In the case of the North - Great Northern LCC there's four staff that are working on it right now. It's co-chaired - actually, there's tri-chairs of the - tri-coordinators. One is one from Fish and Wildlife Service, Yvette Converse; the second's from National Park Service, Tom Olliff; and the third is from British Columbia, one of the Environment Administrators up there, Madeline Maley.

They have an advisory team of staff as well that work with them. And they have a substantial subset. What they've done in this case is they've subdivided in a sense this Great Northern LCC into three ecoregions, the Columbia Basin - more or less the Upper Columbian Basin, the (Sage Step); the regions - Southern Utah, parts of Wyoming; and then the Rocky Mountains themselves.

And they have a substantial science committee that works with the LCC to identify science needs to help develop science RFPs and other things. And also has a substantial role in taking the science and ensuring that it's translated and utilized by the management community. As well as the vice versa of that, the management community working with the sciences to identify clearly what science is more relevant and pressing in addressing the conservation needs that they're dealing with.

So if you got on the LCC's website you'd find that they have a science plan. They are in the third year actually of putting out projects - developing and putting out projects and working to translate that work into management actions by the constituents, the member agencies of the LCC.

Okay, this is (unintelligible), the LCC steering committee members. There's a substantial number of them here. Unfortunately this one doesn't seem to have Department of Defense, Corp of Engineers at all on it, which is probably something that would be worth them looking into. Maybe this is something that you all can help us address in some of these LCCs that don't have DOD or Corps engagement.

Okay, a little bit about what they've done then. And this is, again, indicative of the LCCs in general, their establishment of their unique vision for that particular landscape. They've established some goal statements. They've also looked at what key stressors are addressing those landscapes, fairly simple ones that most people would have identified. But this represents the collective vision of those partners.

And then subsequent to this is a series of actions. They have an operational plan that addresses each of these and starts working towards collective actions that the agencies will hopefully implement using their own jurisdictional authorities on the ground in their way of addressing these resource threats.

So each of the 22 LCCs is at different stages of doing this. And again, keep in mind that the oldest of the LCCs now is only about two-and-a-half years old. The first came in 2010 but by the time people get hired and things get moving it was late in that fiscal year. So a little bit of 2010, all of 2011 for at least this LCC, and now on to 2012.

Four of the LCCs just got started very early of this fiscal year, FY12. So they just got started in October, November, December of 2011. So those LCCs are just getting themselves on the ground. I think most of them have just

established steering committees. They have not gone through the process of establishing either operational plans or science agendas.

So if you start looking across the 22 LCCs you will see they are different stages of maturity. The young ones quickly catching up to the old ones because they've learned a lot from them. They often borrow processes, documents, and other things from them, and use that to advance to a level of maturity where probably another year or two they'll all be acting somewhat similarly in terms of their ability to work on the landscape.

Okay, let's talk about science a little bit and two things I want to talk about science. One is this - the importance of what we call strategic habitat conservation which is primarily a term the Fish and Wildlife Service and USGS uses, really it's a sort of application of adaptive management focusing on trying to better implement an adaptive management approach. And those of you who have dealt with this, and I'm sure many of you have, recognize that tying all of these things together is incredibly challenging for a number of reasons. One of them being that individual agencies often don't have capacity to do all the different pieces of this, second being that we're often not patient enough to do it either politically or within our own agencies, third of all is there's a lot of confounding factors that get in the way and cause this to be very difficult to do.

But the hope here is that we can at least put in place with the resources that would be available through these LCCs a better opportunity to actually implement an adaptive approach that does bring us through this sort of spiral of planning, design, delivery, monitoring, and research that continually refines itself over time.

So this is a - sort of a unifying approach. It's being developed in a number of the LCCs as a fundamental approach for their development of science and management but I'd be the first to admit that it's just in its infancy and really being fully deployed. It's also not terribly new in terms of the concept, you know - this idea of adaptive management's been around about a quarter of a century but the application of it, again, has been challenging. And what we think needs to happen, particularly with climate change and the level of uncertainty as to how that's going to play out on the land, is recognizing that this adaptive approach and the constant learning that is hopefully incumbent with this will allow us to better position ourselves down the line.

Again, a number of groups have been using approaches like this or trying to implement this and just recognizing that we hope to look for outcomes rather than just simply actions. This is not just putting anchors in conservation and summing up those anchors as trying to figure out what is the metric that we could use to better account for those actions.

Establishing desired results, establishing specific outcomes that we want to see coming out of these landscapes, tracking progress, learning from this process, and hopefully sharing this learning across this LCC network, within the LCC, and nationally.

Currently with the development of the LCCs is what's called the National Climate Change and Wildlife Science Center which is run out of USGS in Reston, Virginia and eight regional climate science centers depicted on the map here. Of these eight, five are fully in place right now or more or less in place; three have been identified and are getting staffed up. Within the year they should have all eight of these pretty well deployed.

These eight climate science centers have a mission that's complementary to the LCCs. Their role is to provide resource managers with the information, tools, science to address climate impacts on fish wildlife and their habitats. They focus on climate change adaptation and impacts, adjustments of these resources and response to the effects or expected actual affects from climate change.

They look at current climate change information, understand the affects on plants and animals, try to synthesize all this to forecast what these scenarios will look like in the future to allow us to plan the resources better. Hopefully quantify vulnerability of not only species but habitat as well.

And really provide a clearinghouse, a forum, a place for us to reach for answers to develop science. Each of these climate science centers is based at a university or often consortiums of universities so they access the resources of those universities that are dealing with climate change, environmental impacts of climate change, a lot of the research that allows us to do the modeling, projections, forecasting, analysis that will support the LCCs.

So one way of looking at this and to position these things in sort of a sequence is if we look at the fundamental science that's developed to support climate change, the IPCC work, the modeling that NASA and NOAA does, a lot of that's done at a fairly high level, major universities or major Federal agencies - atmospheric modeling, those are not the things that the CSCs or the LCCs deal with.

So where the climate science centers come in is taking that basic information, taking those global models and trying to apply them to ecosystems developing predictive models, responses, and taking that information, allowing it to be

used by resource managers in their application of resource management programs and projects.

So the LCCs come at the bottom here where they take those applicable pragmatic usable models, hopefully apply them to what the agencies are trying to do in terms of developing resourced plans. And then translate that into resource priorities in terms of developing future visions for the National Wild Refugee System for example, working with conservation partners such as the Trust for Public Lands and their strategic visioning for where they want to direct their resources in purchasing conservation segments, working with the National Parks Service to help them understand how climate change will affect the resources that their National Parks were originally defined to project but which may not exist in that setting in 50 years from now or even shorter period of time than that.

Looking at coastal refuges, coastal ecosystems and understanding how we need to modify those or move them in terms of land acquisition to address resources under sea level rise scenarios. And this is a cyclical process.

Okay, they're monitored or managed in the same way in a sense as the LCCs, often with some different people though, the science folks. They have a - grab my little marker here. They have an executive stakeholder advisory council which consists of people from State and Federal agencies dealing with climate change.

They bring in the relevant LCCs. For example, this references the Great Northern LCC, this happens to be the Northwest climate science center which is based out of Oregon State, University of Washington, and University of Idaho. That's a consortium of three universities that are partners in this climate science center.

They bring in other partners that are dealing with science as well. So it's a sort of - a similar structure in the sense of the LCCs, links the LCCs in, and then helps use the LCCs being the primary clients of these climate science centers to define the science needs that they address.

Again, that's an important point, each of these eight climate science centers is associated with certain LCCs. Those LCCs are the principle source for defining the needs that the climate science center works with.

Okay, and this is typical of the sort of groups that are part of the climate science center; State, tribal, Federal organizations and those three LCCs that they deal with.

Okay, partnerships. The LCCs are by nature partnerships but they also deal with a lot of other partnerships. As all of you know, there's a lot of existing entities out there that are dealing with landscape level issues. Sometimes as a singular landscape, Chesapeake Bay for example, the Everglades, Puget Sound. It could be a prairie issue. In some cases there are national efforts already under way and I'll mention a couple of those here.

Partnerships are fundamental to the LCCs, they utilize what existing partnerships have already developed and ramp that up to the new level that the LCCs are dealing with, by that nature bringing these partnerships together.

And in fact, in a lot of LCCs, there's many existing partnerships that are already involved with them and at the table. This is, again, the Great Northern.

There's a number of partnerships already existing there, the Yellowstone Coordinating Committee for example, it's a multi-Federal agency, all that

work around the Yellowstone area. Wyoming Landscape Conservation Initiative, Arid Lands, I'll just run through these without elaborating upon them.

So each of these groups has been in existence prior to the LCC. Each of them is looking at landscapes at the level that they're dealing with but often a lot of these don't interact right now. So what the LCC has done is provided in a sense a forum for a lot of these partners to get together. In fact, there's representatives from a number of these on the steering committee that work with the LCC as a forum for identifying collective needs and hopefully responding to those in a way that supports all their issues.

All right, in the bird world there's something called joint ventures, migratory bird joint ventures. They've been around a little over 25 years now. These are dealing with all bird species now. These work with the LCCs very intimately. In fact, a number of the LCC boundaries are very similar.

For example, the (unintelligible) joint venture and the Great Plains LCC have similar boundaries in one. In fact, that case, the joint venture helps stand up the LCC and now they work collectively with people on both Boards. The joint venture identifying bird needs, looking at wetland development, taking information that's relevant to climate change from the LCCs and using that to better employ and support the work that the JV does.

National Fish (unintelligible) and Action Plan's another one. This is only about six or seven years old but this was developed to address the recognized reality that aquatic resources are the most imperiled resources. The majority of threatened endangered species are aquatic based.

And so (NFAP) was defined - designed to try to address those by focusing on the fish habitat, directing resources toward those fish habitat areas that are most imperiled and try to do the protection restoration work that's appropriate for that.

Similar to the JVs although not quite as developed, fish habitat partnerships work with a number of the LCCs right now. It's an emerging relationship between those two. But in both cases JVs and (NFAP), the science needs at the national level are being translated to the LCCs and the climate science centers so that we can provide new resources to these groups to increase hopefully their effectiveness.

The National (unintelligible) Research Preserve Program out of NOAA, these are often very linked to the State programs as well. The LCCs are working with NOAA in a number of ways to try to collectively identify science needs to help them better plan impacts of a variety of effects on these reserve areas. These are science based reserves that are used for collection of information about impacts upon those systems and also protect those resources.

So just a couple of examples here. Again, these are fairly early in the development stages but hopefully give you some idea of the things they're doing. First of all, a number of the LCCs are establishing science agendas. This is the Appalachian LCC; it extends from Southern New York down to Northern half of Alabama.

Principally the Appalachian Mountains although not completely though part of the lower - the (Wabash) River System, Indian and the Ohio, almost down to the confluence. A fairly extensive LCC, a lot of States in this one, 15 States, very complicated LCC because of the State arrangement, but does include a lot of the key Federal agencies.

Just last fall, what they did - and this is one of the newer LCCs, it's only about a year old, they brought together about 140, 150 of the researchers and managers working within the Appalachians and went through a several day science forum where they identified a series of themes, aquatic issues, human dimensions, terrestrial issues, climate change, and went through the process of identifying effects of those on the Appalachians. And then tried to move from that into a process of identifying gaps of knowledge, areas where we can exchange information, and identify areas where the LCC will try to deploy its resources to fill in gaps or to link things together in the most effective way possible. So they're just sort of getting out of the gates on this, less than - or about a year old at this point.

And they've got a good report out there that's on their website. And you can check that out, a number of the LCCs have reports like this. Western Alaska just did one of these. The Arctic has done one, was one of the initial ones. A couple of the other LCCs have moved down this path, the North Atlantic for example has some extensive work on this.

Okay, and the Artics, as I mentioned them, obviously, climate change is predominate impact up there. Climate change is not only affecting the resources but has a huge effect on the culture up there. Relatively limited number of people but - that ties to the environment is very intense so it has a direct impact upon them.

And they've been looking at this - in this case, it was looking at glacial impacts and recession of glaciers over time, the left being one photo taken in 58. The right photo being one taken 35 years - 45 years later, shows a dramatic change in that individual glacier.

But the glaciers have an impact on water supply and the water supply of the glacier is the dominant source of supply for a number of species up there so what they're trying to do is model these impacts and understand the effects of glacier changes upon water supply that supports these systems - fisheries based on glacial melt water primarily. So what will those water level be in the system in the future? How will that impact stream ecology? And obviously, what's the tie to the cultural subsystem fisheries that goes along with that?

So it's an interesting tie between ecological and cultural resources that the Arctic is dealing with, similar sorts of things in Western Alaska and along the Northern Pacific where tribal Native American cultural resources are very tightly tied to fisheries resources in particular.

And I think - this may be the final example, prairie, plains, and potholes. Here a transboundary LCC, the Arctic was as well, but I think most of their work is being done within that - within the US side.

Prairie, plains, and potholes deals with some of the major prairie ecosystems of the Northern Prairie, looking at climate change impacts upon these prairie pothole wetlands and the direct impact of that on avian conservation.

So looking at developing (unintelligible) of greater precision so that they can project these changes upon wetland and wetland dependent birds, outcomes hopefully will be the downscale molds that will allow the management agencies there - and not only the joint venture, the waterfall joint venture.

But the State agencies, Ducks Unlimited is a major player in those areas, NRCS, and others dealing with how one best protects those wetlands, deals with water management, and looks at purchasing either outright or developing

easements on other wetlands to protect wetlands in areas that are likely to be refuges against these sort of changes over time.

One last example here, this is a very large scale one. This is the - what's called the Southeast Conservation Adaptive Strategy, (CAST), which is a major effort of 14, I think, Southeast States, a number of LCCs.

If you walk across a map from the Atlantic to Texas it includes the South Atlantic LCC, the Appalachian LCC, Pennsylvania Ford LCC, Gulf Coastal Plains and Ozarks, Gulf Coast Prairie, and maybe one more, all working together with the Gulf Coast and Ozarks.

Gulf Coast Plains and Ozarks LCC is the lead on this and working with the States to look across all of their State (unintelligible) action plans, each of these States has a State (unintelligible) action plan, try to work with them to develop a vision of the Southeast landscape under a series of major stress issues, climate change amongst them, and help define areas of critical need and protection, possibly resources that are most likely to be harmed the most and help direct their resources - provide direction I should say.

The LCCs don't mandate anything, they simply provide opportunities for better management that the partners can decide to adopt or not. But in this case provide a Southeast wide vision of what this landscape can look like with the variety of stresses that are - they're going to be facing in the years to come.

Just a little bit about the challenges, and there are many challenges as one might perceive with something like this. I'm not going to go into a lot of them. There's a very good report out there that was put together by the Lincoln

Institute of Land Policy. It's on their website that sort of came out in the early phase of these LCCs, actually refers to them just as they're fairly embryonic.

We've been working with this group since then to expand upon them and develop with them something called a practitioner's network for large landscape conservation. They're actually meeting in a couple weeks down in Tucson in conjunction with the US Institute for Environmental Conflict Resolution's annual conference or biannual conference.

But they noted a couple of major challenges, I think, which are all indicative of what we're dealing with within the LCCs. There's a tremendous - regardless of the fact that we have this amazing technology that's getting better all the time, there's a tremendous lack of information.

It's not that technology does the hindrance to that, it's the people side, the human side of this; our inability to share information as openly as we need to.

What we learn in one landscape often isn't translated to another. Who's doing what on the land is not often well known. There's always at these meeting surprises about people who you would think would know what their partners are doing but often don't. And just that exchange of information of who's doing what, where, and what they've learned is a tremendous challenge and something that we'll, I think, always be dealing with.

A lack of capacity, and that's sort of the premise - one of the premise of the LCC is that we simply don't have a capacity or constrained and often cases always - of course, by budgets and others, but often constrained by artifacts of past management.

We have a lot of structures in place that may or may not be as useful as they have been in the past and probably would benefit from transition to the new approaches to resource conservation. But all this means that there's a lack of capacity in trying to create new programs like LCCs in this environment is a challenge in and of itself.

Coordinated strategy, I think this was a reflection of the fact that there is not good forums for these at the national level where we can address these issues. There's just not within Federal government any existing body that is dealing with this across the various agencies that are charged with these resource management issues.

And policy, a lot of the policies we have deal with single species. Some of the policies we have don't cross jurisdictional boundaries very well. The appropriate - the policy tools we deal with now are really based upon a paradigm of management that doesn't really address landscapes in a very effective way.

So - and this is, again, one of the things that the Lincoln Institution is looking at through this practitioner's network is what policy changes need to be made to allow us to better address these stresses that across geopolitical boundaries, jurisdictional boundaries and other sorts of things that have been traditional hindrances to us working collectively.

And financial investments, you know, all of us have our programs that we like to employ. They have histories. They have people who are advocates for them, who will fight for them, which is wonderful. But what that often leads to is very challenging exercise in putting together complicated land protection programs, land restoration programs and other things that need basically a breed of people that might be called a conservation business manager who are

adept at dealing with these financial programs in a variety of different ways. Just to reflect some of the challenges that we face at the LCC level, and that's similar across many of these large landscape efforts.

So that's the presentation on LCCs. It's a really superficial look at them. Just a couple weeks ago in Denver we had a - our first really national LCC workshop. A little over 400 - around 400 people came out for this. It was the first time all 22 LCCs got together in one place with many of the partners to talk about how this process has evolved to look at the challenges we're facing and to sort of start thinking about where this thing is going in the future.

There's a couple structures in place to help coordinate this that we'd be more than happy to talk with you about. But one of the things we'd certainly love to do is continue to explore how Department of Defense in all of its various ways can be engaged with the LCCs.

And in fact, just a couple weeks ago started to work with a couple of Corps folks on developing an MOU between the Corp and Fish and Wildlife Service and possibly the Department of Interior to support that expanded engagement.

So with that, why don't I stop and open it up for questions? And be happy to address them as best as possible or to - if I can't answer the question hopefully direct you to a place where you might be able to find those answers.

Courtney Chambers: That sounds great, Doug. Thank you very much for sharing with us. Yes, if you would like to ask your questions verbally please do remember to remove your phone off of mute that way we can hear you or you're welcome to use the chat feature.

(Maria): Hi, Courtney. This is (Maria) with IWR.

Courtney Chambers: Yes, hi, (Maria).

(Maria): Just a quick question about the MOU and what it would entail and its purpose.

Courtney Chambers: Okay, Doug?

Doug Austin: Yes, so about three weeks ago our leadership of Fish and Wildlife Service, Dan Ashe, who's the Director, and a couple Deputies and a few of our Assistant Directors met with (Rock Salt), with the Corps. I can't give you his exact title. I'm sure you all know that title better than I do - and a number of his staff.

And one of their - well, a couple of things came out of that. One is they just wanted to engage between Fish and Wildlife Service and the Corp more. There's a number of interactions already but they wanted to support a broader level of involvement between the two agencies.

Specifically what they asked us to do was to draft a MOU that identified some key process issues that would support and encourage, I guess, the Corps - and I think primarily is looking at the district engineer level or their civilian counterparts to be engaged with the LCCs and provide a - sort of a - I guess, encouragement for that, a green line from the central office that that sort of involvement is in fact appropriate and welcome.

But also recognizing that it's - it may not fit in the current paradigm of projects that sort of define some of those Corp activities.

We also wanted to use that as a vehicle for identifying joint science needs, research needs, and information needs that might be relevant to the LCCs that

the Corps involved with and vice versa and engage them in that dialog at the national level.

There's a number of other things in there. We just got some notes on this so we haven't started writing it yet. Hopefully we'll get something in a draft form in about - within the next four to six weeks, maybe somewhere in that range and it will work it's way through whatever the channels are between the two agencies.

(Maria): Thank you.

Courtney Chambers: That sounds like a great step forward. Are there any other questions?

Doug Austin: Well, Courtney, I'd be more than happy to - yes, as I say, email or the chat shows that there is existing MOU. Yes, in fact...

Courtney Chambers: Doug, sorry, that question didn't show up to everybody, if you could repeat it that'd be great.

Doug Austin: I'll read it, yes. (Mark) writes, could the existing (unintelligible) MOU between Fish and Wildlife Service and Corp be used to support the initiative?

Yes, in fact, what we did when we walked into that meeting was we looked at all the existing MOUs between the Corp and the service and also models of other MOUs between the Corp and other conservation partners.

And we're going to review all of those. (Julia Morales) I think is - and (Janet Cushing) are working us on this. We're evaluating all those trying to find if there's nuggets in there that kind of lay the groundwork for us or on that might just need to be modified for use here.

And then craft anything new based upon existing ones. We don't want to duplicate anything that's already existing there, hopefully build upon that.

So yes, rest assured we're looking at everything that's available out there and trying to build upon those existing documents.

Courtney Chambers: Okay, great. While others are thinking of additional questions, Doug, do you have your contact information on any of these slides?

Doug Austin: You know what, let me see if there's a last slide here? No, you know what I can, I can type that in here and I'll send it to everybody.

Courtney Chambers: That would be great, thank you.

Doug Austin: See if I can do this to everyone.

Courtney Chambers: Yes, and if there are any questions please do - feel free to speak up.

Doug Austin: So there's my email. I typed it wrong, ignore that one. Yes, there's no - there's not two Ts in my name.

Courtney Chambers: Got it, thank you.

Doug Austin: So you can send me an email that way. Also if you do a search for landscape conservation cooperatives or get into DOI or Fish and Wildlife Service website you can go directly to our webpage that way.

Courtney Chambers: Okay, thanks, Doug. I'm going to go ahead and share the link to where this web meeting will be posted with our other archived meetings as well for people that save the link and access it at a later date.

Just a quick note though on the Gateway, it's down today temporarily. Apparently it had a glitch when it was updating yesterday. So if any of you had difficulty accessing the Gateway today that's why and (Ginny Dickerson)'s working on it. So this link may not work right away but that is where the webinars are posted.

Doug Austin: Okay, I'm going to send you the National LCC website here as well.

Courtney Chambers: Okay, that would be great.

Doug Austin: There you go.

Courtney Chambers: Thank you. All right, well, if we don't have any other questions then we'll begin wrapping up today. Doug, we really want to thank you for taking your time to share with us today about this exciting new prospect for hopefully additional Corps cooperation with these conservation cooperatives.

Doug Austin: My pleasure, thank you.

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