Connecticut River Pilot Core Team Meeting in

Hadley, Massachusetts

May 1, 2015, 10:00 a.m. to 2:00 p.m.

Attendees by phone: Bob Houston, Brad Compton, Emily Preston, Bill Ardren

Attendees in person: Kevin McGarigal, Joanna Grand, Bill DeLuca, Ethan Plunkett, Bill Labich, Dave Eisenhauer, Andrew Maclachlan, John Warner, Ken Elowe, Eric Sorenson, Andy Fisk, Mitch Hartley, Randy Dettmers, Ken Sprankle, Dave Paulson, Scott Schwenk, Jeff Horan, Maritza Mallek, Nancy McGarigal, Andrew Milliken, Bill Jenkins, BJ Richardson, Rachel Cliche, Dee Blanton, Georgia Basso, Dave Perkins, Patrick Comins, Bridget MacDonald, Tanya Lama, Catherine Doyle-Capitman, Renee Farnsworth

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Nancy McGarigal: I want to thank everyone for coming to this meeting, both in person or on the phone. We're at a crossroads: this could be the last large group meeting we have, at least for a while. We'll be talking more about that today. But it could be the last time that this diversity and composition are together. As for the agenda, first Ken and I are going to give some introductory comments. Then Andrew is going to give some background on LCD and this project. The bulk of the meeting is going to be devoted to reviewing comments from the team and their organizations. I'm sorry we could not get those comments out to you in advance. Some of the comments came in last night late, and some were given verbally over the phone, so we did not have an easy way to provide a summary before today. But we think we've captured the comments in our agenda for today's discussion. We have a handout that summarizes the main topics, and we'll discuss as much as we can today in the time that we have. We want to focus on the topics that are best served by a large group discussion. We may have to skip the lessons learned discussion. Then Dave Eisenhauer has some updates from the Communications Subteam, and Andrew will describe next steps. We also have a bit of a social planned for the end of the afternoon. You have to see what Kevin made before we dive in. For those of you that are on the phone, it's a mega-sized cookie shaped like the Connecticut River Watershed, with the cores and connectors on it.

Like I said, this meeting is a crossroads for us – ending one phase and moving on to another. It's kind of sad to think this is the last meeting like this. I want to say I have thoroughly enjoyed getting to know all of you and working with everybody. I think I can speak for my USFWS colleagues that we're really proud of what we've done to date, together, as a team. I know today we are discussing some concerns, but that doesn't diminish the respect I have for everybody and the process we've been through. We at USFWS have been really impressed with how committed and engaged and enthusiastic you've been for the past 14 months. I work on a lot of teams, and I don't think I've seen this level of commitment and engagement ever, especially with the diversity of people we have in the room. The work has been challenging, and sometimes I have been frustrating, but then I talk to Georgia or Mitch or Rachel or Marvin or Eric, all of whom have said at one point "This was really thought-provoking," or "I really enjoyed this meeting," and I think "Oh good!" because it's been challenging. But to me it's awesome that, even though we don't agree on everything, people thought this was new and interesting. We are

pioneering new ground. I hope we all appreciate that we took sophisticated models, and tried to integrate them into a design through a collaborative process with a large, diverse team. There's a lot of talk out there. You see it constantly in publications with people talking about how to do design work. But how many have actually tried to work through the process and actually come up with a design? And get as far as we have? We should celebrate that. It's hard, it's challenging; we have lots of disagreements, and we know why it's hard and why it's challenging, but worth it.

I talk a lot with Rob Campellone, the Landscape Conservation Design Policy Advisor in Headquarters. I asked him what's unique about our process, and he sent me this in response: "The CT River pilot project is at the forefront of landscape-scale adaptation planning in the United States. It is innovative and informing my discussions with other agencies and organizations. It is the current best example of LCD work within the FWS." He's asked to use our project as a case study in a forthcoming publication about how to do LCDs.

So let me thank you all again for all of the hard work again over the last 14 months, and I look forward to working with you again.

Ken Elowe: Sometimes when we participate in a long process full of small details and decisions, it can be easy to forget about all that we've accomplished. I think we should reflect on that. For me, the first time I started thinking about large landscape design was when I was in grad school, and I was asked to help create a design to ensure that the Berkshires could sustain populations of black bears, even if there was highly increased development. So we did that, and it was fairly crude, and they started buying land to try to support bears. A few years later there was a lawsuit around development at Killington Ski Area, and we again tried to figure out connectivity along the spine of the green mountains for conservation. That began a process of looking at not just habitat, but connections between them. In Maine, with the Beginning with Habitat program. All of these used a model – sometimes pretty crude. When I think back to that and what we have now, and what our capability is – it's worlds apart. But at every stage we knew what our objectives were. We were trying to make decisions using the best information we had at that time, at that point in history. We're trying to do that now. It's not perfect; it's not done; it can always be improved. When you look at the list of information and products that we have, it's not something I dreamed of back then. And we all have responsibilities to our home organizations and agencies. We want to support fish and wildlife populations.

That requires us to make decisions every day based on information from a wide variety of sources. The President's Council of Environmental Quality wants to highlight parts of the country where big initiatives are being undertaken to ensure resilient, functional landscapes for the future that considers climate change. They want to highlight the Connecticut River, but they want to make an announcement in the next few weeks. It hasn't happened yet because we wanted to coordinate among the 4 state governors. As Nancy said, this project quickly rose to the top among all the projects happening around the country. That's something to celebrate. We need to consider where we are in context. … I think of models as doing two big things. They take lots of models and information and put them together in ways that teach us new things. They also highlight areas where we don't have quite enough information to make

us comfortable – they highlight areas of uncertainty, so that we can focus science research to try and reduce that uncertainty.

What do we need to change in the future to make it better and better as we go along? Certainly, nothing in wildlife conservation is a one-and-done kind of thing. It would be irresponsible to not revisit, adapt, and improve our models and our designs.

I want to take a minute and recognize Kevin and his team, because you have had more patience than any technical team I've ever worked with. To be as responsive as you have, as technically credible, and socially responsive to us, is amazing. Every time we asked to see results immediately, you got us those results very quickly. Your creativity and consideration of different approaches to different issues, and willingness to put together results for us to review so that we can move on to the next decisions. I'm going to hand the mic off to Kevin, so he can give a proper introduction to each of them.

Kevin McGarigal: They are all phenomenal people. It's been a great pleasure to work with them. Joanna is a former PhD student who came back, and we refer to her as the data queen. She is an invaluable asset. Ethan goes back a while too. He got his MS degree with me working on the marbled salamander project, and became an expert modeler and R code writer. He is the lead programmer; he oversees all the complicated programming aspects of this model. Bill DeLuca has also been around quite a while – goes back to his PhD. More recently than the others – he earned his PhD in 2013. We were able to roll him into this project as the species expert. He does all the species modeling efforts. He's probably destined to move on to something beyond this, maybe an academic position. Brad Compton has the longest history with me. I think we've been working together for about 15 years now. We first worked together on CAPS, which is the basis for the Index of Ecological Integrity. He's been my right-hand man in my lab, helping me with lots of different projects and helping my grad students. He's just been the most incredible asset anyone could ask for. I think he's online. So that's my team; they've been phenomenal. I hope you can appreciate all the effort they've put in.

Ken Elowe: As a token of our appreciation we've got a book for each of you; it's a book about our National Wildlife Refuges. We're going to stop a little bit early and so we're going to have a little ice cream social at the end and we hope you stay for us.

Andrew Milliken: I want to add my thanks to Kevin and his team, to the core team, and specifically to Nancy for her incredible patience with all of us. I think it's been incredible how she's facilitated this whole process, and I can't imagine how we would have done it without her. I wanted to go over some of what went into this process and led up to it. I promised I would do it in 2 slides, which I did, but the font is a bit small. The history of this could go back to the birth of landscape ecology as a field in the 1980s. But I wanted to bring in some of the really relevant stuff to this CTR LCD. The first SWAPs were written in 2005, and upon completion of those the northeast states decided what they really needed to do next was develop regional assessments, data layers, and maps. They pooled their funding and resources to allow for this. The aquatic and terrestrial habitat maps were one of the first outcomes.

At the same time, Strategic Habitat Conservation was developed by FWS and USGS in 2006. It called for LCDs in concept although not initially in name. The original Designing Sustainable Landscapes grant was

piloted in in the South Atlantic in 2008-2010 and was through the Atlantic Coast Joint Venture. We actually incorporated a lot of lessons learned from that as we started to form the North Atlantic LCC.

The regional also decided to take an approach where they identified representative species. They examined over 600 species, and the resulting list is being used in this project.

Kevin mentioned that he's been working for years on the Conservation and Prioritization System (CAPS), which had a fair amount of scientific input in the early days, and has been worked with and used for implementation in Massachusetts. And it really informs the ecological integrity approach we're using.

In 2010 LCCs were initiated, and our original goals were to build on existing efforts. We had a Northeast Conservation Framework Workshop in 2011. The key finding from this workshop was to expedite delivery of the right actions in the right places: the most important habitats and connections for species and ecosystems in the northeast region. So that has also informed this effort.

Nationally, there has been an effort to think about how best to help fish wildlife and plants adapt to climate change. A formal strategy was published in 2012.

Finally, the LCC did invest in taking the concept of Designing Sustainable Landscapes (DSL) that was piloted in the South Atlantic and implement it in the Northeast, building on the work that Kevin and his lab did with CAPS and trying to be consistent with what was called for in the climate adaptation strategy. We are somewhere between the 2nd and 3rd phase of this work. In the first 2 years we had a scientific advisory committee (University, state, federal members) that provided a lot of input on the initial methodologies. Clearly we have more work to do, but I wanted to make sure people knew that there was a strong scientific advisory committee that helped this project get off on the right foot. We also had 3 workshops with over 100 partners to get partner input during the first phase. Some of you were at those workshops. That is another important step to improve this process. In addition, we have a 54-member technical committee composed of LCC members that has been providing input to this process and recommending additional phases of work. And then also the LCC steering committee, which includes members from many of the organizations that you work for. They have been very supportive of this idea of multiple scales of conservation planning design, and piloting this effort in the CT River Watershed, and of taking some next steps.

I wanted to give that context to see how we got here. The additional slide I wanted to put up is from the Climate Adaptation Strategy.

Scott Schwenk: I wanted to make a couple of comments as we go through. We talked about the comments a lot as a staff. We take the comments very seriously and we have really tried to honor everyone's opinions. We've tried to hear everyone and incorporate your comments, and that doesn't change today. From my perspective everything is still on the table. The other comment I will make along these lines, is that the process has been going on over a year. Some of you may not want to or need to continue on with this level of involvement. I think we should make as many decisions as we can today.

Let me give you a little bit of background on the comments. A couple of weeks ago Eric Sorenson invited me up to Vermont to meet with 20-25 people from the area. People had a lot of questions and a lot of comments. Eric did a great job facilitating that meeting. I want everyone to know that these comments aren't all from Eric; he's compiled them for us. I hope that people have had a chance to look at that.

Georgia Basso and Patrick Comins also organized a meeting in Connecticut and have sent in comments, and Dave Paulson shared comments from Massachusetts as well.

If a comment was made suggesting a change from something that the team discussed and decided on, I have noted that as well. This doesn't mean we can't change the decision, but I wanted everyone to have the context for that kind of thing as we go through the handout.

The first couple of comments are I think what we've been hearing the most. This was brought up by Patrick, Georgia, and Bob Houston. We need to recognize there are lots of important local data sources that were not integrated into the design; in virtually every case they were not available at a regional scale. Their relevancy is not tied to whether or not they are available regionally, but the datasets … Our design is not intended to be a complete conservation solution.

Comments 1 and 2: [timestamp on Webinar recording: 42:00]

Smaller-scale features that are not mapped regionally such as Important Bird Areas, key waterbird nesting areas, migratory shorebird stopover areas, and vernal pools may be missed

Ensure that design products can be applied to local questions, like the relative value of a particular parcel

Jeff Horan: I think as we move forward it would be good to consider some specific examples of how to use the design alongside local data. I think it would be helpful for us to show a couple of examples about how to overlay outside information.

Scott: Yes, and that goes along with the second point. I agree that this will be important going forward.

Bill Labich: This past week we had our inaugural RCP network steering committee meeting. On that call we have 3 RCP partners who are in the watershed. We discussed the Connecticut LCD and I shared the link with everybody. We talked about what the LCD is: a design, seamless, 4 states, big context, and how might they use it in their own RCPs. And they talked about comparing it to their existing plans and other data they use. They wouldn't take it lock stock and barrel; they would use it as a tool. I have comments about the comments. Some of them question the very nature of this model, and I didn't understand that at all. It's a model; it's not like it is knit together from parcel data or field data from the ground up. So I guess some of the questions…I think we can do a case study and explore that but we can have some consensus about what the appropriate scale is for this design, and not expect it to do everything that other, more local datasets, are intended to do.

Emily Preston: We compared this with the data we used for the wildlife action plan, which is also landscape scale stuff. We kept saying this is "a" dataset. One of the things that we say over and over

again; I think it's important as we provide the data that we say this multiple times throughout the documentation, because some people won't get it otherwise. When you're dealing with this scale it's hard to bring it down to a parcel and say much about the parcel except saying "Wow, cool, this is important wildlife habitat." It might not tell you much about what's in there because it's this multi-faceted model. Many, many users of this kind of data don't understand modeling. They want to know what made it important wildlife habitat. We need to come up with a good way to explain the model, including what it is and what it isn't. Maybe we say up front that it's not a habitat management tool, it's a piece of data that helps you prioritize.

Andrew Milliken: Dee reminded me that we had similar conversations about Regional Conservation Opportunity Areas (RCOAs). The language they settled on was that it was intended to supplement, not replace. The second comment goes back to something Ken said, which is that one of the values here is that we'll identify gaps that we want to address. It just so happens that 2 of those identified gaps: vernal pools and stopover habitat *were* identified as gaps and are currently the focus of projects funded by the NALCC. So another useful outcome of today is the identification of other needs that we could direct funding to.

Patrick Comins: It may pay to collect as many of these additional datasets as possible and put them on Data Basin so that people can have one-stop-shopping.

Scott Schwenk: With that backdrop, and maybe some context about what the design is and isn't, and that it supplements but doesn't replace, let's get into some harder discussions.

Comment 3: [timestamp on Webinar recording: 52:00]

25% cap on core areas lacks scientific justification and seems arbitrary; any cap should accommodate needs of target conservation elements

Ken Elowe: I feel some responsibility. I thought it was very important to articulate through our modeling how much of the landscape is actually needed to support populations at the habitat we desire. That being said, and I think that's still an important part that we can glean from the data, is that even with that large landscape need, for practical conservation applicability we wanted to know where we go first. What's the strategic starting point that would be enough to get us going and keep us busy for some time, but would certainly not be the full conservation estate needed.

Mitch Hartley: One of my reservations about this approach is that it took us about 100 years to get to the protection level we're at now. I don't know if the 25% really allows us to prioritize where we go first. I think there's data that points us that way, but I'm most interested in the top 1% of the landscape. The other thing I don't like is the objectives. If we need 70-80% to conserve all species, I think we contradict ourselves to say we have a design that we go for 25%. I don't know how explicit we want to be – this design only gets us halfway there.

Andrew Maclachlan: Every part of the landscape is evaluated through this conservation design. The question is has that changed at all in the last 5 months (I haven't been here)? I'm assuming that's still the case. If we have no white space, then what I have to say is that when we chose 25%, the goal wasn't

to save 25%, it was to figure out where to start. If we're not careful with our messaging, then we end up with the perspective that Mitch has just conveyed. I don't think we need to change the design. I think we need to change the message. I don't think there's anything wrong with the design. Which 1% do we start with? I don't think that matters so much. It's like saying which dime do you start with to get to a dollar? It doesn't matter. We can't sit around and think about which 1% to start with. I think that's a specious argument and we don't need to go there. The 25% isn't meant as a scientific argument; it's meant as an anchor to start the process.

Emily Preston: I agree that this is a messaging issue. We spent a lot of time talking about that 25% number to come up with something that was narrowly focused, but would also provide a means to use the design for everyone in the watershed. I think we need more time to really look at these core areas and compare them against other analyses that have been done. Some places we just know. Looking at these things is part of the evaluation of this whole process, which I think needs to happen before we expand this. … We can't do that in just a month. I wouldn't change this part of the design, but we should figure out what we'd retain or change if we were going to do this again or do it somewhere else. That's an important thing that I want to do going forward. But I don't want to revisit these hard won decisions, especially this one, which we talked about a *lot*.

Jeff Horan: A lot of the comments on the handout are related to decisions that the core team made as a group. The core-connector design is our leading face, so it's the first thing that people are going to see. It gets down to messaging and what's the impression that we want to give. I agree with Mitch that we want to know where to go first. But land protection is also opportunity based, and so we need a broader area. I think the 25% is pretty limited. I'd like to be able to rank them. And I'd like to know what the next 25% is. I think it's misleading to lead with the 25% and say that it's all we need. Everyone in this room knows that that isn't enough. I don't think the approach is flawed, but what do we lead with to help people understand what we need?

Randy Dettmers: This was a subjective decision that we had a lot of conversation about. There were many decisions throughout the process. Maybe for future applications we need to note that things like 25% of the landscape cause people angst. Perhaps a more formal decision analysis process should be used for these more subjective decisions. The whole thing makes me think about the conversation of: yes it's a starting point; yes we have objectives. But maybe if we'd had more objectives in total from the beginning we could have come up with a better justification for the 25% type number.

Andrew Milliken: I have another thought for how to address this in addition to communications. We need to make sure that it is easy for people to combine the network with other parts of the package. If you are mostly interested in neotropical migratory birds, we should make it easy for you to look at relevant data and compare it to the core network. So I think some of this brings up questions about communications and information management.

Eric Sorenson: I want to back up for a minute. I don't want to give the impression based on the comments sent in by Vermont that we're against modeling or the work that Kevin's team did. I don't think there's a way to do this work without using modeling. I think IEI, Resilience, etc. is the best we've

got and I don't mean to criticize those tools. I think the sticking point is that the local information gets overwhelmed by the models, and it makes it a regional product only. We think we can make a product that's both regional and local. We don't get a lot of chances to do something like this, and if we don't do it now it might not happen. To Ken and Mitch's comments: if the objective of the project is not to conserve all that we need to, that should be blasted out in front. Based on the objectives, it implies that we're doing a design that going to conserve lots of plants and animals. We should start with a design that does that as well as we can. It should include the full range of what we need: connectivity, intact forests at scale, species, etc. If we want to set a limit on where to prioritize, then pick a subset of the overall package. But don't leave out the rest of the design that's critical for functioning for the long term. And don't pick the 25% first.

Scott Schwenk: I think the real challenge in that, that we can spend a few minutes talking about, is whether we can identify that fully functioning landscape. Is that everything that's undeveloped currently, or is it even more than what we have now? So then is what we would like to have anything less than what we already have? Are there any places on the landscape that we don't care about, and we would be comfortable excluding from the design? I think we should be aspirational, but I'm not sure how we'd express that.

Mitch Hartley: I think that's the starting point. I think where that discussion would lead matters. We need transparency. I think that's what Ken pushed for at the beginning. I think you'd be starting with "here's our position, here's what we want, here's what it takes." 25% would be more defensible if it was of our overall vision.

I think as a pilot one of the things we have to do is look at the entire process. It's been pointed out that there were certain constraints on how we did this. Now is the time to ask whether these were the right constraints. Whether than thinking about replicating this in different watersheds, is should we try a different approach in another watershed, and then compare and contrast? There are costs and time and tradeoffs, and I think now is the time to think about this a little bit more.

Randy Dettmers: To your question, Scott, of is it too late? I would say no. I think we have to try and describe the landscape that accomplishes all of our objectives. Ultimately we are trying to achieve all of our objectives. It will take further conversations that may be difficult. I think we should try that.

Kevin McGarigal: I'm trying to refrain from talking too much here. But I want to remind us that one of the factors that went into choosing an arbitrary threshold like 25% is the difficulty, and I'll say the impossibility, of quantitatively defining what is enough. The scientific community has not been able to answer that question. Think about the difficulty in defining a viable population size for a single species. There isn't even scientific consensus on the definition of viability. I'm not aware of a scientific consensus on how to define what is "enough." Given this, that we cannot define it and it is not knowable, we said that since we can't define the big number, then let's be strategic about it. Let's move in a direction that we agree on – that more is better – but we'll never know what is enough.

Patrick Comins: Getting back to what Eric is saying about what is enough. I guess my concern is about how the tool is used. I know that FWS is very serious about landscape conservation design. For example,

we should have designs before new refuges are established or new lands acquired. And what I don't want to see is people saying that because something is not in a core, that it doesn't merit any money spent or that land shouldn't be acquired. I don't want it to be used as an excuse for inaction.

Ken Elowe: I have to respond a little bit to Kevin. I'm comfortable with the tool as it is right now. But as someone involved in a fish and wildlife agency, and have been my entire career, we're always being asked to make decisions about how much is enough. Agencies are regularly put on the carpet either in the public process or the legislative process, when they get those numbers wrong. We can't come up with a number, but we're always being asked to look at trends and data to answer what is enough. The National Waterfowl Plan makes an attempt about how much is enough. The Atlantic Shorebird Strategy also makes an attempt at this. Even if it's hard, we have to try and articulate how we're trying to meet the expectations of the public. That being said, this idea of a landscape and what's needed, we need to be able to articulate somehow. I think we can start doing that with wildlife capability models. And some of us are going to have to take a stab at it. I also think we need a strategic way to do conservation. But I don't think we can abdicate our responsibility as fish and wildlife agencies to figure out what is enough. Ecosystems are hard to think about, but species are a metric that the public understand and expect us to describe. We've been using surrogates for a while. What Mitch is saying is that if we need to be able to do that, then the question for you Kevin is if we were to look at the species side of this as the how much is enough question, as part of a tiered approach, then that would be revamping the entire core-building process, right? If we built out the species cores up to 100% to meet the population objectives, could you then slice it to create tiers.

Kevin McGarigal: Most importantly, it doesn't address the ecosystem side of things, which the team decided to weight more heavily. On the species side, our modeling approach does not lend itself to population estimation for these species. While we recognize that with the right dataset for certain species, you can make a population estimate, it doesn't answer the question of how large a population, how well distributed, and with what genetic structure is necessary to sustain a population, however you define "sustain." And if you could agree upon that magic number of how much you'd need, then you'd still need a model that would allow you to estimate that, and we don't have models for all the species you'd need to for that. Granted it could be done for some species, and some game species have more data that would be useful for such a model.

Ken Elowe: But we could and we have looked at the landscape capability units, assuming a 1:1 relationship in terms of LC units versus population size. We've looked at what proportion of the population objective we're capturing by the cores already. I'm not saying those other questions are not valid – they are. But in the where we are today type mode, can we do better than we have, knowing that this can all be refined in the future.

Kevin McGarigal: We don't actually equate LC index with a population size estimate. We assume that as LC increases, that populations would increase, but we can't equate that to a certain population size or density. So if your goal is related to size or density, then we can't do that directly through landscape capability. All we can do is say that increasing LC is likely to increase a population size, well actually it

just means there is a higher likelihood of being able to support individuals of that species, but that doesn't translate directly into population size or persistence.

Ken Elowe: But that's the level of information that most people are working at. So it's better than using nothing at all.

[timestamp on Webinar recording: 1:29:00]

Scott Schwenk: I think we have perhaps a couple of options on the table. Mitch's suggestion is to stick with what we have here and essentially let the next pilot project try defining a 100% of need level. Another option that Randy and others have suggested is to try and add a step here. We could keep the 25% in cores – and not kid ourselves that there won't be arbitrariness to it – and use something like the Wildlands & Woodlands vision of 70% of the landscape in forests, which might be more like what we need entirely. And we could add that by adding more from the selection index or do additional core-building that encompasses more of the landscape.

So who would like to stick with what we have and leave this additional work for a later date or an additional watershed? I count 7.5 in the room are comfortable with sticking with what we have now. Who would like to pursue additional tiers? Ken you have your hand up again. I count 7.

Bill Labich: If you add the cores and connectors together, what proportion of the watershed is that? Just under 50%, right? And Wildlands & Woodlands is 70%, which includes working landscapes. That is a call to action. It's considered a synthesis document by environmental scientists and historians. It's not a design; it's not based on a scientific paper, other than what that group of people said. It's a call to action – just to distinguish between a design and a call to action.

Brad Compton: If people want to change things, I do think that's a policy solution. If people want to increase the area protected then we could add buffers.

Emily Preston: I rebut the buffers thing: it doesn't solve a problem with something being too arbitrary to add in a new arbitrary thing as the solution. Regarding revisiting the cores or not, I think the best use of our time is really looking into the data rather than resetting the cores.

Ken Elowe: I have a suggestion for a way forward. The usefulness of this as a strategy to explore conservation decisions – I haven't heard anything that says this is a wrong way to go. I also heard some interest in continuing to explore how to define the full landscape needed. So I recommend that we try to use this tool side by side with local information and evaluate to what degree it helps us make strategic decisions, starting now. Perhaps a small group would like to keep talking about an aspirational goal.

Scott Schwenk: We have a pretty even split here. I think we can have a discussion over the next couple of weeks and bring it back to the group for a more definitive yes or no answer.

Kevin McGarigal: Technically we have an approach that allows us to build cores to any level. The real question is how much. If it's not 25%, there still need to be a decision about how much. We'll still have the same arbitrariness to end at any point.

Bill Labich: I remember the meeting in which we saw higher percentages of cores and connectors, and everyone said "that's too much!" So if you expand it then you still have the key issue of messaging.

Patrick Comins: It would be optimal if we could have tiers, where we have top 25%, then 25-50%. That way you can evaluate opportunities and threats as they arise. I realize that our goal in a perfect world is to be proactive. But in practice - if an opportunity comes up, it would be good to have tiers so that we can evaluate the value of that. Where we need tools are answering whether parcels should be a priority for Forest Legacy, should it be a priority for the RCPP funding. Those decisions need a more solid background with which to evaluate things. Of course there will be exceptions, like migratory stopover, grassland birds, other small features that will be difficult to identify through this process. If we could put it into percentiles it might be helpful, and it might alleviate some concerns.

Kevin McGarigal: We did look at tiers at one point. The decision was that we would choose a single level for cores because the selection indices, IEI, resiliency, etc. are available as a continuous valuation. The technical issue for us is that if we create tiered cores then we'd have to decide how to deal with the connectors. Connectors are based on cores so if we had different core maps we'd also end up with 3 sets of connectors.

Patrick Comins: I find the connectors very confusing. I think all we're trying to illustrate with the connectors is that there should be a connection between cores.

Eric Sorenson: First, about messaging. I think if we release this or put it out there as a map with cores and connectors and a 25% cap. It won't matter how much messaging you do, in some locations it will be used as the maximum. For that reason I think we should include tiers, because people will ignore information about the layers to use with cores. I think if you come up with a method for what makes a functional landscape. If X number of blocks adjacent to each other form connectivity, then through a process like that you can build what looks like a functional landscape. Then you have forests represented at scale. Then I think we can get to a total area that we can say represents the full needs of species. I think if we start from 0 it won't work.

Scott Schwenk: I think that opens up a lot of new questions and I'm not sure we could agree on the final set.

Mitch Hartley: The construct we have here for connectivity is artificial. If we have 3 different sets of cores and they have 3 different sets of connectors, then to me that means the connectors are an artificial construct. There are other ways to think about connectors that are more permanent and fixed. Beginning with Habitat chose riparian corridors as the connectors. There are alternatives like that that I don't think we've discussed. I would suggest a fixed connector network that's scalable for 10-90% protection of the landscape. I think that should at least be on the table for a future design.

Jeff Horan: I think it's important to think about what the face of this is. What do people look at? I love the continuous surface but I don't think people understand how to use it. I'm also concerned that within our 25% core areas, we still only take into account 50% of the existing conservation estate. I also have a technical question about what happens if we grow the cores out up to 50% and then ran the

conductance. Then what would we do? We'd have larger blocks, and I think it would solve some of the issues that Eric was concerned about.

Comment 4: [timestamp on Webinar recording: 1:49:30]

Unfragmented forest blocks should be used as the unit of analysis rather than core areas; meaning of cores and connections within unfragmented forest is problematic

Scott Schwenk: This would potentially be a fundamental difference in approach, and that is orienting the design around forest blocks, rather than core areas. Short of changing the design, one approach could be to overlay core areas on top of the forest blocks, and this gives additional information about why these forest blocks are really important. Another variant could be to still use core areas, but define the entire forest block in which the core area resides as a second tier. Now, if we were to assign more of the landscape to core areas, some of it would fill in these forest blocks, but I'm not sure that fully addresses the question. Our fundamental approach has been that we're trying to identify the best of the best in the landscape and grow out core areas to encompass the really high core areas, and not use a road boundary to define what those core areas are.

Ken Elowe: As a conservation strategy, I support looking at forest blocks. We used it 15 years ago for Beginning with Habitat. That was the level of information we had at the time. We have more information now, and I think the capability to look at the ecological value of the whole landscape is a much more valuable tool than looking at forest blocks or parcels.

Patrick Comins: I like the suggestion of overlaying forest blocks. I think it also solves some of the issue of connectors being confusing. In a sense the cores and connectors are really a matrix. The areas outside of the cores and connectors influence them being chosen. To pick a set boundary for the connectors is arbitrary, but looking at the forest blocks would give us some intuitive ideas as to what functions as a buffer and/or connector. Secondly, I find forest blocks difficult in southern New England, because it's hard to decide what counts as a fragmenting feature. The other thing is that true blocks are not necessarily a useful unit to work at conservation, at least for interior forest species. So one of the things we've done in CT is look at forested landscape at the 1-km scale. It does have some shortcomings. What about developed areas within that block? Perhaps those could be excluded. In any case I'd like to put in a plug for including a forest blocks layer in the design.

Bill Labich: If we grew cores based on forest blocks, would that just result in fewer larger forest blocks with a bias toward the north where there are already large forested blocks.

Scott Schwenk: I think what you're getting at is that we'd have to have a whole new set of discussions…I don't want to say it's starting over but…

Patrick Comins: 100 acres of grassland could be a block, but 100 acres of forest would not be much.

Eric Sorenson: If you have a core area defined within a block it's going to be hard for a practitioner to operationalize how you conserve what will be a very nebulous boundary. That core area does need

something around it to be effective. It has a high IEI because it's not next to a road; it's in a good setting. What that place need to continue being that way is protection out to the road, or it will decrease in integrity.

Kevin McGarigal: One way to achieve them is to take the cores and buffer them to the next road, and we could call that a tier. The issue for us would then be whether we develop connectors and how.

Eric Sorenson: If you do that then the connectors become the road crossings.

Patrick Comins: Not all road crossings decrease or ruin forest functionality.
Kevin McGarigal: This relates back to Scott's earlier comment about the need to define the relative level of barriers. So there's the simple "all roads are barriers." I'm not sure on how to implement a block that extends across roads.

Patrick Comins: That's going back to the forested landscape approach, is percent of forest cover at the 1 km scale.

Emily Preston: In NH we've gotten away from the idea of road-bounded blocks for many reasons that have been articulated. It's arbitrary. For birds it's quite permeable; for frogs, not so much. What I like about what we did was that we looked at combinations of habitats, combinations of things that would make habitat better, but to identify core areas and allow practitioners to help a person who wants to put an easement on their land but leave out one spot for a house. The cores could indicate the best area on a parcel for the future house and the rest could be protected. In a way I feel like the road bounded blocks solution is going backwards.

BJ Richardson: I also wanted to point out that TNC already has developed a way to look at forest blocks and roads. That tool is already available to those who are interested in that particular thing. We're looking at putting that on data basin – it's already available to those who want to download it. I'm also trying to understand the practitioner area. I don't understand what the difficulty is because once they see the core area, they can tell from a map that they're within a road-bounded block.

Eric Sorenson: My point BJ is that if you don't identify the whole block as being important, then the value of the core area decreases as the block around it get developed. The other point is that you can't go in the field and see where the core area begins.

[timestamp on Webinar recording: **2:07:00]**

Scott Schwenk: I think we've got two options here. One option is that we allow and facilitate users to overlay forest blocks or the forested landscape (as defined in southern New England) on the design. Then we don't have to get into decisions about how to define those boundaries. The second option is that we would, as part of the actual design process, we would take a core and buffer it out to the road boundary of the road bounded block. It might not work everywhere in the region, as Patrick said. Kevin: A point of clarification. If you buffer the cores out to the roads, would the connectors be out from the original cores or from the blocks?

Scott Schwenk: From what I've heard, I think they'd be built on the blocks.

Kevin McGarigal: I think one viable option is to continue to build the connectors from the cores.

Scott Schwenk: I think we should set that decision aside for later if we are going to be able to do it either way.

So who would like to take the first option, where we keep the core network but facilitate viewing it with forested blocks? I count 12 in the room; Emily also votes yes. The other option is building forest blocks into the design more explicitly. Who supports that? I count 3. So the three that voted for the latter, can you live with the majority decision? Rachel, Patrick, and Eric. And Mitch. Can you live with it?

Eric Sorenson: I don't understand what that means, to live with it for now, when we're coming up with a regional design. This is different from a small project in Maine. I am not sure if we will be able to change this later. This is a pilot for a regional design, and I don't think we can change a regional design every few years.

BJ Richardson: I think we might want to not think too much about the regional design. We need to get the pilot right and recognize that the regional design will be pretty different.

Mitch Hartley: Most of my comments are coming from the perspective of things that I would change in the next iteration. I am not thinking of this as a regional model. I don't think we considered some things I'm trying to suggest. One big thing for me is the dynamic of how understandable is it, how simple it is, how easy it is for people to accept? Using blocks instead of continuous surfaces are important to … I really strongly share Eric's concern about mappable features vs. continuous, but perhaps for different reasons. I don't know that we will do this again. I guess I'm saying the same thing as BJ.

Randy Dettmers: I have a question back to you Eric. If we were to do a full set of objectives and a full landscape design, would that also address your concerns about forest blocks? Within the blocks, here's our top % of what we'd want to start with.

Eric Sorenson: I agree. A lot of this is that there are a lot of moving parts. I'm concerned that if we don't include all the parts, it won't protect what we want it to protect. I think forest blocks are simplistic but useful. If we had a full picture that would capture everything we need but it's not forest blocks, then that's fine.

Lunch Break [timestamp on Webinar recording: 2:17] (video paused, so discussion follows directly)

Ken Elowe: A lot of what we're talking about are not modeling decisions, but rather formatting decisions. It's important to finish up the questions about the data. So to me that has been very encouraging.

Scott Schwenk: Quick recap. We want to make the point that the design is not the definitive solution for all conservation questions. We are going to explore what it might mean to have a fuller representation of the landscape. If there are any people who will participate in that – I'm going to nominate Randy, Eric,

and Ken – we won't have a full meeting about it but we'll form a small team. The decision about forest blocks are to go with the overlay approach for forest blocks to identify how they are important, recognizing that if we alter the core area model that it will pick up more of the forest blocks.

Next we're going to skip ahead to the aquatic issues.

Comment 6: [timestamp on Webinar recording: 2:21:30]

Include all rivers and streams in the conservation design as necessary parts of the functioning aquatic network

Eric Sorenson: These aren't my thoughts; they are comments come from the aquatic ecologists that I met with. They argue that it's a network in which all of it is important. Unlike terrestrial networks, there aren't any parts of the aquatic networks that you don't need, that you can do without. There are many ways you can prioritize aquatic areas – because they are especially good, or especially bad. I don't think you can maintain the good areas unless you maintain or improve the bad areas above and below.

John Warner: I think we recognize that the rivers are a network, and we had discussions about what it means to fragment a river. We wanted to extend the stream segments and make them into a network, but I don't think there was any value to say everything was important. It wouldn't advance our decision-making in any way. It depends on how you are going to use it. What areas are really important? Where are the barriers to passage, especially between fragmented good areas? The idea was to try to come up with a depiction of the best of the best, to target your in-river restoration activities and your culvert work. It's otherwise hard to decide where you're going to start.

Dave Perkins: We identified high-values to help highlight them. We have the underlying color spaghetti map that shows the relative value of all the areas. We can't lose sight of that tool to help at any given geography that we want to work in. We also had a lot of discussions about studying watershed blocks, in terms of HUCs or catchments. You can always look at things from that perspective, and we ultimately decided to look at stream segments. And part of what helped us go the other way is that we do have to Aquatic Index of Ecological Integrity.

Andrew Mac: I agree.

Kevin McGarigal: Some of the stuff that Dave was talking about happened within the aquatics subteam. We did a whole analysis that was HUC-based. We summarized integrity at the catchment scale, for example. The Core Team as a whole never really saw that stuff. The other thing was to see if you guys wanted to comment on the Active River Area that's in these topics.

John Warner: To me, this is just a different way to look at it. In headwater streams, we have more of a watershed-based buffer. In other areas, it is similar to the active river areas, but we didn't really consider that concept when we were making our decisions. I'm trying to consider the implications beyond the example given by Vermont, and what that represents vs. what we have.

Scott Schwenk: Do we want to stick with cores, or is there anyone who wants to advocate for including all rivers and streams into the design?

Dave Paulson: Something Eric and I discussed is that where this idea came from is the question of what do we need to preserve all of the aquatic diversity. And the response is that we need all of it. In contrast, where we landed with the design was more of a high value prioritization perspective.

Andy Fisk: I get the point from Vermont. I think it's their prerogative to focus on everything. As long as this doesn't do violence to that, so someone can't go to Vermont and say that only the core areas are worthwhile, it seems like we don't need to make the change for this product. My other comment is that the ability to overlay allows you to do different things, to include Active River Areas and the like. So there are solutions that allow Vermont's observation either to be not harmed, or get at what they are looking to do. So their comments are good observations, and I think these are reasonable resolutions.

Scott Schwenk: So we're not saying that this design trumps anyone else's design. If Vermont places equal value across their network, we're not trying to undermine that.

Eric Sorenson: You know, Vermont got all worked up about this and wrote a whole bunch of stuff. This is just our perspective, but it's also our perspective from trying to consider what happens when this goes to 9 other states and becomes regional. That's a big question around this little topic. The Vermont fish and aquatics people are adamant that you can't leave anything out of a network. They do think you can prioritize. Does it go to the 9 other states in this form, or are the 9 other states going to be involved in deciding what this looks like? Vermont fish and aquatics people are adamant that you can't leave anything out in a conservation design for what we need.

Scott Schwenk: Two comments. Rather than a voting process, we're going to explore the concept of full landscape; what we really need – and I think that will address a lot of these concerns. This is a learning process all the way through – we're not going to jump directly to a regional design based on what we decide today.

Andrew Milliken: I think we should take that pressure off ourselves. This is a very important part of a larger learning process. We will take what we learn here to other watersheds and the region. We will not develop a regional design based on what happened in this watershed with no further steps and no further discussion. I can promise that. We might do some modeling based on these decisions. There will be no regional design driven by the decisions here without some kind of much more involved process with a set of partners, including some things I was going to talk about at the end of the meeting. I think we can take the pressure off that way and think about what we want to learn from implementation as well as the process we've gone through to date.

John Warner: We were trying to prioritize the best habitat. If the question was asked was what do you need, then we'd have said you need everything too, with good connectivity and good water quality. It isn't disjunctive the way the terrestrial landscape is. So maybe it's beyond messaging. We wanted to identify the highest quality aquatic habitats. I think part of the issue here is the assumption about the concept about what this was intended to be in the first place.

Eric Sorenson: I think there are many places in the terrestrial system that we almost have to write off, whether it's cities or highways or cornfields. There are parts of the terrestrial system we can and should write off in a reasonable conservation design, and the point is that you can't in an aquatic design.

Comments 7 and 8: [timestamp on Webinar recording: 2:39:30]

Incorporate all Active River Areas into the design, given the ecological importance of riparian areas and floodplains

Replace aquatic buffers for lower reaches with Active River Areas

Scott Schwenk: We do have this concept of Active River Areas (ARAs) for cores – do we want to do something? Kevin, do you want to describe what you recall about the subteam's discussion of these datasets.

Kevin McGarigal: I don't think the aquatic subteam formally discussed ARAs, but there was a focused discussion with TNC about how to incorporate floodplains into the design. We decided for various reasons to incorporate the floodplain restoration map and not to use the ARAs dataset.

Andrew Milliken: The goal of that meeting was to look at both floodplains and riparian areas as connections. I think looking over the ARAs and at specific examples, such as Hadley, we realized it didn't really give us what we wanted. Also it was kind of coarse because it relied on elevation which was coarser than we wanted. I remember in the end we decided that wasn't the best way to go, but I can't remember all of the details.

Scott Schwenk: I'm not quite sure where to go from here. This is a suggestion or recommendation from Vermont that the ARAs be incorporated. This was considered prior and the team decided not to use it, but we can revisit it if the team thinks we should. Can we make a decision to stick with where we are, or to reevaluate using them?

Andrew Mac: I think we are forcing an answer to something for which we lack information. I don't think we can answer that question now. Those of us in the room already decided not to use it, so without more details from Eric's team about specifically why they want to include the Active River Areas, we don't have a basis to change our minds.

Eric Sorenson: This is the part of the aquatics that I feel like I actually know something about. If the ARA mostly defines the valley bottom where there are glacial lake deposited soils or alluvial soils, where the river could theoretically migrate, if we don't include those areas, if they're not targeted for some kind of conservation then they get left out of the picture. I think they're critical to river function.

Scott Schwenk: I'm going to use what Andrew said as an escape hatch. If the aquatic group is willing to discuss this a little more, maybe they can get some more information. Dave and John are you okay with discussing this later, outside of the full group? (yes)

Comment 9: [timestamp on Webinar recording: 2:46:00]

Rare, threatened, and endangered species should be incorporated into the core design

Scott Schwenk: There are some elements here that we all agree are important, but for various reasons they are not baked into the design. And Eric has explained why he and other folks have advocated for making the effort to try to include these, and if we don't have them, then they consider it a shortcoming in our design work.

One of those elements is the set of rare, and threatened and endangered species. It's a topic we've discussed quite a bit. I think there is agreement that this is very important. However, the question is what can we specifically do in terms of specific species data or not, in this kind of design work. Again, the context is that this design is not to be used by itself. It's to be used in combination with other products. So, certainly one option is for state agencies to use their local rare species data to make conservation decisions. However, the message from some partners is to revisit this and see if there is something that we can do to incorporate rare species data into the design. There are a few issues with this, including that some of this data is quite sensitive. Some states will be reluctant to release this data because some of these species face threats from collection. Some datasets are biased because rare species tend to be found where people look for them, such as around universities, rather than in those areas that are truly the best habitat for them. In addition, some species are consistently in the same place, but others are more ephemeral in their use of different parts of the landscape, which presents a challenge for incorporating them into the cores.

Emily Preston: I think that there is value in the rare species data. I think the step that we might take to address this best is to look. We can look and see if the core areas actually address the majority of the known rare species locations. Does the analysis do a really good job of picking up those areas? A terrible job? Or something in between? This could be particularly important at the CTR scale. I don't think, however, that we should be leaping to change the analysis. But it's an important thing to look at in this pilot, to see how we did.

Ken Elowe: Thanks Emily, those are great comments. I would love to see us be able to address TESP and rare species. It's been challenging to get all the states on the same page about how they want to go about it. I think the important thing is to determine how to decide how to talk about whether or not the design does a good job addressing rare species instances. Getting the data on these species at a regional scale has already been a challenge the LCCs have encountered.

Emily Preston: I think we have been the most troublesome because we have the most restrictions. But we could take a quick look at how the core areas now overlap rare species. I also think that we don't think enough about keeping common species common. We also want to stop species from winding up on these lists. We should take a look and see how well the analysis did before doing something different.

Kevin McGarigal: The rare species that were incorporated are bat hibernacula, tiger beetle, and new England cottontail.

Dave Warner: We also have a lot of restrictions in Massachusetts. We have to bury it so much that it may not be useful to have it in there.

Eric Sorenson: Not all rare species are created equal. There are some that we are not interested in including in a conservation design. I think we need to prioritize which species fit into a regional conservation design and which don't, based on which factors are most important.

Rachel Cliche: I want to remind people that we are using representative species, which I would think would represent the habitats for the majority of these rare species. I don't want people to forget that we're using representative species for that reason.

Andrew Milliken: Just to build on that, these are on the fine-filter side of the coarse-filter spectrum. A few species have hyper-specific needs. The question is, how do we deal with that? Is there a way to represent that in the design, or is it a complementary tool? Having worked with the NE Diversity Tech Committee as they wrestled with the RSGCN occurrence data, it's really challenging. Those are the experts within each state and they're still not completely sure how to use that data.

Emily Preston: I want to point out that the representative species didn't address a lot of the rare species for me. Some were too broad-ranging and didn't represent habitat types any more distinctly than the underlying system. I think the representative species is one of the weaknesses of this pilot project that we should be exploring further.

Jeff Horan: I'd like to put this forward as one of the best approaches for a regional approach where you look at the design with, say, BioMap. You don't necessarily want to build cores around all the habitat. It is a special case study where we lay out that we did not address this specifically, but we provide the steps needed to incorporate it into a given conservation plan stepped down from the design.

Eric Sorenson: I agree with Jeff to some extent – it is a lot of effort. But if we don't do it, and consistently, then I don't think it will get done on a regional level. Take that prioritized list of rare species and use it to prioritize cores. Maybe that works better for blocks than cores. You wouldn't need to reveal what the species is.

Ken Elowe: I think the effort that the states are undertaking right now with RCOAs is something we need to learn from. They are trying to do what we're talking about here. How do you depict the important areas for all species? Representative species have their limits with respect to utility. And not all species get picked up by the design. Nor was it designed to. To Emily's point, Representative species were designed to get at broader scale habitats that could bring along some of the more common species, and to give us a metric for what kinds of habitat and what kinds of distribution was necessary to sustain some of those broad categories of habitat. I look at rare species as chocolate chips on the landscape – you're just going to have to locate them. If the diversity tech committee can help us do that on a regional scale, then we can consider including them.

Scott Schwenk: We have two things to potentially explore. 1) Try and do an evaluation of how well the cores capture rare species – is that something the states can help with? It's not something the staff here could do by ourselves. I suggest that the 4 states determine whether this is something we could do reasonably quickly. 2) Recognizing that there will be other efforts, can we prioritize the cores based on the number of rare species, or some particular aspects of rare species? The states again would have to lead that effort. So my proposal is that the 4 states have more conversation about one or both of those, and then we'll try to move forward. Does that sound reasonable?

Next Steps [timestamp on Webinar recording: 3:06:50]

Nancy McGarigal: It looks like we'll need to put off the lessons learned discussion. One thing we should do is suggest how we'll get back to folks on the topics we didn't cover – maybe Andrew will cover this. We want to follow up and we don't want to miss any comments – some more came in after we prepared this summary.

Scott Schwenk: I want to thank everyone for a really constructive dialogue. Eric, I want to thank you; the spotlight has been on you, but I really appreciate you working so hard on this.

Nancy McGarigal: And I just want to thank Scott. Those of us here in the office know that Scott is the workhorse of the group. Thank you very much Scott, for that. Here's Andrew.

Andrew Milliken: I also want to recognize Scott, who has been working incredibly hard to make this work, and facilitate between this team and UMass. The intellectual energy he has put into this has really added a high degree of integrity. Thank you Scott. On to Next Steps. We do need a way of addressing the issues we didn't get to today.

Ken Elowe: I think email forums are difficult. I have a question to the group: is there an interest in coming together periodically to discuss how implementation is going? Would the group be interested in coming together if we facilitated that? Do we need a face-to-face forum, or can it be done online or through conference calls. But would you like to stay in touch?

Nancy McGarigal: I see a nodding of heads.

Emily Preston: In order for us to go forward, we need to digest it and work with it, and then come back together and see how it's working. I think it's important for USFWS to hear from the states on how it's working. I think when we're having conversations it helps, but I think we should have shorter meetings. I think it would be useful to check in about what is working and not working for different people.

Bill Labich: I think it's important to take this out for a spin. I know the RCPs are eager to look at the data and work with the data. We'll have a meeting this fall and I'd like to get the design out there. So I support continuing to meet. I think we should meet again in 4 months.

Patrick Comins: From this morning's discussion it seems like things might be changing, so I think we'd want to get together and see how it has changed.

Mitch Hartley: If we're really going to have a discussion then I think it has to be in person. Maybe we should consider the WebEx type stuff when you raise your hand online. I just can't imagine a productive phone conversation without some kind of moderation.

Jeff Horan: One piece of this is us addressing the CT design, and the next piece is that I don't know that we've defined how this group has a role in developing a 13-state regional design. I think that's a question that should come back here. But I'd like to know what the role if of this core team in rolling out the full design for the northeast.

Andrew Milliken: We have some short-term things that I'd like to see if we can address. Things that we did not get a chance to address. We do need a way to address them. I think we can ask via email who is interested in participating that way. A few small groups are going to explore specific issues. Hopefully we can narrow down what needs to be discussed by the large group and have a very focused call. I just don't want to fail to address these issues just because we ran out of time. So we do need people's input on what they think is important to discuss further, and then we need people who care about those topics to attend a conference call on it.

I can reiterate what Scott listed off but that might not be the best use of time. In general it was related to communications, visualizations, a group that will explore the full landscape design, experiment with overlaying on forest blocks, a discussion with people familiar with Active River Areas, and thinking through an approach for rare species (particularly the states). We can get those listed out and make sure people are aware of those. So there is an open question here: can we also begin the process of learning through implementation as a parallel process? It gets back to the question that was up on the screen. Can we implement the design and package as it now exists. I will speak for the LCC Steering Committee: they were very interested in the learning that would happen through implementation, as well as the learning from the process. So, are we at that point? You can ponder that for a minute. I think that we have to end this meeting with some agreement on that.

Other things that are likely to happen. First, there is additional work that needs to happen before we can think about regional conservation designs. There are some things we want to correct or improve. In some cases UMass will work with TNC. For example, there is the lakes and ponds classification. The bottom line is that there is a set of next steps that will happen. Another thing that was built into a previous grant was an evaluation of the representative species approach.

One of the things we didn't get to today is more documentation and peer review, and potentially publications. Kevin said there is interest in publishing at least on IEI, and maybe on the process. So that's something that is going to go forward. In addition, I think there was also the idea of a partner/peer review of the design. As I mentioned, there was a group that did some work like this up front, and so maybe a similar group could be convened.

For those of you who aren't aware, there is a group of states that are thinking about RCOAs for reference in State Wildlife Action Plans. This is being led by the State Wildlife Program Managers. They are trying to get at species of greatest conservation need and regional concern. They are trying to focus on a conservation design for these species. They had a workshop in March and are following the work

being done in the Connecticut River. That is a parallel effort that needs to converge with this process going forward in order to develop a regional conservation design. From both of those efforts we'll have good learning that will help us think about regional conservation design. It would be great if there were some people involved in this effort, and some from the RCOA process, as well as others, to form a team to do the regional conservation design. We've talked about whether or not it makes sense to take the steps developed as a team here and use them to run a regional conservation design. However, that's a nontrivial computation task at the regional scale, so we'll have some review before we do that.

Bill Labich: What is the scale of a regional conservation opportunity area?

Andrew Milliken: It would look something like a core area. It's a network of areas for conservation of the regional species of greatest conservation need.

Bill Labich: Is there a size? A million acres? All of New England?

Andrew Milliken: I think it would look something like a core area. There is interest from other watersheds in trying to learn from our process and apply it elsewhere. Bob Houston from the Gulf of Maine has been listening in. There are also interested partners in the Susquehanna. So there is a need to develop lessons learned for those groups. I want to emphasize what I said earlier, which is that as a pilot, what we have learned until now and what we'll learn from implementing, will be very important for other watersheds. This increases the priority of getting back together to share lessons learned. At some point, even our regional boundary is something we need to cross. For example, the South Atlantic LCC has their own version of a conservation design, and we'll need to develop a way to merge them.

Nancy McGarigal: Is it reasonable to have some sort of meeting in 2 months to go over some of the concerns and talk about the larger conservation strategy? I heard 4 months was a target for people hoping to do field testing. And then we want to get back to some of the concerns that were brought up about the current design.

Andrew Milliken: We can have the group identify which issues are the most important to them

Scott Schwenk: Regarding rolling this out, it's a very different message to roll out the 25% cores plus connectors, vs. rolling out something tiered for the whole landscape, and thus needing to wait until that was completed.

Ken Elowe: I don't think we can answer these questions now. We need to think through this and present a strategy for going through all of these things. I propose the planning group put our heads together and come up with a strategy to propose to the group in a couple of weeks.

Nancy McGarigal: We'll have to put off Dave until a future date. We're going to break now for ice cream. I hope everyone feels good about today. We've put some things off, but it's because we've been listening. We also don't have everyone in the room today who has been actively involved in the past, so it will be good to bring them in as well. Thank you to those on the phone. For the social, we want everyone to make their own core-connector network in ice cream.