

Connecticut River Watershed Landscape Conservation Design  
Core Team Meeting  
May 30, 2014

Attendees

*In person:*

Dave Stier, Springfield Museums/Friends of Conte  
Marvin Moriarty, Friends of Conte  
Mitch Hartley, USFWS Migratory Birds  
Randy Dettmers, USFWS Migratory Birds  
Ken Sprankle, USFWS CT River Coordinator  
Georgia Basso, USFWS Coastal Program/EPA Long Island Sound Study  
Colleen Sculley, USFWS Wildlife and Sports Fish Restoration  
Bill Labich, Highstead  
Katie Kennedy, The Nature Conservancy  
Andy Fisk, CT River Watershed Council  
Tim Wildman, CT DEEP, Inland Fisheries  
Jenny Dickson, CT DEEP  
Eric Sorenson, VT Fish and Wildlife  
Andrew French, Silvio O Conte Refuge  
Rachel Cliché, Silvio O Conte Refuge  
Cynthia Boettner, Silvio O Conte Refuge  
Chad Rittenhouse, Univ of CT  
Andrew Milliken, USFWS Science Applications  
Andrew MacLachlan – USFWS, Science Applications  
David Eisenhauer – USFWS, Science Applications  
Scott Schwenk, USFWS Science Applications  
Maritza Mallek, USFWS Science Applications  
BJ Richardson, USFWS, Science Applications  
Lori Pelech, USFWS, Science Applications  
Ken Elowe, USFWS Science Applications  
Ethan Plunkett, UMASS  
Bill DeLuca, UMASS  
Jeff Horan, USFWS Refuges  
Nancy McGarigal, USFWS Refuges  
Jan Taylor, USFWS Refuges  
Bill Thompson, USFWS Refuges

*Via Webinar/phone:*

Jed Wright – USFWS, Gulf of Maine Program  
Emily Preston – NH Fish and Game  
Mike Slattery – USFWS, Chesapeake Bay Program  
Bill Jenkins – EPA  
Bob Houston – USFWS, Gulf of Maine Program  
John Warner – USFWS, NE Field Office  
Patrick Comins – Audubon CT/Friends of Conte  
Kevin McGarigal – UMASS  
Pete Murdoch - USGS

## **I. Welcome (Nancy McGarigal)**

- Nancy reminded attendees that we had scheduled monthly core team meetings through August and she now suggests that members secure Sept 26 and Oct 31 as well. The October meeting could potentially focus on next steps and implementation of the design.
- Nancy let attendees know that she and Dave Eisenhauer are trying to pull together a simple questionnaire to give to core team members as a “pulse check” on how folks think the process is going. It will likely be done in SurveyMonkey and shared via email. So, be on the lookout for it.

## **II. Update from Terrestrial Subteam (Randy Dettmers)**

- reviewed underrepresented spp and ecosystems
- still focusing on bat hibernacula and whether we can obtain data to include in design
- still collecting data from States on other underrepresented species
- more discussion needed to reach consensus about inclusion of endangered plants and other listed species
- discussed population objectives and how to deal with species that don't live their entire lifecycle within CT River Watershed

## **III. Update from Aquatics Subteam (Andrew MacLachlan)**

- met earlier in May, will meet again soon
- looking at different macrogroups for the aquatic world
- trying to use physical aquatic environment characteristics
- how do we include ponds, lakes, and differentiate from rivers, streams
- going to review different weighting metrics for measures of ecological integrity
- connectivity is extremely important
- next week is a presentation on connectivity metrics to define ecological flows
- dams and culverts (I didn't understand this well)
- today they will talk about endangered/rare species

*Discussion:* Bill Labich: Given that there two separate subteams working independently, aquatics and terrestrial, is there a sense that we are encountering similar issues/challenges with process decisions. Will there be a meeting to discuss this overlap before we make any final decisions? Seems like there are opportunities to benefit from the thought and planning processes being done by the respective teams. It would be interesting to find out where there are similarities in the frameworks being used for decision-making.

Nancy suggests this could be a focus of the next core team meeting

## **IV. Presentation by UMass DSL Team (Kevin McGarigal)**

\*\*These note are only highlights from Kevin's presentation. The full presentation is posted on the project website under this meeting date: <http://northatlanticlcc.org/groups/connecticut-river-watershed-pilot>

- reminded us of the 7 steps in the full conservation design process; we are in step 2 – the design phase

- reminded us we are developing and evaluating 3 scenarios or approaches: a) ecosystem-based; b) species-based; c) combined ecosystem and species approach
- we are currently in the process of selecting tiered core areas
- provided a quick update on the 4 work products that will be combined to create a selective index:
  - available data sets on the rare and other important species we identified
  - IEI representing the best of the best by macrogroup
  - TNC's Resiliency information
  - USGS headwater stream temperature sensitivity information (Ben Letcher and Ana Rosner's work)
- Kevin displayed preliminary maps for the Watershed that included the 4 products integrated using an unweighted mean (eg took the highest values from each ecosystem), and one with a weighted mean based on the preliminary weighting the Terrestrial subteam came up with at the April meeting.
- He identified decision points and some of the questions we need to answer – Do we want to weight products? What should the weight be? A summary of key decisions remaining:
  - Complete objectives for species and ecosystems
  - weighting aquatic systems/macrogroups
  - weighting components of core area selection index
  - finalize rare species to add to design
  - deciding how much land to allocate to core areas
  - deciding whether there should be a minimum core area size
  - deciding how to delineate core areas for aquatics

**Question (Eric Sorenson):** Why are we using resiliency index AND the IEI?

**Response:** They are different enough that it's worth considering both, although it's true that there are some factors that are accounted for in both indices. For each step in the process, there are many options. What inputs to use, how to weight them, etc. So the problem is that we don't have the time and resources to explore all possible scenarios, so instead we are trying to reach consensus on which products to use and how to weight them so that we can have fewer scenarios and they can be completed, so it's practical.

**Question (Eric Sorenson):** Afterwards, how much room where there be for tweaking based on ground-truthing or expert opinion?

**Response:** Field verification is ideal at all stages. Kevin hopes that any local experts will do an assessment and provide feedback. It's hard to say how much that feedback can be incorporated because we don't have a time scale for the feedback coming in, and we are constrained by the timeline of Phase 2.

**Comment (Emily Preston):** State agency people can be looking at the regional level results and ask if it makes sense to them for their state based on local expert opinion. If results are vastly different from what the state thinks is true, then we may need to regroup, because we don't want the States to dismiss the results out of hand.

**Response:** Kevin says there should be a formal and frequent way to provide feedback at each step so that we know how much this is resonating with different groups. I encourage that you evaluate products as they are developed. Yes, if the results are "vastly" different

then what you know is occurring “on the ground”, then we’re wrong. But if they’re the same, that’s not good either. We want to provide new insights. Andrew says we need to be sure we explain why the results differ from results obtained by other people. For example, with the incorporation of resiliency and other metrics, the output priority areas may change, but for a good reason. Bottom line is that there should be some similar results with State agency planning efforts, but also differences due to such things as using a regional context, and the incorporation of resiliency, IEI, and landscape change.

**Question (Eric Sorenson):** I would like to be able to test the IEI on Vermont only to see how it compares to other things. Also, scaling by macrogroups vs. ecosystem – why?

**Response:** First, Yes, the IEI grid is available in GIS. Second, scaling by quantiles is used to put things on the same level playing field when you have things that have different and wacky distributions, and allows you to say where’s the best 1% of the landscape, macrogroup, ecosystem, etc. So quantile scaling is necessary for combining products and interpreting the final result. That said, if an area is small enough that an ecosystem doesn’t contain much area, when you quantile scale it you might scale within a patch from best to worst. Which is to say that the scaling has to be implemented over a large scale. So the problem with ecosystems is that a lot of them are really small and the scaling produces weird results. Also, several ecosystems are very similar to each other, but they are in different ecoregions and they get different names, so then the scaling occurs over those ecosystems separately instead of over them merged. This is the reason for scaling at the macrogroup. Also, be aware that ecosystem-level information is being used in the process; you just don’t really see it at the macrogroup level.

**Question: (Jeff Horan)** Landscape capability – and expected increase for eastern meadowlark. Yesterday we were talking about whether we should not include species that are at the edge of their range, or at least not give them higher weights.

**Response:** Not a question Kevin can answer independently. Some species have the core of the range in the CT River, some are at an edge of their range. The spp identified as priorities have a substantial portion of their distribution in the CT watershed, so none of them are really at an outlying edge. But you bring up an interesting question, of how do we deal with species that are expected to increase with climate change. That’s not an academic question, but rather a management one, so it’s a question for the subgroups. But we also need to know about how land use will change in the future before we can make a decision about what to do about species like eastern meadowlark, especially since the reason it’s likely to increase is due to its use of grassland habitat.

**Question (Ken Elowe):** In the vulnerability index, are we going to be able to tease out the difference between the climate and land use impacts, since we maybe can’t do anything about climate, but we can influence land use patterns? It might be preferable to have them separate as opposed to having a combined index.

**Response:** Kevin said we can certainly have climate vulnerability separate from habitat vulnerability (based on land use). As we think about the metrics we want, it becomes clear that there are many different ways to potentially combine measures into new metrics. These are things the breakout groups can brainstorm about.

**Comment (Scott Schwenk)** – Everyone should be aware that while Kevin focused on core areas, they are not the only focus. The final product will be continuous or tiered.

**Question (Marvin Moriarty):** On slide 3 of Kevin’s presentation, the two comments were very interesting. Have you or the LCC given consideration thus far to the sociocultural and economic considerations? The public is likely to have ideas about that. It would be good to have public participation throughout the process.

**Response:** Obviously these are very important, and in the real world they are essential steps. They are not explicitly considered in the model because both those side details are outside the scope of the DSL project. For instance, there isn’t an incorporation of economic data into the design process. It is being driven by ecological considerations. For now we have to leave this and field verification out. At this point such things won’t be brought in formally, but rather based on a gut check by partners.

**Comment (Ken Elowe):** We’ll have to consider this when we get to implementation, but as Scott just mentioned, when we’re trying to sustain the full expectations of ecosystems on the landscape, it turns out that huge amounts of conservation are needed, and then we have to figure out whether that’s really what the public wants, or even if it is, is it what the public will tolerate. So we are aiming for a conservation design that is ecologically based. At the implementation step, we’ll have to dive into sociocultural and economic considerations at multiple levels of government/public participation.

**Question (Bill Labich):** How are you deciding between vulnerability or other means of identifying areas to protect? How will we choose between focusing on persistence, vs. biodiversity, etc? I understand that the model will contain some level of subjectivity. When do you turn it over to the implementers?

**Response:** This issue has come up in the last two meeting as well. Are we striving for a single regional conservation design that meets all needs? The answer is yes and no. We are trying to move forward as a group and reach consensus on a regional conservation design that meets everyone’s consensus needs, so that we have a common framework from which to work throughout the region, recognizing that many subjective decisions were made during the process with the input of the LCC. There will be a consensus design but also many additional designs that will be produced in the process. Not all of this is in the scope of the current project. One of the proposals for Phase 3 is to create a software decision support tool that will allow users to go through and select inputs and create their own design.

**Comment (Mitch Hartley):** Comment along similar lines...I didn’t see the Design Conservation Network as the main purpose of what we’re doing right now. Over the course of the last three meetings I’m getting a sense that we are creating a conservation network of core areas and networked connections. I think this is really important to have, but in my mind conservation design is not only about designing a network. It’s about helping us make decisions using whatever tools we have available. And those tools have a lot of constrains – for example, a lot of this focuses on adding areas, rather than restoring what we have. I guess I’m looking for some clarity that the 7 design steps is the real goal of the Pilot, or whether part of this is going to be

about how do we make decisions about which parts of the landscape have how much value and for what.

*Response:* Perhaps you are getting hung up on core area delineation; and the idea that all we care about are the core areas, but that's not the case. The delineation of core areas is supposed to focus some of our management on places where they're likely to do the most good. If you want to think about tools, there are a plethora of data products that are being created through the DSL process. So, all of these are tools that can inform managers about the value of a particular place. Any user can use these GIS products individually or in combination however they want. What we're trying to do with the conservation network is to take a regional perspective specifically that takes into account needs across the watershed. Hopefully through this design process we'll identify places that are important locally and regionally. So it's not exactly what you want, but it is complementary and not contradictory. These are not just places for land protection, but are also places where management is needed, or where restoration is warranted, etc.

*Comment (Ken Elowe):* This project is valuable because it gives us the ability to combine our collective conservation efforts to have a greater effect than we do individually, and that's really what we're after here. It's not going to make decisions for all people, but it's providing relative knowledge that incorporates species and landscapes beyond that which we ordinarily focus on. The design provides an opportunity of what we can achieve under our combined responsibilities and provides context for all of us in our respective agencies/organizations to make decisions about where and how to prioritize.

#### **VI. Close out before Break-Out Sessions**

Reminder that next meeting is June 27, 2014 here in the Regional Office from 10 to 2.

Action item: Follow-up next month on suggestion that the two subteams provide highlights of their respective progress and where strategies/issues/concerns could benefit the other subteam.

#### **Connecticut River Watershed Landscape Conservation Design Pilot Study Core Team Meeting Dates**

***\*\*\*All meetings will be in the USFWS Regional Office, Hadley, Massachusetts from 10:00 am to 2:00 pm\*\*\****

Friday, April 25

Friday, May 30

Friday June 27

Friday, July 25

Friday, August 29

Friday, September 26 (potentially need alternate location)

Friday, October 31