

Terrestrial Subteam Breakout Meeting Notes

July 25, 2014

Attendance: Maritza Mallek, Nancy McGarigal, Scott Schwenk, Jeff Horan, Georgia Basso, Jenny Dixon, Rachel Cliche

Phone Attendees: Bob Houston, Emily Preston, Eric Sorenson, Patrick Comins, Mike Slattery, Randy Dettmers

Emily: When did we decide we were going with “fewer, larger” core areas as depicted in Kevin’s presentation? When did we decide on a 5% or 10% slice? I would like to see the top 10% slice; I have a concern with losing too many of smaller scale high priority areas. I’m also not sure of the algorithm approach; I’d like to know more.

Scott: We can come up with many ways to create core areas. Those decisions are definitely not final. We asked Kevin to share today two seeding options, which is what you saw in the slide. We are going to ask Kevin for a writeup of the algorithm, because we need to know what goes into it. Also, I want to ask for at least 2 runs using different %s as the seed, and we can also ask for different final extents for the core.

Randy: As part of that, can Kevin give us some numerical information in terms of the proportion of each macrogroup that is captured when he does the algorithm in different ways? We want to see the visual output, but also need the numbers.

Scott: Agreed. And we want to see numbers for the ecological systems as well.

Eric: I wouldn’t be surprised if rare species are associated with small fragmented areas.

Jeff: Perhaps we want to exclude certain types from core areas, such as light industrial. So we need to make some mapping rules, for situations like that, to give to Kevin’s team.

Scott: We also need to consider whether we want to wait and see if some of this is addressed when we develop species.

Rachel: I think we should wait so we have more information, and if we have missing areas then we can choose them later on.

Emily: Yes, but we should also keep in mind that one goal is for this to be a transferable product, as a pilot, so we don’t want to change small things at the end. We need to be careful of “add-ins”. If the product doesn’t even work for this area, it’s problematic for trying to apply this methodology for other areas. Maybe we should just add in limitations (eg rare spp) as needed by practitioners. Or, maybe use rare spp info to test/validate core areas but not build them into the design.

Eric: I agree completely that we need to state the limitations of the product. If it doesn’t include rare species, we have to let people know. I don’t think it makes sense for something as difficult to predict

distribution for as rare species to try and include that. Maybe we need to change the goal from conservation of all species, to conserving all but rare species.

Georgia: Building off of what Emily said about the flexibility of the tool to be used in other areas. I'm focusing on larger core areas in LISS, and I think it's good. But when I think about more urban areas, maybe more, smaller is better, because the larger core areas might be impossible or they might be reserves - in some areas a large area is not available for conservation. More larger wouldn't work well for people or species in, say, the long island sound.

Jenny: I've also been thinking about rare species from the habitat standpoint. Are we including things like fens and marshes in the terrestrial? If not, we have to say upfront that we're not capturing these unique ecological communities or habitats. If people want to include it, we need to let them know that they'll have to overlay that at the end. I think its more important to focus on including the rare natural communities or habitats vs species. But if we cant, or cant do them all, we could have a qualifier "this tool does not capture these rare natural community types: fens, bogs, vernal pools, etc"

Eric: Well, keep in mind that we have macrogroups and not systems. We should probably include those habitats where they exist in our design

Scott: This is challenging. The rare natural species databases among the 4 States varies greatly. We're relying on the States to share information with us. In some cases we have data that looks like a rare migratory bird that was observed once. On the other hand, some species are always in one area, like a rare plant, but they are so few. I'm not trying to take a strong stand one way or another. But I do think we want to conserve species, and I don't think we should change our goal. If we don't explicitly incorporate species data, then yes, we should make that clear. Are there any other thoughts from state folks on how to approach the rare species data?

Emily: I think we should be looking at it somehow, but I'm not sure how. The problem I have with it is that the data is very spotty. Only a few species or certain areas have really good survey data associated with them. In lots of places we have no data on a given rare species, it could be present - we just don't know. There's also a big difference between species at the edge vs. the middle of their range here. These questions are all really difficult. I am still thinking we might want to use the rare spp information to test/validate, but not build into, our design

Eric: I agree about the spottiness of the heritage/rare species data - it's so dependent on where data has been collected. On the other hand, that's the data that tells us that a particular species is rare. I'm worried that those species won't be included in the design, and that ultimately those species or their habitats may be lost.

Jeff: Emily, Eric, and Jenny. You agree that we could capture these, but we have to make decisions to ensure we capture them. I think we have to review the outputs from Kevin's team. Our goals are to conserve biodiversity, connectivity, etc. I agree that we should look at rare species from a habitat standpoint. I think that this is possible.

Eric: Vermont is a small state. New Hampshire, Mass, etc. have much more rare species data than we do. I can't review all our rare species records to verify that those areas are captured in the design.

Jenny: Maybe we could look at the rare species list and look for way to find representative species to use for comparison/testing/validation that the design includes others. We wouldn't have to look at them all, but a select few.

Jeff: So Jenny, how would you describe that process. Could we document and describe step-by-step the process that gets us to that point? Something that we can give to Kevin to incorporate?

Jenny: I think there is. Maybe we should talk to Andrew or Lori to see if they have any suggestions on how to make that next step. They are helping with the regional conservation need species data set, so maybe they have ideas.

Jeff: But it also might rely on a review from you and the other state folks. You just reiterated that data doesn't always predict where the species will be.

Scott: I think we should move on, although we haven't resolved the issue about whether or not to include all the rare species and community type info. I think I have enough to write up some pros and cons and identify tradeoffs. I do think we have to be careful about privileging rare species to the detriment of high integrity areas.

#### **Discussion on utility of minimum size threshold for core areas**

Emily: Do we want to focus on rare species (eg small areas) so much, given that we don't know if they'll be rare in the future? If our goal is to conserve the stage, maybe rare species shouldn't be the focus.

Maritza: Perhaps we could ask Kevin to ensure that any seed had a kernel that grew to at least whatever our minimum threshold size is for a core area.

Georgia: Concerned with setting small threshold if we are also looking at small migratory bird stopover habitat

Eric: Perhaps the minimum size should vary with latitude...north (larger) to south (smaller)

Jeff: I would be more comfortable saying we should keep all the top 5% or top 10% than I would with creating a minimum core size. Then we know we have those unique areas if we absolutely preserve the top 5 or 10 that are the seeds. To Eric's north-south comment - I feel like that gets into the question of well-distributed cores. I think we address that through the HUC 8 approach, which assures that the more urbanized areas will have cores as well as elsewhere in the watershed. That means we don't have to change the methodology. I would hope we could agree on something like that today. I personally like subsections when thinking about ecology, but in this case we're not thinking about subsections to help us describe the system, but rather to compare different parts of the watershed, and so I think it's appropriate to use HUCs for that.

Eric: I think that is a good point. I'm convinced about the subwatersheds. I like the idea of ecoregions because of the information they contain, but I understand the rationale for that. I like Jeff's proposal of including all the top 5 or 10% used as seeds.

Randy: Can we talk about the hybrid approach. Have we asked Kevin about that? Does he have an opinion?

Scott: It's on the list to ask him about, but we haven't yet.

Scott: We could also discuss how to deal with development in the core area. Right now Kevin has showed us maps that only exclude expressways.

Jenny: I'm concerned if we exclude any development we would not have much core area in CT. I think we should exclude high intensity suburban and urban development, and expressways. But I wouldn't exclude exurban areas, especially if they are near more natural areas. I think there is still some value in those habitats.

Emily: I agree with Jenny. Including the small roads is fine, and it's easy to explain that methodology.

Eric: I agree too.

Rachel: What if we used the traffic data Kevin had instead of road size?

Emily: Has it been checked by DOT? Or published?

Scott: That's one product that Kevin already has for us that can be accessed on Databasin. His team put together a predictive model for traffic as well as road mortality. But, it sounds like we have consensus that we should exclude huge development, no-brainer areas. However, light development like rural areas and lightly trafficked roads are ok and should not be barriers to spread.

Jenny: I suspect that the data came from DOT and so was verified initially.

Jeff: Could we talk about species with the time remaining?

**-- Randy's draft document up on the screen.**

Randy: \*gave overview of the sheet\*

Jenny: Overall this looks pretty good, but can you please explain how you assigned values to Society and Ecological.

Randy: This was very cursory and arbitrary so don't put too much stock into this. I was thinking of recreational value (like hunting, wildlife viewing) for societal. Ecological is if it has a unique or important ecological role. *Relative to the other species listed?* To be honest I'm not totally clear myself on what those values should be.

Jeff: I really like how you organized it. It's hard to think of an objective scale for something like value, though we'll have to come with those. This is nice because it gives us a step-by-step approach to think about weighting. Perhaps we could add a column where we could input how well we think each species represents their guild. Also, is there a conservation factor within the watershed for that species? It's related to threats and responsibility, but we want to get at whether we can address that part of the matrix in the Connecticut watershed.

Scott: Thank you for working on this. This type of thing is, I think, transferable to other places. It's transparent. It will be difficult to fill it in but I think this will be useful.

Next subteam meeting - before core team meeting. We want to discuss this table. Perhaps we can get some more products from Kevin's team that incorporates some of the variations, and look at those too.