Update to CT River Pilot Core Team

Summary of Teleconference/Webex Meeting on 5 January 2015

<u>Participants</u>

By Phone: Bill Jenkins, Bill Labich, Bob Houston, Dave Stier, David Paulson, Emily Preston, Eric Sorenson, Jennifer Greiner, Marvin Moriary, Pete Murdoch, Rachel Cliché, Patrick Comins, Georgia Basso

In person: Randy Dettmers, Mitch Hartley, Nancy McGarigal, Andrew Milliken, Dave Perkins, Maritza Mallek, Jeff Horan, Scott Schwenk

<u>Updates</u>
<u>Terrestrial Subteam</u>: At the December Core Team meeting, we decided on a combined ecosystem and species-based core area selection process that favored the ecosystem approach. We are still targeting 25% of the landscape in cores, but the first 20% will be filled in using the ecosystem approach, and then final 5% using the species-based approach. We reviewed the consequences of this decision, and had agreement that this protocol did a good job of capturing areas of both high ecological integrity and high landscape capability for the representative species. Still left are specific decisions about the connectors and any buffers around cores and/or connectors.

<u>Aquatic Subteam</u>: Two of the main issues remaining at the end of the December Core Team meeting were how to handle lentic classification and what to do about the culvert passability scores.

TNC finished a new lentic classification, and we were interested in incorporating it into the design. Due to time constraints, we have decided to put this off until the next phase of the project, and the lakes and ponds classification we have now can be thought of as a placeholder.

With regard to culvert passability scores, we asked Kevin McGarigal how much of an influence passability scores had on the overall ecological integrity index, and it turned out to be a pretty significant variable. However, most of the culvert passability scores are model-based and the predictability of the model seems pretty low (R^2 values of 0.2-0.3), so we weren't sure we wanted to use those results on the whole basin. After discussing the issue with some fish biologists, we decided to assume 0 passability – a worst-case scenario – because this way we know what direction the error is in. It also allows us to easily factor in the number of road crossings as an index of aquatic connectedness. For culverts with surveyed information, we will use those data after the initial ecological integrity modeling is done, just like the other types of local information that will be used to supplement the model results. Since the predictive ability of the model for bridges was high, we decided to keep that information (the passability score for the road crossing predicted to have bridges will be 1).

- We had almost unanimous consensus that connections among terrestrial cores are an integral component that should be displayed as a part of the final design. They constitute a tier of priority below the cores, but are still critical because of their role in maintaining ecological connectivity across the watershed and providing opportunities for adaptation to future changes, especially climate.

- There was little support for including fixed-width buffers around terrestrial cores in the final design (although people recognize that the integrity of cores would be compromised if development happens right up to the edge of core borders). If the design includes connections among cores, this reduces the need for buffers to some degree, and we were not able to easily reach agreement on how to define buffers or assess their value in meaningful terms.

- We had further discussion about how much of the total landscape is appropriate to capture in the final design elements (i.e., terrestrial cores and connectors). There was some support for a combined total of 50%, with 25% in cores and 25% in connectors, but there was also some concern that identifying 50% of the landscape in the final design might not be an adequately strategic approach, particularly in regard to allocating limited resources. Some of the support for capturing 50% of the landscape in the final design was framed in the context of viewing the "final design" as a starting point for further conversations with land managers and planners working at various scales, with the recognition that further interpretation and exploration of the data behind the design would be needed.

- We affirmed the need for descriptions of the "portfolio" of conservation targets (i.e., ecological systems and representative species) occurring in core areas, as well as descriptions of desired conditions/appropriate activities within core areas and connectors in order to maintain the value of these elements in the final design.

- We reviewed the 4 scenarios Kevin had provided as options for identifying connectors. These were based on using different maximum threshold values for conductance between core areas. These major points of discussion on identifying connectors were as follows:
  - Significant concerns were raised by some participants regarding all 4 of the connector options that were presented. Each of them results in "isolated" cores (i.e., no connectors) even where some conductance flows among them. Even relatively low levels of conductance could be important for the more isolated cores. At the same time, the connectors ("green space") among neighborhoods of core areas in close proximity appears too broad, especially with scenario 1 (maxpath >0.01). The simple approach of thresholding conductance may not accomplish the purposes of achieving a well-connected network of core areas while also limiting connections to those that are most important. Just having a higher conductance score may not mean an area is the most important place for maintaining connections. Connections actually might be most important where cores are partially isolated and we don't want linkages to be severed.
  - Consequently, there was a fair amount of support for simply using conductance to show connections, rather than any of the 4 connector options, in the final design.

- However, others raised concern that the raw conductance map would be hard for some users (e.g., town planners) to interpret, understand, and apply as a product that consisted of the multiplicity of random least cost paths.
- The idea of an alternative approach was raised that tries to combine the most appealing aspects of the conductance product with the simplicity of a single level of connections. The idea would be to make sure that for any core areas that were currently connected to other cores with at least some conductance level, some connection would be maintained in the final design. At the same time, some of the degree of connections among cores in close proximity and with broad areas of high conductance between them would be reduced to highlight the "best of the best" connections. Conceptually, this might be along the lines of identifying (and then buffering?) the top 25% of conductance between pairs of cores, and then unioning the resulting connections.
- We were not able to reach consensus on an approach for connectors and wanted to check with Kevin on the feasibility of developing and applying an alternative approach as described in the previous bullet

- We concluded the meeting with an agreement to send a written poll to Core Team members on which connections product to use: conductance, 1 of the 4 thresholded options, or an alternative connection option (only if it is feasible for Kevin's team to develop in a short time).
- Anyone who has not yet seen the maps of conductance and the 4 threatholded scenarios or would like to review them again can access them on the [NALCC's Conservation Planning Atlas (DataBasin)](#). You will need a Databasin account and access to a special CT River Pilot group in order to view those maps. Instructions for gaining access are available [here](#) and from [the CT River Pilot page of the North Atlantic LCC website](#).

Next Steps

- We have discussed the idea for an alternative approach for identifying connectors with Kevin and his team. They have some ideas on how that might be implemented and think they can provide an example of what that would look for at least a portion of the watershed (probably not the entire watershed) within a short time.
- We still plan to send out a written poll to Core Team members on which of the connections products to use, as described above. We expect to do this no later than Monday, but as soon as possible, so that we can make a decision on this issue in time for Kevin's team to incorporate it into the final design products to be presented at the next Core Team meeting at the end of January. If an example of the alternative approach for identifying connectors is available by Monday or sooner, we will share what that option looks like and include it as one of the options for Team Members to vote on. Otherwise, we will ask for your votes based on the existing options.
- Be on the lookout for the written poll on the options for connectors and please respond as quickly as possible to the poll. We will likely have a short response time in order to allow Kevin's team as much time as possible to incorporate our decision into the final design.