**Technical Oversight Team Comments**

**3rd Quarter Report, 2013**

**Support for Understanding Land Use and Climate Change in the Appalachian LCC**

**Grant Receipt/Organization: NatureServe**

**Reviewer #1** -

**COMMENTS 2012-04 3rd QTR. 2013**

**Comments on Nov 2013 Progress Report, ALCC Grant 2012-04**

18 Nov 2013

**Overall**

The revised project report (Sept 18 version) represents significant progress since the May 2013 version, and the authors and experts should be commended. A few minor comments still need to be addressed, as detailed below by page number.

There is some delay in the timeline as acknowledged in the progress report. The species and habitats to be assessed are still in the process of selection, but it sounds as though the delay is not serious and the process is now well underway. Vulnerability assessment has already begun, presumably on the draft list of targets, which will help with the timeline.

Details on the budget were not provided but the progress report indicates that expenses are within the approved budget plan and categories.

All in all, the project seems to be on course and providing useful information to the LCC.

p.13 High conservation significance

This paragraph needs clarity. Two criteria are included: high conservation concern and regional responsibility. Presumably the Rank 1 species would be those that are:

* federally listed or G1-G3, AND for which the LCC has a high level of responsibility

The Rank 2 species might include the following species groups:

* state-listed or S1-S3 AND regional responsibility
* Federal, G1-G3, S1-S3, State Wildlife Plan or other state conservation priority but with less than 75% of the range falling within LCC boundaries.

Perhaps we should also include leading edge species > 50% of range in LCC whose populations may become our responsibility in both Rank 1 and Rank 2?

p. 14-15 Importance to Ecological System vs. Management Importance

I had suggested in May 2013 that invasive species, pests, and pathogens fit best in the “Importance to Ecological System” section , in which case the “Management Importance” section would become “Game species”. I understand if the authors disagree, but I still find the placement a little odd. I checked this with our invasive species specialist here and she agreed. She pointed out that invasives are like the evil twin of keystone species, with huge impacts on ecological systems, whereas game species are more of an agricultural product managed very consciously for human benefit. Also, if I were a game manager and read this report, I might be unhappy to see that my species were lumped with the harmful groups, so from a reader acceptance standpoint within state fish & game agencies this may be an issue.

p.17 Processes

My comment from May 2013 was not addressed in the revised draft. Here it is again: In this section, I’d like to see flood regimes added to the hydrology discussion, so that it is clear that hydrology is more than droughts and storms. The discussion of disturbance needs to include more than fire: windthrow and ice damage have more impacts on higher elevation Appalachian forests than fire. Again, erosion and sedimentation should be included.

p. 18 table

Can game species be included in this table?

p. 32 No single CVA approach…

I’m not sure that paragraph (a) is a goal of this grant. Doing the hard work of analyzing temperature and precipitation data is critical to our ability to assess species and ecosystems, but I think the recommendation should be to use the best available data, rather than to launch the Appalachian LCC on the task of re-creating the climate science centers’ work.

This same bias has crept into the recommendations for habitats and species. The report has already outlined excellent methodology for choosing habitats and species. It should not suddenly be restricted to “where climate change has been most extreme” within the Appalachian region. We have a large degree of uncertainty associated with the geography of climate change in Appalachia, but we have in-depth knowledge of the current conservation status species and habitats.

I would suggest returning to the language used in the May 2013 version of this report, which simply summarizes the three synergistic approaches: habitat assessment, species assessment, and intensification for the targets identified as most vulnerable in the rapid assessment. Under the habitat assessment, I would suggest adding in my review comment from May 2013: assessment of foundational and keystone species is often a useful first step in assessing habitats.

Appendix 2

As mentioned in May 2013, ideally this appendix would also show whether a method has been documented thoroughly enough for others to adopt, and whether more than one organization/entity has already applied it. As a state scientist, I would be very reluctant to try a method that has not been used by someone other than just the developer of the method. On the other hand, if I see that several entities have used the method, then I will be more confident that it’s worth my time to try.

Appendix 3

Add the newly available USGS NEX-DCP30 data: NASA has downscaled the CMIP5 model temperature and precipitation data to produce the NEX-DCP30 data on a very fine 800-m grid that covers the continental United States (CONUS) for a variety of climate change assessments that require higher resolution data.

<http://regclim.coas.oregonstate.edu/index.html@p=1549.html>

Also, as mentioned in May 2013, I still didn’t see the dynamically downscaled data from Scott Klopfer (Va Tech) and Chris Burkett (VA DGIF) which covers VA, WV, PA, and MD, and parts of other states. Maybe it is called something else? I think it is probably an important data set for the Appalachian LCC.