

APPALACHIAN LANDSCAPE CONSERVATION COOPERATIVE GRANT 2013 PROGRESS REPORT

Quarter: (circle one)

2013 1st

2013 2nd

2013 3rd

2013 4th

Note-this is actually the report for the quarter ending 12/31/12 (4th Qtr. 2012)-P. Ruble 1/31/2013

Grant Number and Title: 2012-02; Assessing Future Impacts of Energy Extraction in the Appalachian LCC

Grant Receipt/Organization: The Nature Conservancy

Grant Project Leader: Joseph Kiesecker/Judy K. Dunscomb

Were planned goals/objectives achieved last quarter? YES

ALCC Need Addressed:

Progress Achieved: (For each Goal/Objective, list Planned and Actual Accomplishments)

Shale gas model:

We have completed 2 Shale-gas models: A high resolution detailed model at only a subset of the Appalachian LLC (= Marcellus Shale Play, see map in Appendix 1) and a lower resolution model across the entirety of the Appalachian LLC. Building two models was necessary due to the availability of data. Several key variables were only available across a portion of the study area. For example depth of the Marcellus shale, Marcellus shale thickness and geologic thermal maturity are key drivers of model accuracy and only available where drilling activities have already occurred. As drilling activities expand new data can be acquired and the model build across the Appalachian LLC can be updated. We are still attempting to identify alternative sources of data for the entire study area that can be used to revise the current model.

Wind development model:

A draft model has been developed; wind scenario development is underway

Coal model:

We have initiated a Sub-Award contract to develop a coal predictive model with Dr. Mike Strager at West Virginia University. It was our expectation that we would have a draft model in hand by this point, however due to contract negotiations with the University, this project timeline is slightly delayed. They have supplied us with a draft methodology – attached – however we expect this methodology to change due to a new and hopefully very much superior coal seam data set we expect to receive from OSM. An updated methods document will be provided, along with a draft model with our next quarterly report.

Summary of Progress: (Provide a paragraph describing progress, work to come, and timelines)

To date a model has been developed that depicts the probability of wind energy development across the Appalachian Landscape Conservation Cooperative; this model is currently undergoing review and should be ready for release in early 2013. Wind development scenarios are currently under development. We have also completed a model that depicts the probability of shale gas development across the Appalachian Landscape Conservation Cooperative. Two models will be made available: a model at only a subset of the Appalachian LLC (see map in Appendix 1) and a model across the entirety of the Appalachian LLC. Shale gas development

scenarios have been completed for the model at the subset of the LCC study area and we are attempting to locate information that will inform scenario development for the entire LCC. See appendix 1 for details on modeling approach and methods.

Difficulties Encountered: Still attempting to acquire detailed data for shale gas model across entire study area. Information that can be used to generate shale gas development scenarios is currently only available for the Marcellus Formation. Estimates as to the extent of shale gas development in formations outside the Marcellus (i.e. the Utica formation) are lacking. Also lacking detailed coal seam data but hope to resolve this via data sharing with OSM. Due to somewhat extended contract negotiations with the WVU, the coal mapping project timeline is slightly delayed.

Activities Anticipated Next Quarter: Completion of wind and shale gas models after expert review; development of wind and shale gas development scenarios; completion of draft coal model.

Expected End Date: December 31st 2013

Costs:

Funds Expended to Previous to this Report: \$3,788.09

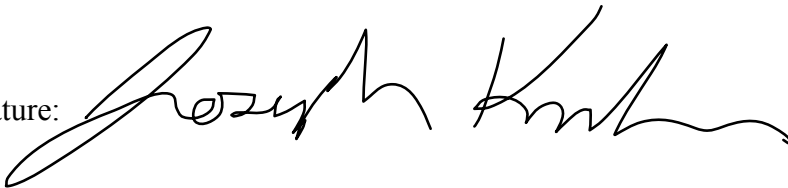
Amount of ALCC Funds Requested within this Report: \$1,122.84

Total Approved Budgeted ALCC Funds: \$216,329.13

Are you within the approved budget plan? YES

Are you within approved budget categories? YES

Signature:



Date: 1/30/2013

