

Andrews Forest LTER Monthly Meeting Minutes

Friday, January 11, 2013, 9 – 11 AM

NEXT MEETING: Friday, February 1, 2013. 9 – 11 AM. RH313

Minutes from previous Andrews Forest LTER Monthly Meetings can be found at <http://andrewsforest.oregonstate.edu/pubs/mtgnotes/monthmtg.cfm?topnav=42>

ATTENDEES

Michael Nelson (lead), Lina DiGregorio (notes), Sherri Johnson, Mark Schulze, Julia Burton, Paige Fischer, Christina Murphy, Tom Dietterich, Tuan Pham, Adam Kennedy, Linda Ashkenas, Lisa Helmig, Cheryl Friesen, Shannon Berg, Jeremy Monroe, Randy Wildman, Mark Harmon, Kristian Nattinger (propsective grad student), Judy Cushing (The Evergreen State College), Klaus Puettmann, Fox Peterson, Kate Lajtha, Steve Wondzell, Kari O'connell, Heather Lintz, Kevin Briggs, Rob Pabst, Sarah Shafer, Julia Jones, Ivan Arismendi, Judy Li, Alba Argerich, Stan Gregory, Don Henshaw, Dana Warren, Roy Haggerty

PRESENTATION

The Willamette Basin Critical Zone Observatory: Leverage and Extension of the Andrews Forest LTER. Presented by Roy Haggerty, Hollis M. Dole Professor of Environmental Geology, Dept. of Geosciences, College of Earth, Ocean, and Atmospheric Sciences

Proposal will be submitted in early February. There are about 20 contributors from OSU and PNW. The area will encompass the Andrews Forest. So they are looking to coordinate and connect to the Andrews program and group. Generally, they are looking at carbon fluxes as affected by land use and land cover, water, episodic events, agriculture, and other human modifications. They plan to instrument the Willamette Basin. Data that the LTER collects would also be part of the CZO. They are going to add 10 gauges and stream chemistry measurements. 6 of which are downstream of the Andrews. They will use the same protocols or stream chemistry (CCAL) as the Andrews. Four primary sites, each associated with a flux tower. One will be WS01. Also soils and groundwater work at those primary sites. They propose adding .25FTE technician at HJA to cover WB-CZO duties. Based at the Andrews. That person would cover the CZO part of the Andrews data collection. This is in addition to two other technicians who would be full-time on the project. Would add additional chemistry measurements at LO cr gauge. Tri-weekly chemistry below Blue River Reservoir. One-yr of gauging and chemistry on Blue River. Timeline: Submitting Feb 5, hope to start Jan 1 2014 and run five years. One million dollars a year.

DISCUSSION: LTER7 Themes and Planning

This meeting is the opening foray in our LTER7* planning process. We open with a discussion on research themes for the LTER7 proposal. First, five very short (5-minute) presentations on possible themes, and then an open discussion on those themes plus any others that might be suggested. The five short presentations:

1. Overview of the role of a theme (Michael Nelson). The use of a theme is specific to our site—it's not required by NSF. Our theme should not be inconsistent with our central question.

2. Possible theme: **Connectivity** – between water, air, land, but also society – emphasis here on interactions (presented by Julia Jones, with input from Christoph Thomas). Julia highlighted examples of human society, landscape, and community. Connectivity within those and between those. Kate Lajtha suggested that we use the theme of connectivity as a means to answer previous themes that we did not fully complete/answer. Ivan Arismendi: since the Andrews is not disconnected to a bigger landscape, how do we define the boundary from other, larger networks?

3. Possible theme: **Diversity** – especially organismal responses to climate change (presented by Sherri Johnson and Mark Schulze). Build on the biodiversity component of LTER6. Think of it more as diversity (rather than biodiversity). This is a core LTER area as defined by NSF. And it is a theme used by other LTER sites. We can also think in terms of diversity of processes (rates, interactions, disturbances). Diversity can also provide links to social and societal issues.

4. Possible theme: **Transference** – moving science into the world (Mark Harmon to present). No slides for this presentation. Do we really know how to apply our science? Effective transference of information. For 20 years we've been studying effects of climate, and we have much more to learn. We also have a good record of taking some of our research and applying it (e.g., dead wood in streams, riparian management). We can build off of our knowledge and our successes. We have a big problem to answer if climate is going to affect our systems and create a future that is more resilient. It's a huge challenge with lots of uncertainties. What is the problem--why can't we do that now? It's imperative that we move on with this. It pulls in social science, humanities, management, in addition to our science. It's not a problem that just we face. But we may be positioned well to take it on. Cheryl Friesen asks if we (scientists) can assess ourselves and how we fit into the broader perspective. Kate Lajtha was concerned that the central theme be management as the ultimate end goal. Mark clarified that it is the science behind how the greater system behind science, management, and the public works and how it can be improved to be more effective. Kate: does it mean that all the research at the Andrews has to be applied? Mark: no, it does not. Kermit Cromack: we're going to have to figure out how to go beyond the Andrews to be able to tinker and talk more at the landscape scale.

5. Possible theme: Alternative Future Scenarios (Stan Gregory). If the Andrews LTER is an observatory, it is an observatory of what? What are we trying to inform in terms of

the day-to-day decisions? Alternative future scenarios are intentional alternate future trajectories. How do you define assumptions of each alternate future trajectory? Jeremy Monroe highlighted the restoration work of the Willamette River basin. Stan clarifies. If we think forward with possibilities, make sure that you think of future scenarios different than future projections.

Wrap up by Michael conversation around these themes.

Connectivity – focus on relationships, which is the origin of ecology. And it's very inclusive. Consistent with current and emergent expertise in the group.

Diversity – other sites have done this and we are increasingly encouraged to think of ourselves within the network and this helps encourage cross-site collaboration

Transference – it draws on our emerging interests and skill set. It raises important philosophy of science questions that we are uniquely positioned to treat. It is a skill set that we'd be adding to our group and we would be unique in that way

Future Scenarios – taps into a new process. It raises unique questions in ethics. Prompting people to project decisions into the future.

Kate commented that the themes presented there are a means by which to look at our existing research and carry that forward. She wants to use all four themes.

Connectivity is a mechanism and we can use it as an overarching theme over the others.

What emerged? What did we miss?

Klaus: what do we really want to know? in terms of ecosystem response and behavior. He thinks that all of these themes fall under ecosystem adaptability.

Cheryl: come up with overarching theme about revelation and conversation. We want our information to make a difference

Stan suggests asking regional leaders about current issues and questions. Ex, the OR governor, metropolitan leaders, forest supervisors. We want to be informed by this but not have to use it.

Mark: we have to be very careful with what we are about in the LTER.

Paige Fischer: socioeconomic adaptation applies to all of this. We could think about what are some of the challenges in front of us and how could the research of this community address some of these issues.

Resilience, adaptation through the lens of connectivity.

Don: one thing we always face is that we have very little resource to devote to a new suite of science. We either have to craft our ideas to capitalize (and justify continuation) of our long-term measurements. Or, we have to make decisions about how to trim down existing long term measurements to free up funding for more new science.

We need to think of the LTER grant as a means to leverage other funds