

Emailed 6/22/09

Dear NEON Colleague,

IN TODAY'S UPDATE:

1. NEON Status
 - a. PDR completed in June.
 - b. Prepping for PDR
2. NEON at work: STREON, the NEON stream experiment

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NEON STATUS

NEON Preliminary Design Review Completed

NEON recently completed its Preliminary Design Review (PDR). NEON, Inc. teams presented detailed project scope, budgets, designs, risks, and project management strategies for construction and operations of the NEON project to a panel of reviewers convened by the National Science Foundation (NSF). NEON and NSF await the delivery of the review committee's report. Final Design Review is scheduled for early November, and if successful, should allow NEON to begin the construction phase in October 2010.

Completion of PDR represents the culmination of years of hard work to design and document Observatory systems. The collaboration undertaken to complete this work was exceptional. NEON, Inc. staff worked to complete the project in tandem with hundreds of scientists, educators and federal officials who participated on committees and review teams.

Prepping for PDR

In preparation for PDR, NEON submitted planning and design documents to the NSF and the review committee. NEON's design plans included approximately 250 documents, totaling over 3000 pages!

In addition, NEON subsystem teams underwent discipline-specific, external reviews in April. Many thanks to the reviewers for their time.

To accomplish documentation and preparations for PDR, NEON's staff grew to 55 employees and in January, NEON, Inc. moved into a new, larger building near the Boulder airport. In addition to classroom and working space that will accommodate expanding staff, the new building features dedicated lab space for key NEON observing systems. The building is also a low-waste facility that prioritizes recycling and composting, uses only 100% recycled FSC-certified paper, and includes several minor renovations allowing NEON to utilize energy efficiently. NEON celebrated its new headquarters with an Open House on January 22, 2009.

NEON AT WORK

STREON, the NEON stream experiment

NEON's goal is to enable understanding and forecasting of the impacts of climate change, land-use change, and invasive species on continental-scale ecology. In order to better understand how freshwater ecosystems function in the scheme of continental-scale ecology, NEON will manage and operate the Aquatic/STREON product team, which will oversee 36 Aquatic sites for data collection.

In addition to regular data collection, this team will operate the Stream Experimental Observatory Network (STREON), which will study how stream ecosystems respond to increased nutrient concentrations and the exclusion of top consumers. STREON will explore how these impacts combine to alter the diversity of stream organisms (algae and invertebrates), the rate at which algae utilize nutrients, and stream metabolism (a measure of algal activity). The experiment will be conducted at 10 sites located directly downstream of NEON's Aquatic sites. The sites were chosen to span a gradient of climate, hydrology, and in-stream nutrient characteristics. STREON measurements will be integrated with continental-scale NEON Aquatic measurements to help us understand how ecosystems respond to changes in ecological drivers and supply data for forecasting models.

The STREON experiment was originally proposed by Margaret Palmer, Walter Dodds, and Bradley Cardinale in response to an NSF NEON Request for Information in 2007. The proposal was refined through several STREON workshop reports and discussions among more than 100 stream ecologists, led by Pat Mulholland. These contributions from the science community have helped NEON to refine the definition of STREON science and operational requirements.