

CALEON MEETING August 26-27, 2005
 UC Riverside Campus, Riverside, CA
 CNAS Large Conference Room, College Building North

I. Agenda:

Friday, August 26

8 – 9:00am	Continental breakfast
9 – 10:00am	Update of status
10 – 12:00pm	Location and structure of node (5)
	<ul style="list-style-type: none"> • wildland • agriculture • urban
12 – 1:00pm	<i>Lunch</i>
1 – 4:00pm	Facilities/Infrastructure for node
	<ul style="list-style-type: none"> • climatological • biological • data management and interconnectivity
4 – 6:00pm	Revisit organization and writing assignments
<i>Evening</i>	<i>Dinner, political organization</i>

Saturday, August 27

8 – 9:00am	Travel to James San Jacinto Mountains Reserve
9 – 11:00am	Visit CENS/NIMS/AMARSS installations
11 – 12:00pm	Revisit infrastructure
12 – 1:00pm	<i>Lunch</i>
1 – 2:00pm	Wrap-up
2 – 3:00pm	Return to UC Riverside; Airport

II. Minutes [Note: these are notes taken down during the meeting itself, please pardon the rough edges]:

Background material presented:

Node: Should include wildland, urban and agricultural site plus a mobile unit.

Expts with water and N deposition

Expts at catchment scale of manipulating groundwater levels and water inputs

Forecasting, transformational science for regional and national scales

Seven Grand Challenges for NEON:

- Biodiversity, Species Composition, and Ecosystem Functioning
- Ecological Aspects of Biogeochemical Cycles
- Ecological Implications of Climate Change
- Ecology and Evolution of Infectious Diseases
- Invasive Species
- Land Use and Habitat Alteration
- Hydroecology and Emerging Issues

Fundamental NEON questions: (three key questions)

1. How are ecological systems affected by changes in land use and climate across a range of spatial-temporal scales?
2. How are changes in the availability and distribution of the nation's water affecting ecological systems?
3. How are patterns and movement of genes and organisms across the continent affect biodiversity, ecosystem functioning and the spread of infectious disease and invasive species?

More specific questions on website (ESA powerpoint)

- e.g. temporal variability and integration across national/ regional scales
- nature of ecosystem response to climate variables
- modeling to differentiate responses
- land use and cover change/ also interactions of climate change & land use
- evolutionary changes influenced by change
- invasive species, patterns and movements of genes and organisms
- pollutants and transfer to other regions
- changes in composition and abundance of species across landscape

How are nodes to be located? Top down or competitive? Ongoing debate

Budget need to be in the 500-100 million (bouncing around within this range)... 240-300 million time-phased. And continuous over many years. Infrastructure, instrumentation management. Management ultimately crucial!!

Network model requires people to manage instruments and data. Cyber-infrastructure represents up to a third of the budget. Will info systems link to CUAHSI? Info systems should be first and the science planning is re-started. CLEANER environmental engineers and water quality focus. Digital watersheds. Need for integration with marine observing systems. Weather systems and pollutant

How to leverage NEON so that we can leverage with State of CA, etc., for more inputs

Biomesonet network of dozens of flux towers and weather stations; example of the standardization that happened in Ameriflux.

Terrestrial and aquatic modules; regularly scheduled deployment and calibration; easy installation.

Mobile in response to events; mobile for cross site calibration; these might lead to differences in the types of instruments that are included in the mobile module.

Water: Precip ET runoff availability

Air: met, pollutants,

Soil: pools, fluxes, transformations, biology, C

Remote sensing: rent aircraft, Hyper plane at NCAR with instruments that are common and can be added to rentable aircraft

Instrumentation facilities (genomics, analytical, collections, isotopes)
Education center

Time Frames

Draft plan supposed to be ready in October;

COREO November

Cost estimates January 06

Node prospectii June 06

Need to develop inter-region cooperation; USFS can help stabilize and provide strengths in land and experimental sites. Forest Service Sites of special interest: San Dimas, San Joaquin, Kings Canyon. Work with Caltrans to develop information Kiosks, highways, I-5, I-80,

Check CALEON website for comprehensive list of sites and centers

Discussion of how to choose ONE NODE in CALIFORNIA with a Wildland, Agricultural, and Urban location

- Integrate strengths in each of the areas of research

- Provide several possible node sites

- Need to plan contingency approaches

- What about using limited submission model

NEON domain site in CA. Then leverage

Think to use our node to leverage and create something big.

Use the minimum specs on NEON sites.

Neoninc.org documents. June meeting 80 p document summarizes

ESTES PARK MEETING MATERIALS.PDF

Contingencies:

NORTHERN CALIFORNIA Locations

Bodega (ocean-continent boundary),

Urban: Richmond Field Station, Mare Island, McLaughlin, McClellan-Mather,

Sacramento State Univ,

Ag: Russell Ranch-Wolfskill, Sierra Foothills Field Station (adjacent urban-wildland interface)

Wildland: Blodgett Forest, Onion Creek, Tahoe (includes urban-wildland interface)

Priority Northern Site: Russell Ranch (Ag), Onion Creek (Wildland), McClellan (Urban)

Adding James Reserve for technology development, coupling to coastal groups for climate drivers, Museum community.

MIDDLE CALIFORNIA Locations

Wildland: Kings River Exptl Watershed, Teakettle, Sequoia, Whittaker Forest,

Ag: San Joaquin Exptl Range (also oak wildlands), Kearney Ag Station, LinCove, Five Points, Shafter,

Urban: Fresno State Univ (USFS lab) UC Merced and campuses.

Link to west Salinas Ag Res Station, Hastings.

Link to east with SNARL, Mono Basin, IRON

Past data on snow is exceptionally rich here, also many forest service facilities

Focus of CUHASI and CLEANER

By focusing on central we have

Regional centers for genomics and stable isotopes; Samples that need to be analyzed quickly because of preservation issues

Calibration uses of mobile lab; also responses to events (flood, fire, earthquake) that would need assessment on 'regular' basis

Data analysis connections to SD super computer

CalTrans can pay for interpretive sites/NEON provides the story boards

SOUTHERN CALIFORNIA Locations

Wildland: Mott, James, Deep Canyon, Santa Margarita, Sky Oaks, San Dimas, Sedgwick, Granite,

Urban: UC Irvine, UCLA, UCR, San Jacinto mountain transect (urban-wildland)

Ag: South coast field station, Desert Res and Extn Center?, Coachella valley station, SDSU

LA integrated watershed management

Santa Ana R.; Santa Clara R includes urban-ag-wildland and coast

Thinking already about integrating air and water pollution management regional management.

If we pick the middle, then make the connections along the coast and connections along the Sierra (and other areas: Central Valley, Sierra East Side).

Which is the most compelling science case?

Northern transect on and southern transects are on edge of major air mass changes. In

north the shift from El Nino to La Nina this location is on the transition where

Where is change most likely to be greatest- middle may be key for snowfall/rainfall edge?

Which is top priority?

Need to write the proposal as the whole program and highlight what NSF will pay for

Water questions lead to Sierra and central transect

Land use changes effect on biodiversity leads to S transect

Land use changes effect on ag land leads to N transect

S. Cal transect is almost a prototype of NEON (testbed). Much already in place.

Deborah Estrin, Santa Margarita wireless network, James reserve down stream.

Weakest part is the water portion in S. Cal.

Recommendation: Carefully evaluate potential to locate 1^o site in middle transect, with a focus on the link to CUHASI and CLEANER, with the San Joaquin Exptl Range (wildland), Kearney Ag Station (Ag), and the development of a new UC Merced Campus (urban) as “NODE”

MANAGEMENT

Who will manage the nodes; Who will pay for the leader, co-leader and staff to actually manage the site? Who will commit?

Following nomination and discussion, Mike Allen agreed to serve as leader at this stage, and work with UCOP (Cathie) for resources to follow through.

UCOP – Mike Allen and others (as available) will meet in early October
Educational component: need to develop. Jim Baxter (Sac State) is especially interested in helping.

Political component: central valley focus doesn't match current local academic activity but that make it an opportunity to attract faculty, perhaps senior people. San Joaquin Experimental Forest is an especially attractive option, but need Forest Service to work with UCOP, NRS, and UC Merced and develop an attractive management plan. Forest Service is interested and willing to collaborate.

Mike and Tony start building some elements on website for proposal development and responses to national.

Political things to do

1. Alex Glaser, Larry need feedback on where we are and CSU leadership; Also other partners. Mike Allen needs help doing some of these meetings (teams of three people for each meeting). UCOP, State, Washington

Locally and to meet with CA congressional delegation. How to develop State partners. (Natural Resources Secretary Mike Chrisman; Steve Arditi). Perhaps with partners: e.g. state agency, forest service, USGS, NSF, UC but perhaps better to have push-pull rather than all together.

2. Partners: land or facilities where there is some direct connections. Great Valley Center may be an important partner with political clout. Community colleges (need interactions with stable faculty) and local school districts.

To Do's

Scoping all three transects and explain why priority chosen.

Writing assignments

Information assignments

web info updates/names, etc