Minutes of the LTER Executive Committee Meeting
March 8-9, 2006
Arlington, VA

Tuesday, March 7

Executive Committee working dinner

A discussion of the timing for the election of a new Coordinating Committee Chair concluded that this election should be held after the CC has taken action on the recommendations of the Planning Grant Governance Committee. These recommendations will be discussed and hopefully acted upon in the May 2006 meeting at Cedar Creek. Therefore, there will need to be a CC meeting at the 2006 All Scientists Meeting in order to hold the election. This might be a half day meeting in coordination with a half day EC meeting. The timing of these events does not require that we seek candidates until after the May meeting.

Wednesday, March 8

NSF attendees: Henry Gholz, Martyn Caldwell, Liz Blood, Peter McCartney, Michelle Kelleher, Alan Tessier

LTER attendees: Magnuson, Waide, Childers, Peters, Henshaw, Hobbie, Collins, Vande Castle, Benson, Porter, Whitmer

1.   Presentation of status of LTER Planning Process

- Scott Collins presented an overview of the LTER planning process, including the goals, history, present status, and future plans.
    - Progress has been reviewed by STF Advisory Committee and approved by LTER CC in September, 2005
    - Sites requested to provide input into process of developing research agenda
    - Currently developing two documents, a conceptual framework and a document that can evolve into a proposals
    - Program needs to be more than existing sites; we anticipate 26 sites plus 4-6 outside research teams
    - Magnuson and Collins met with J. Collins, Margaret Leinen, and other Program Officers in January
    - Next meeting in June in Madison

    Q: Gholz: Is there a diagram that encompasses concepts?

    A: Yes, we can provide it.

Q: Gholz: How does altered biotic structure fit in?

Q: Magnuson: How do we ensure that cross-site research is the eventual outcome of the process?

Q: Gholz: How does process relate to NCEAS?

Q: Hobbie: Recall that there were suggestions also to do more synthesis of long-term data of all kinds.

Q: Gholz: NCEAS is set up to do post-facto synthesis; funds to do planned synthesis are lacking

Q: Blood: Where are you in regard to the participation of social scientists?

- Barbara Benson gave an overview of the cyberinfrastructure element of the planning process (see PowerPoint) including goals, support for ecological approaches, products (working documents are posted on the Planning Grant wiki), focus group objectives and composition

Q: Gholz: Where do Clim and Hydro DB fit into this scheme?

A: Benson: These represent post-collection data integration efforts, which are part of the scheme of using global schemas for a federated system.

A: Henshaw: Moving toward more web-services oriented, eml-driven architecture with tools to make creating site specific filters easier.

Q: Caldwell: How close has the interaction been with NEON?

A: various LTER people: These are parallel planning processes that have some overlap of people. There were people who had participated in NEON IT planning who were participants in the LTER CI Focus Groups. The same is true for the science planning groups. These Focus Groups also included people from other groups engaged in similar CI planning efforts such as CUAHSI and OpenDAP.

Q: Blood: How are the responsibilities for different pieces of cyberinfrastructure portioned out among the different players?

A: Benson: There have been some very interesting partnerships for developing middleware components between LTER and computer scientists, for example, LNO with NCSA on grid technology and NTL with SDSC and others on tools for the scalability of sensor networks.

A: S. Collins: What is the difference between the developing the best ideas and implementing those ideas at the ground level?

Q: Blood: Once software is developed who is responsible for implementation, maintenance and update? Discussions with Office of Cyberinfrastructure may result in them providing services to virtual cyber entities. **Blood needs feedback to put into plan being developed at NSF.**

A: various LTER people: In LTER we need to be operating in production mode; prototypes and proof of concept are not enough. We need a funding model for "hardening" software and support and maintenance of software.

Q: Gholz: **Need to come up with an integrated view of what cyberinfrastructure is lacking in LTER and what is the cost of acquiring it.**

2.   Governance Plan

Ann Zimmerman and John Magnuson presented the recommendations of the Planning Grant Governance Committee (see PowerPoint), which were discussed for two hours by the EC. Major suggestions for improving the recommendations included (from Ann Zimmerman's notes):

Emphasize the science role of this group by expanding the first bullet: Set the vision of the Network's science agenda. Suggestions that were made to be sub-bullets were:

- Interact with existing and emerging networks
- Develop ideas for new proposals for network-level science (also stated as: Focus on identifying and obtaining new sources of funding for cross-site research; Guide Network in obtaining funding for cross-site research)
- Develop synthetic products
- Do science

(**Ann will send these suggestions to Deb who will come back with a list of suggestions regarding the sub-bullets**.)

A related suggestion was to collapse the following 2 bullets (approve bylaws changes; vote on Chair of EC/CC and make them sub-bullets under a category called "Conduct business of the CC".

A discussion also surrounded the bullet "Evaluate effectiveness of the EC and Chair annually." A consensus was reached to remove this bullet. The group thought that leaving this responsibility would detract from the CC focus on science. Instead, under the current bylaws, the CC can impeach the Chair, and it should stay this way.

Don asked if the Chairs of Standing Committees will attend the CC meetings? Does the IM representative on the EC go to the CC meeting? It's important to have an Information Manager present when science issues are discussed.

John Magnuson: The more appropriate question is under what terms do they go.

The current bylaws state that the Standing Committees may have representation at Coordinating Committee meetings at the discretion of the Executive Committee.

Notes regarding proposed changes to EC:

Question about who appoints committee chairs: EC elects Chair. Members of targeted and ad hoc committees are recommended and voted on by EC.

The IM community picks the IM representative for the EC.

Bob noted that there are budget implications for changing the frequency of meetings. Having one less meeting of the CC may not make up for the costs of having a larger EC and an additional meeting per year.

Notes regarding increasing representativeness of the EC:

Deb: Who deals with problems of sites feeling like they're not being represented well? How does it work now?

After some discussion, people agreed that this is a matter that the Chair should work to resolve.

Scott: The representation scheme proposed isn't the most parsimonious; it may be too complex. He would rather have site representatives represent the entire Network rather than a subset of sites. Wants to encourage EC members to act in the best interest of the entire Network.

Scott proposed that there be 3 bodies:
- A body of the lead PIs
- The EC
- Science meeting that has lead PIs and at least one other person from a site

The rationale for this is that there are things that lead PIs will want to/should vote on. Thus, another responsibility of the EC is to figure out which things should be voted on by lead PIs. Votes could take place electronically.

Concern expressed by several people that the size of the EC as proposed is too big. It was suggested that there be 6 representatives that rotate through from the sites (sites select their won rep) and 3 members-at-large elected by the EC. John M. stated that it's important for the EC to have some latitude to determine its membership; this is why he

suggested the members-at-large category. Also, there may be good leaders who are out there, but not on the EC, or particular expertise that is needed on the EC from time to time.

These issues will be discussed further by the EC on March 9. The issues to be resolved are: 1) How many at-large members; 2) How at-large members are elected; and 3) How many site members.

(The March 9 discussion came to the following conclusions:

We would have 9 members from the sites. When its turn comes, the site determines its representative. Making a correction for the present sites represented and the most recent sites represented, the rest would be arranged randomly and when their turn came they are expected to name a member and that same person would be expected to participate in network governance for three years. These representatives would act in behalf of the network and not represent a set of other sites.

Three at large members would be determined by the Executive Committee, one being chosen per year.

All terms are for three years.)

Notes regarding the proposed terms of the chair:

Term limit: Discussion around whether the Chair's term should be 2 or 3 years. Several people were concerned that it would be easier to get people to agree to a two-year term. Plus, with the year as Chair-elect, someone essentially serves for 3 years. One downside to this is that it will take a while for people (federal agencies, other organizations, etc.) to realize who the Chair is if it changes frequently. This is a good reason for having the stable contact point be the LNO.

In the end, it was decided to change the proposed term from 3 years to 2. Chair can still be re-elected for one term.

Compensation: Someone noted that the expectations of what time you expect to devote can be different from what you're compensated for. In other words, even though it's a half-time job, the compensation may be at 30% level. No resolution reached on this, although the group seemed to lean toward the 50% level.

3.   Report from Henry Gholz

        During lunch, Henry Gholz provided an overview of DEB/NSF issues

- Henry and Ali Whitmer had an exciting meeting with EHR – Ali Whitmer will brief

- TRENDS project – J. Collins very supportive of LTER; interested in advancing theory; need to <u>focus LTER presentations on contributions to advancing theory</u>
- Gragson and Grove going to visit NSF in April; Baerwald has been difficult to contact incommunicado because HSD program has $32 million this year; Baerwald heads this as well as Biocomplexity CNH competition
- Penny Firth, Acting Director of DEB, is working on a new Biosphere Initiative. Although the details of this initiative are not yet public, the general outline seems to be the same as discussed with Bob Waide during Penny's recent visit to Albuquerque (this point was confirmed later offline). The initiative couples human and natural systems and ecological and social scientists through a focus on ecosystem services.
- Budget generally better, and 07 budget has across the board increase. However, 06 general Federal budget projection is bleak. In NSF, we may see such changes in the distribution of funding within BIO, with Microbial Observatories having less money. Ecology and Ecosystems took cuts in 06. Next year, if 07 budget goes through as planned, coincidentally all sites will be at same ($820K) level except for two augmented sites. <u>There is a possibility that LTER budget will be flatlined at that point.</u>
- We should <u>talk to SBE folks (Lightfoot) and GEO (Barrequeta)</u>.

4. Bob Waide led a discussion of the accomplishments of the LTER Network Office during the past year. Subsequent discussion led to the decision to rely on the results of the mid-term review for this year's evaluation. Additional comments included the need to re-think the purpose of the annual site survey.

5. Bob Waide reported on the CLEANER All Hands meeting held March 7-8. CLEANER and CUAHSI are proposing to join into a joint organization called the WATERS Network. They are still discussing the fundamental characteristics of such a partnership and are at the point in their planning that NEON was several years ago. There is still some pessimism that the collaboration will work. However, they have made significant progress in some areas such as information management tools for hydrological data, and the **LNO should follow up their interactions with David Maidment** in this area. **The LTER Network should have periodic updates on CLEANER progress.**

6. Magnuson and Waide led a discussion of items for the agenda for the Cedar Creek CC meeting. It was decided to schedule a half-day EC meeting the afternoon of May 16 to dovetail with a NISAC meeting schedule for May 15-16. A draft agenda was agreed upon and **will continue to be fleshed out by Magnuson and Waide.**

7. Collins and Waide met with Sherry Farwell and Jim Gosz from the EPSCoR program to discuss possible collaborations. Scott gave a brief overview of the LTER planning process and the group discussed linking NEON and the LTER planning grant. Specifically, they discussed possible EPSCoR funded sites as participants in the science arising from the planning grant. There may be sites

funded by EPSCoR that could plug geographic or technical gaps in the LTER Network.

8. Liz Blood met with the Executive Committee to discuss the NSF vision for NEON.

Thursday, March 9, 2006

The mini-symposium was held in the morning and attended by roughly 75 people. A list of attendees was created and is attached to this document. Not all attendees signed the list. A list of speakers and topics is attached to this report.

The session was introduced by Jim Collins and Henry Gholz and chaired by Ali Whitmer. The general opinion of the presentations is that they were excellent as individual offerings and as a group. The LTER program is proud to be represented to NSF and other agencies in the DC area by these presentations. Examples of research from our colleagues were in respect to global change, emerging concepts and theories, influence of people from archeological studies, and graduate thesis research. Many favorable comments were received from attendees. NSF was so impressed by the min-symposium presentations that they are going to issue a series of special press releases on the topics discussed. They also suggested that we **pick dates and schedule a room for next year's mini-symposium now.**

9. A lunchtime meeting with Gassam Asrar and Evert Byington of ARS led to an interesting and profitable exchange of views. The major points discussed were:

    -   the role of LTARs and how the ARS can be engaged in this process (LTARs are being developed from the CSREES side of the USDA)
    -   the continued support of existing LTER – ARS sites, and the interest from both groups in expanding the connections between LTER and the ARS
    -   the Trends project provides an example of joint agency collaboration and creation of products

10. Magnuson and Collins met privately with Jim Collins before the afternoon session. They reported on the results of our mini budget request that J. Collins had asked us to make of our sites. They presented the summary of the responses to him and pointed out that the greatest expressed needs were in the areas of information systems and graduate student support. The summary table is attached here. Jim Collins was interested in our findings. He did not act on our information but was interested as part of the planning process that we consider what is needed to bring the sites up to a standard level of being able to participate in inter-site research and other areas. He encouraged us to consider letting him know how a progressive scale of value added for levels of funding would look to reach certain standards at the sites. He again stressed his belief that we should

recognize contribution to theory and concepts as being central to anything we do in the science arena.

11.   Meeting with Jim Collins (also present Henshaw, Magnuson, Whitmer, Peters, Hobbie, Childers, Caldwell, Gosz, Gholz, Waide)

Jim Collins gave a brief overview of his vision for NSF/BIO.

Upon his request, Ali Whitmer presented an overview of the education aspects of the LTER planning grant including EdEn grants, grad and undergrad training programs, best practices undergrad training programs,

Q: Collins: What do you see as value added by spending money through networks or other large initiatives?

A: Whitmer: The capacity to increase diversity is much greater when we work together in networks.

Need to bring out justification for value added and leveraging in LTER as part of the strategic plan. (Need to redo the site characteristics table). Need to focus on minority participation

Don Henshaw described the CI component of the planning grant, including the participants in the CI working group, the assessment survey of cyberinfrastructure and capabilities at LTER sites, and the process of planning for necessary cyberinfrastructure to accommodate network science plans for new cross-site experiments, data mining of existing long-term site observations, and model development and archival.

Q: Collins: Have we done an analysis of what kind of machines or machines will be necessary when the network is built out and gathering data?

A: Henshaw: While there are computing and mass storage needs at the site and network level, we are primarily interested in the development of middle-ware to facilitate the integration of multidisciplinary, multi-site data and network science goals. The middleware will include software and bandwidth development and will focus on quality and throughput of network science data to improve data discovery and interoperability across the Network.

Collins: We need to get information on the actual physical needs for cyberinfrastructure, particularly computing power. Get a vision of this as early as possible, a **one-pager by the end of March**. If PACE holds on, we are looking at a doubling of NSF. Genie is a proposed testbed for networks.

Henshaw: Human resources devoted to information science positions are needed across a range of operational scales including study sites, multi-site projects, multi-site networks, and centers, but also requiring support of open-source communities and academic

programs. Strategic allocation of resources is needed to place resources where they are most useful. The modeling center would provide resources to assist in model development, re-use, and archival.

12.   Penny Firth made a short presentation on her vision for DEB. She pointed out that we were in a period of great opportunity. She echoed Jim Collins statement that theory should be framing what we are going to do. She asked us to turn more attention to partnerships with shared money and shared goals. She also asked how we could form partnerships that would increase the flow of NSF-funded information to decision makers.

Draft Agenda 8 - LTER Executive Committee
March 8-10, 2006
Arlington, VA

Tuesday, March 7

7:00 PM   EC working dinner
               Brainstorm for candidates for Chair of the Coordinating Committee.
               Timeline and mechanism for election of Chair[1]

Wednesday, March 8 – Room 370 - NSF

8:00 AM   Update on LTER Planning Grant (30 minutes; Collins)

               Update on Cyber Infrastructure planning (30 minutes; Benson)

               Coffee break (15 minutes)

               Review and provide feedback to the draft governance plan[2] (2 hours;
               Zimmerman/Magnuson)

11:30 AM   Break to get sandwiches

12:00 PM   Working lunch - Update from Henry Gholz on NSF activities

Move to Room 680 – NSF

1:00 PM   Annual review of the LNO (including mid-term review report) (60
               minutes; Waide)

               Report from CLEANER meeting (15 minutes; Waide)

               Tentative agenda for the Cedar Creek CC meeting[3] (30 minutes;
               Magnuson/Waide)

               Break (15 minutes)

3:00 PM   Sherry Farwell – EPSCoR

4:00 PM   Liz Blood – NEON (60 minutes)

5:00 PM   Adjourn

7:00 PM   Dinner with mini-symposium speakers

Thursday, March 9

8:30 AM   Mini-symposium

12:30 PM   Working lunch with ARS representatives

EC meets in Room 630 NSF beginning at 2:00 PM

2:00 PM   Meet with Jim Collins, AD for Biology

3:00 PM   Meet with NSF Program Officers – Penny Firth, Martyn Caldwell, Roberta Marinelli, Phil Taylor, Dave Campbell, Tom Baerwald (all invited)

4:00 PM   Status of the All Scientists Meeting/ review of Program Committee decisions[5] (30 minutes; Waide)

                EC comments on LNO performance[6] (30 minutes; Magnuson)

5:00 PM   Adjourn and departures

7:00 PM   Dinner with Hayden and Michener (invited)

Friday, March 10

                Possible briefing for Congressional staffers (with Robert Gropp)[4] (Magnuson and Waide)

Action items

[1]Message to CC about elections; list of possible candidates

[2]Feedback to governance committee

[3]Draft agenda

[4]Plan for Congressional briefing

[5]Guidance for LNO and Program Committee

[6]Review report of LNO performance

8:30AM   Alan Knapp (Colorado State University): Global change and change in
paradigm.

8:45AM   John Briggs (Arizona State University): Combining archeology and
                ecology in the Sonoran desert and desert grasslands.

9:15AM   Scott Pearson (Mars Hill College): Land use history and patterns of
                biodiversity in Southern Appalachian forests.

9:45AM   Michelle Mack (University of Florida): Climate warming and threshold
                changes in Arctic and Boreal ecosystems.

10:15AM   Break

10:30AM   Deb Peters (USDA): Human impacts and land cover change in drylands

11:00AM   Tiffany Troxler-Gann (Florida International University): Ecosystem
                responses to hydrologic change in Everglades tree islands: Findings and
                future directions

11:30AM   Scott Collins (University of New Mexico): LTER vision for the future

Presentations

Associated Groups in LTER CI Planning

A Review of the Accomplishments of the LTER Network Office 2005-06

Cyberinfrastructure Planning within the LTER Network Planning Grant Context

Governance