

LTERR/CC Meeting Minutes
April 13 - 14, 1989
Albuquerque, New Mexico

ATTENDEES:

NSF: Tom Callahan, Bob Robbins

Sites: AND - Jerry Franklin, Stan Gregory, Art McKee; ARC - John O'Brien; BNZ - Keith Van Cleve, Leslie Viereck; CDR - Dave Tilman; CPR - Bill Lauenroth, Robert Woodmansee; CWT - Dave Coleman, Jack Webster; HBR - Charles Driscoll; HFR - David Foster, John Torrey; JRN - Gary Cunningham, Walt Whitford; KBS - Eldor Paul; KNZ - Cathy Tate, Tim Seastedt; LUQ - Robert Waide; NIN - John Vernberg; NTL - Tim Kratz, John Magnuson; NWT - Nelson Caine; SEV - Jim Gosz, Jim Brown; VCR - Raymond Deuser

Invited Participants:

Indy Burke (CPR)-GIS presentation; Jack Hautaluoma - Strategic Plan Observers: from NSF - Sonya Mallinoff, Deh-l Hseung; from Sevilleta - James Brunt, Bob Parmenter, Sandra Turner; from Albuquerque USFS - Deborah Hayes

Network Office Staff: Jerry Franklin (AND), Chair; Caroline Bledsoe, Research Coordinator; Stephanie Martin, Administrative Assistant; Rudolf Nottrott, Data Manager

AGENDA

April 13, Thursday

1. Introductions, site bullets--the most exciting LTER happening at each site (report by Franklin)
2. Executive Committee report--MSI, supplements, coordination grant, new staff introductions, Network Manager position (Franklin)
3. LTER/CC Meetings schedule through fall '90 (Franklin)
4. LTER Research Coordinator's Report (Bledsoe)
5. NSF Report (Callahan/Robbins)
6. NSF Review & Renewal Process (Bledsoe)
7. Activities/Workshop Reports:
 - a) GIS Working Group, future direction (Foster)
 - b) Modeling Workshop (Lauenroth)
 - c) Stream Group Workshop (Gregory)
 - d) Information Mgmt & Research (Bledsoe and Stafford)
 - e) LTER Bulletin Board (Lauenroth)
 - f) National Science Board Presentation (Franklin)
 - g) A Cross-Site Modeling Project (Lauenroth and Shugart)
 - h) AERC Workshop (Bledsoe)
 - i) EPA Interest in Long-Term Research & Risk Assessment (Woodmansee)
8. Intersite Research Projects Sponsored by LTER/CC

- a) Predicting Influence of Global Change-Woodmansee (Lauenroth)
- b) Productivity Along Lifeform Gradients (Tilman)
- c) Stable Isotope Initiative-Hobbie and Fry (O'Brien)
- d) Regional Ecological Response to Climate-Kittef (Lauenroth)
- e) Comparative Analysis, Temporal & Spatial-Magnuson (Kratz)

9. Scientific & Technical Committee Report & Discussion (Gosz)

10. Remote Imagery For All Sites (Lauenroth & others)

Adjourn at 5 p.m. for LTER Tasting at UNM.

April 14, Friday

11. GIS demonstration and technical briefing, UNM T.A.C. Center

12. LTER Strategic Plan (Magnuson/Bledsoe/Hautaluoma)

13. Upcoming LTER activities

14. Miscellaneous LTER business

15. Teleconferencing (Gosz)

Adjourn at 5 p.m.; field trips, Sevilleta & Jornada

MINUTES

1. Introductions (FrankRn, et al.). LTER site representatives related interesting recent developments at their sites. For example, BNZ described the "heat island" effect of Fairbanks, while NWT reported a "vole population explosion."

New Network Office staff Stephanie Martin (Administrative Assistant/ Newsletter Editor) and Rudolf Nottrott (Data Manager) introduced themselves. The position description for the Network Manager will be sent out to all sites within six weeks.

2. Executive Committee Report (Franklin).

Minimum Standard Installation (MSI) Concept. NSF's Bob Robbins outlined a general Geographic Information System (GIS) for sites, as reflected in the recent supplemental requests. All supported the MSI concept, with variations (mostly ARC/INFO, some raster-based ERDAS). The GIS working group, Nottrott and Robbins will continue to identify Network needs. Franklin will ask the GIS working group to select a liaison to contact the NSF-supported GIS center in San Diego. Over the next six-to-12 months, the GIS working group will identify other groups who use GIS.

Franklin will also ask Foster (GIS chair) and Gosz (Sci-Tech chair) for their recommendations on new GIS software and ecological applications of GIS. Many people were concerned about the costs of GIS technical staff. Robbins said that NSF recognizes the need for increased base operating budgets.

Strategic Plan. More time was created on the LTER/CC agenda to clarify Network research and organizational goals in preparation for

the fall 1989 meeting at HFR, which will focus on the strategic plan. Various site and Network documents that will set future direction are already being written.

In order to advance the planning process, Jack Hautaluoma, former NSF program director and currently an organizational psychologist with Colorado State University, was asked to conduct a preliminary "visioning" session followed by a pragmatic session during the expanded strategic planning segment. If the larger group endorses the need for a plan, Hautaluoma may be asked to continue working with the LTER/CC.

Request for an Information Resource Development Committee. In response to a request from Susan Stafford to create a standing committee, Franklin asked Stafford to assemble a small working group. This working group, composed of Pls as well as data managers, should consider data management policy issues such as data ownership/ access/oversight, generic/standardized software, and data preservation/ custodianship, in the context of the strategic plan. It was also suggested that Pls consider bringing their data managers to

LTER/CC meetings as the second site representative to emphasize the importance of their role and to involve them more directly in Network affairs.

3. Fall '89, Spring '90 & Fall '90 LTER/CC Meetings.

Fall LTER/EXEC, Tues. October 10, Harvard Forest, Petersham, Mass
LTER/CC, Wed-Fri, Oct 11-13, Harvard Forest
Field trips, Fri-Sat, Oct 13-14, Harvard Forest, Hubbard Brook
Departure, Sun October 15

In addition to establishing the content and direction of the LTER Strategic Plan, the fall LTER/CC agenda will address some controversial Network issues, including: 1) standardization/ multiple standards; 2) technical developments; 3) Network size and scope.

Site representatives who will attend the fall LTER/EXEC & LTER/CC meetings were urged to schedule flights early, since mid-October is the height of the leaf season in New England. A combination of on-site and commercial accommodations will be provided by HFR. Attendees should plan to arrive in Boston Tuesday, October 10, between 1:00 and 5:00 p.m. Transportation will be provided to and from Petersham. To keep fares down and to manage the full-day field trip to Hubbard Brook, they should plan to depart Boston on Sunday, October 15. Site representatives must notify Stephanie at the Network Office-- SMARTIN @UWACDC or 206-543-4853--that they plan to attend, as well as their arrival/departure times.

3. Upcoming Meetings, continued

Spg '90 Sites under consideration: Luquillo (Puerto Rico) & North Inlet (SC)

Fall '90 Sites under consideration: Virginia Coast & Bonanza
Creek (Alaska)

4. LTER Research Coordinator's Report. Caroline Bledsoe reported that she spends about two weeks a month in Washington, D.C. at NSF, two weeks a month in the LTER Network Office in Seattle, and one week traveling. She helps with planning and coordination at NSF and in the Network, as well as promoting intersite research. She dubbed 1989 "The Year of Workshops," with six scheduled before December 1989.

Communication in the Network via electronic mail has increased dramatically from 198 to 1989--from about 90 persons with addresses to more than 150!

5. National Science Foundation Report (Callahan/Robbins). LTER Program Officer Tom Callahan noted that four sites are slated for July reviews: Andrews, Central Plains, Niwot RWge and Northern Lakes. The current review team is not yet fully assembled (four plus Callahan). Reviews will emphasize the necessity for interproject communication, and will provide immediate verbal feedback.

The deadline for the next round of renewal proposals is February 1, 1990. The recent competition for supplements to existing BSR grants was very successful. Thirty-one requests were received and 12 awarded.

Other NSF funding opportunities:

- * mid-career fellowships/10 years past doctoral (LTER scientists not well-represented); \$3.5 million in FY '90 competition; to be announced in May '89, proposal deadline is September 29, '89
- * undergrad research awards
- * grants for women, minorities, handicapped
- * research planning grants
- * facilities development 50/50 match
- * science & technology centers

There are currently no plans for another open competition for new LTER projects. However, next year's Network core budgets may see an increase (up to 10%) as they come up for evaluation and renewal.

6. NSF Review & Renewal Process (Bledsoe). At the fall 1988 LTER/CC meeting at Kellogg Biological Station, Tom Callahan requested 1) suggested guidelines for the preparation of renewal proposals and 2) criteria for their review by a panel. The LTER Executive Committee prepared a report which was discussed and revised by the entire LTER/CC. The final report will be forwarded to NSF by mid-June 1989. (Copies available from the Network Office.)

7. Actiivities/Workshop Reports.

a) GIS Working Group -David Foster (HFR): The GIS working group, which consists of GIS "experts" from several LTER sites, met in December 1988 at HFR. (See January '89 report sent to all sites. Copies also available from the Network Office.)

b) Modeling Workshop - Bill Lauenroth (CPER): Thirteen sites were represented, and information on site modeling activity was shared in

poster format. Very few LTER sites, it turns out, have active modeling projects, and these are individual, not comprehensive models. This observation led to a semantical discussion of what qualifies as modeling and a debate over whether or not modeling is or should be promoted at the site level. (Report available from the Network Office or Lauenroth.)

c) Stream Group Workshop - Stan Gregory (AND): Six LTER representatives attended a workshop on solute dynamics and streams. A manuscript on intersite comparison will be published.

d) Information Resource Development: An ad-hoc committee (Stafford, Bledsoe, Callahan and Robbins) discussed the need for more emphasis on how to effectively use information in comparative research. Franklin and the LTER/EXEC recommended further discussion by a small group (see the Executive Committee reDort above).

e) LTER Bulletin Board - Bill Lauenroth: The current Network News has an article on how to access the Bulletin Board, which is currently running on a Sun computer at Colorado State University. It was agreed that Rudolf Nottrott and the Network Office should take over this responsibility in order to help centralize communications for the Network. Nottrott is already investigating development of centralized e-mail distribution for the Network.

f) Nat'l Science Board Presentation - Jerry Franklin: In his recent presentation to NSB Franklin emphasized that the LTER Network was accomplishing good science. He stressed the Network potential for advancing technologies and, when asked to share his vision for the effort, proposed government agency support for Network expansion.

g) A Cross-Site Modeling Project- Bill Lauenroth: Lauenroth described collaborative modeling projects not supported by LTER core budgets) which currently exist between the University of Virginia and Colorado State University. The models focus on two transects: Andrews/Coweeta/Hubbard Brook (forest); and Central PlainstNiwot Ridge (grassland).

h) AERC Workshop - Caroline Bledsoe: In an Asociation of Ecosystem Research Centers (AERC)-sponsored workshop in Florida in March 1989, about 35 ecologists discussed ways to enhance synthesis and comparative research in ecology. They also discussed the possible establishment of a national center which would have support staff and short-term, rotating scientists. Support for basic BSR research and for the center would probably be sought from NSF.

i) EPA's Interest in Long-Term Research: There was a discussion on the political role of LTER in addressing global environmental concerns and its position vis-a-vis the international scientific community. Should climate change be studied on an individual site, regional or national Network scale? Climate research is already being done. Woodmansee described a model involving a minirnum of four, a maximum of six, sites participating in a collaborative study with university, industry and federal agency partners.

8. LTER/CGsponsored Intersite Research Projects.

a) Predicting Influence of Global Change: Woodmansee (CPR) outlined the current status of national and international IGBP activities, and suggested possible LTER connections.

b) Productivity Along Lifeform Gradients: Tilman (CDR) has requested information on productivity from all sites. About a third have responded; Tilman encouraged others to complete his questionnaire so he can begin his analyses.

c) Stable Isotope Initiative: John O'Brian (ARC) outlined Hobbie and Fry's plans to compare stable isotope ratios (N and C) from soils, vegetation and animals at LTER sites. Fry will request that each site identify its representative, who will work with Fry on sample collection and attend an April 1990 workshop at Woods Hole.

d) Regional Ecological Response to Climate: Lauenroth presented the results of Kittel's research. For details, contact Kittel at CPR.

e) Comparative Analysis. Temporal & Spatial: Kratz (NTL) presented some results from the variability workshop organized by John Magnuson (NTL) in the spring of 1988. Particularly interesting was the ranking of all 12 participating LTER sites along a gradient of increasing relative variance for combined data from each site. This ranking appeared to correlate with site productivity. Manuscripts are in preparation.

9. Scientific-Technological Report. The Sci-Tech Committee (Gosz, chair) met in January 1989; their report is available from the Network Office. The committee identified four critical research endeavors, ranked in order of importance: (1) acquisition of satellite imagery for all sites; (2) trace gas measurements across all sites; (3) process modeling and spatial analyses using GIS; (4) whole ecosystem manipulations.

10. Remote Imagery for All Sites. The choice of data sets and the costs of purchase of remote imagery for all sites were discussed. Jim Gosz recommended that two regional centers be developed. John Magnuson provided cost estimates prepared by Mark Mackenzie for (a) annual GIS software, ARC/INFO and ERDAS; (b) hardware (e.g. SUN 386i) maintenance contracts; (c) purchase of remote imagery for all sites (both LANDSAT and SPOT); and (d) salary for one full-time Ph.D.-level GIS staff person. The total was about \$90,000 per year. This increased cost for GIS suggests that individual LTER base operating budgets should be increased from \$350,000 to \$400,000. However, some concern was expressed that this would be too much of an investment in one tool, in percent-of-budget terms. It was noted that only a few sites currently have appropriate data for GIS.

APRIL 14, Friday

11. GIS Demonstration at UNM T.A.C. Center. This two-hour briefing provided information on GIS capabilities and applications in ecology. Indy Burke (CPR) described her work on modeling and GIS in northeast Colorado. David Foster (HFR) talked about his use of GIS in HFR to predict forest susceptibility to hurricane disturbance.

12. Strategic Plan. Notes from the planning session conducted by Jack Hautaluoma, plus his materials transcribed, are attached as a separate document.

13. Upcoming Activities:

4/26 28 Wide-Area Networking Workshop (WAN)
5/15-17 Decomposition Workshop
Fall 89 Root Techniques Workshop
Sept 89 Trace Gas Workshop
9/1S29 Remote Sensing Workshop

14. Miscellaneous LTER Business.

a) An LTER/EXEC election was held to replace John Vernberg, whose term is over. Keith Van Cleve (BNZ) was chosen; the alternate is Jim Gosz (SEV).

b) Planning continues for an LTER all-scientists meeting in the fall or winter of 1990-1991.

c) An exchange of Chinese and U.S. scientists is planned. In the summer of 1989, about 10 Chinese scientists will visit several LTER sites, touring by car. In the fall of 1990, several LTER scientists will visit potential Chinese LTER-like sites. Jerry Franklin invited short proposals from Pls who would like to participate.

d) The LTER poster display prepared by the Sevilleta group is available for short-term loan. (Contact Stephanie Martin in the Network Office.)

15. Teleconferencing. Jim Gosz (SEV) emphasized the potential of teleconferencing for enhancement of communication and collaborative research in the LTER network.

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Meeting Handouts available from the Network Office:

NSF U.S.-Eastern Europe Cooperative Science Programs Program
Announcement

Guidelines for LTER Renewal Proposals & Panel Review

LTER GIS Working Group Report, January 1989; also available from
Foster HFR

Sci-Tech Committee Report, revised April 1989; also available from
Gosz SEV

T.A.C. Remote Sensing Service Center Proposal, April 1989

Pre-Proposal: "Defining the Value and Potential Use of Remote Sensor
Satellite

Data on LTER Sites in the U.S."; Roger M. Hoffer, Colorado State
University

LTER Cross-Site Stable Isotopes Initiative, ARC, April 1989

Software & Hardware Maintenance, Data Acquisition, and Personnel
Costs

for Operating the MSI,

Root Workshop announcement (date to be announced)

USGS Desert Winds Project Report (Jornada field trip)

LTER Ecological Research Goals

Modelers Workshop Report; also available from Lauenroth CPR

minutes submitted by Stephanie Martin