## LTER Network Office

#### The Network

The National Science Foundation created the Long Term Ecological Research (LTER) Network in 1980. The Network provides the scientific community, policy makers, and society with the knowledge and predictive understanding to conserve, protect, and manage the nation's ecosystems, their biodiversity, and the services they provide. Its 26 sites are distributed from the Arctic to the Antarctic and from Polynesia to the Caribbean.

#### The Network Office

The LTER Network Office (LNO) was founded in 1983 to support and coordinate research, education, and governance activities for the Network. Specifically, the LNO:

- » Contributes to an efficient and effective environment for conducting site, cross-site, and synthetic research and education
- » Develops and deploys state-of-the-art techniques in information management
- » Maintains a forward-looking public outreach program
- » Coordinates interactions with other scientific networks, agencies, and entities
- » Supports an efficient computational and communication infrastructure
- » Provides administrative support to the Network

However, the impact of the LNO's activities extends well beyond the LTER Network to other scientific communities. By supporting research working groups, the LNO encourages interactions between ecologists, physical scientists, social scientists, computer scientists, and information technologists, thus providing opportunities for increasing synthesis and expanding collaborations.



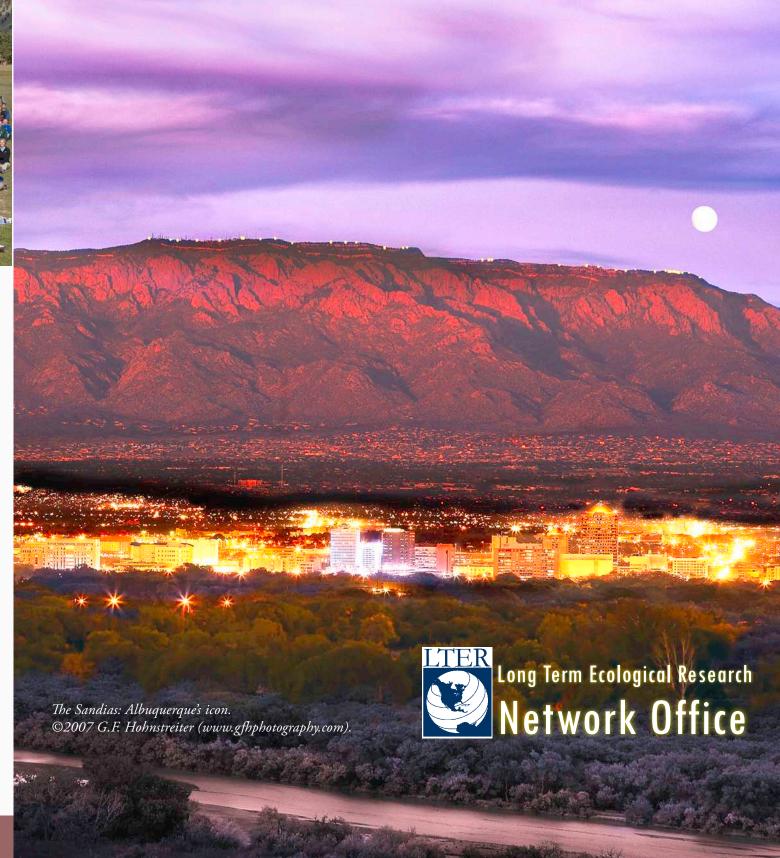
LTER scientists gather for the 2006 All Scientists Meeting at the YMCA of the Rockies near Estes Park, CO. Photo by Dill, Inc.

These collaborations encourage activity among disciplines as envisioned in the Decadal Plan for LTER. Additional benefits include distributed data services and their use for new synthetic research, standards of practice for ecological information management, new cyber-infrastructure tools, increased access to data for education and underserved groups, and collaboration with other environmental observing networks to plan a robust and efficient national cyberinfrastructure for ecological research.

For more information

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#### **Research synthesis**

The LNO plays a key role in fostering research synthesis between sites and across the network by supporting and facilitating a broad range of scientific meetings that are the foundation for coordinated research. Annual Science Council meetings provide an opportunity for sites to engage in shared problem solving, test new scientific ideas, and plan new research initiatives.



The LTER Science Council stops at the Arctic Circle on their way from Bonanza Creek to Toolik Lake. The idea for the EcoTrends project was conceived at this meeting. Photo by John Vande Castle (self-timed camera).

Triennial All Scientists Meetings—including plenary addresses, workshops, poster sessions, and time for creative interactions—provide a platform for communication that builds network-level science. The LNO coordinates all activities for these meetings, identifying venues, obtaining travel funds for attendees, and helping to develop a program. An annual LTER mini-symposium at the National Science Foundation in Arlington, VA, provides a forum to share LTER research plans and findings with a broad range of decision makers from government agencies, foundations, and non-governmental organizations. Regular planning meetings facilitated by the LNO provide opportunities for the LTER community to map out new research goals and strategies. The LNO provides funds for research working groups to focus on synthesis of LTER data, often resulting in important publications in prestigious journals and new proposals to enhance synthesis.

# LTER Network Office

The LNO provides critical services in support of the research and education goals of the LTER Network, represents the Network in its interactions with other scientific networks and organizations, facilitates the operation of the Network as a cohesive research entity, and fosters new, broadly-based initiatives that extend LTER science, education, and cyberinfrastructure to new communities.

#### **Cyberinfrastructure support**

LTER science is intricately linked with developments in cyber-infrastructure (CI). The LNO supports CI within the Network by offering services that meet the needs of the community and keep pace with evolving technology. The LNO is responsible for developing and implementing the LTER Network Information System, and through an inclusive process of gathering input from community collaborators, investigators, and information managers, it provides leadership, coordination, and support for computing and communication, information technology, and workforce development for the LTER Network. LNO's CI activities support synthetic research and important data products such as the EcoTrends database, and LNO staff provide on-site, group, and individualized consulting services for improving and maturing information management practices for sites.



LNO staff designed and implemented a web interface to access LTER site data through the EcoTrends project.

#### **Development and outreach**

The LNO's development, outreach, and training activities support Network sites in sharing their achievements and successes with the general public. Communication and information resources include tools and products such as brochures, newsletters, a traveling display, and a public website that highlight network activities and achievements. The LNO also manages a private intranet portal for LTER scientists to access Network information resources, such as archives of meeting documents, technical reports, and other network publications that underpin and support network level endeavors.



Training workshops bring critical technologies and skills to LTER sites and groups such as members of the Information Management Committee. Photo by John Sumrow.

LNO's outreach fosters partnerships with other scientific networks, agencies, and organizations to broaden the scope of LTER research and to advance ecological informatics projects that benefit the whole scientific

community. Partners include academic research institutions, government agencies, and public institutions.

The LNO organizes regular training sessions for LTER scientists and information managers at its state-of-the-art training facilities. Recent topics have ranged from information management and emerging technologies to enhancing research through information technology.



The LNO effectively communicates information about the LTER Network, its purpose, activities, and achievements, through an array of proven, high-visibility mechanisms such as the LTER traveling exhibit. Photo by John Sumrow.

#### Core services

In response to requests from the LTER sites and governing committees, the LNO provides a range of basic services to support the activities of the LTER Network:

#### Event Support

Meeting logistics, technology infrastructure, training lab

#### Email Support

Mailing lists, aliases, webmail, spam and virus protection

#### Hosting Services

Web site, database, domain name service, virtual servers

#### Consulting Services

Website design and construction, database design and construction, server design and configuration

#### Synthesis working groups

Review and funding, meeting planning, technology infrastructure

#### Database support

Personnel, site bibliography, data catalog, climate/hydrology, remotely-sensed data

#### Collaboration support

Video teleconference hosting, collaboration software hosting