

## **APPENDIX A.**

### **Data sharing policies:**

#### **1. LTER -- <http://lternet.edu/data/netpolicy.html>**

##### DATA ACCESS POLICY FOR THE LTER NETWORK

1) There are two types of data: Type I (data that is freely available within 2-3 years) with minimum restrictions and, Type II (Exceptional data sets that are available only with written permission from the PI/investigator(s)). Implied in this timetable, is the assumption that some data sets require more effort to get on-line and that no "blanket policy" is going to cover all data sets at all sites. However, each site would pursue getting all of their data on-line in the most expedient fashion possible.

2) The number of data sets that are assigned TYPE II status should be rare in occurrence and that the justification for exceptions must be well documented and approved by the lead PI and site data manager. Some examples of Type II data may include: locations of rare or endangered species, data that are covered by copyright laws (e.g. TM and/or SPOT satellite data) or some types of census data involving human subjects.

#### **2. Coweeta Hydrologic Laboratory**

##### Data Acquisition Policies

##### COWEETA LTER DATA MANAGEMENT POLICY

The Coweeta LTER program has established the following data policy to both increase public and private awareness of our research activities and to provide a mechanism for the appropriate transmission of information to interested parties. The data policy of the Coweeta LTER project applies to data: 1) funded by, 2) collected on-site, or 3) relevant to the LTER research program. We require metadata for all research meeting the aforementioned criteria. Projects funded entirely by the NSF LTER program also must comply with Type 1 and Type 2 data requirements. The Coweeta data policy pertains to projects that are currently active, although we strongly urge investigators with either non-NSF funded, or completed projects to enter their data (or at the very least metadata) in the Coweeta Web Site. All requests for, and subsequent use of, data residing on the Coweeta LTER project web site must be accompanied by completion of the DATA USERS AGREEMENT (see below).

##### DATA CLASSES

###### TYPE 1

Type 1 data are available to all interested parties with few or no restrictions other than those stipulated in the DATA USERS AGREEMENT. Type 1 data sets include those routinely collected by either LTER Co-PI's or associated investigators that are crucial to multiple research projects (e.g., climatological, hydrological and similar data). These data will be made available within 3 years of collection with few or no restrictions other than those stipulated in the DATA USERS AGREEMENT. In addition, all Type 2 data sets automatically will be migrated to Type 1 status after three years has elapsed from the completion of the project (see below).

## TYPE 2

Type 2 data are available only with written permission from the Co-PI(s) directing this segment of LTER research (see DATA USERS AGREEMENT). We require this permission for two reasons: 1) to ensure that the data being requested are appropriate for the purposes stated by the requesting investigator, and 2) to ensure that the PI has had sufficient time to process, analyze, synthesize and publish results obtained from these data. A data set will be maintained under Type 2 status for a maximum of three years after completion of the project, after which time it will immediately be migrated to Type 1 status.

A project is completed when the PI responsible for this segment of the research determines that all planned publications have been obtained from the data set. The PI will notify the Data Manager when a project has been completed.

The Coweeta Data Policy only is applicable to data on Human Subjects (as defined in the Code of Federal Regulations, title 45 part 46 "Protecting Human Subjects") where it does not conflict with the protections accorded under the aforementioned code as well as those described in Authority: 5 U.S.C. 301; 42 U.S.C. 289, 42 U.S.C. 300v-1(b). In addition, the policy does not apply to data that have restrictions on their distribution (e.g., satellite data, personal economic data)

## DATA MANAGEMENT PROCESS

1. Co-PI starts new aspect of research program
2. Meta-data description created and placed on the web (within 6 months of inception)
3. All data collection, analysis, synthesis, completed
4. Manuscript(s) accepted for publication
5. Data placed on web site as Type 2 data
6. Three years pass Data migrated to Type 1 status.

The deadlines contained in the data management policy are maximum deadlines and PI's are encouraged to migrate their data to Type 1 status as soon as feasible.

## DATA USERS AGREEMENT

By downloading and using data collected under the auspices of the Coweeta LTER, the user agrees to the following responsibilities:

1) before downloading a data set, the user will provide accurate and complete information to the Principal Investigator (PI) responsible for the data set of interest. We provide a web-based method for this purpose,

2) the user agrees not to sell or distribute data provided by the Coweeta LTER program,

3) the user will provide any manuscript for courtesy review by the PI at least 30 days before submitting it for publication,

4) the user will provide one copy of any manuscript which draws upon Coweeta data to the following two addresses:

Teresa Moss, Secretary  
Coweeta Hydrologic Laboratory  
3160 Coweeta Lab Road  
Otto, NC 28763 USA

Ron Rouhani  
Coweeta LTER Data Manager  
Institute of Ecology  
University of Georgia  
Athens, GA 30602-2202 USA

5) the PI retains all rights to data released to the public, Ecological data sets are dynamic and may change over time.

Coweeta and the PI(s) disclaim any responsibility for errors that may or may not exist within online data.

6) the user assumes all responsibility for errors in analysis or judgment associated with online data,

7) violation of any of the terms of the Data User's Agreement will result in immediate forfeiture of the data, as well as a complete loss of future access privileges to data collected by researchers associated with the Coweeta LTER program.

### 3. VCR LTER

## Data Management Policy of The Virginia Coast LTER

### Objectives:

The Virginia Coast Reserve Research Data Management System (VCR-RDMS) was established to provide a means of distributing data among scientific research projects and to provide archival storage for data collected by VCR-LTER researchers.

### Quality Assurance

The responsibility for quality assurance (both in data and documentation content) rests with the principal investigator who submits the data to the VCR-LTER database. To facilitate quality assurance, the data management staff will provide printed copies of data and documentation submitted by a principal investigator to that investigator upon request.

### Submission of data:

All data collected during a calendar year must be submitted to the VCR-LTER data manager prior to June first of the following year. Data must be submitted with standard VCR-LTER forms describing the format and content of the data. These forms will include a list of persons that have permission to make data available to others during its protected period (see below).

The data management staff will take steps to assure that the data remain physically intact and accessible by implementing a high-quality program for long-term archival storage.

### Data Access:

At time of data submission, a Principal Investigator must specify a date (not further than 2 years in the future) when the data can be made publicly available. During a protected period (between when a data set is submitted and when it becomes publicly available), all rights to control access to the data set are retained by the principal investigator associated with that particular data set. In the event that a more protracted protected period is needed, a principal investigator may petition the VCR-LTER governing committee (currently composed of all LTER principal investigators) for a longer protected period which may be granted by a simple majority vote.

Except by permission of the VCR-LTER governing committee, release of data (public or protected) is limited to individuals and institutions engaged in bona fide scientific research. Individuals and institutions utilizing data from the VCR-LTER database should properly acknowledge the contribution made by the VCR-LTER and supply the VCR-LTER with copies of publications resulting from the use of VCR-LTER data. A fee, covering reasonable costs entailed in the distribution of data, may be assessed.

#### **4. Konza LTER**

One of the goals of the Konza Prairie LTER program is to support, as much as possible, collaborative and independent research efforts on Konza Prairie. Thus, we have developed a highly successful protocol (implemented in 1983) that allows outside (non-Konza LTER) investigators access to the LTER data. We have three levels of access restrictions: unrestricted, limited restriction, and full restriction. Briefly, unrestricted--archived data sets accessible to all researchers. This is read-only access and it is understood that any errors discovered (or suspected) in an unrestricted data file must be brought to the immediate attention of the Data Manager, who will confer with the investigator (These are the data we have on our WWW server; most Konza LTER data fall in this category). Limited restriction--archived data sets with read-only access available to current Konza LTER researchers or to outside researchers upon written permission of the current LTER PI(s) and the data set investigator. The PI(s) may deem that the investigator approval is not necessary if he/she has waived that privilege, is deceased, or cannot be reached within a reasonable amount of time. This restriction is mostly used for short-term projects (i.e. graduate students theses, short-term exploratory research, etc.) Restricted--these data are accessible only to the investigator or persons designated by the investigator. These may be raw data or other data files which are considered incomplete, unchecked, or have proprietary rights (e.g. commercial remote sensing data). Our goal is to have all LTER data archived, on our WWW server and in the unrestricted category within one year after the last datum is collected. As soon as any data set is placed in the unrestricted category, it is placed on our WWW server. Thus we are constantly updating the data base on our WWW server. In addition, we ask investigators who use Konza Prairie LTER data to follow these guideline for the release and citation of data collected as part of the Konza Prairie LTER project:

1) Manuscripts using the data are to be provided to the Principal Investigator, LTER, Division of Biology, Ackert Hall, Kansas State University, Manhattan, KS 66506 so that he/she may notify the appropriate investigators. 2) Acknowledgment should be made to recognize the contribution of data by Konza Prairie LTER. We request that the following statement be included in any manuscript or proposal. "Data from the Konza Prairie Research Natural Area were collected as part of the Konza Prairie LTER program (NSF grants DEB-8012166, BSR-8514327 and BSR-9011662), Division of Biology, Kansas State University, Manhattan, KS. Data and supporting documentation are stored (Data Set Code(s)=\_\_\_\_\_) in the Konza Prairie Research Natural Area LTER Data Bank." Additionally, specific investigators may be cited for their contributions to the paper.

#### **5. NCEAS**

National Center for Ecological Analysis and Synthesis  
Data and Information Policy

##### **1. The Center's Mission**

NCEAS exists to advance the state of ecological knowledge through the search for general patterns and principles. The Center's focus is collaborative, basic and applied research on the structure and dynamics of ecological systems. Particular emphases include pioneering and applying new methodologies, analyzing and synthesizing results from large heterogeneous data sets, addressing problems of scale from individual to regional and global issues, and helping bridge the gap between modeling and empirical results with policy formulation and decision making. To meet this mission requires pooling of data across sites, experiments, and/or investigators, as well as application of innovative computation and analysis.

## 2. NCEAS Data Principles

The Center does not intend to serve as a large data repository. However, we are committed to making the data that are compiled for NCEAS activities available to the broader scientific community. To meet this goal requires that:

- NCEAS data sets are well archived;
- data are sufficiently documented using appropriate standards and conventions to be used by researchers not associated with the NCEAS activity;
- datasets are made available in a timely manner;
- requested restrictions on data access are respected and enforced;
- researchers receive adequate acknowledgement for the use of their data by other researchers.

## 3. Management and distribution of NCEAS data and information

NCEAS investigators pool data that vary widely in their level of documentation and accessibility. The Center provides staffing and computing resources to bring data into a common format for analysis. We also assist in data cataloguing (minimal description), documentation (description adequate for data exchange), archival storage, and distribution.

Although our goal is to foster sharing and dissemination of ecological data, we respect concerns related to copyrights and intellectual property. Data sharing issues are addressed on a case-by-case basis through discussions between project leaders and the NCEAS Director and staff. As a departure point for these discussions, we recognize the following classes of original (O) data and data derived through NCEAS-sponsored activities (D), and suggest the following policies:

- O1. Published data and meta data (i.e., data about data) in the public domain.  
Policy: NCEAS will identify recognized distribution nodes or will distribute over the Internet.
- O2. Unpublished data in the public domain.  
Policy: NCEAS will catalogue and document these data and provide Internet access to them.

O3. Unpublished data available by permission from an individual or organization  
Policy: NCEAS will catalogue these datasets but will direct any requests for data to the appropriate individuals or organization.

O4. Unpublished data available from an individual only for specified NCEAS analyses.

Policy: NCEAS will catalogue these data only by permission from the individual or organization.

D1. Data and metadata pooled from published sources.

Policy: NCEAS will document these data and provide Internet access to them.

D2. Data and metadata pooled from data sets including unpublished data with restrictions on access and distribution.

Policy: NCEAS will catalogue and document these data but will direct requests for data to the project leader.

D3. Data derived from an NCEAS analysis that are distinctive enough from any of the original data that they should be treated as a new data set.

Policy: NCEAS will catalogue and document these data, and will provide access to them two years after completion of the NCEAS project, or earlier with permission from the project leader.

These additional policies also govern NCEAS management of data and information:

Prior to or upon completion of an NCEAS-sponsored project, we request that an exact and well documented copy of all data that have been compiled for that project must be provided to the Center. The data will be archived and their dissemination will be based on based on the policies as listed above or as developed with Project Leaders. NCEAS will provide tools and staff support for assembling and documenting data in manner consistent with NCEAS conventions.

In general, NCEAS data sets may not be sold or redistributed by the recipient.

NCEAS requests, but does not require, that copies of analytical tools developed by NCEAS investigators be repositied with the Center. Copies of software products developed by NCEAS staff to support sponsored projects will be kept at the Center and used where appropriate to support other NCEAS activities.

Copies of any publications resulting from NCEAS support must be provided to NCEAS at the time of publication.

## **6. H. J. Andrews Experimental Forest Data Access Policy**

2 Feb 1998

Introduction  
Data Use Agreement  
Disclaimer  
General Citation  
User Registration Form  
Data Availability

#### Introduction:

Welcome to the H. J. Andrews LTER Database. Our intentions are to make our data as freely available as possible (See Data Availability). Our data sets consist of long-term research study data with accompanying documentation (metadata). Spatial and non-spatial data sets are available as well as software and models. We encourage the use of our data sets, but as a professional courtesy we ask that data users read and agree to the terms of our Data Use Agreement.

It is considered a matter of professional ethics to acknowledge the work of other scientists that results in data used in subsequent research. Therefore, Andrews Forest researchers request appropriate citation and acknowledgement for subsequent distribution or publication of any work derived from these data sets. Data users are strongly encouraged to consider consultation, collaboration and/or co-authorship with original investigators.

#### Data Use Agreement

Any Andrews Forest data set and accompanying metadata available on these web pages can be downloaded for academic, research, recreational, and other professional purposes. Permission to download data sets is granted to the Data User without a fee subject to the following terms:

#### Data User will:

- notify the designated contact (Principle Investigator) when any derivative work based on or derived from the data and documentation is distributed.
- notify users that such derivative work is a modified version and not the original data and documentation distributed by the Andrews LTER.
- not redistribute original data and documentation
- acknowledge the support of the Andrews LTER and appropriate NSF Grant numbers in any publications using these data and documentation. (See appropriate citation)
- send two reprints of any publications resulting from use of the data and documentation to the following address:

Andrews Forest LTER Program  
c/o Tami Lowry  
Forestry Sciences Lab

3200 SW Jefferson Way  
Corvallis, OR 97331

By using or copying these data and documentation, the Data User agrees to abide by the terms of this agreement. The Andrews Forest LTER Site shall have the right to terminate this agreement immediately by written notice upon the Data User's breach of, or non-compliance with, any of its terms. The Data User may be held responsible for any misuse that is caused or encouraged by the Data User's failure to abide by the terms of this agreement.

Thank you for your cooperation. We hope your collaboration with our site is a productive one!

Disclaimer:

While substantial efforts are made to ensure the accuracy of data and documentation, complete accuracy of data sets cannot be guaranteed. All data are made available "as is". The Andrews LTER shall not be liable for damages resulting from any use or misinterpretation of data sets.

General Citation

Data sets were provided by the Forest Science Data Bank, a partnership between the Department of Forest Science, Oregon State University, and the U.S. Forest Service Pacific Northwest Research Station, Corvallis, Oregon. Significant funding for these data was provided by the National Science Foundation Long-Term Ecological Research program (NSF Grant numbers BSR-90-11663 and DEB-96-32921).

User Registration Form:

We ask that you complete a short user registration form (see sample form) when downloading data. This form has been implemented as a courtesy to the intellectual property rights of those who generated the data and for our purposes of tracking the use of this data set in order to set priorities for limited resources. Mailing this form indicates that you have agreed to the terms of our Data Use Agreement.

Thank you for your cooperation!!

Data Availability:

We wish to make our data as freely available as possible. Our ideal goal is to make most data available via the Internet in 2-3 years after collection, to conform to the LTER Network standards. Realistically, however, it is not possible to make all data available in that time frame. We therefore recognize two access categories for electronic data sets:

Type 1 data are freely available over the Internet once the terms of the Data Use Agreement are agreed to.

Type 2 data are not freely available, but may be distributed under specific restrictions. Metadata for Type 2 data will generally be made freely available via the Internet. Type 2 status will be assigned to electronic data that meet the conditions listed below. Bear in mind that data are not restricted without specific justification from the data set curator (typically the Principle Investigator). Moreover, Type 2 status is not meant to be a permanent condition, and data sets will be assigned Type 1 status once distribution concerns have been satisfied. Those interested in exploring the use of Type 2 data are encouraged to directly contact the data curator to determine which collaborative arrangements would be mutually acceptable.

### Conditions Justifying Type 2 Status

#### 1. Legal Issues

a. The data includes the location of sensitive resources that might be endangered by revealing the location. This would include locations of artifacts, threatened or endangered species, and certain permanent plots.

b. Data will not be released that may compromise one's personal privacy. This might include types of census data involving human subjects.

c. Data that are covered by copyright laws (e.g., TM and/or SPOT satellite data).

#### 2. Data Quality Assurance and Control Issues

a. The quality of the data is currently too low to be released. Data proofing and QA/QC have not yet been conducted or completed, but could occur if resources become available.

b. The data include measurements using new techniques that require further research before their value/limitations are understood.

c. Legacy data that have significant problems in metadata, measurements or other issues that make the value of the data questionable without significant investment of resources. Examples of this category would be some of the IBP-Coniferous Forest Biome data (1969-1979) which were stored prior to adoption of rigorous metadata and QA/QC standards. While the potential value of this legacy data may be high, significant resources are required to validate these data before distribution. We discourage making requests for these data unless the requester has funding to support the development of these data sets.

#### 3. Publication Issues

a. Protection of vulnerable PI is required. These data sets are those collected by graduate students, Post-Doc's, and others who have a limited number of data sets to their name and whose professional development might be compromised by releasing the data too early.

b. Data for which the sampling interval is longer than the 5-6 year LTER funding interval. These would be data sets that might take a decade or more to detect a trend. If appropriate, intermediate data from one measurement period will be made accessible as a Type 1 data set.

The Andrews Data Access Policy was developed in conjunction with the LTER Network policy as well as with individual LTER site policies, particularly the Virginia Coast Reserve and the Central Arizona Project.