



WATER RESOURCES RESEARCH GRANT PROPOSAL

Title: Web-based Data Analysis and Distribution for Water Resources Data Sets Denise Lach, Oregon State University

Abstract

The expertise and facilities at Oregon State University (OSU) will be used to create and maintain a web site that will link faculty at OSU and other Oregon University System (OUS) institutions with various state and federal agencies and will provide a central location for water data, information, and analysis for the State of Oregon.

Duration: February 1, 2000 - January 31, 2001

Fiscal Year 2000 Funds Requested:

Total \$14,077
Direct \$10,227 + \$3,850 tuition
Indirect \$0

Matching Funds to be Allocated:

Total \$15,412
Direct \$11,025
Indirect \$26,437

Principal Investigator(s):

Denise Lach, Assistant Professor Department of Sociology Oregon State University
Corvallis, OR 97331

Key Collaborators:

Kenneth J. Williamson, Department of Civil, Construction, and Environmental
Engineering
Cherri Pancake, Department of Computer Science
Karyl Butcher, Head Librarian

Congressional District: Oregon #5

Critical Need for Research

The apparently abundant water resources of Oregon are increasingly under pressure from population growth and shifts, development and implementation of environmental policies and regulations, and changing cultural values. In order to create responsive policy,

decision makers at the local, state, and regional levels must take into account existing and emerging findings from research, as well as lessons learned from previous efforts. Access to this critical information is difficult as it is spread across institutions, agencies, and individuals, and is in multiple forms including agency reports, published papers, electronic files, and unanalyzed data. We propose to create a framework that allows access to information critical to making water resource decisions through a searchable data base.

Expected Results, Benefits, and Information

We will create a platform that allows the integration of various types of information into a searchable database that can be used by scientists, resource managers, industry and other non-governmental organizations, and members of the public as they make choices about how to manage water resources in Oregon. The platform will be structured so that information input is relatively simple, the database easy to maintain, and is continuously updated as new information is developed and/or submitted. Data sets, collected through primary research or other sources (e.g., USGS, USFS), will be made available to other users. As appropriate, comparisons across data sets will be conducted or developed by local scientists. Information about Oregon water resource issues produced and/or stored by institutions of higher education in Oregon and the Pacific Northwest, local, state, and federal agencies will be included.

Goals and Objectives

Our goal is to create and maintain an accessible source of information about Oregon water resources that is used for analysis and decision making by scientists, water resource managers, and others. To meet this goal, we have several objectives including:

1. Establishing partnerships with agencies who are willing to cooperate with and support the construction of the database platform.
2. Working closely with the Northwest Alliance for Computational Science and Engineering (NACSE) to create (1) a platform for integrating data sets and other information and (2) a protocol for identifying, collecting, and entering data on the website.
3. Working closely with the OSU Library to create a retrievable archival facility for reports and other "hard copy" information that is currently ephemeral, unlike published articles, but that contains valuable information.
4. Eliciting water resource information and data sets from a wide array of potential producers and/or users and making this available via the web site.

Methods, Procedures, and Facilities

As described above, we will work closely with NACSE, part of NSF's "metacenter~ system, a national infrastructure that provides network-based access to high performance computing resources. Cheri Pancake, Project Director for NACSE, will participate in this effort and help create the platform and protocol described above. Once the protocol has been developed, we will work closely with scientists at OUS institutions, and local, state, and federal agency scientists who produce relevant data sets and other types of information. We will also work closely with other potential users of the database such as agency staff and members of the watershed councils responsible for making local decisions, to identify the types and forms of information they need to make responsible decisions about water resources. This multi-level procedure gathering available information from producers and information needs from users - will help ensure that the information is credible but useful.

Technology Transfer

The primary technology transfer method will be through use of the OWRRI web site and with linkage to other web sites for water agencies in the Pacific Northwest. We will create an e-mail newsletter that will describe new additions to the OWRRI web site each month to develop a user community.