

## 9. PROGRAM: TEACHING AND RESEARCH

### Introduction

Teaching and research are the principal activities on reserves and the basis for the continued existence of the reserves within the University of California. A third activity is public service and, while important, is subordinate to the teaching and research mission. The allocation of these activities on each reserve is the joint responsibility of the reserve Management Advisory Committee and the Faculty Reserve Manager with guidance from the Campus NRS Advisory Committee and the Systemwide office.

### Reserve Plans for Teaching and Research Use

In order to minimize conflicts among users of the reserves, each reserve management plan should anticipate potential conflicts and provide for their mitigation through zoning of areas for teaching, research and public access and through scheduling to minimize public use during critical research periods (see Chapter 13, Guidelines for Management Planning). It is the joint responsibility of the Career and Faculty Reserve Managers and the reserve Management Advisory Committee to develop long-range planning for the use of reserves. Such planning should include projected facility and personnel needs for both teaching and research functions and should be coordinated with the Campus NRS Advisory Committee and the Systemwide office.

### Fostering Use

The following activities are designed to foster reserve use and should be included in the overall joint efforts of the Faculty Reserve Manager and Campus NRS Committees in collaboration with the Systemwide office.

1. Promotion. The promotion of the reserves will be enhanced by assisting the Systemwide office in the maintenance of reserve websites and other outreach materials such as brochures.

A program should be established to familiarize new faculty and graduate students with the NRS. Similarly an outreach program should be established to familiarize the faculty and graduate students from nearby colleges and universities with the NRS as a resource for teaching and research; this role is often played by a campus's NRS administrative coordinator.

2. Use Statistics. Consistent record keeping of use is necessary in order to continue the documentation of reserve productivity, which is critical to the justification of budgetary support and required by granting agencies. Information on research use such as the researcher's name, affiliation, project title, number of participants, duration, sponsor and support level are collected in the NRS's online Reserve Application Management System (RAMS). Use statistics are aggregated and published on the NRS website.
3. Library and On-Line Databases. An accessible library should be maintained on campus and, if facilities permit, on the reserve. The library should contain reference materials pertinent to the reserve, publications originating from reserve use, a metadata catalog of datasets based on work at the reserve, appropriate student project reports, and other material of special interest to reserve users.
  - **NRS Bibliographic Database**. A record of publications that result from reserve use should be maintained and included in each Annual Report for the reserve (see Chapter 15, Guidelines for Annual Reports), and on the Internet-based NRS Bibliographic Database, found at <http://www.ucnrs.org/>. The NRS Bibliographic database provides a searchable source of all the work done at a reserve, or set of reserves, that may be of interest to a new researcher. It provides information on the value of these sites in ways that might not be immediately apparent. There are also administrative reasons for collecting bibliographic data; documenting the use of NRS reserves provides objective proof of the value of the reserves and the benefits they provide to California.

- **NRS Metadata Catalog.** Data management is fundamental to the continued existence of field stations. Ecological data, for example, can be used to answer many of the most pressing issues of our time. Policy makers want information on ecological problems, and field stations are in a unique position to provide answers to many questions — but only if we can compare our current situation to the past. Shared data sets increase the value of field stations as repositories of ecological data, provide a real-world basis for teaching analysis and methods, and improve research, as advances in other fields often find legacy ecological data invaluable for entirely new, and unpredicted, purposes. The NRS data registry was developed in coordination with the National Center for Ecological Analysis and Synthesis (NCEAS) and the Knowledge Network for Biocomplexity (KNB). Catalog entries should be made on-line at <http://www.ucnrs.org/>.
4. User Feedback. Periodically, an evaluation of the reserve should be requested from researchers, faculty and students who use the reserve. The purpose of these evaluations is to identify problems and opportunities that should be addressed by the Faculty Reserve Manager or by the appropriate NRS committee.
  5. Fundraising. The Faculty Reserve Manager and the campus NRS Advisory Committee should work with the campus administration and the Systemwide office to develop support funds for the reserves. The function of such funds would include seed money for faculty and student research projects, course support, facility development, personnel and operating costs.
  6. Facilities. The development of appropriate physical facilities such as laboratories and accommodations will greatly improve the value of a reserve as a resource for research and teaching. The development of useful facilities is a complex and generally capital-intensive endeavor that should be closely coordinated between the campus and the Systemwide office (see Chapter 14, Guidelines for Facilities Development).

7. Long-Range Planning. Appropriate campus administrative offices should be made familiar with the NRS's facilities plans on the reserves. Copies of any reserve facilities planning studies, with subsequent amendments, should be filed with the Systemwide office.