

DRAFT PROPOSAL FOR
INEL-UI COOPERATIVE ATMOSPHERIC MONITORING PROJECT
AT THE TAYLOR RANCH FIELD STATION OF THE
UNIVERSITY OF IDAHO WILDERNESS RESEARCH CENTER

I. PURPOSE

A. Goals

The University of Idaho Wilderness Research Center operates the Taylor Ranch Field Station as a focal point for interdisciplinary wilderness-related research by the University and cooperating organizations. This paper presents a proposal for a cooperative effort between the Wilderness Research Center and the Idaho National Engineering Laboratory to conduct research to develop a background site for an integrated global environmental monitoring network.

B. IGBP Designation

C. Biosphere Reserve Designation

D. Joint Program of Research and Monitoring

E. Cooperative Programs

1. Training

2. Equipment testing

3. Testing methodology

II. CURRENT SITUATION

A. Background

The basic goal of the Wilderness Research Center is to facilitate and sponsor research to expand understanding of natural ecosystems, components of natural environments and natural phenomena; the comparative use of such information to evaluate man-altered environments elsewhere, and the effects of wilderness uses on resources and participants. Established in 1972, the Center's administrative offices are housed in the College of Forestry, Wildlife and Range Sciences, thus taking advantage of the interdisciplinary expertise and resources of the College and the University. For the past 14 years it has been the location of research on the ecology of wilderness wildlife species (including mountain lion, big horn sheep, bobcat, owls), animal and bird community relationships, predator-prey relationships, and habitat relationships. Archeological research (funded by the National Geographic Society) has studied the prehistoric settlement and subsistence patterns of the Big Creek drainage. Research is in progress to evaluate indicators of biological, physical, and social conditions affected by human use of wilderness.

B. Location and Facilities of the Taylor Ranch

The 65-acre Taylor Ranch field station, located on the Big Creek Drainage in the heart of the 2.3 million acre Frank Church-River of No Return Wilderness in central Idaho, is ideally suited to conduct such research. It is staffed year-round; has basic laboratory facilities, residence

cabins, pack stock and an airstrip; four pristine mountain streams cross the property; and it is the focal point for an ongoing research program. Because Taylor Ranch is located in the center of the largest contiguous acreage of Wilderness in the lower 48 states, it could serve as an excellent background site for a regional atmospheric monitoring program in the central and northern Rockies.

C. INEL Leadership in Atmospheric Monitoring

The Idaho National Engineering Laboratory has taken a leadership role in developing the concept and methodology for an integrated global background monitoring network.

D. Uniqueness

III. ASSUMPTIONS ABOUT THE FUTURE

Environmental monitoring is becoming a major field of applied science with rapidly developing methodologies, instrumentation and scientific organization and accumulating data bases. Internationally, environmental monitoring will become increasingly important with the industrialization of lesser developed nations.

IV. ACTION PLAN

- A. Biosphere Reserve Designation for the Frank Church-River of No Return Wilderness
- B. Develop an Instrumentation Plan
- C. Joint Training and Collaboration
- D. Site Development
- E. Division of Responsibilities
- F. Field Visit
- G. Affiliate Faculty Appointments
- H. GIS
- I. Human History
- J. Range Transects