



Bison and Yellowstone Lake, Yellowstone Natl. Park

February 17, 1986

Dear Taylor Steering Committee:

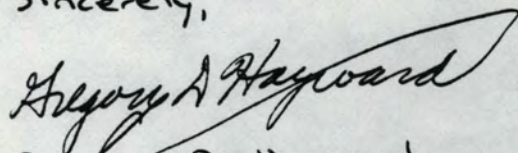
Due to our past work at Taylor Ranch and continued research within wilderness, we have a personal interest in the long-term success of Taylor Ranch as a center for effective research. During the past year, we've been away from the University and, therefore, are unaware of developments in long-term planning. Thus, this note may be a little out of step with recent discussions by the steering committee.

Last year, at a time when it seemed the Taylor Ranch Steering Committee was not active, Pat submitted a proposal to Ed Through Oz. We felt concerned that Taylor Ranch had been acting as a research center for over a decade but could see no substantial move toward developing long-term research goals and objectives. More importantly, the potential role of the ranch as a center for long-term ecological monitoring was not being addressed. Ecologists and managers have long recognized the paucity of, and need for, data on natural ecosystem stability. Many ecological processes can be understood only with data collected over an extended period. In addition, baseline data is needed to support any biological research conducted from Taylor. Lastly, a sound data base will strengthen proposals for further research funding, e.g. NSF funds.

We feel a system for collecting and organizing long-term ecological data at Taylor Ranch is essential for a research facility of its type. Pat's proposal, therefore, concerned developing an ecological monitoring plan for Taylor. Although Pat is now unavailable to work on the proposed project, we thought the steering committee

might be interested in reading the proposal simply as a tool to stimulate further thought on the long-term direction of Taylor Ranch as a research facility. We have asked Oz to copy the proposal to distribute at the next steering committee meeting.

Sincerely,



Gregory D. Hayward

Patricia H. Hayward

Patricia H. Hayward

UNIVERSITY OF IDAHO
Department of Fish and Wildlife Resources
Inter-Office Memorandum

DATE: 13 August, 1985
TO: Ed Krumpe, Director of Wilderness Research Center
FROM: Oz Garton, Fish and Wildlife *EOG*
RE: An Ecological Monitoring Program for Taylor Ranch and vicinity

Pat Hayward has developed the attached proposal to develop an Ecological Monitoring Program for Taylor Ranch and adjacent wilderness. I have encouraged her because I feel such a monitoring program would dramatically expand the scientific and educational value of the Taylor Ranch research facility and because ecological monitoring is one of my own areas of expertise and interest.

Do you think that the Wilderness Research Center could afford the money for such a useful endeavor? Please let me know, at your earliest convenience, so that we can pursue other sources of funding, if necessary.

cc: Pat Hayward

Ecological Monitoring at Taylor Ranch

A proposal to the Wilderness Research Center by Patricia Hayward
Faculty Sponsor: Dr. E. O. Garton, Fish and Wildlife Department

Taylor Ranch (the University of Idaho Wilderness Research Station), as a permanent research facility located in the relatively undisturbed ecosystem of The River of No Return Wilderness, has potential for significant long-term ecological research. Ecologists and resource managers frequently lament the paucity of information on the dynamics and trends of ecological communities and the difficulties in obtaining such information due to problems of logistics, human disturbance, and lack of personnel to collect such data. Research facilities at Taylor Ranch, however, overcome some of the problems associated with gathering long-term data because of the facility's location in a wilderness and because University employees occupy the ranch year round.

In the past, Taylor Ranch has served as a base from which various unrelated field research projects operated. These independent investigations have contributed significantly to the understanding of mountain lion behavior and population dynamics (Hornocker 1970, Seidensticker et al 1973), bobcat population ecology (Koehler, in progress), elk food habits (Claar 1973), resource partitioning in forest owls (Hayward 1983), and archaeology (Leonhardy, in progress). Each of these studies could have benefitted from baseline ecological data. Unfortunately, such

data was not available. Baseline data would also aid in bringing continuity to the separate investigations and assist in the formulation of research direction for the station. Until a long-term ecological monitoring plan begins, Taylor Ranch will be incapable of formulating a coordinated research direction and fulfilling its full potential as a wilderness research facility.

Over the two decades since the University purchased Taylor Ranch, many forces have influenced the land and biological communities in the wilderness around the ranch. The influence of mining activity on water resources, fluctuations in game populations on plant communities, fluctuations in insect populations on bird and small mammal densities, and the process of succession on forest community structure in the region are all unknown because ecological monitoring has not been initiated.

The value of data obtained through long-term monitoring is not limited to an understanding of the environment of The River of No Return Wilderness and should not be underestimated. Standardized monitoring techniques allow comparisons of wilderness with managed environments. The United Nation's Educational, Scientific, and Cultural Organization's establishment of a world-wide network of biosphere reserves for the purpose of developing baseline data bases from which to monitor man's effect on various ecosystems emphasizes the importance and urgency for establishing long-term monitoring stations. Through the understanding of ecosystem dynamics obtained over a long period in an undisturbed environment,

managers can better predict the results of their activities on managed forest lands in more disturbed environments. The development of theories to describe ecological processes require empirical data on the many components of functioning ecosystems. Although the benefits obtained from a coordinated monitoring program will not be immediate, with time, the data will be sought by managers and researchers inside and outside the Wilderness. Likewise, the baseline data will raise new questions and strengthen research proposals submitted to agencies such as NSF.

I would like to develop a preliminary monitoring plan outlining methodology to collect long-term baseline data on water quality, aquatic life, plant community composition, bird and mammal populations, and soil erosion. To meet this objective, I will review literature on ecological monitoring and formulate preliminary methodologies to gather pertinent data at Taylor Ranch. Methodology outlines will be sent to specialists within and outside the University of Idaho in the field of water quality monitoring, aquatics, plant ecology and soils, animal ecology, as well as Payette National Forest and Taylor Ranch personnel for review and comments. A proposed Ecological Monitoring Plan for Taylor Ranch and adjacent wilderness, incorporating suggestions by these experts and Forest Service managers, will be submitted to the director of the University of Idaho Wilderness Research Center by 1 April, 1986.

Schedule

Initiate literature review and writing	Oct. 14, 1985
Send preliminary report to reviewers	Nov. 29, 1985
Deadline for return of reviews	Jan. 31, 1986
Final proposed Ecological Monitoring Plan	April 1, 1986

Budget

Salary	
6 weeks @ \$7.50/hr.	\$1800
Benefits	
@ 10%	180
Operating Expenses	
Xerox, telephone, postage, etc.	150
Travel	
350 miles @ \$.18/mi.	<u>63</u>
 TOTAL	 <u>\$2193</u>