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**Proposal for a Consortium for Wilderness Ecosystem Research and Monitoring
in the Frank Church - River of No Return Wilderness (FC-RNRW)**

BY

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Goals of the Consortium: To cooperate and coordinate in using the FC - RNRW wilderness to benchmark change; based on scientific and administrative studies that use minimum necessary tools and methodologies to compile essential data; resulting in a critical mass of wilderness ecosystem research and monitoring that will attract prominent scientists; and be an educational demonstration for wilderness stewards and others.

I. Objectives:

- A. To compile long-term, integrated, baseline data;
- B. That measures wilderness values and attributes of naturalness and solitude;
- C. Suitable for :
 - (1) Understanding external and internal influences on wilderness conditions;
 - (2) Understanding natural ecosystem processes to support long-term management; address forest and range health of all wild lands; and habitat, wildlife and exotic species issues;
 - (3) Address wilderness management issues;
 - (4) Understand the interactions between natural resource conditions, human experiences and impacts.

II. Logical Partners in the Consortium:

- A. Principal partners are those organizations with legal, managerial or public program responsibilities in FC-RNRW (FS, UI, IFG, Leopold Inst., NBS);
- B. Cooperating partners are those organizations collaborating in consortium ecosystem research and monitoring studies;
- C. Affiliate partners are those organizations with interest in the work of the consortium and resulting data.

USFS R-4; R-1; Intermountain Forest and Range Experiment Station (INT)

Idaho Fish and Game

Aldo Leopold Wilderness Research Institute

University of Idaho Wilderness Research Center

NBS - Idaho Cooperative F&W Research Unit

National Biological Service - IWAES and Paired Ecosystem Studies

Bureau of Land Management

Ag Research Service - NW Water Research Center

Idaho Water Resources Research Institute (IWRRI)

Idaho Department of Environmental Quality

US Environmental Protection Association

Other interested parties, e.g., Nature Conservancy, National Marine Fisheries Service, etc.

III. Elements of Cooperation:

- A. Consortium of partner institutions contributing advice, direction and financial or in-kind support towards agreed upon projects and activities;

- B. Direction, guidance and feedback through an Executive Steering Committee representing the principal partners having substantial legal responsibility and financial investment in the consortium;
- C. Periodic reports of baseline measures and other study data;
- D. Sharing of pertinent information for the consortium data base from each partner institution's activity (e.g., trends in big game surveys, fish counts, hunting permits, wilderness visitation data, progress summaries from studies, etc.), consider hard copy and electronic data access.
- E. Coordinate information needs to respond to timely issues as they evolve.

IV. Organization, Direction and Management:

- A. Leadership by an Executive Steering Committee (ESC) consisting of selected executive leaders for principal partner institutions;
- B. ESC to be co-chaired by the key land management and research officials, i.e., Regional Forester; Dean of Forestry, Wildlife, and Range Sciences-University of Idaho; Director Intermountain Experimental Station;
- C. Other Executive Steering Committee members:
FC-RNRW Administrator, Director Leopold Institute, Director UI-Wilderness Research Center, NBS - Fish and Wildlife Cooperative Research Unit; Idaho Fish and Game.
- D. ESC duties would be to:
 - (1) Define information needs;
 - (2) Provide strategic direction, with advice from a Scientific Steering Committee;
 - (3) Provide and coordinate funding as available, cooperate in joint funding proposals;
 - (4) Meet at least annually to consider findings and provide feedback.

V. Scientific Steering Committee (SSC):

- A. Consisting of principal scientists and selected managers from the consortium partners and others based on interest and information needs;
- B. Co-chaired by prominent scientific and management leader(s) in appropriate fields;
- C. SSC Duties:
 - (1) Advise ESC on research/monitoring needs, methods, priorities, locations, data system and data collection;
 - (2) Solicit and peer review RFPs;
 - (3) Advise on quality control considerations in all elements of consortium activity.

VI. Scope and Integration:

- A. Information needs and clearly defined questions will guide data collection.

- B. Possible baseline drainage: Proposed for consideration is Intensive Data Collection focused in one major, "baseline drainage" that contains most wilderness attributes (such as Waterfall Creek), to provide a reference point for studies and data from other locations in the wilderness complex, and for comparison with monitoring efforts such as IWAES, and other paired ecosystems, studies such as in Reynolds Creek, Rush Creek, other wilderness areas, etc.
- C. Continuation of data sites: Supplemental data collection locations will be used as necessary to complete a continuum of desired information on wilderness attributes (e.g. collect anadromous fisheries data from Rush Creek since Waterfall Creek does not have them; location of atmospheric monitoring station at Taylor Ranch or Rush Peak Lookout if not allowed in Waterfall Creek, or Salmon Forest lichen study monitoring site).
- D. All relevant studies in the wilderness will be integrated into the data system -- through design of a flexible, data management/GIS system, study reporting requirements and feedback, peer review, etc.

VII. Examples of Information Needs/Data Collection:

- A. Wilderness Values/Attributes including (but not limited to) the following:
 - (1) Air quality (chemical and visibility)
 - (2) Water quality, bio-chemical and turbidity of lakes and streams
 - (3) Noise -- natural background and introduced
 - (4) Recreation
 - a) Extent (type, length, season, purpose)
 - b) Recreation impacts
 - (5) Solitude (maybe an index from 3 and 4)
 - (6) Naturalness
 - a) Plant communities/habitats (aquatic, riparian, terrestrial)
 - b) animal populations: (aquatic, terrestrial, avian)
 - c) Disturbance regimes (fire, flood, wind, avalanche, insects, disease)
 - d) Exotics (species, rate of spread, ecological trajectories)
 - (7) Cultural sites
 - (8) Meteorology: temperature, precipitation, wind, solar radiation, etc.
 - (9) Other topics to be defined.

VIII. Priority Actions:

- A. Meeting and commitment by proposed co-chairs and members of Executive Steering Committee (ESC) and ESC members.
- B. Develop strategic framework, vision and organization for planning.
 - (1) Solicit partner institutions - letter from co-chairs of ESC
 - (2) Convene and change Executive Steering Committee

- (3) Convene and appoint Scientific Steering Committee
 - (4) Develop financial plan and budget
 - (5) Develop funding initiative.
 - (6) Write institutional cooperative agreements
 - C. Develop a Research and Monitoring Strategic Plan addressing priorities identified by ESC (with advice of SSC).
 - (1) Study and data collection locations (visit candidate areas);
 - (2) Data collection needs, priorities, methods, guiding questions;
 - (3) Coordination with Wilderness Management (fire, recreation, hunting, fish, outfitters);
 - (4) Opportunities to integrate related studies in FC-RNRW and elsewhere;
 - (5) Criteria for data management systems;
 - (6) Financial requirements and strategy.
- IX. Implement Essential Action as Resources are Available and as Directed by ESC - For Example:**
- A. Host FC-RNRW research and monitoring workshop for:
 - (1) Presentation and review of past, on-going and potential research and monitoring in FC-RNRW;
 - (2) Complete development of a research and monitoring agenda for FC-RNRW;
 - (3) Develop specific proposals.
 - B. Develop a data management system.
 - C. Arrange to extend and integrate on-going studies into the baseline system: Yeo's terrestrial monitoring, Minshall's riparian studies, Peterson's amphibian studies, Peek's habitat utilization and succession studies, Krumpe's campsite inventory and impact studies, BYU lichen study, etc.
 - D. Design and establish a wilderness attribute monitoring system and begin data collection.
- X. Proposed Roles of UI-Wilderness Research Center**
- A. A principal partner in the consortium.
 - B. Provide access to University framework:
 - (1) For conducting research and monitoring program (faculty and graduate research assistants under faculty supervision);
 - (2) Seasonal work by faculty;
 - (3) Publishing and peer review of results;
 - (4) Potential to maintain long-term data system;
 - (5) Facilitate external funding.
 - C. Use of Taylor Ranch Wilderness Field Station as staging area for fieldwork as appropriate.
 - D. Hands on work: writing plans, convening workshops, arranging field trips, communicating results, soliciting and peer review of RFP's, etc.
 - E. National and international communication and coordination with scientific community.