

Research in Wilderness: How to *facilitate* and *control* research in wilderness?

Appropriateness, benefits & values, impacts, approval process, conduct & guidelines

- Overview/ Misc. Thoughts: **David Parsons (Leopold Institute)**
- Panel Discussion: experiences, impressions, anecdotes, issues & concerns

Troy Hall (U. Idaho)

Dan Reinhart (NPS-YELL)

Dan Fagre (USGS-GLAC)

Deb Mucklow (FS-Flathead NF)

- Evaluating Proposals for science: **Peter Landres (Leopold Institute)**
- Discussion

**Wilderness Stewardship in the Rockies:
Let's Talk; GLAC, 03/10-12/04**

Science and Wilderness

*Scientific use is one of “public purposes” of Wilderness Act
(Howard Zahniser expressed concern that recreation might “interfere
with...installations for scientific purposes”)*

a) *Science for Wilderness:*

Scientific information is critical to informed planning and
stewardship

-understanding of consequences of decisions

b) *Wilderness for Science*

Wilderness provides baseline for understanding natural
ecosystems & effects of human activities

-critical to global stewardship

Two Common Views:

- a) “needs of wilderness should drive research; should only approve research projects if will help management of the area and has no impact to the wilderness”
 - need to “control” scientists

 - b) wilderness has tremendous scientific value; research should be permitted “for its own sake” as long as impacts are commensurate with those of other kinds of use
 - managers perceived as “hostile”, “bureaucratic”, “unappreciative”
 - “it’s just easier to work somewhere else”
- ➔ Loss to both wilderness and society

Challenge: How do we balance the benefits of science against the values of wilderness?

Value of Wild Areas for Science

-baseline understanding of natural ecosystems and effects of human activities on them

Importance of Science Informed Management

-NEPA (and common sense) require that decisions be based on the best available understanding of consequences

Values of Wilderness

-solitude, untrammeled, primeval character and influence, natural conditions: “*wilderness character*”

“if visitors don’t complain is it OK?”



Issues of Concern:

- Met/snow stations
- Live trapping (wolves, bears)
- Radio collars (bighorn, lynx)
- Wildlife guzzlers (desert wilderness)
- Plot markers (FIA)
- Helicopter sampling (lake chemistry)
- Equipment transport/caches (horses, helicopters)
- Mechanical thinning (forest restoration)
- Fire history sampling (wedges, cores)
- Visitor surveys (questionnaires, beepers)

Lack of consistency; Lack of security



Wilderness Policies Related to science:

BLM “...provided that wilderness is essential to results of such research”

FS “...ensure that research areas outside wilderness could not provide similar research opportunities”

“... allow interviews or direct contact with visitors only outside wilderness.”

FWS “...when the minimum tool concept is adhered to for all equipment”

NPS “...is no alternative to conducting the research in a wilderness area”

Key Question: *if can be done elsewhere...????*

Case Study 1

Katmai National Park and Preserve
*Established in 1918 as a place to study
explosive vulcanism (Pres. Wilson)*

Issue: NPS approval for major drilling project to better understand vulcanism (NSF, DOE, USGS, NAS)

After early support, including exploratory studies, NPS decided it did not support study and did not have authority to approve: required legislative EIS

Result: Project halted; bitterness among scientists that 3 years and \$1 million wasted. Final decision based on information available at outset



Novarupta Volcano, 1953
1912 eruption was U.S.'s largest
eruption of 20th Century

Case Study 2

Death Valley National Park

Issue: Proposal for geological study of plate tectonics; involved motorized access, equipment, & caches (NSF)

Little immediate value to park identified



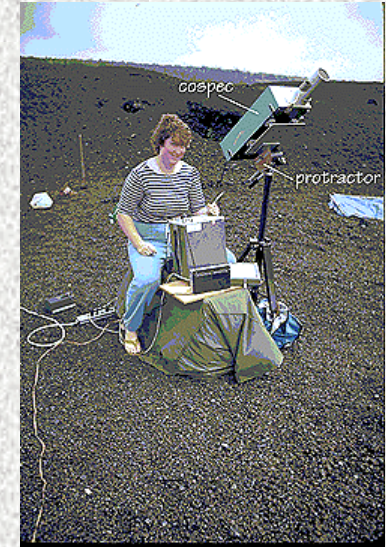
Result: Early communication and NEPA process led modification of proposal to minimize impacts; recognized benefits to basic park information, interpretation and regional groundwater hydrology. Considered a “win-win” situation

Case Study 3

National Park's of Hawaii

Issue: 1978 Wilderness hearings recognized need for mechanized access and equipment, and fences as minimum management tool

Dilemma was whether to specify as “special conditions” in legislation



Results: based, in part, on national environmental group's argument against need for special provisions ('64 Act sufficiently broad & flexible), Congress did not include special provisions. “Science and native ecosystem preservation and restoration...fundamental to wilderness.

Case Study 4

Isle Royale National Park

Issue: Long term (1958) studies of wolf – moose relationships have added significantly to both scientific understanding and management.

Conflict between potential impacts of live trapping wolves and wilderness values raised questions regarding need to continue

Results: Independent panel convened; → importance of tracking genetic change warranted continued study, but needed to pursue techniques that would not require handling. Fecal DNA appears promising



Oelfke & Wright. 2000. Park Science

Oelfke et.al. 2003. George Wright Forum

Potential Mitigation Options:

- Siting of activities or equipment to minimize visual intrusion
- Timing of activities to avoid high visitor use periods
- Non destructive sampling
- Remote sensing
- Use of primitive tools
- Capitalize on education opportunities

Ideas for Guidelines/Guidance:

For scientists

- more clearly articulate wilderness concerns
- standardized proposal format
- advise re. concerns, what to address
- need to communicate benefits of proposed studies
- principles of conduct for scientists

For managers

- means for considering benefits (as well as impacts)
- guidance in evaluating scientific quality
- improve within- and inter-agency consistency
- improved understanding/appreciation of science and scientists
- standardized process for review & approval

Overall: improve communication at all stages of the process