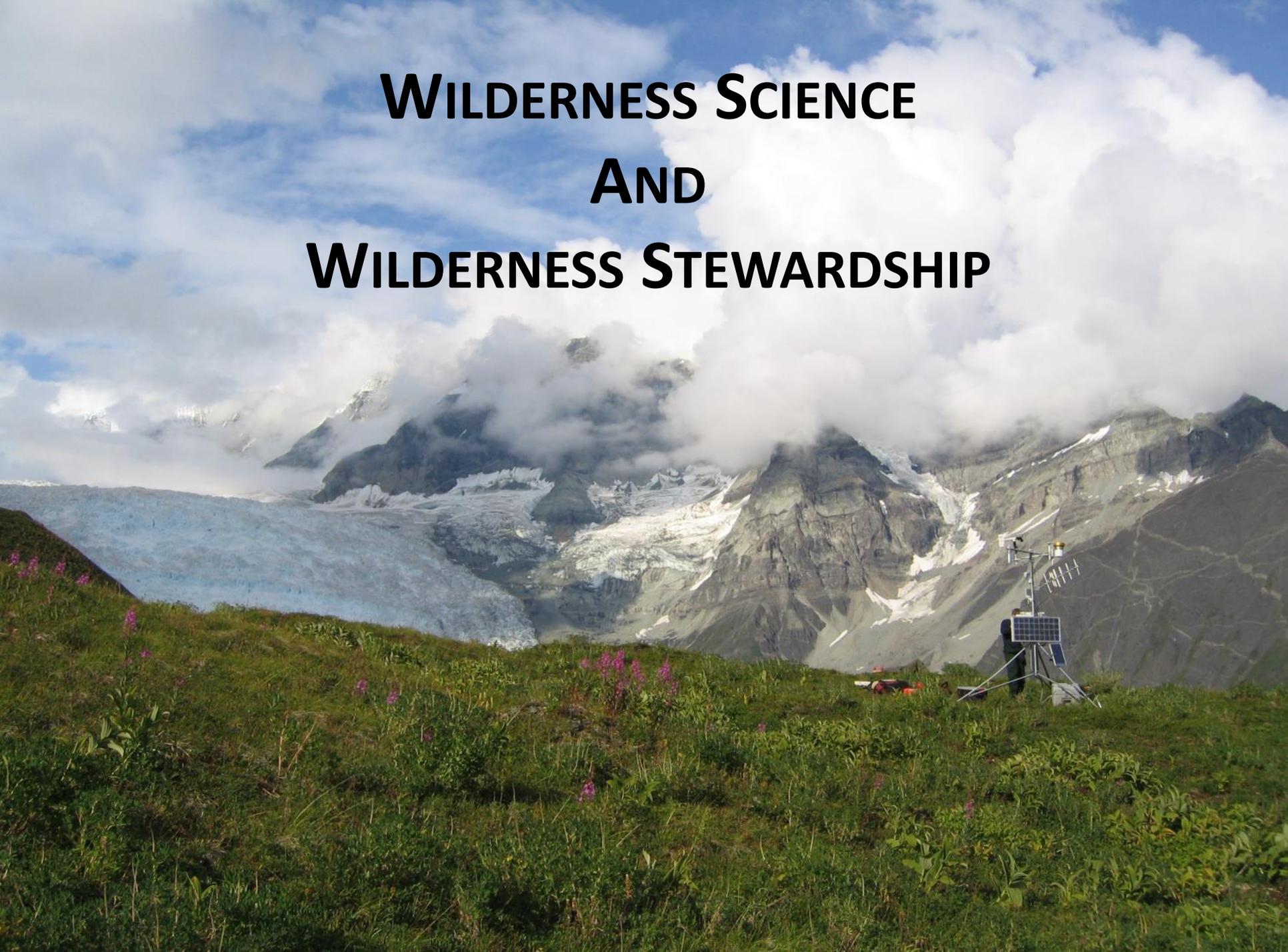


WILDERNESS SCIENCE AND WILDERNESS STEWARDSHIP





A science of land health needs, first of all, a base datum of normality, a picture of how healthy land maintains itself as an organism.

Aldo Leopold, *Wilderness as a Land Laboratory*

Importance of wilderness science

The NWPS serves as an important resource for advancing research, from discovering new dinosaurs to understanding human history on the American landscape.



Ziapelta sanjuanensis,
Bisti/De-Na-Zin Wilderness,
New Mexico



Arlington Springs Man, Channel
Islands National Park,
California

Chert projectile points,
Western Arctic National Parklands,
Alaska



Importance of wilderness science

The NWPS provides invaluable records of environmental change that provide insights into management responses.



Visitor use impacts, carrying capacity, restoration techniques; Boundary Waters Canoe Area Wilderness, Minnesota



Grasshopper remains, including extinct species, Knife Point Glacier, Absaroka-Beartooth Wilderness, Wyoming



Fire behavior modeling, burn severity, decision support tools; Gold Pan Fire 2013, Selway-Bitterroot Wilderness, Idaho

Importance of wilderness science to wilderness stewardship

Science should inform wilderness stewardship as we learn more about ecological systems, individual species and their habitats, human behavior, and the successes and failures of various policies and management activities.

Science can help us understand the nature of the system for which we are a steward.

Science can help in learning how to correct human-caused perturbations in such systems.

Science can help in understanding how systems might be used and enjoyed without destroying them.

Science can help in understanding how valuable wilderness is to people and how it might enhance their lives.

*Ensuring the stewardship of the National Wilderness Preservation System
Pinchot Institute for Conservation 2001*

PRESERVING WILDERNESS CHARACTER

AND

FACILITATING APPROPRIATE SCIENCE

- How much science is happening in your wilderness area? Is it increasing?
- Who conducts the science - agency staff, external researchers, or both?
- How do you educate researchers on the relevant laws, policies, and permits?
- What is your process for evaluating proposals?
- How to track cumulative effects – administrative, commercial, visitor, scientific?

SCIENTIFIC ACTIVITIES RANGE FROM HAVING LITTLE IMPACT...



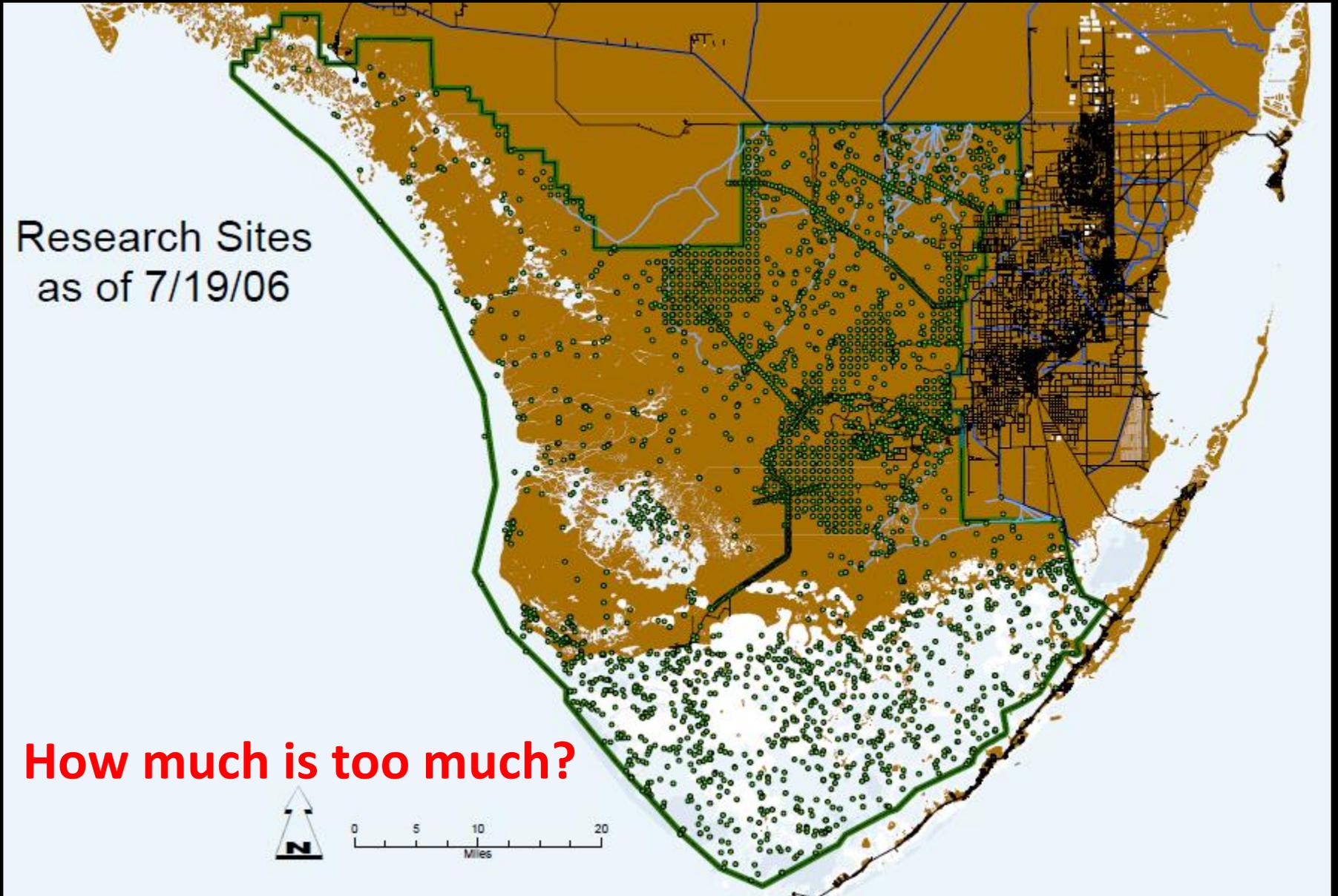
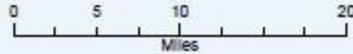
**...TO INTENSE SHORT
TERM, AND SOMETIMES
LONG TERM, IMPACT...**



...AND TO CUMMULATIVE IMPACTS

Research Sites
as of 7/19/06

How much is too much?



IS THERE A PROBLEM?

Lack of communication and a clear evaluation process causes misunderstanding and conflict

Jerry Franklin:



“Scientists...are often uninformed about regulations and unwilling to make necessary compromises to conform with wilderness values. Scientists can be arrogant and cryptic in their relations with managers...some may feel that research gives them a license to do whatever they please.”

The first discussions that led to the Kaibab project occurred in 1985. The previous year, Novarupta was tempered by concern over whether drilling could be permitted in a narrow statement of objectives, a drilling strategy, and integrated discussion of scientific in-

“Managerial...attitudes toward research in wilderness are also problems...which may include hostility and disinterest, [and] apparently reflect a lack of appreciation of the potential value of scientific study.”

How does your unit evaluate wilderness research proposals?

A Framework to Evaluate Proposals for Scientific Activities in Wilderness



United States Department of Agriculture
Forest Service



Rocky Mountain Research Station
General Technical Report RMRS-GTR-234WWW
January 2010

- Interagency team
- Pilot tested > 100 proposals
- NOT policy, a decision support tool
- Currently in revision

Important Considerations - Wilderness Science

- Wilderness dependence and surrounding landscape (Why here, why now?)
- Impacts to each quality of wilderness character
- Relevance to wilderness stewardship
- Contributions to science
- Use of Minimum Tool or Activity
- Cumulative effects

Important Considerations - Wilderness Science

- Law and policy – rationale and conflicts
- Scales of research and outcomes (time and space)
- Stakeholder views and conflicts
- Uncertainties – implementation, outcomes, funding, access to data
- Communications plan – scientists, managers, public
- Post-study responsibilities

MANAGER RESPONSIBILITY

1. Use standardized and comprehensive process for evaluating research proposals
2. Provide scientists access to information about the significance of wilderness character
3. Communicate to scientists about the evaluation process and expectations for responsible behavior
4. Be tough: protect all wilderness values, including those of a “blank spot” and beware of “a death of a thousand cuts”

SCIENTIST RESPONSIBILITY

1. Learn about the unit process for evaluating research proposals
2. Understand that wilderness is not merely a place to conduct research
3. Talk with managers early and often about:
 - the research
 - its potential impacts to wilderness character
 - how to reduce and mitigate these impacts

Questions?

We welcome collaborations with NWPS
managers at all agency levels!



Leopold Institute | 406-542-4190