



River Research Across Time

Alan Watson

**Aldo Leopold Wilderness Research
Institute**

USDA Forest Service

Rocky Mountain Research Station



Chris Armatas

**ORISE Research Fellow
Aldo Leopold Wilderness Research Institute**

USDA Forest Service

Rocky Mountain Research Station

Archiving data, methodologies and products

National river recreation study data: a nationwide survey of river recreation use from 1977-1984

- 69 surveys in 23 states on 57 different river segments
- River usage (how often visited, type of watercraft used, etc.)
- Opinions of conditions (erosion of stream banks, litter on banks, too many homes along river, etc.)
- Changes people might like to see (more parking at access points, post signs warning of hazard, etc.)
- Why they visit the location and conflicts with other visitors.
- **Found at:** <http://dx.doi.org/10.2737/RDS-2014-0007>



ABOUT RIVER RECREATION RESEARCH IN THE FOREST SERVICE

Scientists at the North Central Forest Experiment Station in St. Paul, Minnesota are embarking on a new program of nationwide research on river recreation management. We are working with other Federal and State agencies to determine how rivers are being used for recreation, by whom, and why.

Finally, we want to help managers deal with some of the complex problems that arise when rivers become increasingly used for recreation. Crowds, litter, vandalism, pollution and erosion are unfortunate spinoffs of increased use. We wish to develop ways to decrease resource damage as well as people's impact on each other, while still allowing for full use and enjoyment of these river areas.

Our ultimate goal is to make it possible for recreationists like yourself to get the maximum enjoyment from the nation's rivers without jeopardizing the environment.

Stopped in 1984
Leopold Institute created in 1993
– no mention of rivers in Charter



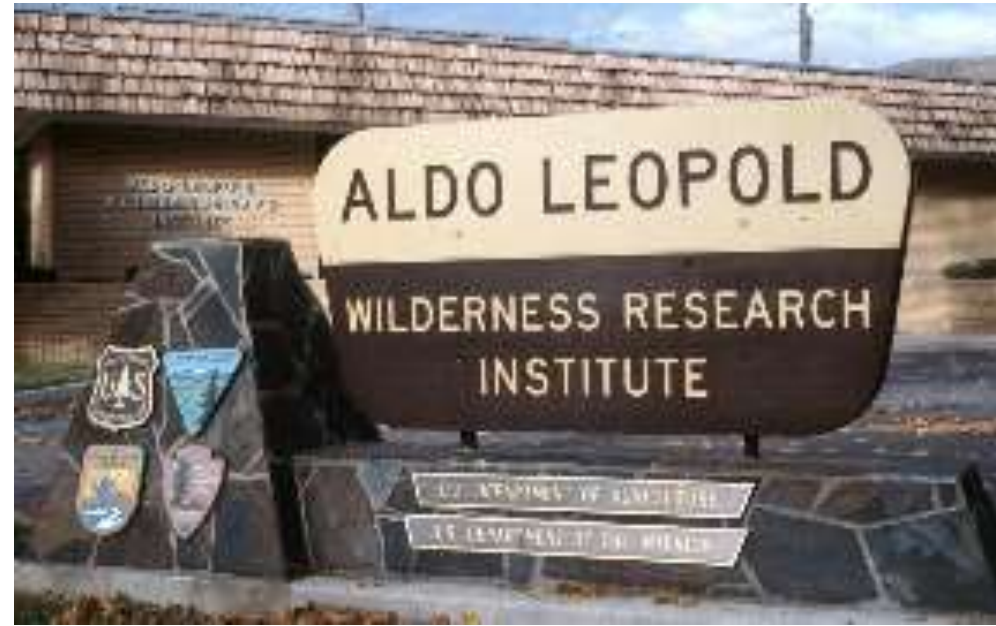
Wilderness Management Research Unit -> Leopold Institute

Forest Service → DOI/DOA

1967 -> 1993

Wilderness issues, not river issues

- Recreation
- Relationships with Wilderness
- Fire Restoration
- Wilderness and Larger Social and Ecological Systems
- Application of Science to Stewardship



Examples

- Solitude experiences and crowding
- Recreation ecology – campsites, travel impacts
- Conflict (activity orientation, wilderness and place dependence, identity & attachment)
- Limits of Acceptable Change Indicators and Standards
- Special Provisions



Examples of Data Collected: 1990s to 2000

1. **Jet boat use on the Main Salmon River: Frank Church-River of No Return Wilderness (Legislative intent, special provisions)**
2. **Commercial and private boat users on Salmon River in the Frank Church – River of No Return Wilderness: 1995 survey (trends, encounters, policies)**
3. **Unique tributary users in the Frank Church – River of No Return Wilderness: 1996 survey (baseline, access, policies)**



Examples of Data Collected: early 2000s

**Gates of the Arctic NP - Kobuk River (Wild):
2001 sport hunter survey related to conflicts**

**Togiak NWR- Land Use Conflicts in 2001,
Qualitative and Quantitative study related to
conflicting demands, indigenous people**

**Qualitative and quantitative study (2004-2005)
on Yakutat residents, local relationships to the
Situk River, and management implications**

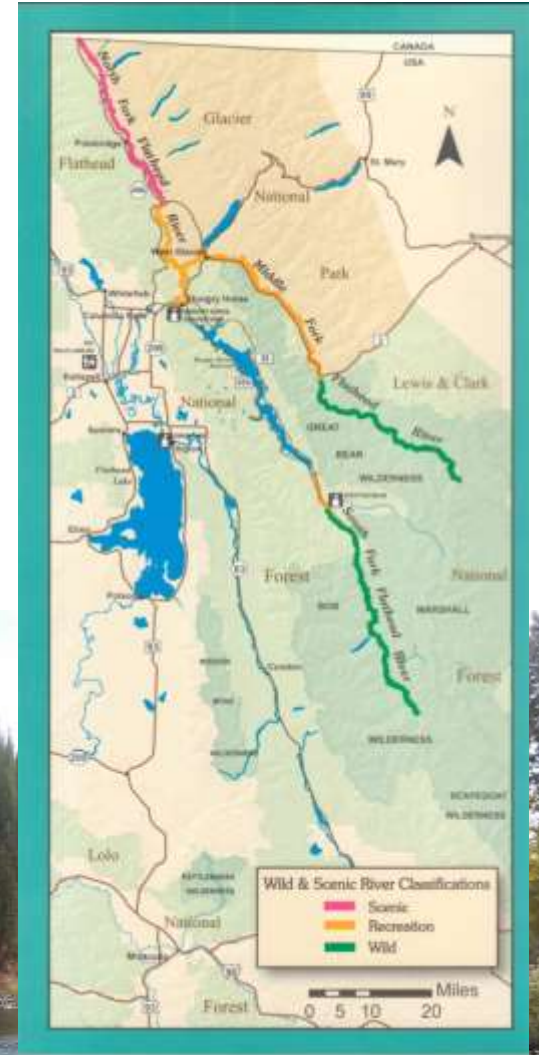
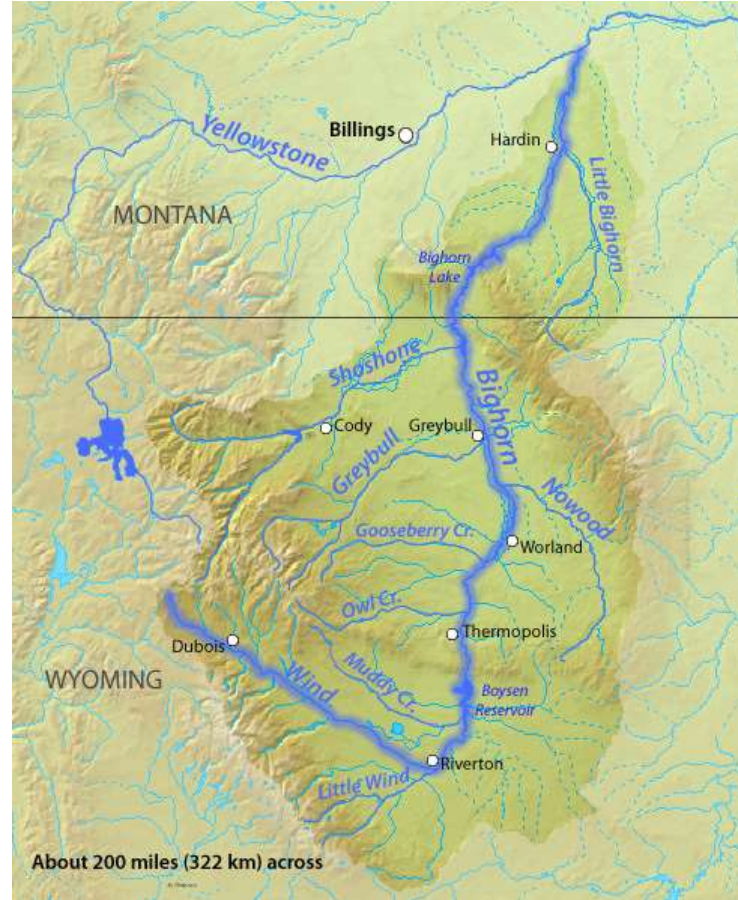
**Quantitative study of angler experiences on the
Situk River, Yakutat, Alaska.**



NOW

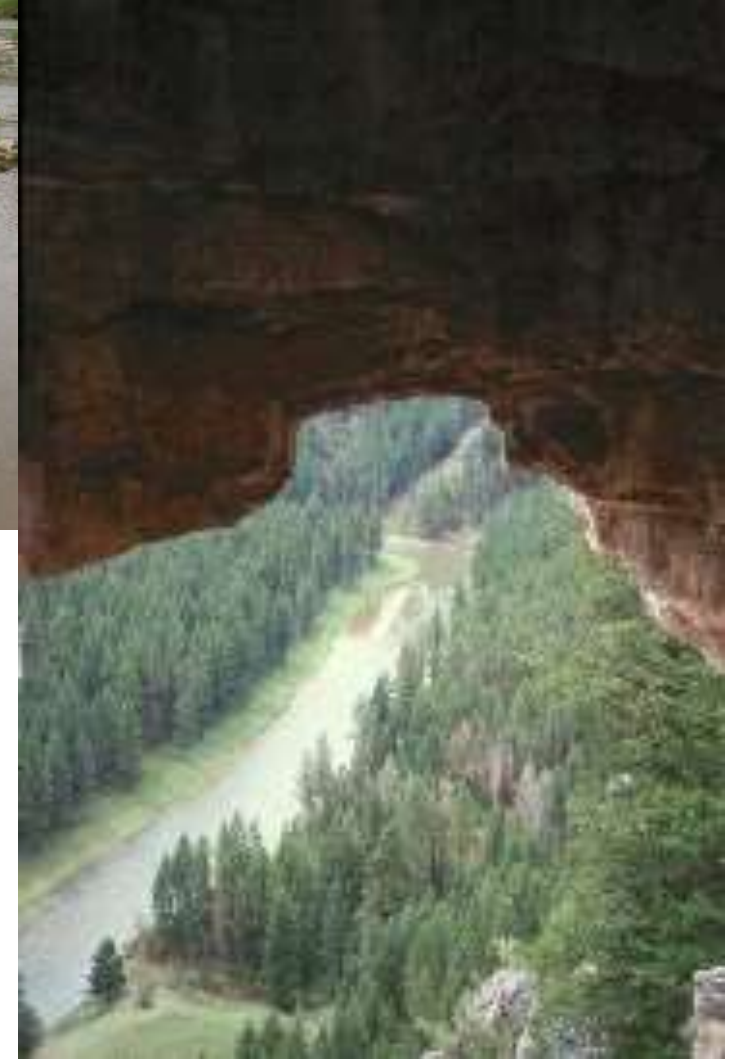
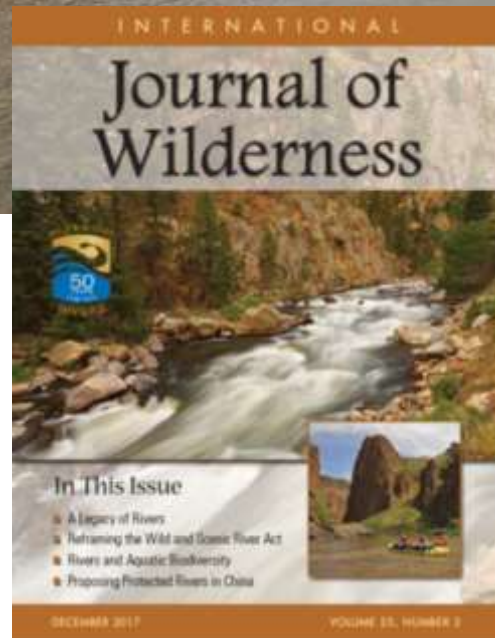
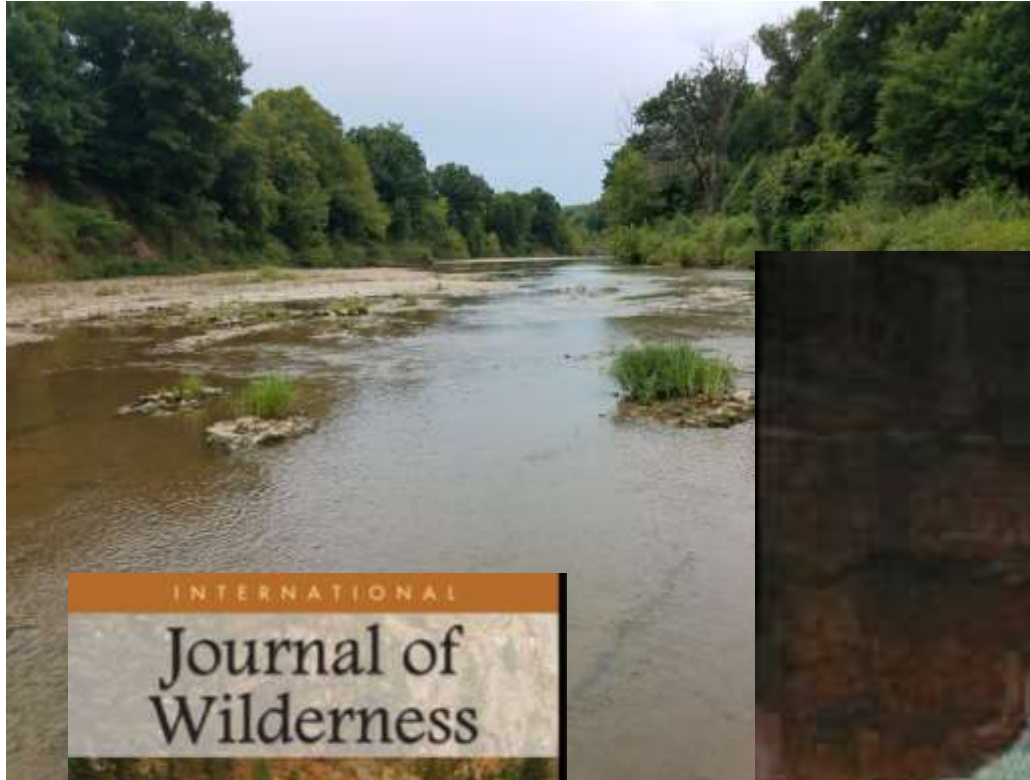
Water-based ecosystem services derived from the Shoshone National Forest – Bighorn Basin – climate and land use change vulnerability, ecosystem services

Assessing Threats Associated with Multiple Drivers: Vulnerability of Outstandingly Remarkable Values for the Flathead Wild & Scenic River Unit



So, what's different?

- Funding sources? NC NRRS “not sustainable,” today no discretionary, reactive funding
- Organization – lack of river research program in FS R&D
- Science (and funding) emphasis on landscape level research, environmental threats and change
- Forest Plan Revisions – vulnerability, ecosystem services and sustainability
- Change in Threats? Dams & recreation?
- You tell me....



Or Something Else?

