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REDUCING THE IMPACTS OF PACK STOCK AT CAMPSITES

Keywords: pack stock, campsite densities, management actions, cost effectiveness

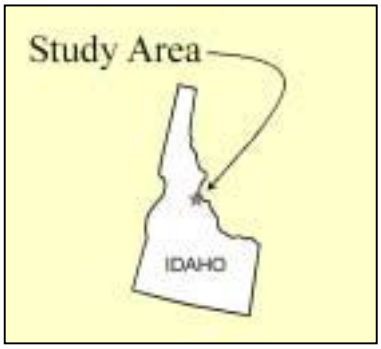
Background & Management Issues:
Wilderness recreation management entails a compromise between providing access to quality wilderness experiences and avoiding ecological impacts. Consequently, goal-oriented management plans that adopt the Limits of Acceptable Change (LAC) framework establish standards and maximum impact levels. Many of these standards are written to address impacts of campsites. Campsites tend to be clustered in destination areas, where density standards are often exceeded. Therefore, management strategies need to be developed and evaluated if LAC standards are to be met.

Project Objectives:

To evaluate the effectiveness of management activities in a popular destination area, including reducing the number of areas available for stock containment, instituting a pack stock containment strategy, and completely closing severely impacted campsites.
To examine the effect of a pack stock confinement strategy on the recovery of impacted campsites and stock-holding areas after closure.

Project Description: Management work was conducted in the Seven Lakes Basin in the south-central portion of the Selway-Bitterroot Wilderness. Campsite densities in the basin were over four times higher than acceptable standards: campsites numbered up to 13 per square mile, extremely impacted sites five per square mile, and moderately impacted sites up to four per square mile.

To assess impacts, six parameters were measured: amount of area obviously disturbed by trampling, amount of area completely devoid of vegetation, total area of tree scarring, total length of exposed roots, proportion of the campsite with vegetation, and proportion of campsite with exposed soil. Measurements in the year following management actions were compared with measurements taken after five years for designated stock areas (sections of campsites where stock could be contained), former stock areas (sections of both open and closed campsites where stock holding was no longer permitted), and camping areas (areas both where stock was permitted and where it was not), and for areas that were restored and those that were not. Of 26 significantly impacted campsites, 12 were closed to stock use, six were open to all use, and one was designated as day-use only for stock. Because closure signs were lost from some posted campsites, only four of the remaining campsites were effectively closed completely. In total, 47 stock-holding areas were closed. Nine stockholding areas were available on the six open campsites, three of which were designated for day-use, and six for overnight use. In addition, stock were to be confined between two designated trees with a high line, rope, or electric corral. Tying stock directly to trees was prohibited, and pack stock were limited to ten animals.



Results: In just five years, the effects of the management actions were obvious. Impacts decreased considerably on former stock-holding areas. On sites still open to camping, the amount of

disturbed area and bare area decreased somewhat, although vegetation cover decreased and mineral soil exposure increase. On designated stock sites, disturbed area and bare area increased only slightly (4% and 1%, respectively), but tree scarring, root exposure, and the soil exposure increased substantially.

At the scale of the entire lake basin, in just five years, disturbed area decreased 37% and bare area decreased 43%. If the management program continues, disturbed area and bare area should decline to just 36% and 24% of what they were in 1993.

Costs were substantial – $135,000 over five years. However, 50% of these costs were volunteer contributions. The additional cost to the Forest Service, beyond fixed salary costs were only $8500/year for the first five years and about $1000/year into the future. The experiential costs of regulation were judged to be minimal.

Management Implications:

- Camping with pack stock creates a significant impact on amount of disturbed and bare area at wilderness campsites, and virtually all root exposure results from tying stock to trees.
- Within a destination area, reducing the maximum group size and confining where camping and stock holding may occur can result in greatly reduced impacts.
- Costs may be sizeable and never ending. Avoiding such impacts initially is most cost-effective.
- Management actions can bring conditions back into compliance with LAC standards.

Publications / Products:

- Spildie, David R.; Cole, David N.; Walker, Sarah C. 2000. Effectiveness of a confinement strategy in reducing pack stock impacts at campsites in the Selway-Bitterroot Wilderness, Idaho. In: Cole, David N.; McCool, Stephen F.; Borrie, William T.; O'Loughlin, Jennifer, comps. 2000. Wilderness Science in a Time of Change Conference–Vol. 5: Wilderness Ecosystems, Threats, and Management; 1999 May 23-27; Missoula, MT. Proc. RMRS-P-15-VOL-5. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station: 199-208. **Leopold Publication Number 399.** Read it here!

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