

End Of Season Report  
Rae Lakes Patrol Area  
Rick Sanger, 1996

**Contents:**

- Summary
- Operations
  - Solar Power
  - Communications
- Resource Management
  - Stock Issues
  - Residual Biomass
  - Resource Issues by Location
  - Food Storage
  - Human Waste
  - One Night Limits
  - Designated Campsites: Further Thoughts
- Public Relations
  - Signs
  - Information Dissemination
- Miscellaneous

**Summary**

Visitor use:

About 30 head of stock were known to visit or pass through Rae Lakes.  
12 llamas also passed through.

Patrol and Law Enforcement

Ranger on duty from June 22 - Sept 14  
June 22-30: 34 miles, 74 contacts, 12 firerings, 0 low-flying aircraft  
July: 177 miles, 166 contacts, 5 firerings, 1 low-flying aircraft  
Aug : 138 miles, 391 contacts, 0 firerings, 0 low-flying aircraft, 2 cites  
Sept: 1-14: 84 miles, 175 contacts, 1 fire ring, 0 aircraft, 5 citations

**Totals:**

Miles	Contacts	Fire Rings	Aircraft	Citations
433	806	18	1	7

Seven citations were issued: 3 fires, 1 unattended food, 1 without permit, 1 false information, 1 violation of terms of permit.  
Numerous verbal "warnings" and educational contacts regarding camping on vegetation, camping too close to water and other regulations.

Emergency Services

0 medivacs

One search

Primary Recommendations (discussed in detail below):

Move Food Storage Box at Arrowhead Lake

Restoration Projects at Arrowhead Lake and Dollar Lake

Auxiliary Reports and Attachments:

End of Season Report (this document, yearend.doc)

Rae Station log (log.doc)

Photo list (photo.doc)

Station inventory (invent.doc)

Supply request (request.doc)

Wildlife sightings (wildlife.doc)

Station history and guide, updated (guide.doc)

Signs for Rae Area (signs.doc)

Maps for Rae Area signs (Dollar.bmp, Rae.bmp, Woods.bmp)

Clarence King SAR Scenario (King.doc)

Wilderness Management Plan Issues (WMP.doc)

Unresolved issues from 95EOS (status.doc)

Details on use of King Radios (radioinf.doc)

Statistics on hikers itineraries and Rae Camp Populations(Itinery.doc)

Charlotte Station log (charlog.doc)

Charlotte Station notes (charnts.doc)

Charlotte equipment request (charreq.doc)

## Operations

### Solar Power

The solar panel installation proved to be an extremely useful asset at Rae Lakes. One battery and one panel were installed using a bracket system on the south-facing side of the cabin. The system allows for the panel to be taken down and stored safely for the winter. Pictures were taken of the "visitor's view" of the installation to determine aesthetic impact.

Maximum current from the panel was read at 3.8 amps. Charging current was found to be present from about 11:30 am until 3:00 pm. Overcast days provided lower amperage but longer charging times.

I did not use the 800 watt inverter provided. Rather, I used my personal 50 watt inverter. It provided plenty of current for my needs (computer, recharge radio battery), and did not have to endure the somewhat irritating fan noise from the 800 watt inverter. I feel that a 250 watt inverter would be more than adequate to cover this station's needs.

The controller's readout proved to be very convenient and it worked throughout the summer.

I ran the battery down two times during the summer (yellow light went "on" on the controller) On both occasions this was from charging my computer at about 4 amps for one hour, at night. The yellow light went out within one hour of charging the following days. I feel the collecting power of one panel and the available time to recharge the battery exceeds the storage capacity of the system and the occasional heavier demand. For this reason, I feel the system should be augmented with an additional battery.

### Communications

#### *King Radios*

A King radio was used for about one month in the Rae area. The reception seemed comparable to MT 500. The battery usage seemed much higher than the MT 500. I replaced the King's battery every 3 days or so, whereas I used the MT500's for over a week.

As an attachment, I've written some supplementary information helpful to users of the KING radio. The document needs some additional information on programming the scan.

#### *HAM Radio*

Continued use of HAM radio confirmed viability as alternate communications source from the Rae Region as well as other areas.

HAM radio was used successfully from Woods Lake Basin, Baxter Lakes, Rae Lakes Ranger Station, Glen Pass, 60 Lakes Basin, Bench Ranger Station, Pinchot Pass, Sawmill Pass, 11,000 ft on JMT N. of Forester.

#### *Radio Telephone*

Radiotelephone service to the east side can be accessed from: Forester Pass, Mt. Bago, Golden Bear Lake, Knoll west of the southern Rae Lake, Wood's Lake, Taboose Pass area, Pinchot Pass, high in 60 Lakes Basin, Baxter Pass, and Glen Pass.

The service could not be accessed from: Tyndall RS, or Charlotte RS, Woods Crossing, South Fork Wood's Creek.

Conceivably, a radiotelephone account could be started for B/C rangers. I believe the radios now in use have the capability. Hardware requirements are: Autodial DTMF tones at 10 per second. Frequency Range in 155 Mhz.

### Miscellaneous

1. This year Laura Poluski agreed to radio me when permits were issued for Woods Lake or Baxter Lakes. Although I only received one call, I believe this is potentially a useful system for making patrols to these more remote areas more effective.

## **Resource Management**

### Stock Issues

#### *Impact per visitor*

Horse and Mules provide an alternate means for people to access and enjoy the wilderness. However, it is typical that the impact on the wilderness will be far more, for a given party size, when that party uses a stock string. In addition, the use of stock can diminish the enjoyment of the wilderness for many other people.

Llama parties also pass through the area, and their impact seems far less. In addition, the experience of other visitors does not seem significantly diminished. I witnessed a backpacker's tent go up on the same spot that four llamas spent the previous night. The packer had shoveled away the manure, and the backpacker didn't seem any the wiser.

Any visitor is going to make an impact. But what happens when a party has more of an impact using stock than one ten times its size that doesn't use stock? I was very pleased to see a grandfather and his grandson able to enjoy 60 Lakes basin together. They had been dropped by a stock string which then stayed in the basin for four days. However, the damaged that that visit caused far exceeded the damage done by an entire season's worth of backpackers (new dust baths, deep imprints in sphagnum moss, manure in the lakes, trampling of frog habitat, etc).

#### *Woods Crossing Camp*

The bear boxes at Wood's Creek are on the south side of the creek. This draws stock parties to that side of the river. However, no grazing is permitted on the south side meadows. In addition, the use of the south side sites by stock can make them undesirable for backpackers due to the resulting manure and smells left in the area. Bear boxes on the north side of the creek, and a restriction that stock parties camp only there, would alleviate these problems

#### *Miscellaneous Points*

None of the private stock parties entering from the east side received the Meadow Forage Guide. This is a problem in that the parties were not informed as to

grazing restrictions. The contractor on the east side issuing permits for the Forest Service should be contacted with regards to this issue.

The stock capacity of Cotter meadow is stated to be 53 stock nights. That in Fjord meadow is 3 stock nights. The two meadows are within 100 yards of each other. How can I close one and not the other? How do I recommend to stock users how to keep their stock in one area and not the other?

As a side note, Fjord meadow was used more than 3 stock nights. I specifically looked in the information I had as to what the limit was, but my information was dated. Charlie Schelz provided up to date info during training, but I must have failed to collect all the data he provided during training.

I would like to call into question the 892 stock night capacity of Twin Lakes meadow. I believe this kind of use would decimate the area.

Randy Morgenson had some very good points about grazing that I wish to repeat here, as a matter of record. He expressed concern about our conducting residual biomass measurements, pointing out that these are essentially range management techniques. He noted that we are not in the feed business, that a meadow's aesthetic appeal is, in fact, our heritage. He referenced quotes by Lewis and Clark, who were overwhelmed by the beauty of the new lands. We must keep site of the fact that it isn't only the ecology of meadows that NPS should be striving to protect. It has long been noted that that beauty is in the eye of the beholder. In this, a democracy, perhaps a vote by the users, settled by majority, could be used to determine a limit to what is considered acceptable stock diminishment of a given meadow.

### Residual Biomass

I feel Wood's meadow can be eliminated from the list of meadows of concern. I would like to measure Twin Lakes Meadow to see if the current capacity of 892 nights is accurate.

### Resource Issues by Location

#### *Dollar Lake*

The campsites at Dollar Lake have been heavily impacted in the past. This has been lessened by past rangers, who have closed the area to camping. Also, the bear box at Arrowhead lake has drawn people away from the site.

I would like to do a restoration project at Dollar to make certain sites very unappealing to camping. This would be reinforced by the posted map that shows where legal sites are located.

#### *Arrowhead Lake*

The camping area at Arrowhead Lake is spreading into a damp area that is sensitive to impact. In addition, one site is too close to water, but well established. I believe that moving the Bear Box at Arrowhead to new location would help correct these problems.

The proposed site is located on the southwest side of the lake. The area is much drier and rockier, and thus able to withstand campers. Good camp areas are available. The views are fine and the area is more open to the wind, possibly reducing the mosquito problem.

The area does have short hair sedge growing in spots, and moss around undisturbed rocks. It is likely these features would be trampled by campers. A short use trail from the JMT to the bear box would no doubt develop. This can be routed through dry, rocky areas.

I believe the damaged area in which the bear box is currently located receives enough moisture from a nearby spring to allow it to recover quickly.

#### *60 Lakes Basin*

See "stock Issues"

#### Food Storage

I believe that the biggest effect in the camping patterns in the Rae Area have been the placement of bear boxes. Although placed at locations that were previously popular camp sites, the bear boxes are a strong draw to specific camping locations. About 80% of the time, I will find a group camping literally on top of the bear box. However, it is unclear how far the use of bear canisters will reduce the impact to areas where there are bear boxes. As I said before, these spots were already popular. But I have found many people using canisters camped near the bear boxes. Some (not just one or two) even will place their canisters *inside* the bear boxes! They are either very concerned about losing their food, or they don't want the bear to move their canister to where they can't find it

It is an interesting question as to whether the park should be obligated to place sufficient numbers of bear boxes. Many visitors are outraged when finding the existing bear boxes full. At each bear box site visitors claimed that the bear boxes were full on at least one night during the summer. On occasion, this led to lost food from resultant hangs. This implies that more bear boxes are needed at least all current bear box locations.

I view the bear boxes as being in the same category as drift fences, they are primarily in place for the convenience of the backcountry users. The stock people don't want to carry their own feed, and the backpackers don't want to carry bear canisters. I think that the use of bear canisters should be strongly encouraged, that the park service should NOT be obligated to place sufficient food storage in all use locations. This would be an unending project. I believe we should advise people "Limited amount of food storage available. To insure the safety of *bears*, use bear canisters!"

We must eliminate from our regulations that hanging food is proper food storage. In many cases, hanging food will not, in and of itself, protect the food from the bear. Bears are now too skilled for a hang to keep the food from them.

Visitors pointed out to me that the Bear boxes at the following locations were full for at least one night during the summer:

Woods

Rae

Arrowhead

Visitors complained on several occasions that the bear boxes were filled by stock users. They wanted to suggest that the stock carry canisters to reduce impact on bear boxes.

### Human Waste

Although it is easy enough to find toilet paper in the area of Wood's Crossing and the Rae Peninsula, I haven't ever smelled the "overpowering odor of human waste" as Keenen described a few years back. I keep expecting to. I think it is worth investigating solar powered, self-composting toilets. I believe that outhouse maintenance has been a hassle in the past.

I have located an old outhouse at Woods Creek Crossing on north side of river. After 100 ft toward Twin Lakes, it is on the left (north) about 100 ft off of trail. It is only about 1.5 ft deep and the pit is fully exposed. It should be either re-dug or eliminated. Ralph Moore's sideboard is useful to help resolve what should be done about this: "Toilets will be placed only where they will resolve health and sanitation problems or prevent serious resource damage and where reducing or dispersing visitor use has failed to alleviate the problems or is impractical."

### One night limits

Rae Basin is a perfect destination/layover spot. It represents the best the National Parks have to offer, and should be allowed to be enjoyed in an unhurried manner. Visitors can currently stay one night per lake, which can total about four nights in the basin. But why force visitors to pack up every night? Doesn't this, in the end, cause even more impact from increased activity at each site?

Randy Coffman suggests that the limit be used as a tool to "lever" people out when the camping areas get crowded. In my second season at Rae, I could see the value of moving people on during August. The other months I waived the regulation for most visitors who want to stay more than one night.

I believe we should consider allowing a maximum of three nights camping in the whole basin. Visitors would be free to spend this time at whatever lakes they chose, moving or not, as desired. Note that theoretically this does NOT increase the numbers of people in the basin, since four nights are currently allowed.

I hear that a one night limit is being considered for Charlotte. If this occurs, where will people be able to relax and spend a layover day? Would they all go to 60 Lakes Basin (an even more fragile area). Perhaps removing the One Night Limit at Rae would reduce the impact at Charlotte.

I found that about 40% of people want to stay one night, 30% want to stay two nights, and only 5% would care to stay longer. The numbers of people wanting to stay two nights might increase if they knew in advance that the option existed.

There are signs at Onion Valley that are misleading. One says there is a one-day camp limit at 60 Lakes, Charlotte, Bubbs, Rae and Paradise. In reality, camping is

only limited at Rae. Another sign says wood fires aren't allowed at Kearsarge or Rae Lakes. In reality they aren't allowed above 10,000 in Kings. The Forest Service information sheet also has the same mis-information about one day limits. These information sources should be corrected to avoid confusion.

#### Designated Campsites: Further Thoughts

In my '95 EOS report I suggested the possibility of having designated campsites in the Rae area to mitigate the impact at that location. This year I paid closer attention to the use habits of the visitors using the area. I found that in only two instances did I find people camped in an area that had not already been camped in before. In short, the worn areas act as designated campsites without the need for any signs or ranger patrols.

Because of this, I feel implementing designated campsites in a more formal fashion will have greater impact on the area than doing nothing. However, I do recommend that the local patrol ranger keep an eye on the area to make sure people do not camp on the remaining patches of short hair sedge.

#### Miscellaneous

1. The trail to 60 Lakes basin has significant erosion and is used fairly heavily. Yet to maintain this trail might draw more use, and impact the fragile area of 60 Lakes Basin more than is desirable. For now, I do not recommend further maintenance of the 60 lakes trail.
2. Some of the trails are causing resource damage through erosion. Most notably the 60 Lakes Basin trail, and to a lesser degree, the trail to Wood's Lake. However, to improve these trails is to invite more use into fragile areas. It is unclear how to resolve this situation.
3. I heard that this year there was a flight dedicated to delivering 10 pizzas to a fire crew placed that day. I think we should be very careful as to keeping helicopter flights to the minimum necessary, and to make efficient use of them when they are used.

### **Public Relations**

#### Signs:

##### *Informational Postings*

I have placed 8.5x11 notices at three locations in the Rae area. These have regulations, suggestions, and informational items of interest on one side, and maps on the other. I have received only positive comments about these signs. They seem to answer the questions most people have ("where are the bear boxes?") and prevent resource damage before it happens ("This is a small, fragile area with no food storage boxes and only a few campsites a legal distance from water. Please consider moving upstream 15 minutes to Arrowhead Lake, which has nice views, a food storage box and more durable campsites."). Several parties, including a llama party, decided not to go to 60 Lakes Basin, or to go only on a day hike because of the lack of methods to

adequately protect their food (“Bears are active in 60 Lakes Basin. The only way to guarantee the safety of your food is to use a portable food cannister or to keep a 24-hour guard.”)

These signs have also been good PR. Several visitors have come up to me saying “You must be Ranger Rick!” (having seen my name on the signs).

### *Sign Order*

I would like to **replace any old sign orders** with the following: (posts for these are already at Rae RS)

[RA] means right arrow (---->)

[LA] means left arrow (<----)

- Two each of these. One for Rae, the other for Arrowhead Lake  
Food Storage Box [RA]

- One of these for Rae Ranger Station  
Ranger Station [RA]

- I believe this one might currently exist in Sierra Cache  
Sawmill Pass 3.5 [RA]

- The following mounted at 90 deg angle to each other  
Paradise Valley 5.5 [RA]  
Road's End [17] [RA]

[LA] John Muir Trail [RA]  
Rae Lake Ranger Station 5.4 [RA]  
Glen Pass 8.9 [RA]  
[LA] Pinchot Pass 7.7

### *Site Restoration signs:*

People have an amazing respect for “Site Restoration” signs. They are incredibly effective in preventing people from camping near them. It is tempting to picket the wilderness with them.

### Information dissemination.

The trailhead rangers at Cedar Grove seem to do a great job at educating the users of the Rae Lakes Loop, with some occasional exceptions. There is, however, no equivalent personal source of information for visitors entering from the east side. The information sent to the permit applicant by the forest service contractor generally remains unread. The biggest problem this year was that private stock parties entering from the east did not receive the Meadow Forage Guide.

The point has been made that simple rules are easier to enforce and communicate although they might not be optimal for a given area. Fires restrictions in

Sequoia Vs Kings are a prime example. The Kings restrictions are easy to understand, but the Sequoia restrictions are more appropriate for each area.

I would like to propose a map format to communicate area-specific regulations. I have included a sample at the end of this report.

### Miscellaneous

1. Vance Vredenburg's Frog Research group was well intentioned but not well informed. They received their collection permit from SEKI, but NOT a minimum impact sheet or Back Country Basics that would have informed them that there were bear boxes at Kearsarge Lakes. As a result, they had some food taken at Kearsarge Lakes.

I believe that in the future, the people sending out any research permits should be sure and send out the usual MI information too.

### Miscellaneous

1. It would be useful to get an updated list of archeological sites for each patrol area. Tom Birch said he would be willing to collect this information if we passed on to him our patrol area boundaries.
2. I met the program manager for the Angeles NF this summer, George Duffy (818) 335 1251. He told me that there is a wilderness ranger handbook series available from Aurthur Carhart Ctr in Montana. This would be an interesting reference to look over for our own use.
3. A visitor reported seeing a memorial plaque at the small lake north of Baxter Lake, in the vicinity of UTM 3765, 40800. It is dedicated to a perished Boy Scout, and says the name of the lakes are "Guth" lakes, in his honor. Should I leave the plaque in place?
4. I felt awkward putting up the foundation decals on bear boxes. I feel these are solicitations for donations, and as such violates 36CFR5.1 as well as the management objectives for placing signs given in our current wilderness Management Plan.

36CFR(5.1): Advertisements. Commercial notices or advertisements shall not be displayed, posted, or distributed on federally owned or controlled lands within a park area unless prior written permission has been given by the Superintendent. Such permission may be granted only if the notice or advertisement is of goods, services, or facilities available within the park area and such notices and advertisements are found by the Superintendent to be desirable and necessary for the convenience and guidance of the public.

SEKI Backcountry Management Plan, 5.11.1 (Management Objectives: Signs)  
To provide signs to protect the backcountry resources and for visitor safety where necessary.

Text of Decals (in very bold, red lettering on white background)

## WELCOME

The placement of food storage boxes in locations like this one is supported by donations to the

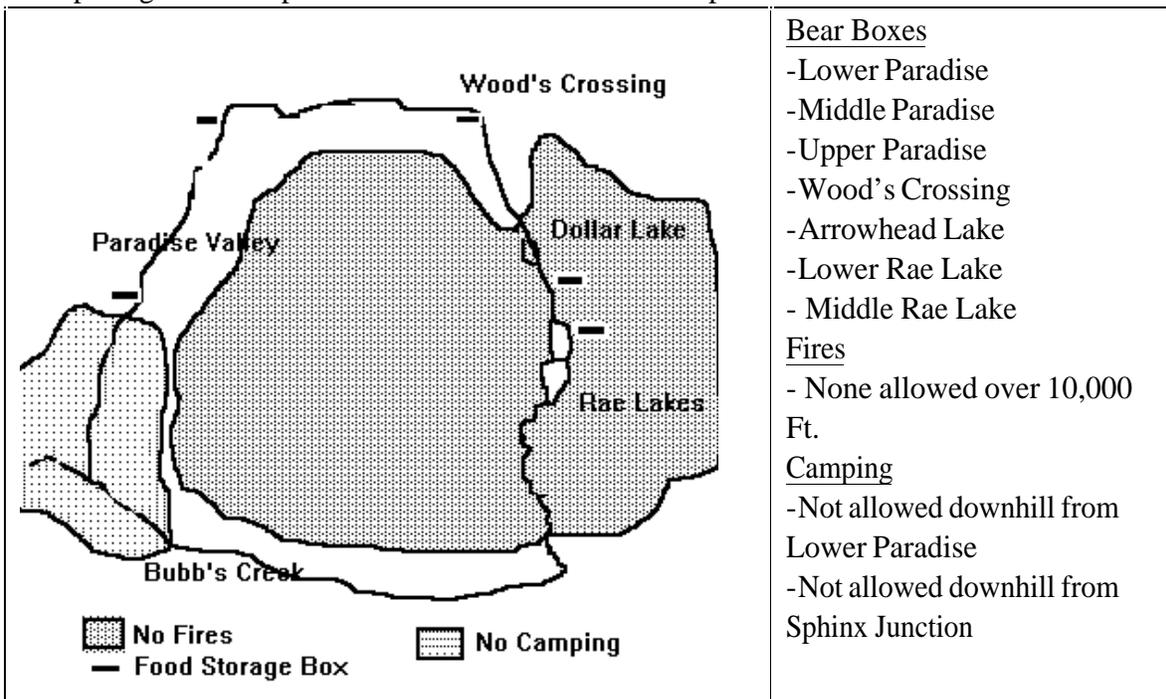
*Sequoia and Kings Canyon*  
*National Parks Foundation*

P.O. Box 1089

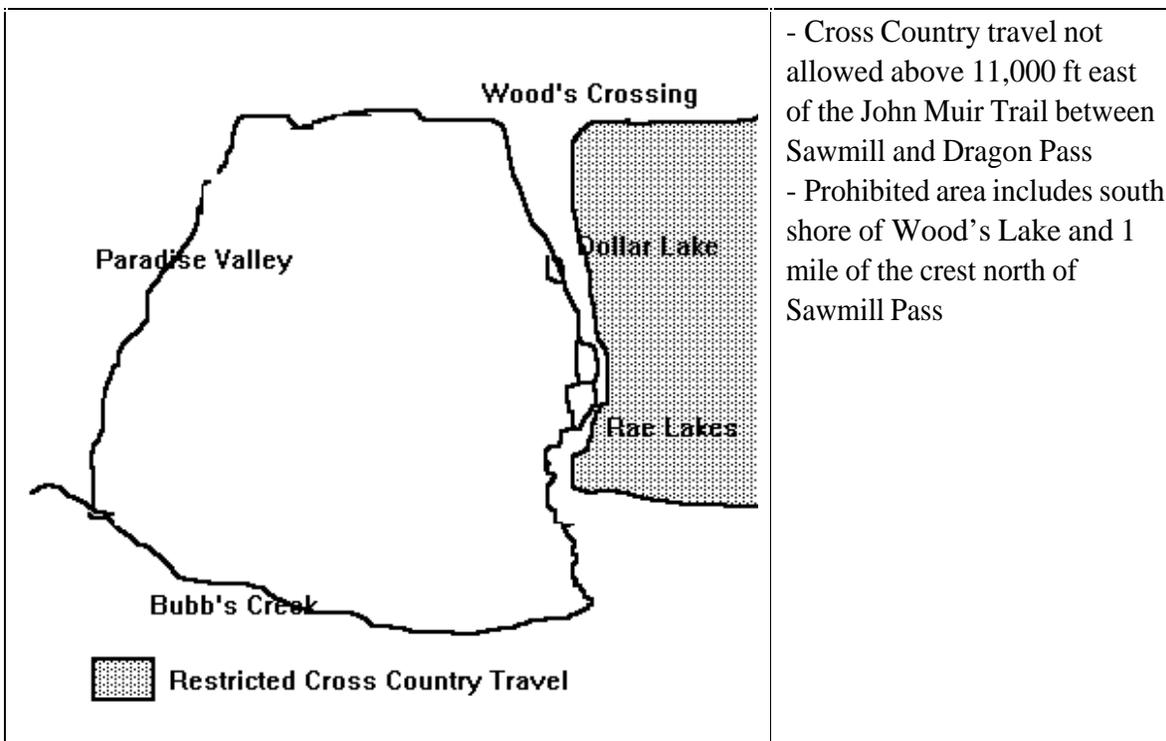
Three Rivers, CA 93271

5. I would be very happy to put up decals to replace the faded and illegible stenciled instructions we currently have on the bear boxes: "Storage for food and scent items **only**. Pack out all Garbage."
  
6. I spoke with several people who advised me that the current bails are so low as to be meaningless.

Sample regulation map for Rae Area. Front has these maps

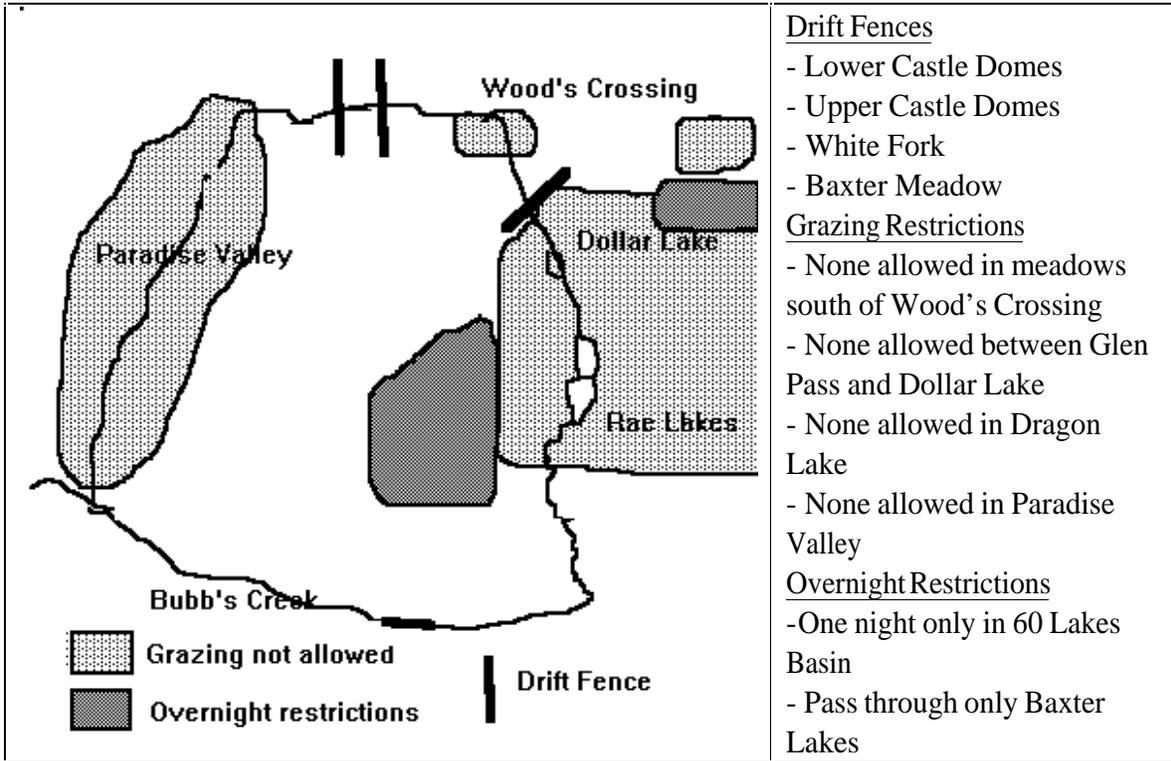


Camping and Fire Restrictions

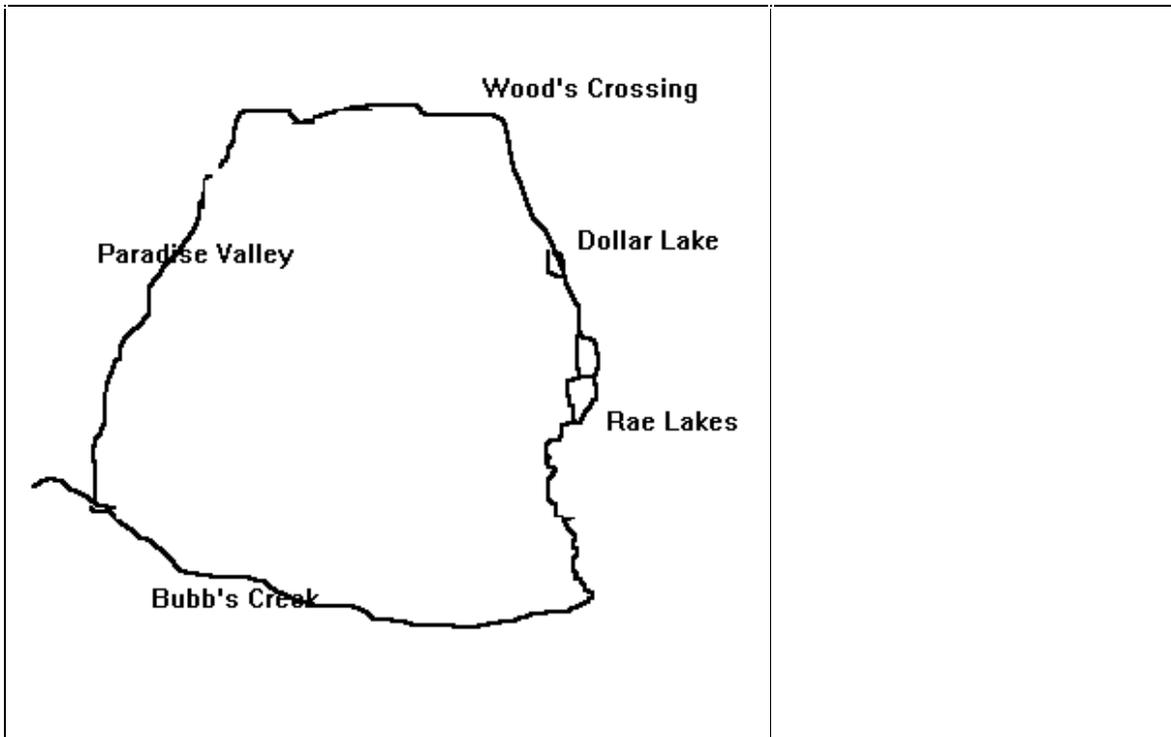


Restrictions to Cross-Country Travel

Back has these maps



Stock Use Restrictions



Other Restrictions

