

Rock Creek Ranger Station
End of Season Report
by Laura Pilewski
Field Season: June 25 - Sept. 28, 2004

A. General Observations

The 2004 season was markedly busier than when I was a volunteer at Rock Creek in 1995. Visitation increased along with associated bear problems, littering and group size issues. Fortunately, this coincided with a new Kern subdistrict supervisory position. For the first time in over a decade, we had a liaison between the front and backcountry. This gave us immediate feedback on numerous incidents, SAR, and provided excellent communications between the pack station, trailheads and other administration. Furthermore, her presence in the field helped us cover more ground, and as a commissioned ranger, enforce regulations. It was invaluable to be able to speak one on one regarding issues instead of piling them up before we leave at the end of the season. Erika Jostad's hard work and efforts really benefitted the resource *she cares so much* about.

Statistics:

Once again, it is difficult to gather numbers that accurately reflect use in the backcountry due to our random nature of patrols (see L.Pilewski 2003). However, I contacted approximately 2,630 hikers (On one day, Jostad contacted 80 people in lower Rock Creek alone!) and 270 head of stock (two groups with burros and a few with llamas).

Stock use was heaviest late season. **Cottonwood Pack Station** was busy providing spot-trips all season long. They kept a clean camp on their "all expense" trips, but their clients that were spotted in were not always educated about rules and regulations. This has been a historical problem and I still feel that they would be more prepared if they received their permits in Lone Pine. This would also minimize future "finger-pointing" from the visitors versus the pack station. Overall CPS packers were all friendly and willing to assist us in the field.

Rock Creek pack station and administrative use caused the most impact to the resource. This is simply due to the fact that they did not provide their own feed and that meadows were extraordinarily dry this year. They all, however, left clean camps and for the most part (except for the NPS stock going above the drift fence) followed grazing regulations.

Leave-no-trace stock training was coordinated by Jostad and Ventura (Kern ranger). Field rangers met in the Kern to learn about stock practices such as rigging and packing animals and setting up appropriate campsites. This was a unique opportunity to learn about and discuss stock issues. This was also a great way to help us be able to relate to stock groups better to improve relations. Joe even trusted us to ride his animals in the rattlesnake-infested canyon (see photos)!

Citations: Two Boy Scouts of America groups (total of four permits) exceeded group size limits and received citations. Three parties (one of which were BSA) received citations for improper food storage. One possible citation is pending for improper food storage and littering. It was invaluable having commissioned officers Jostad and R. Pilewski nearby to issue all citations in the setting of where they happened. I'm a huge advocate of using education in lieu of

law enforcement, but in all above instances, the parties admitted to being knowledgeable of the regulations. In fact two of the three food storage violators had bear canisters and/or were camping next to a bear box. The BSA groups had appropriate literature on group size limit and the ½ mile rule and had been reminded of it at the trailhead.

Medicals: None!

Assists: I helped a minor whose friend was flown out of Wallace ck. (Ryan SAR). I provided breakfast and supervision on his way out to Horseshoe meadow from Crabtree. I also gave out fuel and other supplies to visitors at the ranger station.

SAR: Before I was even "mobilized," I had to head out and find an overdue hiker (**Woll SAR**). He did not return one evening to his base camp at lower Soldier lake so two of his friends hiked out to report him missing. The remaining two of his party hiked out shortly afterwards leaving camp behind. With only a water bottle and windbreaker in hand, Woll hiked to Iridescent lake, snow-covered Arc ps., Consultation lake, Trail crest, Crabtree ranger station (no note left), Crabtree lakes, lower Whitney ck., PCT south to Rock ck. and ultimately back to camp. Meanwhile, the helicopter, R. Pilewski, Walsh, and I combed the area all afternoon and evening only to find him back at camp at nightfall. Woll had no map and would only drink filtered water (his stated reason for dropping down to Consultation lake). During his extensive tour, he never mentioned to the 50+ hikers he probably passed and got water from, that he might be reported "missing." He only asked directions to lower Soldier lake. Furthermore, when I escorted him to the trailhead with all his comrades' abandoned gear, his "worried" friends and family were nowhere to be found. So, I brought him down to Lone Pine where I arranged a hotel room and treated him to dinner (as he didn't even have a wallet). The photos he later sent of his expedition are quite entertaining!

The "**Mt. Russell**" SAR was instigated right upon my arrival to Crabtree (from Sky Blue that morning). Just as I set my pack on the porch, Rob (3-1-3) and I get supplies together and head out for the search. Storm clouds were building (for the third day in a row). Given the weather and the technical nature of their route, prospects were grim. We combed the Arctic ck. drainage including up to Whitney-Russell Pass and around the shoulder to the east side by sunset. We returned to the ranger station by 2200 that evening and that night a game plan was made by the IC. Unbelievably, the climbers were found alive and well at Tulainyo lake by helicopter 5-5-2 first thing the next morning.

Weather: It was the driest season I have seen in my ten years in the sierra. By mid August, Siberian pass ck. was barely flowing (the spring in mid to lower Siberian pass Creek however, flowed all season). Army Creek practically disappeared until just west of the large sand flat. Rock Creek's small branch in front of the cabin stopped flowing mid to late season. We only had a few short thunderstorm cycles, one of which caused the "Hot Springs" fire just south of lower Rock Creek along the Kern rim. It burned for a good portion of the summer, but only kicked up significant smoke a few times toward the end of the season.

B. Use Patterns

Hiker and stock use patterns were virtually identical to last years with elevated numbers. Over half the hiker parties were backtracking due to Whitney exit quotas (see Jostad 2003). This continues to put increased strain on the resource especially with regards to bears and proper food storage. Mt. Langley/Old Army pass areas were patrolled approximately once every pay period,

including holiday weekends. Only one dog was spotted from afar, leaving the park. This area should continue to be monitored closely for resource issues (see trails and Jostad 2003). Stock spot-trips seemed to have also become quite popular. These too need to be closely monitored for numbers and adequate minimum impact education.

Commercial users were pretty much the same as last year (Jostad 2003). IBP monitoring forms were filled out on most trips that came through the area.

Administrative. The demography crew conducted surveys near Cirque peaks while I was in the Kern. Two bat researchers stayed for a night in lower Rock Creeks. California Fish and Game conducted extensive golden trout surveys in the area. They, however, had a couple issues regarding group size (2 CA Fish & Game members with 15 BSA) and food storage (the 2 CA Fish & Game members did not have canisters). I believe that researchers should also go through minimum impact training like the general public before heading out, if nothing else to be well informed of area specific issues. The annual chief ranger/Dept. of Defense and Squad trips also passed through.

Aircraft. Low flying military aircraft, primarily FA-18's, continue to bombard the wilderness with noise. The most flagrant displays of dogfighting and circling peaks occurred on a constant basis (M-F) in the Miter basin. The number of reported deviations was in no way a reflection of the amount of traffic as my patrols were focused below timberline due to the bear problem. Ironically, this traffic increased after the Dept. of Defense trip. Perhaps, someone told them how beautiful the Corcoran pinnacles were.

But seriously, I do think Greg Fauth should be commended for not giving up on this issue. This year there was much more open discussion and military representatives seemed more sympathetic to this wilderness intrusion. This trip also provided a chance for our new chief ranger, J.D. Swedd, to become involved. It was a great chance to meet him and it's refreshing to have someone in his position still be an advocate of aesthetic wilderness values.

Overall, there were fewer blatant violators but on average all "commuting" military aircraft were flying at a much lower level with deviations occurring in the area of surrounding 13,000-14,000' peaks.

Hunting. Hunting camps were already appearing in the adjacent GTW before seasons' end. I wouldn't be surprised if poaching occurs along the boundary given the prevalent rumors in Lone Pine. This is unfortunate since the NPS is not fulfilling its duty to protect this resource which includes the endangered bighorn sheep.

C. Natural Resources

Wildlife: As Rachel Mazur and others have observed, Rock Creek is the power-spot when it comes to wildlife. Perhaps, this is due to it being a transition where the southern sierra meets the alpine zone or merely because it's a sanctuary from NFS land. Regardless the reason, I had the fortune to see my first mountain lion after having spent 10+ summers in the sierra. It's one thing to see its fresh tracks on top of yours or hear one crash through bushes. It's another to have one break its lanky stride, abruptly stop and look right at you from 100' away in an open meadow (right by your ranger station)! It was being taunted by a noisy coyote who wanted part of its deer kill. Ultimately, the trail crew helped me move the carcass away from the main hiking thoroughfare for the visitors' safety (see station log).

Other carnivores such as a pine marten (at the station), long-tailed weasels, coyotes and bears were seen by me numerous times throughout the Rock Creek drainage. The latter three were all seen above 11,600 ft. as well as at lower elevations throughout the season. A local trail crew member Major Bryant was rewarded on his day off with the sight of eleven bighorn sheep on the northwest slopes of the Miter. Another group of locals (from Lone Pine) is convinced they saw a wolverine frolic in the northeast meadow of upper Soldier Lake. Despite legitimate skepticism, I tend to believe their report. The only two bears I saw this season in the Rock Creek drainage were either jet black (and would have likely tried to obtain their counterbalanced food) or a 250+ lb. cinnamon colored bear neither with any semblance of a tail. Given the duration, location & source (I have been friends with these folks for 10yrs), I would be inclined to deem this a reputable sighting. I'll continue looking . . .

Deer were abundant in the Rock Creek area this year except when the mountain lion was about. Along with the expected resident bird life, I saw a pair of redheads at Funston Lake, a common poorwill and belted kingfisher at Rock Creek Lake and a Wilson's phalarope at Chicken Spring Lake. A small owl was seen in lower Rock Creek and I heard one while camped at upper Soldier Lake, but neither observation was adequate for identification. All pika calls/sightings were recorded. I found a rather large population of them south of Funston Lake along the park boundary. My favorite observation of these critters was triggered when a bouquet of "innocent" pink balloons floated just above the talus along Army Creek drainage. I sat back and listened to all the rodent alarm calls cascade from west to east in synch with the predatory balloons.

Bears: Bear activity was extremely high this year. I saw two different bears grazing early season, both of which ran away immediately upon an encounter. Unfortunately, that abruptly changed. After returning from training in the Kern, I learned a JMT through-hiker (who never even reached the JMT!) lost all of his food at New Army Creek junction. I found the admittedly textbook-looking branch ripped off the tree along with the torn, empty stuff sacks. After this big score, the bear hung around this area and wreaked havoc even ripping an unattended tent for a mere first aid kit that contained aspirin & Neosporin. This bear also obtained hung food at lower Soldier Lake, "penned-up" meadow, just below Sky Blue Lake (11,800') and Rock Creek Lake (See BIM's & citations). It almost obtained a tremendous amount of food from a group of eight that was spotted into Rock Creek Lake by CPS for approximately one week. But, miraculously, I contacted them that evening and camped there for two nights where the bear, indeed, harassed us for most of both nights. Consequently, the group left early (see IBP monitoring form).

Trail crew was also harassed by the same bear with only minor property damage. A much larger (250+ lb.) cinnamon colored bear, however, did rip apart an unattended tent only to return the following day where it was hazed by me, Jostad, and four other trail crew members. It never was seen again that season! That one was probably responsible for the Crabtree areas incidents given its description.

The small troublemaker was last seen on the Siberian outpost late August. I believe that the last week of hazing and the presence of the mountain lion scared it away. Before it left, its scat turned from wrappers to currant berries which gave me hope. This little guy caused me to focus virtually all my patrols in the immediate Rock Creek drainage. Surrounding areas went almost unpatrolled (Funston Lake, Siberian outpost, up. Miter basin).

Vegetation . . . isn't as exciting to talk or write about although I love it, especially in salad form in the backcountry. Once again, goddess Sylvia Haultain helped supplement backcountry funding (for much needed gear) by forcing me to explore remote places along the southeastern park boundary for vegetation mapping purposes. Because of the large volumes of people and bears, trips were abbreviated but hopefully provided all necessary information.

Another fun project was collecting local samples that were lacking in the park herbarium. It made for a fun treasure hunt and helped me learn and key quite a few new plants with my new dissecting scope (remember, we don't have TV out here). Hulsea vestita and sensitive species such as Hackelia sharsmithii and Arabis pygmaea locations were recorded.

Meadows. Although lower Rock Creek and "penned-up" meadows show signs of use, Nathan's by far is worse for the wear (see photos). Since most other areas were used for spot trips or had limited grazing from mostly burros and llamas, they showed significantly less impact. Nathan's, however, has large dust baths and areas of closely cropped and trampled vegetation. It appears that soils and plants were more easily disturbed or uprooted because of such dry conditions. Furthermore, not much moisture came in the form of summer rain to replenish the vegetation. This also concentrated grazing in sensitive riparian areas such as the boggy spring-fed area east of the trail in Nathan's meadow. Similar to a wet year, it was interesting to note how sensitive these high meadows are at both extremes in precipitation.

D. Cultural Resources

Obsidian flakes were noticed in areas previously documented on the Siberian outpost and Boreal plateau.

E. Backcountry Facilities

The **patrol cabin** continues to be mouse infested. Although some minor caulking was done along the west and north sides of the cabin (by Dave Yemm, trail crew, day off!), the rodents can still enter where the roof and ceiling meet the walls. Optimistically, with more work, the mice can continue to inhabit the attic while the ranger can live hanta-free downstairs. Otherwise, trapping is a continuous effort. The tongue & groove porch is still in need of repairs from last year's break-in.

Drift fence: Although nice and new in appearance, it was very tightly strung and difficult to set up without adding length in places. This problem could be alleviated if all posts (approx. 30 T-bars) were replaced with permanent ones. Furthermore, although meant to protect upper meadows, stock (esp. administrative) still travel around the uphill side. Perhaps extend it to Joe Devel peak!

Signs: All are in good shape. Old Army pass sign was replaced (it was MIA). It also now states "Bighorn sheep habitat" in hopes of instilling guilt to those who illegally escort dogs up Mt. Langley. Somebody has already tried to remove the sign.

A rehabilitation area sign was moved from a single campsite along the west shore of lower Soldier lake to the beginning of the use trail since all sites are inappropriate (& technically illegal) for camping.

An old Siberian outpost rehabilitation sign was removed as the majority of the trail is now vegetated in this area.

F. Trails

The construction crew was a welcome neighbor. In the short time they were present (Aug. 5- Sept 15) they rerouted 700' of the south side of Guyot Pass (see photos), placed 10 (?) checks just north of Guyot Creek, "ground-pounded" all area trails, installed a stock demonstration camp and helped me with numerous area projects. Furthermore, it was great to have more eyes and ears out there to let me and the Crabtree ranger know of any incidents. One member found some half buried food and garbage at Crabtree before a bear did. They helped pass along bear, fire and permit information to those who passed by when I wasn't available. All construction crew members kept a very tight camp, never lost any food despite bears constant appearances, and were a tremendous help in hazing the area bears. I, of course, accepted many dinner invitations under the guise of evening bear-hazing patrols as they were conveniently located near the lower Rock Creek campground.

Problem areas

Mt. Langley is becoming more popular every year for dayhikers and backpackers. I would place this as a high priority since it would be a proactive approach to mitigating damage in this fragile alpine environment. As the snow recedes, multiple new trails are formed. There is presently on single use trail that leads to a high point south of the summit at approximately 12,200.' But, from that point on it's chaos. Having seen the success of the monumental cairns built from Columbine lake to Sawtooth Pass, I think this too would be a perfect application. Either that or we could remove 28' from the summit so it's a "13-er."

The unmaintained trails to **"penned-up" meadow and the "all-expense" camp** at Rock Creek lake still show significant resource damage. Trail crew and I assessed these areas and agreed that a significant amount of time would be needed to blast and reroute these trails out of the meadows (which has been a resource management goal). It would be nice if a decision was made as to how to manage and protect these areas (see "Restoration crew," Jostad 2003).

From a visitor use stand point, **New Army pass and the Guyot pass trails** still would be a high priority. Although the construction crew wasted no time in addressing the most severe areas of Guyot Pass, the grades still remain quite steep along these two trails.

It would also be nice if the Kern crew could complete the **drift fence** as planned (see Backcountry facilities).

G. Camp Areas

Lower Soldier lake. This year I was shocked at the number of people that camped here. There were many nights where 30-40 people were present. Not only did this cause the bear box to fill up, but it also caused significant sanitation issues. In fact, I found that given the terrain, many people relieved themselves in the spring-fed willows along the east shore (without even burying it or packing out TP). Even the most ambitious person with good "control" must hike a long distance to be away from water and camp. Given the amount of youth and novice wilderness users, I'm skeptical that they follow appropriate rules.

Furthermore, the peninsula itself shows lots of wear and tear. Virtually no ground vegetation or downed wood is present. Illegal firepits still appear on occasion, but with frequent evening and morning bear patrols this year, this was less of an issue. I also strategically buried

some rocks in front of the perpetually scarred boulders in hopes that it may discourage future fires. We'll see. It seems to work for campsite rehabilitation (also done in this area near lake this year).

A rehabilitation site No camping-from here to inlet sign was placed along the west shore in hopes of eliminating rogue campsites that kept appearing along the "beach." In summary, lower Soldier lake needs to be monitored closely as use increases with the new changes in the permit system. **Lower Rock Creek crossing** has similar issues but on a much smaller scale.

Rock Creek lake's biggest users seemed to be the clients of CPS (both at the "all-expense" camp and the bear box). Next year, I would like to make a sign showing how the camp area stretches farther west. I had to tell many people this year to not camp between the trail and lake meadow (both <25' away). Trail crew helped me move some large rocks and logs to start rehabilitation but more work is needed next year.

Miter basin has seen an extreme increase in use since I was last here (as a VIP) in 1995. This has a lot to do with publications and the internet advertising it as a "quick" way (as compared with the PCT) to access Mt. Whitney. Numerous people ask me for directions, of which I'm hesitant to give. I'll answer specifics, but emphasize that it is a cross country route. The main camping area at timberline just below Sky Blue lake was significantly rehabilitated early season and no new firepits appeared (see photos). But, food storage here at 11,400' and at "penned-up" meadow became a significant issue this summer (see BIM's and citations). In addition to lowering group size for cross country travel, perhaps we should somehow regulate use in this area. Unfortunately, this could prove quite complicated. But, including a park itinerary on NFS issued permits should be mandatory for both safety and land-use management strategies.

Firewood availability. Generally speaking both campsites with bear boxes that allow fires are depleted of downed wood. Performing fuel wood inventories would help guide changes in restrictions. The emergency restriction that went into affect late summer was of huge benefit ecologically. Surprisingly, compliance was almost 100% with virtually no complaints. This shows promise for future changes in regulations. I think Californians are becoming more afraid of catastrophic wildfires and are generally less motivated to build campfires in general (it's more work).

Food storage. From what I could gather, four out of six parties that had their food stolen this summer were cited (one pending). The two that weren't "caught" appeared to have had their food hung while I was at LNT stock training in the Kern and helping with the stock demo camp installation. Missing even one day of patrolling the Rock Creek drainage made that much of a difference. I was able to figure out the bears' pattern by interviewing virtually every hiker. I knew I could relax a little when it wandered back to the east side. I was able to confirm with visitors' digital photos that one bear consistently went back and forth over Army and Cottonwood passes.

The yearling bear that caused virtually all the trouble was bordering on aggressive. It sniffed around tents constantly (even without the presence of food and with people present in them). It jumped on one person who sat up suddenly in his tent (no injury). The bear even bent the tent poles in half. He had unwittingly slept beside a backpack with food. Food storage literally became a safety issue. Amazingly, almost 99% of people had bear canisters, including

two that were cited. The main issue in this area now is surplus that won't fit in the cans. This needs to be emphasized at the trailhead before people start their trip.

Due to limited Whitney exit quotas, Rock Creek is seeing almost twice the use. Now, out of convenience, people are using bear boxes to cache food for their return trip. This, along with copious amounts of trash/food/fuel left behind, can sometimes leave boxes over half full with nobody even present. However, at this point, there is no way to enforce this issue. Literature and trailhead education regarding this matter is needed.

H. Permit Systems

Lone Pine trailhead rangers did a great job this year. All hikers seemed well-informed of the bear problem and fire regulations. It was also good to hear 3-1-9 made it into the field frequently. Bishop, unfortunately, failed to give any stock-related information to a private stock party who was out for twenty days (Do we still have special packets of stock literature on the east side?). I do not have much feedback on wilderness camping fee collection as most parties did not receive envelopes or did not originate in the park. But, in general, my observations are similar to Rob's at Crabtree (see R.Pilewski 2004).

A few ideas I have about improving trailhead operations would be to have a base station radio and a more interactive approach to issuing permits in the form of displays and a leave-no-trace quiz (see appendix).

The Wilderness Office, as always, did an excellent job as our support team. Supplies, medicine, and important messages were always relayed in an efficient manner. Peter, Gary and Ben's hard work in the office setting had a direct effect on the wilderness resource.

In summary, it was a wonderful year working with all of the Kern rangers. Allison did an excellent job as a first-year ranger. Joe covered more territory than I've ever seen the Kern ranger explore. Paul helped me gather herbarium specimens. And, it's always a pleasure to learn from Erika and Rob, two people who have dedicated their careers to protecting and preserving this wilderness. I look forward to returning next year. In the meantime, here are a few suggestions for next season . . .

I. Recommendations

Local ranger projects for next year:

- Caulk/foam to mouse-proof cabin.
- Bury rocks/rehabilitate camps at Rock Creek Lake. & "waterfall."
- Reroute upper New Army Creek crossing above overgrown willows.
- Pick/photograph a potential route up Langley.
- Gather more herbarium specimens.

General:

Permits/trailheads:

- Continue to station NPS trailhead rangers in Lone Pine & Bishop and allow early season patrols into the park for area familiarity.
- Cease to allow Cottonwood pack station to issue wilderness permits as they are too busy and have no vested interest in going over all permit regulations.
- Make researchers go through the permit office to receive minimum impact regulations and any other pertinent area information (at least on a seasonal basis).
- Monitor increased visitation and use trends on Mt. Langley and in Rock/Crabtree areas in part due to new Whitney exit quotas
- Investigate possibilities of installing a base station radio at east side trailheads for improving communications
- Share INFS wilderness ranger patrol schedules (& call nos.) so we can facilitate communications, SAR and other incidents.
- Discourage food caching in bear boxes by including information in park and forest service literature and at trailheads.
- Complete specific park itineraries on INFS permits for visitor safety and wilderness management.
- Use new methods or ideas for education at trailheads (see appendix).

Maintenance/signs/trails:

- Create educational flyers and displays for stock demonstration camp.
- Find a permanent way to mouse-proof bear boxes by sealing holes.
- Complete drift fence (trails).
- Establish a restoration crew (see Jostad 2003).

Resource management

- Create a mandatory bear canister restriction for Rock Creek drainage (at least up to Sky Blue lake and Guyot Creek) and increase awareness of the importance of fitting all food in canisters or boxes at the start of trips.
- Make management decisions regarding Mt. Langley, "penned-up" meadow, and stock use trail at Rock Creek lake (also trails).

Ranger Division

- Continue spring training. Perhaps include topics about animal tracking, bear hazing and bird identification (Training was excellent this season. Keep it up!).
- Continue having a Kern subdistrict supervisor in the field.
- Staff field ranger stations through mid October to conduct hunting patrols as rumors of poaching continue to circulate. The NPS has an obligation to protect the resource (Wilderness Coordinator, ranger division).

J. Inventory

4 sm. propane tanks
Full supply of first aid equip
-field first aid kit in frontcountry
Radio battery charger
8+ gal. white gas
lots of sun screen, bug dope, tools
3 pr. sz. lg. asst. work gloves
1 ext. cord
1 water filter

lg. plastic bags & burlap
-enough for 2005
6+ rolls duct tape
6 TP
mirror
lg. plastic tub
clothespins
coffee cone & filters
lots batteries (except AAA)

K Needs for Next Year

10+ tubes gray mortar caulking
-see Dave Yemm
2 twin mattresses
for snow survey use
1 sm. propane tank
6 mouse traps
strainer (for sump)
BIM's forms
1 Belt buckle Blake Diamond L28
Speed daypack
1 lightweight. tent
1 Compass (good type w/declination)

Iso Pro fuel cans
20 sm. wastebasket sz. trash bags
1 sm. winch for hitching cable
Stock Demo camp sign &/or flyers
AAA batteries
Books: Place Names of the High Sierra
Field Guide to Mammal Tracking
by ...&Halfpenny (all
stations)
...Peaks & Passes by Secor

Appendix:

Having talked to numerous visitors and trailhead rangers over the years, I feel that we could better educate the public if we went about it in a more creative manner. Nobody likes being lectured especially after a long drive with little sleep. Trailhead rangers themselves get burnt out by mid season repeating the same things over and over again. Inevitably, some topic is forgotten. So, with the advent of the digital camera and easier to use (but not for me!) computer graphics, I think we can greatly improve our minimum impact sheet that people presently DO NOT READ thoroughly if at all. Given the comparatively small number of private stock groups, a separate package (with min. impact & meadow info, grazing card, etc.) could be created for them. And, maybe we could have two separate flyers for backpackers: one with generic minimum impact regulations and one with specific area information. It would be novel if we could at least include a little color on our flyers if our budgets allow!

If we think this quiz approach is too much, we could possibly use it for obtaining a "frequent backcountry user" card with regards to all generic, not area specific information. That could save visitors and permit issuers time and possibly paper. This test can also be geared to specific trailheads (i.e. marmots at Mineral King or "wag bag" use near Whitney). A small separate flyer could have a list where the visitor or ranger circles/writes all that applies to the permit itinerary (i.e. bear box locations, local campsite & fire restrictions, and trail/fire conditions). Perhaps, the written portion could be abbreviated and filled out as people are waiting in line (or at home with east side INFS reservations). A non-written portion with photos and/or real life displays(i.e. bear damaged items) could be displayed at the trailhead ranger stations. If we could coordinate this for all park and local forest service trailheads, it might benefit both agencies and save time re-inventing the wheel every year in each location. The following is just a quick brainstorm trying to include all issues on the current minimum impact sheet.

Backpacker Leave-No-Trace Quiz

Preparing for your trip...

T/F Everyone in my party either has a map & compass or will be with someone who has one at all times (a GPS alone is not adequate).

T/F We have a specific plan if someone gets tired, separated, lost or hurt.

Circle the correct answer:

I will **build/knock down** the hundreds of cairns/trail markers that people who don't know how to use a map build.

Maximum group size is a) 4 people, 2 elephants

b) 18 scouts with 2 permits*, 1 dog

c) 15 people, 20 head of stock (llamas, burros, mules or horses)

*affiliated groups may not travel or camp within 1/2 mile of each other if total group size exceeds 15 people/20 stock.

Selecting a cool campsite...

Circle things wrong with this beginner's trip

Picture #1: Show cartoon/photo depicting tent on vegetation, too close to water, with trench, rock windbreak, litter, etc. and possibly cartoon figures stating "Ahh, what a beautiful campsite," "I wonder why it's so cold & damp.").

Picture #2: Show above cartoon/photo with damage (dead grass, trash, fish guts, TP, trench, a rock windbreak, etc. Then show two hikers commenting "Who would camp here? This place is trashed," "Yuck, I wouldn't even drink the water").

Pictures #3+: show photos of appropriate campsites

Sanitation...

T/F I am glad the trail crews build these pathways into the mountains. They hate when I'm lazy and cut switchbacks because it kills vegetation and ruins the trails.

Circle the correct answer:

I always leave my human waste..

a) above ground with my TP!

b) under a rock where a trail crew member might find it.

c) under the cover of some willows where the water drains into the lake that I and other visitors will be drinking out of for years to come.

d) 6" under the ground, 100' from water & trails.

Which is best?

a) Burying TP so rodents & marmots can dig it up, decorate Guitar lake and spread disease.

b) Burning TP so it starts a huge forest fire.

c) Packing it out in a zip-lock bag.

T/F Most backcountry illnesses are attributed to poor hygiene, but it is still a good idea to treat or filter my water.

T/F I will be drinking out of cool crisp mountain streams and lakes.

T/F I will be jumping into this same water after I am sweaty and covered with sunscreen and toxic insect repellent. And then, I'll wash my clothes and dishes there to.

T/F It is possible someone will be drinking downstream from me somewhere else. (Is this a good metaphor for all things I do in life?).

Lions & marmots & bears, oh my!..

T/F Most park wildlife is elusive and I'll be lucky to catch a glimpse of a squirrel.

T/F When a person feeds wildlife (from Rosy finches to black bears) they become addicted to our junk food and may never forage for healthy natural food again (just like us).

T/F This may become a safety issue for the next visitor who happens to have lunch near that plague-ridden rodent, west-Nile virus carrying bird, or aggressive hungry bear.

T/F I know the fishing regulations and have a California fishing license.

T/F The national park is one of the only wilderness areas in the world where you get to experience humility and leave all guns and weapons behind.

Circle the "scented" items (*circle all & show photos of bear damage to them*).

Food, soap sunscreen, repellent, garbage, toothpaste, lotion, first aid kit pills/ointments, me

T/F These vehicles had scented items in them (*show damaged vehicles*).

Choose proper ways of storing these items in the backcountry or trailhead.

- a) Bear boxes (negs: might be full especially if people leave things like trash behind in them).
- b) bear proof canister (self-reliant, flexibility in camping if I get tired, if there's bad weather, etc and can't make it to a bear box).
- c) Counter-balancing (a good last resort but bears may rip off branches-show photos & offer diagram of how to do properly if they don't have a canister).

The goal of storing food properly is to

- a) keep you from going hungry
- b) save a bear's life. Bears are not relocated. They are shot and killed (*show photo*).

T/F If every hiker lost one power bar a day from July 1st through September 30th, that would equal over two thousand bars!

T/F All of my food, trash, etc. fits into a bear canister (if false discuss options with trailhead ranger).

Fire!

Where campfires are permitted, the rangers work hard to clean out ashes. They are much easier to maintain if they are three-sided, aren't filled with dirt, and don't have tiny pieces of foil, plastic, or other trash (choose one that matches that description-show photos of good/bad examples).

Note: Fires must always be attended. Plastics emit toxic gases and foil doesn't burn completely.

PASS/FAIL question:

T/F The goal of this test is to educate people so that you and future generations can visit the same exact places and feel that they are the first ones to ever visit and, at the same time, leave it unimpaired for the wildlife that lives there year round (*include inspiring wilderness quotes, etc.*).