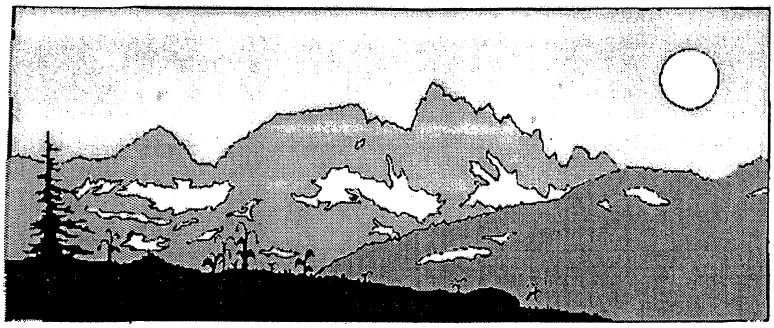

HIGH SIERRA HIKERS ASSOCIATION

PO Box 8920, South Lake Tahoe, CA 96158

June 6, 2007

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P. 1 of 2
YOSEMITE NATIONAL PARK

Superintendent
Yosemite National Park
Attn: Merced River Plan
P.O. Box 577
Yosemite, CA 95389

Dear Superintendent,

The High Sierra Hikers Association (HSHA) is a nonprofit public-benefit organization that seeks to inform and educate its members, public agencies, and the general public about issues affecting hikers and the Sierra Nevada. Many of the HSHA's members visit the Merced River basin in Yosemite National Park for hiking, camping, backpacking, horse packing, and other recreational pursuits. Following are our scoping comments on the Merced Wild and Scenic River Comprehensive Management Plan. Please place a copy of this letter in the project record.

General Comments

The HSHA is very concerned about the ongoing (and increasing) adverse impacts in the Merced River basin due to commercial stock animal usage, in particular to supply the High Sierra Camps. This planning process should be used to terminate—forever—the impairment of park, wilderness, and wild & scenic river resources and values resulting from these high-impact activities. Following are our specific comments:

The HSHA is especially concerned with the Merced Lake, Vogelsang, May Lake, and Sunrise High Sierra Camps (HSCs). These aged and ugly facilities have a significant negative impact on the Merced River corridor, the trails leading to those camps, and ultimately on Yosemite Valley and beyond. All the by-products of human occupancy are produced at these camps: sewage (human body wastes), "gray water" from showers, grease and detergent from kitchens. But there are no water or sewage treatment plants. Wastewater ends up in the meadows, soils, and waters of Yosemite National Park.

California Wilderness Act

Congress specifically recognized this threat to Yosemite when it passed the California Wilderness Act of 1984 (CWA). The Act, signed by President Reagan, bestowed formal wilderness designation upon the Yosemite backcountry. The Act allowed the HSCs to remain, but stated:

> "If and when it occurs that the continued operation of these facilities . . . results in an increased adverse impact on the adjacent wilderness environment (including increased

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> adverse impact on the natural environment within the enclaves themselves), the operation of these facilities shall be promptly terminated, the facilities removed, the sites naturalized, and in the procedure set forth by section 9 of the bill, the areas promptly designated as wilderness."

The four HSCs cited above are classified as "potential wilderness," which, by law, must be treated the same as wilderness.

The HSCs are an anachronism—an out-of-date holdover from the bad old days from 1916 (the Merced Lake camp) through the early 1960s, when more development and more commercialism were considered desirable and beneficial. One way to look at the HSCs today is this: If the NPS were to propose establishing an HSC in the Yosemite backcountry at the present time, the project would never get off the ground. It would violate the Wilderness Act (WA), it would violate the CWA, and it wouldn't have a ghost of a chance of surviving a NEPA process. That being so, why should not the existing HSCs be abolished? Fifty years ago, no one talked about environmentalism. Now we have a federal agency, the EPA, and all and sundry declare themselves to be in favor of environmental protection. It is long past time for the National Park Service at Yosemite to heed the mandate of its Organic Act, adhere to the strictures of the WA, the CWA, and the Wild and Scenic Rivers Act, obey NEPA requirements, and follow the direction of the General Management Plan (GMP) of 1980, by choosing preservation of park resources, scenery, wilderness character, and wild river values over ongoing exploitation and impairment.

Vogelsang HSC

The Vogelsang HSC (capacity 42) is supplied from Tuolumne Meadows, but its very existence has a significant impact on the Merced River corridor. The trail from Tuolumne Meadows to Vogelsang HSC, like all trails traversed by the HSC supply trains, is battered and polluted, featuring flies and stench and dust. One is not out of sight of manure for the entire seven miles.

The same is true of the trails to Merced Lake (capacity 60), May Lake (capacity 36), and Sunrise, (capacity 34). For the sake of those few, dozens of people every day—and during the course of an entire season, thousands—are inconvenienced, offended, and exposed to health hazards by the disgusting condition of the trails.

The 1984 CWA also stated:

> "Because of the importance of continuing monitoring and assessment of this situation, immediately upon enactment of this bill into law, the Secretary of the Interior should document current baseline operational and environmental impact conditions of all of these facilities [HSC camps], and he should also, within one year of the date of enactment, report in writing to the relevant committee of the House and Senate, his findings and recommendations as to this matter. Annual assessments of this situation should thereafter be made by the Secretary to assure continued monitoring of conditions."

Has the Park Service at Yosemite prepared the baseline reports and submitted the annual monitoring reports as requested by Congress? If such reports do exist, they should be made public at once and included in the record for this project.

Illegal Construction

Those HSCs are classified as "potential wilderness additions," which, by law, must be treated and managed essentially the same as wilderness. (See the California Wilderness Act of 1984, Section 9.) However, despite the ongoing and increased impacts of the HSCs, and the clear direction from Congress, we are aware that the NPS has made continuing efforts to hide the impacts of these facilities from Congress and the public, and has illegally continued to use nonconforming methods (i.e., helicopters) to maintain the HSCs and to construct new developments (i.e., sewage mounds, toilets, etc.) at the HSCs. Congress specifically directed that:

> "Helicopter use for routine nonemergency purposes associated with visitor use is a questionable activity in national park system wilderness areas and should be eliminated within designated national park system wilderness." (House Committee Report No. 98-40, at p. 51.)

The 1980 GMP, which preceded the CWA by four years, stated:

> "Potential wilderness classification will prevent any further development of facilities or services; should existing developments be removed, there will be no reconstruction of facilities. Wilderness classification will require the eventual elimination of all improvements that do not conform with wilderness activities. Use of wilderness areas will be restricted to activities that are compatible with wilderness as cited in the Wilderness Recommendation for Yosemite National Park." (National Park Service, 1972).

Vogelsang HSC

After passage of the 1984 CWA it became evident that the meadows and streams around the Vogelsang HSC were being threatened by sewage and wastewater from the camp. Instead of closing the camp, as required by law, the Park Service in 1985 constructed a new "leach mound" system in an effort to contain the wastes. The project involved a great amount of explosives, soil disturbance, and helicopter use. But this fix was short-lived. By 1990 it was obvious to the Yosemite administration and to the Curry Company (the operator of the camp) that the mound system was failing.

> "After several seasons of continuing environmental concerns, NPS maintenance representatives have determined that the mound system for sewage disposal at the Vogelsang High Sierra Camp is inadequate to properly handle solid wastes generated by Camp guests and employees." (Yosemite National Park Project Proposal Form, dated 1/16/91.)

At this point, as in 1985, the only correct, legal action would have been to close the camp, naturalize the site, and designate it as wilderness. Nevertheless, in the summer of 1991, without asking for public comment, the Park Service once again ignored the law and constructed new toilet facilities at Vogelsang HSC.

Sunrise HSC

In 1991 the Park Service admitted that:

> "At Sunrise camp, there are inadequacies in the sewage system and in potable water; work will be required in the near future." (Draft Concession Services Plan Environmental Impact Statement, December 1991.)

Instead of complying with the law by documenting the problems with the Sunrise sewage system (a cesspool), and removing the camp, the Park Service constructed a 604-square-foot building at the Sunrise camp to house toilets and showers. This was done in blatant disregard of the Organic Act, the California Wilderness Act, the Wilderness Act, the Wild & Scenic Rivers Act, and the 1980 General Management Plan.

In sum, all four of the HSCs cited above should be subject to site-specific Environmental Impact Statements (EISs) as part of the Merced River planning process. This has never been done, and is necessary to illuminate the scope and nature of the substantial environmental impacts of those facilities. Significant issues include, but are not limited to: (1) impaired scenery; (2) degraded trails; (3) pollution of surface and ground waters by sewage and wastewater produced at the HSCs; (4) pollution of surface waters by manure (bacteria, etc.) produced by pack animals that service the camps; (5) harm to wildlife that come in contact with sewage, kitchen/bath wastes, and human food sources; (6) harm to native songbirds due to proliferation of brown-headed cowbirds; etc. Given the above, your planning process for the Merced River should include and adopt alternatives that will permanently remove all four of the HSCs discussed above, restore the sites, and propose that the potential wilderness additions at those four HSCs be designated as wilderness as intended by Congress in the California Wilderness Act (see that Act, Section 9; and House Committee Report No. 98-40).

Commercial Packstock Enterprises

The use of stock animals can be legitimate, appropriate, and even necessary for certain recreational and/or administrative purposes. We want to make clear at the beginning that we do not advocate or suggest the complete elimination of recreational or administrative stock use from the Merced River basin. Our primary concern is that the NPS must acknowledge and substantially reduce the many adverse impacts that are occurring due to the currently excessive and poorly controlled activities of commercial stock enterprises.

We are aware that commercial packstock activities and impacts have increased substantially in recent years throughout Yosemite National Park. Your planning process should begin by producing a complete disclosure of the increases in stock use, facilities, and impacts that have occurred over the past few decades. Then, your plans should significantly reduce/control commercial stock use to avoid the identified impacts, and incorporate definitive limits to prevent future harmful increases in commercial stock enterprises.

Quotas and Permits for Commercial Stock Outfitters

The Yosemite backcountry, including portions of the Merced Wild & Scenic River corridor, is so popular that quotas on its use have been implemented to prevent unacceptable impacts. We support the implementation of restrictions designed to protect park, wilderness, and wild & scenic river values. However, we remain concerned that commercial outfitters are allowed easy access when the general public is turned away due to use quotas. A fundamental tenet of environmental science that must be acknowledged is that one horse (or mule) can produce at

least as much impact as several people (see references below). Your management plans for the Merced River should state clearly that: (1) Commercial stock use of Yosemite National Park is a privilege—not a right, and (2) Commercial stock use shall not be given priority over private foot travel. **Wherever rationing (i.e., a quota system) is necessary, commercial stock use shall be reduced to maximize the number of people allowed to enjoy the area.**

In addition, all commercial outfitters (and/or their clients) should have to wait in line with the rest of the public to obtain wilderness reservations and permits. Commercial packstock enterprises should never be allowed to issue their own wilderness permits to conduct commercial operations in Yosemite National Park. (This is a ridiculous notion, and one that illustrates the unfair special treatment that commercial packers receive from land managers in some areas.)

Impacts of Recreational Stock Use

Parties traveling with stock animals have much greater impact on park, wilderness, and wild & scenic river resources and values than groups traveling on foot. The disproportionate amount of impact created by stock users must be much more limited and much better controlled. Impacts to meadows, stream zones, wetlands, and lake shores. Numerous studies have documented adverse impacts to meadows caused by stock animals used for recreation (Cole 1977, Merkle 1963, Nagy and Scotter 1974, Neuman 1990 & 1991a-b, Strand 1972, Strand 1979a-c, Sumner and Leonard 1947, Weaver and Dale 1978).

Trampling and grazing by livestock are known to increase soil compaction and to contribute to streambank erosion, sedimentation, widening and shallowing of channels, elevated stream temperatures, and physical destruction of vegetation (Behnke and Raliegh 1978, Bohn and Buckhouse 1985, Kauffman and Krueger 1984, Kauffman et al. 1983, Siekert et al. 1985).

Streambanks and lake shores are particularly susceptible to trampling because of their high moisture content (Marlow and Pogacnik 1985). Unstable streambanks lead to accelerated erosion and elevated in-stream sediment loads (Duff 1979, Winegar 1977).

In sum, the impacts of recreational stock animals on meadows, streams, wetlands, and lake shores are substantial, and need to be addressed in this planning process.

Impacts due to invasive weeds.

The role of herbivores in dispersing weeds is now well established. Seeds can be spread from one location to another by attachment to the bodies of animals (epizoochory) or by being ingested and later excreted (endozoochory). (See, for example, Fenner 1985, Hammit and Cole 1987, Harmon and Kiem 1934, Heady 1954, Janzen 1982, Ridley 1930.) Many native herbivores have been shown to be effective seed dispersers. In addition, domestic stock animals such as cattle, sheep, pigs, and horses have all been shown to pass viable seeds through their intestinal tracts. (See, for example, Harmon and Kiem 1934, Harper 1977, Heady 1954, Janzen 1981 and 1982, McCully 1951, Piggin 1978, St John-Sweeting and Morris 1991, Welch 1985.) A detailed review of the scientific literature regarding the spread of weeds by domestic livestock (cattle, sheep, and horses) concluded:

> "Recent research showing that livestock significantly increase invasions by non-indigenous plants in the western U.S. is persuasive. Similar results were found in all western states and for nearly every introduced species that has been studied. Although many of these studies would have benefited from both better replication and more recent research techniques, the pattern of evidence is overwhelming." (Belsky and Gelbard 2000)

Numerous other reports document specifically that recreation livestock (i.e., horses, mules, etc.) can and do spread exotic weeds. (See Benninger 1989, Benninger-Truax et al. 1992, Campbell and Gibson 2001, Hammit and Cole 1987, Harmon and Kiem 1934, Janzen 1981 and 1982, Landsberg et al. 2001, Quinn et al. 2006, Weaver and Adams 1996.) For example, several reports show that horses can excrete viable seeds for many days or even weeks after ingestion. (See, for example, Janzen 1981, and St John-Sweeting and Morris 1991.) Hammit and Cole (1987) state that horse manure is a major source for exotic seeds in wilderness recreation areas. Campbell and Gibson (2001) found that "seeds transported via horse dung can become established on trail systems," and that weed seeds found in horse manure had become established along trails used by horses, but not along trails that weren't used by horses. Weaver and Adams (1996) documented "substantial overlap in the weed species germinated from horse manure and the weeds present along trails used by horses." After reviewing all available scientific evidence, Landsberg et al. (2001) concluded that "concerns about dispersal of weeds by horses are legitimate."

Invasive (i.e., weed) species have been specifically identified—at the national level—as one of the four greatest threats to our national forests.[1] The spread of invasive weeds has also been identified by the Regional Forester as an urgent issue that needs to be addressed in all Forest Service activities in California.[2] Current direction requires Forest Service units adjoining Yosemite to address these issues. For example, specific Standards and Guidelines applicable to neighboring Forest Service lands include:[3]

> 42. Encourage use of certified weed free hay and straw. Cooperate with other agencies and the public in developing a certification program for weed free hay and straw. Phase in the program as certified weed free hay and straw becomes available. **This standard and guideline applies to pack and saddle stock used by the public, livestock permittees, outfitter guide permittees, and local, State, and Federal agencies.**
>
> 43. Include weed prevention measures, as necessary, when amending or re-issuing permits **(including, but not limited to, livestock grazing, special uses, and pack stock operator permits).**

As outlined above, scientists have (in the past five to seven years) documented "overwhelming" evidence that domestic livestock (including horses, mules, etc.) can and do spread harmful weeds. This relatively new issue has never been adequately evaluated by the NPS at Yosemite. Therefore, your plans for the Merced River should address the issues of

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1. *See* http://www.fs.fed.us/projects/four-threats/
2. *See* http://www/fs.fed.us/r5/noxious weeds/
3. *See* http://www.fs.fed.us/r5/snfpa/final-seis/rod/appendix-a/standards-guidelines/forest-wide.html

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weeds and plant pathogens that may be spread by domestic stock animals. This would include, at minimum, a range of reasonable alternatives for mitigating the potential for spread of weeds and plant pathogens, such as: (1) prohibiting all grazing by domestic stock (to minimize the free-roaming of stock animals and dispersion of seeds across the landscape via epizoochory and endozoochory); (2) requiring stock users to feed their animals weed-free forage for at least several days before entering the park (in order for stock animals to excrete viable weed seeds before entering Yosemite); and (3) cleaning stock coats and hooves before entering the park (to minimize the potential for epizoochory).

Given the above-described impacts, your management plans for the Merced River should include the following elements to mitigate these impacts:

- No grazing by recreation livestock should be permitted. Stock users should be required to carry feed for their animals, as is required in many other national parks. Certified weed-free feed should be required to minimize the spread of weeds. This is consistent with the biocentric approach described in Hendee and others (1990).

- Lower group size limits for stock parties should be adopted to mitigate the greater impact of stock on park resources and wild & scenic river values (see below for detailed discussion of group size limits).

Trail damage by stock animals.

When compared to hikers, stock parties cause substantially greater impacts to trails (Dale and Weaver 1974, Frissell 1973, Kuss et al. 1986, Laing 1961, McQuaid-Cook 1978, Trottier and Scotter 1975, Weaver and Dale 1978, Weaver et al. 1979, Whitson 1974, Whittaker 1978, Wilson and Seney 1994).

Whitson (1974) provides a good discussion of how horse impact differs from hiker impact. Dale and Weaver (1974) observed that trails used by horses were deeper than trails used by hikers only. Trottier and Scotter (1975) documented deterioration of trails used by large horse parties. Weaver and Dale (1978) found that horses caused significantly greater trail damage than hikers Whittaker (1978) concluded that horses significantly increased the potential for severe erosion by churning soil into dust or mud. Weaver et al. (1979) found that horses caused more trail wear than both hikers and motorcycles. After reviewing the available literature, Kuss et al. (1986) concluded that: "*Pack stock and horse travel is considerably more damaging to trails than hiking.*" Recent research (Wilson and Seney 1994) has confirmed these earlier studies, concluding that "*horses produced significantly larger quantities of sediment compared to hikers, off-road bicycles, and motorcycles.*"

To mitigate these impacts of stock use, your Merced River management plan should include the following elements:

- Groups using stock should be limited to ten or fewer animals per party (as suggested by Cole 1989 & 1990).

- To allow reasonable access for stock users, and to reduce the impacts of stock use on trails, some trails should be designated and maintained to withstand stock travel. Proper

maintenance of these trails (and reconstruction where necessary) may reduce (but not offset) the impacts of stock travel.

• A network of "foot travel only" trails must be designated so that hikers can enjoy a stock-free experience. These trails should be maintained for foot travel only. Funds saved by designating a network of "foot travel only" trails could be used for intensive maintenance of the stock trails (see Cole [1990], p. 461).

Water quality impacts of stock animals.

Stock urine and manure contribute to eutrophication of streams and lakes (Stanley et al. 1979). Such impacts are a significant concern in the oligotrophic aquatic environments of Yosemite National Park. Livestock manure can also pollute water with harmful bacteria and other organisms such as Giardia and Cryptosporidium, which are pathogenic to humans and other animals. (See, for example, Derlet and Carlson 2002 and 2006).

Some stock users continue to claim that the strains of Giardia and Campylobacter spread by domestic livestock are not infective to humans. This is wishful thinking. For example, their argument that humans cannot contract Giardia from stock animals hinges on a single inconclusive study conducted on domestic cats. The cross-transmission of enteric pathogens from stock animals is certainly not fully understood. However, there is an increasing body of evidence showing that pathogenic bacteria, protozoa such as Giardia and Cryptosporidium, and other harmful pathogens can be spread from stock animals to humans (Bemrick 1968, Blaser et al. 1984, Buret et al. 1990, Capon et al. 1989, Davies and Hibler 1979, Derlet and Carlson 2002, Derlet and Carlson 2006, Faubert 1988, Isaac-Renton 1993, Kasprzak and Pawlowski 1989, Kirkpatrick and Skand 1985, Kirkpatrick 1989, LeChevallier et al. 1991, Manahan 1970, Manser and Dalziel 1985, Meyer 1988, Rosquist 1984, Saeed et al. 1993, Stranden et al. 1990, Suk 1983, Suk et al. 1986, Taylor et al. 1983, Upcroft and Upcroft 1994, Weniger et al. 1983, Xiao et al. 1993).

Specifically, Derlet and Carlson (2002) found pathogenic organisms in 15 of 81 manure samples collected from pack animals along the John Muir Trail. This documents that about twenty percent of the manure piles in the Sierra contain potentially pathogenic organisms (i.e., organisms that may cause disease in humans). Pack animal manure collected in Yosemite contained pathogenic bacteria as well as Giardia. Derlet and Carlson (2006; copy enclosed) also found pathogenic bacteria in surface waters in parts of Yosemite that are used by packstock, and concluded that ***"pack animals are most likely the source of coliform*** **[bacteria]** ***pollution."***

Your environmental document must evaluate and disclose the effects of domestic animal wastes on the environment, and your management plan(s) should include the following elements to minimize the amount of animal waste that reaches water courses:

• Campsites for stock users should be designated away from water, on level and dry sites. Stock users should be required to camp at these designated sites, and to keep their animals tied at all times when not in use. This will require stock users to carry feed for their animals, as is required in many other national parks. Managers should carefully select and designate campsites and hitching sites for such use (see Cole [1990], pp. 457–62).

- Stock users should be required to use other management tools (i.e., use of portable electric fencing when watering stock, diapers on horses, etc.) to prevent pollution of surface waters by livestock manure. (See enclosed report "Horses in Diapers Help Mexico's Beach Cleanup.") This report documents the feasibility of requiring diapers on horses to prevent the spread of diseases found in horse manure. Horse diapers are commercially available and have been accepted around the world.[4]

In addition, your environmental document must acknowledge not only the State's specific water quality standards, but also the state/federal anti-degradation requirements.[5] Significantly, the waters of Yosemite National Park are high quality waters that are eligible for designation as Outstanding National Resource Waters. The federal and State anti-degradation requirements clearly apply. Specifically, the National Park Service must comply with the California State Water Board's Resolution No. 68–16, which requires that existing high quality waters be fully protected, unless very specific formal findings are made. In this case, neither the Central Valley Regional Water Quality Control Board, the California State Water Resources Control Board, nor the U.S. Environmental Protection Agency has ever made the overriding findings necessary to allow degradation of water quality from the High Sierra Camps or the commercial stock enterprises that operate within Yosemite. Therefore, because the degradation and pollution of water resulting from both the High Sierra Camps and the commercial pack & saddle stock enterprises are *controllable*, that degradation and pollution must be fully prevented (unless the findings required by Res. 68–16 are formally made).

Impacts of brown-headed cowbirds.

The operation of livestock pack stations, stables, and corrals (i.e., stock holding areas) is contributing to the demise of songbird populations in the Sierra Nevada by creating artificial habitat for the parasitic brown-headed cowbird. Cowbirds are obligate brood parasites that can significantly impact native passerine species. One study in the northern Sierra found that up to 78 percent of warbler nests are parasitized by cowbirds, resulting in significant decreases in the reproductive success of those species (Airola 1986). Elsewhere in the Sierra, individual female cowbirds have been reported to lay an average of 30 eggs per season (Fleischer et al. 1987). These high rates of parasitism and fecundity by cowbirds indicate that significant local impacts occur wherever cowbird populations are present. Habitat modifications, pack stations, corrals, and the presence of livestock throughout the Sierra may contribute significantly to regional declines in songbird populations (Graber 1996). A detailed literature review on cowbird impacts is enclosed and incorporated by reference. The impacts of stock holding facilities must be evaluated. An environmental impact statement (EIS) should be prepared that clearly discloses the environmental consequences of, and alternatives to, the continued operation of stock holding facilities in the planning areas.

Your management plan(s) should include the following elements to address the impacts of brown-headed cowbirds:

4. *See* http://www.equisan.com.au/
5. *See* the *Water Quality Control Plan for the Central Valley Region*, the State Water Resource Control Board's Resolution No. 68-16 ("Statement of Policy with Respect to Maintaining High Quality Waters in California"), and 40 CFR § 131.12

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- Remove pack stations and stables from national park lands
- Reduce stock use to the minimum amount that is necessary

Aesthetic effects—adverse impacts on visitors' experience.
We are also concerned about the many aesthetic impacts that result from stock use, such as the presence of annoying bells, dust, manure, urine, and flies, and the proliferation of unsightly hoofprints, drift fences, and over-grazed areas (see Absher 1979, Cole 1990, Stankey 1973, Watson et al. 1993). Most of the mitigation measures suggested above would have the added benefit of offsetting these "social" impacts. For instance, designating campsites for stock users would prevent sites used by hikers from being littered with stock manure. Tying stock and supplying feed will eliminate the need for bells and drift fences, prevent overgrazing and trampling of sensitive areas by stock, and reduce the pollution of surface waters by stock animal wastes (i.e., manure and urine). Designation of a network of "foot travel only" trails will provide hikers with a stock-free experience (i.e., no manure or dusty trails churned by stock, etc.). Adoption of group size limits based on science (see below, especially Cole 1989 & 1990, Watson et al. 1993) will reduce the impacts of large stock groups on the experience of hikers.

Group size limits.
The NPS at Yosemite has in the past taken the irresponsible, unsupportable (and illegal) position that limits on group size will only be adjusted in conjunction with surrounding land units. This ignores the mandate of the Wilderness Act and the Wild and Scenic Rivers Act to preserve wilderness and wild & scenic river values regardless of how other surrounding areas might be managed (or mismanaged). The fact that officials in the central and southern Sierra agreed on a consistent number in 1991 for maximum group sizes is no excuse to ignore the mandates of the Wilderness Act, the Wild and Scenic Rivers Act, and the Park Service's Organic Act. This is especially true since the 15-year-old decision to allow 25 stock animals per group throughout the central/southern Sierra was adopted without following any NEPA process, and was implemented over the strong objections of hundreds of citizens and scores of conservation groups.

Further, the current group size limits have been shown to significantly and adversely affect park resources and values. In order to adequately protect Yosemite's environment and wild & scenic river values, the group size limits must be revised downward.

Number of persons per group (on trails).
Dr. David Cole, an internationally recognized research scientist, has written: **"Limits on party size must be quite low (certainly no larger than 10) to be worthwhile"** (Cole 1989). We therefore propose that group size (on trails) be limited to 10 persons, as suggested by Dr. Cole.

Number of persons per group (off trail).
Large groups traveling "cross-country" cause significantly greater impacts to resources and the experience of visitors (Cole 1989 & 1990, Stankey 1973). Dr. Cole (1989) has written: **". . . small parties are critical to avoid the creation of new campsites and trails in little-used places. . . . Once a party exceeds a certain number (perhaps four to six), special care must be taken in**

off-trail travel." As suggested by Dr. Cole, group size should be limited to no more than four to six persons for all off-trail travel.

Number of stock animals per group.

Dr. Cole has found that thresholds in group size that result in unacceptable impacts *"... would certainly differ between backpackers and parties with stock"* (Cole 1989). He adds that lower limits are necessary for stock parties, since they cause greater social ***and*** ecological impacts. Dr. Cole has estimated that parties traveling with stock animals often cause ten times more impact than groups traveling without stock. (See enclosed 8/6/99 letter from D. N. Cole to J. E. Bailey). Yosemite National Park must acknowledge the available research findings and conclusions, and regulate hikers and stock users according to their varying degrees of impact. The current group size regulations in effect for Yosemite's backcountry—which employ the same limits for hikers and stock users—were arbitrarily adopted for "ease of management." This scheme does not comply with either the Wilderness Act, the Wild and Scenic Rivers Act, or the Park Service's own Organic Act or wilderness management policies.

Recent research has shed light on the effects of large stock groups on the experience of wilderness users. Watson et al. (1993) documented that the average hiker in the central/ southern Sierra is unacceptably affected by encountering stock groups with more than nine animals. Even stock users themselves are negatively affected by encounters with large groups: The average stock user in the central/southern Sierra is unacceptably affected by encountering groups with over fifteen animals (Watson et al. 1993, Table 29 & Table 10). Thus it is very clear that twenty-five animals in a group will degrade the character of the Merced River corridor for the majority of visitors. The Park Service must take action to prevent impairment of these areas by lowering the group size limit for stock parties.

We propose that groups be limited to no more than nine head of stock per party in the Merced River corridor—and indeed throughout the entire park. (see Cole 1989 & 1990, Watson et al. 1993), and that all off-trail travel by stock be prohibited.

Cross-country (off-trail) travel with stock.

One very important element in Yosemite's existing Wilderness Management Plan (WMP) is the prohibition on cross-country travel by groups with stock animals or groups over 8 persons. The plan states:

> "It is Service policy to deemphasize cross-country travel by limiting such travel in Yosemite Wilderness to groups of eight people or fewer. This plan recognizes actual and potential environmental deterioration from off-trail use."

and

> "Stock must travel on designated trails or authorized stock routes and remain within one quarter mile of trails for watering, rest stops, and camping."

This important language must be retained (and strengthened as per our comments above). We recommend against any attempt to weaken this language or to open new areas to off-trail stock use.

Two harmful loopholes in the current WMP must be addressed during this planning process for the Merced River corridor. First, the exceptions in the WMP (Appendix G) for cross-country travel by stock animals must be removed. Secondly, nowhere does the plan list or define "designated" or "established" trails. (Appendix G lists "authorized" exceptions but not the "designated" or "established" trails on which large groups are permitted). Some older maps, still in use, show trails that are no longer maintained, and which are not suitable for travel with stock or by large groups. A list or map clearly defining what trails/routes are open to travel with stock and by large groups in the Merced River corridor should be included in this planning process. This will make clear, to both the public and agency personnel, which routes are open and closed to travel with stock and to large groups. We request the opportunity to review the map or list described above before it is adopted. It should be included in the draft environmental impact statement(s) (DEIS/s) for this planning process.

Summary and Conclusions

As discussed above, the above mentioned four High Sierra Camps and commercial packstock enterprises are having significant, adverse impacts on the environment in the Merced River Wild & Scenic River corridor. Your plans should fully address these impacts by eliminating the HSCs, and adopting effective limits and controls on commercial packstock enterprises.

Thank you for considering the above comments, and incorporating these issues into your plans for the Merced River. Please contact me at the letterhead address if you have any questions about this letter. Please also send full paper copies of all environmental and decision documents for our review.

Sincerely yours,

Peter Browning

Peter Browning
High Sierra Hikers Association

Enclosures (4): (1) "Coliform Bacteria in Sierra Nevada Wilderness Lakes and Streams: What Is the Impact of Backpackers, Pack Animals, and Cattle?" by Derlet and Carlson (2006) (6 pages); (2) "The Brown-headed Cowbird in the Sierra Nevada: Impacts on Native Songbirds and Possible Mitigation Measures," by B.C. Spence (5 pages); (3) "Horses in Diapers Help Mexico's Beach Cleanup," by Reuters, August 2003 (3 pages); and (4) letter dated August 6, 1999, from Dr. David N. Cole, Research Biologist, Aldo Leopold Wilderness Research Institute, to Jeffrey E. Bailey, Forest Supervisor, Inyo National Forest (2 pages).

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