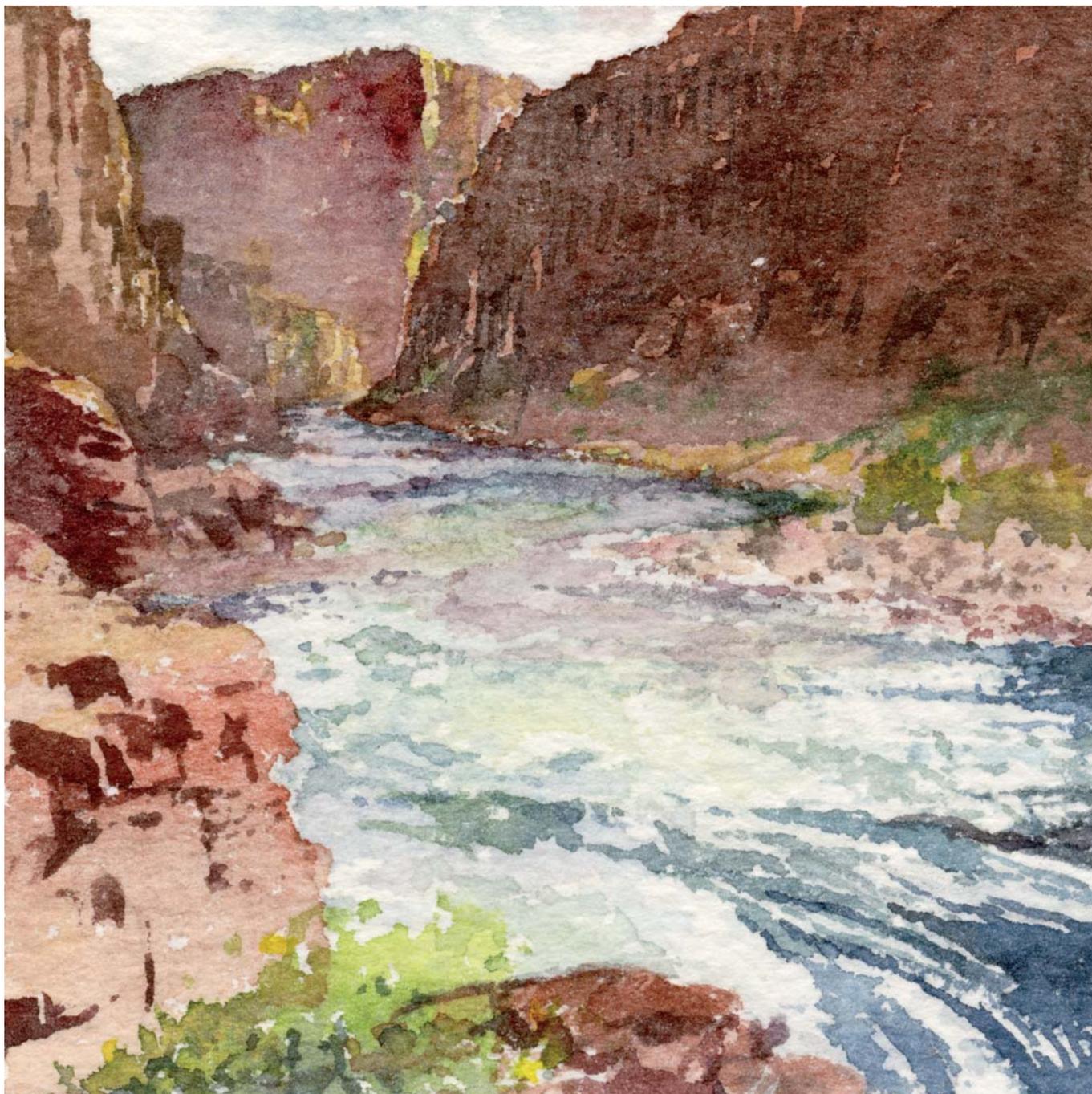




# **Final Environmental Impact Statement Colorado River Management Plan Volume Three**



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National Park Service  
U. S. Department of the Interior

Grand Canyon National Park  
Arizona



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**November 2005**  
***Comment and Response Document***  
***Colorado River Management Plan***  
***Grand Canyon National Park***

***Volume III***



**UNITED STATES DEPARTMENT OF THE INTERIOR  
NPS**

**COMMENT AND RESPONSE DOCUMENT  
COLORADO RIVER MANAGEMENT PLAN  
GRAND CANYON NATIONAL PARK  
Coconino County, Arizona**

**Volume III**



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## Background

On October 8, 2004, the NPS released the *Draft Environmental Impact Statement for the Colorado River Management Plan (DEIS)* for public review and comment. The *DEIS* was designed to provide a comprehensive look at the impacts to natural and cultural resources from current visitor uses on the Colorado River, and to evaluate various alternatives that can help the National Park Service (NPS) achieve its mission to preserve park resources while enhancing recreational opportunities in the river corridor. The release of the *DEIS* initiated a formal 90-day public comment period that was subsequently extended another 30 days, ending February 1, 2005.

Public meetings to provide an overview of the *DEIS* and accept public comment were held throughout the country and were attended by approximately 1,000 people. Press releases, website updates and public meetings were used to request public input and to disseminate information about draft alternatives and their impacts. During the public comment period, the NPS received 9,777 submissions at public meetings, by fax, by email, and by regular mail from the public, agencies, tribes, organizations, and businesses. Substantive comments are either addressed as revisions to this *Final Environmental Impact Statement Colorado River Management Plan (FEIS)* text or as responses to comments addressed in this document.

Respondents invested considerable time and effort to submit comments on the *DEIS*. Comments covered a wide spectrum of thoughts, opinions, ideas, and concerns. The most commonly addressed themes included Visitor Use and Experience, Wilderness, Concessions, Permits, Allocation, and Registration. While each person's viewpoint was diligently considered, comments were determined to be substantive or nonsubstantive in nature. NEPA regulations require that responses be provided to substantive comments. Comments are substantive if they:

- Challenge accuracy of analysis
- Dispute information accuracy
- Suggest different viable alternatives
- Provide new information that makes a change in the proposal

In other words, they “raise, debate, or question a point of fact or policy. Comments in favor of or against the proposed action or alternatives, or comments that only agree or disagree with NPS policy, are not considered substantive” (NPS Director's Order 12). From the nearly 10,000 submissions received on the *DEIS*, 5,793 individual substantive comments were extracted. Per NEPA guidance, these comments were summarized and are presented, along with a response, per issue or impact topic in this volume.

Nonsubstantive comments are comments that offer opinions or provide information not directly related to issues or impact analyses. Nonsubstantive comments have been considered by the planning team, but do not require a formal response. Nearly 30,000 nonsubstantive comments were identified that generally supported or opposed certain aspects of the plan. Nonsubstantive comments were placed into 109 categories. Three categories generated nearly 2,600 comments each: Res Gen (commenters stating a preference for protecting the canyon's resources); VUE (commenters mentioning an opinion about visitor use and experience); and M2 (commenters voicing a dislike for motors). A list of nonsubstantive comments follows the miscellaneous substantive comments.

## Methodology For Collecting Comments

A process referred to as “content analysis” was used to compile and correlate similar public comments into a format useable by NPS decision makers. The NPS interdisciplinary planning team and NPS contractors read all comments and determined which comments were substantive and nonsubstantive. Pursuant to the *National Environmental Policy Act* (NEPA), responses were prepared for all substantive comments, and the content of this *FEIS* also demonstrates responsiveness to public input. Content analysis was performed in the four steps described below.

*Develop a coding structure*—Initially, a coding structure was developed to help sort comments into logical groups by topics and issues, derived from an analysis of the range of topics covered in the *DEIS*, NPS legal guidance, the scoping process, and the letters themselves. The coding structure used was inclusive rather than restrictive; an attempt was made to capture all comment content. The codes were assigned to comments within letters, faxes, oral transcripts, meeting comment forms, and electronic mail.

*Read and code public comment submissions*—As each submission was read, distinct comments were identified and given a code based on, among other things, the topics addressed and whether the comment was substantive or nonsubstantive (according to criteria set forth in the Council on Environmental Quality regulations). Submissions could, and often did, contain several comments.

*Create a comment database*—For each comment in a correspondence, codes assigned by one staff person were validated by another, then entered into a database, along with the submission code and type, the name and address (if available), and the text of the comment, if substantive.

*Prepare a narrative summary*—The database was used to help construct a narrative summary. Opinions, feelings, and preferences of one element or one alternative over another, and comments of personal and philosophical nature were all read and analyzed. All comments were considered, whether thousands of people voiced the same concern or a single person or organization raised a technical point.

The purpose of reading, coding, and analyzing the contents of the comment letters was to assist the team in determining if the substantive issues raised by the public warranted further modification of the alternatives or further analysis of issues and impacts. With the information provided through the public review process, the agency reconsidered the draft preferred alternatives (Alternatives H and 4) and developed a “Modified Preferred Alternative H” and “Modified Preferred Alternative 4” as described in the Chapter 2 of Volume I of this *FEIS*.

Although the content analysis process attempted to capture the full range of public concerns, it is acknowledged that comments from people who chose to respond do not necessarily represent the sentiments of the entire public. Further, this is not a vote-counting process; emphasis in this process was on the content of the comment rather than the number of times a comment was received.

Comments and responses are categorized by topics and issues. A topic is a category of subject matter. These categories were developed through the scoping process and were selected in order to track major subjects through the *Draft and Final EIS*.

After all public comments were entered into the database by issue, substantive issue reports were generated per topic and issue. The team analyzed the comments and then grouped comments with similar subject matter to prepare issue statements that represented all comments in each subject matter group. Some of the more detailed comments that were received appear verbatim in this document, while others were summarized, reflecting the content of several similar comments. The issue statements were then sent to professionals in the respective fields (i.e., Air Quality, Water Quality, Wildlife and Habitat) for analysis and response. The comment summaries and responses were reviewed by the interdisciplinary planning team for accuracy and completeness.

All comments received can be tracked to the original submission. Instructions will be posted on the CRMP website or may be obtained by requesting a compact disk from the Park.

### **Organization Of Comments And Responses**

Volume III is divided into three sections as follows:

**Copies of Letters from Agencies and Tribes:** In accordance with NPS policy (NPS Director's Order 12, section 4.6), only letters received from federal, state, local agencies and from American Indian tribes are reprinted in full in this section. Due to the volume of comments received, all other correspondence received during the public comment period on the Draft EIS are summarized, rather than reprinted. The letters received and reprinted are from (in order of presentation in the document):

- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- Hualapai Tribe (3 letters)
- Navajo Nation (3 letters)
- White Mountain Apache Tribe
- Arizona Game and Fish Department

**Substantive Comments and Responses:** Substantive comments are summarized in this section, including comments received from agencies, tribes, organizations, concessioners, businesses, and individuals. A response to each substantive comment is presented. The comments are grouped and numbered within categories (see Volume III Table of Contents for categories). Each comment is coded to allow tracking of the comments and responses in a database with each respondent and each piece of correspondence received. Some comments are not ordered sequentially, or have missing numbers. This is a product of either providing the reader with comments grouped by topic or of comments that have been combined because they are similar.

**Summary of Non-Substantive Comments:** All non-substantive comments received are summarized and categorized in this section.



# **CHAPTER 1: AGENCY AND TRIBAL LETTERS**

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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**REGION IX**  
**75 Hawthorne Street**  
**San Francisco, CA 94105-3901**

**received**  
**2-8-05**

MAR 9 REC'D

February 1, 2005

Joseph Alston, Superintendent  
 National Park Service  
 Grand Canyon National Park  
 P.O. Box 129  
 Grand Canyon, AZ 86023-0129

Subject: Colorado River Management Plan Draft Environmental Impact Statement (EIS)  
 [CEQ# 040465]

Dear Mr. Alston:

The U.S. Environmental Protection Agency (EPA) has reviewed the document referenced above. Our review and comments are provided pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA Implementation Regulations at 40 CFR 1500-1508, and Section 309 of the Clean Air Act.

The Draft EIS analyzes alternatives for managing the Colorado River corridor through Grand Canyon National Park. Eight Lees Ferry alternatives, including no action, are evaluated for the river segment between Lees Ferry and Diamond Creek. Five Lower Gorge alternatives, including no action, are evaluated for the river segment between Diamond Creek and Lake Mead. The Lees Ferry alternative preferred by the National Park Service (NPS) is Alternative H. The Lower Gorge alternative preferred by NPS is Alternative 4. The Lower Gorge alternative preferred by the Hualapai Tribe is Alternative 5.

We have rated this Draft EIS as EC-2 – Environmental Concerns-Insufficient Information (see enclosed "Summary of Rating Definitions"). Our concerns are based on the project's potential impacts to water quality, particularly in the lower gorge, and insufficient information regarding appropriate mitigation to minimize and avoid those impacts. We recommend that the Final EIS include additional information regarding foreseeable future actions and impacts in the lower gorge, and appropriate measures to mitigate those impacts. We also urge the National Park Service, Hualapai Tribe, State, and other partners to obtain baseline and periodic water quality monitoring information in the lower gorge so that activities affecting water quality can be adaptively managed over the life of this management plan. We will be happy to work with you and the Hualapai Tribe to address issues related to this project before the Final EIS is published.

MAR 9 REC'D

We appreciate the opportunity to review this Draft EIS and request a copy of the Final EIS when it is filed with our Washington, D.C. office. If you have any questions, please call me at (415) 972-3854, or have your staff call Jeanne Geselbracht at (415) 972-3853.

Sincerely,  
  
 Lisa B. Hanf, Manager  
 Federal Activities Office

003985

cc: Charlie Vaughn, Chairman, Hualapai Tribe  
 Karen Smith, Arizona Department of Environmental Quality  
 Wayne Nordwall, Bureau of Indian Affairs

U.S. Environmental Protection Agency Rating System for  
Draft Environmental Impact Statements  
Definitions and Follow-Up Action\*

MAR 9 REC'D

Environmental Impact of the Action

**LO – Lack of Objections**

The U.S. Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

**EC – Environmental Concerns**

EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

**EO – Environmental Objections**

EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

**EU – Environmentally Unsatisfactory**

EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

**Category 1 – Adequate**

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

**Category 2 – Insufficient Information**

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

**Category 3 – Inadequate**

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

\* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.

MAR 9 REC'D

Colorado River Management Plan Draft Environmental Impact Statement  
EPA Comments – February, 2005

1. According to the Draft EIS (pp. 292 - 295), under Alternatives 4 and 5, boat/motor repair and fuel transport and storage practices represent significant environmental risks to water quality in the lower gorge, but these impacts could be reduced to a minor intensity with reasonable mitigation. However, the Draft EIS does not identify the mitigation measures that would be implemented to reduce these risks. In addition, EPA is concerned that, under Alternative 5, a significant increase in daily helicopter and pontoon boat trips could increase the potential water quality impacts in the Quartermaster Canyon area. For example, approximately 600 to 800 helicopter flights per week already land and take off at 15 helipads in a mile-long stretch in the Quartermaster area (Draft EIS, p. 216). Under Alternative 5, helicopter flights, with up to 960 passengers per day, could increase to greater than 1,700 trips per week. Without appropriate mitigation measures, potential impacts could result from fuel storage and fueling facilities, toilet and washing facilities, and picnic areas. However, the Draft EIS does not provide sufficient information to determine the specific potential direct, indirect, and cumulative impacts of Alternative 5, or how they would be mitigated.

It is also appears that Alternative 5 activities and additional developments may be foreseeable even if the National Park Service selects its preferred alternative, Alternative 4. Pursuant to 40 CFR 1502.14, EISs should rigorously explore and objectively evaluate all reasonable alternatives, including reasonable alternatives not within the jurisdiction of the lead agency, and include appropriate mitigation measures not already included in the proposed action or alternatives. Therefore, although some elements of Alternative 5 may be outside of NPS's jurisdiction (e.g., within the jurisdiction of the Hualapai Tribe), the impacts of the entire alternative should be analyzed in the EIS. In addition, EISs must consider cumulative impacts from foreseeable future projects, pursuant to 40 CFR 1508.25, regardless of the source or jurisdiction causing the impact.

**Recommendation:** The Final EIS should identify the mitigation measures that would reduce the potential impacts of fuel or other spills under Alternatives 4 and 5. The Hualapai Tribe should ensure that all fuel, sanitation, picnic, and ancillary facilities constructed or operated on tribal lands ensure protection of water quality in the affected watershed. The Tribe, as a cooperating agency, should work with the National Park Service to provide information in the Final EIS regarding the potential impacts of Alternative 5 and further potential future developments, and measures to mitigate those impacts. The Final EIS should describe the facilities and operations in the Quartermaster Canyon area that would be added to accommodate the significant increase in daily visitors. If the National Park Service is unable to obtain this information in appropriate detail for the purpose of disclosure in the Final EIS, we recommend providing reasonable estimates. Information should include the following:

- Describe the toilet and washing facilities that would be added.
- Describe how wastewater, sewage, and solid waste would be transferred and disposed in a manner that protects water quality.
- Describe foreseeable future increases in daily visitors and associated increases in helicopter and pontoon boat rides; and the potential impacts of and appropriate mitigation measures for such increases.
- Describe and locate the existing fuel storage and fueling facilities and all changes to the facilities and operations that would be needed (e.g., containment design, spill prevention and control plan) to accommodate the significant increases in both pontoon boat rides and helicopter rides.
- Discuss how the Hualapai Tribe will ensure protection of water quality (e.g., through contracts, enforcement authority, etc.).
- Describe how implementation of mitigation measures will be assured (e.g., through a commitment agreement, contract/permit provisions, implementation and effectiveness monitoring); how binding the mitigation commitments are; and who will be responsible for mitigation measures.

2. The Draft EIS provides some water quality information for the Colorado River and its tributaries from Lees Ferry to Diamond Creek, excluding Diamond Creek. However, the Draft EIS (p. 119) indicates that limited water quality data are available for the lower gorge. Sampling of existing water quality in the lower gorge would be useful to establish a water quality baseline, in light of reasonably foreseeable management changes in this river segment. Periodic monitoring over the life of this management plan would provide water quality data for adaptively managing the lower gorge to ensure protection of water quality.

**Recommendation:** We recommend that the National Park Service establish the existing water quality baseline for the lower gorge, and continue monitoring future water quality trends. The National Park Service, Hualapai Tribe, State, and/or other partners should assemble all existing water quality data from the lower gorge Colorado River and its tributaries, including Diamond Creek. If water quality data are available from the mainstem near Diamond Creek, they may be useful for this purpose. Water quality in the Quartermaster Canyon area is especially important. If data are not available, we recommend you conduct baseline monitoring for basic water quality parameters, including pathogen indicators, nutrients, and hydrocarbons. Periodic monitoring should then be conducted over the life of the plan. The Final EIS should discuss how baseline and periodic monitoring would be accomplished and how the information would be used to adaptively manage the river, particularly in the Quartermaster Canyon area.



United States Department of the Interior

U.S. Fish and Wildlife Service  
2321 West Royal Palm Road, Suite 103  
Phoenix, Arizona 85021-4951  
Telephone: (602) 242-0210 FAX: (602) 242-2513



FEB 03 REC'D

received  
2-2-05

FEB 03 REC'D

2

In Reply Refer to:

AESO/SE  
02-21-89-I-0106-R1

January 31, 2005

Memorandum

To: Superintendent, Grand Canyon National Park, Grand Canyon, Arizona

From: Field Supervisor

Subject: Draft Environmental Impact Statement for the Colorado River Management Plan

Thank you for your letter requesting comments on the Draft Environmental Impact Statement (DEIS) for the Colorado River Management Plan (CRMP) for Grand Canyon National Park (GRCA). We have reviewed the DEIS and offer the following comments.

In general, the DEIS is well-written and largely achieves the purpose of disclosing effects to various resources, including species listed under the Endangered Species Act (Act). It is a good beginning toward assessing the effects of the proposed action on listed and other special-status species. We understand that a biological assessment/evaluation (BA) will be developed to complete that assessment. We hope the following comments will aid you in that effort. We are also prepared to assist you in developing the assessment and additional measures to reduce or eliminate effects to listed species.

The various alternatives are described in extensive detail in the DEIS. Rather than attempt to track every detail of the alternatives, we focused our attention on those portions of the proposed action that could affect listed and special-status species. For the most part, those situations and the likely effects will be similar for all of the alternatives.

Page 31. We support several of the changes to the operating requirements that are being considered for addition to the plan. We believe that the proposed Generator Use and Commercial Operator Responsibility for Passengers operating requirements will help reduce effects to several listed and special-status species. We recommend they be incorporated into the plan.

Page 31. The DEIS states that restricting Tapeats and Kanab creeks to day-use only will be an element common to all alternatives. We support limiting Tapeats and Kanab creeks to day-use. Kanab Creek has been identified by the National Park Service (NPS) as a potential site for reestablishment of humpback chub. We recommend that NPS monitor recreational use of this tributary to determine if this closure improves water quality and fisheries habitat, and implement other measures or further restrictions as necessary. We

agree that Grand Canyon tributaries are vital to native fish, and recommend NPS continue to make protection of these areas a high priority. We also recommend that NPS monitor the effects of the closures on variables such as water quality to justify their use.

Page 31. The DEIS states that a partial closure of the Little Colorado River will be a common element of all alternatives. We agree that recreation potentially has adverse effects to humpback chub (*Gila cypha*), and that the Little Colorado River is the most important tributary in the Grand Canyon for this species. However, we recommend including information on the justification for the closure. On page 483, the DEIS cites Gorman and Stone (1999) for reporting a reduction in catch rate of humpback chub near the confluence, and states that recreation is a suspected cause; however, there is no information in the citation to support this statement, and NPS provides no further discussion of how recreation is causing the decline. We also point out that the Grand Canyon humpback chub population has declined significantly over the last 15 years, thus the reduced catch rates near the confluence may be due to this overall decline as opposed to effects from recreation. Nevertheless, we agree that closures or reductions in user-days may be necessary for the Little Colorado River to minimize adverse effects to humpback chub at the current time. We would like to work closely with you to develop these as necessary. We note that nearshore habitats are important to humpback chub from spring through autumn; if a closure is necessary, a closure from March 1 to November 30 may be more effective at reducing effects. We also recommend that NPS fund and implement a study to examine the effects of recreation on native fish in Grand Canyon, including humpback chub. Where data on the effects of recreation are limited, we suggest NPS test closures to better determine their effectiveness. For example, one method could be to turn closures on and off in alternating two-year blocks and monitor changes in variables such as population size and water quality.

Page 32. The DEIS states that a monitoring and implementation plan will be developed subject to the availability of necessary funding. We recommend that NPS fund and implement a comprehensive monitoring program as part of the CRMP and use it to adaptively manage recreational use. NPS is proposing a significant increase in recreational use (a 27.5 percent increase in user-days based on numbers from page 283), but is not actively assessing the effects of current use, and has no plan in place to assess the increased effects of future use. NPS has collected little data on the effects of recreational use because a monitoring program has not been put into place. We believe that some recreational activities can adversely affect the Kanab ambersnail (*Oxyloma haydeni kanabensis*), humpback chub, and southwestern willow flycatcher (*Empidonax traillii extimus*), and we recommend NPS develop a comprehensive program to study the effects of recreation on the ecology of the Grand Canyon, with emphasis on imperiled species such as humpback chub, Kanab ambersnail, and southwestern willow flycatcher. In addition to our previous comments recommending a study for native fishes, we recommend that the program:

- Include tributaries in monitoring, as they are vital to the ecology of the Grand Canyon, to native fishes (page 482), are home to several endemic species, and are subjected to extensive impacts from river-runner recreation.

- Monitor water quality (comment also pertains to pages 263 and 284): how does recreation alter water chemistry (e.g. temperature, turbidity, dissolved oxygen) and contaminants in the Colorado River and tributaries (contaminants include those from personal care products, human waste, outboard motor fuel and oil, etc.). Include an investigation of the sources of contaminants in known problem areas, such as Tapeats Creek (see page 118).
- Monitor disturbance: how does trailing, swimming, wading, hiking, boating, etc. affect the biota. Pages 482-484 have a discussion of many of these effects; NPS should investigate each of these in more detail.
- Closures: test various closures and study how they alter effects to better justify their use (see also our previous comments specific to humpback chub).
- Consider reductions in total use rather than specific closures: if recreation is causing significant adverse effects, a reduction in total recreational use, as opposed to increasing user-days, may be necessary to preserve the long-term ecological health of Grand Canyon. While we agree that reducing use per day should be beneficial, we question if these benefits will be outweighed by the overall significant increase in recreational use.
- Use adaptive management to reduce conflicts in specific areas and to identify new research initiatives.
- Coordinate closely with other programs, such as the Glen Canyon Adaptive Management Program, the Little Colorado River Watershed Project (LCR MOM), and Arizona Game and Fish Department programs such as the conservation strategies for bluehead and flannelmouth sucker (*Catostomus discobolus*, *Catostomus latipinnis*).
- Develop and implement goals for managing listed species as part of the CRMP that are based on existing recovery plans (a number of goals, recommendations, and actions that are applicable to the CRMP are included in recovery plans for the southwestern willow flycatcher and humpback chub).

Page 82. According to Table 2-8, only Alternative 2 meets Vegetation, Terrestrial Wildlife, Aquatic Resources, and Threatened or Endangered Species Resource Management Objectives for the Lower Gorge. Alternative 4 (the preferred alternative) does not meet the plan objectives for Terrestrial Wildlife and Threatened or Endangered Species. We recommend that the preferred and selected alternative meet the plan objectives for those resources.

Page 82. All listed species and their habitat within the zone of influence (2 miles on either side of river) of the proposed action should be considered and addressed in a biological assessment. Recreational use of launch sites, takeouts, beaches, side canyons,

caves, springs, hiking trails, and any other attractions that overlap listed species habitat in the zone of influence should be examined for possible effects.

Page 137 (and Table 3-10 on page 148). Reference is made to a "3c" species. It is not clear if that reference is to the old list of 3c species that was once maintained by the USFWS. The USFWS list of Category 1, 2, and 3 species no longer exists.

Page 145. The DEIS includes speculation that river runners may inadvertently be spreading the exotic New Zealand mudsnail (*Potamopyrgus antipodarum*). We are concerned about the relationship between recreation and the spread of that and other exotic species. Spread and establishment of exotic species is an ever-increasing threat to native species, including listed and special-status species that are often particularly vulnerable. We recommend you consider this problem in relation to the proposed action and develop means to address it. For example, NPS could develop a distribution and monitoring study for the mudsnail, combined with a public information campaign similar to NPS efforts at Yellowstone National Park (<http://www.nps.gov/yell/planvisit/todo/fishing/mudsnail.htm>).

Page 148. It is not clear where the Species of Concern category for Federal Status in Table 3-10 is derived from. However, Region 2 of the USFWS does not maintain a list of Species of Concern. In addition, the USFWS list of 3b species no longer exists (see our comment for page 137).

Page 152. The DEIS states that brown pelicans (*Pelecanus occidentalis californicus*) are infrequent winter migrants. However, we are aware that recently a number of pelicans occurred in the river corridor, and that there were some incidents of interaction between the birds and recreationists. Although these situations may be rare, we recommend that a contingency plan be developed to address such situations in the future. For example, such a plan could include informing recreationists of the seasonal possibility of such incidents and the proper course of action. A plan could also include a course of action that would be followed by GRCA staff when such incidents occur. We would like to work with you to develop appropriate protocols, which could also address other listed species.

Page 157 and 468. The DEIS states that sign of the Mojave population of the desert tortoise (*Gopherus agassizii*) was recently discovered near the river corridor. We also understand that the sign was discovered in an area that is used extensively by recreationists. We recommend that consideration of the effects of the proposed action on this species be included in a BA.

Pages 216 and 340. The DEIS states that "neither the helicopter operations nor the boat operations are licensed or regulated by the NPS" and "the NPS has no authority over helicopter flights that land and take off on Hualapai tribal lands." However, the DEIS also states that use of helicopters at Whitmore and Quartermaster will be considered as part of the impacts of the alternatives. We agree that the effects that may result from the use of helicopters in these areas should be included in the effects analysis. If such use is

not actually part of the proposed action or any Federal action, then any effects would be considered cumulative effects under the Act. However, if the use of the helicopters would not occur “but for” the proposed action, then any effects that would result would be directly related to the action and would be considered to be interrelated and interdependent effects.

Page 415 and 416. We support the mitigation measures for vegetation and recommend that they be incorporated into the plan.

Page 447. The DEIS states that side-canyon hikes probably result in the greatest impacts in terms of vegetation trampling and disturbance to sensitive biological resources. Most such side-canyon activity is probably associated with certain regularly visited canyons and/or attractions. Some of those canyons or attractions may contain listed or special-status species or their habitat. We recommend that each of those particular canyons/attractions be identified, the effects to specific listed species effects be identified, and measures to address those effects be explored. We would like to work with you to develop appropriate measures that can be incorporated into the proposed action.

Page 449. The DEIS states that campsites, stops at attractions, and social trails have resulted in impacts to bird habitat. The DEIS also states that the Yuma clapper rail (*Rallus longirostris yumanensis*) and the yellow-billed cuckoo (*Coccyzus americanus*) are known to occur in the Lower Gorge. We recommend that the known occurrences for those two species, as well as any other habitat, be analyzed to determine if the habitat for those two species has been, or is likely to be, affected by recreational activities.

Pages 469 and 530. The DEIS states that the present level of recreational use in the Lower Gorge would present substantial impacts to amphibians. We are particularly concerned about effects to the relict leopard frog (*Rana onca*). The DEIS states that recreation-related impacts could cause the species to become extirpated in at least one location in the action area. We believe the plan should include measures to protect the population(s) of this species in the action area. We recommend that GRCA work with us and the Relict Leopard Frog Conservation Team to develop such measures for inclusion in the plan. The draft *Conservation Agreement and Rangeland Conservation Assessment and Strategy for the Relict Leopard Frog* provides a number of recommendations relevant to that effort.

Page 473 and 474. We support the mitigation measures for terrestrial wildlife and recommend that they be incorporated into the plan.

Page 483 (also page 518). The DEIS states that recreational angling may result in catch of endangered humpback chub and other native fish. While we agree that this is true, recreational angling could also benefit the species by reducing nonnative fishes that are predators and competitors to humpback chub. We recommend that NPS work with us and the Arizona Game and Fish Department to explore recreational angling as a method

of removal of nonnative fishes from Grand Canyon, and develop an appropriate education program to minimize effects to humpback chub.

Page 487. We support the mitigation measures for aquatic resources and recommend that they be incorporated into the plan.

Page 489. We agree that aquatic resources in tributaries and springs are sensitive and prone to impacts of recreation. The DEIS states that at least 62 of 261 recreational sites have an aquatic feature. We recommend that, at least for those sites that contain listed or special-status species or their habitat, each of those sites be evaluated for current and expected effects to the species. A site-specific plan should then be developed to reduce or eliminate the adverse effects.

Page 514. For the most part, we support the mitigation measures for threatened, endangered, and sensitive species and recommend that they be incorporated into the plan. Please see the additional comment for page 514 below.

Page 514. The DEIS lists several potential mitigation measures for listed species, including closure of Vasey’s Paradise and Elves Chasm. While we agree that closures of Vasey’s Paradise and Elves Chasm to recreation may be beneficial to Kanab ambersnail, and that adverse effects to the Kanab ambersnail likely occur at these locations, we question whether closures (beyond the closure to camping) are necessary at this time. Access to most of the ambersnail’s habitat at Vasey’s Paradise is limited by slope and dense stands of poison ivy (*Toxicodendron radicans*). Although ambersnails are more easily accessible in Elves Chasm, they tend to occur in areas that are generally avoided by hikers. Also, the Elves Chasm population appears to be increasing; thus recreation does not appear to have an overall impact to the population, although adverse effects likely do occur at a small scale. With regard to Kanab ambersnail, we recommend that:

- NPS develop and implement a public information program to educate recreations and commercial guides about protecting the Kanab ambersnails in Vasey’s Paradise and Elves Chasm.
- Recently, Vasey’s Paradise has become quite dry, and one of the downspouts has ceased to flow. One possible explanation for this is that recreational cavers may have somehow damaged the outflow. We recommend that NPS investigate the mechanisms causing the outflow to stop flowing.

Pages 514, 519, and 532. The DEIS lists closure of southwestern willow flycatcher nesting habitats to recreation as a potential mitigation measure for both the Lee’s Ferry and Lower Gorge management areas. We agree that closures may be necessary, and that adverse effects to willow flycatchers may be occurring due to recreation-related disturbance. We recommend NPS fund monitoring for flycatchers, consider closing areas that contain occupied nest sites, and incorporate information about flycatchers and areas of Grand Canyon known to be important to flycatchers into a public information and education program. We also recommend that NPS work with us to implement the

Southwestern Willow Flycatcher Recovery Plan and develop goals for implementing the recovery plan within the CRMP. In addition to land-based activities, the use of helicopters and motorized boats may also contribute to disturbance of flycatchers. We recommend that those activities also be examined in relation to their overlap with known flycatcher occurrences and existing habitat.

Pages 518 and 519. The DEIS indicates bald eagles (*Haliaeetus leucocephalus*) wintering in the river corridor could be adversely affected by recreational activity. We recommend developing protective measures for areas that can be identified as roosts consistently used by bald eagles. For example, for those roosts that are consistently used, seasonal buffer zones could be implemented around the roosts to keep foot traffic a certain distance away from the roost(s). The DEIS indicates that motors on boats are not used at all times when on the river. Thus, as long as safety permits, seasonal restriction of use of motors when motorized boats pass within a certain distance of known consistently used roosts may be another example of an appropriate protective measure.

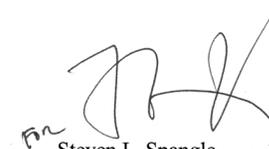
Page 519. The DEIS states that California condors (*Gymnogyps californianus*) could be affected by interactions with recreationists in the river corridor. We recommend that a plan be developed to address such situations in the future. For example, such a plan could include informing recreationists of the seasonal possibility of such incidents and the proper course of action. A plan could also include a course of action that would be followed by GRCA staff when such incidents occur. The plan could also include reminders to recreationists regarding the effects of trash on condors and the importance of removing all trash from the river corridor. We are also concerned about the possibility of condor-helicopter interactions in the Whitmore and Quartermaster areas. If condors spend time in either of these areas, then the potential for such interactions, including the possibility of collisions, needs to be addressed. If the helicopter use in either of those areas is not under the authority of NPS, but is part of or directly related to the project, any anticipated effects should at least be considered as cumulative or interrelated and interdependent effects (please see our comment for pages 216 and 340).

Page 519. The Mexican spotted owl (*Strix occidentalis lucida*) is most likely to be affected by recreational activity in owl territories during the breeding season and by disturbance from helicopter use that will occur under the proposed action. The DEIS provides some information regarding the occurrence of owls within the zone of influence of the proposed action. However, it is not clear where the occurrences are in relation to recreational use of side canyons. We believe that the species can potentially be affected by recreation in side canyons where owls occur or may occur. We recommend that all known occurrences of the species, as well as unsurveyed habitat, that could be affected by ground-based recreational activity be closely examined and the effects addressed. Similarly, if the zone of influence of helicopter use associated with the proposed action overlaps owl occurrences and habitat, the possible effects of that activity should be fully analyzed (please see the comment above for page 519).

Page 532. We support the mitigation measures for threatened, endangered, and sensitive species and recommend that they be incorporated into the plan.

As indicated above, we support many of the mitigation measures that are included in the DEIS. However, we also believe that development of additional measures may be possible and appropriate in conjunction with the analyses recommended above. We are prepared to assist you with the development of such measures and with additional opportunities to benefit listed species and their habitats.

Thank you for the opportunity to comment on the DEIS. If we can be of further assistance, please contact Bill Austin (928) 226-0614 (x102) or Brenda Smith (x101) of our Flagstaff Suboffice.



Steven L. Spangle

cc: Field Supervisor, Fish and Wildlife Service, Albuquerque, NM  
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RE: Comments Of The Hualapai Indian Tribe On The  
Draft Environmental Impact Statement For The  
Proposed Colorado River Management Plan

Ladies and Gentlemen:

This law firm represents the Hualapai Indian Tribe. In this capacity, we submit the following comments, concerns, and requests for revision.

1. Introduction

The draft Environmental Impact Statement ("EIS") prepared by the National Park Service ("NPS") proposes to devastate the economy and culture of the Native Americans who have lived in the Grand Canyon since time immemorial, and who live and work today along the Colorado River on the Hualapai Indian Reservation. This draft EIS violates every aspect of the federal policy of self-determination for Indian people, and proposes to take the opportunity for self-sufficiency away from the Native Americans who have deep commitments and connections to the Grand Canyon that pre-date the NPS by at least a thousand years.

As a non-gaming tribe, the Hualapai Tribe relies almost exclusively on its tourist operations on and near the Colorado River for revenues to fund necessary governmental and social services, including cultural resource protection programs, and the health care, welfare

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programs, and education for tribal members. These tourist operations are conducted in a reasonable and responsible manner, under tribal law and tribal regulations, by Native People who have strong traditional obligations to protect and preserve the Grand Canyon and the Colorado River for generations yet to come.

Never in history has the NPS threatened such a complete reversal of federal policy, and this type of total disregard for tribal sovereignty and tribal water rights that are established and protected by federal law. Appropriately, prior plans prepared by the NPS for management of this area did not include such attacks on tribal sovereignty and tribal rights. Rather, the Tribe was not included in such plans and instead worked in a cooperative manner with the NPS to manage areas of mutual interest and concern on a government-to-government basis.

Importantly, the draft EIS has seriously misstated the Tribe's positions with regard to many issues, and has misrepresented repeatedly the Tribe's preferred alternatives. For the reasons stated below, the Hualapai Tribe requests that the draft EIS be revised to remove provisions related to the Tribe and its activities from the proposed Colorado River Management Plan. These matters are best dealt with between the Tribe and NPS on a government-to-government basis, in accordance with well-established federal law and policy. In addition, NPS must assess accurately the non-Indian adverse impacts on tribal property, activities, and water rights.

2. Background

The NPS proposes to adopt and implement a revised Colorado River Management Plan ("CRMP") which will supersede the plan, currently in effect, that was approved by the Regional Director on September 14, 1989. To this end, NPS has determined that the proposed new plan, being a major Federal action significantly affecting the quality of the human environment, triggers impact statement requirements and other provisions of the National Environmental Policy Act ("NEPA"), 42 U.S.C. §§ 4321 - 4370F, and the regulations of the Council on Environmental Quality at 40 C.F.R. Chapter V.

An agency that is planning a major Federal action must carry out its NEPA responsibilities by studying and

reporting on all elements of the proposed action that impact upon the human environment and identify and assess reasonable alternatives to them. 40 C.F.R. § 1500.2 At the same time it must pay due regard to its jurisdictional limitations. 40 C.F.R. § 1508.15. In this case NPS, in formulating the EIS, may properly consider only activities occurring on Federal lands within the Grand Canyon National Park for which Congress has assigned to it regulatory responsibility.

Pursuant to NEPA NPS published a notice of intent to prepare an EIS on June 13, 2002, at 67 FR 40749, and it gave notice of the availability of the draft EIS on October 22, 2004, at 69 FR 62042.

3. The draft EIS proposes a taking of the Tribe's senior federal reserved water rights, in blatant violation of federal law.

The Hualapai Indian Tribe is more adversely impacted by the proposed CRMP and its environmental consequences than any other person or entity. The Hualapai reservation, which was carved out of the Tribe's aboriginal lands by the Executive Order of President Chester A. Arthur dated January 4, 1883, lies south of the Federal lands in the Grand Canyon National Park that are within the jurisdiction of the NPS. The northern boundary of the reservation, as defined in the Executive Order, lies on the Colorado River.

The Tribe's right to the beneficial use of the entire river along its northern boundary, including the north bank, was reserved by the United States for the use and enjoyment of the Hualapai people under the principles described in cases such as *United States v. Winans*, 198 U.S. 371 (1905), and *Winters v. United States*, 207 U.S. 564 (1908). The draft EIS attempts to take and injure the Tribe's senior federal water rights by purporting to restrict the Tribe's uses of the river in violation of federal law. In addition, the draft EIS fails to assess the impacts on the Tribe's water rights caused by non-Indian activities on and near the river, including the activities of thousands of tourists who damage tribal resources while using NPS permits.

4. Regulation of Hualapai Tribe activities in the Lower Gorge is not within NPS statutory jurisdiction and is therefore not a proper subject of the proposed CRMP nor of the draft EIS.

The draft EIS covers Hualapai Indian Tribe activities that are not within the statutory jurisdiction of the NPS. The non-jurisdictional tribal activities are those that take place within the Tribe's reservation and activities on lands and waters that are subject to a reservation of right. The draft EIS mistakenly states that the Hualapai Tribe and NPS share a common boundary.

The northern boundary of the Hualapai Reservation is fixed by the Executive Order dated January 4, 1883. This describes the boundary as being "on" and "along" the river which plainly means that the Reservation includes part, if not all, of the river. The southern boundary of the part of the Grand Canyon National Park that lies north of the reservation was fixed by the Grand Canyon National Park Enlargement Act of 1975, Public Law 93-620. 16 U.S.C. §§ 228a - 228j. A part of the south boundary of the park as described in the Enlargement Act appears to be within the Tribe's reservation.

The fact that the river portion of the reservation may lie within the park's boundaries does not mean that it is subject to NPS jurisdiction. Section 4(b) of the Enlargement Act, 16 U.S.C. § 228c(b), limits such jurisdiction to Federal lands within the boundaries of the park. It is unmistakably clear from the context of the act that Indian lands are not federal lands for NPS jurisdictional purposes. The Enlargement Act did not effect a taking of Indian title to, or reserved rights in, lands that may lie within the park's boundaries. Indeed, Section 5 of the Act, 16 U.S.C. § 228d, provides that Indian tribal land may be taken into federal ownership and control only with the approval of the tribe's governing authority. No such approval has ever been given by the Council of the Hualapai Tribe.

The draft EIS signals the NPS plan to extend its regulatory controls for the first time to the Tribe's activities in the Lower Gorge which is described as the

stretch of the river from Diamond Creek at River Mile (RM) 226 to Lake Mead at RM 277. This extraordinary extension of jurisdiction is based upon the NPS contention, stated at page 65 of the draft EIS, that the Tribe's northern boundary is "on the south side of the river above the historic high water line". The draft does not undertake to explain the basis of this inaccurate and unlawful contention.

Because the Tribe's activities in and along the river are not subject to the laws of the United States that are administered by NPS, they are not subject to environmental review under NEPA or the regulations at 40 C.F.R. Chapter V. They should therefore be excluded from the draft EIS.

5. Regulation of helicopter activity in the Lower Gorge is not within NPS jurisdiction and is therefore not a proper subject of the proposed CRMP nor of the draft EIS.

Each of the five Lower Gorge alternatives address helicopter activities. They all acknowledge that such activities in the Quartermaster area are not subject to regulation because the helicopters "take off and land on sovereign tribal land". But activities at the Whitmore Wash helipad are also extra-jurisdictional and have no place in the proposed CRMP or the draft EIS.

Congress has vested in the Federal Aviation Administration ("FAA") the "sole authority to control airspace over the United States". Public Law 106-181, Title VIII, § 802(1). It has moreover specifically granted to the FAA the exclusive authority to control air tour operations over national parks, including particularly the Grand Canyon National Park. *Idem*, §803.

The FAA has exercised its air traffic jurisdiction over the Grand Canyon by its adoption of its Limitations Rule which was originally published on April 4, 2000, at 65 F.R. 17,708, and is codified at 14 C.F.R. 93.303 - 93.325. The Rule generally establishes certification requirements and limits the number of permissible flights.

The helicopter provisions in the proposed CRMP and in the draft EIS are in direct conflict with the statutes and regulations governing air operations generally and particularly with the statutes and regulations governing

air operations over the Grand Canyon. These provisions should be deleted.

6. Regulation of Hualapai Tribe activities in the Lower Gorge is not permitted by Section 7.4(c) of the National Park Service regulations and is therefore not a proper subject of the proposed CRMP nor of the draft EIS.

NPS may not lawfully extend its regulatory control over tribal activities in violation of its regulations by means of a management plan. The decision to exclude the Hualapai Tribe's Lower Gorge activities from NPS regulation was made in 1977. NPS has explained that the decision was taken to implement federal policy expressed in the Indian Self-Determination and Education Assistance Act, Public Law 93-638, codified at 25 U.S.C. §§ 450a - 450n and elsewhere.

The dispute between the Tribe and NPS over the location of the Tribe's boundary has been asserted as an additional reason to exclude Hualapai activities from regulatory control. See *Lesoeur v. United States*, 21 F.3d 965, 968-969 (9<sup>th</sup> Cir. 1994). NPS recognized that this determination constituted rule making subject to the requirements of the Administrative Procedure Act, 5 U.S.C. § 553, and so, in accordance with its requirements, it amended 36 C.F.R. §7.4(c) dealing with boating in the Grand Canyon National Park. Under this 1977 amendment the NPS Grand Canyon river running regulations apply only to "Federally owned land administered by the National Park Service, along the Colorado River within the Grand Canyon, upstream from Diamond Creek at approximately river mile 226." (emphasis added)

In accordance with Section 7.4(c) NPS does not undertake to regulate Hualapai river running operations. In fact, NPS observes the regulation by not assessing Lower Gorge user days to its commercial concessionaires that launch from Lees Ferry and this has resulted in an increase in the marketing of trips that continue beyond Diamond Creek to Lake Mead. See 1989 Colorado River Management Plan, Appendix F, paragraph IV.C.

Because NPS regulation of Lower Gorge activities in general, and Lower Gorge activities by the Hualapai Tribe in particular, is not permitted by the Code of Federal

Regulations, it is not a proper subject of the proposed CRMP or of the draft EIS.

7. The draft EIS violates NEPA in that it fails to consider the environmental impact of Lower Gorge user days attributable to NPS commercial concessionaires. This special exemption for concessionaires moreover constitutes an impermissible discrimination.

NPS reveals in the draft EIS that it will continue to observe Section 7.4(c) with respect to its commercial concessionaires. Accordingly the proposed CRMP continues the practice of not counting user days of commercial concessionaire passengers below Diamond Creek. This exemption is not explained directly but is rather left to the reader to infer from statements that touch upon the subject including particularly the following:

- Page 23 the draft EIS states that all of the eight Lees Ferry alternatives cover the section of the river from Lees Ferry to Diamond Creek. The Lower Gorge alternatives cover the section of the river from Diamond Creek to Lake Mead. But the Lower Gorge alternatives impose limitations only on the Hualapai Tribe and not on the Lees Ferry concessionaires.
- Page 30 of the draft EIS states that for each of the Lees Ferry alternatives a determination has been made as to the number of days for each "trip ... on the river between Lees Ferry and Diamond Creek."
- Page 65 of the draft EIS states that "(b)elow Diamond Creek the user-day limits established by Grand Canyon National Park do not *now currently* apply." (emphasis added) What this actually means is that NPS does not currently attribute to commercial concessionaires their passengers' user-days below Diamond Creek nor does it intend to do so in the proposed CRMP.
- Page 65 of the draft EIS NPS reveals that it does not count, and it has no intention of counting, user days of concessionaire passengers that enter the Canyon at Whitmore Wash for a three-day trip

to Lake Mead as well as those passengers that launch at Lees Ferry and continue to Lake Mead.

NPS does not estimate or otherwise discuss anywhere in the draft the number of uncounted user days attributable to commercial concessionaire passengers in the Lower Gorge.

NPS plainly violates NEPA by failing to include in the draft EIS any consideration of Lower Gorge user days attributable to concessionaires. Moreover, the NPS policy of giving commercial concessionaires a free pass on user days in the Lower Gorge based upon Section 7.4(c) of the regulations while at the same time imposing severe limitations on the Tribe's Lower Gorge activities is arbitrary and unreasonable and, in the circumstances of this case, it constitutes an impermissible invidious discrimination.

8. The draft EIS particularly fails to consider the impact of daytime and overnight camping on the Tribe's reservation lands of untold thousands of passengers of NPS's river runner concessionaires.

We have noted above that the draft EIS, particularly at pages 23, 30 and 65, disclaims any effort to count or to estimate the number of concessionaire boat passengers that launch at Lees Ferry and continue to Lake Mead or that enter the Canyon at Whitmore Wash for a three-day trip to Lake Mead. All of these passengers camp for two or more days and nights along the river boundary of the Tribe's reservation. We do know that they number in the thousands per year and that their adverse environmental impact is extraordinary. This impact falls almost entirely on the lands of the Hualapai Tribe.

The draft EIS specifically violates the mandates at 42 U.S.C. § 4332(2)(C)(i) through (v) in that it fails to report on the environmental impact of this Lower Gorge camping regulatory exemption, the adverse environmental effects which cannot be avoided should the proposed regulatory exemption be implemented, alternatives to the proposed regulatory exemption, the relationship between short-term and long-term camping effects, and any irreversible and irretrievable commitments of resources that will be involved in the regulatory exemption should it be implemented.

We have given due consideration to Appendix C of the proposed CRMP which requires concessionaires to mitigate to some extent the environmental damage caused by campers. But that is not part of the draft EIS nor does it purport to be. It does not measure the adverse environmental impacts of the regulatory exemption or propose alternatives to it.

9. The draft EIS fails to include consideration of the river runner concessionaire contracts which NPS intends to enter into during this calendar year. The terms of such contracts will significantly impact the human environment of the Grand Canyon.

There are now sixteen contracts between NPS and river runner concessionaires that prescribe the conditions and restrictions upon the use of the Grand Canyon. These contracts, entered into under provisions of law that have since been repealed, provided for a term of seven years ending on December 31, 2002. On April 8, 2003, more than three months after the expiration of the contracts, NPS published notice of its decision to award a three-year extension of the contracts pursuant to 36 C.F.R. § 51.23. They may not be further extended or renewed without compliance with the competitive selection provisions at 16 U.S.C. § 5952.

River runner concession contracts for years following this calendar year will be subject to the provisions of the National Park Service Concessions Management Improvement Act of 1998, 16 U.S.C. §§ 5951 *et seq.* Particularly, Section 5951 of Title 16 requires NPS to issue a prospectus for the purpose of soliciting proposals from prospective contractors including incumbent contractors who may have a right of renewal.<sup>1</sup> Section 5951 and 36 C.F.R. § 51.5(a)(4) require that the prospectus, and any contract entered into under the prescribed process, must include provisions for the protection, conservation and preservation of the resources of the Grand Canyon.

The most compelling of the purposes to be accomplished through these concession contracts is the protection of the Grand Canyon's fragile shores and beaches. These lands are occupied by more than 100,000 passengers of commercial river runners that operate subject to concession contracts.

<sup>1</sup> These comments do not address the issue of whether the sixteen contracts that expired on December 31, 2002, were validly extended by the notice published in the Federal Register on April 1, 2003.

The rules governing standards for the use of the shores and beaches must include, for example, provisions for the control and removal of trash and human waste.

These kinds of rules are attached to and are a part of the current contracts. But NPS, in the draft EIS, has not undertaken its NEPA responsibility to study and report on the significant immediate and long-term environmental impacts of overnight camping along the river nor does it propose alternative plans for dealing with those impacts.

The omission of any consideration of the immediate and long-term environmental impacts of contract provisions regulating activities along the river's shores and beaches by a massive number of campers plainly violates NEPA. Further, the proposed CRMP and the draft EIS should anticipate issuing a prospectus for a seventeenth concessionaire contract for the Lee's Ferry to Lake Mead route that applies Indian preference, in accordance with federal law. This seventeenth concessionaire contract must include a number of user days commensurate with the number of user days allocated to non-Indian concessionaire contracts.

10. The draft EIS must be revised to assess accurately the economic and social impacts of the NPS preferred alternatives on the Hualapai Tribe.

The draft EIS proposes unlawful limitations on the activities of the Hualapai Tribe. The Tribe appropriately regulates its own activities, in accordance with federal law, tribal sovereignty, and a deep commitment to preservation of the Grand Canyon and the Colorado River for generations yet to come. NPS does not have the power nor the authority to step in and interfere with this reasonable tribal self-regulation.

Because the Tribe relies on its tourist activities to fund its governmental, cultural resource protection, education, and social services, the culture and economy of the Tribe would endure massive adverse impacts by the limits proposed by NPS. The draft EIS does not accurately state these tremendous impacts and, thus, violates NEPA. To comply with NEPA, the draft EIS must be revised to accurately state the devastating social, cultural and economic impacts that the NPS preferred alternatives will have on the Hualapai Tribe.

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Conclusion

The draft EIS fails to comply with the requirements of NEPA on many grounds, as described above. In addition, the draft EIS threatens to violate federal law by taking tribal water rights and unlawfully imposing regulatory authority over activities within the Hualapai Reservation. This unlawful attack is not fair to the Hualapai People, who have been the traditional protectors of the Grand Canyon and the Colorado River from time immemorial.

The Colorado River and the Grand Canyon have always been central to the culture and economy of the Hualapai Tribe. Through the draft EIS, NPS proposes to reverse history through unprecedented restrictions on tribal activities that would devastate the Hualapai economy, and make it impossible for the Tribe to fund necessary governmental and social services, including health care, welfare programs, cultural resource protection programs, and education for tribal members.

In accordance with long-established policy, NPS should revise the draft EIS to remove provisions related to the Tribe and its activities from the proposed Colorado River Management Plan.

Sincerely,

Williams & Works, P.A.



Susan M. Williams

CC: Charles Vaughn, Chairman  
Hualapai Tribe

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RE: Comments of the Hualapai Tribe on the Administrative  
Review Draft 08-22-05 Final Environmental Impact  
Statement Colorado River Management Plan

Ladies and Gentlemen:

This law firm represents the Hualapai Tribe (the Tribe). In this capacity, we submit the following comments on the "Administrative Review Draft 08-22-05 Final Environmental Impact Statement of the Colorado River Management Plan" (the Administrative Draft). The Tribe previously submitted comments to the EIS draft. The Tribe appreciates this opportunity to provide you with these comments. (Hualapai DEIS Comments).

In sum, the Administrative Review EIS misrepresents the authorities of the National Park Service (NPS). The EIS also does not take the required hard look at the Hualapai Tribe's Proposed Action and Preferred Alternative and the impacts of the proposed non-tribal tourist activity contained in the NPS Preferred Alternative as required under NEPA.

The Tribe urges the NPS to adopt the Tribe's Preferred Alternative that it will submit shortly. Moreover, if NPS disregards the Tribe's rights and interests, the Tribe will be forced to challenge the Final EIS and Record of Decision (ROD).

NEPA requires that for all major actions significantly affecting the quality of the human environment, "a detailed environmental impact statement must be drafted, which includes a discussion of: (i) the environmental impact of the proposed

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action, (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented, (iii) alternatives to the proposed action, (iv) the relationship between local short-term uses of man's environment, and the maintenance and enhancement of long-term productivity, and (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented." *County of San Diego et al., v. Bruce Babbitt*, 847 F.Supp. 768 (S.D. Calif. 1994), quoting 42 U.S.C.S. §4332(c) (NEPA Section 102(2)).

In preparing an Environmental Impact Statement (EIS), NEPA requires agencies to "[r]igorously explore and objectively evaluate all reasonable alternatives." 40 C.F.R. §1502.14(a). Agencies must take a "hard look" at the environmental consequences of the proposed action by ensuring that the EIS: (1) adequately compiles relevant information; (2) analyzes the information reasonably; (3) consider fully and not ignore pertinent data; and, (4) make accurate public disclosures. *Neighbors of Cuddy Mountain v. Forest Service*, 137 F.3d 1372, 1476 (9<sup>th</sup> Cir. 1998); *Sierra Club v. Army Corps*, 701 F.2d 1011 (2<sup>nd</sup> Cir. 1983).

In violation of NEPA, the Administrative Draft EIS fails to analyze a reasonable range of alternatives, fails to take a hard look at the proposed action, and fails to disclose accurately the Hualapai Tribe's Preferred Alternative. In addition, the proposed limitations in the CRMP on tribal activities may separately violate numerous other federal laws, regulations, and policies.

More specifically, NPS failed to compile data in good faith, did not analyze the data collected in a rational manner, ignored relevant information, and failed to update current management and existing environmental conditions in the Canyon. NPS failed to take a hard look at the environmental impacts to tribal lands, tribal water rights, and trust resources, including but not limited to water, fish, wildlife, culturally significant plants, and sacred sites resulting from non-tribal visitors to the Canyon. In each of these aspects, the Administrative Draft EIS is "arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law." 5 U.S.C. § 706(2) (A).

The Hualapai Tribe maintains that NPS has no authority to manage tribal lands and use of the Colorado River flows. Instead, NPS and the Tribe must co-manage the Canyon resources through current and future intergovernmental agreements with the Hualapai Tribe, such as the Memorandum of Understanding By and Among the Hualapai Tribe, the Grand Canyon National Park, and

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the Lake Mead National Recreation Area, dated October 2000 (Fall 2000 MOU). The Fall 2000 MOU establishes a process for management of the Area of Cooperation between the parties.

The Tribe was disappointed that NPS failed almost entirely to address tribal comments, concerns, and revisions to the Draft EIS. The Administrative Draft fails to respond substantively to the Tribe's comments, concerns, and revisions to the Draft EIS, nor does it remove critical provisions that were requested for removal by the Tribe. Also, rather than disclose fairly the northern boundary dispute and the well documented history of recent relations between NPS and the Hualapai Tribe to manage activities in the Area of Cooperation, the Administrative Draft paints a rosy and inaccurate picture of current management in the Canyon, especially in the Lower Gorge. The Tribe requests that the EIS be updated with current tribal data as set forth in these comments to analyze properly the impacts of the NPS proposed Preferred Alternatives on the Tribe. The Tribe has considered carefully the NPS's concerns regarding Tribal activities in the area of cooperation. The Tribe will submit tomorrow a corrected statement of the Hualapai Tribe's Preferred Action and Alternatives tomorrow.

1. Introduction

NEPA requires "that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts; it also guarantees that the relevant information will be made available" to the public. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989). NEPA further requires federal agencies to:

[A]ssess and consider comments both individually and collectively, and shall respond by one or more of the means listed below, stating its response in the final statement. Possible responses are to: (1) Modify alternatives including the proposed action. (2) Develop and evaluate alternatives not previously given serious consideration by the agency. (3) Supplement, improve, or modify its analyses. (4) Make factual corrections. (5) Explain why the comments do not warrant further agency response, citing the sources, authorities, or reasons which support the agency's position and, if appropriate, indicate those circumstances which would trigger agency reappraisal or further response. 40 C.F.R. § 1503.4.

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The Administrative Draft falls well short of these requirements.

After reviewing the Draft EIS, the Tribe expressed clearly its position that the CRMP presented a "total disregard for tribal sovereignty and tribal water rights." Hualapai DEIS Comments at 2. Combined with the Tribe's belief that "the draft EIS has seriously misstated the Tribe's positions with regard to many issues, and has misrepresented repeatedly the Tribe's Preferred Alternative," the Tribe specifically requested NPS to "remove provisions related to the Tribe and its activities from the proposed Colorado River Management Plan." Hualapai DEIS Comments at 2. The Tribe expressed its concern that the CRMP presents a dramatic shift in federal policy that would seriously undermine tribal sovereignty and federal policies promoting Indian self-determination and economic self-sufficiency.

The Tribe specifically requested NPS to "assess accurately the non-Indian impacts on tribal property, activities, and water rights." Hualapai DEIS Comments at 2. As discussed more fully below, the Tribe maintains that the Administrative Draft still fails to consider or take a hard look at the environmental and cumulative effects of non-Indian, NPS-permitted activity on Hualapai tribal property, activities, water rights, and trust resources in the Lower Gorge below Diamond Creek. The Administrative Draft EIS still omits meaningful analysis of the socioeconomic impacts of NPS's preferred alternative on the Hualapai Tribe and tribal enterprises.

The Tribe urges NPS to eliminate from the CRMP all limitations on Hualapai tribal activities in the 108 mile, Hualapai Reservation portion of the Colorado River. Instead, the Tribe urges NPS to adopt the Hualapai Tribe's Proposed Action and Preferred Alternative that will be submitted tomorrow. The Tribe also urges NPS to take a hard look at the complete and cumulative impacts of all non-Indian visitors in the Canyon on tribal water rights, tribal economic development, and other resources of the tribe.

2. Background

Finally, the Tribe restates its previous request to include the following language into the EIS at page iv of the Executive Summary of the Administrative Draft EIS:

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An agency that is planning a major Federal action must carry out its NEPA responsibility by studying and reporting on all elements of the proposed action that impact upon the human environment and identify and assess reasonable alternatives to them. 40 C.F.R. §1500.2. At the same time it must pay due regard to its jurisdictional limitations. *Id.* §1508.15. With regard to the Colorado River, NPS may properly consider only activities occurring on Federal lands within the Grand Canyon National Park for which Congress has assigned to it regulatory responsibility.

3. The EIS Proposes an Illegal Taking of the Tribe's Senior Federal Reserved Water Rights.

The Tribe is extremely concerned that the CRMP illegally places a limitation on future tribal use of the flows of the Colorado River. Although NPS acknowledges the need to protect the Tribe's senior federal reserved water rights to the Colorado River, the Administrative Draft fails to disclose publicly and accurately describe the nature of the Tribe's water rights, and depicts inaccurately the Tribe's position regarding the northern boundary of the Hualapai Indian Reservation.

The Tribe remains concerned that neither the public, nor NPS has an accurate understanding of the Tribe's senior federal reserved water rights. As a consequence, the Administrative Draft EIS does not take the required hard look at the environmental consequences of the NPS Preferred Alternatives. The federal recognition and the legal basis for the Tribe's water rights stems from the well-established principles of reserved rights first enunciated in *United States v. Winans*, 198 U.S. 371 (1905), and *Winters v. United States*, 207 U.S. 564 (1908). In the context of an off-reservation fishing right, *Winans* explained the concept that Indian rights are "not a grant of rights to the Indians, but a grant of rights from them - a reservation of those not granted." *Winans*, 198 U.S. at 381.

The Supreme Court specifically addressed the question of Indian water rights in *Winters*, concluding that when the United States created a reservation, water rights are generally implied with a vested priority date as of the date of the creation of the Reservation. *Winters*, 207 U.S. at 577. As to the extent, or quantification of the reserved water right, the Court held that the right must be in a quantity sufficient to meet the needs and purposes of the Reservation. *Id.*

The governing law on quantification of federally reserved Indian water rights in Arizona is *In re the General Adjudication of All Rights to Use Water in the Gila River System and Source*, 201 Ariz. 307 (Ariz. 2001) (*In re Gila River*). In *In re Gila River* 201 Ariz. at 310 the Arizona Supreme Court addressed, "What is the appropriate standard to be applied in determining the amount of water reserved for federal lands?" The Court noted that the *Winters* case distinguished between Indian and non-Indian reservations, and held that because of the PIA test's potential to discriminate against tribes, the PIA test, alone, should not be applied to Indian reservations. *Id.* at 316-18. Having determined that "the purpose of a federal Indian reservation is to serve as a permanent home and abiding place to the Native American people living there . . . [the water right contains an] amount of water necessary to accomplish the homeland purpose." *Id.* at 318. The Court then laid out a set of factors, known as the Homelands Test, to quantify a Tribe's water right, including but not limited to: land use plans, history, culture, geography, topography, natural resources, economic base, past water use on the reservation, as well as present and projected future populations. *Id.* at 318-19.

In carrying out their federal trust responsibilities, federal agencies like NPS have a duty to consult with a tribe in decision-making, to avoid adverse impacts on treaty resources, and a duty to protect tribal treaty-reserved rights "and the resources on which those rights depend." *Klamath Tribes v. U.S.*, 24 Ind. Law Rep. 3017, 3020 (1996). Executive Order 13175 provides that each "agency shall have an accountable process to ensure meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications." 65 Fed. Reg. 6, 249. According to the President's April 29, 1994 memorandum regarding Government-to-Government Relations with Native American Tribal Governments, federal agencies "shall assess the impacts of Federal Government plans, projects, programs, and activities on tribal trust resources and assure that Tribal government rights and concerns are considered during the development of such plans, projects, programs, and activities." As a result, Federal agencies must proactively protect tribal interests, including those associated with tribal culture, religion, subsistence, economy and commerce.

Evaluation of a breach of the trust relationship is governed by the standard set forth in *Fort Mojave Indian Tribe v. U.S.*, 32 Fed.Cl. 29 (1994), where the court held:

"In *Fort Mojave I*...the court articulated the standard under which plaintiffs' breach of trust claim would be evaluated as follows: Where a trust relationship exists, "[t]he trustee has a duty to protect the trust property against damage or destruction. He is obligated to the beneficiary to do all acts necessary for the preservation of the trust res which would be performed by a reasonably prudent man employing his own like property for purposes similar to those of the trust." G. Bogert, *The Law of Trusts and Trustees* s.582 (2d ed. revised 1980); see also *Restatement (Second) of Trusts* s.176 (1959).

"Here, the title to plaintiffs' water rights constitutes the trust property, or the res, which the government, as trustee, has a duty to preserve. Defendant's obligation to perform "all acts necessary" to preserve the trust res would necessarily include prudently representing plaintiffs' interests in litigation in which ownership to those water rights is placed in issue." *Fort Mojave Indian Tribe, v. U.S.*, 32 Fed.Cl. 29 (1994) quoting *Fort Mojave I*, 23 Cl.Ct. 417, 426 (1991).

The Tribe remains concerned that NPS has not analyzed adequately the Tribe's water rights. If the NPS enforces its proposed limits on the Tribe's activities and uses of the Colorado River, NPS will take, injure, or otherwise limit the Tribe's senior federal reserved water rights to divert and use the flows of the Colorado River.

To resolve the overarching concerns of the northern boundary issue and the nature of the Tribe's water rights, the Tribe maintains its position that NPS should omit limitations on tribal activities in the Lower Gorge from the CRMP and disclose publicly in the EIS the nature of the boundary dispute and the Tribe's water rights to the Colorado River. NPS should clarify that the CRMP is not intended, nor should it be interpreted as an attempt by NPS to regulate, assert jurisdiction, or otherwise attempt to limit tribal activities in the Lower Gorge. Instead, NPS should endorse the Hualapai Tribe's Proposed Action and Preferred Alternative that will be transmitted shortly.

The Tribe urges NPS disclose thoroughly the Tribe's water rights, the history of the northern boundary dispute, and recent efforts by the Tribe and NPS to manage the Area of Cooperation pursuant to the terms and conditions of the Fall 2000 MOU.

4. Regulation of Hualapai Tribal Activities in the Lower Gorge is not within NPS Statutory Jurisdiction and therefore is not a Proper Subject of the CRMP.

The Tribe summarized its concern that the "draft EIS signals the NPS plan to extend its regulatory controls for the first time to the Tribe's activities in the Lower Gorge which is described as the stretch of the river from Diamond Creek at River Mile (RM) 226 to Lake Mead at RM 277." Hualapai DEIS Comments at 4-5. The Tribe reiterates its position that NPS lacks statutory authority to regulate Hualapai tribal activities in the Lower Gorge because tribal activities take place on tribal lands, and the Grand Canyon Enlargement Act specifically limits NPS jurisdiction to federal lands. 16 U.S.C. § 226c (b).

Similar to the northern boundary dispute, the Tribe maintains its position that NPS should omit the Lower Gorge from the ROD and remove any reference or analysis of NPS jurisdictional authority or other efforts that could be interpreted as NPS regulation, or attempts to otherwise limit tribal activities in the Lower Gorge.

Alternatively, the Tribe suggests that NPS place this dispute in its proper context by disclosing thoroughly the nature of the jurisdictional dispute and recent history between the Parties to manage the Area of Cooperation pursuant to the terms and conditions of the Fall 2000 MOU.

5. Regulation of Helicopter Activity is Beyond NPS Authority and therefore is not a Proper Subject of the CRMP.

The Tribe appreciates NPS's recognition of tribal sovereignty, and acknowledgement that NPS lacks jurisdiction over helicopters landing and taking off exclusively on tribal lands at the Quartermaster Area. However, the Administrative Draft fails to respond to the Tribe's comments that the Federal Aviation Administration has exclusive jurisdiction over air tour operations over national parks, including Grand Canyon National Park. See Public Law No. 106-181, Title VIII, § 802(1), 803.

Because FAA has exclusive jurisdiction over air tour operations in the Grand Canyon, helicopter activity is beyond the scope of NPS authority and the CRMP planning process. Accordingly, the Tribe appreciates NPS's recognition that it has no authority over transportation outside the park boundary, including helicopter flights on Hualapai Lands. There would continue to be no limits on exchange types or numbers at Whitmore." Administrative Draft at 44. The Tribe agrees with such conclusions, but fundamentally disagrees with NPS's

assertion of authority to impose seasonal restrictions and cap at current rates the number of helicopter exchanges at Whitmore Wash. See Administrative Draft at 58-59.

The Administrative Draft unlawfully attempts to limit helicopter activity at Whitmore Wash, not only in conflict with the statutes and regulations governing air operations over Grand Canyon, but in conflict with tribal sovereignty, economic development, and the FAA over-flight exemption for the Hualapai Tribe. In addition to removing all such references, the Tribe recommends NPS disclose publicly its lack of authority to regulate or otherwise impose seasonal restrictions or other caps on helicopter exchanges at Whitmore Wash.

6. Regulation of Hualapai Tribal Activities in the Lower Gorge is not Permitted by National Park Service Regulations and therefore is not a Proper Subject of the CRMP.

In addition to the Tribe's position that NPS lacks authority to regulate tribal activities in the Lower Gorge because such lands are tribal lands, and because the Grand Canyon Enlargement Act limits NPS authority to federal lands, the Tribe reminds NPS that its own regulations specifically limit NPS jurisdiction over whitewater rafting in the Grand Canyon National Park to above Diamond Creek. 36 C.F.R. § 7.4(b). Therefore, as recognized in *Lesoeur v. United States*, 21 F.3d 965, 968-69 (9<sup>th</sup> Cir. 1994), NPS has further clarified its lack of authority over Hualapai river running operations below Diamond Creek.

Because NPS regulation of Lower Gorge activities by the Hualapai Tribe is not permitted by NPS regulations, it is not a proper subject of the EIS or the CRMP planning process. The Tribe suggests that NPS abandon its preferred alternative, Alternative 4 Modified. The Tribe maintains its position that NPS should omit the Lower Gorge from the ROD and remove any reference or analysis of NPS jurisdictional authority or other efforts that could be interpreted as NPS regulation or limitation of tribal activities in the Lower Gorge. Solely for purposes of assisting NPS to comply with NEPA. The Tribe is willing to work cooperatively with NPS to supplement the EIS with accurate data and information to disclose publicly a true and accurate Hualapai Tribe Proposed Action and Preferred Alternative. The Tribe's Alternative will be submitted shortly.

7. The EIS Fails to Consider or Take a Hard Look at the Environmental Impacts of Lower Gorge User Days, Attributable and Cumulative to Guests of NPS-Permitted Commercial Concessionaires. The Special Concessionaires Exemption Constitutes Impermissible Discrimination.

The Tribe referenced four examples of statements in the Draft EIS that indicated NPS did not analyze the environmental effects to the Lower Gorge from user days attributable to guests of NPS-permitted commercial concessionaires. Hualapai DEIS Comments at 7. Review of the Administrative Draft indicates that the language in each of these references remains in the Administrative Draft and that NPS has not expanded its environmental analysis on this key topic as requested by the Tribe. *Id.* The Tribe urges NPS to revise and supplement the Final EIS and document accurately in the Record of Decision the rationale for omitting such disclosure and analysis.

The Tribe further challenged the NPS policy of giving commercial concessionaires a free pass on user days in the Lower Gorge, based upon an odd interpretation of NPS regulations, while at the same time attempting to impose severe limitations on the Tribe's Lower Gorge activities. Attempting to limit tribal activities, while giving a free pass to NPS-permitted concessionaires, is arbitrary, unreasonable and, in the circumstances of the Colorado River constitutes an impermissible, invidious discrimination against the Hualapai Tribe.

In its earlier comments, the Tribe noted that the draft EIS "disclaims any effort to count or to estimate the number of concessionaire boat passengers that launch at Lees Ferry and continue to Lake Mead or that enter the Canyon at Whitmore Wash for a three-day trip to Lake Mead." Hualapai DEIS Comments at 9. All of these passengers camp for two or more days and nights on and along tribal lands and waters within the Hualapai Reservation. The Tribe does not see where in the Administrative Draft NPS has responded to or addressed this important concern.

NPS simply must analyze the alternatives and environmental effects of this illegal exemption by analyzing impacts to the Lower Canyon and the Tribe's trust resources caused by the guests of NPS-permitted commercial concessionaires. NPS must take a hard look at the relationship between short-term and long-term camping effects, impacts on cultural sites of the Tribe, and any irreversible and irretrievable commitments of resources that will be made as a result of this NPS policy.

8. The EIS Fails to Consider or Take a Hard Look at the Environmental and Cumulative Impacts of Daytime and Overnight Camping on the Tribe's Reservation Lands Attributable to Guests of NPS-Permitted Commercial Concessionaires and Other Boaters Authorized Under the NPS Preferred Alternative.

NEPA requires agencies to prepare an EIS that addresses a project's direct impacts, indirect impacts, and cumulative effects. *Kleppe v. Sierra Club*, 427 U.S. 390 (1976); *Thomas vs. Peterson*, 753 F.2d 754, 758-59 (9<sup>th</sup> Cir. 1985); *Save the Yak v. Block*, 840 F.2d 712, 714 (9<sup>th</sup> Cir. 1988); *Neighbors of Cuddy Mountain v. United States Forest Serv.*, 137 F.3d 1372, 1378-79 (9<sup>th</sup> Cir. 1998). This analysis needs to include: (1) the effects of past connected and cumulative actions; (2) the effects of present connected and cumulative actions; and (3) the effects of reasonably foreseeable future connected and cumulative actions. 40 C.F.R. 1508.7.

In its previous comments the Tribe raised substantial questions as to whether NPS adequately addressed the significant cumulative effects of implementing the NPS Preferred Alternative. Review of the Administrative Draft reveals that NPS failed to consider adequately the past, present, and reasonably foreseeable future actions of all private, local, state, tribal, and federal activity within and adjacent to the Tribe's 108 mile northern corridor in the Grand Canyon.

The Tribe remains concerned that NPS has not disclosed publicly, nor analyzed adequately, the environmental and cumulative effects of renewing and continuing the commercial operations of the current 16 NPS-permitted concessionaire contracts and all other boaters authorized under the NPS Preferred Alternative. Of key concern to the Tribe is the protection of the Grand Canyon's fragile shores, beaches, water rights, and cultural resources.

The Tribe urges NPS to revise and supplement the Final EIS accordingly or document accurately in the Record of Decision the rationale for omitting such disclosure and analysis.

9. The EIS Fails to Analyze or Take a Hard Look at the Socioeconomic Impacts of the NPS Preferred Alternatives on the Hualapai Tribe.

After reviewing the Draft EIS, the Tribe was very concerned that the CRMP proposed a dramatic shift in federal policy that would seriously undermine tribal sovereignty and the federal policies to promote Indian self-determination and economic self-sufficiency. Hualapai DEIS Comments at 1-2.

Although the Administrative Draft includes several revisions in attempt to characterize the economic importance of the Colorado River to the Hualapai people, the Administrative Draft still omits meaningful analysis of the socioeconomic impacts of NPS's Preferred Alternative on the Hualapai Tribe and tribal enterprises. See Administrative Draft at 732-43. Under the NPS's preferred alternative in the Lower Gorge, the Tribe would endure massive, adverse economic and other impacts due to the NPS's proposed limitations on tribal activities and use of the Colorado River in the Grand Canyon. The Administrative Draft fails to disclose accurately these tremendous economic impacts.

The Tribe urges NPS to revise and supplement the Final EIS accordingly or document, accurately, in the Record of Decision the rationale for omitting such disclosure and analysis.

10. The EIS Fails to Explore Rigorously and Evaluate Objectively All Reasonable Alternatives and, Specifically, the Tribes' Accurately Described Proposed Action and Preferred Alternative and Relies on Stale Information.

NPS fails to comply with the NEPA mandate to consider fully a reasonable range of alternatives because NPS has not described accurately and analyzed either current management or the Hualapai Tribe's Corrected Proposed Action and Preferred Alternative. Throughout the NEPA process and Core Team meetings, the Hualapai Tribe called upon NPS to accurately and fully consider the Tribe's Preferred Alternative, to no avail.

Specifically, the Tribe attempted to negotiate with NPS in the government-to-government Core Team meetings contemplated in the Fall 2000 MOU regarding boating safety and protection of the Canyon, but the negotiations have not been successful. Thus, the Tribe's Proposed Action and Preferred Alternative, as stated in the Administrative Draft EIS, is not the Tribe's true Preferred Alternative. The Tribe will be submitting tomorrow its Proposed Action and Preferred Alternative.

An agency may not define the objectives of its actions in terms so unreasonably narrow that only one alternative would

accomplish the goals of the agency action. *City of Carmel-by-the-Sea v. United States Dept. of Transportation*, 123 F. 3<sup>rd</sup> 1142, 1155 (9<sup>th</sup> Cir. 1997).

NPS must offer the Hualapai Tribe, the public and itself the opportunity to understand and evaluate accurately the Tribe's true Preferred Alternative. NEPA require NPS to consider all reasonable alternatives. 40 C.F.R. 1502.14(a). Failing to do so amounts to a violation of NEPA.

A key goal of the Tribe's was for NPS to issue a prospectus for a 17<sup>th</sup> concessionaire contract to conduct whitewater trips launching from Lees Ferry that applies Indian preference as required by federal law. The Tribe acknowledges that NPS has added a prospectus for a 17<sup>th</sup> concessionaire contract that will apply Indian preference as secondary criteria, but such effort falls well short of the Tribe's desire for a more defined contract.

In addition, the Draft EIS relies on stale information. NEPA was enacted to ensure that federal agencies do not act on incomplete information, only to regret its decision after it is too late to correct. *Marsh v. ONRC*, 490 U.S. 360, 371 (1989). To comply with NEPA, an agency has a "continuing duty to gather and consider new information in assessing the environmental impacts of its actions." *Coeur d'Alene Lake v. Kiebert*, 790 F. Supp. 998 (D. Idaho 1992). Here, NPS has failed to fulfill its obligation to supplement, correct, or revise the CRMP to depict accurately and analyze adequately both current management conditions and the Tribe's preferred alternative. In evaluation of the environmental effects of each of the alternatives, NPS relies impermissibly, and then analyzes, stale data and incomplete and outdated information.

Current tribal management and activity levels in the Canyon, especially in the Lower Gorge below Diamond Creek, are not portrayed accurately in the Administrative Draft. The Administrative Draft purports to rely on "numbers used for the current condition alternative were based on statistics for 2003 provided by the Hualapai Tribe." Administrative Draft at 77. The Tribe provides the following information from 2004 regarding current conditions that are quite different from 2003.

The "No Action" Alternative 1 analyzed in the Administrative Draft presents an inaccurate depiction of current management and tribal uses of the Colorado River, particularly

in the Lower Gorge below Diamond Creek. Alternative 1 does not accurately reflect the dramatic increase in tribally-authorized tourism below Diamond Creek that has occurred since CRMP revisions began. NPS failed to conduct its independent duty to collect new information to portray accurately existing management conditions throughout the Canyon, and especially in the Lower Gorge, where the Tribe has more recent activity data for 2004.

NPS should replace its Table, "Summary of Use - Alternative 1 (No Action)" on page 78 of the Administrative Draft, and throughout the EIS, with the following:

Diamond Creek Launches					
(Group Size, Including Guides)					
Noncommercial Trips	HRR Trips	Day Trips	Overnight Trips	Available Campsites	Boat Passengers*
Maximum of 2 trips per day, up to 19 people per trip.	Multiple trips per day, up to 120 people per day.	Average of 3 trips per month, up to 34 people per trip.	15	482	Unlimited from Lake Mead below Separation Canyon. Tribally-authorized jet boat operations below Diamond Creek.

- This figure represents the highest number of daily boat passengers that occurred in 2004.

11. The Draft EIS Violates the Terms of the Settlement Agreement.

The Tribe acknowledges that NPS has attempted to prepare the CRMP in accordance with a Settlement Agreement that resulted in the Stipulated Dismissal in the action: *Grand Canyon Private Boaters Association v. Alston*, CV-00-1277-PCT-PGR-TSZ (D. Ariz. Filed Feb. 2, 2002) (Settlement Agreement). Section 5 of the Settlement Agreement pertains partially to how NPS will carry out the CRMP planning process in a manner that fully respects the sovereignty, rights, and interests of the Hualapai Nation.

Section 5 of the Settlement Agreement states:

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Nothing in this Agreement is intended to affect the Parties' obligations to comply with the applicable laws of the Hualapai Indian Tribe. Furthermore, nothing in this Agreement is intended to affect the rights of the Hualapai Indian Tribe or the Parties' obligations with respect to any permits that may be required on the Hualapai Indian Reservation.

Settlement Agreement at 6.

As described throughout this comment letter, the Administrative Draft fails in almost every occasion to recognize fully, and not otherwise attempt to alter the Hualapai Tribe's sovereignty, rights, interests, and authority over tribal lands, cultural properties, treaty rights, water rights and other trust resources. The Tribe's corrected Proposed Action and Preferred Alternative will identify a process that better will protect tribal rights by allowing the NPS to accomplish its own mandates.

Section 5 of the Settlement Agreement states:

The Federal Defendants will respect the intergovernmental agreements between the National Park Service and the Hualapai Indian Tribe concerning the Area of Cooperation . . . Federal Defendants will exercise their best efforts to incorporate into the CRMP planning process the ongoing negotiations of consultations . . . and to incorporate into the CRMP itself the results of those negotiations and consultations.

Settlement Agreement at 6.

The Tribe's Proposed Action and Preferred Alternative best complies with the Settlement Agreement.

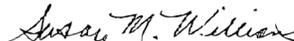
Conclusion

The Administrative Draft EIS violates NEPA's requirement to analyze a reasonable range of alternatives, take a hard look at the proposed action, and disclose accurately the Hualapai Tribe's Preferred Alternative. The Hualapai Tribe's Preferred Alternative will be submitted to NPS tomorrow. Thank you for your consideration of these comments.

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Williams & Works, P.A.

Sincerely,

Williams & Works, P.A.

  
Susan M. Williams

Charles Vaughn, Chairman, Hualapai Tribal Council  
Joe Alston, Supervisor, Grand Canyon National Park  
Rob Eaton, Field Solicitor, Department of the Interior

### Hualapai Tribe's Proposed Action and Preferred Alternative

In keeping with the letter and the spirit of the Memorandum of Understanding entered into by and among the National Park Service ("NPS"), Lake Mead National Recreation Area ("LMRA"), and the Hualapai Tribe (the "Tribe") on October 11, 2000, the Hualapai Tribe requests that the following proposed action and preferred alternative be included and evaluated as part of the Environmental Impact Statement for the Colorado River Management Plan:

1. Determination of Safe Load Capacity. Safe Load Capacity and use of the River by all parties within the Area of Cooperation shall be determined through a collaborative process among NPS, LMRA, and the Tribe that takes into consideration the following factors:

- a. the economic needs of the Tribe;
- b. natural resource protection;
- c. cultural resource protection;
- d. the duration of the average trip launching from or below Diamond Creek;
- e. the types of boats used;
- f. the qualifications and training of boat operators;
- g. the level of NPS-permitted activities continuing below Diamond Creek.

2. Minimum Safe Load Capacity. The Safe Load Capacity allocated for tribal boating activities within the Area of Cooperation shall always allow tribal boating activities in an amount that is equal to or greater than the amount of time allocated for use of the Colorado River by non-Indians.

3. Initial Expert Report On Safe Load Capacity. The Tribe shall prepare a report by a qualified expert that draws a conclusion regarding the Safe Load Capacity within the Area of Cooperation based upon a comprehensive evaluation of the seven factors listed above. Unless NPS disagrees with this expert report, the conclusion of the report shall be relied upon by all

parties as the Safe Load Capacity within the Area of Cooperation.

4. Additional Expert Report By NPS. In the event that NPS disagrees with the initial expert report described above, NPS shall prepare a second report by a qualified expert that draws a conclusion regarding the Safe Load Capacity within the Area of Cooperation based upon a comprehensive evaluation of the seven factors listed above. If this second expert report is in conflict with the first expert report, then the two experts shall conference on the differences in an attempt to present all parties with a joint expert opinion that draws a conclusion regarding the Safe Load Capacity within the Area of Cooperation based upon a comprehensive evaluation of the seven factors listed above.

5. Qualification of Experts. Experts retained by the parties for purposes of determining the Safe Load Capacity within the Area of Cooperation shall be qualified in the following areas:

- a. economic analysis;
- b. governmental relations between the federal government and Indian tribes;
- c. natural resource protection;
- d. cultural preservation;
- e. safe boating standards; and
- f. best business practices within the tourism and boating industry.

6. Resolution of Impasse. If either NPS or the Tribe chooses to disagree with the Joint Expert Report, the parties shall resolve their impasse under the dispute resolution procedures for the Area of Cooperation Arbitration Board.

7. Area of Cooperation Arbitration Board. The Area of Cooperation Arbitration Board (ACAB) will serve as the forum for settling disputes between the parties, including, but not limited to: Safe Load Capacity, development and implementation of joint regulations to govern boating operations within the Area of Cooperation, and enforcement of joint regulations to govern boating operations within the Area of Cooperation. The ACAB shall be comprised of three (3) arbitrators, one to be

selected by the Tribe, one selected by NPS, and the third arbitrator shall be selected by the first two arbitrators. The arbitrators shall jointly develop and adopt regulations to govern the process for resolution of disputes brought before the ACAB, which shall be approved by all parties before taking effect.

8. Implementation of Joint Regulations Within the Area of Cooperation. The parties shall work together in the following collaborative process to develop and implement joint regulations to govern recreational boating activities within the Area of Cooperation:

- a. Either party may request the other party to consider adoption of specific regulations governing health and safety for boating operations.
- b. For NPS requests to the Tribe, NPS shall furnish the Tribe with copies of the federal regulations that NPS wishes to jointly implement within the Area of Cooperation, as well as a description of how NPS enforces such regulation against non-Indians operating on the Colorado River. NPS shall not request the inclusion or enforcement of federal regulations within the Area of Cooperation that are not enforced by NPS against non-Indian boaters operating on the Colorado River.
- c. For tribal requests to NPS, the Tribe shall furnish NPS with the specific language and tribal regulation, as well as a description of how such regulation is necessary to protect the health and safety, natural resources, cultural resources and/or the economic and social well-being of the Tribe.
- d. In the event that NPS and the Tribe do not agree on which regulations should be included within the joint regulations to govern boating operations within the Area of Cooperation, the parties shall submit their dispute to the ACAB for resolution.

9. Enforcement of Joint Regulations To Govern Boating Operations Within the Area of Cooperation. The parties shall enforce joint regulations to govern boating operations within the Area of Cooperation as follows:

- a. Each party shall give written notice to the other party of an alleged violation.
- b. The parties shall first meet and confer to resolve or enforce the alleged violation.
- c. If, after good faith efforts to meet and confer to resolve the alleged violation the parties still disagree about the proper enforcement action, the parties shall submit their disagreement to the ACAB for resolution.

10. NPS Issuance of an Indian Preference Concessionaire Contract. NPS shall make available at least one concessionaire contract for boating operations on the Colorado River that fully and fairly applies Indian Preference in accordance with federal law, for purposes of conducting a whitewater boating operation launching from Lee's Ferry. This Indian Preference Concessionaire contract shall include an allocation of user days that is equal to or greater than the average number of user days allocated to each of the NPS concessionaires that were contracted without the use of the Indian Preference requirements of federal law.

11. Docks Within the Area of Cooperation. The Tribe shall develop and maintain at least two docks within the Area of Cooperation to safely accommodate boating activity. Should NPS disagree with the development and management of docks by the Tribe, NPS shall deliver written notice to the Tribe that explains the safety concerns of NPS. The parties shall then meet and confer in good faith in order to find a mutually agreeable plan for safe and adequate dock development and maintenance. Should the parties fail to reach a mutually agreeable plan, then the dispute shall be submitted for resolution to the ACAB.

12. Collection of Tribal Fee by NPS. NPS shall collect the Tribal Permit Fee from each person who launches at Lee's Ferry with a permit that allows travel into the Area of Cooperation, and shall remit such fee to the Hualapai Tribal Council on a monthly basis. The amount of this fee shall be set initially at \$100 per person, and is subject to change from time to time by the Hualapai Tribal Council. In the event that the parties have difficulties or disagreements regarding the collection of this fee, the parties shall submit their dispute(s) for resolution to the ACAB. This fee is separate from the fee the Tribe collects from every boating passenger who takes out at Diamond Creek on the Hualapai Reservation.

**HUALAPAI TRIBAL COUNCIL  
RESOLUTION NO. 73-2005  
OF THE GOVERNING BODY OF THE  
HUALAPAI TRIBE OF THE HUALAPAI RESERVATION**

(Hualapai Tribe's Proposed Action and Preferred Alternative Regarding the National Park Service's Colorado River Management Plan)

**WHEREAS**, the Hualapai Tribe has resided in the Grand Canyon and surrounding areas since time immemorial; and

**WHEREAS**, by Executive Order, dated January 4, 1883, the Hualapai Reservation was set aside with a northern 108-mile boundary "on" and "along" the Colorado River. Exec. Order of Jan. 4, 1883, reprinted in 1 Charles Kappler, Indian Affairs: Laws and Treaties 804 (1904); and

**WHEREAS**, the Hualapai Tribe has senior federal reserved water rights to the diversion and use of water flows in the Colorado River - in sufficient quantity to meet and satisfy the homeland needs of the Hualapai people for all time; and

**WHEREAS**, the National Park Service (NPS) has a trust responsibility to protect the Hualapai Tribe's reserved water rights and other trust assets, and is required to work with the Tribe on a government-to-government basis; and

**WHEREAS**, under Hualapai Tribal Council Resolution No. 78-2000, the Hualapai Tribe entered into a Memorandum of Understanding (MOU) with the Grand Canyon National Park and Lake Mead National Recreation Area in October 2000 to manage activities cooperatively and enhance tribal economic development in the Area of Cooperation (RM 164.5 - RM 273.5); and

**WHEREAS**, resolving disputes through a cooperative process is preferable to litigation; and

**WHEREAS**, the goals of the cooperative process include development of mutually agreeable determinations of the following: 1) safe load capacity for boating operations within the Area of Cooperation; 2) joint regulations governing boating operations within the Area of Cooperation; 3) enforcement of joint regulations governing boating operations within the Area of Cooperation; and, 4) fair and reasonable dispute resolution processes to further the cooperative efforts of the parties.

**WHEREAS**, during the cooperative process, the Tribe developed serious concerns that NPS was using the processes of preparing an environmental impact statement (EIS) for the Colorado River Management Plan (CRMP) to propose radical new limitations on tribal economic development within the Hualapai traditional homelands without meaningful consultation with the Tribe, and without regard for the economic and social well-being of the Tribe; and

**WHEREAS**, due to this perception of unilateral, divisive action by NPS and due to communication breakdowns in the cooperative process, nothing in the Administrative Draft EIS

for the CRMP accurately reflects the Proposed Action and Preferred Alternative of the Hualapai Tribe.

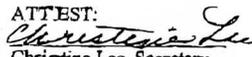
**NOW, THEREFORE BE IT RESOLVED**, that the Hualapai Tribal Council approves and ratifies the attached, "Hualapai Tribe's Proposed Action and Preferred Alternative."

**NOW, THEREFORE BE IT FURTHER RESOLVED**, that the Hualapai Tribal Council authorizes the Chairman to transmit the Tribe's Preferred Alternative to NPS.

**CERTIFICATION**

I, the undersigned as Chairman of the Hualapai Tribal Council hereby certify that the Hualapai Tribal Council of the Hualapai Tribe is composed of nine (9) members of whom 8 constituting a quorum were present at a Council Meeting duly called, held on this 12th day of October, 2005; and that the foregoing resolution was duly adopted by a vote of 7 in favor, 0 opposed, 0 not voting, 2 excused pursuant to authority of Article V, Section (a) of the Constitution of the Hualapai Tribe approved March 13, 1991.

  
Charles Vaughn, Chairman  
Hualapai Tribal Council

ATTEST:  
  
Christine Lee, Secretary  
Hualapai Tribal Council



**THE  
NAVAJO  
NATION**

**JOE SHIRLEY, JR.**  
PRESIDENT

**FRANK J. DAYISH, JR.**  
VICE-PRESIDENT

October 10, 2005

J. Grace Ellis, Cultural Resource Specialist  
Grand Canyon National Park  
823 N. San Francisco St. Suite B  
Flagstaff, Arizona 86001  
[grace\\_ellis@nps.gov](mailto:grace_ellis@nps.gov)

Subject: Grand Canyon National Park Cultural Resources Management Plan.

Dear Mrs. Ellis:

The Historic Preservation Department - Traditional Culture Program (HPD - TCP) has reviewed the Draft Environmental Impact Statement - Colorado River Management Plan, Grand Canyon National Park. The following are the concerns and recommendations of the Navajo Nation concerning the Management Plan.

First, it should be mentioned in the introduction the special relationship the Park has with the Hualapai Tribe and the Navajo Nation. The Park is located in the Aboriginal use area of the two tribes. These boundaries are in dispute and currently under negotiations with the Federal Government.

Second, on page 103: the Navajo Nation reserves the right to develop its portion of the Grand Canyon (Colorado River, Marble Canyon, and the Little Colorado River Gorge). We have been allocating (internally) for a full-river concession contract with the Grand Canyon National Park.

Third, on page 159 under Cultural Overview (second paragraph) it is written "As documented by written records, the historic period (starting with European contact in 1540) witnessed the Navajo arrival and ongoing American Indian use, which included shelter, farming, hunting, gathering of plant, and mineral resources, ritual, and refuge." This is not accurate. The reason Navajo people have been using the Grand Canyon is because some clans originated in the corridors of the Canyon. We have ceremonial Oral History in Grand Canyon such as the Night Way, and the Water Way which were handed down since pre-historic times. They didn't arrive there for protection and/or as refugees. The Canyon is a part of the Aboriginal use area of the Navajo people. Please refer to the Navajo Nation Historic Preservation Department's publication ["Bits'is Ninéézi - The River of Never Ending Life: Navajo History and Cultural Resources of the Grand Canyon and the Colorado River" by Roberts, A. and Richard M. Begay

and Klara Kelley. Specific Cultural information can be found on pages 23 - 28 of the publication.]

Forth, on page 161 under Traditional Cultural Properties and Ethnographic Resources paragraph 2 - last three sentences on the page it reads similar to part 3 above. Navajos did not arrive to the area; they originated in the Canyon. Please refer to the Navajo Nation Historic Preservation Department's publication (Roberts. 1995. Pp. 23-28).

Fifth, on page 162 under Cultural Landscape - last paragraph (six sentences down), it reads "traditional connections". This is also not accurate. It should read "...pre-historic traditional and cultural uses..."

Finally, on page 214 under Adjacent Lands and Jurisdictions, Navajo Indian Reservation: it should read "78 miles from Glen Canyon Dam to the Little Colorado River is a part of the Aboriginal use area of the Navajo people. Therefore, the boundary of the Navajo Nation/Grand Canyon National Park is the middle of the river."

The above recommendations and corrections shall be included in the final draft of the Grand Canyon National Park Cultural Resources Management Plan. Furthermore, if there is question regarding the Navajo Nation's traditional cultural affiliations refer to the Navajo Nation Historic Preservation Department's publication (Roberts. 1995. Pp. 23-28).

In conclusion, the HPD-TCP appreciates the consultation efforts of the Grand Canyon National Park pursuant to 36 CFR Pt. 800.1 (c)(2)(iii). Should you have questions or concerns, do not hesitate to contact me at (928) 871-7143, Mr. Tony Joe at (928) 871-7750 or the address printed at the bottom of page 1.

Sincerely,

Marklyn Chee, Cultural Specialist (Section 106 Representative)  
[marklynchee@navajo.org](mailto:marklynchee@navajo.org)

TCP 06-040  
cc: Arvin Trujillo, Executive Director, Division of Natural Resources, Alan Downer, Program Manager III, Historic Preservation Department, and Tony Joe, Program Manager, TCP.  
Attachments and Reference cited: Bits'is Ninéézi - The River of Never Ending Life: Navajo History and Cultural Resources of the Grand Canyon and the Colorado River" by Roberts, A. and Richard M. Begay, and Klara Kelley.



THE NAVAJO NATION  
PARKS & RECREATION  
DEPARTMENT

Ray Russell  
Department Director

ADMINISTRATION

POST OFFICE BOX 2520

WINDOW ROCK

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## THE NAVAJO NATION

Joe Shirley, Jr.  
President

Frank Dayish, Jr.  
Vice-President



September 29, 2005

### Navajo Parks and Recreation Department, Division of Natural Resource, The Navajo Nation's Response to the Colorado River Management Plan Within the Grand Canyon National Park

The Navajo Nation is a neighbor on the eastern boundary of the Grand Canyon National Park and has a great interest in the proposed revised Colorado River Management Plan as to the impact it may have on our economic opportunities that relates to tourism development. The enclosed map outlines two Tribal parks, The Little Colorado River Navajo Tribal Park established in March 27, 1962 and Marble Canyon Navajo Tribal Park established in August 1, 1964. Both parks have been established to preserve, protect and conserve these properties as an endowment for future generations to view the geologic formations, botanical resources of this scenic area. The development of access to view these are proceeding very carefully as our cultural history also determines sacred site, plants as it relates to commercial development.

Currently the Navajo Parks and Recreation Department have the responsibility to oversee and manage eight of these parks with a limited budget and limited long-term financial resources. We would like to emphasize that over the long term we will eventually finish the necessary tasks to make these parks an enjoyable experience for tribal members as well as visiting tourist.

Several concerns that we have as it relates to living next to the National Park boundary. First is statements made in past by congressional leader as it relates to the passage of Grand Canyon Enlargement Act of 1975. When Senator Barry Goldwater spoke on behalf of the legislation that would create the enlargement of the park, he stated that the Navajo Nation agreed with the concept. A check with Tribal leaders, council legislative members, Navajo tribal park officials at the time in the 1970s revealed no such conversation with Senator Goldwater of the official position on this matter, yet he stated in the Congressional Record that the Navajo tribal government was in agreement with the proposed item. Many instances have become known where congressional leaders took license in presupposing our Native American stance without actually asking us the questions. These past practices have caused us irreparable harm and over regulation by federal agencies and locked us out of the full use of our land and resources.

As Native American tribal governments begin developing their sovereign duties, many issues become known and collection of use fees by visitors is one. Our contention is that fees generated by rafting, camping collected by the

National Park Service that run the length of our western borders should be shared with our nation as a means to help defray expenses in taking care of the activities in and around the Navajo Nation side of the Colorado River banks. Any monies to repair this area that come through federal appropriation should also be shared to maintain the general area of use by river travelers and tourist that travel through the area.

This is especially true from the confluence of the Little Colorado River and the Colorado River where are concern is the use by river running companies to take side trips into the Little Colorado River. Again, our park rangers are not collecting fees as the payments and launching sites are under the National Park System.

We appreciate the invitation to comment on the Colorado River Management Plan and consider your government operation a good neighbor, but we also like to bring these issues to your attention.

LAWRENCE MORGAN - SPEAKER OF THE  
NAVAJO NATION COUNCIL

EVELYN J. ACOTHLEY  
COUNCIL DELEGATE

DUANE B. TSINIGINE  
COUNCIL DELEGATE

CARL BIGHORSE  
GRAZING COMMITTEE



## CAMERON CHAPTER

JACK COLORADO  
CHAPTER PRESIDENT

TEDDY BEDONIE  
CHAPTER VICE-PRESIDENT

LOUISE KERLEY  
SECRETARY/TREASURER

RAYOLA J. WERITO  
COMMUNITY SERVICE  
COORDINATOR

October 11, 2005

Grand Canyon National Park:

Cameron Chapter appreciates the opportunity to submit our comments to the Colorado River Management Plan EIS. Representatives have already met with Teddy Bedonie, Cameron Chapter Vice-President, and he strongly expressed his views on assistance or opportunity for a joint venture that will enable Navajo Entrepreneurs to establish businesses to take tourist down the Grand Canyon.

In addition, Cameron Chapter is finishing up our Land Use Plan under the Community Land Use Planning Committee that is striving for Certification in May of 2006. We are also completing our Five Management System Policies and Procedures which is required under the Navajo Nation Law of Title 26, our Certification date is also for May of 2006. Our operating plans will enable us to be a full functioning government entity under the Navajo Nation, with the ability to enter into Memorandum of Understandings, Memorandum of Agreements, etc., with outside entities (and governments). We plan to develop revenue generating activities that will sustain us in the future, and as Cameron Chapter is adjacent to Grand Canyon National Park, we look forward to a positive working relationship.

Cameron Chapter's goal is to increase people's presence in the Park and in the Canyon, thru employment with those who are presently doing business or partner to utilize resources to develop these opportunities.

Within the Park boundary is our traditional use areas and continued access needs to be ensured, whether for plant collection, ceremonial sites, etc.

Please include this as Cameron Chapter's comment for the Colorado River Management Plan. If you have any questions, please feel free to call me at (928) 679-2323 or 679-2404. Thank you.

Sincerely,

A handwritten signature in cursive script, appearing to read "Rayola J. Werito".

Rayola J. Werito, Community Services Coordinator  
Cameron Chapter

Cc: Jack Colorado, Cameron Chapter President  
Teddy Bedonie, Cameron Chapter President  
Mae Franklin, Forest Service Liaison  
FILE



**White Mountain Apache Tribe  
EXECUTIVE OFFICE OF THE CHAIRMAN**

Dallas Massey, Sr., Chairman

December 13, 2004

Joseph F. Alston, Superintendent  
Grand Canyon National Park  
PO Box 129  
Grand Canyon, Arizona 86023

Dear Mr. Alston:

The White Mountain Apache Tribe gratefully acknowledges receipt of the October 2004 Draft Environmental Impact Statement for the Colorado River Management Plan (CRMPEIS) and the opportunity to continue to assist the National Park Service (NPS) in managing Grand Canyon. Our comments on the draft CRMPEIS are a product of the September 27, 2004 meeting held with members of our respective staffs and representatives of the San Carlos Apache Tribe and the Yavapai-Apache Nation held at Fort Apache, on the Apache elders' perspectives on the cultural importance of Grand Canyon, and on our interpretations of NPS responsibilities to protect Grand Canyon as a national treasure and Native American sacred site.

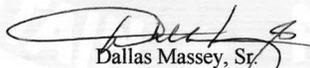
The theme that unifies our comments is the Apache elders' view that Grand Canyon is an inherently powerful, dangerous, seldom visited and difficult-to-access place. NPS policies and plans should embrace this clear and prevailing truth, rather than seeking to alter it.

In terms of the CRMPEIS, this truth and the Apache perspective on it indicates a NPS mandate to manage Grand Canyon, especially including the Colorado River corridor, as a wilderness. The By proposing to allow intrusive and inappropriate numbers of boaters and motors, the CRMPEIS's Preferred Alternative fails to protect the unique natural, cultural, and experiential values of the Colorado River in Grand Canyon. We regard continued power boat use on the river as inconsistent with the NPS obligation to protect Grand Canyon as a wilderness and, pursuant to Executive Order 13007, as a Native American sacred site.

The only alternatives in full accord with Apache cultural perspectives and our interpretation of pertinent federal authorities are Alternatives B and C. Please select B or C or otherwise plan to eliminate motors.

We look forward to continuing work to preserve historic properties and other heritage resources.

Sincerely,



Dallas Massey, Sr.  
Tribal Chairman

cc. Ramon Riley  
THPO  
Vincent Randall, POB 21, Clarkdale, AZ 86323  
Vernelda Grant, Archaeologist, SCAT, PO Box 0, San Carlos, AZ 85550  
P. O. Box 1150 • Whiteriver, Arizona 85941  
Telephone: (928) 338-1560 • Facsimile (928) 338-1514



THE STATE OF ARIZONA  
**GAME AND FISH DEPARTMENT**

2221 WEST GREENWAY ROAD, PHOENIX, AZ 85023-4399  
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 Grand Canyon National Park  
 January 31, 2005  
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January 31, 2005

Joseph Alston  
 Superintendent  
 CRMP Project  
 Grand Canyon National Park  
 P.O. Box 129  
 Grand Canyon, AZ 86023

Re: Draft Environmental Impact Statement (DEIS) Colorado River Management Plan, Grand Canyon National Park, National Park Service, October 2004

Dear Mr. Alston:

The Arizona Game and Fish Department (Department) has reviewed the Draft Environmental Impact Statement (DEIS) that the National Park Service (NPS) has prepared for the Colorado River Management Plan. The Department appreciates the opportunity to provide comments to the NPS on this draft document.

**Alternatives that Include No-Motor Months:**

The expansion of no-motor months will affect adaptive management experiments and science activities (mechanical control of trout through 2006). The Department has work scheduled to take place from July through September, and January through March. Mechanical control work requires motor boats, so an exception for scientific activities will need to be considered. Additionally, no-motor months will impact the Department's fish core-monitoring activities if they extend through February.

**Non-Native Fish Recreation:**

The NPS should explore alternatives that would actively encourage the recreational harvest of trout in the Colorado River in the Grand Canyon by anglers as a partnership in conservation. Page 488, Cumulative Impacts, states that impacts on native fishes from angling are caused primarily by backcountry users in the Marble Canyon area and near Bright Angel Creek. In the past, the Department has suggested that NPS encourage recreational fishing to take advantage of the recreational opportunities provided in the river corridor, as well as providing some potential benefit to native fishes. Although there is the potential to catch humpback chub, if angling is restricted near the mouth of the Little Colorado River the impact should be minimal. The Department recommends NPS consider allowing outfitters to advertise fishing trips and using recreational fishing as a way to reduce non-native densities.

The Department recommends deleting the reference to an Arizona state "non-native" fishing license (page 173). Fishing licenses issued do not specify native or non-native fishes. There also

should be mention that Tapeats Creek, Clear Creek and Bright Angel Creek are popular recreational fisheries that have been managed as recreational fisheries for decades. Also, as stated on page 147, efforts by the NPS and the Grand Canyon Monitoring and Research Center (GCMRC) are currently underway to reduce trout population densities at selected Grand Canyon sites to relieve predation and competitive pressures on the endangered humpback chub and other native fishes. The Department recommends that NPS make it clear if management of recreational fisheries is proposed to be eliminated or altered in any way. NPS should continue coordination efforts with the Department regarding fish closures so that the Department can facilitate management and notification to the recreation angler through our fishing regulations.

Additionally, a description regarding NPS and GCMRC management activities that are being utilized to reduce non-native pressure requires further explanation. This effort is more accurately characterized as an experiment within the Glen Canyon Dam Adaptive Management Program and not currently considered a management activity (page 147 and 151).

**Humpback Chub section:**

This section on page 518, states that the humpback chub display modified behavior patterns in the Little Colorado River as they are not captured as frequently in the lower 2 kilometers of the reach as they were historically (Minckley 1989, 1990). However, this statement is speculation from grey literature, and there is little evidence to suggest adverse impact to humpback chub from boaters. The author may have been referring to the fact that adult chub "hide" in the shade provided by motorboats parked inside the mouth of the Little Colorado River. The Department has not found additional evidence that recreational use in the Little Colorado River has had an adverse impact on native fishes.

**Threatened and Endangered Species and the Preferred Alternative (Lees Ferry to Diamond Creek):**

To more accurately assess the potential impacts that the preferred alternative may have on threatened and endangered species, we believe a more thorough explanation of why the preferred alternative would be advantageous. The preferred alternative would increase river use between May and August by about 37%, and the mitigation proposed for Southwestern willow flycatchers is to close the breeding areas. This is the peak breeding season for flycatchers and the Department has concerns regarding closure enforcement. The document mentions the closures on page 528, however, NPS should more fully describe how the breeding areas will be closed and enforced.

If closures are to be used, the Department suggests including those areas with territorial birds and not limit closures solely to nesting habitat. There are areas with territorial males and pairs where no nests have been found, and habitat for resident birds needs to be protected. Additionally, the Department recommends including areas that had resident flycatchers within the last 5 years. However, these areas should be surveyed annually and if at the end of the second survey period (when a minimum of two protocol flycatcher surveys have been conducted) and no birds were

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found, then we believe it is acceptable to reopen these areas to day-use until April 15<sup>th</sup> of the following season.

**Threatened and Endangered Species and the Preferred Alternative (Diamond Creek to Lake Mead):**

The Department believes that the Southwestern willow flycatcher occupancy in the reach around RM 262.5 will be negatively impacted as a result of Alternative 5. Additionally, we suggest that any new docks constructed should be placed in areas away from potential flycatcher habitat. The above discussion regarding closures also pertains to this section of the river.

Overall, the Department believes that a decrease in number of individuals in a party with the subsequent increase in trips will have an adverse effect on a larger area of flycatcher habitat. We recommend larger group sizes with less trips resulting in more concentrated impacts in time and area with less frequency.

**Public Safety:**

The preferred NPS alternative would create an overall increase in current annual passenger totals and would likely increase the number of winter launches. In regards to cold water immersion, the possibility and exposure risk to passengers to cold water immersion emergencies may increase, even during summer months. The Department considers this risk to be substantial during warm summer months and extreme during winter months. A person's survivability can be greatly increased by the presence of immediately available "safety" boats to retrieve overboard passengers, proper use and fit of Personal Flotation Devices (PFD), and prompt treatment of hypothermic passengers.

**Restricted Swimming:**

Please provide a rationale for restricting swimming to the lower 300 m of the Little Colorado River, since this restriction may impact commercial river guides and fishery scientists. There is a popular swimming area at approximately 700 m upstream from the mouth, therefore, swimming could be limited to the area below 700 m. Another area preferred by swimmers is approximately 1500 m upstream from the mouth (Jump-off Rock).

**Additional Comments:**

The reference to Little Colorado River spinedace needs to be reevaluated as spinedace are not collected in the park (page 145).

The Department recommends deleting the statement that young fish are found in submerged vegetation (Mueller and Marsh), since this refers to fish in the lower Colorado River and not the Grand Canyon (page 150).

As described on page 32, administrative use is considered an addition to the recreational use allocation described in the alternatives. However, please describe how many additional administrative trips will be allowed and what potential impacts, or cumulative impacts those trips

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would have regarding each alternative. Also, how these administrative trips will be scheduled to minimize impacts to recreations users should be explained further.

Under Assumptions, page 446, please change Arizona Dept. of Fish and Game to the Arizona Game and Fish Dept.

The Department would not consider the California brown pelican a rare winter transient, as indicated on page 516, Table 4-23 and Page 529, Table 4-25. This species should be listed as a rare summer/fall transient.

In regards to the statement that peregrine falcons do not occur in the Grand Canyon during the fall and winter is incorrect, as indicated on page 517, 4<sup>th</sup> paragraph. These falcons are regular fall migrants through the Grand Canyon region and a portion of the population is resident, including throughout the winter.

The Department appreciates the opportunity to provide comments on the DEIS. If we could provide further assistance or comments, please contact Rebecca Davidson, Project Evaluation Program Supervisor, at (602) 789-3602.

Sincerely,



Bob Broscheid  
Habitat Branch Chief

cc: Rebecca Davidson, Project Evaluation Program Supervisor, Habitat Branch  
Rick Miller, Habitat Program Manager, Region II  
Kevin Morgan Habitat Program Manager, Region III  
Larry Riley, Fisheries Branch  
Bill Persons, Research Branch  
Leonard Ordway, Acting Non-Game Branch Chief

AGFD # 10-01-04 (16)

## **CHAPTER 2: SUBSTANTIVE COMMENTS AND RESPONSES**

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## Adjacent Lands

AL1

Impacts from Lees Ferry-Down trips are not analyzed in the Lower Gorge section.

RESPONSE:

Impact analyses for the Lower Gorge incorporated continuation trips from the upper canyon, along with trips originating at Diamond Creek. Carrying capacity, in particular available campsites, figured prominently in those analyses. See Sections 2.5, 2.5.1, and Section 4.1 for discussions of how Lees Ferry-down trips were considered in the development and analysis of alternatives.

Analysis of impacts on adjacent lands for the Lower Gorge alternatives were addressed either in the assumptions and analysis of Lees Ferry alternatives, or in resource-specific analysis of Lower Gorge alternatives as presented in each section of Chapter 4: Environmental Consequences. Because these discussions sufficiently address all identified impacts to adjacent lands specific to Lower Gorge alternatives, a separate analysis of Lower Gorge alternatives is not presented in the Adjacent Lands section.

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AL2

Grand Canyon Monitoring and Research Center should not be held to higher standards than other river users and should be given priority in trip scheduling.

RESPONSE:

They are held to the same standard as commercial river operators, which is appropriate. As agents of the federal government, Grand Canyon Monitoring and Research Center should be held to a high standard as they set the standards for others. Because of the critical nature of the work they perform, NPS requires nothing more of them than it does for other public users. NPS is flexible with their scheduling and schedule administrative trips so they will cause as little impact to recreational users and the resources of the river corridor as possible.

---

AL3

Trip lengths in the Lower Gorge should be justified, with an explanation of how they relate to carrying capacity and resources.

RESPONSE:

Please see Chapter 2, Criteria for Developing Alternatives.

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AL4

Impacts to take-outs, take-out operations, and downstream beaches and resources from Whitmore restrictions (in Alternative H) are not adequately analyzed.

RESPONSE:

See modified text in Chapter 4, impact analyses. These impacts are addressed in the analysis and are reduced in the Modified Preferred Alternative H.

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AL5

Bar 10 Ranch may not wish to accommodate 2,500 hike in/hike out passengers proposed in Alternative H.

RESPONSE:

The modifications to the preferred alternative address this issue.

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AL6

Limits on jet boat pick-up numbers don't seem to account for the increase in use below Whitmore (Alternative H).

RESPONSE:

The Modified Preferred Alternative H reduces additional passengers entering at Whitmore from Alternative H in the *DEIS*. Additionally, with the elimination of peaks in use (from reductions in group size, trip lengths and the implementation of a launch schedule) scheduling 4 pick ups a day should still accommodate all trips. NPS will monitor use levels and impacts to take-out and deal with conflicts or unacceptable impacts through the adaptive management process.

---

AL7

*Colorado River Management Plan* does not address what would happen if the Hualapai Tribe closed the Diamond Creek road, or if access was restricted at Little Colorado River or Havasu Creek.

RESPONSE:

The NPS presumes the egress at Diamond Creek will remain as it is today, with no changes. If the road should be closed, the NPS will address the situation if the need arises. The mouths of the Little Colorado River and Havasu Creek are within NPS jurisdiction and have no proposed restrictions other than those discussed for the Little Colorado River in Section 2.3.1.

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AL8

The *DEIS* explains that the Hualapai, who own the take-out, have requested that the public not use the landing between certain hours, but the hours, listed in multiple places, are inconsistent.

RESPONSE:

The Hualapai Tribe controls access through the reservation to Diamond Creek. To accommodate the multiple uses that occur at Diamond Creek, the NPS has worked with the tribe to better schedule use. The times were presented inconsistently in the *DEIS*. Based on clarifications provided by the Hualapai Tribe, the time frame is 7-9 am. If this time frame changes in the future, this information will be provided to the public.

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AL9

The NPS and Hualapai Tribe should work together to reshape the shoreline at Diamond Creek. This would make take-outs safer.

## RESPONSE:

Shoreline modifications are not the purview of the NPS or the Tribe. It would require considerable input from the Army Corps of Engineers. Given the flow conditions of the Colorado River, shoreline conditions will always change.

## AL10

Four pick-ups may not be enough, especially when Diamond Creek floods.

## RESPONSE:

See AL6 above; exceptions will be granted by the NPS during emergency situations (such as when Diamond Creek is flooded). Please see modified text in Section 4.1, Assumptions.

## AL11

Until a formal agreement on joint management of the Lower Gorge is made between the NPS and the Hualapai Tribe, NPS should continue in the same mode as the previous management plan and should not adopt any of the alternatives.

## RESPONSE:

The 1989 Colorado River Management Plan included “Interim Management Guidelines” (Appendix F) for activities that occur below Diamond Creek. The guidelines would be reviewed each year until a permanent “Lower Gorge Management Plan” was developed. The permanent Lower Gorge Management Plan was not developed. Because of the increased level and types of use in the Lower Gorge, the NPS determined that those activities were important to include in this planning effort. The NPS, at the request of the Hualapai Tribe, offered the Tribe cooperating agency status to assist with the *Colorado River Management Plan*. The NPS and the Tribe developed Lower Gorge alternatives in the *Colorado River Management Plan*. With the exception of the pontoon boat operations and upriver trips, the Tribe and the Park agreed on the type and level of operations in the Lower Gorge. The Tribe and Park alternatives were evaluated as part of the draft document. Ultimately, the NPS is responsible for managing the river through Grand Canyon National Park.

## AL12

The cumulative impacts section for the Lower Gorge is inadequate since it does not evaluate the extent of planned development for the Grand Canyon West airport. It does not fully evaluate the number of projected flights, the number of tourists expected, the added infrastructure, and the related noise impacts within the park. (*DEIS*, pages 339, 340, 345).

## RESPONSE:

The NPS used all available information on past, present, and foreseeable future activities that may affect the Lower Gorge. The NPS does not manage Grand Canyon West and the information concerning the Hualapai Tribe’s business operations are considered proprietary.

AL13

Upstream travel should be allowed to River Mile (RM) 240.

RESPONSE:

The Modified Preferred Alternative 4 allows upstream travel to RM 240. Please see Section 2.5 for additional details.

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AL14

Could the Hualapai retrofit helicopter egress with a mix of buses at Diamond Creek and mule rides at Whitmore?

RESPONSE:

Diamond Creek road operations are beyond NPS jurisdiction, and the mule operations at Whitmore were evaluated and determined to cause unacceptable levels of impact to both NPS and Bureau of Land Management lands.

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AL15

Can anything be done to maintain takeout/access at Pearce Ferry (Lake Mead)?

RESPONSE:

Lake Mead contracted with Federal Highways to study the cost/feasibility of constructing a road to the river from the old take out at Pearce Ferry. Although they have not made an official decision, they do not plan to extend the road to the river because of expense, and potential unreliability of a road built below full pool in a reservoir.

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AL16

The NPS should consider adding an orientation on resources and campsites at Diamond Creek, but quit charging to land at Diamond Creek.

RESPONSE:

The NPS is developing an educational DVD or website that will be made available to all boaters. The Tribe controls access to the road at Diamond Creek as it crosses the reservation. The NPS has no control over what the tribe charges for access over the Diamond Creek road.

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AL17

Alternative 4 allows the Hualapai Tribe up to three overnight launches per day. This is too many. Only one should be allowed. Travertine Canyon is already one of the most crowded places in the canyon. The plan also says there are 15 campsites. Most trips prefer to camp between Bridge Canyon and Spencer Canyon

because camps below Spencer are much less desirable. There are only nine camps in that stretch and some are small and some are affected by high water in Lake Mead. Competition is already fierce for these camps. Increased use will make that worse even with three new camps for the Hualapai.

The plan also says who will be allowed to up run to Separation. It does not state whether or not power boaters will be able to up run and compete for camps once Lake Mead fills up. Power boaters competing for campsites were once a huge problem and will be again if this plan does not address the problem.

RESPONSE:

NPS recognizes that Travertine Canyon is a popular attraction site that is prone to crowding. For that reason, the preferred alternative limits group sizes to 40 (including guides) in the peak season and 35 in the non-peak season for day trips. Group sizes are limited to 20 (including guides) all year for overnight trips. Under current conditions, over 100 people can be in a single HRR day trip and overnight trips have no group size limit. The NPS and the Hualapai Tribe have agreed that such large group sizes exceed the social and physical carrying capacity of the sites at which these groups stop. Splitting groups into smaller sizes will reduce resource impacts.

The Modified Preferred Alternative H includes trip length restrictions and the reduction of spikes in use from trips launching at Lees Ferry. The NPS believes that these factors will serve to alleviate campsite competition. If monitoring indicates that conditions exceed carrying capacity, the NPS will implement mitigation strategies and/or adjust components of use.

The Modified Preferred Alternative 4 for the Lower Gorge allows upstream travel to Separation Canyon. Jetboat tow-outs are restricted to day use only. Visitors accessing the Lower Gorge from Lake Mead will be allowed to do so, however, under the revised *Colorado River Management Plan*, overnight camping will be required to obtain a Grand Canyon overnight use permit.

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AL18

LOWER GORGE ALTERNATIVES: I would like to see more involvement in the Lower Gorge by Grand Canyon National Park. I agree with Alternative [4] for the Lower Gorge except that there shouldn't be a limit to the number of jetboat pickups or tow outs from Separation Canyon. Regardless of how the Hualapai's want to run their trips in the Lower Gorge they should in no way be allowed to dictate upstream travel by any private citizen or commercial service entity. Separation Canyon has historically been a practical and appropriate transition place between downriver trips and upriver trips. It should remain as the line of demarcation for upstream/downstream travel.

RESPONSE:

The Modified Preferred Alternative 4 allows upstream travel to Separation Canyon.

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AL19

Page 589 of the *DEIS* mentions deadhead rafts because of the difficulty of bringing large trucks down the Diamond Creek road. Perhaps the size of rafts should be regulated such that they could be taken out at Diamond Creek. What are the trade-offs as far as congestion at Diamond Creek versus congestion in the Lower Gorge? Would this have a positive effect and can it be quantified? Certainly such large rafts do have an impact on the character of the river corridor itself.

Page 589–590 states, “In addition, Diamond Creek takeout congestion is likely to increase because of Lake Mead water levels continuing to drop. Because of lower Lake Mead water levels, takeouts on the lake have shifted from Pearce Ferry to South Cove, which adds about 15 miles of travel to trips and discourages use of the lake as a takeout.”

This is not true. Not being able to access Pearce Ferry does increase use of the Diamond Creek takeout but declining lake levels decreases use of the Diamond Creek takeout since the increased current all the way down to a few miles from South Cove makes its use much more feasible. This is much more complicated than indicated and has impacts on both Diamond Creek congestion and congestion in the Lower Gorge.

RESPONSE:

The NPS believes that the reductions in group size and the elimination of spikes in use (through moving to a launch based system) will adequately address the crowding issues at Diamond Creek. Assumptions about changes in use patterns are based on best available data, including trends that have been noted since the drop in Lake Mead water levels. If monitoring indicates that conditions from the implementation of the Modified Preferred Alternative H exceed carrying capacity, the NPS will implement mitigation strategies and/or adjust components of use.

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## Air Quality

### AQ1

Additional mitigation tools to consider implementing include:

- Limits on campfires to address air quality and resource protection concerns,
- Campsite restoration trips, and
- Implementation of smaller and/or faster trips.

What role did concern over campfire use pose in selection of the preferred alternative? The statements regarding campfire use on beach and air quality appear to be short sighted and too narrowly constructed. The fact is that campfire use is controllable and easily mitigated. Campfires can be replaced by requiring clean burning gas camp stoves, the number of fires that visitors make can be regulated, and campfires can be restricted in parts of the canyon that have poor air circulation or turnover. If campfire use played a significant role in a determination of alternative preference, or is likely to play a larger role in future management planning, then the park should prepare to quantitatively research the effects of campfires on the visitor and resource and the park should consider mitigation to reduce measurable impacts.

### RESPONSE:

Campfire emissions were modeled to assess the impact of changing use seasons, but were not a primary criterion for judging alternatives (see the goals and objectives for air quality in the *FEIS* Chapter 4). Their emissions were found to be at negligible levels under all alternatives, and less than 1% of park-wide emissions of the modeled pollutants. Complete elimination of campfires thus would not change any air quality impacts except the localized plumes and odors of wood smoke. However, should campfire emissions prove to be a problem in the future, they could be reduced, either through regulation or education. This option has been added as a potential mitigation measure common to all alternatives.

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### AQ2

Regarding a B/C Alternative mix, some respondents thought there would be a substantial reduction in vehicle emissions that would provide a major beneficial improvement in opportunities to experience clean air in the parks (if motors were removed).

The issues identified during the scoping process for the *Colorado River Management Plan* and the air quality effects analysis for the *DEIS* illustrate that air quality is an important concern in the Colorado River corridor. Several laws and policies governing the NPS recognize that resource conservation takes precedence over visitor recreation. When there is a conflict between resource conservation or visitor enjoyment the NPS seeks to, “avoid or to minimize adverse impacts” (page 8).

Guiding regulations and policies outlined in the *DEIS* demonstrate that the NPS has high standards to uphold concerning air quality in the Grand Canyon and Colorado River corridor. The need to preserve wilderness character and experience also dictate that air quality be maintained in as clean condition as possible since, even short-term air pollution impacts can seriously degrade the wilderness experience. People do not seek a remote, wilderness-type experience in the Grand Canyon river corridor or backcountry with the expectation of breathing fumes from motors and helicopters, even for a short period of time.

The management objective for air quality for the Colorado River Management Plan is “to ensure that exhaust emissions from river recreation-related craft do not degrade ambient air quality or adversely affect

air quality related values, such as visibility, human and ecological health, and cultural resources” (*DEIS*, page 297). The air quality effects analysis demonstrates inarguably that Alternative B provides the best opportunity for the NPS to meet this management objective and protect air quality in the Colorado River corridor.

According to the *DEIS*, by far the primary contribution to degraded air quality in the Colorado River corridor is from motor boats, followed by aircraft and campfires. Motorboats contribute 10% of the park’s total CO emissions, and contribute significantly to producing almost three percent of the park’s total VOC and NOx emissions.

The removal of motorized boats from the river corridor would have a positive impact on air quality. Page 301 of the *DEIS* notes that, “All alternatives would produce some air pollution year-round, although the Lees Ferry alternatives would produce very little during those times when motors were not allowed.” Additional benefits to air quality can be derived from the elimination of helicopter exchanges at Whitmore, especially since aircraft contribute over four percent of the park’s total SO<sub>2</sub> emissions (*DEIS*, Table 4-8, page 304), and from reducing campfire emissions by reducing group sizes, trips and people at one time, daily launches, user-days and probable total yearly passengers (*DEIS*, page 306).

#### RESPONSE:

While it is true that motor emissions are eliminated in Alternatives B and C, these emissions are so low under any Lees Ferry alternative that they are considered negligible (based on emissions) or minor (based on odor and plumes). As pointed out in the text, the changes in river recreation emissions are very unlikely to change overall pollutant exposures. The lack of moderate or major adverse impacts means that air pollutant emissions must be considered within the overall matrix of resource preservation and visitor use objectives for the *Colorado River Management Plan*. Based on these objectives, the NPS believes the Modified Preferred Alternative H does the best job of “avoiding or minimizing adverse impacts” while allowing the widest range of recreational opportunities.

Several commenters noted the percentage contribution of air and watercraft to total park emissions of different pollutants. Due to calculation errors, the values reported in the *DEIS* were incorrect. Corrected emission values were posted to the *Colorado River Management Plan* website during the public comment period and were available at public meetings. Corrected values are also presented and used in Chapter 4 of the *FEIS*. The fact remains that certain sources do contribute a relatively large percentage of total park emissions for some pollutants. This percentage reflects not only the size of the source, but also the low overall emissions from the park as a whole. As noted in the impact analyses, emission changes under some alternatives may change local impacts (odor and plumes), but generally not in overall pollutant exposures (particularly for carbon monoxide and ozone). The NPS considered these impacts in the evaluation process, along with other *Colorado River Management Plan* objectives, in selecting the preferred alternatives.

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#### AQ3

Motors are clean and efficient. To date, there has never been any study done or evidence presented that motorized trips have a negative impact on the resources of Grand Canyon. This was true even when 2-cycle engines were in use. With the advent of 4-cycle technology and Grand Canyon River Outfitters’ voluntary conversion to this technology, this statement has become even truer.

## RESPONSE:

The purpose of the air quality analysis in the EIS is to determine emissions from Colorado River recreation use and the potential impacts of these emissions. The NPS agrees that current motor technology is clean and efficient compared to 2-cycle engines, and the analysis for this EIS found outboard motor emissions to be negligible. However, the NPS does not agree that there has “never been a study done or evidence presented” concerning negative impacts of motorized use. Such use does have a negative impact on some park resources such as wilderness values and natural quiet. All of these factors, as well as public comments on the plan, were considered in selecting the preferred alternative.

## AQ4

Table 2-7 on page 81 of the *DEIS* shows that Alternative 2 has fewer adverse impacts to air quality than the other Lower Gorge alternatives. Some respondents support decreased group sizes, fewer daily launches and the implementation of daily passenger limits launching from Diamond Creek as well as reduced allowable upriver travel. Pontoon boat operations and associated facilities as should be eliminated in the Quartermaster Area and jet skis should be eliminated from the Lower Gorge. These operations and facilities constitute a substantial environmental contamination risk (*DEIS*, page 287).

## RESPONSE:

As noted in the *DEIS* text, personal watercraft (“jet skis”) are not permitted in the park (see *DEIS* page 296). Their use already constitutes a violation of park regulations. The NPS and Hualapai Tribe have established specific management objectives for the Lower Gorge. Modified Alternative 4 best meets all the objectives identified by the NPS and Hualapai collectively (aside from pontoon boat use), recognizing that more than air quality needs to be considered. Hualapai tribal operations in the visitor use area around RM 262.5 create a departure in visitor use levels and resource conditions from the rest of Zone 3. The Quartermaster area is, therefore, considered a node of activity. Modified Alternative 4 meets the natural resource impact topic management objectives on a regional level; however, it does not meet the objectives in the localized two-mile stretch around RM 262.5.

## AQ5

The relationship between the mitigation measures shown on page 302, the actions and related analysis discussed in the mitigation of effects section for each alternative and subsequent declaration regarding the achievement of management objectives is unclear. The Mitigation of Effects discussion on page 302 begins with “Previous mitigation efforts indicate that specific measures can be effective in reducing impacts to air quality, if adequate funding, staffing, monitoring, and implementation of the measures are maintained.” The *DEIS* acknowledges throughout that adequate funding, staffing, etc. are not a given.

The NPS considers a monitoring program with the ability to institute appropriate mitigation measures vital. However, the NPS has made it clear throughout the *DEIS* that such a program is dependent upon funding. In the *Colorado River Management Plan*, the NPS is proposing mitigation that is dependent on monitoring, to actually alter the potential impacts of several alternatives including Alternative H. To be effective, the monitoring has to be included in the *DEIS* and the Record of Decision as a feature of the proposed action that the NPS can reliably implement. Unfortunately a viable effects analysis, comparison of alternatives and selection of a preferred alternative cannot be based on funding that has been unavailable.

Additional mitigation actions common to all Lees Ferry alternatives and Lower Gorge alternatives on the same page actually consist of measuring and monitoring. While the NPS supports monitoring and measurement of air quality, the park should recognize that monitoring and measurement are not mitigation.

The NPS believes that implementation of many of the mitigation measures listed would have a beneficial result in reducing the level of impact to air quality. The NPS should incorporate these “additional” mitigation measures into another level of alternative analysis clearly displaying the possible benefits.

RESPONSE:

The NPS agrees that any mitigation measures identified in the EIS must be funded to be effective. Some mitigation measures include monitoring pollutant levels in the canyon, but the full mitigation measure also includes using these data to work with air quality regulators to address pollution issues. Since most air quality impacts experienced in the Colorado River corridor result from emissions occurring far upwind, these data are essential in dealing with those regulatory agencies to reduce those impacts.

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AQ6

The fact that most of the visibility degradation in the park is attributable to sources outside the park’s and the tribe’s direct influence and control does not remove the NPS’ responsibility to reduce impacts that further contribute to reduced air quality.

RESPONSE:

The NPS agrees, and is working to reduce those impacts within and outside the park.

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AQ7

On page 303, the *DEIS* states the assumption that “Recreational use of the Colorado River will remain at the permitted levels (emissions will not change significantly) over the life of the plan.” This indicates that no changes will be made to recreational use in response to the results of monitoring for at least ten years, regardless of what monitoring may reveal. If this assumption is correct, NPS has an obligation, under its Management Policies to “err on the side of protecting air quality and related values for future generations” (*DEIS*, page 296). In this case, this means choosing a nonmotorized alternative.

RESPONSE:

The wording of this statement was not clear. The intention was to indicate that use levels would be at permitted levels, (i.e., use would not start below permitted levels and grow to permitted levels over a number of years, thus causing emissions to grow from some lower starting point to the modeled emissions). It was not intended to mean that permitted levels themselves would not change in response to adaptive management decisions. A clarifying statement has been added to the text in Section 4.2.3.4.4 of the *FEIS*.

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AQ8

In comparing Alternatives B and H, the effects analysis indicates that Alternative B has the potential for the greatest positive impact on protection of ALL natural resources. The effects analysis in the *DEIS* indicates that Alternative B provides the greatest protection of air quality.

Table 2-4 on page 55 indicates that the effects on human health are beneficial, long-term, and negligible to moderate, versus adverse, negligible regional effects to human health for Alternative H. The same table indicates that Alternative B has a beneficial, negligible reduced contribution to adverse, major regional effects on air quality resources, versus negligible to minor contributions to major, adverse, regional, short and long term impacts for Alternative H.

RESPONSE:

Because of calculation errors, incorrect emission values were used in the *DEIS*. Corrected numbers were posted to the *Colorado River Management Plan* website during the public comment period and were available at public meetings. Corrected values are also used in the Final EIS. While it is true that motor emissions are eliminated in Alternative B, these emissions are so low under any Lees Ferry alternative that their impacts are considered negligible or minor under the analysis criteria used for this plan. As pointed out in the text, the changes in river recreation emissions are very unlikely to change overall pollutant exposures, which drive regional and indirect impacts. So, while Alternative B does provide the greatest protection for air quality, the difference in emissions is negligible. When combined with the other objectives of the *Colorado River Management Plan*, the Modified Preferred Alternative H best meets all of the CRMP management objectives.

AQ10

The analysis of Lower Gorge alternatives, including Figure 4-3 on page 321 of the *DEIS*, clearly shows a significant benefit to air quality from Alternative 2 compared to the other alternatives. This is especially important because emissions under the Lower Gorge alternatives are significantly higher than under the Lees Ferry alternatives. For example, the preferred Lower Gorge Alternative, 4, would contribute almost 20 percent of the park's total CO emissions, over 15 percent of NOx emissions and over seven percent of the park's total SO<sub>2</sub> emissions, all of which constitute a reduction in current emissions. The air quality of the Lower Gorge should not be sacrificed because of a greater public and political tolerance for a variety of motorized activities.

RESPONSE:

Because of calculation errors, faulty emission values were released in the *DEIS*. Corrected numbers were posted to the *Colorado River Management Plan* website during the public comment period and were available at public meetings. Corrected values are also used in the *Final EIS*. Although physical protection of air quality may appear to be best served by Alternative 2, management objectives for the entire *Colorado River Management Plan* are not met by Alternative 2. The NPS and Hualapai Tribe have established specific management objectives for the Lower Gorge. Modified Alternative 4 best meets all the objectives identified by the NPS and Hualapai collectively, recognizing that more than air quality needs to be considered. Hualapai tribal operations in the visitor use area around RM 262.5 create a departure in visitor use levels and resource conditions from the rest of Zone 3. The Quartermaster area is, therefore, considered a node of activity. Modified Alternative 4 meets the natural resource impact topic management objectives on a regional level; however, it does not meet the objectives in the localized two-mile stretch around RM 262.5.

AQ11

Eliminating helicopter exchanges would not decrease the diversity of options available to visitors because other methods of exchange such as hiking and mules could be available without the negative impact to the natural soundscape and air quality. Allowing helicopter exchanges has a negative impact on the air quality

objective, which is ignored in the *DEIS*. The *DEIS* also states that the objective of managing the park in a wild and primitive condition and providing a wilderness river experience is met by decreasing helicopter exchanges from 6,800 passengers to 5,000. There is no doubt that a reduction is an improvement, but permitting hundreds of helicopter trips a year does not constitute meeting that objective. There is no way to mitigate the loss of quiet and the reduction of air quality. The objective of managing the park in a wild and primitive condition and providing a wilderness river experience is not met by this alternative because it allows motor trips.

RESPONSE:

The air quality impacts of helicopter exchanges at Whitmore are addressed in the air quality analysis (see the emission tables presented for each alternative in Chapter 4 of the *FEIS*). While these emissions fall well below the 50-ton per year threshold for negligible impacts, they were considered with other management objectives in determining the preferred alternative. Hiking exchanges are considered under several alternatives, although mule exchanges are not because of biophysical and cultural resource impacts.

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AQ12

Park Management objective for air quality is to “ensure exhaust emissions do not degrade air quality.” Increased commercial motorized launches will increase carbon monoxide emissions. Boats by far create the most polluting emissions in the canyon (page 296).

RESPONSE:

Because of calculation errors, the wrong emission values were released in the *DEIS*. Corrected numbers were posted to the *Colorado River Management Plan* website during the public comment period and were available at public meetings. Corrected values are also used in the Final EIS. The changes in emissions between current conditions (Alternatives A and 1) and the modified preferred alternatives (Modified H and Modified 4) are less than 50 tons per year, and thus “negligible” under this analysis, although carbon monoxide emissions under Modified Alternative 4 are at “minor” impact levels. Cumulative impacts to air quality are not expected to change under these alternatives either. Consequently, although any increase in air pollutants could be considered “degradation” in some sense, the lack of a change in impacts, combined with the need to meet many *Colorado River Management Plan* objectives beyond air quality considerations, has led the NPS to select the preferred alternatives.

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AQ13

The government should provide Grand Canyon National Park a hydrogen gas powered boat that would not pollute the Colorado River.

RESPONSE:

The NPS is a government agency. At this time, hydrogen powered boats have not been developed that are suitable for use on the Colorado River. Untested and hypothetical power sources could not be considered in the analysis (see *DEIS* page 303).

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## AQ15

Air quality impacts are beneficial in Alternative C/J; adverse in the current and preferred alternatives. The differences are dramatic as illustrated in Figure 4-2 (page 304). The only emissions are from winter campfires. Under Alternative C/J “Emissions of all pollutants would be much less than 50 tons per year, making their impacts on human health negligible” (page 308). “Alternative C would not result in the impairment of air quality and related resources in Grand Canyon National Park” (page 310). It “would have the lowest air pollutant emissions of the Lees Ferry alternatives” (page 306).

## RESPONSE:

Because of calculation errors, emission values in the *DEIS* were wrong, and corrected numbers were posted to the *Colorado River Management Plan* website during the public comment period and were available at public meetings. Corrected values are also used in the Final EIS. While it is true that motor emissions are eliminated in Alternative C (there is no Alternative J), emissions are so low under any Lees Ferry alternative that their direct impacts are considered negligible or minor. As pointed out in the text, the changes in river recreation emissions are very unlikely to change overall pollutant exposures. The lack of moderate or major adverse impacts means that air pollutant emissions must be considered within the overall matrix of resource preservation and visitor use objectives for the *Colorado River Management Plan*. Based on these objectives, the NPS believes Modified Preferred Alternative H does the best job of “avoiding or minimizing adverse impacts” while allowing the widest range of recreational opportunities.

## Allocation

A1

The NPS must lawfully grant all applicants equality of treatment in reserving space on the river, without discrimination and allocations must be adjusted to current demand in its division of space and cannot be arbitrary. This system must be fair to all users. This should also include camping allocation.

RESPONSE:

Equal access depends upon the measure of use. While some believe that passengers per year should be the primary measure for allocation, others believe that user-days or launches per year should be the primary measure. The EIS considers a full range of alternatives, including allocation scenarios that reduce disparity for the various measurements of use. The NPS believes that the Modified Preferred Alternative H meets the standards of fairness (by providing for an approximately 50/50 allocation of user days between commercial and non-commercial users) and provides for a range of experience for a variety of park visitors and best meets management objectives for the CRMP.

A2

The NPS is legally mandated to limit commercial services to those that are necessary and appropriate. An analysis of what type and amount of commercial services are “necessary and appropriate” should be included in the EIS.

Some respondents said they support 70% noncommercial and 30% commercial allocation, with say a three-year transition period, while others suggested reducing the number of commercial launch spots 20% to allow the operators to increase their price 20% and their profits would remain unchanged. This would have the most impact on the waiting period.

More permits should be given to noncommercial boaters, do not increase commercial permits. Instead of shifting some access allocation away from the commercial outfitters to address unmet noncommercial/ self-guided demand, NPS proposes a continuation of this longstanding inequity. In Alternative H, the NPS provides access for 19,834 commercial passengers and only 6,482 noncommercial/self-guided passengers. This ratio is even more lopsided in the more desirable summer season (longer days, better weather) with 15,862 commercial passengers getting to float the canyon to only 2,270 noncommercial/self-guided passengers.

Another respondent suggested that another option of transferring commercial use to private use is that when commercial outfitters are up for sale, the outfitter be bought out and the use assigned to the private sector. This buy out could be by the NPS or Interior, or by a fund established by private use fees.

RESPONSE:

The Final EIS on the *Colorado River Management Plan* determines the types and levels of commercial services that are necessary and appropriate for the Colorado River through Grand Canyon National Park. (see additional text in Section 1.6)

The Modified Preferred Alternative H provides for a range of experience for a variety of park visitors, and the NPS believes it best meets the needs of park resources and visitor experience for the life of this plan.

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P.L. 105-391 and its attendant regulations dictate rates charged by concessionaires on the river. There is no provision in the law or regulations to allow a concessionaire to raise its rates simply to compensate for decreased allocation.

If the NPS determines such services are no longer necessary and appropriate, they must be ended. There is no provision for the NPS to “buy” permits back from those to whom they have been issued. If the service is still considered necessary and appropriate, the NPS will issue a new contract for those services. If the service is no longer determined to be necessary and appropriate by the NPS, no such contract will be issued.

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A3

Current allocations are reasonable and proper. Do not change allocation system or numbers.

RESPONSE:

The NPS believes that Modified Preferred Alternative H would best serve the needs of Grand Canyon National Park and the visiting public over the life of the plan. Although current allocations were deemed appropriate in 1989, this review has shown some changes are necessary to best meet the needs of the park and its users.

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A4

Equalize access/allocation on the basis of numbers of launches and passengers; eliminate allocation formulas based on user-days.

Implement a plan to rapidly move through and retire the present waiting list, transition into a weighted lottery system, and fully address the allocations and impacts of administrative and research uses.

The “user-day” concept of trip measurement unfairly and irrationally prejudices the noncommercial user for purposes of access and opportunity, as the choice of trip type and experience, along with natural conditions, determine the trip length and user-day measurement. A reformed launch-based allocation system equalizing the number of persons (as opposed to user-days) between the user sectors is the only equitable pathway to remedying the long-standing problem of equitable access.

RESPONSE:

Each type of allocation offers advantages and disadvantages. For commercial companies, user-day allocations generally result in faster trips and more passengers. Noncommercial users tend to focus on their launch (i.e. launch limits), not cumulative user-days or cumulative passengers. In the *FEIS* both noncommercial and commercial users are limited by launch schedules, and user-day limits are maintained for commercial companies. Noncommercial use no longer has a user-day limitation.

The *FEIS* has chosen a plan that would transition away from the waitlist within a year. Also please see comment and response in Methods (M#2) regarding allocation and impacts of administrative and research allocations.

A7

Some respondents advocated single boat motorized raft trip as one of the more desired and appreciated river trips offered in Grand Canyon. The data contained in the *Colorado River Management Plan* indicates the demand for single boat trips (Chapter 3 pp. 167). With the current launch scenario our company is permitted to allow 28 individuals to depart Lees Ferry every Thursday, Friday and Saturday. The trip configuration can be two single boat motorized trips with 14 guests on each trip or one two boat motorized trip with 28 guests on the trip. With the launch schedule proposed by the *Colorado River Management Plan* our company would be encouraged to provide only two boat motorized trips per launch. If we offered only a one boat motorized trip we could not fill our allocation and the public would be denied their access. Even if that proves to be the case, the principle and mechanism for enhancing commercial and noncommercial small group launches (respectively) may be able to be incorporated into the final preferred alternative to some degree.

RESPONSE:

The NPS believes that commercial outfitters will continue to be able to offer a range of trip types and sizes under the Modified Preferred Alternative H.

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A8

The plan offers an unjustified short section on non-allocated systems for fair distribution of access.

RESPONSE:

Non-allocated systems for distributing access received an appropriate level of serious consideration. The NPS believes the split-allocation system as outlined in the *FEIS* will work best to meet the needs of the public and the park.

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A9

Why mitigate shifts in allocation at 40%? What is that based on? Why create a system that can only result in significant shift in one direction (i.e., commercial to noncommercial, April through August)?

RESPONSE:

The modified preferred allocation option has several modifications from the Draft EIS, including the elimination of an adjustable split allocation system. The modified preferred allocation option is the no action option (current system), in which recreational river use in Grand Canyon would continue to be allocated between the commercial and noncommercial sectors in a set ratio (albeit a different ratio than is currently set) that will remain the same for the life of the plan. See new text describing the modified preferred allocation option in Chapter 2: Alternatives, and analyzed in Chapter 4: Environmental Consequences—Visitor Use and Experience.

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A10

Some respondents suggest increasing private access in the shoulder season, but think that commercial access should remain unchanged. The plan could be modified by simply providing the private users more

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access in the months of March, April, and also in September and October. The canyon has little use during those months. The commercial public user-days are filled, so the canyon could still accommodate more private use during those months. This is the simplest way to solve the problem. Then leave the commercial allocations and launch days just the same.

RESPONSE:

Noncommercial use has been increased somewhat over *DEIS* levels. Daily launches are probably the most important use measure for measuring impacts to visitor use and experience because launches (or trips) are the “units of use” that have encounters, occupy campsites, or influence the probability of encounters at attraction sites. The daily number of people launching would probably provide similar information because the number of trips and people are highly correlated (the correlation in the 1975 study was 0.94), but launches are easier to track.

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A11

Why would the park increase private allocation? If they do not currently use all of their launches, why would the park increase their allocation at all?

RESPONSE:

At present the noncommercial user-day allocation is consistently and fully used. (See CRMP/*FEIS* data at <http://www.nps.gov/grca/crmp/documents/stats/1998-2003ByMonth.pdf>) At present noncommercial users are not given an allocation of launches, instead these are controlled and released in a methodical way by the River Permits Office with the goal of ensuring the noncommercial user-day allocation will be fully used. Many thousands of people on the waitlist are waiting to get their chance to schedule a trip.

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A12

The NPS plans on doing a demand study to justify the allocation split between privates and commercials, and to adjust allocation every two years based on this study. The park does not detail how this demand study would work; but, without even having the results of such a study, they have decided first to increase the private sector by 141% and then to do their demand study. Figures on the NPS’ own on-line launch calendar show that in the year 2004 the private boaters had over 270 available launches and only used 241.

RESPONSE:

Please see comment and response in Allocation (A #11). In 2004 noncommercial users used their full allocation of 54,450 user-days plus some.

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A13

Canceled private trips should go back to the allocations pool.

RESPONSE:

The *FEIS* offers a plan for re-releasing cancelled private trips. (See *FEIS* Chapter 2, Noncommercial Permit System Options)

A14

What procedures would be used to reallocate unused commercial launches in March? Some respondents suggest that all unused launches and user-days be allocated to noncommercial trips to reduce the waiting list and some thought they should be allocated to noncommercial trips during the fall and winter seasons. Other respondents thought that reallocation should not be mixed between commercial and noncommercial users.

RESPONSE:

The NPS does not believe that there will be a need to reallocate unused commercial dates in March. Under the Modified Preferred Alternative H, there is no commercial use in March.

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A15

Allocation must protect commercial boaters and provide a fair alternative that does not favor a small specialized few (private boaters). Some respondents believe that the current waitlist gives a false impression of total private demand. The NPS should protect these 16 companies who are doing such an excellent job serving the needs of the public and adding to the State, Regional, and local economies. By allocating a 50/50 allocation division between private and commercial boaters in the park's Preferred Alternative, the park would unfairly favor a small, specialized few.

RESPONSE:

The Modified Preferred Alternative H retains the existing commercial user-day allocation limits. The NPS believes its concessionaires will continue to provide excellent service to the public.

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A17

With regard to the Lower Gorge Section, average the number of user-days and split the months from Alternatives 1, 4 and 5 and be done with this discussion and move on. Why? The differences are minor, minuscule or statistically unimportant.

RESPONSE:

Management of the Lower Gorge is not based on the user-day system. Please see the Modified Preferred Alternative 4.

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A18

Many respondents favor a 50/50 allocation system.

RESPONSE:

Please see comment and response in Allocation (A #1).

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A19

The first objective for allocation of use listed on page 24 is to “address user perception of allocation inequity.” The *DEIS* does not resolve this issue. The recommended alternative makes the allocation inequity worse. The system suffers from not only perceived inequity, but also actual inequity. The NPS appears inflexible and unresponsive to changes in demand between user groups under the current allocation system.” To quote the *DEIS* (page 651), “If a significant number of people affected by the split allocation feel their proportion of the allocation system is unfairly disproportional to their demand, then they would feel the allocation system isn’t fair and doesn’t work.” The allocation system isn’t fair and doesn’t work. The current allocation of user-days is 84% for commercial operators and 16% for noncommercial trips (page 166). None of the action alternatives does anything to even modestly change this unfair allocation. The NPS Preferred Alternative (page 52) allocates 88% of the summer recreational passenger to the commercial operators. The NPS Preferred Alternative (page 52) allocates 75% of the total recreational passengers to commercial operators. This is unacceptable and the NPS should choose another method that better addresses the current allocation inequity. An allocation alternative that fairly splits the use between commercial and recreational boaters would be much better.

RESPONSE:

Please see comment and response in Allocation (A #1).

A21

How would variances in trip lengths be allocated? If there is a variance, how could it be granted to one group and not to another? If it is granted to all groups then what does a “maximum trip length” mean?

RESPONSE:

Since many noncommercial trips will be affected by the new reductions in maximum allowable trip length, it was suggested in the Draft EIS (Chapter 4: Environmental Consequences—Visitor Use and Experience) that mitigation for noncommercial trips might be to allow variances for longer trips with additional stipulations about how they operate and interact with other canyon users. Currently about 10% of all noncommercial trips take trips between 22 and 30-days in length during the non-peak season; therefore it is assumed that only 10% would be affected. Once the CRMP is implemented, the NPS will evaluate the need for variances based upon actual use and resource monitoring data. If there is a demonstrated need and resource conditions are favorable, the NPS may consider the use of variances for noncommercial trip length on a trip-specific basis.

A22

On page 25 the *DEIS* states that, “Information obtained through this system would be used by the NPS to make demand-responsive transfers between commercial and noncommercial sector allocations.” Does this mean that if I reserve a spot, pay my deposit to a commercial concessionaire, pay the balance of the cost of the trip, arrange for vacation from my job, NPS can make the determination that the commercial trip I am scheduled on can be canceled and a noncommercial trip will be substituted? If that is the case, what gives NPS the right to cancel my vacation plans, and what compensation will there be for me when my trip is canceled, especially when there is a high likelihood that all other commercial trips offered by my vendor of choice are full?

RESPONSE:

The *DEIS* never proposed canceling anyone's trips when making allocation adjustments. Instead, it proposed making adjustments to future, unscheduled years based on data obtained from current years. The *FEIS* has dropped the adjustable split concept in favor of a non-adjustable split allocation system.

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A23

Some respondents support the proposed alternative allocation process. Retain launch-based over person-based access. That the *DEIS* proposes to control access through a launch-based system is superior to a passenger-based system in a regulatory environment where incidence of contact measured between groups has greater weight than contact measured between people. That you still need to cap overall commercial user-days is acceptable and necessary. It is understandable why you elect not to cap noncommercial user-days, presumably because (a) that sector may be less likely to use its full launch allocation, (b) annual use will vary widely based on trip length and actual group size, and (c) there is no practical way to apply fair recourse to constraining launches once a user day maximum has been achieved.

RESPONSE:

All of the above have been maintained in the *FEIS*.

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A24

Some respondents commented that they were baffled why Alternatives D, E, and G included these smaller groups in months when there were no large motor trips on the water. The preferred alternative is more acceptable by mixing the small noncommercial trips with the motor trips. Did you purposefully combine incongruous plan options into the non-preferred alternatives to make them look inferior? This example is just one of many silly combinations of the plan features you have lumped together in Alternatives A–G. Examining the alternatives, it seems the NPS is trying to stack the deck.

RESPONSE:

The NPS developed a full range of alternatives to include a range of group size, trip lengths, motors, nonmotors, etc. per NEPA requirements. Please see Section 2.2, Criteria for Developing Alternatives.

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A25

Granting permissions for a particular number of trips in a particular year for both commercial and private trips should be based on "after the fact" trip analyses. They should certainly not be based on "before the fact" interest expressions that can be easily loaded and misleading.

RESPONSE:

Please see comment and response in Allocation (A #20).

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A26

Allocation inequity is a perception of only a small portion of the public, but it's presented here as if all comment and users had this perception. Many members of the general public commented that the status quo should not be changed. Apparently, this phrasing of these comments from the public resulted in the opinion being largely omitted from the NPS' presentation/synopsis materials and from their objectives because "it wasn't a complaint", as one of the team members stated when asked why this perspective was not represented in the most visible of the synopsis and the objectives that were derived from them. The public should have been informed that it needed to "complain" to be considered. To reflect the reality of the comments received and to help educate the public about the politics and issues facing Grand Canyon, the NPS should clarify that this is the perception of a specialized sector of the overall public and that it is not a perception shared by both user groups.

RESPONSE:

Many noncommercial users feel the present allocation split unfairly favors commercial users and point to the 12-25 year long waitlist as evidence. Commercial users, on the other hand, offer a variety of opinions. Some commercial users seem to feel the allocation situation is not broken and does not need significant adjustment. Please see comment and response in Allocation (A #1) for why the NPS made the adjustments it made.

A27

Some respondents thought the time to adjust allocation system is too long. Why should it take two years for the NPS to adjust allocation after finding the demand unequal?

RESPONSE:

The goal was to adjust allocations far enough into the future so no trips would have to be cancelled due to adjustments. Nevertheless, the modified preferred allocation option has several modifications from the Draft EIS, including the elimination of an adjustable split allocation system. The modified preferred allocation option is the no action option (current system), in which recreational river use in Grand Canyon would continue to be allocated between the commercial and noncommercial sectors in a set ratio (albeit a different ratio than is currently set) that will remain the same for the life of the plan. See new text describing the modified preferred allocation option in Chapter 2: Alternatives and analyzed in Chapter 4: Environmental Consequences—Visitor Use and Experience.

A28

Some respondents favor a fixed allocation system. Remove the "all-user/adjustable split allocation" element and replace with traditional fixed allocations capped at an annual user-day level of 115,500 each for the commercial and noncommercial sectors, for a total annual recreational user-day allocation of 231,000. Noncommercial use opportunities would occur year-round. Commercial use would continue in the summer months and in part of the shoulder seasons. It is our understanding that the purpose of the Adjustable Split Allocation/All-User Registration System is to have a way to determine relative demand between the professionally outfitted public and the self-guided public. If the major user groups, as represented by the parties listed above, have agreed that the allocation should be fixed, then there is no need to measure demand.

## RESPONSE:

The *FEIS* has dropped the adjustable split allocation system and replaced it with a fixed allocation system that caps commercial use at 115,500. Noncommercial user-day use is not capped, but it is estimated that on an average year around 113,000 user-days will be used by the noncommercial sector.

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A29

How outfitters apportion allocation adjustments should be examined thoroughly. Such examination is critical. The impact of losing a launch or one user-day to a small company and/or to an oar only company is greater than the same loss to a larger company or a company who operations include motor use. The economies of scale make this so and just as this is recognized in our tax code, it must be recognized by any system the NPS might adopt to transfer allocation between the user groups approves of. How, specifically, the allocation loss, a loss of days or launches, would be distributed amongst the outfitters, from which companies and how much per company to address the economies of scale. Solution: If the Adjustable Allocation System is kept in the final plan, fix the one-way door. Do not base transfer of access on launches because a launch based transfer system will favor the private user group and because it does not recognize and address the economies of scale and economic differences in individual operations of the 16 outfitters.

## RESPONSE:

The modified preferred allocation option has several modifications from the Draft EIS, including the elimination of an adjustable split allocation system. The modified preferred allocation option is the no action option (current system), in which recreational river use in Grand Canyon would continue to be allocated between the commercial and noncommercial sectors in a set ratio (albeit a different ratio than is currently set) that will remain the same for the life of the plan. See new text describing the modified preferred allocation option in Chapter 2: Alternatives and analyzed in Chapter 4: Environmental Consequences—Visitor Use and Experience.

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A30

Many respondents commented on the seasonality and how commercial and noncommercial permits were allocated according to seasons. There is no reasonable justification consistent with the NPS legal mandates for segregating use by the commercial and noncommercial sectors by season.

It is interesting that Table 4-2 (page 223), which ranks the eight alternatives by season for several characteristics does not indicate commercial vs. noncommercial use.

## RESPONSE:

Please see comment and response in Allocation (A #1). Table 4-2 is a tool that was used to determine impacts to a variety of resources. The NPS has no data that differentiates between impacts caused by the different user groups. A description of use by commercial and noncommercial sector is included in the summary of use tables in Section 2.4.

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A31

Winter and fall allocations should be increased for motor or oar commercial trips. Also, equalize summer allocations. Just like the allocation for the private user is spread out over the entire year, so should the commercial outfitters.

RESPONSE:

The NPS has analyzed a full range of alternatives. Some alternatives analyze an increased commercial use for the entire year including the winter and shoulder months. The Modified Preferred Alternative H represents the balance between providing a variety of trip types and protecting the resource.

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A32

An allocation of launches and person-days should be made available only for companies willing to run educational trips, and should be in addition to whatever allocation the outfitters get during the rest of the year, as a reward for encouraging education. The trips should be demonstrably educational with at least one teacher/lecturer/resource person per trip and preferably one per raft.

RESPONSE:

Any kind of additional trip results in additional environmental impacts, and the NPS will not consider increasing commercial allocation in this way. NPS requires commercial companies to include educational components in all of their trips. Formal educational trips will not have an allocation and will be conducted as administrative use.

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A33

Some respondents thought there should be an increase in rafter, kayak, and oar allocations. It seems very clear that the river could easily tolerate an increase of 10% in rafting volume and not negatively impact either the rafting experience or the canyon's ecosystem. This increase of 10% could be allocated entirely to private rafters, thereby increasing their access without restricting the current volume of commercial rafters.

RESPONSE:

The NPS believes the *FEIS* considers a full range of alternatives. The Modified Preferred Alternative H does increase opportunities for noncommercial boaters.

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A34

The *DEIS* compares the user-days and passenger numbers for each alternative on page 223 of the *DEIS* in Table 4-2. This table is misleading because: Under Alternative A, actual commercial user-days of 113,083 for that year are compared to the maximum possible days of 115,500 listed under Alternative H. Many people, organizations and the media, including the Arizona Daily Sun in a recent editorial, have mistakenly read this chart as saying Alternative H would give an increase to commercial access, when, in fact, the increase in overall use is only for the private user group. The maximum possible days is the actually the same, 115,500 under both Alternatives A and H. The same issue occurs with the comparison of passenger numbers, 18,891 actually accommodated under A during the year examined vs. the maximum allowable number under both Alternatives A and H of 19,835.

RESPONSE:

115,500 is a commercial user-day cap that may or may not be met by commercial outfitters. The NPS recognizes that commercial outfitters do not always meet their current cap of 115,500; their average from the 1998–2003 seasons is 113,083. Please see Table 4-1.

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A35

Might NPS make changes to allocation in some future year? Adjustments would be helpful in helping sectors use their allocation. Some respondents recommend maintaining a management option to collaboratively adjust the launch assignments to help alleviate conditions such as systematically unused launches. Adjustments might also be useful in helping other sectors fully use their half of the user day allocation.

RESPONSE:

The NPS has eliminated the adjustable split allocation option. A user-day cap has been set only for commercial use. A launch-based system distributes commercial and noncommercial use throughout the year. The NPS will take this comment into consideration as it develops administrative procedures for managing the new allocation and launch system.

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A36

Some respondents liked Alternative B because commercial boaters would be allocated 7,914 probable total yearly passengers (61%). Noncommercial users would be allocated 4,980 probable total yearly passengers (39%). While Alternative B clearly does not result in an even split of permits between commercial and noncommercial users, it is much more equitable than that proposed under Alternative H.

RESPONSE:

Equity can be measured in a number of ways, including passengers, launches, and user-days. The Modified Preferred Alternative H provides for very similar user day numbers for both commercial and noncommercial boaters. The NPS believes it best meets the needs of park resources and visitor experience for the life of this plan.

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A37

Current total user-days and impacts should be increased no more than 10%.

RESPONSE:

Impacts do not necessarily have a linear relationship to the various measurements of use (user-days, launches, TAOT etc.). Please see Section 4.1 for a discussion on the assumptions used in the analysis of impacts. By moving to a launch based system and reducing variables such as trip length and group size that contribute to crowding and congestion, the Modified Preferred Alternative H increases total user-days while decreasing potential impacts.

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A38

Some respondents liked Alternative E because this option spreads out the commercial motorboat use and eliminates as much of the congestion as possible. Motors should be allowed in April and September, to spread out the use. Less impact is better for the commercial guides and gives the commercial passengers more options. Spread out the commercial motor and nonmotor use.

RESPONSE:

The Modified Preferred Alternative H spreads out motorized use between April and mid-September.

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A40

It would help in the review of the *DEIS* if the number of people launching per day of the week were shown. Much of the fluctuations in daily launches (page 37), between three and nine launches, are caused by the commercial trips wanting to launch their six-day trips all on the same day to the week. This is similar to airport crowding at prime take-off times. Noncommercial launches are more evenly spaced so there are no more than nine per week and a maximum of two per day.

RESPONSE:

All action alternatives in this EIS eliminate spikes in use by moving to a launch based system. While the NPS has not used People Launching Per Day as a tool in our methodology, it has used user days and PAOTs, both of which include the number of people launching per day.

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A42

The proposed registration system seems ludicrous. There is no way the NPS could accurately monitor demand and it could easily lead to abuse of the system. Most people who want to do a Grand Canyon trip have NO idea what doing a private trip in Grand Canyon entails. Is the NPS going to count these uninformed people as people who want a private trip? Are they going to educate them and make them realize they are not qualified to go and would be best on a commercial trip? This would put quite a burden on the NPS. The burden would be to appease the few private boaters who want more allocation. It makes no sense.

RESPONSE:

The modified preferred allocation option has several modifications from the Draft EIS, including the elimination of an adjustable split allocation system. The modified preferred allocation option is the no action option (current system), in which recreational river use in Grand Canyon would continue to be allocated between the commercial and noncommercial sectors in a set ratio (albeit a different ratio than is currently set) that will remain the same for the life of the plan. See new text describing the modified preferred allocation option in Chapter 2: Alternatives and analyzed in Chapter 4: Environmental Consequences—Visitor Use and Experience.

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A43

Perhaps the most disturbing portion of the proposal is the 40% limit placed on the private and commercial sector allocations in the adjustable split allocation approach. What is most disturbing is the number itself. It

is admirable that the NPS prefers to adjust allocations to more accurately reflect demand, but it is singularly misguided to cap such allocation at any particular level.

RESPONSE:

The 40% limit was part of the adjustable split allocation system, a system that has been eliminated in the *FEIS* in favor of a non-adjustable split allocation system. There is no longer a 40% limit.

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A44

Some respondents recommend testing and implementing a third type of launch in addition to the “standard” and “small” launches identified in Alternative H. In order to help the noncommercial sector fully use its half of the split allocation, “very small” trips with minimal impacts to TAOT and PAOT should be instituted in a manner similar to the “Winter Test Launches.”

RESPONSE:

The idea of adding additional small trips to the launch schedule was examined by the planning team. While it is true that adding a “very small” trip to the launch schedule would minimally increase People At One Time, Trips At One Time (TAOT) would increase to unacceptable levels (above 60). Since any sized trip is a trip, adding any sized trip to the launch schedule would increase TAOT numbers the same amount. The only way to accommodate more “very small” trips without increasing TAOT was by eliminating the equivalent number of larger trips. Trip leaders can always choose to take fewer passengers than the limits allow.

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A45

One short paragraph about the “Adjustable Split Allocation” is found in the Executive Summary (page xii) but fail to see it discussed anywhere else in the document. Is it discussed anywhere else in the document?

RESPONSE:

The “Adjustable Split Allocation” option was discussed in the Allocation of Use section, which began, on page 24. However, the modified preferred allocation option has several modifications from the Draft EIS, including the elimination of an adjustable split allocation system. The modified preferred allocation option is the no action option (current system), in which recreational river use in Grand Canyon would continue to be allocated between the commercial and noncommercial sectors in a set ratio (albeit a different ratio than is currently set) that will remain the same for the life of the plan. See new text describing the modified preferred allocation option in Chapter 2: Alternatives and analyzed in Chapter 4: Environmental Consequences—Visitor Use and Experience.

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A46

Many respondents commented on the Adjustable Split Allocation System. While some thought the system was acceptable others were skeptical of its implementation and thought it was ill advised. Under this Adjustable Split Allocation approach the NPS is proposing to make demand responsive transfers between commercial and noncommercial sector allocations. However, this system suffers from several certain flaws and deficiencies. It offers false hope to the noncommercial boaters. The result will actually worsen the

noncommercial boaters' chances of obtaining a permit: (1) The potential transfer between commercial and noncommercial sectors "would not go into effect until two years after the system dictated that an adjustment was warranted." So if in 2007 [the first year that a determination could possibly be made] a determination was made that an adjustment was warranted; there would be no change until at least 2009. However the NPS already knows that there is an overwhelming shortage (30 year wait) of noncommercial trips and there is not a shortage of commercial trips (no wait list): therefore an immediate demand responsive transfer is warranted. (2) Given the magnitude of the waiting list for noncommercial trips, the maximum adjustment of two-launch increase per month would provide no significant relief for noncommercial users. If a determination was made in 2007 that an adjustment was warranted for every month for the NPS Preferred Alternative then in 2009 noncommercial launches would increase by only 16, a 3% increase for noncommercial boaters; a 2% loss for commercial operators. So even if the system were to work at its maximum, it is too little too late. (3) The expected life of this *Colorado River Management Plan* is 10 years (page IV). During that period, it is not possible, even at the maximum potential transfer between commercial and noncommercial sectors to make a reasonable adjust in the allocations. If an adjustment was warranted for every month and every year, there would be a maximum transfer of 112 launches. (4) The *DEIS* shows no criteria for what would trigger a demand responsive adjustment. How can we support an unknown program when history teaches us that the commercial operators circumvent the rules every time? As shown in the next two paragraphs, it is more likely that there will be demand responsive adjustments from the noncommercial sector allocations to the commercial allocations sector. (5) The NPS preferred launch date allocations (page 52) will almost guarantee that some noncommercial trips are not filled, and a demand responsive adjustment will be made to transfer those unused noncommercial trips to the commercial sector. The NPS preferred alternative (page 52) would allow 204 new noncommercial launches per year (compared to current, page 38). However, 92 of those new launches (45%), and 26% of all noncommercial launches are winter launches. According to the *DEIS* (page 657); only 2% of noncommercial boaters prefer winter launch dates. Therefore, there is a great chance that not all of these noncommercial launches will be filled. When noncommercial launch dates are not filled a "demand responsive adjustment" will be made transferring allocations to the commercial sector. (6) The noncommercial trip size allocations will also probably result in a demand responsive adjustment and transfer of noncommercial trips to the commercial sector. Noncommercial river trips are allocated at 16 participants per trip, yet only about half of the launches reach that limit. The average group size is 13 (page 167). With winter trips dominating the noncommercial allocation, the average will drop even lower. Using these figures, the total noncommercial user-days would be closer to 70,000 rather than the 97,459 cited in the *DEIS* (page 52). Again, the noncommercial users will be criticized and probably penalized for not using their full allotment. A "demand responsive adjustment" will be made transferring noncommercial allocations to the commercial sector.

#### RESPONSE:

The modified preferred allocation option has several modifications from the Draft EIS, including the elimination of an adjustable split allocation system. The modified preferred allocation option is the no action option (current system), in which recreational river use in Grand Canyon would continue to be allocated between the commercial and noncommercial sectors in a set ratio (albeit a different ratio than is currently set) that will remain the same for the life of the plan. See new text describing the modified preferred allocation option in Chapter 2: Alternatives and analyzed in Chapter 4: Environmental Consequences—Visitor Use and Experience.

A47

Some respondents commented that they would like to see some allocation left for the waiting list until its completion. Allocation could be split as follows: 25% waiting list, 50% lottery and 25% real time scheduling (approx 6 month lead time)

RESPONSE:

The NPS expects the revised proposal to clear the waitlist in the *FEIS* to benefit existing waitlist members as follows:

- 600 launch dates would be immediately awarded to waitlist members before the waitlist is changed.
  - Waitlist members would then be given an opportunity to group together and combine waits, then compete for 600 additional launch dates. The NPS believes this could accommodate 1,800 additional members of the waitlist.
  - Finally, waitlist members would be given the option to be transferred to the new, hybrid-weighted lottery with additional weight. NPS predicts that over half of those who transfer to the new system and compete every year will receive a trip within 10 years.
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A48

In a lottery system, would there be a separate lottery for smaller groups? If someone got a permit for a large group and ended up only having a small group, how is that tallied in the allocation?

RESPONSE:

In the lottery, people would indicate the trip size they were competing for, then compete only with others wanting that size for that particular trip.

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A49

Some respondents suggested eliminating the common pool allocation.

RESPONSE:

The common pool allocation system was considered in the *DEIS* and not selected.

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A50

Some respondents suggested reducing allocation numbers and thought resource protection should be a basis for allocation. Establish resource protection and carrying capacities as the baseline for use allocation. There must be a rational relationship between resource capacities (and values), and use allocations. The preferred alternative must place resource protection above visitor use when in conflict, as required by law. Exceeding physical conditions and carrying capacities [set by camp availability, crowding bottlenecks, low river flows, wilderness values, time required for navigation, scouting, hiking, repairs, etc. (UDT), seasonal conditions, safety considerations, etc.] exacerbates impacts and compromises Park values.

## RESPONSE:

A single number cannot determine carrying capacity. Rather, several variables including size and distribution of beaches, trips at one time, and encounter rates all contribute to carrying capacity. By moving to a launch based system and reducing variables such as trip length and group size that contribute to crowding and congestion, the Modified Preferred Alternative H increases total user-days while decreasing potential impacts. If impacts are unacceptable based on monitoring, mitigations will be implemented.

## A51

Having a maximum group size not to exceed a total of 36 persons, but allowing companies to incorporate their specific authorized boat capacities, would enable the outfitters as a whole to service their allocations with significantly fewer motorized commercial launches.

Because the majority of motorized trips are conducted in “S-Rigs” having an authorized capacity of 17 persons, a group size of 30 plus crew would satisfy those specific companies well. They can send a two-boat trip down the river with all seats filled and a crew of two on each boat. There’s no waste.

## RESPONSE:

Group size limits are based on camp size and other resource concerns. Group sizes for commercial trips have been reduced to better protect and preserve the resource base of the canyon and to improve visitor experience.

## A52

It is unlikely that full utilization of the private sector’s allotted user-days will be achieved under the proposed system. It assumes that trips will all have the full 16 participants. Under the current system the average size is 14 participants. You are also assuming that there are enough people willing to go in Dec–Feb to launch a full trip each day. Do you have historical statistics that say otherwise?

## RESPONSE:

The *FEIS* does not use user-days to allocate noncommercial use. It only uses launches. If nobody chooses to use one of these launches, it will not be used.

The NPS ran a “winter test” program, which showed clear demand for winter launches, leading us to believe that a large portion of these winter dates will be used by the noncommercial sector.

The NPS believes calculations and estimates used in the EIS are reasonable (See Appendix K for additional details).

## A54

Some respondents wanted to see more details on how the park would deal with potential effects a continued drought would have on management of recreational opportunities.

The park should also consider an allocation free Alternative C that allows trip leaders to compete in a lottery for river permits and the successful river traveler can then seek out the services they need from the greater business community to help them travel through the canyon, allow incidental business permits to offer guided services including consultants on river trips should be allowed. This allocation should not be from the general public.

RESPONSE:

Please see comment and response in General Resources (RG #36). The NPS preferred option for allocation is Option A, the No Action/Split Allocation system, which continues to allocate use between the commercial and noncommercial sectors. The ratio of use would remain the same for the life of the plan and provides the greatest planning stability for river users and park managers. See new text describing the modified preferred allocation option in Chapter 2: Alternatives and analyzed in Chapter 4: Environmental Consequences—Visitor Use and Experience.

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A55

If you INCREASE the overall allocation to persons on the waitlist plus new applicants this would not be necessary.

RESPONSE:

The NPS considered the possibility of expanding allocation while retaining the waitlist, but determined that it would not adequately resolve the problem of an ever-expanding waitlist.

The NPS believes that Modified Preferred Alternative H will provide a range of opportunities for visitors while protecting the resource, and that the lottery system will better meet the needs of noncommercial potential boaters in Grand Canyon.

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A56

Some respondents support Alternative F, but would also like Alternative F to have the modification of the Common Pool as the choice of allocation. An additional modification to our recommended Alternative F recommendation would be for the consideration of Noncommercial Oar trips to be maintained at 18 days during the summer, not reduced to 16 and shoulder seasons to remain at 21 days.

RESPONSE:

The NPS feels it has analyzed an appropriate range of alternatives. Trip lengths have been increased in the Modified Preferred Alternative H from the *DEIS* Alternative H in the shoulder season for noncommercial nonmotor trips.

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## Aquatic Resources

AR1

The Department recommends deleting the statement that young fish are found in submerged vegetation (Mueller and Marsh), since this refers to fish in the Lower Colorado River and not the Grand Canyon (page 150).

RESPONSE:

See revised text in the *FEIS* Section 3.2.8 Affected Environment Aquatic Resources.

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AR2

The section on timing on page 486 should also state impacts are much more likely in the summer because of the heat and the increased desirability of visitors interacting with water, especially in side streams.

RESPONSE:

See revised text in the *FEIS* Section 4.2.8.4.1 Environmental Consequences Aquatic Resources.

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AR3

Page 487 of the *DEIS* regarding mitigation could mention instead of closure of high-use sites that where necessary, sites could be limited to one (or two) group(s) at a time. This would require the establishment of a social procedure where a second group arriving sends someone to notify the first group and the first then should leave (although they should have the right to a minimum amount of time) while the second waits and then proceeds to visit. Even if such a limit is not perfectly followed it should still reduce crowding and congestion and the associated impacts to some degree.

RESPONSE:

See revised text in the *FEIS* Section 4.2.8.4.2 Environmental Consequences Aquatic Resources.

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AR4

On page 489 of the *DEIS*, one of the assumptions states that decreasing trip lengths can reduce impacts to aquatic resources. This is false. For a fixed number of user-days, reducing trip lengths increases the number of trips. Thus, there will be more people visiting high-use aquatic features. Increasing trip lengths spreads out impacts in the canyon while reducing trip lengths increases impacts on high-use features.

An assumption on page 489 states, "Longer trips have, by their nature, increased amounts of time for visitors to interact with the canyon environment." For a fixed number of user-days, longer trips also means less trips and less people. Less people interacting with the canyon environment will reduce the impacts on the canyon environment. So it is not at all clear what the effects are of longer trips and they are more likely beneficial than adverse. Furthermore, it is clear the park has presented no detailed analysis of the effects of longer trips and is only speculating and is probably wrong in that speculation. Page G-15 states, "The relationship between trip length and discretionary time is unknown." The assumption on Page 489 about longer trips directly contradicts this statement.

## RESPONSE:

In the Modified Preferred Alternative, the number of launches per day is fixed and the number of trips in the canyon at one time (TAOTs modeled by the GRTS) is reduced. User days are not fixed on a daily basis and there is no user day cap for noncommercial users.

Trips longer than 14 days have more opportunities to layover at campsites and therefore more time to interact with the canyon environment including the old high-water zone and nearby attractions. Data from river guide and private boater itineraries indicate that most layover trips hike to an attraction site located up the side canyon adjacent to the campsite. The NPS acknowledges that a small percentage of trips may sit all day at the campsite. Since the Grand Canyon staff have no data to show that one type of user is more likely to use minimum impact practices than another type of user, UDT is based upon amount of time in the canyon (trip lengths), group size, number of daylight hours, average amount of time needed on the river to move from one camp to another at 8,000cfs, and amount of time spent doing camp chores for each trip type. See Appendix H. UDT was just one of several tools used in the analysis of each alternative.

Assumptions for the UDT model were based on best available data including river guide and private boater itineraries, the river trip simulator model and staff expertise. Data from the monitoring program may help to refine the assumptions for the model.

The NPS developed and used the river trip simulator in our analyses of alternatives to model trip scheduling and to predict congestion, crowding, and campsite availability. The model includes campsite data, trip length and group size. Group size and campsite availability are consistent with the physical carrying capacities in the canyon. The monitoring and mitigation program that will be implemented with the plan will include a campsite evaluation component to assess the results of the strategies the NPS has chosen. If the NPS discovers unacceptable impacts, the adaptive management program will provide the avenue for making necessary changes.

## AR5

On page 493 of the *DEIS* regarding Alternative C is the clause, “all trips moving at about the same pace.” Pace is not discussed elsewhere and no mention of this is made in Alternatives B or F, which could also have this occur. If pace is important then it should be mentioned in the beginning of this section. A simple analysis such as that performed in these comments in Visitor Use and Experience show that traveling at the same pace reduces encounters so that should be beneficial. Yet on page 494 is the statement, “Recreational impacts to aquatic resources in tributaries and springs would be adverse and moderate to major because of the large increases in spring and summer UDT as well as the high numbers of trips all traveling at the same speed.”

No evidence is provided that groups traveling at the same speed have an adverse affect and it is difficult to imagine how this would have an adverse effect on tributaries and springs. The current discussion in Alternative C about trips moving at the same pace needs to be removed.

## RESPONSE:

All analyses contain a discussion on pace, which is a critical component of UDT. One of the problems with the high use, no-motor alternatives, is that all of the trips are traveling at the same pace. The launch based system will keep trips at one time (TAOTs) under 60, but will not necessarily remedy the congestion, crowding and competition for campsites and attraction sites that will occur under Alternative C.

In the *DEIS* Table 4-21, the number of people visiting aquatic attractions, which are tributaries, is unacceptably higher in Alternative C than in Modified Preferred Alternative H. The likelihood of trips visiting these attractions at the same time is high given the number of daylight hours and the similarity in commercial and noncommercial trip lengths. The NPS assumes that the more people that visit a site in a single day, the greater the likelihood that there will be large concentrations of people during that day. It follows that larger concentrations of people have a greater potential to cause adverse effects to visitor experience and localized resources since individuals tend to spread out into areas where they may not otherwise go. The assumptions about impacts to resources and visitor experience from crowding and congestion are based on best available data.

## AR6

Page 483 of the *DEIS*, in the last paragraph, near the first sentence, there should be some discussion of how far noise, especially motor and prop noise, carries underwater. This would likely be well over a mile in calmer waters since sound carries much farther in water than air. A table should be computed and shown for raft noise at a single point on the river (the junction with the Little Colorado if this is site specific) using data for how far the noise carries through the water.

### RESPONSE:

Although sound from boat motors also travels underwater, the likelihood of significant underwater sound impacts from the type and number of motorboats used in the Grand Canyon is small enough to not warrant additional analysis. The limited information available about underwater sound propagation from outboard motors similar to the four-stroke motors used in Grand Canyon indicates that river organisms are more likely to be injured by physical contact with the propellers than by sound produced underwater by the motors (Dr. Kurt Fristrup, personal communication). Expected broadband sound levels (integrated over all frequencies radiated by the motor) are expected to be below the level of 180 dB re 1 uPa at one meter, the level above which biologists are very concerned about the potential for injury of aquatic organisms. Behavioral effects would be expected to be limited, due to the limited range at which outboard motor sounds could be detected and the relatively brief exposure that each boat would normally present. The scenario with the greatest potential for impacts would be in a calm section of the river where several boats might be spaced not much more than the maximum distance of detection. Concerns would be tempered by the fact that freshwater fish do not generally have very sensitive hearing, and many species may not actively use sound for communication. In addition, rapids, air bubbles, eddies, and other characteristics of the flowing river would tend to attenuate underwater noise propagation in many places.

Motorboat noise is a transitory impact and the number of motorboats at any one time near the Little Colorado River is typically one or two, except during the peak season when several motor trips may visit at the same time.

U.S. Fish and Wildlife Service critical habitat designation around the mouth of the Little Colorado River is an area where protection of endangered species from human activities is a high priority. The NPS cannot enumerate the potential impacts of motor/prop noise because of the lack of data; however motors and other human activity are not likely to have a beneficial effect on critical habitat. Although the Modified Preferred Alternative H allows motorboats to travel in the mainstem Colorado River through critical habitat, motorboats are no longer allowed to enter the tributary. (see Chapter 2, Operating Requirements)

## AR7

The paragraph on page 488 of the *DEIS* regarding regional drought is puzzling. Regional drought is said to have moderate to major effects on aquatic resources. Yet if those aquatic resources are adapted to natural conditions and drought is natural then the conclusion of significant impacts is unjustified. That is not to say there are not measurable impacts but the natural environment is not static and so such impacts are within the scope of natural processes. If the drought is no longer natural (say, due to global warming) then there may be some legitimate impacts. If recreationists increase the impacts of drought there may be some impacts above that of just the drought itself. It is difficult to construe how such impacts rank more than negligible to minor except in isolated cases where a spring or other water resource completely dries up and that water resource contains a significant percentage of a threatened or endangered species. But that should be considered in the next section, not in this section on aquatic resources.

## RESPONSE:

Drought conditions are a natural phenomenon and canyon resources evolved in these highly variable desert conditions, including periods of extremely low flows in the main-stem of the Colorado River. Under current Glen Canyon Dam operations, flows will not be lower than those that have occurred over the last 30+ years and low flows will remain around 5,000cfs. Drought conditions have affected spring and seep flow at places such as Vasey's Paradise where plants and animals can become stressed, but the NPS has not witnessed any significant decreases in population or long-term permanent changes due to drought. Therefore, the impact rating under the cumulative effects for drought alone has been revised to negligible to moderate. See *FEIS* Section 4.2.8.

## AR8

Page 490 states of the *DEIS* states, "When several large groups visit attraction sites at the same time, the probability of impacting aquatic resources magnifies and impacts such as rolling substrates, bank erosion, trampling of riparian vegetation, disturbing food sources and egg masses, dam building, polluting water with personal care products and creating multiple trailing are more likely to occur."

Table 4-21 looks at high-use days and not the number of people present at one time as the above quote implies. There is no evidence presented that two groups using a high-use site in the same day at different times, one in the morning and one in the afternoon is any different than two groups visiting the high use site on different days, one in the afternoon and one the next morning. Table 4-21 should only look at days when high numbers of people are present at the same time.

In the impact analysis, many of the alternatives cite Table 4-21 in terms of "crowding and congestion" (page 498 for example). Since Table 4-21 looks at high-use days and does not present number of people present at the same time this is clearly unjustified.

## RESPONSE:

Many trips with similar trip lengths traveling at the same pace along the river as modeled in Alternative C would result in several trips landing at attraction sites at the same time. The statement on page 490 of the *DEIS* is correct, since it is based upon several large groups stopping at an aquatic attraction site at the same time. The data used in the Grand Canyon River Trip Simulator (RTS) was based on actual river trip itineraries from 1998–2000. Twenty years of photo documentation by the NPS has captured numerous days when two or more large trips are visiting attraction sites at the same time during the peak season. Several have been printed in the *DEIS* see Chapter 1: Purpose and Need divider page.

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The NPS assumes that the more people that visit a site in a single day, the greater the likelihood that there will be large concentrations of people at one time at the site during that day. It follows that larger concentrations of people have a greater potential to cause adverse effects to visitor experience and localized resources since individuals tend to spread out into areas where they may not otherwise go. The assumptions about impacts to resources and visitor experience from crowding and congestion are based on best available data.

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#### AR9

The expansion of nonmotor months will affect adaptive management experiments and science activities (mechanical control of trout through 2006). The Department has work scheduled to take place from July through March. Mechanical control work requires motorboats, so an exception for scientific activities will need to be considered. Additionally, nonmotor months will impact the Department's fish core-monitoring activities if they extend through February.

The most significant impact of the preferred alternative on Grand Canyon Monitoring and Research Center would be the increased length of the nonmotorized season. Currently the Grand Canyon Monitoring and Research Center requires use of motorized support for research activities in the months of September (before the 15th), and December through February. The two projects requiring motorized support during this time period are the mechanical removal of salmonids in the Little Colorado River reach and sediment monitoring activities. Although there is potential for collecting sediment-monitoring data by alternative methods during this time period, the salmonid removal project would be impossible to support by alternative means. Implementation of preferred Alternative H would either require the Grand Canyon Monitoring and Research Center to request launch exemptions during the proposed nonmotorized season or the project would be curtailed during seasonally significant time period (Jan./Feb.).

#### RESPONSE:

Research falls under administrative use. All administrative use must go through a minimum requirement analysis. It is possible that a research study may use a motorized raft in the nonmotorized season if the study meets the minimum tool requirement.

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#### AR10

Page 147 of the *DEIS* states that efforts by the NPS and the Grand Canyon Monitoring and Research Center are currently underway to reduce trout population densities at selected Grand Canyon sites to relieve predation and competitive pressures on the endangered humpback chub and other native fishes. Arizona Game and Fish Department recommends that NPS clarify if management of recreational fisheries is proposed for elimination or altered in any way. NPS should continue coordination efforts with the Arizona Game and Fish Department regarding fish closures so that they can facilitate management and notification to the recreation angler through their fishing regulations.

Additionally, a description regarding NPS and Grand Canyon Monitoring and Research Center management activities that are being used to reduce nonnative pressure requires further explanation. This effort is more accurately characterized as an experiment within the Glen Canyon Dam Adaptive Management Program and not currently considered management activity (page 147 and 151).

## RESPONSE:

The NPS will continue to inform and coordinate efforts to reduce nonnative fish populations in Grand Canyon National Park with Arizona Game and Fish Department. The Kanab Creek closure is an overnight camping closure due to impacts to soils and vegetation. Recreationists will still be able to fish during the day. The Little Colorado River fishing regulations are consistent with current Arizona Game and Fish regulations.

Recent analyses of historical humpback chub data suggest that the abundance of the Little Colorado River population is in decline. A likely factor contributing to the decline of humpback chub is interaction with nonnative fish. At its 24-25 April, 2002 meeting, the Adaptive Management Work Group formally recommended to the Secretary of Interior that a nonnative fish control effort begin in the Little Colorado Reach of the Colorado River mainstem. Completed documents supporting this research project include:

- Environmental Assessment (12-6-02; FONSI),
- Supplemental Environmental Assessment (8-15-03; FONSI)
- U. S. Fish and Wildlife Service consultation (9-02), (8-03)
- Biological Assessment concurring with Grand Canyon Monitoring and Research Center analysis of effects on humpback chub (12-6-02), (8-03)

The Salmonid Removal project in the Little Colorado River area is an experiment of the Glen Canyon Dam Adaptive Management Program. It is not a “management” activity. The success of this removal project is being evaluated; it will not become a management action until the data are analyzed and a management decision is made. At this time, Grand Canyon Monitoring and Research Center is continuing the Adaptive Management Program approved experiment of salmonid removal in the area of the Little Colorado River confluence—RMs 56 to 76, also the area of the highest population of humpback chub. They do 6 trips a year (Jan, Feb, Mar and July, Aug, September) where they assess current native and non-native numbers and eradicate nonnative fish by electrofishing. The next month they return to see how effective the eradication was (that is, how much did the numbers of nonnative/ rainbow trout increase from the amount killed in the last trip?). Each trip they also catch humpback chub to assess their numbers, size classes, changes, etc.

## AR11

Page 489 of the *DEIS* states, “Contamination by personal care products and human waste occurs along the river and in side canyons. Changes in the water quality could adversely affect aquatic resources, but there are no data to support this conclusion; the overall impact is probably negligible.” This statement directly contradicts statements in the water quality section such as “Often subtle changes in water quality can result in substantial changes in dependent aquatic flora and fauna” (page 263).

## RESPONSE:

Pharmaceuticals and personal care products (PPCPs) have been shown to affect aquatic resources in various studies conducted primarily in Europe. (see <http://www.epa.gov/nerlesd1/chemistry/pharma/book-summary.htm>). Through activities such as excretion, washing, teeth brushing and swimming, chemical compounds such as caffeine, nicotine, aspirin, estrogen, biocide and gingivitis agents, musks in fragrances, methylbenzylidene camphor in sunscreen, retinoids in anti-aging lotions and antimicrobials in hand soaps enter water bodies. These compounds can affect aquatic species at the cellular level including endocrine disruption or loss of microbial diversity. There are no monitoring requirements in the United States for

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PPCPs in water and the NPS has no data on the effects of PPCPs on the aquatic resources of the Colorado River and its tributaries within Grand Canyon. However, results from studies done on other rivers can be extrapolated to Grand Canyon National Park. See revised text in the *FEIS* Section 4.2.8 Environmental Consequences Aquatic Resources.

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#### AR12a

Page 487 of the *DEIS* contains a list of additional mitigation measures not already incorporated into the alternatives that are judged likely to reduce impacts to aquatic resources. It is unclear if each of these actions was analyzed to determine what level of gain could be achieved with implementation. Were these mitigation measures incorporated in the effects analysis? Implementation of many of the mitigation measures listed would have a beneficial result in reducing the level of impact to aquatic resources. The NPS should incorporate these “additional” mitigation measures into another level of alternative analysis clearly displaying the possible benefits.

#### RESPONSE:

Specific mitigation measures will be described in the *Colorado River Management Plan* implementation plan. Type and levels of mitigation will be based upon results of the monitoring program. NPS has analyzed the alternatives without specific mitigation measures because without appropriate baseline data on the effects of recreational activities on aquatic resources, it would be difficult to determine exactly which mitigation measures should be employed. Also, mitigation measures for aquatic resources may cause adverse effects to other resources including visitor use and experience.

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#### AR12b

Cumulative Impacts: While the large-scale impacts caused by Glen Canyon Dam may outweigh the effects of recreationists on aquatic resources, this does not remove the NPS’ responsibility to reduce impacts that further exacerbate the degradation of habitat and effects to aquatic species in the river and tributary ecosystems. The NPS is attempting to put off dealing with significant management changes until the next planning process that will be over a decade away.

#### RESPONSE:

The Glen Canyon Dam EIS and the Adaptive Management Program set up a program under the Secretary of the Interior to address the long-term effects of Glen Canyon Dam operations on the natural, cultural and recreational resources and values of Glen Canyon National Recreation Area and Grand Canyon National Park. As a member of the Adaptive Management Work Group, the NPS is responsible for ensuring that NPS resource concerns are represented. The NPS cannot, and does not, abdicate any of its responsibilities. However, the Adaptive Management Program sets a number of objectives for management of the Dam that are outside NPS jurisdiction. It is the NPS mission to preserve the integrity of the resources under NPS authorities; the NPS does this in the context of the Adaptive Management Program and our own management authorities.

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#### AR13

Summary: Removal of motors from the Colorado River will protect aquatic resources.

Specific impacts from motor use have been documented. According to the *DEIS*, “outboard engine exhaust (Tjarnlund et al. 1995) and noise (Schoilk and Yan 2002) are deleterious to fish health and alter behavioral

patterns... Wakes from motorized boats can create bank erosion and dislodge riparian vegetation which provides shade and an abundance of insect life for aquatic species” (page 483). On page 490, the *DEIS* states further that “The benefits of a no-motor season are a reduction in pollution from motor fuel and exhaust and the removal of disturbance to fish from motor noise ... A motor season in the spring and summer adversely affects aquatic resources in the mainstem.” Clearly, the removal of motorized boats from the river corridor would have important positive impacts on aquatic resources.

According to the *DEIS*, “the specific issues raised through scoping included impacts directly related to recreation: pollution from human personal care products, camp waste and human fecal waste; contaminants from motorboat use; and adverse affects including changes to stream channel geometry, turbidity and sediment/habitat distribution caused by recreation in tributary streams” (page 483).

RESPONSE:

While the nonmotor Alternatives B and C may represent viable alternatives for natural resources, they do not meet the management objectives for visitor experience and socioeconomics, which are also components of the *Colorado River Management Plan*. These alternatives limit access to the river corridor and do not provide a full range of opportunities for the visitors. The NPS chose Modified Preferred Alternative H as the preferred alternative because it best balances visitor access and resource protection.

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AR14

The Arizona Game and Fish Department recommends deleting the reference to an Arizona state “non-native” fishing license (page 173). Fishing licenses issued do not specify native or non-native fishes. There also should be mention that Tapeats Creek, Clear Creek and Bright Angel Creek are popular recreational fisheries that have been managed as recreational fisheries for decades.

RESPONSE:

The reference should have described the trout stamp required on an Arizona state fishing license in order to fish for trout, a non-native species in the Colorado River through Grand Canyon National Park. The NPS does not manage recreational fisheries for nonnative species for recreational purposes within Grand Canyon National Park. The results of a recent research experiment are being evaluated to determine management options for removing exotic brown trout from Bright Angel Creek to benefit native fish species.

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AR15

As with overall numbers, the NPS needs to clearly relate trip length reduction to resource protection objectives, especially because it is not clear why trip lengths are shorter under Alternative B, which also has the lowest overall numbers of users, than under Alternative H, which retains motors and increases annual users to over 26,000 people.

RESPONSE:

The NPS heard in scoping that noncommercial users want greater access to the river and an increase in the number of launches per year. Shorter trip lengths provide more people access to the river and are one of the trade-offs for the NPS to respond to this request without degrading the natural and cultural resources of the canyon. The modified Alternative H addresses the respondent’s desire for longer trip lengths by increasing the noncommercial trip length in the shoulder.

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AR16

The reference to the Little Colorado River spinedace needs to be reevaluated as spinedace are not collected in the park (page 145).

RESPONSE:

See revised text in the *FEIS* Section 3.2.8 Affected Environment Aquatic Resources.

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AR17

In addition to our previous comments recommending a study for native fishes, U. S. Fish and Wildlife Service recommend that the program:

Include tributaries in monitoring, as they are vital to the ecology of the Grand Canyon, to native fishes (page 482), are home to several endemic species, and are subjected to extensive impacts from river-runner recreation.

RESPONSE:

The NPS will work closely with the U. S. Fish and Wildlife Service to develop a monitoring program that includes native fishes and other aquatic biota in the *Colorado River Management Plan* implementation plan.

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AR18

Page 483 (also page 518) of the *DEIS* states that recreational angling may result in catch of endangered humpback chub and other native fish. While it is true that recreational angling could also benefit the species by reducing nonnative fishes that are predators and competitors to humpback chub, the NPS should work with the U. S. Fish and Wildlife Service and the Arizona Game and Fish Department to explore recreational angling as a method of removal of nonnative fishes from Grand Canyon and develop an appropriate education program to minimize effects to humpback chub.

The NPS should explore alternatives that would actively encourage the recreational harvest of trout in the Colorado River in the Grand Canyon by anglers as a partnership in conservation. Page 488, Cumulative Impacts, states that impacts on native fishes from angling are caused primarily by backcountry users in the Marble Canyon area and near Bright Angel Creek. In the past, the Arizona Game and Fish Department has suggested that NPS encourage recreational fishing to take advantage of the recreational opportunities provided in the river corridor, as well as providing some potential benefit to native fishes. Although there is the potential to catch humpback chub, if angling is restricted near the mouth of the Little Colorado River the impact should be minimal. The Arizona Game and Fish Department recommends NPS consider allowing outfitters to advertise fishing trips and using recreational fishing as a way to reduce non-native densities.

RESPONSE:

The NPS plans to enhance river runner education as a component of the *Colorado River Management Plan* implementation plan. The NPS will incorporate angling information into the DVD and/or web based orientation program.

Recreational fishing river trips are not a recreational opportunity that the NPS promotes in Grand Canyon National Park.

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AR19

**Comparison of Alternatives B and H**

The management objective for aquatic resources for the Colorado River Management Plan is “to manage river recreation use in a manner that protects native aquatic organisms, reduces aquatic habitat alteration, and minimizes the spread of exotic species” (*DEIS*, page 485). The aquatic resources effects analysis demonstrates that Alternative B provides the best opportunity for the NPS to meet this management objective and protect aquatic resources in the Colorado River corridor. The effects analysis in the *DEIS* indicates that Alternative B provides the greatest protection to aquatic resources. Table 2-4 on page 56 indicates that the effects on aquatic resources are adverse, regional to localized, short to long-term, seasonal, with negligible to moderate effects for both Alternative B and Alternative H. However, the *DEIS* analysis reveals important differences between the two. These differences are discussed under the water quality section of our comments. In addition, under mitigation of effects, for Alternative B, levels of mitigation required would be less than Alternative A because of the reduction in use. This level is said to be reasonable and attainable. For Alternative H, the mitigation of effects section states, “An increase in funding and staff over current levels would be needed year-round.” This is a significant difference, indicating that the ranking of Alternative H at the same impact level as Alternative B is dependent on the implementation of mitigation measures that have been described as possible “if adequate funding, staffing, monitoring, and implementation of the measures were maintained” (*DEIS*, page 487).

**RESPONSE:**

While Alternative B may represent a viable alternative for natural resources, it does not meet the management objectives for visitor use and experience and socioeconomics, key components of the *Colorado River Management Plan*. Alternative B does not provide a range of opportunities for the visitors and limits access to the river corridor. The NPS chose Modified Preferred Alternative H as the preferred alternative because it best balances visitor access and resource protection.

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AR20

Page 145 of the *DEIS* includes speculation that river runners may inadvertently be spreading the exotic New Zealand mudsnail (*Potamopyrgus antipodarum*). The relationship between recreation and the spread of that and other exotic species is of concern. Spread and establishment of exotic species is an ever-increasing threat to native species, including listed and special-status species that are often particularly vulnerable. The NPS should consider this problem in relation to the proposed action and develop means to address it. For example, NPS could develop a study for the mudsnail, combined with a public information campaign similar to efforts at Yellowstone National Park (<http://www.nps.gov/yell/planvisit/todo/fishing/mudsnail.htm>).

**RESPONSE:**

The NPS plans to enhance river runner education as a component of the *Colorado River Management Plan* implementation plan. The NPS will incorporate New Zealand mudsnail information into an educational DVD and/or web based orientation program.

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AR21

Coordinate closely with other programs, such as the Grand Canyon Adaptive Management Program, the Little Colorado River Watershed Project (LCRMOM), and Arizona Game and Fish Department programs such as the conservation strategies for bluehead and flannelmouth sucker (*Catostomus discobolus*, *Catostomus latipinnis*).

## RESPONSE:

The NPS will work in coordination with these agencies in the management of aquatic resources in Grand Canyon National Park.

## AR22

Alternative 2 is most protective of the river's aquatic resources. The Lower Gorge provides habitat for a number of aquatic species. The important aquatic resources of the Lower Gorge should not be sacrificed because of a greater public and political tolerance for a variety of motorized activities. In spite of the impacts to aquatic resources, the NPS has chosen to adopt an alternative that still allows very large group sizes and increased daily launches as well as a higher level of motorboat and jetboat use.

Table 2-7 on page 81 of the *DEIS* shows that Alternative 2 has negligible to minor effects on aquatic resources and Alternative 4 has moderate effects, which are described in the *DEIS* as "Impacts to the aquatic environment would result in detectable effects to aquatic organisms or populations in the Colorado River, tributaries, or springs. These changes would not be permanent, and the resource would rebound to pre-impact numbers after one season" (page 486). Since the *DEIS* is also clear that the park does not have aquatic resource monitoring or mitigation programs in the Lower Gorge portion of the river corridor, it is not clear how the park will know if the resource has in fact rebounded after one season.

## Major Issues/Concerns

Current management of the Lower Gorge has allowed levels of use and group sizes that contribute to degradation of aquatic resources. Page 503 of the *DEIS* states that "Larger groups are more likely to disturb larger areas (Hendee, Stankey, and Lucas 1990) and the probability is high that a larger surface area of tributary stream beds would be impacted. When several large groups visit attraction sites at the same time (HRR trips and continuing commercial trips), the probability of impacting aquatic resources magnifies and impacts such as roiling substrates, bank erosion, trampling of riparian vegetation, disturbing food sources and egg masses, dam building and creating multiple trailing are more likely to occur. Large numbers of visitors per day repeatedly using aquatic attraction sites (such as Travertine) in the late spring and early summer months can have significant impacts on aquatic resources and habitat during critical months of the year. Repeated annual heavy use of aquatic attractions could lead to long-term impacts on species abundances and diversity."

Page 504 states that "Wakes from all motor and jetboats contribute to erosion of these newly exposed deposits, changing gentle slopes to sharply cut banks...." And "Repeated annual heavy use of sensitive side canyon tributaries or springs could lead to long-term impacts on species abundances and diversity."

## RESPONSE:

Although physical protection of the resource may appear to be best served by Alternative 2, management objectives for the entire *Colorado River Management Plan* are not met by Alternative 2. The NPS and Hualapai Tribe have established specific management objectives for the Lower Gorge. Modified Alternative 4 best meets all the objectives identified by the NPS and Hualapai collectively (aside from pontoon boat use), recognizing that more than aquatic resources need to be considered. Hualapai tribal operations in the visitor use area around RM 262.5 create a departure in visitor use levels and resource conditions from the rest of Zone 3. The Quartermaster area is, therefore, considered a node of activity. Modified Alternative 4 meets the natural resource impact topic management objectives on a regional level, however, does not meet the objectives in the localized two-mile stretch around RM 262.5.

A resource monitoring and mitigation program for the Lower Gorge will be one component of the *Colorado River Management Plan* implementation plan.

AR25

The current *Colorado River Management Plan*, completed in 1989, states as its first goal, “To preserve the natural resources and environmental processes of the Colorado River corridor and the associated riparian and river environment.” The NPS has clearly failed in its efforts to fulfill this goal. The natural resources in the river corridor are now much worse off than before *Colorado River Management Plan* was developed. The principle fish species the NPS and other agencies have been working to protect, the humpback chub, has declined more than 75% to just 2,000 adult fish. Nothing has been done to address the need to recover the four native fish that have become extinct in the canyon: razorback sucker, bonytail chub, roundtail chub and Colorado pikeminnow. The NPS has also been negligent in ensuring that two other species, the flannelmouth sucker and bluehead sucker, are not suffering the same fate. This decline in native fish populations is just one indicator of the extensive ecological damage taking place in Grand Canyon’s river corridor that the NPS is neglecting. The entire food base for the river ecosystem has been dramatically altered. A green alga (*cladophora*) has displaced the natural carbon food base. None of the river’s indigenous aquatic insects exist in the canyon any longer.

These changes represent a significant violation of the NPS’ Organic Act (1916) that requires that the NPS preserve its lands unimpaired for the enjoyment of current and future generations. The lack of any substantive action of late also represents a violation of the intent of the 1992 Grand Canyon Protection Act.

RESPONSE:

The current *Colorado River Management Plan* planning effort supercedes the 1989 plan. The “environmental processes” referred to in the 1989 plan were specific riverine conditions. The NPS does not control the operations of Glen Canyon Dam. The NPS has a mandate to preserve natural processes and restore natural conditions where feasible. The NPS attempts to do this as a member of the Glen Canyon Dam Adaptive Management Program. The fundamental changes that have occurred along the Colorado River by the closure of Glen Canyon Dam are addressed in the EIS under cumulative effects. The *Colorado River Management Plan* is a visitor use plan and not an ecological restoration plan.

The Glen Canyon Dam EIS and the Adaptive Management Program under the Secretary of the Interior addresses the long-term effects of dam operations on the natural, cultural and recreational resources and values of Glen Canyon National Recreation Area and Grand Canyon National Park. As a member of the Adaptive Management Work Group, the NPS is responsible for ensuring that resource concerns of the agency are represented. The NPS cannot, and does not, abdicate any of its responsibilities. However, the Adaptive Management Program sets a number of objectives for management of the Dam that are outside NPS jurisdiction. It is the NPS mission to preserve the integrity of the resources under NPS authorities; the NPS does this in the context of the Adaptive Management Program and our own management authorities.

An impairment to a particular park resource or park value must rise to the magnitude of a major impact, as defined by its context, duration, and intensity and must also affect the ability of the NPS to meet its mandates as established by Congress in Grand Canyon National Park’s enabling legislation. For each resource topic, the Final Environmental Impact Statement establishes thresholds or indicators of magnitude of impact. An impact approaching a “major” level of intensity is one indication that impairment could result. For each impact topic, when the intensity approached “major,” the interdisciplinary planning team would consider mitigation measures to reduce the potential for “major” impacts, thus reducing the potential for impairment. The NPS finds that the Modified Preferred Alternative H as presented in the Final Environmental Impact Statement would not result in the impairment of park resources and values for which Grand Canyon National Park was established.

## AR27

Increased protection (limited access) should be given to spring and stream areas containing sensitive species.

## RESPONSE:

The NPS will work with the U. S. Fish and Wildlife Service to manage river use consistent with the Endangered Species Act. Closures as mitigations will be used based upon recommendations from and under the guidance of the U. S. Fish and Wildlife Service. In general, full closures will be used only as a last resort. Currently, the NPS proposes a seasonal closure from March 1 to November 30 along the south half of the Little Colorado River from the confluence to the park boundary (2 miles upstream). Overnight use restrictions at Kanab Creek and Tapeats Creek are in response to unacceptable levels of vegetation damage and soil compaction and erosion impacts. An Elves Chasm closure to protect Kanab ambersnail would encompass only Upper Elves Chasm and would not restrict access to the lower falls. Analysis presented in the Biological Assessment indicates that the Kanab ambersnail at Upper Elves Chasm is vulnerable to impacts from river runners, thus the park will close Upper Elves Chasm to recreational access during the peak use season (March through October). To assist in the reduction of impacts to Kanab ambersnail at Vasey's Paradise and Elves Chasm, the NPS will implement a program to educate recreational and commercial guides about protecting the Kanab ambersnail at these two locations. Seasonal closures of nest sites (with a 0.5 mile buffer) to protect Southwest willow flycatcher may occur in Marble Canyon, Grand Canyon and the Lower Gorge in critical habitat. The NPS believes that increased education of river runners on how to avoid impacting special status species will help protect many of the affected species.

## AR28

Page 494 of the *DEIS* states, "This alternative retains high summer use during the critical season." The summer user-days for Alternative C are 90.4% of the current summer user-days. Summer user-days as a percentage of the total user-days are the lowest of any alternative (much lower in most cases), by contrast, Alternative H, the preferred alternative, has 102.8% of the current summer days. Yet there is no mention of summer being the critical season on page 502. Page 494 should note that Alternative C reduces the high summer use. Page 502 should mention that summer is the critical season. And the impacts implied by summer user-days should be the same or lower for Alternative C as Alternative H.

## RESPONSE:

The analysis of potential impacts to cultural and natural resources presented in the Environmental Consequences chapter indicates that crowding and congestion contribute significantly to resource vulnerability. Thus, while the total number of user-days is an important variable to consider in the analysis of potential impacts, groups size, number of trips and people in the canyon at one time (TAOTs and PAOTs), UDT, and trip lengths can serve to mitigate or exacerbate the potential for impacts. While the Modified Preferred Alternative H does include an increase in total passengers and user-days, it also includes a reduction in group size, trip lengths, TAOTs, and PAOTs, as well as the number of days out of the year that more than 100 people visit attraction sites in a single day. These reductions will serve to reduce impacts to aquatic resources caused by crowding at attraction sites. Additionally, monitoring, mitigation and increased education will further promote resource protection.

AR29

On page 82 of the *DEIS*, according to Table 2-8, only Alternative 2 meets Vegetation, Terrestrial Wildlife, Aquatic Resources, and Threatened or Endangered Species Resource Management Objectives for the Lower Gorge. Alternative 4 (the preferred alternative) does not meet the plan objectives for Terrestrial Wildlife and Threatened or Endangered Species. U. S. Fish and Wildlife Service recommends that the preferred and selected alternative meet the plan objectives for those resources.

RESPONSE:

Although physical protection of the resource may appear to be best served by Alternative 2, management objectives for the entire *Colorado River Management Plan* are not met by Alternative 2. The NPS and Hualapai Tribe have established specific management objectives for the Lower Gorge. Modified Alternative 4 best meets all the objectives identified by the NPS and Hualapai collectively (aside from pontoon boat use), recognizing that more than aquatic resources need to be considered. Hualapai tribal operations in the visitor use area around RM 262.5 create a departure in visitor use levels and resource conditions from the rest of Zone 3. The Quartermaster area is, therefore, considered a node of activity. Modified Alternative 4 meets the natural resource impact topic management objectives on a regional level, however, does not meet the objectives in the localized two-mile stretch around RM 262.5.

A resource monitoring and mitigation program for the Lower Gorge will be one component of the *Colorado River Management Plan* implementation plan.

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AR30

On page 488 of the *DEIS* there should be some discussion of the impacts of mule waste on tributary streams (primarily Bright Angel Creek). Livestock corrals are present at Phantom Ranch and there is considerable mule waste on the trails that must have some effect on the water quality in the creek. There should also be some discussion of hikers use of Bright Angel Creek and that the park currently encourages the use of the creek to cool off to avoid heat problems.

RESPONSE:

Stock impacts to water quality are discussed in Chapter 4: Environmental Consequences Water Quality. These issues will be further addressed in the Grand Canyon National Park Backcountry Management Plan revision.

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AR32

Monitor disturbance: how does trailing, swimming, wading, hiking, boating, etc. affect the biota? Pages 482-484 of the *DEIS* have a discussion of many of these effects; NPS should investigate each of these in more detail.

RESPONSE:

A long-term monitoring program will be a component of the *Colorado River Management Plan* implementation plan and will address visitor impacts to aquatic resources in the canyon. Depending on the feasibility and availability of funding, Grand Canyon National Park will look at the levels of potential toxic chemicals and composition of PPCPs (pharmaceuticals and personal care products) in representative aquatic

biota, primarily trout. The results of these studies can then be extrapolated to the humpback chub. These studies would complement existing water quality studies on the impacts of recreation within Grand Canyon National Park. The Park also plans to fund a study to examine behavioral changes of humpback chub in response to recreation in the Little Colorado River (feeding, avoidance of predators, habitat use, etc.). Other studies will determine recreational impacts to native fish habitats; factors such as aquatic vegetative and abundance of invertebrates will be measured in several tributaries (such as Shinumo).

## Cave And Paleontological Resources

CP1

You have many potential mitigation measures listed under each area of impact, from closing Vasey's Paradise and Elves Chasm and all caves (p. 514) to scheduling camps (p. 584). All caves are currently closed, so how will this mitigate impacts? The irony is that you do not have the funding necessary to monitor the impacts. How will you know when to activate mitigations?

RESPONSE:

Closing caves as a mitigation as described in the Environmental Consequences Terrestrial Wildlife and Special Status Species sections of the EIS, refers to installing bat gates in caves to physically keep visitors out of caves and to protect bat species. For example, in Stanton's and Rampart caves, visitors disturbed whole maternal colonies of bats by frequently entering these caves even though the caves were closed per Superintendent's Compendium. The bats subsequently abandoned these roosts. The NPS installed bat gates to keep visitors out of the caves and the bats returned. The NPS will be enhancing the Limits of Acceptable Change (LAC) standards that were developed in the 1989 *Colorado River Management Plan* and will include standards for terrestrial wildlife and special status species. The goal is for the NPS to activate mitigations before impacts reach the major threshold or the LAC standards are exceeded.

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CP2

Vasey's Paradise has an outflow stoppage that may have been caused by cavers. NPS should investigate.

RESPONSE:

NPS does monitor the condition of seeps and springs, including Vasey's Paradise. Any apparent change in flow rates from Vasey's is likely caused by seasonal flow patterns.

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## Concessions

C1

The *Colorado River Management Plan/DEIS* improperly assumes greater future demand for concessions services, even though concessions services have not been able to sell their seats for the last three years. The NPS should eliminate this false assumption from the plan, and should also explore at least one alternative that allows more noncommercial river trip participants than commercial river trips participants. The private citizen that wants to float the river should have a greater opportunity to receive a permit than the commercial outfits.

The closest thing that offers equal access to both commercial and noncommercial users is Alternative E, with a difference of 45 trips launched throughout the full year. Giving 609 trips to commercial users and 564 to noncommercial users is not quite equal access. Alternative E should provide 587 total trips throughout the full year to both sectors.

RESPONSE:

All alternatives in the *Colorado River Management Plan* cap March to October commercial use at current levels. The preferred alternative gives more access to noncommercial boaters than previously, without increasing commercial allocation.

There are several ways to measure “use,” including launches, numbers of passengers, and user-days (one person on the river for one day). Because of the differences in trip sizes and trip lengths, it is difficult to compare commercial launches to noncommercial launches as “apples to apples.”

In the Modified Preferred Alternative H, noncommercial and commercial user-day totals are very close.

The disparity in launch numbers reflects the kinds of trips in which commercial and noncommercial passengers participate, with commercial passengers tending to take much shorter trips than noncommercial passengers. This difference means that more commercial passengers will launch, but the NPS believes that one kind of parity (user-days) is close to being achieved under Modified Preferred Alternative H.

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C2

The NPS is legally mandated to limit commercial services to those that are necessary and appropriate. A public and open review of the concessions process must be undertaken.

RESPONSE:

The determination of the types and levels of commercial services necessary and appropriate for a particular park area are determined through NPS planning processes. The *Colorado River Management Plan* is this document and process for Grand Canyon, and it has provided for public participation throughout.

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C3

While some respondents thought that guides should be counted as administration and not part of the user day allocation, others felt that they create an impact on the resources just the same as other “users” and should be counted as part of the user day allocation.

Grand Canyon National Park requires its river concessionaires to be buffers between the inner canyon and river passengers. Trip leaders and guides are the on-the-ground managers for commercial river and backcountry trips and the park sets very stringent criteria for their qualifications, skills, and performance. The draft plan sees merit in having commercial passengers accompanied by an NPS-approved guide on all trip-related hiking, including hiking exchanges both into and out of the canyon, (page 31 par 4), and would exclude commercial guides from the PAOT count (page 28). A paragraph on page 413 stresses the importance of guides in leading and managing passengers' activities to minimize multiple trailing and impact in the old high water zone and pre-dam riparian plant communities.

RESPONSE:

After careful consideration of current group sizes, including impacts on beaches, trails and visitor experience, the NPS determined that maximum group sizes should be reduced. Inclusion of guides in this number reflects their impact on resources. However, the larger commercial group size relative to private groups reflects the benefit that guides provide to their clients and to preserving park resources.

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C4

Whitmore access is overly restricted in the *DEIS* and the parameters should be modified. The impacts are not determined by numbers of people but rather by the frequency and timing of helicopter use. If you are going to allow helicopters you must design a method that takes advantage of the logistics of helicopter use. Higher helicopter capacities reduce flight operations. Operational windows could limit the time of day that other groups are likely to be noise impacted. A rim-landing zone should be developed to allow users to hike people to the rim at dawn for a helicopter flight out that minimizes intrusion in the canyon proper.

RESPONSE:

The NPS reanalyzed Whitmore exchanges and modified the preferred alternative somewhat, to allow close to existing exchange levels to continue. There will be daily time restrictions for exchanges. The development of a rim-landing zone is outside the purview of this plan.

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C5

Commercial trips should launch in winter, don't just give them the "prime" launch season.

RESPONSE:

The NPS determined not to increase commercial winter use, leaving a time of year when only noncommercial trips will launch. In addition, the NPS made adjustments to spread commercial use out into shoulder seasons, which provides more noncommercial access in the summer.

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C6

Some respondents were opposed to the NPS proposed launch schedule that eliminates motorized trips during the prime month of September. Under preferred Alternative H, motorized trips would not be allowed to launch for a 6-month period from September through February. Since approximately 70% of commercial passengers use motorized boats, this proposal denies access to a large user group during the entire fall

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season. September temperatures are conducive to hiking and river travel. The NPS proposal to move September motor launches to March is not a balanced trade off. Instead they suggest adjusting the proposed launch schedule in Alternative H to allow motorized use from April 1 through September 30. The daily launch schedule for summer use should remain in effect throughout the month of September. March should be incorporated into the no-motor season thereby maintaining a six month no-motor season.

RESPONSE:

The NPS has adjusted the motor use season, from March through August in Alternative H in the *DEIS* to April 1 through September 15 in Modified Preferred Alternative H in the *FEIS*.

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C7

The *DEIS* states that administrative trips will meet the minimum tool mandate. Does this mean that nonmotorized boats will be used unless there is an insurmountable reason to do otherwise? The NPS must manage all recreational river trips within the minimum tool mandate.

RESPONSE:

Administrative use, including scientific, research, resource management, educational, and patrol river trips are subject to the Minimum Requirement Analysis (MRA). The MRA is a two-step process that 1) determines if the action is necessary for management of the areas as wilderness, 2) evaluates the appropriate methods or “minimum tool” to accomplish the objectives. The application of the minimum requirement concept is addressed in new sections entitled, “Wilderness Character” in Chapter 3, and “Impacts to Wilderness Character” in Chapter 4 of the *FEIS*.

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C8

Motorized trips are beneficial to Grand Canyon National Park. The Final EIS and *Colorado River Management Plan* should more fully address the beneficial impacts of continuing to authorize the use of motorized watercraft, including the role of such use in supporting the total level of use and allocation thereof proposed as part of the NPS’ preferred alternative. The Final EIS and *Colorado River Management Plan* should expressly recognize that the continued authorization of motorized use for recreational river trips in Grand Canyon National Park is essential to the NPS’ preferred alternative and to meeting the NPS’ management objectives for the *Colorado River Management Plan*. As demonstrated by the NPS’ analysis of the no-motor alternatives, a decision by the NPS to eliminate the motorized trip option would cause a dramatic reduction in the public availability of professionally outfitted river trips, reducing the number of participants able to enjoy a professionally outfitted trip by more than half.

To preserve the quality of the visitor experience that all Grand Canyon river runners are able to enjoy today, eliminating motorized use would force the NPS to significantly lower current levels of authorized use to minimize crowding and conflicts in accordance with the NPS’ stated management objectives for visitor use and experience. Reducing or eliminating motorized recreational use would have the further effect of significantly limiting the wide spectrum of use and range of visitor services currently available to the general public, contrary to the NPS’ management objectives. Given the substantial benefits provided by allowing motorized use, and the absence of any sound justification for reducing or discontinuing such use, the commenter supports the NPS’ decision to reject a “no-motors” alternative in the *DEIS*, suggests that the NPS should more fully explain its decision to reject such an alternative in the *FEIS* and *Colorado River*

*Management Plan*, and continues to urge the NPS not to adopt any such alternative in the *Final EIS* and *Colorado River Management Plan*.

RESPONSE:

The NPS believes it has adequately addressed the effects of motor trips. The choice of the preferred alternative reflects in part the NPS desire to provide a range of service types and levels.

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C9

Single boat motorized raft trips are one of the more desired and appreciated river trips offered in Grand Canyon. Over the past years we have provided an average of thirty single boat motorized trips per season. The data contained in the *Colorado River Management Plan* also indicates the huge demand for single boat trips (Chapter 3 pp. 167). The launch schedule proposed by the *Colorado River Management Plan* would encourage commercial outfitters to provide only two boat motorized trips per launch. If they offered only a one boat motorized trip, they could not fill their allocation and the public would be denied their access. Single boat motorized trips allow less impact on the resources and provide for a far better visitor experience. The visitor experience is also enhanced even with the group contacts. There is less impact on the visitor experience to have contact with two single boat motorized trips than there is to have contact with a two boat motorized trip. The single boat motorized trips also have the ability to camp in smaller areas thereby minimizing the impact on the resources. There would be a great injustice to the public recreational user in Grand Canyon National Park if the *Colorado River Management Plan* discouraged the continued offered services of single boat motorized trips. The NPS advocates smaller trips but at the same time encourages larger trips due to the launch scheduling. The *Colorado River Management Plan* should consider a launch scenario where a launch of two, single boat motorized trips is given the same weight or impact as a two boat motorized launch. If a concessionaire acquires a launch that launch could be a (A) two boat motorized trip or (B) two single boat motorized trips with both scenarios (A) and (B) being considered a single launch.

RESPONSE:

The NPS did an initial analysis of this concept. Its implementation would exceed the acceptable level of TAOTs, so it was not carried forward. The NPS believes that the launch numbers in the preferred alternative (Modified Preferred Alternative H) would provide opportunities for a range of trip sizes and types.

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C10

The government can treat noncommercial river runners differently TO THE EXTENT NECESSARY for legitimate government interests. During the past fifty years, the U.S. Supreme Court has addressed questions of equal rights and unlawful discrimination in numerous decisions. These decisions prohibit discrimination and require “equality of treatment,” based on the Equal Protection Clause of the Fourteenth Amendment, which says that the government cannot “deny to any person within its jurisdiction the equal protection of the laws.” The Supreme Court views the Fifth Amendment as also requiring equality of treatment, specifically by federal agencies. Today the Court’s view is that liberty and equality safeguards of the Constitution protect both “freedom from” unwarranted government intrusion, and the “freedom to” partake in benefits created by the government. The court has held that government agencies can treat people unequally ONLY TO THE EXTENT NECESSARY to carry out “compelling interests” or “legitimate

interests” of the government, but not to an ADDITIONAL EXTENT that “serves only to oppress” a “politically unpopular group.” Here, the “benefit” in question is the right to run a famous river. For example, in the interests of safety, it can require noncommercial to verify that they are qualified to run a river trip themselves, something that is obviously not required of commercial passengers. However, it cannot treat them differently to an ADDITIONAL EXTENT that is not necessary for safety purposes of other lawful reasons. It cannot provide an inferior right to RESERVE SPACE on the river, compared to commercial passengers, for noncommercial applicants who are qualified to run the river themselves.

RESPONSE:

The 14<sup>th</sup> amendment applies to certain protected classes of people, usually determined by such things as race, gender, religion, or national origin. At this point in time, private boaters have not been named as a protected class. The NPS believes that the *Colorado River Management Plan* provides for a range of recreational opportunities for a range of people.

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C11

Some respondents thought that there should be an inherent flexibility in scheduling commercial trips.

For example, the limit of one oar trip only each day all season long results in virtually a complete loss of flexibility for scheduling commercial oar trips. This loss of flexibility will be a huge change for oar companies; under the existing launch limits of maximum people/day, oar outfitters have been able to place an oar launch on pretty much any date. The new limit of one oar launch/day causes several problems for scheduling oar trips and providing public services: 1. When scheduling commercial tips, outfitters use a month-by-month approach with each outfitter given an allotted number of launches for each month based on their allocation and trip types. Each outfitter gets one pick and then must wait until 15 other companies have picked, before getting a 2nd pick. At that point, when modeling Alternative H with the one oar launch/day limit, almost half the available oar launches have already been taken after just one pick for each company leaving not many choices for a company with a number of oar trips still to launch that month. The result in one case was with seven trips to schedule for the month, five of the seven ended up being scheduled to launch all in the same week. This is a real loss for the public.

RESPONSE:

The NPS recognizes that the change in launch schedules will require some adjustment by commercial companies to adapt to the new system. The outfitters have historically worked well together to manage their allocation, and the NPS has confidence that they will continue to do so.

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C12

The *DEIS* Alternative C notes that trip starts will be shifted from one recreational user group to another, based on demand. The NPS has failed to describe a mechanism that states which commercial operator will forfeit trips when a shift in use occurs from the concessions user-days to the noncommercial user-day pool.

RESPONSE:

The modified preferred allocation option has several modifications from the Draft EIS, including the elimination of an adjustable split allocation system. The modified preferred allocation option is the no action option (current system), in which recreational river use in Grand Canyon would continue to be

allocated between the commercial and noncommercial sectors in a set ratio (albeit a different ratio than is currently set) that will remain the same for the life of the plan. See new text describing the modified preferred allocation option in Chapter 2: Alternatives and analyzed in Chapter 4: Environmental Consequences—Visitor Use and Experience.

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C13

Some respondents support reducing the group size. However, maintaining the current commercial allocations while decreasing group size and reducing the number of launches will simply force motor outfitters to run more two-boat trips. Such trips need bigger camps and clearly impact the canyon more. If you reduce group size, you need to increase the number of trips and/or reduce motor allocation.

RESPONSE:

The NPS believes that the preferred alternative provides opportunities for a range of group sizes and experience. Group size is key in determining a need for bigger camps, and the overall reduction in group size will reduce this need. The NPS believes that reducing group size will not result in a need for bigger camps.

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C14

A registration requirement that includes commercial passengers is long overdue. However, for purposes of evaluating the relative public-demand for commercial and noncommercial trips, the NPS proposal is unlikely to provide accurate information. Since the noncommercial sector will be applying for a lottery (with all of the accompanying uncertainty and requirements) and the commercial sector will be scheduling a date certain trip, the registrations will likely be skewed.

RESPONSE:

The modified preferred allocation option has several modifications from the Draft EIS, including the elimination of an adjustable split allocation system. The modified preferred allocation option is the no action option (current system), in which recreational river use in Grand Canyon would continue to be allocated between the commercial and noncommercial sectors in a set ratio (albeit a different ratio than is currently set) that will remain the same for the life of the plan. See new text describing the modified preferred allocation option in Chapter 2: Alternatives and analyzed in Chapter 4: Environmental Consequences—Visitor Use and Experience.

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C16

A variety of commercial trip possibilities should be allowed.

Some respondents support a reasonable mix of commercial (motorized and nonmotorized) trips to launch during the month of April.

Other respondents mentioned wanting a mechanism to force the commercials to offer opportunities to kayak or raft the river under their own control. Stating that their trips are in fact prejudicial against those who have the skills to do it. No companies offer the opportunity to row, and only offer kayak trips.

Still others stated that limited oar launch flexibility affects oar-only companies the most as motor companies running oar trips have the rest of their operation to off-set impacts to their oar operations. Cycle problems and date problems experienced by motor companies can be more easily resolved inter-outfitter because there are three motor launches each day, making a date-trade within a few days of a desired day more achievable. With just one oar launch/day, there are very few options for date-trades for oar-only companies. Providing some additional flexibility for oar companies will have very little impact on the overall river schedule because the oar-only companies are small and have very few launches, since the launches are user day heavy in comparison to shorter trip types. Being completely locked into a launch calendar will stunt the freshness and enthusiasm of our programs, trip offerings, and our management team, resulting in a loss to the public on a number of levels.

A proposed solution was suggested. Please model and consider several scenarios to address the loss of flexibility for commercial oar launches:

- 1) Once a week allow two oar launches on the same day; keep all other variables.
- 2) Twice a week allow two oar launches on the same day; keep all other variables.
- 3) Allow oar companies to launch more than one trip/day as long as another day that week goes without a commercial oar launch. Two private trips could be scheduled that day instead. Since commercial and noncommercial users are on the same “oar” schedule, it will not change contacts, impacts, etc.
- 4) Allow unused motor slots to be picked up by oar companies; there probably won’t be any unused motor launches, but this might provide a little or occasional relief in the situation faced by oar companies.

RESPONSE:

Changing launch scenarios as suggested would take TAOTs outside the limits set by the plan.

C17

Retain historic level, mixed-use commercial launches, seasonally weighted in summer. Some respondents support retaining commercial access at historic annual levels and like the seasonally weighted and commercially preferential access in summer, while spreading use more evenly over the course of each week with fewer daily launches.

RESPONSE:

This plan reviewed all use of the Colorado River, and is intended to revise use to improve protection of the resource and visitor experience. The range of alternatives includes the provisions suggested in the comments.

C18

Trip length generated many comments from respondents. Some respondents didn’t want to see trip lengths extended beyond what was proposed in the *DEIS*, suggesting a need for trips not to “dither” about, but get out of the canyon in a reasonable number of days to reduce TAOTs and keep discretionary time from getting any more out of hand than it is.

Other respondents thought trip lengths in the *Colorado River Management Plan* were too short. Some of these respondents went on to recommend that the *Colorado River Management Plan* provide for a single maximum trip length that applies to all trip types and modes of transportation (i.e., motorized and nonmotorized), particularly during the summer season, as is provided for under current NPS policy. They

felt that there shouldn't be any disparity between commercial, noncommercial, motor and oar maximum trip lengths. However, if the NPS determines that it is necessary for the *Colorado River Management Plan* to establish a separate maximum trip length for commercial, motorized trips, some respondents recommend that the maximum trip length for such trips should not be less than 12 days.

RESPONSE:

The NPS carefully considered and analyzed a range of trip lengths and types in the planning process. After review of comments, the NPS revised some trip lengths upward in the shoulder seasons. The NPS believes it has provided for the differing types of passengers and trip configurations in its preferred alternative. Please see Section 2.2.2.2 and Section 4.1 for detailed discussions about trip length.

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C19

Passengers hiking out are oftentimes not guided, because they have different rates of travel, different schedules or routes, or some may have made their own reservations to stay the day at Phantom Ranch or in the Bright Angel Campground. Some commercial operators have been trying to get third-night accommodations at Phantom Ranch so that outgoing passengers have the option of staying overnight and hiking out the next morning.

RESPONSE:

The NPS believes that as a safety and visitor experience measure, guides should accompany exchange hikers to and from Phantom Ranch. Implementation of this policy will be made through the new contracts, and will take into consideration the different ways that exchange passengers enter and leave the canyon.

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C20

Some respondents thought that you shouldn't be able to hire a "guide" for private trips.

RESPONSE:

See Section 2.7.5 in the *FEIS*.

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C21

Some respondents thought Alternative H should be retained, but modified to restore motor operations through mid-September and restore the September and October nonmotor launches. The mixed-use period should run from April 1 to September 15, with the nonmotor period from September 16 through March 31st. However, a more meaningful definition of the "nonmotor" season is suggested: September 15th should be the last day any motor trip could be on the river above Diamond Creek. The "mixed-use" and "no-motor" seasons, consequently, would refer to the presence, or absence, of motorized craft above Diamond Creek, rather than launches at Lees Ferry.

RESPONSE:

The NPS considered these changes, and made some of them in the Modified Preferred Alternative H. Because of potential differences in trip length, the NPS determined that the last date for motor launches would be September 15<sup>th</sup>. This will provide more consistency.

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C22

Commercial guests have to pay when they book a trip so there is no artificial demand. Measure noncommercial demand not interest.

RESPONSE:

The NPS believes this comment is related to the adjustable split allocation. The modified preferred allocation option has several modifications from the Draft EIS, including the elimination of an adjustable split allocation system. The modified preferred allocation option is the no action option (current system), in which recreational river use in Grand Canyon would continue to be allocated between the commercial and noncommercial sectors in a set ratio (albeit a different ratio than is currently set) that will remain the same for the life of the plan. See new text describing the modified preferred allocation option in Chapter 2: Alternatives and analyzed in Chapter 4: Environmental Consequences—Visitor Use and Experience.

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C23

Some respondents prefer Alternative E for commercial use. It could be modified by adding one more motor launch to April and September respectively, cut winter use by one launch, and bump up noncommercial launches in the shoulder seasons.

RESPONSE:

Modified Preferred Alternative H represents some adjustments that respond to this comment. It increases some use in the shoulder seasons, and eliminates winter all commercial use.

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C24

Some respondents support the commercial launch schedule presented in Alternative C.

RESPONSE:

The NPS considered Alternative C, but found that the Modified Preferred Alternative H better met the overall goals of the NPS.

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C25

Does a commercial trip with four oar-boats and one motor-rig count as an oar-powered trip or a motor trip?

RESPONSE:

Such a group must launch during the motor season. However, because it travels at the speed of a typical oar launch, it must schedule as an oar trip. Such a trip must travel as a single trip, without the motor-rig moving ahead to (for example) claim a camp.

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C26

Page 52 of the *DEIS* states, “Commercial motorized use would be capped at the current 74,260 user-days.” However, the table “Summary of Probable Yearly Use” forecasts 76,913 user-days of commercial motor

use for the full year. Commercial motorized use must be capped at 74,260 for the full year. Commercial motorized use then must be transitioned to zero over the next 10 years.

RESPONSE:

The text in the EIS was revised to clarify that 74,260 is the average number of user-days per year actually used by commercial motorized trips during the period from 1998-2003, whereas the cap on commercial motorized user-days remains the same as it has been at 76,913. Due to scheduling issues, including last minute cancellations, commercial operators have on average historically used less than their user-day limits.

Modified Preferred Alternative H (the NPS preferred alternative) does not transition to a year-round no-motor condition.

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C27

One of the most significant missing elements of the *DEIS* is any information or analysis of what a new commercial river trip calendar would look like, not in the general terms of seasons and daily launch rates, but in specific, day-to-day terms of which companies are launching what trips on each day, and what results at Phantom Ranch, Whitmore, Diamond Creek, for the jet-boat operations across Lake Mead, and so on. It would perhaps be advisable as part of preparing the Final EIS for the park planning team to engage in this level of specificity. It seems likely that only through this level of close examination will a complete analysis and a deep and thorough understanding of how a revised system is or can be made to work in all its many interconnected aspects be fully possible.

RESPONSE:

Currently, the commercial operators develop and submit their proposed launch calendar each year, for NPS review and approval. The NPS anticipates that the operators will continue to sort out their launch patterns, based on the requirements of the new plan.

This level of specificity is not required to make a decision about the *Colorado River Management Plan* preferred alternative.

The NPS believes that the commercial operators will adjust to the new program, which is necessitated by the need to improve resource protection and improve visitor experience for all park visitors.

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C28

Alternative H is hard on motor trips. Perhaps the plan should include a provision for allowing motors to convert their motor launches and user-days to oar trips. Perhaps there should be incentives for this to occur.

RESPONSE:

The NPS considered an incentive system to encourage motor trips to convert to oar trips, but because of the greatly different trip lengths, the use system could not sustain an exchange of faster trips for slower ones, as it would greatly increase the number of TAOTs.

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C29

In many National Parks, concessionaires are directly and indirectly responsible for most of the environmental footprint within those respective units. This is clearly the case within the Grand Canyon National Park Colorado River corridor, where commercial river contractors organize trips with extremely large groups, control the large majority of use permits, operate motorized boats, and rely on helicopter shuttle services at take-out points. Without doubt, the vast majority of human-induced environmental impacts within the corridor are directly and indirectly attributable to these operations.

RESPONSE:

The specific level of impacts created by each user group has not been determined by the NPS. Also, please see comment and response in General Resources (RG #31 and RG #32) regarding impacts by different user groups.

C30

Some respondents did not like the public registration system that was proposed in the *Colorado River Management Plan*. Sixteen concessionaires already have demonstrated that public interest will fill quotas every year, with wait lists. The NPS method of measuring is controversial and could be slanted. How many more personnel would the NPS require to cover the phones? Sixteen concessionaires require between two and five full time people answering phones for their own company. Since the public has to rely on the existing concessionaires to see the Grand Canyon from the river, the concessions must have fair, equitable and reasonable rules to provide the service without infringement of more government bureaucracy and duplication.

RESPONSE:

The modified preferred allocation option has several modifications from the Draft EIS, including the elimination of an adjustable split allocation system. The modified preferred allocation option is the no action option (current system), in which recreational river use in Grand Canyon would continue to be allocated between the commercial and noncommercial sectors in a set ratio (albeit a different ratio than is currently set) that will remain the same for the life of the plan. See new text describing the modified preferred allocation option in Chapter 2: Alternatives and analyzed in Chapter 4: Environmental Consequences—Visitor Use and Experience.

C31

Grand Canyon is the “workplace” of commercial river guides. The qualities of the canyon and the river create the quality and safety of a river trip. If guides don’t love what they do, and if they feel that their “workplace” is compromised or degraded, it will be difficult to retain the quality of river guides that we currently have, which in turn affects the safety of the river-running public. Guides have already watched the quality of various resources deteriorate over the last decades; imagining an accelerated decline is an unsavory prospect to these important stewards of the canyon.

RESPONSE:

The NPS believes the preferred alternative will improve preservation of the resources, and that the commercial river guides will continue to provide a high-quality experience for their clients.

C32

The October launch schedule of 0.5 oar launches/day will result in some oar companies possibly scheduling one or more of their traditional three October launches in late October. Late October launches will really be November trips and would extend the operational “in-season” focus into the “off-season.” November trip operations would be a big impact on smaller companies. The number of trips a company would have to launch late in the year would vary each year based on the system the outfitters use to select off-season dates. Some companies may have as many as three late October launches on any given year. Launching three trips during essentially the off-season would have a bigger impact on small companies because three trips is more than 10% of their total allocation. Solution: Model and adopt an increase of 0.5 commercial oar launch/day for October for either the whole month or at least for the first half of October. This would bring commercial oar launches back to one launch/day as exists today. While each of these impacts on a small company’s business operations and trip configurations on its own would not be too much to bear, the combination of all these impacts adds up. In many cases, these are impacts that will be experienced only by oar-only companies and will be hardest felt by companies that offer a long(er) trip style.

RESPONSE:

Modified Preferred Alternative H actually provides more September oar launches than current use, and October allowable use is approximately the same as current actual use. The NPS believes that commercial operators will find ample opportunity to provide a good visitor experience within this alternative.

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C33

The NPS should retain the current limit of upriver travel to RM 240 and not limit the number of jet boat pick-ups.

A large percentage of the commercial trips departing Lees Ferry end their trip on Lake Mead and are transported to South Cove (at present lake levels) through the services provided by Canyon jet boats. Typically the river guests are transferred from the rafts to the jet boats at Separation Canyon (RM 240), or slightly below. The *DEIS* addresses this upriver travel issue and suggests that the jet boats not travel above RM 260 for river guest transfer to the jet boats (Chapter 2 pp. 76). This travel time from RM 240 to RM 260 would add an additional number of hours until the pick-up time thereby causing delays and complications as our river guests attempt to proceed to their final destination. There are various issues involving rafts, flights and final travel connections that would be totally disrupted by the additional time required to travel on the rafts that extra distance. The NPS staff has stated that there are concerns about the jet boats being run aground due to the lower levels of Lake Mead. The jet boats are now using a GPS on each boat that allows accurate reading of the proper and deepest channel in the Lower Gorge. There has been a tremendous improvement on jet boat navigation demonstrated this past season. In addition the captains of the jet boats are aware of the floating docks that facilitate the Diamond Creek down trips and the helicopter tours. These jet boat captains respect these areas and slow the boats to minimize any negative impacts caused to the floating docks by the wakes of the jet boats. The *DEIS* limits the number of commercial pick-ups to four per day during peak season and one per day during non-peak season (*DEIS* page 76). There are times when flexibility is needed in a plan to facilitate unpredicted situations. There may be times when Diamond Creek floods requiring additional river trips to take-out on Lake Mead. There may be times when more than four trips per day require the services of the jet boat on Lake Mead. I suggest the NPS allow this flexibility in the plan and not limit the number of pick-ups per day.

## RESPONSE:

Modified Preferred Alternative H includes the following provisions responsive to this comment: (a) RM 240 would be the upstream travel limit; (b) commercial pick-ups would remain limited to four per day, but a provision was added to allow waivers or variances in the event of unusual circumstances such as flood closure of the Diamond Creek Road (see Sections 2.3.1 and 4.4.4.5 of the *FEIS*).

## C34

Many respondents had ideas regarding group size limits. These ranged from allowing a limit on the maximum number of people (i.e., 46 as a maximum) to restricting group size to less than 22 on all commercial trips. One commercial operator revealed that in 2004, motorized 20-passenger boats carried an average of 18.84 passengers, a load factor of 94.2% in a field of 16 companies whose load factors ranged from 94.2% down to 73.27%. (As perspective, an S-Rig authorized to carry 16 plus crew but operating at a 73.27% load factor is going down the river with an average of only 11 or 12 passengers on each boat and, for every 4 boats that do that, an additional one-boat launch is needed).

Further, some respondents suggested waivers for group size. Trips for people with disabilities will be unable to operate at this time of year because the high number of boats/guides, care attendants and support staff needed to operate these trips will result in exceeding the group size limit even for a very small number of trip participants. Oar trip group size limits for the fall will prohibit some companies from offering specialized trips (e.g., the String Quartet Trip) at that time of year. To operate a specialized trip under the shoulder season group size limits, companies would have to run it for just 13 trip participants (13, plus crew of 7\*, plus 4 quartet members). The ability to send assistants as part of the crew on specialized trips (normal practice in case a participant is unable to continue paddling during the trip) will also not be possible under the new group size limits and is also a concern.

\* Some hybrid trips require six guides and 6 boats: five oar boats to accommodate the gear displaced by our small, unloaded paddleboat. The string quartet trip requires a sixth oar boat to accommodate the instruments, music boxes, and the four musicians.

## RESPONSE:

The NPS analyzed a range of group sizes, and found continuing concerns regarding continuing loss of beach size, campsites, and other impacts of larger sized groups. The NPS realizes that the new smaller group sizes will provide challenges for our commercial operators, and anticipate they will meet those challenges with their usual high standards.

## C35

Allow motor support kayak trips any time of year up to the sample trip length as nonmotor trips and allow them to launch on either a motor or an oar slot. Motor supported commercial kayak trips make it possible to discount the price of the trip considerably below what is possible for rowing supported kayak trips, simply due to reduced labor costs. This is a niche market of people who think and play the same way noncommercial boaters think and play. They either need a discount or they find it difficult to rationalize paying full price when they are paddling themselves down the river. (Being rare, increase in TAOTs will hardly be perceptible.)

## RESPONSE:

Motor support kayak trips must launch during motor season (because of the motor), and must fill an oar launch slot (because of the number of days they spend on the river, and the consequences to TAOTs).

C36

Some respondents thought Bar 10 Ranch was given preferential treatment in Alternative H.

RESPONSE:

Impacts to Bar 10 Ranch were not the deciding factor in selecting Alternative H as the NPS preferred alternative. Impacts to their operations were analyzed as part of the socio-economic analysis, because that analysis considered impacts to a range of park neighbors and localities.

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C37

A respondent suggested that the educational function of the Grand Canyon be recognized and used as follows: As addition to one of the alternatives identified in the *DEIS*, or perhaps as a new alternative, existing and willing commercial outfitters are to receive a launch date each spring for the interval mid-March to mid-April and again in mid-September to mid-October, for the purpose of conducting educational river trips. Each launch is to include a maximum of two motorboats and twenty passengers, and a minimum of one instructor, but preferably one per raft. The trips are to be preferably 13-14 days long to Diamond Creek, and certainly no longer. The educational launches and person-days are to be in addition to the regular launches and allotments and will only be given to outfitters running educational trips. In exchange for this benefit, outfitters should give a discount to passengers and organizations participating in the educational trips.

RESPONSE:

Nothing prevents outfitters from doing this under their current allocations. The NPS is not considering increasing commercial allocations even to specifically allow for educational trips. All trips should include an educational and interpretive component.

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C39

In terms of the total launch matrix, Alternative H would take 45 or more motorized launches that motorized operations are now using and give them as rowing launches that the rowing companies don't presently need, but—under the proposed redefinitions of the “use seasons”, they would need but couldn't schedule.

Motorized trip operations are presently using 475 launches in an assigned operating cycle of 168 days, April 1 through September 15.

Alternative H would reduce motorized launches to 430 and cast them into what appears to be 184 days, but is really 138 and in any case no more than 113 because it includes 31 to 46 days (all of March and probably half of April) that the general public will consider unusable.

This creates an efficiency imperative: Commercial motorized trips are being conducted in boats that are authorized to carry the necessary crew plus 16, 18, or 20 passengers, depending on their structure and configuration. The companies using these boats have different “philosophies” toward how efficiently it is done. Some companies run mostly one-boat trips; some run mostly two-boat trips, some run a mixture; some try to fill all seats, some try not to fill all seats.

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In terms of “load factor” (the ratio of seats filled to seats available), the operating results (2004, a typical year) of 12 motorized-trip companies ranges from 73.3% to 92.4%. For all 430 proposed motorized launches to be available to the public, and to do so within the maximum usable period of 153 days, all motorized-trip operators will have to essentially give up one-boat trips and load all two-boat trips to at least 90% authorized capacity. The number of launches for each company, with all seats filled, has to be 10% over, to allow for the factors (cancellations, no shows, etc) that the 105% calendaring of user-days now does.

RESPONSE:

Please see changes made in the Modified Preferred Alternative H.

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C40

Many respondents proposed a “Joint Recommendation” Alternative. The Joint Recommendations state, “While no nonmotor commercial use is shown on the chart in the month of April, the collaborating parties support mixed commercial use in that month, scheduled in a manner that would result in no more than three nonmotor trips (two noncommercial and one commercial) departing on any one day.”

Because the outcome of certain critical policy questions is unknown at this time (such as maximum commercial group size limitations and the importance the NPS will place on retaining a meaningful level of one-boat motor trips similar to historic use patterns to prevent an inadvertent increase in average motor group sizes even as the NPS seeks to reduce overall group size limits), final motor and nonmotor commercial launch numbers can only be determined at a later time. The NPS should retain a degree of flexibility when it comes to the commercial river trip scheduling process that must follow the *Colorado River Management Plan* official revision, in the course of the plan’s implementation. It may be that some April use should ultimately be reserved for nonmotor commercial trips.

RESPONSE:

The NPS has modified Alternative H to adjust the motor season to April 1 to September 15.

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C41

Releasing launch dates late in the spring makes organizing this equipment difficult at best. This equity may be addressed by an earlier continuing interest system and release of unclaimed launch dates by November of the previous year.

RESPONSE:

Right now, noncommercial applicants are required to pay 90 days prior to a launch, which is when the majority of cancellations occur. The commenter is advocating the NPS to move that date further forward, so that others could obtain a “cancellation” and plan a trip.

Under the proposed new permit system, the NPS expects fewer cancellations (because there will be no deferments). There will be no continuing interest system, because the waitlist will be phased out.

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C42

The sum total of (commercial and noncommercial) Alternative A (473) compared with Alternative H (430) has a DIFFERENCE of only 43 motorized boats (a decrease under Alternative H). Please halve the number to 21.

RESPONSE:

The NPS has analyzed the range of use and believes that the Modified Preferred Alternative H best represents the best interests of Grand Canyon National Park.

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C43

A respondent suggested that powerboats should be allowed only on odd weeks.

RESPONSE:

Because of the increased speed with which motorized boats negotiate the Grand Canyon, this would not reduce the number of encounters with nonmotorized boats. As motorized boats would “catch up” with nonmotorized trips, crowding on the lower portion of the river on alternate weeks would result. The NPS considered and rejected such a concept during the alternatives development process.

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C44

Private boaters are well aware that there are limited penalties for canceling their expression of interest or even their permit (30-50+ cancellations rates over the last few years illustrate this truth). The registration requirement is a barrier to collecting information that is not possessed by the general public but is possessed by private boaters: these two groups are very different, and the all user registration system ignores this fact, to the detriment of the public. Commercial boaters usually want to educate themselves about a trip before committing to buying it. They want to be able to check on the services available and research travel options as well as to interact with an actual person who may be providing actual services. Private boaters, on the other hand, usually know about time of year, how they will make their trip, and they do not need to do the research typically completed by commercial boaters. Therefore, requiring people to register their interest prior to knowing what they are getting into or when is problematic for commercial users and will limit the number of commercial users willing to register their interest. Even if the registration system allows people to view availability first it will not resolve the fundamental problem of comparing interest with demand.

RESPONSE:

The NPS believes that this question is addressing the all-user registration system, and the adjusting split allocation. Neither is presented as preferred options in the *FEIS*.

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C45

Information needed for full consideration of impacts is lacking in some key areas to the *DEIS* leaving the public with a less than complete picture and making the process scary and confusing for us as we attempt to analyze and communicate impacts to our operations. The *Colorado River Management Plan* team is still in scoping mode with several key elements: comments to help define how a key element might be best implemented or defined have been requested. This either prevents our ability to analyze and comment on impacts or shifts the focus of our comments away from being able to tell the NPS how a given element will impact our operations. For example, the impacts of elements of Alternative H on big vs. small companies and motor vs. oar companies are not considered in the document and had not been explored by the team. Details of the All User Registration system have not been presented and as it turns out, have not been finalized. Public comments on many key elements can not be as detailed and beneficial as they could be if

complete research, examinations, finalizing, detailing etc. had been accomplished prior to publishing the *DEIS*. Likely this is due to the short time frame required by the private boater lawsuit settlement. This is an important document and the new plan will have far reaching and long lasting impacts to the resource and the park visitor. The *Colorado River Management Plan* review process would have been best served by allowing the NPS the time it needed to fully prepare all elements of the document, propose new systems, and prepare impact analyses without having to use “averages” and without lumping all the outfitters into a generic group. The *DEIS* includes elements that will have some negative impacts on the industry that provides services to the visiting public and, more specifically, will have negative impacts to our small oar-only operations. Many of these elements will have to be tried out, in many cases for the first time in any resource, and then adjusted throughout the process after the unintended consequences have been experienced.

RESPONSE:

The *Colorado River Management Plan* provides a detailed analysis of the environmental consequences of each of the alternatives. In some cases where detailed analysis is lacking, it is because best available data allowed for only a broad analysis. For example, available data did not lend to an analysis of differentiated impacts between the various commercial operators. In other instances, some detail was considered best addressed in the implementation plan. Finally, some detail is most appropriately left to the Park, in order to provide flexibility in providing a range of quality river experiences while protecting the resources of the canyon. The NPS has confidence that the commercial river operators will adapt well to the requirements of the new plan.

## Consultation and Coordination

CC1

NPS should continue coordination efforts with the Arizona Game and Fish Department regarding fish closures so that the Department can facilitate management and notification to the recreation angler through fishing regulations.

RESPONSE:

The NPS will continue to coordinate efforts with Arizona Game and Fish Department; Kanab Creek closure is related to overnight camping, not fisheries management. Little Colorado River closure is consistent with Arizona fishing regulations.

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CC2

It is not clear whether or not NPS has consulted with the U. S. Fish and Wildlife Service with respect to this Plan. Consultation is required.

RESPONSE:

Consultation is underway; please see Chapter 5: Consultation and Coordination.

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CC3

The *Colorado River Management Plan* should require the NPS to engage the Secretary of Interior directly if recovery efforts continue to fail. Advocate for a supplemental EIS on the operations of Glen Canyon Dam, to explore the full range of alternatives available to achieve endangered fish recovery (including decommissioning the dam).

RESPONSE:

Recovery efforts for the humpback chub are specific to Glen Canyon Dam operations. Those decisions and recovery efforts are outside the scope of the *Colorado River Management Plan*.

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CC4

Coordinate closely with the Glen Canyon Adaptive Management Program, the Little Colorado River Watershed Project, and the Arizona Game and Fish Department programs such as the conservation strategies for bluehead and flannelmouth sucker.

RESPONSE:

The NPS coordinates closely with all of the agencies involved in the Glen Canyon Adaptive Management Program and will continue to do so through that program and directly for our own management needs.

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## CC6

Consider a “Citizen Task Force” to discuss, advise, and assist with ongoing future management decisions and efforts. It would consist of representatives of affected users. Another suggestion was to appoint an advisory board of noncommercial users to help you consider changes and impacts to any system.

## RESPONSE:

The Federal Advisory Committee Act (FACA) generally prohibits federal agencies from meeting privately with unchartered, non-governmental groups “in the interest of obtaining advice or recommendations.” Furthermore, according to the National Environmental Policy Act of 1969, the NPS has afforded all members of the public an equal opportunity to provide their comments on, and to express their concerns about, the *Colorado River Management Plan* (the proposed federal action).

## CC7

Create an agreement between interested parties to govern jetboat contacts—the Hualapai Tribe have been unhappy with wake turbulence created by jetboats and have made it clear they prefer the jet boat pick-ups take place below RM 260. This stretch of water is regulated by the NPS, and while we understand that the Hualapai claim historic rights to this stretch of water, the park’s responsibility is to manage for both user groups. The NPS should pursue an agreement between the Hualapai, NPS, Outfitters, and Canyon Jetboat Service that will address the proper etiquette and operational procedures for contacts between jet boats, Hualapai trips, and Grand Canyon rafting trips. It is not necessary to restrict this entire stretch of river.

## RESPONSE:

The Modified Preferred Alternative H allows for four jet boat pick-ups per day during the peak season (March–October). These pick-ups can occur below RM 240. Because the Lees Ferry action alternatives eliminate spikes in use, it is anticipated that this restriction will have little effect on commercial operators that offer the jet boat take-out service. The park will continue to work with the Hualapai Tribe and commercial operators to ensure proper etiquette and operational procedures for use in the Lower Gorge.

## CC8

Rather than continuing to consider the Colorado River in the Grand Canyon as such a unique feature, a suggestion is to contact and get involved with the Interagency White Water committee. They manage truly wild rivers, scenic rivers, and controlled rivers as well. They have a great deal of knowledge, insight and experience. Most of your issues including conflicting or competitive demands are the same—their advice and knowledge are free.

## RESPONSE:

The NPS believes the Colorado River through Grand Canyon National Park offers one of the world’s premier river experiences. This river trip is one of the few in the contiguous United States that provides an opportunity for a 277 mile river trip. Several staff at Grand Canyon National Park are members of the River Management Society, a non-profit professional organization committed to achieving excellence in the management of rivers using science, experience and public values. The organization has its root in the former Interagency Whitewater Committee (established in 1972). The staff at Grand Canyon National Park have served on several committees for the organization, and routinely participate in interagency workshops and conferences annually.

## Cultural Resources

### CR1

The concept of “cultural resources” should be expanded to include the resources valued by the culture of Grand Canyon river runners, in addition to traditional American Indian cultures. Unlike American Indian tribes, Grand Canyon river running culture is specific to the Grand Canyon: ALL of the group’s sacred and traditional sites lie in the canyon, and along the river corridor. Our written tradition about specific sites—generally called “attraction sites” in this plan began with Major Powell’s account of his trip in 1869, and continues up to the present, and includes dozens of books and thousands of articles.

Our cultural presence is, in fact, the entire reason for this plan. We also want access to our traditional cultural resources and do not agree that our active involvement with our culture should be curtailed any more than we would want to impose similar restrictions on Native American tribes. There is concern that increased use might require closures of sites that are central to our cultural heritage.

### RESPONSE:

Cultural resources, by their definition, include historic, prehistoric and traditional cultural properties. To qualify, sites must be at least 50 years in age and represent significant events or people in history/prehistory, architectural achievements, or contain information important to history or prehistory. The river running history in the Grand Canyon contributes to the overall human history of the river corridor and these resources are considered historic archaeological sites. They receive the full protection of law as outlined in the Archaeological Resources Protection Act and the National Historic Preservation Act.

Traditional cultural properties, are by their very definition, properties that are eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community’s history, and (b) are important in maintaining the continuing cultural identity of the community. While the river running community may see itself as a “culture” it would be difficult to define it as such within the guidance provided by the National Register. However, the NPS recognizes and protects significant historic properties, including those important to river running history, as archaeological sites.

Nowhere in the document is it proposed to curtail access to these significant places. The management objectives in the *Colorado River Management Plan* are specific to preservation and interpretation of the cultural heritage of the canyon. Please see Chapter 1, Objectives.

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### CR2

Grand Canyon National Park must strengthen and renew their commitment to successful preservation of the park’s cultural resources.

### RESPONSE:

The NPS is committed to preservation of the park’s cultural resources. Please see Chapter 1, Objectives.

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### CR3

The *FEIS* should characterize impacts to the cultural resources in Grand Canyon as “regional” rather than local. This elevates their importance to the level necessary for their continued protection and preservation.

RESPONSE:

Regardless of the characterization as regional or local, all resources in Grand Canyon are important and their protection and preservation is of paramount importance to the NPS. The NPS believes “local” is appropriate and do not see this level as weakening our preservation mandate.

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CR4

When cultural resource sites have been fully excavated by Grand Canyon National Park, why is it considered adverse impact when passengers visit these sites? What are they impacting?

RESPONSE:

Grand Canyon National Park has only one fully excavated site along the river, the Bright Angel Site; however if the NPS did engage in complete excavation, that action would be considered an adverse effect to that property under Section 106 and 36 CFR 800 regulations.

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CR6

“Analysis”: Less exchange at Whitmore has potential to reduce effects on cultural resources. Please explain how?

RESPONSE:

See revised text for Modified Preferred Alternative H in Section 4.5 of the *FEIS*.

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CR7

Thousands of cultural sites have not been cataloged or stabilized and protected because of lack of funding. None of these problems have been addressed by the NPS.

RESPONSE:

In 1971, Executive Order #11593 was executed that instructed all federal agencies to inventory their lands for historic properties that may be eligible for inclusion in the National Register of Historic Places. No funds were allocated for that effort. Grand Canyon National Park is currently undertaking inventory surveys that will hopefully bring inventory to 5% of parkland. The NPS continues to add to our inventory and recognize that it is highly unlikely that 100% of parkland will ever be inventoried. See revised text in Section 4.5 of the *FEIS*.

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CR8

Monitoring visitor impacts relative to baseline conditions should be an essential component of any alternative, not a mitigation measure. Strict enforcement of the Archeological Resources Protection Act (including increased enforcement staffing) is listed as mitigation. Why is strict enforcement of the law a mitigation measure? It is clear that it is a mandate. Revegetation of areas damaged by social trailing, temporary or permanent closures of sites, graffiti removal, additional education of visitors in leave-no-trace ethics and others are mitigation measures.

RESPONSE:

See modified text relative to increasing NPS patrol presence (rather than strictly enforcing Archeological Resources Protection Act; NPS currently strictly enforces Archeological Resources Protection Act and all other applicable laws).

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CR9

Have a Cultural Resource Ranger give talks at Lees Ferry, Phantom Ranch and Diamond Creek.

RESPONSE:

Increased education and interpretation are integral components of implementation of the *Colorado River Management Plan*. Whether it is cultural resource rangers or some other avenue for dissemination of information, additional cultural information will be provided to the public.

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## Edits

E1

A number of comments were received that pointed out typographical errors in the *DEIS*.

RESPONSE:

Typographical errors pointed out in these comments have been addressed in the *FEIS*.

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E6

The *DEIS* is 600 pages long. Is there a group, which has condensed this down to some understandable points? Why it was not stylized to permit easier digestion of the information contained therein?

RESPONSE:

The *DEIS* was over 800 pages long without the Appendixes, but it included an 18-page Executive Summary that condensed the major points. The EIS is voluminous due to the number and complexity of the alternatives and the thorough analyses of potential impacts to fifteen impact topics.

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E8

The wording on page 101 under the rule changes for waitlist members (paragraph 1) does not match the wording for the same rule changes on page 663. In the first paragraph on page 663, (paraphrasing) you leave out the words “Before anyone of these could apply through the new permit system.” The wording on page 663 implies that the waitlist member would be required to give up their place on the waitlist. Perhaps you could make this wording match.

RESPONSE:

The wording on page 101 should have been repeated on page 663 in the Draft EIS. However, significant revisions have been made in the sections on Transition Options in the *FEIS* (see Sections 2.6.1 and 4.2.11.9).

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E11

There is misleading information found in two respective tables without any real explanation regarding commercial user-days. In reference to Alternative A on page 38 of the *DEIS*, which indicates total commercial user-days at 113,083 and Alternative H on page 52, which indicates total commercial user-days at 115,500. The preferred alternative lists the current allocation, while Alternative A lists the six-year average of actual commercial use. It is important to clarify this type of data. The uninformed reader (such as the City Editor of the Arizona Daily Sun on 1/26/05) might construe that to be an increase in the commercial sector, which it is not.

RESPONSE:

NPS recognizes that the 115,500 in the alternatives does not indicate an increase in commercial user-days from 113,083 in Alternative A. The commenter is correct that the table for Alternative A shows the six-year

average of user-days actually used by the commercial sector (i.e., 113,083), whereas the alternatives that show a user-day total of 115,500 are actually showing the commercial user-day cap (or limit) from March–October. Alternative A also has the same commercial user-day cap of 115,500. However, in its efforts to use best available data, the NPS has shown actual six-year averages where possible for Alternative A. Alternatives B through H are estimates based upon the best available data (used for Alternative A) modified as needed for the specific provisions of each alternative. In the case of total user-days, NPS assumed that commercial operators would attempt to use their entire allotment of user-days. Therefore, it was considered most accurate to show the 115,500 limit for Alternatives B through H rather than to speculate about an amount less than the cap that might actually be used.

Similarly, it should be noted that there is also a March–October user-day cap for commercial motor use of 76,213 for all the alternatives (including Alternative A). However, similar to the situation with the 115,500 cap described above, in the Alternative A table the total shown is 74,260 because that is the actual average user-days used by commercial motor trips from 1998–2003.

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E12

Commercial Nonmotor Launches (*DEIS* page 52): 169 is not the cap for these trips; however, the rest of the commercial numbers are listed as caps. Please be consistent with the format of your numbers. In addition, 102,725 is not the cap for the private sector, it is only 80% of the cap. Please clarify your numbers for the noncommercial sector.

RESPONSE:

Alternative A numbers are generally averages of six years of actual trip data. The numbers in the table for the other alternatives are estimates of what is expected to occur within the commercial user-day cap, based upon a continuation of behavior evident in the actual trip data from 1998–2003. There is no user-day cap for noncommercial trips.

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E13

In the Introduction: Criteria for Developing Alternatives, Figure 2-1: Actual Trips Launching Per Day (1999–2002) is completely unreadable. The lines differentiating the years are blurred together and the only thing that is understandable is that more trips will be launching from May through September. In the final EIS, separate each year from one another in four separate graphs. This should make it readable.

RESPONSE:

Figure 2-1 is included in the *DEIS* to illustrate the daily and seasonal variations in launches per day over the four-year time period. The NPS believes it does that quite well, illustrating one of the major differences between the current situation and the alternatives that have seasonal but NOT daily variations (please see the figures in each alternative’s description showing average and maximum launches per day by trip type, for example Figure 2-9 for Modified Preferred Alternative H). The electronic versions of the *DEIS* (available on compact disk or on-line) show Figure 2-1 in color, which allows one to discern yearly differences to some extent. However, the yearly differences are not considered important to the purpose of the figure, so the figure will not be revised.

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E27

Table 4-27 estimates the average river encounters per day while Table 4-28 estimates the average time in sight of other groups. Note that these are for all the alternatives, not just for Alternative A as the titles suggest. It is curious that the *DEIS* provides identical ranges of numbers for all the alternatives for river encounters and time in sight during the summer when there should be some difference between these alternatives. Does it make sense that the preferred alternative has more daily launches and a wider variety of trip lengths than the nonmotor Alternative C and yet both have the same wilderness quality? This is not consistent with our intuition.

RESPONSE:

Please see the corrected titles for Tables 4-27 through 4-35 in Chapter 4: Environmental Consequences—Visitor Use and Experience).

The Draft EIS does not provide identical ranges of numbers for all the alternatives for river encounters, but does so for estimated average time in sight of other groups during river encounters per day, as shown in Table 4-28. This table summarizes time in sight estimates for current management and the new alternatives. It is primarily based on analyses of 1998 data (Shelby 2000), with consideration of daily launch levels, TAOT, patterns of launches, and subsequent encounter levels. Oar trips and motor trips were combined (motor trips have more encounters, but those encounters tend to be shorter). Average time in sight is expressed in terms of 15-minute ranges to reflect the appropriate level of precision. Current time in sight averages are less than 45 minutes per day (when applied to a five hour “on-the-water” period) in the summer and less than 30 minutes in other seasons, which are at or below the 15% wilderness standard using the “on the water” length of day. Action alternatives generally maintain or slightly reduce average time in sight in the summer, but none reduce it to the next lower range. In all the action alternatives, time in sight impacts have negligible impacts on experiences because they are well within wilderness standards. See the impacts analysis for the Modified Preferred Alternative H in Chapter 4: Environmental Consequences and Appendix G—Visitor Use and Experience for more information.

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E29

Page 599 of the *DEIS* should change “those seeking motorized trips” to “those seeking motorized trips in a potential wilderness.” Also, “seeking motorized river opportunities”, should be changed to “seeking motorized river opportunities in a primitive zone.”

RESPONSE:

The NPS believes it has stated the information contained on page 599 correctly.

## Methods

M1

The information in Appendix H that discusses user discretionary time (UDT) appears anecdotal (not supported by any factual data) and could be as easily countered by other anecdotal information. It is not clear if the numbers shown in the tables are just an example, or if these are being used as a basis for planning and decision-making. The numbers appear to be of questionable value in my experience.

RESPONSE:

The UDT model was one of many tools used to determine carrying capacity and forecast potential impacts from each of the alternatives. Where data was lacking for this effort, best professional judgment prevailed using assumptions and extrapolations from scientific literature, other park units that manage river use, and personal observations of park staff. The UDT model represents best available data for the information it provided.

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M2

Please include administrative use in the *FEIS* charts, graphs, totals, etc. and specify that it has (or has not) been factored into the impact analyses. Of particular concern is that administrative use is not currently factored into impacts to the natural and cultural resources and those impacts may be substantial. For example, science performed on humpback chub is not factored into the impacts on the chub. For another example, tamarisk eradication work is not factored into the cumulative impacts to soil degradation.

RESPONSE:

Administrative use represents a range of activities including river patrols, resource monitoring, education, and research. While the NPS does not know exact numbers, it has included a certain level of administrative use in our analysis. The NPS has committed to a more rigorous review of all administrative use to account for carrying capacity, and congestion and crowding. Specific resource evaluations are addressed within the resource sections of this plan. See comment and response in General Resources (RG #14).

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M3

The NPS should analyze a version of Alternative B with the following recommended improvements.

- While the *DEIS* shows that a reduction in visitor numbers will decrease resource impacts, it does not clearly justify the specific reduction of visitor numbers by almost half in Alternative B. The *DEIS* should clearly relate specific numbers to resource impacts.
- As with overall numbers, the NPS needs to clearly relate trip length reduction to resource protection objectives, especially because it is not clear why trip lengths are shorter under Alternative B, which also has the lowest overall numbers of users, than under Alternative H, which retains motors and increases annual users to over 26,000 people.

RESPONSE:

The NPS believes it has analyzed a full range of alternatives that meet management objectives per NEPA requirements. Analysis of Alternative B provided important information about the environmental

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consequence of implementation of a low use-no-motor use scenario and how well such a scenario meets management objectives. Please see Chapter 2 for a discussion on how trip lengths relate to resource protection objectives.

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M4

Nowhere in the *Colorado River Management Plan/DEIS* does the NPS offer any rationale or basis for the proposed alternative numerical allocations between commercial and noncommercial segments of the public. Since the NPS recognizes in the plan that the level of demand from the two segments (commercial and noncommercial) is not known, any numerical allocation is arbitrary. Fairness dictates that allocation should be based on number of passengers and should be equally shared between the two segments until demand is determined.

RESPONSE:

Equal access depends upon the measure of use. While some believe that passengers per year should be the primary measure for allocation, others believe that user-days or launches per year should be the primary measure. The NPS believes it has considered a full range of alternatives as required by NEPA. Alternative B included equal allocations of trips launching in the summer and Alternative C included near-equal launches and user-days in the summer season. Additionally, the Modified Preferred Alternative H includes increases in annual and summer season noncommercial launches, passengers and user-days.

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M5

As a measurement, user-days are appropriate and necessary for managing use to protect the resource, but are not appropriate for measuring demand for allocation purposes. If allocation is to be based on demand, then demand should be measured, and allocation determined, based on user-trips (numbers of passengers), rather than user-days because:

- A user-day is not of the same value for all members of the public. Some would consider an 18-day trip as too short.
- The public demand is not for user-days but for an “ideal user-trip” (within constraints imposed by realities) based in an individual’s personal preferences. Many describe this user-trip experience as their “trip of a lifetime.” For some this might be seven days, while for others it might be 14 or 21 days. Regardless of the trip length, it is the ideal experience that is being demanded, rather than user-days.

RESPONSE:

Alternatives were not analyzed using a single measure of use. The range of alternatives incorporated a variety of allocation scenarios. Each of these scenarios was analyzed for its potential to have environmental consequences and for its potential to balance use and resource preservation. The interconnectivity of management variables such as user-days, trip length, total passengers, group size, and total launches and their potential to affect the resources of the canyon (as well as visitor experience) is represented throughout the *FEIS*. The NPS believes that the Modified Preferred Alternative H represents the best balance of those variables.

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M6

It is inappropriate to decrease trip lengths as a mechanism to create more launches for the already underserved noncommercial user group. Shortening noncommercial trip lengths was done in late 1972, and

this impairment of the visitor experience without adjusting allocations is as unacceptable today as it was then. The NPS proposed change in noncommercial trip length impacts about 80% of all noncommercial trips in the summer, and over 90% of the fall and winter trips. Shortening noncommercial trip lengths is a major impact on the noncommercial river visitor.

RESPONSE:

Please see the Modified Preferred Alternative H. The new trip length limits present a reasonable balance between providing opportunities for a variety of visitor experiences while protecting the resources of the Grand Canyon. The NPS has strived to find equitable solutions for all our users, recognizing that the river can only sustain a certain number of users at one time. In creating our alternatives, the NPS has attempted to provide access for visitors consistent with protection of park resources. Reducing the noncommercial trips by 2 days will allow many more noncommercial trips to launch.

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M7

Often the differences are by an order of magnitude. So how do two alternatives that are basically low-use and high-use versions of the mixed-motor/nonmotor case have much greater visitation for the low-use alternative? This defies any sensible explanation and either must be explained in greater detail to substantiate the numbers or the entire table must be deleted. Furthermore, it appears to be inconsistent with the numbers given in Table 4-29 that shows a median number of 25 people encountered for Alternative D compared to 30 people for Alternative G. Note that other alternatives also demonstrate similar absurdities. The other possible conclusion is that some of the alternatives have been “data-mined” to a greater extent than others by tweaking inputs to the trip simulator to produce better results. If this is the case, then the *DEIS* is presenting alternatives that cannot be compared “apples-to-apples” and the entire document is called into question since the public cannot possibly compare alternatives which cannot be compared to each other.

RESPONSE:

Summer trips at one time in Alternative D are greater than summer trips at one time in Alternative G. This is a function of longer trip lengths in Alternative D. Table 4-27 in the *FEIS* illustrates the estimated encounters at attraction sites including the probability of meeting other groups at high- and low-use sites. The NPS believes that all alternatives have been evaluated in a consistent manner using best available data.

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M8

No evidence is provided that groups traveling at the same speed have an adverse affect on tributaries and springs. In fact, any mention of similar pace doesn't appear anywhere else, even in other alternatives that one might expect to also have such a “problem.” The current discussion in Alternative C about trips moving at the same pace needs to be removed.

RESPONSE:

Motorized trips generally move through the canyon more quickly than nonmotorized trips. The river trip simulator has taken this into account. Thus, fewer trips (and people) are in the corridor or at popular attraction sites in a given day, since the faster trips leave the corridor sooner. Trips traveling at the same time do not by themselves have an adverse affect, but their rate of travel must be considered in the context of the number of people and trips launching per day. All analyses contain a discussion on pace in that pace is a critical component of UDT. One of the problems with the high use, no-motor alternatives, is that all of

the trips are traveling at the same pace. The launch based system will keep trips at one time under 60 TAOTs, but will not necessarily remedy the congestion, crowding and competition for camp and attraction sites that will occur as simulated under Alternative C.

In Table 4-21, the number of people visiting aquatic attractions, such as tributaries, is unacceptably higher in Alternative C than in Alternative H. The likelihood of these trips visiting these attractions at the same time is high given the number of daylight hours and the similarity in commercial and noncommercial trip lengths. The NPS has made the assumption that the more people that visit a site in a single day, the greater the likelihood that there will be large concentrations of people at some point or points during that day. It follows that larger concentrations of people have a greater potential to cause adverse effects to visitor experience and localized resources since individuals tend to spread out into areas where they may not otherwise go. The assumptions about impacts to resources and visitor experience from crowding and congestion are based on best available data. The commenter has not provided adequate data to warrant a change to this assumption. See comment and response in Aquatic Resources (AR #5).

#### M10

Volume I, Page 174 of the *DEIS* mentions the most recent data shows 214 campsites between Lees Ferry and Diamond Creek. Of these, there are 55 large camps (36 people), 106 medium-sized (13-24 people) and 53 small (12 or fewer). This data shows groups of more than 24 are too large for almost 75% of all camps. We recommend that a measure, large trips at one time (LTAOT), be used to analyze the competition for large campsites. A breakdown of LTAOT would look like this:

Alternative B has two commercial oar groups launching each day with a trip length of 16 days. This means up to 30 groups of 25 people could be using a large campsite on any given night (55% of large campsites).

#### RESPONSE:

The NPS believes that it has adequately analyzed carrying capacity and the potential for campsite competition by eliminating spikes in use, reducing group size, and reducing maximum TAOT.

#### M11

One commenter criticized the recent masters thesis titled “Regional Economic Impacts of Grand Canyon River Runners”, by Northern Arizona School of Forestry Masters student Evan Hjerpe, noting that Mr. Stephen Fullam notes “the study examines an issue that compares Macintosh apples (noncommercial river trips) with Granny Smiths (concessions river trips), but the data is so corrupt he’s managed to compare apples and oranges.” Hjerpe’s analysis examines a very contentious, political issue—commercial vs. noncommercial use of a public wilderness area, in this case the Colorado River in Grand Canyon National Park, and the regional economic benefit river runners have on the local economy.

#### RESPONSE:

The focus of Hjerpe’s analysis was to present the regional economic impacts of boating in Grand Canyon National Park, using best available data. Comparisons between commercial and noncommercial groups are not pejorative since they only focus on contributions to the regional economy. In fact, page 26 of the Hjerpe report states that while commercial passengers spent considerably more money per day, economic impacts are not the primary focus of the NPS, and gives recommendations and rationale for providing more equitable access to the noncommercial sector. This report was but one tool used in the economic analysis and the commenter did not provide specific data to justify a change to the analysis.

M12

If there is an annual transfer of allocation via launches as is indicated, how the loss is apportioned between the 16 outfitters who vary in size and operational style is not addressed. Economies of scale are one factor that immediately illustrates why this is a critical issue that must be specifically examined by the NPS at this stage.

RESPONSE:

Please see the comment and response in Socioeconomic Analysis (SE #6).

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M13

Different launches have more, or less, user-days attached to them with the longer oar trips having the most user-days attached to them. This factor creates an inequality between launches: a launch is not just a launch; a launch with more days represents a greater loss of access and represents greater value/loss potential. It will not take long, at the rate of one lost launch per year for some small companies to be lost to the private allocation black hole.

RESPONSE:

For this reason, the *Colorado River Management Plan* incorporates a launch-based schedule that includes a variety of trip types. Trip lengths in the *Colorado River Management Plan* are presented as maximums, and companies are free to run shorter trips.

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M14

Some respondents do not support any of the allocation options in the *DEIS* because they don't relate to the rest of the *DEIS* and actually contradict points in the alternatives. The allocation analysis based on launch dates doesn't tie back to the alternatives. For example, Option B is the only option that addresses the issue of number of launches per day and the number of launches per day in this option in the spring exceeds the spring launches analyzed in Alternative B. The allocation options outlined in the *DEIS* contradict the NEPA analysis, because they don't work with what is in the effects analysis for the alternatives. Options B and C are flawed in relationship to all of the alternatives. The NPS has not provided any analysis of launch impact because of a common pool approach, or for that matter for Option C either. This analysis must be included if the NPS intends to not adopt the common pool allocation option.

RESPONSE:

Please see Chapter 4 (Approach to Allocation Options, Impact Analysis—Common to All Alternatives).

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M15

The math wasn't spelled out and the report needs further clarification on the details of how you arrive at the final calculations. For example, most plans reduce the maximum number of launches and in some cases the group sizes. Yet, in some alternatives the yearly numbers increase across the board. That seems a bit counterintuitive (in this case, two negatives should not make a positive). Does this assume that your projections are due in part to more summer launches on days that currently are not at the maximum

resulting in a potential net increase in summer launches? In addition, increased use in the winter and secondary seasons would raise the yearly numbers. It may be correct to assume that any increased launches for a given day in the summer season would likely be used, but the demand on winter trips is currently very low and increasing those launches will not necessarily result in actual use to the full potential. The *FEIS* needs to spell out how you arrive at such counterintuitive numbers.

RESPONSE:

Increases in total numbers, while maximum launches per day and group sizes have been reduced, happens because current conditions result in spikes in use. Some days have up to nine groups launching, some of which can have up to 43 people. The action alternatives spread use into the shoulder and winter seasons and reduce group size and the maximum number of trips that can potentially launch per day. This better distributes use and results in fewer trips in the canyon at one time, while also providing an opportunity for an increase in passengers. Analysis assumed a solid demand for winter use, based on the winter test results described in Chapter 1. Please see Section 4.1 for a detailed discussion of general assumptions used for analysis.

M16

The impact analysis assumptions (*DEIS*, page 226) concerning group size do not give numbers. For example, the soils analysis uses this concept, yet does not compare impacts by numbers. Is this where the *DEIS* arrives at the small group number of eight? The number of people in relation to launches in each alternative comes up with a range that seems to relate to the total number of small (eight person) and regular (16 person) trips. The number of people in relation to launches in each alternative is compared and a range is presented. There is no support for the NPS projection that all trips in Alternative C will launch at full capacity when Park data from 1999 to 2002 shows a trip average of 14.02 people per trip. The NPS must provide rationale for the presumed increase in Alternative C group size averages. This skewing of the data may hide the fact that Alternative C may be more beneficial to the resource than Alternative H.

RESPONSE:

Analysis for Alternative C did not assume that all trips would launch at full capacity. For some parts of the analysis (winter for example), maximum trip sizes were used because of lack of historic information about use. Private trip sizes were determined by averaging data for 1998–2003. See Appendix K for the methodology and assumptions used in determining levels of use.

M17

The calculation that assumes all trips are from Lees Ferry to Diamond Creek is flawed because in some alternatives a significant number of people will leave the river at Whitmore by helicopter. Although this model does not consider Whitmore it can be argued that Whitmore should be a separate analysis and that broad decisions about overall use of the river should consider all alternatives on an equal basis, which is without Whitmore.

The calculations are fairly simple, which has the benefit that it is hard to manipulate and distort the results but has the disadvantage that they may not model more complex aspects of river trips. However, any section of the river that distorts things away from the underlying physics is also likely amenable to management controls. While this simple model is appropriate for broad decisions among alternatives more complex models such as the Grand Canyon RTS are necessary for final analysis and more specific decisions about whether management objectives are met.

RESPONSE:

Total passenger numbers assume that existing exchange rates at Phantom Ranch continue. Whitmore exchanges are calculated within the parameters given for each alternative (and assume that demand will exceed the number of exchanges allowed). For example, total yearly passenger numbers include passengers coming in at Whitmore. Appendix K details the assumptions used in calculations. The Grand Canyon RTS was used as part of this analysis.

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M18

The document lacks details that are critical in evaluating the alternatives. There is no information on fees, cancellation policies or the details of permit award (how far out in the future, etc), small vs. standard trips, etc. Because of this lack of detail, it is requested that the public be allowed to review the final proposal and comment on it before a Record of Decision is filed.

RESPONSE:

Please see the comments and response to Permits (P# 41).

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M19

The analysis indicates that decreases in the total passengers, daily launches, trips at one time, group-size, and trip length are the measurements. Reductions in “commercial trip length and commercial group size” are bogus; the proposed “reductions” are only adjustments to current levels. The reduction in trip length for noncommercial groups is counter productive, and it causes undue hardship and safety concerns.

RESPONSE:

The interactions of variables such as total passengers, daily launches, group size, and trip length were analyzed to determine environmental consequences for the range of alternatives (See Chapter 4, Introduction, Assumptions). All of these influence TAOT, PAOT, and other indicators of crowding and congestion. Please see the Modified Preferred Alternative H, which increases trip lengths from the *DEIS* Alternative H.

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M21

Count the number of boaters launching per day (user-days) rather than the number of distinct trips launching.

RESPONSE:

User-days are calculated by determining the number of passengers and how many days each is on the river. While the NPS did not use the number of passengers launching per day throughout the analysis, it did include the number of PAOTs in the canyon, as well as user-days in our analysis. These numbers incorporated the number of people launching per day. Trips At One Time was also an important carrying capacity standard that was compared to the number of available beaches. It was also used to predict encounter rates and crowding and congestion at specific sites.

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M22

Alternative C has 92 people launching each day during the summer. In the shoulder seasons there are 62 people launching each day. What is the probability that more than 100 people will be present at Elves Chasm at any one time? There are 123 days in the summer season. Table 4-21 shows that there are 80 days with more than 100 people. This is 65% of the days during the summer season. The average must be below 92 and the median is well over 100. Page 275 of the *DEIS* says that there are 11,252 passengers during the summer and Table 4-21 shows that over 8,400 are present on days with 100+ visitors, which are over 75% of the summer passengers. Havasu Creek has 73 days with more than 100 visitors and in these 73 days has at least 9,250 people, which are 82% of the total summer passengers. This is an average of at least 127 people per day while the other 50 days have an average of less than 40 people per day. These are such skewed distributions that it strikes me as very unlikely. A histogram of the distribution for these two cases really needs to be shown. Furthermore, a small reduction in the number of people launching each day would have to have a large effect. For instance, simply reducing the commercial group size to below 28 would mean that three commercial groups and one noncommercial group would no longer be greater than 100 people. At 26 people in a commercial group, two commercial groups and three noncommercial groups would be 100 people. Thus the result is highly sensitive to the commercial group size. This demonstrates why reducing commercial group size is important.

RESPONSE:

Please see Section 4.1 for a discussion on the interconnectivity of variables. The number of people launching per day is an important factor in determining the potential for crowding at attraction sites, but trip length, group size, and trip type (with varying trip speeds) are equally influential. The commenter has not provided data to warrant a change in the analysis.

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M23

The input files for the Grand Canyon RTS should be made available for each of the alternatives (along with the trip simulator if it is not already available).

RESPONSE:

Input files for the Grand Canyon RTS are a part of the administrative record.

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M24

The use of the Grand Canyon RTS model is a concern when it seems to have been used as an answer rather than as a tool, resulting in homogenized trips, reduced flexibility, and more rigidity (such as designated campsites for certain size trips). Because the RTS is based on camping beach studies conducted in the early 1990s rather than the current state of Grand Canyon beaches (in terms of size and campability), the model used to formulate your assumptions is inaccurate. Furthermore the RTS model is based on behavior under the rules regarding activities at attraction sites, and campsite conditions as they existed before the RTS was developed. The new rules and restrictions proposed within this plan will invalidate the RTS projections of trip interactions because guides will make decisions about campsites and daytime activities based upon the new rules and current campsite conditions, and not the decisions projected by the RTS.

## RESPONSE:

The Grand Canyon RTS was one of many tools used to determine carrying capacity and forecast potential impacts from each of the alternatives. Where data was lacking for this effort, best professional judgment prevailed using assumptions and extrapolations from scientific literature, other park units that manage river use, and personal observations of park staff. The RTS represents best available data for the information it provided. The RTS also included restrictions proposed in the *DEIS*, as well as new data on beaches. The commenter has provided no specific data to warrant modification of the analysis. New data from monitoring, as prescribed in the implementation plan, may be used to refine the RTS.

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## M25

Table 2-2, pg. 36 and Table 4-1, pg. 223 lists an 8,985 maximum number of passengers at one time under alternative G. This is an order of magnitude higher than any alternative. However, the value is given as 895 on page 49. Which number is accurate, and which number was used in the decision making process or comparative calculations?

## RESPONSE:

Tables 2-2 pg. 36 and Table 4-1, pg. 223 list the probable yearly passengers for commercial, noncommercial and combined use. The 895 figure on page 49 indicates the maximum people in the canyon at one time.

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## M26

How does this compare to other time periods, 1990s, 1980s, and 1970s or as major management policies changed? If numbers are more than in the past how can the park ensure less impact?

## RESPONSE:

Please see comment and response in General Resources (RG# 9).

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## M27

Reducing daily launches and spreading use over the week is laudable, but flawed. Especially given your proposed overall increase in annual use, reducing daily launches and spreading use more evenly over each week is both laudable and necessary. You assert that TAOTs will drop from 70 to 60. The methodology that produced those figures is flawed. According to our modeling, maximum TAOTs would not be reduced to 60; they will remain at 70, approaching that peak significantly more often than currently. This is due in part to the fact that oar launches are estimated at 169, which is what you deem to be probable. Intuition says that number is greater.

## RESPONSE:

The maximum number of commercial oar launches in shoulder and summer is 210. The NPS estimates that 80% (169) of those launches will actually be used based upon actual data from 1998–2003. See Appendix K for an explanation of assumptions and calculations.

In implementing the *Colorado River Management Plan*, actual trips at one time (TAOT) will be monitored and adaptive management techniques taken as needed to maintain TAOT at 60 or lower (see clarification in Section 2.2.2.1). These adjustments, as well as our assumptions and methodology are presented in

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Appendix K. The Modified Preferred Alternative H is not expected to exceed 60 TAOTs, however, if it does mitigations can be implemented.

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M28

Decisions about use levels have largely ignored excellent, but now dated, experimental sociological carrying capacity studies by Shelby and his colleagues. Those studies should be repeated, the data should be published in the peer-reviewed scientific literature, and the management implications of those studies should be debated and pursued by the NPS. Without concerted scientific efforts to understand contemporary visitor perception, NPS decisions about recreational experience are only guesswork.

RESPONSE:

The *Colorado River Management Plan* incorporates best available data. Additional data obtained after the *Record of Decision*, either from the monitoring indicated in the implementation plan or from outside data, would be considered as part of an adaptive management process.

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M29

The plan shuts out locations rather than setting achievable monitoring goals and limits of acceptable change. The analysis in this section of the plan is not strongly convincing. Photo point monitoring should have been much more consistently done and articulated in the process.

RESPONSE:

Monitoring goals will be outlined in the implementation plan. Day use-only restrictions that have been included in the *Colorado River Management Plan* are the result of the identification of unacceptable impacts to specific locations. Visitation is still allowed at these locations.

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M30

The NPS has failed to adequately explain and justify its use of average UDT as a consideration in the *DEIS*. There is no correlation presented that shows how UDT directly impacts the resource, therefore, any consideration of UDT in ranking alternatives is incomplete. No other NPS action or analysis raises this issue.

RESPONSE:

User Discretionary Time is a calculation of the cumulative amount of time people have to experience and explore the river corridor during their river trip. The type of trip (which incorporates trip speed), the length of trip, and the time of year (which incorporates seasonal availability of daylight) all affect the amount of time that visitors have to experience the Grand Canyon and interact with the environment. While this interaction carries a potential for resource impacts, that potential is weighed against other factors such as group size and the number of trips at one time. Further, UDT is also an indicator of whether visitors are allowed enough time to experience the resources and values of the Grand Canyon. UDT was but one tool used in the analysis of the Environmental Consequences. Please see Chapter 2, Carrying Capacity Standards and Chapter 4, Introduction for a discussion of how UDT was used in the analysis. Assumptions for the use of UDT are also included per impact topic in Chapter 4.

UDT is the product of an effort to recognize that all user-days may not carry the same potential for impacts. For example, a person on a 10-day motor trip in the summer will have more time to interact with the terrestrial environment (UDT) than a person on a 10-day oar trip in the summer. This is due to the increased amount of time that will be spent on the water for the latter person. Similarly, a person on a 10-day oar trip in the summer will have more UDT than an individual on a 10-day oar trip in the winter. This is due to a decrease in light and an increase in camp chores (starting a pan fire, hauling more gear etc) in the wintertime. While human behavior cannot be precisely predicted, the data and assumptions used in developing the UDT model have yielded a useful tool that refines and contributes to the analysis of environmental consequences of the range of alternatives. NPS used best available data in the development of this tool, and additional data based on results of monitoring can be used to further refine the model.

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M33

The NPS assumption that longer trips equate to more discretionary time is suspect. Is there evidence backing this up? Common sense indicates that commercial passengers on motorized trips would have the most discretionary time per user day, regardless of the overall length of their trips.

RESPONSE:

UDT recognizes that trip length and trip type, as well as amount of available daylight influence the amount of time that a passenger has to interact with the environment. For instance, a trip of 10 people on a 10 day motorized trip in the summer will have more UDT than the same trip in the spring. Also, that trip will have more UDT than an oar trip in the summer, given that more time will be spent rowing down the river. Also please see comment and response under Methods (M #30).

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M34

One of the assumptions on page 417 of the *DEIS* states, “As there is no data to empirically support or refute the position that commercial trips cause less resource damage than noncommercial trips, the assumption is made that all individuals could equally adversely affect or benefit vegetation resources.” There is data that shows larger group size cause more vegetation impact and since all groups over 16 people are commercial, then this statement is false. This assumption should be changed and there should be an assumption that vegetation impacts are related to group size. This is implicitly acknowledged on page 423 of the *DEIS* where it is stated “. . .the reduction from maximum group size from 43 to 25” would decrease the likelihood of impacts from social trailing and campsite expansion in the old high-water zone and upland areas.

RESPONSE:

The assumption on page 417 refers to impacts per individual passenger. Indeed there is no data available that indicates that an individual commercial passenger has different impacts from an individual noncommercial passenger. The assumption about impacts from large groups is presented in Section 4.1 and throughout the analysis.

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M35

Page 414 of the *DEIS* states, “Impacts were measured against pre-established thresholds to determine the impact intensity” (*DEIS* page 414). It is unclear from the analysis what this baseline is and how it relates to the limits of acceptable change indicators or other measures used in the analysis. The NPS’ stated intention to revise the limits of acceptable change as a part of this *Colorado River Management Plan* process (*DEIS* page 415) is of concern. There is no actual discussion of any proposed changes in the *DEIS*. In fact, all of

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the analysis and proposed mitigation are discussed in the context of existing indicators. Impacts to vegetation under the current condition exceed the limits of acceptable change (*DEIS* page 419). In changing these indicators, is the NPS intending to accept a greater level of impact based on current conditions?

RESPONSE:

Please see comment and response in General Resources (RG #2).

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M36

What is the carrying capacity of the canyon? The *DEIS* does not make a clear determination of capacity, maximum use levels, or provide clear explanations that provide a basis of comparison between the different alternatives. All descriptions are generic and appear to be based on management expectations or assumptions rather than fact, science, or quantitative measurement.

RESPONSE:

Please see comment and response in General Resources (RG #5).

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M37

Many contacts are multiple contacts between two groups that occur on the same day (another source of interpretation and manipulation) that may only be approximated by using Brownian motion. The actual average observed contacts could be impacted by multiple contacts especially around places like Phantom Ranch. If this is a problem then it would suggest that restrictions around exchanges at Phantom Ranch would be more appropriate than altering the management of the entire river.

It is assumed that each group of a particular type travels the river at the same overall speed (trip length). In reality they travel at somewhat different speeds and these differences can cause contacts between groups. The *DEIS* suggests that most trips of a particular type are within plus or minus one day of the average. Looking at the alternatives with small differences between travel times of different groups it appears that the smaller differences within each group would not significantly change the conclusions of this model.

It is probably best to separate out the convective and diffusive components since the choice of contact probability can change the relative importance of each component. For the convective component the average number of people encountered is dramatically reduced when trip speeds are similar. This is consistent with our intuition although some may be surprised at the degree of reduction. Well what if we added just a few fast motor trips? Looking at the commercial motor row we see that such a trip, if it existed, would encounter a lot of people. This demonstrates that gradually phasing out fast motor trips is not a viable alternative.

RESPONSE:

Please see comment and response in Visitor Use and Experience (VUE #207).

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M38

Though the *DEIS* does not describe details of how the increase would be implemented, it is recommended that an incremental increase be implemented. Possibly 33%, increments with a goal to achieve a 50-50 split with the commercial allocation over a period of time.

Grand Canyon National Park will need additional staff in place to effectively monitor changes to the resource before any increase in visitor use. It is not prudent for Grand Canyon National Park to rely solely on computers and spreadsheets to form a plan for adaptive management. Grand Canyon National Park staff will need to be “in the field” to monitor “real time use” for effective and objective mitigation.

RESPONSE:

The Modified Preferred Alternative H provides close to a 50-50 split in user-days between commercial and noncommercial users.

Following the *Record of Decision*, the *Colorado River Management Plan* mitigation and monitoring plan will include a timetable for implementing changes brought about in the forthcoming *Colorado River Management Plan*. Also, please see comment and response in Park Management and Operation (PM #16).

The NPS intends to include field monitoring as part of its implementation plan. Staffing needs for such monitoring is described in Park Operations, and the types of monitoring are included in the impacts analysis.

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M39

The proposed methods could include the use of observational and survey data collected at primary attraction sites, designated camps, and hiking routes of various user groups (motorized, nonmotorized, long/short, upper/lower gorge, private/commercial). Data could be collected by observers in the canyon to record information on specific impact issues raised during scoping meetings, including but not necessarily limited to the following:

- Hiking behavior, whether people follow established trails or go off on their own routes developing new social trails;
- Observation of wildlife encounters and subsequent behavior;
- The occurrence of litter, group behavior in dealing with managing litter, and restrooms;
- Occurrence of visitor impacts in tributaries (e.g., pollution from sunscreen, shampoo, human waste; stirring up of substrata);
- Visitor impacts on cultural sites;
- Observational data could be collected during typical high season use periods May–August, and compiled within a GIS database to produce maps of impacts and group types. Data could be summarized into a report by November, 2005. Additional information could be collected on visitor’s knowledge of minimum impact practices and understanding of perceived impacts and camp practices and procedures. This data could be collected at launch sites prior to their trip getting underway. Secondly, a review of the various types of information and education could be presented including a review of literature of research completed specifically on the Grand Canyon and what current information exists and is presented to public and private boaters.

The findings from this study could be summarized in a technical report with corresponding maps and pictures (Approx. 10 pages each) to be delivered by November of 2005. In addition, the research team would be willing to present the findings at a national meeting. Finally, the research team would disseminate the results through academic journals and/or conferences.

## RESPONSE:

The elements that you detail would be useful in determining the impacts of visitation on park resources and will each be considered as the NPS develops the implementation plan for the *Colorado River Management Plan*.

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## M40

Peer-reviewed scientific analysis of several resource impacts should be vigorously pursued, including:

- Analysis of trailing impacts;
- Harassment of protected water birds by watercraft, especially bald eagles, wading birds, and shorebirds (Brown et al. 1989, Brown and Stevens 1997, Stevens et al. 1997);
- Impacts of off-river hiking on the ecology of tributary streams; and other topics related to visitation impacts. These physical, biological, and sociological elements should be considered in the context of a rigorous long-term monitoring program, information that should feed back to improve overall river management.

## RESPONSE:

Physical, biological, cultural, and sociological studies will be part of the NPS monitoring and mitigation programs.

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## M41

The proposed system includes a process of adjusting use allocation based on demand. Currently there is no adequate explanation about how demand will be measured. Indeed, this issue compromises the proposed system because there is no credible data regarding demand for these types of river uses. Additionally, as evidenced in the summary below, understanding demand trends in recreation and leisure markets is a complex process that must consider a multitude of factors and visitor attributes.

## RESPONSE:

The modified preferred allocation option has several modifications from the Draft EIS, including the elimination of an adjustable split allocation system. The modified preferred allocation option is the no action option (current system), in which recreational river use in Grand Canyon would continue to be allocated between the commercial and noncommercial sectors in a set ratio (albeit a different ratio than is currently set) that will remain the same for the life of the plan. See new text describing the modified preferred allocation option in Chapter 2: Alternatives and analyzed in Chapter 4: Environmental Consequences—Visitor Use and Experience.

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## M43

This argument for increasing group size is also true in regard to the shoulder season group limits. Don't see that the group sizes proposed is quantitatively based on comparative studies of each possible group size limit. These limitations also compound the launch and crowding issues, as a group limit of 24 is essentially

operationally unobtainable with a motorboats carrying capacity of 18 for S-rigs, and 23 for J-rigs. This forces outfitters to choose between carrying 16 passenger and two guides per launch with an S-rig, and operate at a launch efficiency of only 75% by utilizing only 18 of the available 24 spots, or to run a second motorboat with five clients and a guide. With a J-rig, we would likely decide to stay at our current one-boat ratio of 18 passengers and two guides, and lose the four unfilled spots allowed within shoulder group size. Here, the cumulative result is again the unanticipated loss of the equivalent of several launches of carrying capacity. Again, the launch based model needs to be modified in order to better match operational realities, as it has not accurately addressed this type of repercussion.

RESPONSE:

Please see comment and response in Socioeconomics (SE #12).

## Natural Resources General

NR1

The NPS should select Alternative B for the benefit of natural resources. It removes the impairment to resources by reducing crowding, conflicts and resource impacts with smaller group sizes, fewer user-days, shorter trip lengths and the elimination of shoreline erosion from motorized boats.

RESPONSE:

While Alternative B may represent a viable alternative for natural resources, it does not meet the management objectives for visitor use and experience and socioeconomics—that are also components of the *Colorado River Management Plan*. Alternative B does not provide an adequate range of opportunities for the visitors and limits access to the river corridor. The NPS has chosen Modified Preferred Alternative H as the preferred alternative because it best balances visitor access and resource protection.

Modified Preferred Alternative H does not impair natural resources. An impairment to a particular park resource or park value must rise to the magnitude of a major impact, as defined by its context, duration, and intensity and must also affect the ability of the NPS to meet its mandates as established by Congress in Grand Canyon National Park’s enabling legislation. For each resource topic, the Final Environmental Impact Statement establishes thresholds or indicators of magnitude of impact. An impact approaching a “major” level of intensity is one indication that impairment could result. For each impact topic, when the intensity approached “major,” the interdisciplinary planning team would consider mitigation measures to reduce the potential for “major” impacts, thus reducing the potential for impairment. The NPS finds that the Modified Preferred Alternative H presented in the *FEIS* would not result in the impairment of park resources and values for which Grand Canyon National Park was established.

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NR2

Alternative H specifies measures to mitigate possible damage to natural resources, but these measures are entirely contingent on funding. Where will that money come from?

RESPONSE:

The NPS fully intends to fund implementation of the *Colorado River Management Plan*, including monitoring and mitigation. See new text in Section 2.3.3 containing possible funding options.

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NR3

Reduce use in the high precipitation months to allow natural resources to recover, increase use in dry months outside of the five summer months. None of the alternatives reduce summer use.

RESPONSE:

The new use in Modified Preferred Alternative H was placed in the shoulder and winter seasons. Although the NPS chose not to reduce user-days in the summer months, factors that contribute to natural resource degradation such as crowding and congestion, large group sizes, long trip lengths, trips at one time, and spikes in use were reduced to benefit natural resources.

The NPS believes the *FEIS* does provide an adequate range of alternatives as required by NEPA.

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NR4

How can you increase use when there is no funding for monitoring? If no funding is in place to monitor damage to natural resources how can you make a huge jump in use all at once without proper monitoring?

RESPONSE:

The analysis of potential impacts to cultural and natural resources presented in the Environmental Consequences chapter indicates that crowding and congestion contribute significantly to resource vulnerability. Thus, while the total number of user-days is an important variable to consider in the analysis of potential impacts, group size, number of trips and people in the canyon at one time (TAOTs and PAOTs), UDT, and trip lengths can serve to mitigate or exacerbate the potential for impacts. While the Modified Preferred Alternative H does include an increase in total passengers and user-days, it also includes a reduction in group size, trip lengths, TAOTs, and PAOTs, as well as the number of days out of the year that more than 100 people visit attraction sites in a single day. These reductions will serve to reduce impacts in the old high water zone caused by crowding at beach and attraction sites. The additional launches were added primarily in the winter and fall seasons when natural resources are generally less sensitive. Additionally, monitoring, mitigation and increased education will further promote resource protection and the implementation plan will spell out how the new use will be phased in.

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NR5

How will increased numbers, drought and low flows impact wildlife and natural resources? Drought and low flows are not considered in the impact analysis.

RESPONSE:

The *FEIS* fully analyzes impacts to wildlife and natural resources (see Chapter 4) including the cumulative effects of drought. While overall use numbers may increase over the life of the plan, TAOTs, group sizes and trip lengths have all been reduced. Drought conditions are a natural phenomenon and the canyon resources evolved over these highly variable desert conditions, including periods of extremely low flows in the main-stem of the Colorado River. Under current Glen Canyon Dam operations, flows will not be any lower than those that have occurred over the last 30+ years of dam operations. However, pre-dam river flows varied from a few hundred cubic feet per second (cfs) to a seven-year average of 120,000 cfs. The resources of the canyon evolved with these highly variable, seasonal conditions. Nothing in this plan affects these naturally occurring conditions.

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NR6

If the total number of beaches and individual beach size are expected to diminish, how will the increased use under Alternative H not increase adverse effects to natural resources? Where will groups camp?

RESPONSE:

The NPS proposes to reduce TAOTs, group sizes, trip lengths, and even out launch patterns, thereby spreading use throughout the system to address the limited number of camps, congestion and crowding at attraction sites and bottleneck areas. The new management plan will have beneficial effects on natural resources over current conditions, especially in the high use season. New winter use (one trip/day) will be phased in and closely monitored for effects under the mitigation and monitoring plan.

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NR7

The NPS needs to implement a rigorous long-term monitoring program. Physical, biological and sociological elements should be considered in the context of a rigorous long-term monitoring program, information that should be fed back to improve overall river management.

RESPONSE:

The NPS proposes a rigorous long-term monitoring and mitigation plan to address visitor impacts to natural resources in the canyon.

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NR8

The NPS has failed to complete the 1989 *Colorado River Management Plan* goal to preserve natural resources and the environmental processes of the Colorado River.

RESPONSE:

The current *Colorado River Management Plan* planning effort supercedes the 1989 plan. The “environmental processes” referred to in the 1989 plan were specific riverine conditions. The NPS does not control the operations of Glen Canyon Dam. The NPS does have a mandate to preserve natural processes. The NPS attempts to do this in a “naturalized” system. The fundamental changes that have occurred along the Colorado River by the closure of Glen Canyon Dam are addressed in the EIS under cumulative effects. The *Colorado River Management Plan* is a visitor use plan and not an ecological restoration plan.

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NR9

Grand Canyon National Park cannot abdicate to the Adaptive Management Work Group its responsibility for management decisions pertaining to the ecological integrity of the river corridor.

RESPONSE:

The Glen Canyon Dam EIS and the Adaptive Management Program set up a program under the Secretary of the Interior to address the long-term effects of Glen Canyon Dam operations on the natural, cultural and recreational resources and values of Glen Canyon National Recreation Area and Grand Canyon National Park. As a member of the Adaptive Management Work Group, the NPS is responsible for ensuring that resource concerns of the NPS are represented. The NPS cannot, and does not, abdicate any of its responsibilities. However, the Adaptive Management Program sets a number of objectives for management of the Dam that are outside NPS jurisdiction. It is the NPS mission to preserve the integrity of the resources under NPS authorities; the NPS does this in the context of the Adaptive Management Program and our own management authorities.

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NR10

The NPS needs to address all aspects of management, especially impacts to the integrity of native ecology from Glen Canyon Dam. Decommissioning the dam should be listed as a mitigation measure.

RESPONSE:

The *Colorado River Management Plan* is a visitor use plan that does not, and cannot, regulate the operations of the Glen Canyon Dam. Effects from dam operations are included in Chapter 4 under cumulative effects for each applicable impact topic. The NPS does not have the authority to decommission the dam.

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NR11

Commercial guides are of critical importance to ensuring passenger enjoyment and safety and protecting the park's natural resources.

Guides help protect the natural resources, so saying they are "indistinguishable" from other users is false.

RESPONSE:

Human use of the environment, regardless of a person's status as visitor or guide, can have varying effects. Large groups at attraction sites, with or without guides, have more feet stepping on roasting pits or crowding around a cave opening, paleontological feature or petroglyph panel. Many of the impacts such as vegetation damage or soil compaction are inadvertent, but larger groups spread out over a wider area than smaller groups, even when a guide is present. See revised text in Chapter 2 of the *FEIS* that addresses how certain resources are more vulnerable to impacts from large groups than others. However, the NPS has recognized the value of guides by retaining an appropriate guide to passenger ratio. These ratios are addressed in the concession river contracts. The NPS believes it is important to have licensed river guides as they often act as stewards and educators. One of the ways the NPS has recognized the importance of guides is that it has kept larger group sizes for commercial trips.

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NR12

Consider reductions in use rather than specific closures at attraction sites. Some respondents agree that reducing use per day will be beneficial, but question if the benefits will be outweighed by overall increase in use.

RESPONSE:

One of the goals of the plan was to reduce congestion and crowding at attraction sites; total closure of these sites was not proposed. Based upon the results of the Brown and Jalbert 2003 study, two areas that had unacceptable levels of biophysical impacts, Tapeats and Kanab, will now be "day-use only" sites. In the EIS, the NPS modeled impact analyses based upon the river trip simulator and have discussed possible mitigation measures for specific resources will be implemented based upon data that will be derived from the monitoring program. Seasonal closures to protect endangered species will occur at locations identified by the U. S. Fish and Wildlife Service. New use will be phased in and monitored under the mitigation and monitoring plan.

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NR13

Reduce use in spring and increase use in the first half of September. Spring is biologically vulnerable, so lighten up use during that period of time.

RESPONSE:

See the modifications made to Alternative H in Chapter 2 of the *FEIS*. Launches in March now consist of two standard noncommercial launches per day. April use increases to three launches per day in the first half and 3.5 launches per day in the second half. Launches in first the two weeks of September more closely resemble summer at 5.25 launches per day.

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NR14

The NPS should implement mitigation measures and alter use patterns to address spring season use impacts. The NPS should consider a rest rotation of use at attraction sites, periodically eliminating use during certain seasons or months and shoulder season launches should be reduced to one trip/day.

RESPONSE:

Use levels, types of use, and launch patterns in the spring and fall seasons have been adjusted in the Modified Preferred Alternative H. The *Colorado River Management Plan* mitigation and monitoring plan will examine an array of mitigations that may include rest rotation of use at attraction sites or seasonal or day-use only closures if warranted by monitoring data.

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NR15

How can you justify increased use when the system has already reached its biophysical carrying capacity?

RESPONSE:

The increase in use will not occur in the peak season, but the new launches will occur in the shoulder and winter months. By reducing group size, trip length, and TAOTs, more users will be able to have access to the river without unacceptable levels of resource degradation. Smaller groups will be able to utilize the more abundant medium sized beaches. The EIS discusses carrying capacity in Chapter 2 (Criteria for Developing Alternatives). Visitor carrying capacity is defined as “the type and level of visitor use that can be accommodated while sustaining acceptable resource and social conditions that complement the park” (NPS 1997). The EIS discusses carrying capacity both in terms of standards (such as PAOT, TAOT, and UDT) and variables (such as trip length, group size, launches per day, and user day limits). The NPS established early in the planning process that crowding and congestion, especially from peaks in use in the high season, resulted in the considerable impacts both to resources and to visitor experience. The Modified Preferred Alternative H reduces crowding and congestion from peaks in use by evening out the launch schedule, reducing trip length and group size. Additionally, TAOT under all action alternatives are reduced from 70 to 60 or below. Use per day is reduced and new use is added in the off-season at a modest one trip per day.

The mitigation and monitoring plan will serve to inform NPS managers of potential impacts and allow for actions such as adjustments to aspects of use such as group size, trip length, and user-days.

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NR16

The NPS should work with other landowners in the Lower Gorge to develop a plan to halt the degradation of natural resources. The increased use will result in increased impacts.

RESPONSE:

Because of the increased level and types of use in the Lower Gorge, the NPS determined that inclusion of Lower Gorge activities was important for this planning effort. To that end, the NPS, at the request of the Hualapai Tribe, added the Tribe as a cooperating agency to assist with the *Colorado River Management Plan*. The NPS and the Tribe submitted a joint proposal for Lower Gorge alternatives in the *Colorado River Management Plan* with the exception of the pontoon boat operations and upriver trips. Both of the alternatives were evaluated as part of the draft document. Ultimately, the NPS is responsible for managing the river through Grand Canyon National Park.

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NR17

Longer trips for noncommercial users will not damage the physical environment: change group size and launch patterns, but leave long trips.

RESPONSE:

The NPS heard in scoping that noncommercial users want greater access to the river and an increase in the number of launches per year. Shorter trip lengths provide more people access to the river and are one of the trade-offs for the NPS to respond to this request without degrading the natural and cultural resources of the canyon. The Modified Preferred Alternative H addresses the respondent's desire for longer trip lengths by increasing noncommercial trip length in the shoulder season when fewer users are on the river.

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NR18

Why take motors out of September. Does it hurt something growing?

RESPONSE:

The Modified Preferred Alternative H has restored motor use in the first two weeks of September.

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NR19

Are Lower Gorge users more or less likely to impact to the environment?

RESPONSE:

The Brown and Jalbert 2003 biophysical impact study showed that sites between Whitmore Wash and Diamond Creek are more heavily impacted than those above Whitmore Wash. This suggests that the educational component of the *Colorado River Management Plan* implementation plan should concentrate on teaching minimum impact ethics to users entering at Whitmore. The NPS has little data on the condition of sites in the Lower Gorge below Diamond Creek. A Lower Gorge biophysical impact study will be included in the mitigation and monitoring plan following the *Record of Decision*. See Chapter 4 of the *FEIS* for analyses of impacts to specific Lower Gorge resources from the various types of Lower Gorge recreational uses.

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NR20

The NPS needs to enforce trail and camping discipline to reduce natural resource impacts.

RESPONSE:

An increase in river patrols, resource monitoring activities and educational information will be included in the *Colorado River Management Plan* mitigation and monitoring plan.

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NR21

From tables on pages 28–52 of the *DEIS*, it is seen that Alternatives A, B, D, E and preferred Alternative H, all have over 50% of their use during the May - August time frame. How can concentrating use during the most sensitive period be acceptable to the park?

While some alternatives have balanced use in spring and fall, balanced use becomes less acceptable as the amount of shoulder season use increases. It also just plain does not make a whole lot of sense to propose an alternative that does not preserve the current higher use in the fall than the spring.

RESPONSE:

The Environmental Consequences chapter indicates that because spring is the growing season for many plants and animals, it is a particularly sensitive time for the majority of biological resources of the Grand Canyon. For this reason the NPS has decreased group size (and other factors that lead to crowding and congestion) in the spring. Additionally, the Modified Preferred Alternative H further incorporates this concept by having more use in the fall than in the spring.

The new use in Modified Preferred Alternative H was placed in the shoulder and winter season. Although the NPS chose not to reduce user-days in the summer months, factors that contribute to natural resource degradation such as crowding and congestion, large group sizes, long trip lengths, trips at one time, and spikes in use were reduced to benefit natural resources.

## Operating Requirements

OR1

Are there limits on the number of trips private boaters can participate in each year? Do commercial customers have the same restrictions?

RESPONSE:

Yes. To maximize opportunities of the public to access and experience Grand Canyon river trips, repeat use in the Lees Ferry to Diamond Creek section will be limited to one river trip per year for all recreational users, whether going commercially or noncommercially.

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OR2

While some respondents thought that guides should be counted as administrative use others thought that they create impacts on the resource the same as other users and should be counted as part of the overall user numbers.

RESPONSE:

All users, including guides and researchers (NPS, etc) will be included in overall user numbers. However, guides and administrative use are not included in the recreational use allocation.

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OR3

In reference to Kanab Creek camping closure (*DEIS* page 31): Granted there is compaction and loss of nonnative vegetation within 200 feet of the mouth of Kanab Creek, the only reasonable way to access Kanab Creek for any distance is to camp at the mouth. There are so few campsites below Kanab Creek that to hike into the area and expect to find a campsite available is unlikely. And landing for day hikes would still be at the same location, meaning compacted areas are unlikely to recover, particularly if you do not close the sites to camping by backpackers as well.

At the very least leave camping at the mouth of Tapeats Creek as an option for the spring and fall shoulder season and winter, restricting it only May through August and restrict the group size outside of that to 16.

One respondent thought use at Unkar should be restricted.

RESPONSE:

The NPS biophysical impact surveys indicate that there are unacceptable levels of old high water zone impacts, including severe native vegetation damage, biological soil crust destruction and multiple trailing.

These impacts are due to the loss of beach camping areas and large group sizes carving out new campsites in the old high water zone. There are also unacceptable levels of human waste. The NPS has closed the Kanab Creek and Tapeats Creek sites to camping because these impacts are primarily related to camping activities.

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## OR4

Some respondents thought the NPS should remove restrictions on repeat trips within a given year. This is a nonissue on the commercial side, as they are not limiting commercial boatmen on number of trips per year. A private boater comes to the Grand Canyon either as a permit holder or by invitation from the permit holder. The number of experienced and available Grand Canyon rafters is small. These people have knowledge, skills and equipment that might result in more than one invitation to join a group during a year. There is no justification for limiting permit holders rights to include experienced Grand Canyon boat persons with their group. Other respondents thought that once a person participates on a river trip (no matter who he or she is), they should wait 2-3 years before they can get on the wait list to participate on another trip.

## RESPONSE:

While those who have been lucky enough to go on multiple Colorado River trips per year in the past will not get to go on as many trips, the NPS expects the repeat use limitation coupled with the large noncommercial allocation increase will result in a much larger number of experienced noncommercial boaters overall.

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## OR5

A variety of restrictions was suggested by a respondent, and includes:

1. Demand, not just increase education for (p584), minimum impact philosophy and practice for ALL users. It also seems that this mitigation measure is germane to all resource topics not just visitor use and experience.
2. Urine and wastewater (hand wash and chickie pail) be bucketed out into the main current. As it often works now, camping often occurs on eddies or slowly moving sections so that all this waste re-circulates in front of the camp to be sucked in by water filter, 'clean' water for washing and maybe cooking, to bathe in etc. Research dollars should be devoted to studying how to treat camp wastes more effectively before dumping in the river.
3. Adopt a scrape-the-plate (rubber spatula!) policy so that wash water is not gummed up with scraps that make cleaning/sanitizing less effective.
4. Encourage setup of kitchen and other activities on the active beach as much as is practicable and safe within the constraints and uncertainties of flow regimes. Certainly require those activities and camps to stay within the post dam sandbar area.
5. Prohibit activities other than careful hiking above the old high watermark.
6. Require tarps under food prep and eating areas; scrap into garbage before rinsing tarp in the river.
7. Suggest that lunch be prepped at breakfast camp and each person carry it in "Tupperware"- I have found that this saves impacting a lunch site due to extra trampling, food bit spills, and saves ice in coolers too.
8. Encourage low-key kitchen set up and meal preparation- the more elaborate arrangements seem to involve more and more "stuff" that leads to more damage to sites.

## RESPONSE:

NPS will increase education and encourage minimum impact practices for all users. Some of these suggestions have already been implemented and others will be considered.

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OR7

The proposed Generator Use and Commercial Operator Responsibility for Passengers operating requirements will help reduce effects to several listed and special-status species and should be incorporated into the plan.

RESPONSE:

The operating requirements will include restrictions on generator use and commercial responsibility for passengers, as well as other regulations.

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OR8

Jet boat use should be allowed up to Separation Canyon and frequency limits restored to current levels.

RESPONSE:

The Modified Preferred Alternative H will allow jet boats to pick up passengers at Separation Canyon (as is currently the practice), providing additional flexibility in transporting passengers to the lake. It will also allow for four take-outs per day that will help eliminate crowding and congestion in the Lower Gorge and at the take-out.

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OR9

If campsite allocations or assignments are made as suggested on page 415 of the *DEIS*, the NPS should not prohibit a small group from camping at a medium or large size campsite.

RESPONSE:

Small groups CAN camp at larger campsites with the expectation that they may encounter other groups at them, since 25% of all campsites along the river corridor have a capacity of 12 or less. The Modified Preferred Alternative H has the addition of a small, noncommercial group size during the peak use season and in the spring to allow more groups to be on the river at the same time and enable small groups to double camp at larger campsites, like Bass, for groups who plan on hiking trails in that area.

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OR10

The NPS proposes, under the heading “Commercial Operator Responsibility for Passengers,” that all “commercial passengers must be accompanied by an NPS approved guide on all trip-related hiking, including hiking exchanges both into and out of the canyon” (*DEIS*, page 31). Please address any problems, real or hypothetical, associated with commercial river passengers hiking the South Kaibab or South Bright Angel Trails through other available means before requiring that guides accompany passengers on trails. Visitor problems on the Bright Angel Trail have been significantly mitigated through (a) explicit and graphic description in our literature and on our website of the rigors involved in the hike, (b) aggressive screening of guests on the telephone, and (c) providing a very qualified host at the Grand Canyon to orient the guest properly with regard to lighter packs, proper nutrition and hydration, pacing, and getting on the trail before 6:00 AM.

## RESPONSE:

Although the aforementioned practices help address some of health and safety concerns, the NPS believes that additional measures are needed to reduce the number of visitor assist and rescue operations of river clients hiking in and out of the canyon. This doesn't imply that river guides must accompany their passengers, but that a qualified hiking guide will be under the employment of the outfitters to address passenger safety issues on the trails.

## OR11

Some respondents commented that no one should be permitted to "guide" a private trip. Whether paid, or just given access to a trip, the presence of someone from outside of a unique group that is only able to make the trip due to the presence of this interloper subverts the definition of a private trip. Allowing such trips to use the private allocation impacts real private boaters, who must wait behind these people who actually need guided services, and should be barred from using the private allocation. Apparently, it is common practice to outfit private trips with equipment, food and "guides." Such trips are different from commercial trips only in that they do not need to meet outfitter and NPS guide standards, training and safety requirements, they are not subject to direct NPS oversight, are not responsible for safety/liability issues, don't pay franchise fees to the government. This restriction should be enhanced to prohibit the "hiring" of anyone and should look to enhance the definition of hiring to include the trading of space on a trip for skill sets not possessed by the private permit holder.

Other respondents thought there should be free competition between commercials and noncommercials for guide services. Using experienced guides in an "assist" role on noncommercials should improve safety and cause less harm to the environment.

## RESPONSE:

The NPS is committed to addressing any violation of trip regulations. The NPS defines commercial operation as: "Any or all goods, activities, services, agreements or anything offered to park visitors and/or the general public for recreational purposes... which uses park resources, (and) is undertaken for or results in compensation, monetary gain, benefit or profit to an individual, organization, or corporation, whether or not such entity is organized for purposes recognized as non-profit under local, state or federal laws." (ref: NPS-53, Appendix 21 – Special Park Uses) Noncommercial trips also use park resources, but are NOT undertaken and do NOT result in compensation, monetary gain, benefit or profit to an individual, organization, or corporation.

## OR12

The *Colorado River Management Plan* should provide for a single maximum trip length that applies to all trip types and modes of transportation (i.e., motorized and nonmotorized), particularly during the summer season, as is provided for under current NPS policy. There should be no disparity between commercial, noncommercial, motor and oar maximum trip lengths. To limit the trip length for commercial motorized trips in the summer and shoulder seasons to 10 days, while allowing trips of up to 16 and 18 days in the summer and shoulder seasons, respectively, for all other trips, including noncommercial motorized trips. Currently, during the summer season, all commercial and noncommercial trips are subject to the same maximum trip length of 18 days.

## RESPONSE:

The NPS has strived to find equitable solutions for all our users, recognizing that the river can only sustain a certain number of users at one time. In creating our alternatives, the NPS has attempted to provide access for visitors consistent with protection of park resources. The NPS believes it is important to provide diverse trip types and opportunities. All of the action alternatives increase noncommercial use during the peak seasons.

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## OR13

Although the *DEIS* appears to value controlling TAOTs over people at one time (PAOTs), do not minimize the importance of PAOTs as an indicator of crowding, especially at attraction sites such as the Deer Creek patio. Two minor ways possibly to reduce PAOTs is to reduce group size on commercial nonmotor trips to 24 (not including guides) and to provide a launch option whereby on days when only one noncommercial trip is scheduled to depart, two commercial one-boat motor trips could launch in the place of one two-boat motor trip.

## RESPONSE:

With social impacts, it is important to focus on more narrowly defined use measures, each of which must specify timing (e.g., at one time, per day, per week, per month, per season), location (e.g., at a launch area, in the entire canyon, at specific attraction sites), and units (e.g., user-days, people, or trips). In the Visitor Use and Experience analysis, impacts are related to several different use level measurements, but the NPS primarily focused on: 1) Daily launches from Lees Ferry, 2) Trips at one time (TAOT) from Lees Ferry to Diamond Creek, and 3) Number of people at specific launch or attraction sites.

The Modified Preferred Alternative H reduces group size from 32 to 24 (including guides for commercial trips) September 1 through April 30, and remains the same (16) for noncommercial trips throughout the year, thus reducing such social impacts as: crowding, large group encounters on the river and at attraction sites, campsite competition, etc., for river runners. A launch is considered to be a river party traveling together, camping together, and sharing meals and experiences. The number of craft launching is not regulated.

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## OR14

Group Size should be no more than 16 for both privates and commercials. Additional launch considerations should be given to groups that choose a small group size such as eight in number.

## RESPONSE:

The NPS has strived to find equitable solutions for all our users, recognizing that the river can only sustain a certain number of users at one time. In creating our alternatives, the NPS has attempted to provide access for visitors consistent with protection of park resources. The NPS believes it is important to provide diverse trip types and opportunities. Modified Preferred Alternative H provides an additional small group launch every other day during the peak season.

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OR15

One of the most repeated arguments for the reduction in group-size has been that large groups at campsites are forced to spread out into the old high-water zone (*DEIS*, page 29). Guides do not set up shore camps; do not spread into the high-water zones, and caution guests against doing those things.

RESPONSE:

Impacts to the old high water zone indicate that large groups are spreading out to these areas, thereby necessitating these restrictions.

---

OR16

One respondent thought motorized boats should only be allowed every other month. J-rigs equal only 10% of permits. Additionally, commercial permits should not be allowed at high use layover campsites.

RESPONSE:

Alternative F addresses no-motorized use during the peak use season. Based on preliminary modeling, by launching motorized trips every other month there would still be mixed-use overlap during a four-week period. Modified Preferred Alternative H provides a 6.5-month nonmotorized season.

---

OR17

The NPS should remove the “seat cushion floatation” requirement for four-foot rafts.

RESPONSE:

All vessels within Grand Canyon National Park must adhere to Coast Guard regulations (See 33 CFR 175.15 for throw able device requirements).

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OR18

All noncommercial trip rafts should be required to display a permit ID tag (as is common practice on other regulated rivers) so they could be easily identified.

RESPONSE:

The NPS will consider this suggestion as it develops the *Colorado River Management Plan* mitigation and monitoring plan.

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OR19

In the noncommercial sector it might be feasible to require each trip leader to pass a written test, or require some similar approach to assuring canyon foreknowledge.

RESPONSE:

All users will be required to participate in an enhanced educational program.

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OR20

Don't place restrictions on tow-outs above RM 260.

RESPONSE:

After public comment analysis, the tow-out restriction below RM260 has been eliminated and will remain at RM 240 in the Modified Preferred Alternative H.

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OR21

Restrict water access by boat and boater from Beamer's Cabin to the mouth of the Little Colorado year round. Do not restrict swimming above Beamer's Cabin.

RESPONSE:

Please see new Operating Requirement text regarding Little Colorado River restrictions in Section 2.3.1 of the *FEIS*.

---

OR22

Some respondents oppose any kind of formal scheduling for visiting attraction sites or for assigning camps, particularly the suggestion on page 236 of the *DEIS* of assigning campsites based on group size. "Require parties of 12 or fewer to use small campsites." It may at times be necessary for a group that's had an injury or difficult time to take an expedient camp. Any type of monitoring and regulating of campsite selection is going to severely impact the wilderness experience.

RESPONSE:

As page 588 of the *DEIS* states, "Most formal scheduling or time limits are likely to be opposed by most boaters. A less intrusive option is to publicize information about camps where encounters can be expected and urge sensitive users to avoid those places during certain times of the day and/or year." Under the Modified Preferred Alternative H, mitigation measures would be employed on a site-specific basis as indicated by monitoring data.

The NPS will be conducting a re-inventory of campsites to determine current carrying capacities as part of the monitoring program in the *Colorado River Management Plan* Implementation Plan. An updated river map depicting the size and locations of campsites will be distributed to river runners. River trips will be encouraged to camp at appropriately sized beaches. Ongoing monitoring of beach sizes may dictate more stringent regulations in the future.

---

OR23

The concessionaires and private boaters should be required to upgrade their equipment as necessary to keep up with advancing technology. The requirement to upgrade equipment and operating practices should be done on the basis of continuous improvement, rather than by adopting a static standard that can become outmoded over the life of the management plan. This is done in many other areas of federal regulatory practice, and should work equally well here.

RESPONSE:

The NPS believes that this is being addressed through the private and commercial operating requirements.

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OR24

Since the availability of large campsites is a primary limiting factor, large camps should be assigned to large groups and everyone launching within a given time should be notified that those camps would be unavailable on given dates. Motorized trips should be able to arrive at campsites on a schedule, unlike oar trips.

RESPONSE:

The NPS believes the modified Alternative H will reduce impacts to visitor experience over current management. Smaller group sizes and spreading out launches to the shoulder seasons help address the issue of diminishing beaches and beach sizes, although ongoing monitoring of beaches may dictate additional restrictions may be necessary if beaches and beach sizes continue to diminish. See the analysis presented in the Environmental Consequences Chapter (4) for details on effects to visitor use and experience and proposed mitigation efforts that would be required to reduce impacts to a minor level.

---

OR25

Suggestions were provided to minimize group encounters, including:

1. Require and enforce that trip leaders keep their boats together except when doing an “up and over” loop hike (Carbon Chuar lop, Surprise Valley, and other hikes designed to accommodate disparate hiking ability and interest within the same group)
2. Reduce the total number of boats needed on commercial nonmotor trips by reducing maximum group size
3. Encourage motor trip leader to “throttle down” when passing other groups through education.
4. Require outfitters to use the latest available quiet, and lowest emission available outboard engines; and
5. Consider disallowing commercial motor supported oar trips or other measures to assure the motor support raft stays with the oar rafts. Here’s the problem: the motorboat stays back in camp loading up the kitchen and catches up to the rest of the group later. Then the same thing may happen at the other end of the day, the motorboat moves out in front to claim a camp while the oar boats catch up. You can solve this TAOT problem directly by enforcement action on keeping boats together or indirectly by disallowing hybrid motor and oar trips altogether, except again, beware of unintended consequences.

RESPONSE:

Items number 1 and 5 are currently addressed in the commercial and noncommercial operating requirements. Modified Preferred Alternative H includes a reduced group size of 32 in the peak season and 24 in the shoulder season, trip leaders are encouraged to throttle down when passing other groups and the NPS currently does require the latest available quiet and lowest emission outboard engines.

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OR26

Some respondents advocate strongly for education as a mitigation tool, rather than additional rules. Any new rules should be a direct response to a real problem; they should be reasonable and make good sense.

RESPONSE:

The mitigation and monitoring plan will have an educational component. See the analysis presented in the Chapter 4: Environmental Consequences for details on proposed mitigation efforts that would be required to reduce impacts to minor levels.

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OR27

Some respondents support the park's recommendation to limit generator use to emergency situations and pumping rafts. However, others thought there are other ways to approach the noise issue: better education regarding river etiquette, for example. A rule about generators (but not noise) will have counter-productive consequences: motor guides in the habit of using blenders to make cocktails will plug them into the electrical outlets on their 4-cycle Honda engines, and run the engine instead of the generator. Noncommercial boaters have already developed gas-powered blender technology, which can be viewed (and HEARD) on the World Wide Web. Instead, promote the distribution of the Grand Canyon Courtesy Flyer developed by Grand Canyon River Guides in cooperation with the Grand Canyon Private Boaters Association that addresses the noise issue. Common sense should prevail, rather than developing new rules that are unnecessary.

RESPONSE:

Restrictions on generator use are in response to public concerns identified in scoping. The NPS agrees that education is also an important tool for addressing this issue and will incorporate river etiquette into the enhanced educational program as part of the implementation plan.

---

OR28

Some respondents support the concept of multiple alternative trip leaders. Because it is so difficult to plan and noncommercial have to plan so far ahead, it is only reasonable to enable groups to indicate more than one potential leader.

RESPONSE:

At the time of the lottery application, applicants may list as many potential alternate trip leaders for their trip as they wish. See new text in Chapter 2 for permit options.

---

OR29

Noncommercial use permits need to have more stringent guidelines put in place and followed (e.g. requiring all trip leaders to have a picture identification picture at Lees Ferry helps eliminate name place holders) and be on the trip to avoid trip cancellation. The NPS should allow only one trip per leader (group) per summer; after they complete that trip, the leader (group) can then be added to the end of the wait list for

additional trips. Also, private users should be charged the same user fees as charged to the commercial users (both passenger fee and trip fee).

RESPONSE:

The *FEIS* limits repeat use for individuals to a maximum of 1 trip per year. Requirements for the clear identification of individuals are an important administrative detail that will be determined under the mitigation and monitoring plan outside of this EIS. Regarding fees, the NPS is exploring options for recovering the costs needed to manage the river program. Fees will be determined through that process. See new text in Chapter 2 for additional details.

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OR30

Why does the NPS require guides to have so many certifications, if there is no difference between guides and commercial passengers?

RESPONSE:

The NPS believes the commenter is referring to the NPS decision to count guides as part of group size. The NPS respects and appreciates the skills the commercial guides bring to the challenging job of safely guiding commercial passengers through the Grand Canyon. The larger group size approved for commercial groups as opposed to private groups in part recognizes the important role guides play in protecting resources and assisting their clients in enjoying the canyon safely and with low impacts. However, guides do, as all people do that enter the canyon, have impacts on the resources. The decision to include guides in group-sizes recognizes that this impact does exist and must be considered in protecting Canyon resources.

---

OR31

The NPS should consider requiring users to submit a statement of health from a medical doctor as a condition of access. This would help reduce the cost and frequency of emergency evacuations and improve the visitor experience of the other members of the excursion.

RESPONSE:

Commercial outfitters assert that their passengers provide medical information indicating their ability to participate on a river trip. There are no requirements for visitors participating in noncommercial trips.

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OR32

Some respondents support the use of site restrictions based on clear environmental concerns. In the event that a site or sites need to be closed for mitigation of endangered species, they recommend instituting temporary seasonal restrictions (rather than permanent) around breeding seasons or other sensitive developmental periods. Also, NPS staff should review a publication by the Access Fund, "Raptors and Climbers: Guidance for Managing Technical Climbing to Protect Raptor Nest Sites." This publication provides guidelines on how to manage climbing in areas with cliff-nesting raptors. Produced in consultation with biologists and land managers this publication has been widely distributed to public lands managers and climbing organizations. This project is an initiative aimed at raising understanding on climbing management and wildlife protection. The document provides valuable guidance specific to climbing areas that correlates closely to management of riparian zones.

RESPONSE:

The NPS has implemented temporary site restrictions for protection of special status species in the past and will continue to do so, based on need and scientific analysis. Rock walls along the river corridor are generally not suitable for rock climbing. Rock climbing is rarely a recreational activity offered or experienced on river trips. The NPS knows of no documented cases of rock climbers affecting raptor nest sites along the Colorado River in Grand Canyon National Park.

---

OR33

The NPS should require their river rangers to follow the same code of conduct as required of commercial guides and noncommercial trips. Specifically, communicating with trip leaders regarding logistics such as campsites and take-out times.

RESPONSE:

Administrative trips are required to communicate and cooperate with every river user.

---

OR34

The NPS has allowed visitor exchanges at Phantom Ranch, the junction of the Little Colorado River and Whitmore for many years. These exchanges provide many visitors an opportunity to participate in abbreviated trips, which they would not otherwise be able to attend given work or family obligations. However, these exchanges also create an obvious increase in use on trails that service the river, and can change the social dynamics of trips as people come or go for good or bad.

The park should continue allowing visitor exchanges as long as the visitor impacts to trails and park resources are acceptable, with the exception of allowing helicopter exchanges at Whitmore. An administrative record should be kept documenting the number and location of allowable exchanges.

RESPONSE:

The NPS currently allows commercial and noncommercial passengers to exchange at Phantom Ranch, Whitmore, and other locations. These exchanges are documented in the NPS on-line launch calendar for all trip types, including administrative trips.

---

OR35

The preferred NPS alternative would create an overall increase in park management and operations because annual passenger totals would likely increase the number of winter launches. In regards to cold-water immersion, the possibility and exposure risk to passengers to cold-water immersion emergencies may increase, even during summer months and extreme during winter months. A person's survivability can be greatly increased by the presence of immediately available "safety" boats to retrieve overboard passengers, proper use and fit of Personal Flotation Devices (PFD), and prompt treatment of hypothermic passengers.

RESPONSE:

See the analysis presented in Chapter 4: Environmental Consequences for details on the effects of increased use during the winter months in Parks Operations and Management.

## Park Management And Operations

PM1

Some respondents want to be able to continue and sustain their academic programs on the river corridor. Also, it was suggested that the NPS establish and maintain an informative web site available to the public that describes details of administrative, research, and resource trips.

RESPONSE:

The NPS had developed an operating procedure for reviewing administrative river trips for research, scientific, and resource management trips. This process will be expanded to include educational river trips. In addition, academic institutions currently schedule river trips through the river concessionaires. The NPS plans to improve information dissemination through the web and other media, and will consider including more information on administrative use as suggested.

---

PM2

Science and other administrative uses have had a tremendous impact on the canyon and on the visitors experience in Grand Canyon. While this seems to be acknowledged, absolutely nothing has been done to address the issues involved in ever increasing administrative use.

RESPONSE:

Administrative use, including scientific, research, resource management, educational, and patrol river trips are subject to review and approval through a standard process, including the Minimum Requirement Analysis (MRA). The MRA is a two-step process that 1) determines if the action is necessary for management of the areas as wilderness, 2) evaluates the appropriate methods or “minimum tool” to accomplish the objectives.

---

PM3

The NPS should more thoroughly consider the pros and cons of assigned camps (some at least). While some respondents thought a requirement for permits or more guidance on stopping at attraction sites (Havasu, Little Colorado River, Tapeats, etc.) was needed, others thought additional restrictions and closures (Little Colorado River, Tapeats Creek, Kanab Creek) and proposals to close Vasey’s Paradise and Elves Chasm significantly diminish the sense of freedom available under the current river management. Too many rules and regulations that seem to make no sense, breed an increased likelihood of noncompliance.

RESPONSE:

The EIS did not specifically address the formal scheduling of visitation at attraction sites or assigning camps because the NPS desire is to preserve the opportunity for visitors to experience the river on its own terms. The assignment of campsite capacities and information for users to understand the choices will allow a range of experiences to be obtained by all river users. Specific mitigation actions may be required at some point in the future if impacts to visitor experience or natural/cultural resources are unacceptable. These potential management actions are described in Chapter 4 as mitigations.

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## PM6

The NPS should consider increasing education opportunities for the visitor. Another idea is to add discrete and durable signs at significant or particularly fragile campsites or trailheads that describe the area, its history, what to look for there, and reminding visitors of the most appropriate ways to minimize human impact and maximize human appreciation of that particular area. It was suggested that the NPS retain and improve the ranger orientation at Lees Ferry for noncommercial river trips. A video/movie is not a sufficient tool because there would be fewer opportunities for questions and discussion. Adding a video either prior to or after a ranger talk would be acceptable and perhaps optimal, as it would provide an instructional visual component. A well-rounded and informative ranger orientation is an essential educational tool that has great potential to mitigate negative effects to the resource.

## RESPONSE:

The NPS agrees with the statements and suggestions made by this commenter. The NPS plans to improve information dissemination through the web and other media, and is currently working on an orientation video for visitors to view prior to their trip.

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## PM7

While it is true that guides walk on the ground just like anyone else, the fact is that they almost universally camp on their boats and therefore have little impact in camp. Guides also are the great guardians of beaches, hiking trails, and campsites. To a guide, dropping a small piece of lettuce on the ground or hiking off the established trail is tantamount to spilling oil from a freighter. Their dedication to maintaining the pristine nature of the resource is remarkable and it shows. Unfortunately, including guides in the overall count creates an incentive to use less guides, thereby creating the potential for less group control. Creating a situation where less guides will be in the canyon is the equivalent of arguing for less park rangers in the canyon. It is counterproductive to the mission.

## RESPONSE:

The maximum group size for commercial trips includes guides. The NPS recognizes that guides provide a valuable service on commercial river trips, and also believes that the current guide-to-passenger ratio can be maintained under the preferred alternative.

---

## PM8

The increase in private trips will put pressure on campsites, along with the put-in and the take-out. The pressure on campsites can be mitigated by site-specific regulations, including closing some sites to camping (such as the new regulations regarding restrictions at the mouth of Tapeats), designating camps where one may lay-over (and for how long) and those where one may not; designating camps for large parties and those for small parties.

## RESPONSE:

The EIS did not specifically address the formal scheduling or assigning campsites camps because the NPS desire is to preserve the opportunity for visitors to experience the river on its own terms. The assignment of campsite capacities and information for users to understand the choices will allow a range of experiences to be obtained by all river users. Specific mitigation actions may be required at some point in the future if impacts to visitor experience or natural/cultural resources are unacceptable. These potential management actions are described in Chapter 4 as mitigations.

---

PM10

In anticipation of new long-term or renewed commercial river concessionaire contracts within Grand Canyon National Park, many respondents wanted to be assured that a pre-decisional public process to analyze the environmental and social impacts of the contracts is undertaken, as clearly required by the National Environmental Policy Act, and its implementing regulations, the NPS NEPA handbook, the NPS Concessions Management Improvement Act of 1998 (“CMIA”), and other applicable authorities. A central goal of this analysis must be ensuring that terms of new or renewed contracts meet the “necessary and appropriate” standard outlined in the CMIA as well as NPS policy and regulation.

RESPONSE:

The *Colorado River Management Plan/EIS* constitutes the decision document as to the types and levels of commercial services necessary and appropriate for the Colorado River through Grand Canyon National Park.

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PM14

The NPS must have a timetable to review and renew the *Colorado River Management Plan* in five to 10 years.

RESPONSE:

The NPS will identify a timetable for implementing management actions in the forthcoming *Colorado River Management Plan*. The document will also describe the appropriate timeframe for review and update of specific management actions, some of which may be tied to contract periods, and as a result of adaptive management practices.

---

PM15

Motorboats have demonstrated their value in rescue situations innumerable times. River guides on motorized trips have intervened several times with noncommercial oar trips who did not know how to right an upside down craft. Some motorboat operators have used their boats to rescue river runners who ended up swimming in the cold wilderness river.

RESPONSE:

The NPS preferred alternative includes the continued use of motorized raft trips. The NPS recognizes that commercial and noncommercial river trips have assisted other recreational and administrative trips in rescue situations.

---

PM18

Problems like social trailing are significant because of inadequate management practices (possibly from funding scarcity, which can be addressed by increasing fees for ALL users if needed). NPS should provide EACH boat with a laminated map of the worst areas and the designated path at each; or install cairns with discrete NPS signs as needed to clarify the designated path. Then run non-stop service trips until the social trails are abated. Perhaps adaptive management scientists can teach boaters to kill two birds with one stone by instructing us exactly when, where, how and why to trample tamarisk to sleep on rather than crowd the high-water line.

RESPONSE:

The NPS agrees that an improved visitor education program is needed to address visitor impacts on resources. Specific management actions needed to address negative impacts from visitation are described in Chapter 4 as mitigations.

---

PM19

Why are no solar-powered emergency communications stations discretely located along the river? Satellite telephones are increasingly available, but they are expensive, fragile, difficult to use, and unreliable, so an emergency communications alternative available to all would seem prudent.

RESPONSE:

The NPS has not specifically explored solar-powered communication stations along the river. Currently, the most common and reliable means of emergency communication has been satellite phones and radios. Due to geographical limitations, the location of the communication stations is a more important factor than how they are powered.

---

PM20

It appears that many management objectives are not met under any of the alternatives. The NPS should identify alternatives that meet more of the objectives.

RESPONSE:

According to DO-12 (§2.7 A), the preferred alternatives must meet project objectives to a large degree, although not necessarily completely.

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PM21

The NPS should attempt quick transition to a new plan. Changes should be initiated immediately and certainly not exceed five years.

RESPONSE:

The NPS will identify a timetable for implementing management actions in the forthcoming *Colorado River Management Plan* mitigation and monitoring plan. The document will also describe the appropriate timeframe for review and update of specific management actions, some of which may be tied to contract periods, and a result of adaptive management.

---

PM22

A request was submitted during scoping to clarify the navigable status of the Colorado; this request does not appear to have been addressed. Please respond on the navigable status of the Colorado. Is there a navigability assessment in the *DEIS*? How does state or federal navigability law affect use and management of the Colorado?

RESPONSE:

The Colorado River through Grand Canyon National Park is a navigable waterway (33 USC 1). The US Coast Guard (USCG) has jurisdiction for conducting inspections on navigable waterways in the United States. However USCG policy, that was established through a 1996 memo is that the USCG: “shall not conduct inspections of or license personnel operating self-propelled or non-self propelled white water rafts on the navigable waters of the U.S.” Consequently the NPS is responsible for regulating these activities. Environmental and safety regulations including the appropriate equipment and guide qualifications are outlined in the Commercial Operating Requirements and the Noncommercial River Trip Regulations. The EIS addresses the impacts of recreational use on various resources unaffected by this status.

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PM23

Helicopters should be used for emergency purposes only.

RESPONSE:

With the exception of exchanges at Whitmore and the Lower Gorge, helicopters are used for emergency purposes. Administrative use other than emergencies is determined through the Minimum Requirement Analysis process.

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PM24

The NPS should consider establishing a combined NPS/Tribal Office at Diamond Creek.

RESPONSE:

The Hualapai Tribe and NPS work cooperatively to address river management issues. The EIS identified some additional joint management efforts including NPS presence at Diamond Creek to address take-out and put-in activities described in most action alternatives.

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PM25

Not only is the current management impairing park resources, but it is also diminishing visitor’s respective experiences. Current management of the Colorado River is not only in conflict with the mandates, but it is also directly in conflict with the Grand Canyon *General Management Plan* (August 1995). As set forth in the 1995 *General Management Plan* the Park is to be managed to: Preserve and protect its natural and cultural resources and ecological processes, as well as its scenic, aesthetic, and scientific values; and provide opportunities for visitors to experience and understand the environmental interrelationships, resources, and values of the Grand Canyon without impairing the resources.

RESPONSE:

For each of the alternatives, the EIS describes whether or not they meet the objectives described in the 1995 *General Management Plan* and the management objectives for the Colorado River. In some cases, mitigation measures are needed to ensure whether or not management objectives can be met.

---

PM26

Please incorporate by reference all the claims and allegations contained in the lawsuit entitled GCBA, et al. VS. ALSTON, et al., noted on Page 7 of the *DEIS* and a part of the park's administrative record.

RESPONSE:

The text contained in the lawsuit entitled, GCPBA et. al, v. Alston et al., is public information, and is part of the park's administrative record.

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## Permits

P1

There should be a portion of the commercial passenger fee that is specifically designated as a “permit fee” or lottery application fee, and this amount should be the same for commercial, noncommercial river runners, researchers, etc. The “permit fee” could be adjusted by the NPS to the point where the total demand fell to the level of the available number of river days.

RESPONSE:

The NPS is exploring options for funding the program (see Section 2.3.3). The NPS’s policy/goal is to provide the opportunity for a river experience to the widest range of people possible. Using fees to regulate demand, however, is not the intention of the NPS.

---

P3

Those with little or no previous access should have preference to those with multiple experiences. Do commercial customers have the same repeat use restrictions? The *Colorado River Management Plan* proposes to restrict access to one trip per year. That will discipline a very few individuals who by various means enjoy nearly unlimited access to the canyon because of special circumstances such as proximity, flexible lifestyle, and ownership of all the equipment that allows for a very low cost trip. Such a restriction is justified but largely irrelevant to the key issues.

The primary question is whether or how much repeat users restrict access to those with little or no previous trip experience. This issue is completely ignored by the NPS. Recommend a permit system using the following methods:

- Separate the applicants into two groups: a) those with two or fewer previous trips, either commercial or private, b) those with more than two trips.
- Award a portion (75%) of the slots to category “a” in sequence of addition to the list.
- Award the balance of the slots to category “b” by lottery with some preference given to time on the list.

Another respondent suggested allowing two or three attempts a year per person with the assumption that a fee to cover the processing costs will support each application. Requiring a six month period between applications might make sense; this would allow an applicant to apply for a spring/summer launch and then again in the last months of the year. In such a scenario, the applicant participates in two very different lottery situations, on high demand and one low.

RESPONSE:

Repeat use restrictions will be the same for both commercial and noncommercial sectors. The NPS believes that this restriction will provide more opportunities for more individuals to experience a Grand Canyon river trip each year.

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P4

The NPS should only need one name to identify a permit holder, not the names of all who want to go on the same trip. The reality of organizing a trip is that many people that would like to go with the trip leader will have to cancel because of life changes over the waiting period. A 90-day advance notice of change in trip participants should be acceptable.

RESPONSE:

Flexibility for changing trip participants will be preserved. See revised section in Chapter 2 (Permit Options).

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P5

There needs to be a permit cancellation and deferment system in place. There is nothing in place under Alternative H to deal with private permit cancellations. With no cancellation call-in system in place, there is actually less gain toward equal access than Alternative H seems to provide. In effort, the cancelled trips/user-days are lost for that year. Some respondents thought there should be stiffer penalties for cancellation (e.g., banned from list for a certain number of years).

RESPONSE:

Cancellation system information is included. The deferment option has been eliminated and replaced with an alternate trip leader system. See revised section in Chapter 2 (Permit Options).

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P6

There should be a pure or weighted lottery in place for all types of permits, and should include a partnering feature. This needs to be absolutely transparent; meaning that publish the code used to run the lottery, and publish the names of the winners, along with data such as wait-list years, etc.

Some respondents preferred a “pure” lottery instead of a “weighted” lottery. As a component of the proposed multiple path access system, a pure lottery provides opportunity to those boaters wanting to obtain a launch within a year. Being a lottery, there is no guarantee or certainty that the launch date selected by the applicant may actually be obtained. However, the successful applicant will be able to launch within one year, as opposed to boaters who may choose to wait several years with certainty in the reservation path.

Because the pure lottery carries no participants over from year to year, speculative participation- “get on the list because maybe I want to go someday” could not exist.

RESPONSE:

The NPS will be implementing a “hybrid” lottery system as explained in the Chapter 2, permits section. The reservation component will not be implemented because it continues a lengthy waiting list that may stretch 20 years into the future, far beyond this plan’s expected shelf life. Some of the reasons why the reservation system is not being implemented include:

- Using the figure of 550 summer launches in 10 years, it is reasonable to predict that if the NPS just offered this opportunity to schedule summer dates to people on our waitlist, advance reservations for this time period would stretch well above 20 years (20 years would mean 1,100 waitlist members would choose certainty). It would take a total of just 3,300 to book all dates 60 years into the future – 60 years represents accommodating less than half the people on our existing waitlist.
  - Creates a commitment that goes well beyond the expected shelf life of this plan.
  - May create one more perceived inequality between the commercial and noncommercial sectors: Commercial companies are not allowed to book that far into the future.
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P8

Research and scientific use should be given priority permitting. Some respondents thought that research and administrative trips need to have a set number of permits given each year. The concept of allowing other government agencies (such as Grand Canyon Monitoring and Research Center) an open-ended permit system needs to be stopped. These trips compete with the other groups, and should be given a standard number of launches per year, not to be exceeded save for some kind of emergency as deemed necessary by the NPS. These trips are supposed to be for the enhancement of the public's knowledge and appreciation of the park, but seldom do they accomplish this. The science trip in Grand Canyon should be subject to unbiased peer review before being approved, like science everywhere else in the country. And further, the result of any science trip should directly enhance visitor appreciation for those who pay to see the Grand Canyon, whether it be on the river or the rim.

RESPONSE:

Please see comment and response in General Resources (RG #14).

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P9

Some respondents urge the NPS to manage the private permits system so that only those who are able and serious about a trip can go. Avoid a system that creates a backlog of people who are not sure when they want to. Enforce the "no pirate trip" rule. Monitor with additional staff on river.

For example, deferrals; many people on the waitlist do not want to go when their number comes up, and the system will let applicants defer endlessly, fostering a perception of a "20 year waitlist".

Another example is the relaxation of the permit holder to defer his/her launch. Another example is the notable number of "pirate" trips (private permittees paying someone to guide them through the canyon). NPS staff on the rim denies this happens, but in reality, the existence of these illegal trips has simply been ignored. This is a factor for the simple reason that a private trip is just that. If a group does not have the skills and knowledge (or confidence), make way for a permit holder who legitimately does.

RESPONSE:

The preferred noncommercial "hybrid" lottery has been revised to encourage only serious applicants to apply. See revised section in Chapter 2, Permit Options.

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P10

A two or three option system was not explored, in which interested parties could choose which way they prefer to participate: an individual lottery, a group weighted lottery or a waitlist. This option would allow the noncommercial boating community to select which level of comfort/ patience meets their needs. Continuing interest in being on the waitlist must be given annually, or that person would be dropped, but would still be eligible to participate in the lotteries. Some respondents oppose any option that results in the likelihood that they would never get a chance to participate in a private river trip - as only using a lottery system (either pure or weighted, individual or group) would produce. Some respondents were also concerned about the verification of those who are entered as participants/registrants in any system . . . Does the NPS have the capacity to really manage such a system (restricting each individual to only one slot) without violating privacy rights (i.e. It is not legal to use a Social Security number for identification)?

RESPONSE:

The NPS will be implementing a “hybrid” lottery system as explained in the Chapter 2, permits section. This system has components of the pure lottery as well as a weighted lottery. The reservation component option is included as a transition option for waitlist members. The NPS is exploring alternatives to requiring Social Security Numbers for identification.

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P12

Some respondents support Alternative C with a few modifications: There must be no discrimination between user groups, the only way to do this is to make sure that all users must come from a common pool. It automatically makes adjustments for demand between commercial and private users by putting all users in a common pool. To some extent you address this in Alternative H, but Alternative H doesn’t seem to make automatic adjustments based on actual demand.

In its analysis of the common pool approach, the NPS states on page 652 that under such a plan “everyone would have an equal chance of getting a permit.” This is the only option that the NPS says will have such a result. By definition, then this means that the inverse is true: the other approaches, including the adjustable split allocation, result in everyone having an unequal chance of getting a permit. Such inequity, though it may not be struck down by a federal judge as unconstitutional under the equal protection clause, creates a profound disenfranchisement among those who cannot afford the two to four times extra cost involved in getting a commercial permit. The NPS should not be in the business of unnecessarily creating such justifiable sentiment. Such inequity is not mere “user perception of allocation inequity” (page 26) as the NPS suggests, rather it is an astounding example of poor judgment which can only be remedied by the goodwill and common sense of the NPS administrators involved.

RESPONSE:

A Common Pool system was considered and eliminated in the *DEIS*. The NPS believes that the split allocation system is the most appropriate system for the Colorado River through Grand Canyon. A split allocation system will offer the widest range of river trip types and opportunities for the widest range of Grand Canyon visitors.

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P13

Permits should provide an authorized operator with a fixed number of service days per season or year.

RESPONSE:

The *FEIS* determines a commercial allocation. Contracting will determine individual allocations for the individual companies. The adjustable split allocation system has been replaced in the *FEIS* with a non-adjustable split allocation system.

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P16

The “demand measurement” component of the NPS’ preferred allocation approach described in the *DEIS* on pages 652-653 is flawed and subject to manipulation. NPS proposes a single registration system for commercial and noncommercial trip participants. While noncommercial registrants can be verified as

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having real interest since they subsequently apply for a permit, there does not appear to be any way to verify that commercial registrants are real persons that will participate in a trip if one is available. This appears to be rife for manipulation as it would be easy for shills to register with falsified or stolen personal information. There is no way to verify that commercial registrants have a sincere interest in participation in a trip.

RESPONSE:

See revised section in Chapter 2 (Approach to Allocation). The modified preferred allocation option has several modifications from the Draft EIS, including the elimination of an adjustable split allocation system. The modified preferred allocation option is the no action option (current system), in which recreational river use in Grand Canyon would continue to be allocated between the commercial and noncommercial sectors in a set ratio (albeit a different ratio than is currently set) that will remain the same for the life of the plan. See new text describing the modified preferred allocation option in Chapter 2: Alternatives and analyzed in Chapter 4: Environmental Consequences—Visitor Use and Experience.

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P17

If the NPS is interested in measuring the potential demand for commercial trips, then a statistically valid national sample would be required. If you cannot afford to pay for a survey, then the NPS should just leave the commercial allocation at the current level. Unless there is compelling evidence that proves a shift in demand, the allocations for both private and commercial sectors should remain the same, at current levels.

RESPONSE:

See revised section in Chapter 2 (Approach to Allocation). The all-user registration system has been eliminated. While data regarding relative demand between the commercial and noncommercial sectors is not known and not currently readily available or obtainable, two important pieces of information remain. First, NPS records show that commercial and noncommercial allocations are both consistently used. Second, the NPS has witnessed tremendous growth in the length and wait times of the noncommercial waitlist. With these two facts, the NPS believes the preferred allocation option is the appropriate response to adjusting the allocation.

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P18

Many respondents felt that credit should be given to people on the waitlist to move to the permit lottery system.

RESPONSE:

Incentive in the form of extra lottery changes based on wait times is provided as a transition option to people on the Waitlist. See revised section in Chapter 2, Permit Options.

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P19

Many respondents suggest a multiple pathway permit system, described as follows.

A reservation option is beneficial and useful to boaters who wish to plan well in advance. This type of system would allow permit holders to reserve a launch date that works for them. It gives them a certain date in the future of their choice that enables the trip planning that they need to coordinate people and resources.

This system should be described and developed as web-based and automated to reduce administrative and management costs, and to increase opportunities for access. The web-based system should identify dates allocated from the noncommercial pool to the reservation system; each date should be indicated as AVAILABLE, CLAIMED or RESERVED to permit holders. A claimed date would indicate that this date has been claimed but fees and information have not yet been received and accepted. This would enable boaters who prefer a date already claimed to wait only 30 days to see if the claimed date they want actually gets reserved. If the individuals desire to call in and register, the park staff would be able to use the same on-line interface to describe availability and submit a registration application on behalf of an applicant.

The transition aspect of the multiple path system is that current wait list enrollees could be allowed several options that would make transition easier for them and the NPS as well.

- 1) People already enrolled in the wait list be given first option to reserve dates.
- 2) Enrolls would be allowed to group their applications to form a single entry with a combined wait number that moves them ahead of lower numbers.
- 3) Current wait list enrollees who don't wish to continue in the reservation system may enter the lottery system at the appropriate time and their already paid fees be applied to any lottery application fees imposed on entry by the NPS.

Upon claiming a launch date, the following would be provided to the River Permits Office within 30 days to enable reserving a launch date:

- 1) number of boaters for the trip-enables determination of fees,
- 2) names and required identification of permit holders and/or alternative permit holders (25% required and more allowed, one of which must attend the trip), and
- 3) a substantial deposit of applicable fees.

Three months before the launch date the following would be due or the launch would be declared a cancellation:

- 1) the remaining fees due,
- 2) any required documentation and applications, and
- 3) identification of participants, either all or some percentage thereof determined by NPS

At first it may seem appropriate to collect 100% of the fees to reserve a launch date. However, a substantial non-refundable deposit, but less than 100% of total fee, would indicate a serious commitment by the group to take the awarded launch opportunity. Just as important as advance payment requiring that the remainder of the fees be paid three months prior to launch. The second payment serves as a second, and also non-refundable, commitment point to be met by the permit holders.

Without exception, nonpayment of fees by the due date would result in a launch that would default to a cancellation. The three-month advance default would allow time for re-offering the trip in the reservation calendar. With a monetary checkpoint at three months before the launch, permit holders whose plans have become tentative for any reason would be more likely to make the decision to cancel at that point instead of paying the balance to trip fees due. This would be preferable to having no-shows at Lees Ferry.

Participants of a launch issued through the reservation system component would not be allowed to participate in other noncommercial trips in the same calendar year. However, participants listed for a reservation system launch in a future year should not be denied participation on other noncommercial trips in calendar years prior to launch as long as they are not permit holders or alternate permit holders for such prior trips.

No person can hold a reservation (or be listed on a permit) and be in the lottery at the same time. In the event that applicants holding a launch reservation decide not to use their reserved date, such launches, depending on how close they are to launch date, should be returned to the list of available reservation dates.

RESPONSE:

The NPS will be implementing a “hybrid” lottery system as explained in the Chapter 2, permits section. Similar to a pure lottery, people start in the hybrid lottery with 5 chances. However, like the weighted lottery people’s chances are reduced if they have been on the river in the last 4 years.

The NPS did reconsider a “reservation” system and recognized serious limitations with such a system (see response to P6 above). The NPS is nevertheless exploring it as a transition option for people on the Waitlist. See the waitlist transition options as explained in Chapter 2.

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P20

Some respondents thought that more permits for “small trips” should be designated.

RESPONSE:

The NPS believes that by designating standard size trips it maintains maximum flexibility for noncommercial use. Standard trips can always launch with fewer passengers.

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P21

Devise a fair system for distributing unclaimed and cancelled launch dates. The first choice should go to unsuccessful lottery applicants for the launch date or period in question and then to other unsuccessful applicants in order of their wait.

Consider (as is presently implemented). This will allow a shift to more private trips while not impacting the commercial sector as substantially.

RESPONSE:

Cancellation system information is included in Chapter 2. See revised section in Chapter 2, Permit Options.

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P22

Respondents shared a variety of ideas regarding group size. Some respondents thought that maximum group size for commercial and noncommercial groups should be equal; others thought the permit system should allow for various types of trips within both commercial and noncommercial trips. One respondent suggested that 10 is a better number for a small noncommercial trip, while other thought the NPS should allow noncommercial groups to determine their own size and to not differentiate between Standard and Small. I do think it would be appropriate to consider decreasing the maximum noncommercial standard trip size (from 16 to 14) if that would accomplish whatever the point is of looking at smaller noncommercial trips.

## RESPONSE:

The NPS has strived to find equitable solutions for all our users, recognizing that the river can only sustain a certain number of users at one time. Part of this limit is beach sizes, some of which can best accommodate smaller trip sizes such as an 8-person trip. In creating our alternatives, the NPS has attempted to provide the greatest access to the greatest number of users. The NPS believes it is important to provide diverse trip types and opportunities and believe that a 16-person group size is the appropriate maximum group size for noncommercial trips. The NPS has also included the small trip option in the Modified Preferred Alternative H to allow for diversity in trip types. The NPS believes an 8-person launch best accommodates our vision for providing this diverse opportunity within the physical constraints of the canyon.

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P23

One respondent suggested that the NPS require anyone going more than once to have a wilderness first responder card.

## RESPONSE:

While Wilderness First Responders is currently required for commercial guides and a good idea for anyone, the NPS is not considering adding this as a requirement for noncommercial users.

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P24

In the Executive Summary (p. xiii) reference is made to descriptions to trip leaders but nowhere in the alternatives is a new description found. It is very hard to evaluate alternatives without more information. Is a trip leader one that, according to p. 659, attends more than two trips in 20 years to help maintain an experience base? The concept of alternate trip leader is understandable and don't think it's what the executive summary was referring to in the descriptions of trip leaders. Please explain in more detail in the *FEIS*.

## RESPONSE:

The noncommercial trip leader and alternate requirements are described in the Operating Requirements. The Operating Requirements are reviewed annually and updated as needed. Changes to the Operating Requirements in the EIS are described in Chapter 2.

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P28

The NPS can make “apples to apples” comparisons of demand by implementing a reservation system for noncommercial trips that is quite similar to the reservation system for commercial trips, then comparing how far in advance people have to reserve noncommercial space compared to commercial space. Obviously, the NPS cannot make “apples to apples” comparisons by issuing noncommercial space through a lottery, a long wait list, a multiple pathway system, or some other system that is quite different from the reservation system used for commercial trips. Like the present long waiting list, a lottery or multiple pathway system would not be a reliable indicator of demand either. It would be hard to tell whom the “real” applicants are, as discussed earlier. Such a system would be unlawful for that reason alone, in addition to the reasons already noted.

## RESPONSE:

See revised section in Chapter 2 (Approach to Allocation). The adjusting split allocation and all-users reservation system have been eliminated. While data regarding relative demand between the commercial and noncommercial sectors is not known and not currently readily available or obtainable, two important pieces of information remain. First, NPS records show that commercial and noncommercial allocations are both consistently used. Second, the NPS has witnessed tremendous growth in the length and wait times of the noncommercial waitlist. With these two facts, the NPS believes the preferred allocation option is the appropriate response to adjusting the allocation.

P29

Give permits based on private reservation system that includes the following aspects and rules:

- 1) A 20-year launch calendar needs to be posted on the Internet and updated weekly by the NPS. Also suggest the immediate transfer of all waitlist members to the new launch calendar. Current waitlist members will be given a preference to reserve launches on the calendar before any new requests are accepted. People who have placed their infant children's name on the current list can choose dates way into the future and will be accommodated by the 20-year time frame. Folks need not worry that the date they choose now is hard and fast, there will be plenty of flexibility in the system to allow them to get a more suitable launch as their date approaches. The launch calendar must extend 20 years into the future because with only 457 launches available each year, it will take over 18 years of scheduling to give each of the 8400 waitlist members a date. Some folks will insist on a popular date, thus will be forced further into the future while others will choose a less desirable date in order to get on the river quicker.
- 2) The current swapping of launch dates would still be allowed. Those who were initially forced to accept a less desirable launch could upgrade through trades and picking up cancellations.
- 3) The new incentive proposed by the NPS to encourage current wait list members to combine into groups will also be used when filling the new calendar. A 3 month period for all current waitlist members to choose whether to keep their existing position or try to move up by combining with other waitlist friends. Each person will be given one point for each year they have been on the list. If two, or more, waitlist members choose to combine into a group they will pool all of their points and receive one launch for the group. One month after all waitlist members have elected, the NPS will issue new waitlist numbers to individuals and groups. Currently the longest anyone has waited on the list is about 13 years, thus 13 is the maximum number of points anyone can possess. Once individuals begin to combine into groups, this number could increase substantially. The NPS will assign new waitlist numbers to individuals and groups in descending order according to how many points the group or individual possesses. Each waitlist entity (individual or group) will be notified of their new waitlist number to be used when choosing launch dates on the new calendar. A few weeks after waitlist members have received their new numbers the call in system will begin taking reservations. Waitlist members will be able to call-in depending on their new WL numbers in the following manor: 1-100 will be allowed to call on the first day, 1-200 on the second day, 1-300 on the third day, and so on. It will likely take about 16 weeks to give all of the waitlist members a launch. Then I suggest a one-month digestion period before the general public is allowed to call in. The launch calendar must be fully updated and checked for accuracy by the NPS during this period. Waitlist members who were sleeping will also be allowed to call during this time.
- 4) Similar to the current system, cancellations will be announced (via internet post and phone message) before being available for claiming. Cancellations will be posted at the end of each week and available for claim the next week similar to the current system. One half of the user fees should be due at the time of reservation and the balance due 6 months before launch. If the balance of the user fees is not received by the NPS on the due date, the launch should be made available to the

general public immediately. This would provide some predictability to the system for parties who want to pick-up canceled launches. Canceled and available dates should be filled the following week giving priority to those who haven't been on the river the longest. To accomplish this, reservations will only be accepted from persons who haven't been on a commercial or noncommercial river trip in the last 4 years on Monday, 3 years on Tuesday, 2 years on Wednesday, 1 year on Thursday, and Friday is wide open. This could end up splitting hairs and would require the NPS to update the reservation system with trip participant names daily, thus I see this restriction being grouped by year. For example if we are calling anytime in 2005, anyone who has participated in a trip since Jan 1, 2005 couldn't call until Thursday; Jan 1, 2004 = Wednesday; Jan 1, 2003 = Tuesday; and Monday = Jan 1, 2002. Yes, those who launch in the fall will have a longer waiting period, so be it. What this amounts to is that if you get on the river a lot, it is much harder to get to run your own trip. Essentially the same situation we are currently in.

- 5) Assuming the NPS will continue to charge \$100/person user fees to float Grand Canyon. To prevent individuals from only risking \$50 and locking up a launch, the group size paid for at the time the reservation is made can only be increased by 2 persons during the life of the reservation. It can be decreased at any time, but once decreased, the 2-person rule applies. Most folks know about what size trip they want to run long before they launch, let them put their money where their reservation is. How do the outfitters like to say it: "real people, real dates."
- 6) There should be no restrictions on repeaters. Only 3% of noncommercial boaters did more than 2 trips during a 5-year NPS study period (*Colorado River Management Plan/DIES*, vol. II, P.657). This rule punishes the permittee, not the repeat boater. If I have my own permit, I should be able to invite anyone I want. Why should I not be able to invite my best friend or brother just because it so happens that he lives near Grand Canyon and filled in as a boatman on a trip 10 months ago? Experienced boaters with their own gear, and who live near Grand Canyon are the most likely folks who will be able to join trips on short notice. Keeping these folks off the river isn't going to provide increased access to Grand Canyon for the noncommercial sector. It will just result in fewer full trips and punish permit holders.
- 7) The concept of the current rule requiring your name to be removed from the waitlist after completing two trips should be maintained, although I suggest 3 trips rather than two. Less experienced boaters need an opportunity to practice. If a current WL member completes three trips during the time they were on the WL and while they are waiting for their transitioned launch to come up, they should lose their transitioned launch. Any individual or entity can only hold one reservation in the system at a time and will lose their reservation if they participate in three trips before their launch. The idea here is to not have people who are getting on the river clogging up the launch calendar. If they want to run their own trip, they will have to wait.
- 8) Cancellations would be allowed in this system with graduating penalties depending on how soon a before launch the party cancels. These rules would apply to both transitioned and new reservations. If it is 1 year before launch, no refund is available. If it is more than 1 year and less than 2, 50% of the deposit is forfeited. If it is more than 2 years and less than 3, 25% of the deposit is forfeited. If it is more than 3 years a 10% booking fee is forfeited. This makes it worthwhile to cancel if your life situation changes. It also puts pressure on the reservation holder to decide if they are serious about the trip, or not, as the launch approaches. I see this rule causing dates 1-3 years down the road to open up on the calendar with some frequency. Rather than cancel, a reservation holder, on a one-time basis, may also give the launch to someone else. This could lead to abuse, but there needs to be a way for a group waiting under one person's name to keep the launch if something happens to the permittee. Could this result in a black-market selling of launch dates, I doubt it? I think enough dates will be available from open dates and cancellations in the system that paying someone for a launch would be unnecessary. Another way to handle this could be to require a participant list be submitted with final payment (6 months before launch) and allow the transfer only to occur in the last 6 months before the launch to a person listed on the participant list. Abuse is still possible, but again I think doubtful.

## RESPONSE:

The NPS did reconsider a “reservation” system and recognized serious limitations with such a system. Please also see comment and response in Permits (P #6). The NPS is nevertheless exploring it as a transition option for people on the Waitlist. See the waitlist transition options as explained in Chapter 2 for further information.

## P30

Make a quick transition into the new permit system. Transition to a new system is difficult. Many users have been waiting more than a decade. Many, especially those who would have received a permit in the next few years, will be upset. Some of us are on the list, but most quit trying since we would be too old to participate 25 years from now. There is additional demand that does not show on the list because the time drives people away. It is important to strike a balance between the new and old system transition and treat list participants fairly.

- 1) Limit applications for the new lottery for the next few years to current list participants. Start the fully open new system on year three and completely move to it. Keep the current list only for 2006 and spring 2007 launches.
- 2) Offer participants cash to exit the list completely.
- 3) Add significant additional trips year round starting this year as a test and evaluate after 3 years. 3 trips per day added from Oct 15 to May 1 and 1 additional trip per day from May 1 to 15 and Sept 15 to Nov 1. Reduce commercial trips during these time frames immediately. Offer to list using the current method on first pass and open cancellations to all participants on the list. This gives those farther down the list; although not in the top 400 some chance to pick up a cancellation, even though it will probably be in the off season.
- 4) Start the small size trips now and get them to list participants until the list lottery takes over.

## RESPONSE:

The *DEIS* Options for Transitioning Waitlist members to the new system have been streamlined and are included in Chapter 2.

## P32

Trades of assigned launch dates are usually triggered when the plans and circumstances of a permit holder or key participant change such that a different launch date is needed to make a trip happen. Based on NPS rules and how launch dates are currently assigned, a permit holder seeking to trade a launch date is generally limited to trading with the small number of people with launch dates assigned within the next year or so. Permit holders seeking trades are left on their own to find someone to trade with, with no effective ways of finding those who might be interested in exchanging launch dates. Trades are not permitted with anyone on the waiting list who may be interested. Permits that could be traded to the mutual satisfaction of each party presently are cancelled on short notice because of these difficulties. Many of these cancellations, as well as the unfortunate forfeiting of access opportunities after many years of waiting, could be avoided by modifications in the NPS rules for trading permits. A dedicated website for finding other noncommercial participants in any NPS permit system, coupled with liberalized rules to allow trades with any other active participants in the permit system, would address these problems. NPS has already demonstrated its ability to expeditiously process trades once they have been consummated. Broadening opportunities to trade, limited to active participants in whatever permit system is in place, would reduce short-notice cancellations and facilitate exchanges between people not ready to go, with minimal NPS involvement.

RESPONSE

Swapping has been eliminated as an option for trip leaders. The main, viable option for these leaders is to pass the trip to one of the alternates listed on the permittees initial lottery application. Should this not work, the trip must be cancelled. It will then be made available through the hybrid lottery to those willing to accept that date with the reduced lead-time before launch. See Chapter 2 for more information on the Permit System.

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P33

Some respondents suggest that no applications be taken from anyone who will not be 18 years old at the time of the requested trip.

RESPONSE:

Under the new noncommercial permit system; applicants must be 18 years old.

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P35

Rafting permits in the Grand Canyon should be evenly divided into three categories; commercial, private and educational/research, and motors should not be allowed.

RESPONSE:

The NPS will implement a split allocation system for commercial and noncommercial use. Educational and research trips will not receive an allocation under this *DEIS*. They will be evaluated and administered in accordance with criteria described in Chapter 2.

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P36

Please include in the *FEIS* the same statistical chance charts that the Forest Service does for the 4 River Lottery. This draft EIS is inadequate because it DOES NOT show people what their chances are in any of your proposed lotteries.

RESPONSE:

To accurately predict future trends, the NPS needs to know how many people would apply for specific dates or time periods. The NPS plans to provide this type of data in the future upon implementation of the new permit system. In addition, the NPS included research on various river permit system when analyzing options for the noncommercial permit system.

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P37

None of the alternatives provide any accommodation for people with disabilities, like through a special population permit that are available through some of the other national parks we have rafted through.

## RESPONSE:

Outfitters are required to provide a wide variety of trip options and opportunities for people with disabilities. The NPS believes this is an appropriate level of accommodation.

P40

Page 663 of the *DEIS* under rule changes for waitlist members: #1 is unclear. Who is They? It sounds like you are saying that if someone chooses to stay on the waitlist they must give up their place on the waitlist. Do you mean that the others on my trip must give up THEIR places on the waitlist? Please clarify this paragraph by not using the pronoun they.

## RESPONSE:

Please see the revised text in Chapter 2.

P41

The *CRMP/DEIS* was lacking on details that are critical in enabling one to evaluate this proposed system. There is no information on fees, cancellation policies or the details of permit award (how far out in the future, etc), small vs. standard trips, etc. Because of this lack of detail, it is requested that the public be allowed to review the final proposal and comment on it before a *Record of Decision* is filed.

## RESPONSE:

NEPA does not require that the NPS solicit public comments on the final proposal. Based on public input the NPS has changed the proposed permit system. Some details regarding implementing the permit system will not be determined until the plan is final.

P42

The chart on page 52 of the *DEIS* gives the impression that there will be substantially more motor use under Alternative H than it actually allows. Use for noncommercial private trips under Alternative H is listed as 102,725 user-days. This is the *Colorado River Management Plan* team's guesstimate of how much will probably be used under Alternative H. The maximum number of possible user-days that could be used given the launch schedule under Alternative H, private use is provided with 131,488 user-days—a much bigger and more alarming number than 102,725 user-days. There is a substantial difference between 102,725 and 131,488; most *DEIS* readers will be unaware of the actual increase for private users provided for by Alternative H because the number wasn't stated in the *DEIS*. Since the private allocation has actually been exceeded historically, due perhaps to the over scheduling of permits to compensate for the high cancellation rate, it seems most likely that private use will be closer to the 131,488 number than the *Colorado River Management Plan* team's guesstimate. The maximum possible private use under Alternative H should have been presented for public information since it is a possible scenario resulting in a huge increase in use for this group and therefore, in a huge overall increase in use and impacts to the resource. Please make this information available to the public in media releases following the finalization of the plan if Alternative H is adopted.

## RESPONSE:

The chart numbers from *DEIS* page 52 have been revised in the new alternative. "Probable" numbers are determined by looking at data from existing trips during the same time of year, limiting group size or trip

length for that trip according to the alternative, adding totals and calculating averages. The NPS believes this is the most reasonable way to predict use. Maximum potential under the existing situation vastly exceeds actual use in any year.

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P44

Some respondents thought that the NPS should open the Lower Gorge up to private boaters.

RESPONSE:

“Diamond Creek-down” permits have been and will continue to be available for private boaters. See the Diamond Creek-down Permits section of Chapter 2.

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P45

Some respondents were disappointed in the NPS’ willingness to accommodate one percent of the populations demand for equal use and access to user-days. Private boaters are primarily people from the Intermountain West, which is far less than one percent of the general US population. The percentage of private trips that cancel is 38%, a result of a falsely inflated private waiting list. An update was recently released regarding open dates in 2006 indicating that cancellations are still an issue with 25% of the dates for 2006 still available. The waitlist seems to be cluttered by people who really aren’t serious about doing a trip. Also, there are people on the list who have been put on the list by others and/or may not have the interest or skills to undertake this activity without a guide.

RESPONSE:

A new, hybrid lottery system is being implemented. The NPS believes this new system will help reduce the cancellation rate and ensure only interested parties apply.

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P46

Consider moving into a subcategory those persons who can prove by Affidavit, or otherwise, that they have NEVER run the Grand, either on a commercial trip or self guided trip, and especially (and obviously) as a Grand Canyon guide. Label these persons with a new number. Create another subcategory (Litton’s idea) for persons who are at retirement age, or face the possibility of dying before the permit comes up. Label these persons subcategory B. Proof here is simple, date of birth. The NPS needs an alternative plan that gives those who have never had this incredible experience before, who are waiting and waiting for just the ONE chance, which think your incentives are ridiculous or unusable. Instead, the CRMP focuses at how to get rid of the list. Giving those who have waited the longest is not enough. Those who have never gone and those who are at retirement or older should be given the priority.

RESPONSE:

The NPS will be implementing a “hybrid” lottery system as explained in the Chapter 2, permits section. Similar to a pure lottery, people start in the hybrid lottery with 5 chances. However, like the weighted lottery people’s chances are reduced if they have been on the river in the last 4 years. The NPS believe this provides everyone who has not had the opportunity in 4 years an equal chance.

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P47

Maintain motorized access for noncommercial trips throughout the year to help increase the number of winter trips thereby accelerating time spent on the wait list.

RESPONSE:

No motorized use will be allowed for commercial or noncommercial users in the nonmotorized season. Noncommercial winter motorized use was analyzed under other alternatives.

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P48

Any system of awarding permits must be open and audited by a panel selected by the board of Grand Canyon Boaters Association.

RESPONSE:

The NPS is not obligated to seek or allow audits regarding the permit system but may do so. The NPS is hereby advised of Grand Canyon Boaters Association's interest in this process.

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P49

To equate launches and user-days as if summer days are equal to winter days defies belief. How could such a measure be seriously proposed? And what is the agenda behind it?

RESPONSE:

The NPS has not suggested that summer and winter days are equal. In its analysis the NPS used different UDT, trip lengths, group sizes, and launch levels to recognize the very different experience users enjoy throughout the year.

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P50

Can you give me any info right now on the timeframe for getting on the waitlist?

RESPONSE:

The preferred noncommercial permit system is a "hybrid" lottery. No additions will be allowed to the existing waitlist; instead it will be reduced and eliminated. See Chapter 2 (Permit System and Transitioning From the Waitlist).

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P51

It was suggested that by 2010, or sooner, the NPS should reduce the time spent on the waiting list for private permits to the same amount of time as those who contract with a commercial outfitter spend on those waiting lists.

RESPONSE:

The NPS believes the new noncommercial permit system coupled with a vastly increased noncommercial allocation will help to ensure noncommercial trip leader waits are significantly reduced.

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P52

The government cannot implement unequal treatment so as to interfere with the Constitutional right to travel. Reservation systems must release vacant space to present applicants—they cannot hold space for future applicants who have yet to reserve it. The NPS can indeed bring new visitors to the parks, including new commercial customers, but it can't give them preferential treatment, compared to noncommercial applicants. A system with a long wait for noncommercial applicants (while commercial space is readily available) violates the Public Trust Doctrine and the NPS Organic Act, as discussed earlier, as well as the equality of treatment provisions of the Constitution.

RESPONSE:

Through the NPS Organic Act, the Constitution directs the NPS to, among other things, regulate use and provide for enjoyment by current and future generations:

“...The service thus established shall promote and regulate the use of the Federal areas known as national parks, monuments, and reservations hereinafter specified by such means and measures as conform to the fundamental purposes of the said parks, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations....”

The NPS is administratively tasked with doing this. The NPS's reservation systems thus need to strike a balance in providing enjoyment opportunities for current and future generations. The NPS believes our Modified Preferred Alternative H will achieve this goal over the life of the plan.

The NPS believes the commenter is trying to equate two concepts that are very different: people applying for space for themselves on previously scheduled commercial trips versus those who apply for leading a noncommercial trip and the right to take whoever they might later decide on that trip.

The NPS knows that an average of around 18,891 people participate on commercial trips each year, and the NPS does not know how many commercial applicants are turned away. For noncommercial trips the NPS has an average of around 3,570 actual participants plus a waitlist with around 8,000 names of actual trip leaders seeking permits for some time in the future, along with the unknown people who might accompany them. In summary, there are 18,891 actual users on the commercial side and approximately 11,570 potential trip leaders on the noncommercial side.

While this is inconclusive information, the NPS believes it offers a sufficient indication that there is great pressure for additional noncommercial allocation. Many people advocated strongly for a 50:50 commercial to noncommercial user-day allocation ratio, and the *FEIS* allocation proposal conforms closely to this ideal.

P53

Permit demand is currently lower than supply during the winter. Why then, under the preferred alternative will winter use increase? Where will the demand come from?

RESPONSE:

Demand for winter dates is not lower than supply during the winter. In fact, in 1998–2001 the NPS exceeded the winter allocation by running a “winter test” program where 138 additional launch dates were released and claimed. Through that study the NPS saw that demand for winter dates is affected mostly by how far in advance those winter dates are made available. In fact 100% of winter launch dates were claimed by waitlist members when those dates were made available at least six to 10 months in advance. For more information, please see: [http://www.nps.gov/Grand Canyon National Park/crmp/documents/stats/Analysis.pdf](http://www.nps.gov/Grand_Canyon_National_Park/crmp/documents/stats/Analysis.pdf).

## Range Of Alternatives

### ALT1

Either there really isn't much difference among alternatives or the impacts analyzed under each topic have been inadequately framed, addressed, or concluded. This is not to say that topic discussions are not informative and well thought through; the disconnect lies in how the conclusion statements are crafted.

#### RESPONSE:

Alternatives were created within the constraints of the physical and social carrying capacities of the Colorado River corridor. In order to be a viable alternative, levels of impact had to be within acceptable levels. Impact ratings ranged from negligible to major depending upon impact topic. Conclusion statements were crafted according to DO #12 policies.

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### ALT2

No serious consideration has been given to balancing, or even materially changing, relative access throughout the year, including the summer season. The NPS did not even consider an alternative that gives noncommercial use equal access in the summer.

#### RESPONSE:

The NPS believes it has considered a full range of alternatives as required by NEPA. Equal access depends upon the measure of use you use. Alternative B included equal allocations of trips launching in the summer and Alternative C included near-equal launches and user-days in the summer season. Additionally, the Modified Preferred Alternative H includes a significant increase in annual and summer season noncommercial launches, passengers and user-days.

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### ALT3

None of the alternatives offered in the *DEIS* adequately address the current and historic disparity between the amount of river access opportunities provided by the NPS to commercially guided outfitter customers and the amount of river access opportunities provided by NPS to the self-guided public. This disparity has resulted in a backlog of more than 8,000 permits and up to 130,000 individuals waiting to take a self-guided river trip. Conversely, those individuals hiring the services of a commercial river concession have been able to get on the river immediately and go on as many trips as they want.

#### RESPONSE:

The NPS believes it has considered a full range of alternatives as required by NEPA. Equal access depends upon the measure of use you use. Alternative B included equal allocations of trips launching in the summer and Alternative C included near-equal launches and user-days in the summer season. Additionally, the Modified Preferred Alternative H includes a significant increase in annual and summer season noncommercial launches, passengers and user-days. This increase is coupled with a transition from the waitlist to a lottery system (including incentives for clearing the waitlist) and limited repeat use to allow more individuals access to the river.

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ALT4

The NPS should explore at least one alternative that allows more noncommercial river trip participants than commercial river trip participants.

RESPONSE:

The NPS believes it has considered a full range of alternatives as required by NEPA and that the significant increase in noncommercial launches, user-days, and passengers in the Modified Preferred Alternative H adequately addresses concerns over parity of use while maintaining a level of use that protects resources and visitor experience.

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ALT5

The NPS should consider an alternative(s) that analyze a variety of support options, including providing outfitted guests the opportunity to participate more in their trips, and allowing self-outfitted river runners to hire consultants for their trips.

RESPONSE:

Hiring a guide on a noncommercial trip changes the definition of a private trip. This blurs the lines between commercial and noncommercial trips. Outfitters allow a wide variety of recreational opportunities including kayak and paddle trips.

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ALT7

The NPS should consider an alternative that evaluates the nonmotorized months prior to phase-out of Feb 15–May 15, and Sept 15–Dec 15. These are the optimum time periods for hikers seeking solitude in the inner canyon, and are also preferred for noncommercial oar-driven users. None of the proposed alternatives split the use in this way.

RESPONSE:

The NPS addressed the idea of no-motors in spring and fall in Alternative D (see Chapter 2). In our Modified Preferred Alternative H the NPS has increased the no-motor season from three months to 6.5 months (September 16<sup>th</sup> to March 31<sup>st</sup>).

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ALT8

The NPS should consider an alternative that allows only motorized trips so that more people can have the experience.

RESPONSE:

This alternative was considered and rejected because it did not provide for a full range of recreational opportunities, including nonmotorized trips.

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ALT12

Grouping a number of options (such as time of year for motor use, size of trip, and number of user-days) into one alternative prevents assessment of each variable independently. Alternative F, which limits motors to half the summer and half the winter, an arrangement that meets the diversity of visitor experience objective better than either Alternatives A or H, is discarded because it increases use in the springtime. But options such as reversing the mixed-use/oars only seasons, or decreasing the size or number of motor trips during that time are not considered. This creates a bias that prevents consideration of options that might better meet many management objectives

RESPONSE:

The NPS believes it has considered a full range of alternatives as required by NEPA. The analysis of potential environmental consequences presented in Chapter 4: Environmental Consequences indicates that crowding and congestion contribute significantly to resource vulnerability and visitor experience. Thus, while the total number of user-days is an important variable to consider in the analysis of potential impacts, group size, TAOTs, PAOTs, UDT, and trip lengths can serve to mitigate or exacerbate the potential for impacts. For this reason, options were packaged into a range of reasonable alternatives.

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ALT13

For years the NPS and others—including outfitters—have discussed a 10% across-the-board reduction in commercial allocation. Why was this not considered within the range of alternatives?

RESPONSE:

NPS believes that it can best meet management objectives by increasing the noncommercial allocation without reducing commercial use. This was done in a manner consistent with protecting resources and visitor experience by adjusting launch patterns, group sizes, and trip lengths.

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ALT14

The NPS should consider an alternative that

- 1) allows no helicopter exchanges at Whitmore;
- 2) limits motor use to two weeks/month of launches May–Aug. The NPS should retain current trip length on private trips, with one/week per month during spring/summer/fall of two-day longer private trips.

RESPONSE:

The NPS believes it has considered a full range of alternatives as required by NEPA. NPS analyzed three alternatives with no Whitmore helicopter exchanges: Alternatives B, C and D. Alternating motor and no-motor bi-weekly would increase TAOTs in the lower end of the canyon to unacceptable levels as motor trips would overtake no-motor trips. The majority of the trips would have high encounter rates with motor trips. Increasing private trip lengths or retaining current trip lengths would also increase TAOTs beyond carrying capacity to over 60 trips at one time.

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ALT15

The NPS should consider a NO motor alternative. There is supposed to be a no-motor alternative in the Draft EIS as mandated from the 2000 lawsuit but it is obvious from the column labeled “Continuation motor trips” that the park has not carried this out in the Lower Gorge. Alternatives B and C would probably eliminate continuation motor trips, which would greatly reduce the noise in that category.

RESPONSE:

Zones 1 is a primitive zone, while zones 2 and 3 are semi-primitive and modified natural respectively, that are characterized by higher levels of use and different recreational experiences including motorized use.

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ALT16

The NPS should consider an alternative that retains the current use levels but isn’t just the status quo (Alternative A).

RESPONSE:

The NPS believes it has considered a full range of alternatives as required by NEPA. Use is defined by several different measures including number of user-days, number of launches per day and number of passengers. Also, please see comment and response in General Resources (RG #9). Alternative E was very similar to Alternative A in number of users.

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ALT17

The only alternative that significantly reduces total impact from rafting groups to the inner gorge would accomplish this by eliminating motorized use. A properly chosen series of alternatives would have included a reduced overall numbers option that split the reductions among motorized and nonmotorized users. Since the basic problem to be addressed in this plan is too many people impacting a fragile ecosystem, a properly selected range of alternatives should include more than one alternative that proposes to address the problem by a significant overall numbers reduction.

RESPONSE:

The NPS believes it has considered a full range of alternatives as required by NEPA. Use is defined by several different measures including number of user-days, number of launches per day and number of passengers. Also, please see comment and response in General Resources (RG #9). Alternative E was very similar to Alternative A in number of users.

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ALT18

The NPS should consider an alternative that phases out motor trips.

RESPONSE:

Alternatives B and C were “no-motor” alternatives that would have eliminated motor use from the Upper Gorge. In developing those alternatives, the NPS recognized that a phase-out of motor trips might be necessary, and this would have been considered administratively if one of these alternatives had been chosen as preferred.

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## ALT19

All alternatives presented in the *DEIS* result in natural and cultural resource degradation, all increase use (except the No Action Alternative), and several (including the Preferred Alternative) focus on benefit to economic interests. Given the preservation mandate of the park, these trade-offs are not acceptable. The range of alternatives fail to: 1) comply with NEPA requirements; 2) serve the NPS mission, 3) address controversial issues; 4) use scientific information wisely; 5) integrate NPS roles and responsibilities with adaptive management of Glen Canyon Dam; and 6) find creative solutions to management controversies. Based on these failures, the NPS should develop additional alternatives that address these deficiencies while fairly treating recreational management.

## RESPONSE:

The NPS believes it has examined a reasonable range of alternatives that addresses each of the commenters points. While this comment does not provide specific deficiencies in *DEIS*, several other comments expand upon these concerns. The NPS has addressed each individually elsewhere in this document.

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## ALT20

The range of alternatives seems to disregard historical 10 to 100 year droughts the Western US regularly experiences, and assumes that increased user-days are the best management option even as air quality, beach size, soundscape, etc. are adversely impacted by the combination of intensive use, Glen Canyon Dam operations and sustained drought.

## RESPONSE:

Glen Canyon Dam operations and the requirement to fulfill the upper basin water commitments to the lower basin are outside the scope of this visitor use plan, although under current Glen Canyon Dam operations flows will not be any lower than 5,000 cfs. If drought conditions continued, changes in recreational patterns and Glen Canyon Dam operations would be required and the NPS and Bureau of Reclamation would work together to develop these. The NPS considered a range of alternatives and analyzed their impacts on air quality, beach size, soundscape and many other park resources, and believes it has chosen the alternative that best protects resources while offering a range of quality visitor experiences to the public.

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## ALT21

None of the alternatives presented by the NPS in the *DEIS* combine the parameters of no-motors, light use of the canyon in the spring when the environment is vulnerable, a more even handed allocation of commercial versus private trip user-days and a reasonable increase in visitor use without almost doubling the user-days.

## RESPONSE:

The NPS considered a range of alternatives and analyzed their impacts on air quality, beach size, soundscape and many other park resources, and believes it has chosen the alternative that best protects resources while offering a range of quality visitor experiences to the public. The range of alternatives presented in the *DEIS* does address each of the commenters points, although they may not all occur in the same alternative.

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ALT23

The alternatives that have been offered do not meet management objectives. Under purpose and need for action the plan should “provide a wilderness type river experience” and it does not.

RESPONSE:

The NPS believes that the Modified Preferred Alternative H does meet the objective to provide a “wilderness type river experience.”

The Management Objective states in total: “to manage the Colorado River Corridor through Grand Canyon National Park to protect the resource in a wild and primitive condition and provide a wilderness river experience (without affecting decisions regarding the use of motorboats on the river).” The NPS believes the commenter objects to the continued use of motorboats, but this is not outside the requirement of the management objective.

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ALT25

Broaden the range of alternatives that will enhance the opportunity to experience the natural soundscape of the canyon.

RESPONSE:

The NPS believes it has analyzed a full range of alternatives according to NEPA requirements. Alternatives B and C have no motors year-round, and the other alternatives have a range of no-motor months and other features. A soundscape management plan will be developed in the near future by the park that will comprehensively address human sound sources. The NPS has direct control over whether passenger exchanges can occur at a given location, not on the means of transportation that a visitor may choose outside the park boundary. The NPS has no control over helicopter flights on Hualapai tribal lands, and does not administer air traffic activity or air tour operations over the park. That responsibility belongs to the Federal Aviation Administration (FAA).

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ALT27

Adopt a hybrid of modified Alternatives B and C to better achieve the stated goals of the NPS. This would involve:

- use levels be equalized 50/50, +/-10%, based solely on number of passengers
- cap passengers at 20,000 per year
- launches per day (maximum four/day summer; maximum three/day shoulder; maximum two/day winter)
- trip length must be maintained at levels that perpetuate a wilderness-type river experience and permit a reasonable rate of travel considering all the variables noted above; Recommend that present summer and shoulder month trip lengths be maintained (18 summer, 21 shoulder), and that 25 days be permitted for winter (as under the proposed, preferred alternative).
- group size should follow those set out in Alternative B (25 commercial, 16 noncommercial standard, eight noncommercial small).
- a five-year phase-out/phase-in period could be established for the elimination of motorized trips, and the phased equalization of passenger numbers to achieve equity.

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A hybrid of Alternatives B and C would be the most legally compliant (and administratively manageable and predictable) option, and would accomplish the best resource protection and river experience/values, meeting virtually all resource management goals. It also allows for a more equitable allocation of use.

RESPONSE:

The NPS believes it has analyzed a full range of alternatives that meet management objectives per NEPA requirements.

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ALT29

The *Colorado River Management Plan* alternatives are lacking in supporting justification for decreasing wilderness trip lengths for public river runners in all the alternatives, without exploring a range of trip lengths from unlimited trip lengths to shorter trips. The NPS should analyze a modified Alternative B that includes longer trip lengths.

RESPONSE:

River runners may always choose to take a shorter trip rather than a longer one. The NPS analyzed a range of trip lengths from eight to 30 days in its alternatives.

Longer trip lengths result in more days spent by each party on the river, with consequent increases in TAOTs, PAOTs, and UDT. The NPS believes it has chosen an alternative that balances resource protection with the opportunity for an excellent river experience and the opportunity for many people to enjoy such an experience.

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ALT30

Alternative H could work if: a) hiking exchanges were possible year round. b) helicopter exchanges were discontinued. c) commercial crew and guides were counted against maximum group size. d) motors were phased out. These modifications to Alternative H are more consistent with the Organic Act and guiding principles of the *Colorado River Management Plan* than Alternative H as offered in the *DEIS*. The *DEIS* supports the conclusion that hiking exchanges have little or no impact, helicopters and motors have adverse impact noticeable about a mile away, and larger groups crowd into the fragile old high-water zones and attractions sites. Helicopter exchanges at Whitmore are difficult to understand since page 171 documents a 1.3-mile trail option instead. Helicopter noise, dust, vibrations, and strong downdrafts are inconsistent with the mission of protecting the values of this park. Bar 10 Ranch should be permitted to improve its 1.3-mile trail and adjacent nine-mile road to facilitate shuttle bus/hike access to the river, rather than continue helicopter exchanges. Hiking and or/riding a mule cause less adverse impact than helicopter use in the park, based on the *DEIS* description of the various qualities adversely impacted by helicopters.

RESPONSE:

Each of the components suggested by the commenter has been analyzed in the range of alternatives. In fact, component c has been included in the Modified Preferred Alternative H. Impacts of Whitmore hiking and helicopter exchanges have been analyzed in the *FEIS* in Chapter 4: Environmental Consequences, and each type of exchange has positive and negative consequences, depending on the resource. In an effort to minimize impacts for the range of resources, the Modified Preferred Alternative H restricts helicopter exchanges at Whitmore to before 10 AM in the mixed-use season (April 1 through September); thereby

providing natural quiet, for at least eight hours of each day and at least 6 months per year. Since the NPS has no authority over how visitors access the canyon outside the park boundary, any allowable exchanges could conceivably exit via helicopter. For this reason, no exchanges are allowed at Whitmore for the remainder of the year.

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ALT31

Maintain the variety of trip offerings proposed in Alternative H, while discarding all river management scenarios that would require all trips to be of an identical type and itinerary.

RESPONSE:

The NPS believes that the Modified Preferred Alternative H balances resource protection with the opportunity for a variety of trip types and the opportunity for many people to enjoy such an experience.

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ALT32

Build more flexibility into the commercial sector through a combination of things: 1) a slightly larger group size, 2) more commercial motor launches, and 3) a longer or altered motor season.

RESPONSE:

Group sizes have been modified in order to reduce impacts on the canyon resources and to improve the quality of the visitor experience. Larger group sizes increase the adverse impacts on the resources of the canyon. Larger group sizes also affect the quality of the visitor experience because there is more crowding and noise and fewer opportunities for solitude.

The NPS is aware that some of the actions called for in the preferred alternative may affect the operations of the 16 commercial rafting businesses. The NPS, through this plan and planning effort, has considered issues relating to the rafting businesses and has accommodated those concerns to the extent possible in conjunction with its overall, primary mission, which is to preserve and protect park resources, and provide for visitor use. Because the launch schedule is crafted to reduce crowding and congestion, the NPS anticipates that commercial operators will be able to plan for a variety of trip experiences once they become accustomed to the changes that result from the implementation of the *Colorado River Management Plan*.

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ALT 33

Alternative H should be revised to allow motorized commercial trips in the shoulder months of September and October, similar to March and April, in part to support the hiking exchange programs during those months. Also, an additional motorized trip should be added in the peak tourist season of June and July to bring the allowed motorized launches to four per day.

RESPONSE:

The NPS believes that the Modified Preferred Alternative H provides a reasonable range of visitor experiences while improving protection of Park resources. This has been achieved partly by providing a reasonable balance of daily and seasonally allowable trip types

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ALT34

A six-month nonmotor and six-month mixed-use model seems equitable and fairly workable, but the March through August mixed-use period is problematic. Some respondents are concerned that the 30% reduction of motor launches during the summer months will increase the prevalence of two-boat trips in the summer if outfitters don't sell enough of their trips in March and April. This shift will mean more big trips looking for larger campsites.

RESPONSE:

The Modified Preferred Alternative H eliminates motor launches in March while allowing motor launches from September 1-15. The Modified Preferred Alternative H has been developed to respond positively to some of the concerns of the commercial river running companies. However, the group size limits and launch limits were developed in order to protect the resources of the canyon and to protect the visitor experience.

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ALT35

Alternative B should not abolish passenger exchanges at Whitmore, but rather allow foot and mule traffic as in the present exchanges at Phantom Ranch.

RESPONSE:

The elimination of exchanges at Whitmore was analyzed in Alternative B. Whitmore exchanges are allowed in the Modified Preferred Alternative H. However, the NPS does not believe that it is feasible to upgrade or maintain the Whitmore Trail to the required stock use standards and the needed improvements also would not be consistent with the management goals for Grand Canyon-Parashant National Monument. Please refer to added language pertaining to stock use at Whitmore in Section 2.7.3.

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ALT36

The NPS's proposed Alternative H is good but needs to be modified. The complicated and time-consuming ordeal of registering interest might make me choose other alternatives. Spring and fall passenger exchanges are supportable as well as the continued use of motorized rafts and increasing the size of groups or allowing more summer launches, so that trips are not pushed into undesirable seasons of the year.

RESPONSE:

The all-user registration system is not the preferred permit system option in this Final EIS (see Section 2.8.1). The NPS believes that the Modified Preferred Alternative H provides a reasonable range of visitor experiences while improving protection of Park resources. This has been achieved partly by providing a reasonable balance of daily and seasonally allowable trip types.

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ALT37

NPS should consider an alternative that reduces the number of encounters between groups of river runners to 10 or less per day. Reduce group size to fewer than 20 people. Phase out motorized use over a ten-year period.

RESPONSE:

The NPS believes it has analyzed a full range of alternatives, including the components suggested by the commenter that meet management objectives according to NEPA requirements.

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ALT38

Why couldn't the number of trips and maximum number of people at one time be controlled under Alternative A by staggering the number of daily launches throughout the week?

RESPONSE:

Alternative A represents the current condition, according to NEPA requirements. Therefore the current launch scenario was analyzed. The NPS believes that it has analyzed a full range of alternatives to that launch schedule in Alternatives B through H.

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ALT39

Alternative H should be modified to:

- Disallowing the use of motors all together, but if that is deemed neither possible nor desirable, reducing the number of months that allow motors to four or fewer;
- Retaining the current 18 day maximum trip length for all summer nonmotor trips;
- Retaining the current 30 day maximum trip length for all winter nonmotor trips;
- Limiting helicopter exchanges to two months (not four as proposed);
- Freezing commercial user-days at or below current levels, (e.g. 113,083);
- Increasing noncommercial user-days at or above commercial user-days levels (113,083 or more);
- Freezing commercial total yearly passengers at or below current levels, i.e., 18,891
- Increase noncommercial total yearly passengers at or above commercial total yearly passenger levels (18,891). There is no defensible reason to allow more than three times as many more commercial passengers than noncommercial total yearly passengers, fundamentally this is inequitable;
- Reducing the maximum group size of commercial trips under all conditions—there is no reason to distinguish between commercial and noncommercial group sizes—if environmental impact is a concern, then lower the largest group sizes;
- Retaining the current (and higher) number of winter noncommercial oar trips;
- Developing a multiple path access system for noncommercial boaters, rather than just one avenue;
- Adding an option for small one or two boat noncommercial trips, if only as a way to fill anticipated use gaps; and
- Avoiding requiring those staying on the current wait list to identify all trip members.

RESPONSE:

The NPS has analyzed several of these components within the range of alternatives. The NPS believes that the Modified Preferred Alternative H meets management objectives by providing a reasonable range of visitor experiences while improving protection of Park resources.

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#### ALT40

##### MODIFIED ALTERNATIVE H (Five Launch Maximum-Long Summer Alternative)

This alternative provides reduces maximum allowable launches in summer (most similar to Alternative D, but with extended shoulders) to mitigate incidence of group contact on the river and at attraction sites. To accommodate annual historic use for commercial motor trips (albeit spread over a longer season), late March would allow for limited commercial motor launches and the months of April and September would allow the same commercial motor launch potential as in the summer months.

This is a mixed motor/nonmotor alternative that would divide the year into two nearly equal periods, with mixed-use occurring from March 16 through September 30 (6 1/2 months) and nonmotor use occurring October 1 through March 15 (5 1/2 months). As in Alternative D, it is characterized by the lowest maximum daily launches of any mixed-use alternative, smaller group sizes for commercial nonmotor trips, but slightly higher group size for commercial motor trips when compared with Alternative H. This alternative would allow for a substantial increase in probable yearly passenger totals. Helicopter exchanges at Whitmore would be allowed from mid-March through early October.

##### RESPONSE:

The NPS has analyzed several of these components within the range of alternatives. The NPS believes that the Modified Preferred Alternative H meets management objectives by providing a reasonable range of visitor experiences while improving protection of Park resources.

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#### ALT41

##### MODIFIED ALTERNATIVE H (Small Group Emphasis-Spring Light Alternative)

###### Launches per day

Launches per day would be decreased to a maximum of six (from nine), most similar to Alternative G only with symmetrical slightly rounded shoulders in late spring and early fall.

April 16 through September 15 on Sundays, Wednesdays, and Fridays one motor launch of two boats is allowed to “split” into two separate one-boat trips to encourage group size diversity, better distribute groups along the river and better use small camping beaches.

April 16 through September 15, on Mondays, Tuesdays, Thursdays, and Saturdays, one small noncommercial trip is allowed to launch.

##### RESPONSE:

The NPS has analyzed several of these components within the range of alternatives. When one motor launch is allowed to “split” into two small launches increases TAOT to unacceptable levels. The NPS believes that the Modified Preferred Alternative H meets management objectives by providing a reasonable range of visitor experiences while improving protection of Park resources.

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#### ALT42

The NPS should consider modifying Alternative C with the following changes:

- Safeguard wilderness preservation through the elimination of motors.
- There should be no discrimination between user groups. The park must implement a common pool permit process.
- Ensure that all river travelers compete together, equally, in the same way for trip launches.

- Maintain present noncommercial trip lengths in all seasons.
- Equalize the summertime launches between groups and apply the same group size equally to all types of trips.

RESPONSE:

The NPS has analyzed several of these components within the range of alternatives. The NPS believes that the Modified Preferred Alternative H meets management objectives by providing a reasonable range of visitor experiences while improving protection of Park resources.

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ALT43

Alternative H should be motorized to allow rafting in September and helicopter exchanges in the spring/fall.

RESPONSE:

Please see the Modified Preferred Alternative H.

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ALT44

Motor trips should be allowed in the canyon through mid September. The summer launches should stay at nine with a mix of motor and nonmotor. Frequently a large group of friends want to take a trip together. A maximum group size of 36 would be able to accommodate this. The number of large group trips could be restricted to one or two days a month. The 10-day maximum length for motor trips should be eliminated or increased to 12 days. The nonmotor season should be longer and the motor season should stay as it currently stands; between March 15–September 15.

Helicopter exchanges should not be restricted to certain months, but allowed through the entire season. Those exchanges should also be allowed for nonmotor trips as well through the same season. There are many people who would otherwise not be able to take the trip due to the trip being too long. There should not be a cap of number of passengers for those exchanges, but stay as it is currently.

The NPS can currently update the allocation ratio. The ratio can be changed with new information as it is discovered.

RESPONSE:

The NPS has analyzed several of these components in the range of alternatives. Some have been included into the Modified Preferred Alternative H, which the NPS believes meets management objectives by providing a reasonable range of visitor experiences while improving protection of Park resources.

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ALT47

Alternative B should be revised to include a low number of winter commercial launches of 21 days duration and also allow for passenger exchange at Phantom Ranch (hikers).

RESPONSE:

The NPS believes that it has analyzed a reasonable range of winter use levels that includes a range of trip lengths from 18 to 30 days. All alternatives allow for Phantom Ranch exchanges year-round.

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## Registration

R2

Many respondents commented that they like to arrange trips directly with an outfitter and not have to first register with the NPS. Remove the “all-user/adjustable split allocation” element and replace with traditional fixed allocations.

RESPONSE:

Based on public comments the NPS has revised its preferred options. The adjustable-split allocation system component and the related all-user-registration system component are no longer part of the preferred option. The preferred option includes split allocations that will not be adjusted (See Chapter 2 for details). Under the preferred option applicants will not be required to register with the NPS before contacting commercial companies; they may proceed as they have in the past.

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R3

What other mechanisms for measuring demand did you consider? Why were they ruled out?

RESPONSE:

In January 2003 two expert panels were held and covered some of the important and controversial subjects included in the *Colorado River Management Plan*. The purpose of the panels was to provide the park with input from academics, researchers, practitioners, and the like. One of the questions asked to this panel of experts concerned what could be done to determine relative demand for commercial versus noncommercial trips. In short, the expert panel’s response was that a survey would probably cost around \$2 million and be of limited use. Also please see comment and response (R #2).

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R4

Making river users register with the park will allow people to take up all the permits and create a black market and severely limit access to the average person. Let the commercial outfitter be responsible for the people they bring in. More red tape is not the answer.

RESPONSE:

Please see comment and response (R #2).

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R5

Does the NPS have the capacity to really manage such a system (restricting each individual to only one slot) without violating privacy rights (i.e. It is NOT legal to use a Social Security number for identification)?

RESPONSE:

The NPS has closely coordinated with it’s legal counsel on this issue and believe it has both the authority and ability to implement and manage such a system.

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R6

Phase-in change in ratio - i.e. Year 1 - 65% commercial/35% noncommercial—and evaluate after the season based on real demand. The “registering interest” is not a very accurate measure. Incrementally reach the changed ratio based on actual use.

RESPONSE:

In a system with user-day limits and demand that exceeds supply, calculating demand based on actual use will merely be reflective of the user-day and trip size limits. Also see comment and response under Registration (R #2) regarding a change in the NPS preferred option: registering interest will not be required.

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R7

In the section Criteria for Developing Alternatives, under ‘Allocation of Use’ (page 25) the *DEIS* states, “a single reservation system would be implemented to enable the NPS to record interest in various types of trips and services. Hopeful recreational users, both commercial and noncommercial, would first register through this system. Those seeking commercial trips would then be instructed to contact the commercial company of choice directly, and those seeking to participate in noncommercial trips would be seamlessly passed through to the noncommercial permit system.” Is this same criteria applied to other recreational activities in the park, such as hiking or horseback riding? If not why impose this extra step on the river users.

RESPONSE:

Please see comment and response (R #2) regarding a change in the NPS preferred option: registering interest will not be required, and people may contact commercial companies directly as they have in the past.

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R8

The only split that is truly fair is one that reflects the actual demand for use. Some respondents support a system that puts all users in one system. It would be a lottery or a reservation system.

It is unlikely that a fair system allocation will be obtained. Given that situation, a variation of the Adjustable Split Allocation would be the best choice among other systems.

The variation is to start with equal use rather than the unfair split occurring today. Almost all independent observers recognize that the current split is not fair. The new system should start with equal allocations next year. Allocations adjustments would be made every five years based on the average real demand, adjusted for ballot stuffing. Both commercial and noncommercial participants would have to register with the NPS. This would create a data source for future research, and when properly adjusted for ballot stuffing would provide the most accurate measure of real demand.

Commercial interests, aware that the demand for their trips is less than the demand and complain loudly that it would be too complicated to administer and would be subject to ballot stuffing. That is simply not the case.

RESPONSE:

Please see comment and response (R #2) and Permits (P #51).

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R9

Does it mean that if large numbers of people were to contact the NPS to register their “interest” in taking a commercial trip, the NPS would transfer up to 24 noncommercial launches per year to outfitters, thereby reducing the noncommercial launches from 457 down to 423?

RESPONSE:

The *DEIS* proposal would not have allowed negative adjustments to an allocation that was already at or below 40%. The revised preferred option no longer includes adjustments. Please see comment and response (R #2) and Chapter 2 for more information.

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R10

The NPS believes this registration system would act as a measure of interest in river trips both from the commercial sector and the private sector. The results in interest from such a registration system would be used to reallocate river use from the commercial sector to the private sector. The NPS does not have a feature in this registration system to insure accuracy and unauthorized “loading” of the system. The adjustable split allocation is biased in favor of the noncommercial users. The noncommercial user can possibly gain use; the commercial outfitters can only lose use. Some respondents are concerned about implementing a system that has not been thoroughly researched. Please do not take away from my ability to participate in a commercial river trip through the Grand Canyon by decreasing the commercial allocation. It is suggested that the NPS stay with the current commercial allocation and delete the Adjustable Split Allocation System from the Preferred Alternative H until some time can be given to developing a workable system that will accurately measure interest.

RESPONSE:

Please see comment and response (R #2).

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R11

If the exact logarithm were published for this, it would be more credible. It seems to still be inherently unfair: commercial operators can count last-minute bookings as demand, while noncommercial trips face a much higher standard, having to commit a large group of people far in advance to count as demand.

RESPONSE:

Please see comment and response (R #2).

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R12

A study of relative demand between the two sectors would be very expensive and because of the “apples vs. oranges” problem not likely to produce definitive results.

RESPONSE:

Please see comment and response (R #2).

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R13

How exactly would this system work? What information would be required during the “registration” program? Why should anyone be required, in a free marketplace, to “register” for a trip?

RESPONSE:

Please see comment and response (R #2).

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R14

On the noncommercial side, what “interest” would you record, other than what would already be obvious from looking at the applications in the noncommercial permit system? Lots of kayakers and rafters are interested in running the Grand Canyon, but they don’t have the money, time, or group of companions to do a trip. Does that still qualify them as “hopeful” recreational users?

On the commercial side, what “interest” would you record, other than the number of people who have paid a deposit for commercial trip?

RESPONSE:

Please see comment and response (R #2).

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R15

If you want a fair advanced reporting system, why not make any user, commercial or noncommercial, pay a deposit to solidify their intent to recreate on the river? If a noncommercial user wants a spot on the waitlist for a trip of eight or 16 people, why not collect a deposit from the person on the waitlist and every other passenger on his or her trip? This might better reflect the actual noncommercial demand.

Since serious interest would essentially consist of having paid a deposit for a specific commercial trip, wouldn’t it make more sense to have commercial passengers report that fact to you after they have actually signed up for a trip, rather than before? For that matter, wouldn’t it make more sense to have the outfitters periodically report the number of paid sign-ups directly to the NPS, rather than the NPS gathering that information from the individual passengers? In sum, what is the point of the “single reservation system?” What new information, if any, would it provide?

RESPONSE:

Please see comment and response (R #2).

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R16

Please explain why the permit and registration systems won’t fail to meet their objectives if funding is not secured.

RESPONSE:

The NPS fully intends to fund implementation of the *Colorado River Management Plan*, including monitoring and mitigation. {See new text in Chapter 2 containing the three possible funding options} Clarifying text has been added to the *FEIS* to address funding for monitoring and treatment of effects. See Section 2.3.3.

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R17

The NPS should gather information from the permit registration system by feeding this survey data into the permit registration system and simultaneously collecting data from the commercial rafting companies about user demand.

RESPONSE:

Please see comment and response (R #2).

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R18

How will the NPS actually use the data collected by these phone calls? Who will take the calls? Does every interested person call the NPS, or only those who book trips? These are important questions that must be answered before any such policy is put into action.

RESPONSE:

Please see comment and response (R #2).

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R19

Will there be a fee just to register?

RESPONSE:

Please see comment and response (R #2).

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R20

How would you inform the public that they have to register for a trip?

RESPONSE:

Please see comment and response (R #2).

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R22

The law does not require government agencies to collect data about “interest.” In fact, it would be unlawful for a government agency to cite data about “interest” as an excuse for an allocation that gives noncommercial applicants an inferior right of access in actual practice. The law protects the rights of

ACTUAL people who are applying for some benefit, in this case a reservation to run a famous river. Actual people book up space, so the kind of demand that is legally relevant is the demand that shows itself in the form of booked up space. This demand is easy to measure, just by checking how far in advance space is booked up, under reservation systems that are quite similar. The law simply requires government agencies to compare waiting times for commercial and noncommercial space, under similar reservation systems, and transfer enough space so that noncommercial waiting times are not longer. It does not appear that the proposed registration system would satisfy the requirements of the law. It appears that it would be an expensive and counterproductive distraction, collecting redundant or irrelevant information and wasting everyone's time. On the other hand, what WOULD be lawful is the simple and direct system: Setting up commercial and noncommercial reservation systems that are quite similar, then comparing the waiting times for both, and transferring enough space so that noncommercial waiting times are not longer.

RESPONSE:

Please see comment and response (R #2) and Permits (P #51).

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R23

Private boaters are used to registering, and even to the need to registering early, well ahead of actually being ready (part why they oppose having to identify firm group members) and canceling if/when things don't work out. Many private boaters understand and will be motivated by that fact that if they register, they'll help to take allocation away from the general public, a goal in and of itself for some. The average American has no idea about the transferal of use being connected to registering an expression of interest. While the general public gradually becomes educated about new systems in place in Grand Canyon, the one-way door on transfers will ensure that any access lost in the meantime can not be recaptured by the public as awareness of the All User Registration system and lost access opportunities grows. The one-way door will take access away from people via a system they didn't even know was in place.

RESPONSE:

Please see comment and response (R #2).

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R24

Visitor demand for access can, and should, be measured through much less costly or bureaucratic processes than the "all-user/adjustable split allocation" system proposed by the park. The commenter recommends using a variety of administrative measures that do not needlessly burden visitors or potential visitors. Low visitor and administrative impact alternatives for gauging demand include: collection of data on failed lottery applications, online reservation system visitor counts for comparison to successful reservations, percentage counts of filled launches for private and commercial use, etc.

RESPONSE:

Please see comment and response (R #2).

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R25

If the system as described in the *Colorado River Management Plan* is implemented, it is suggested that a two-year pre-implementation data collection period be used to allow the NPS to create the system and collect independent data to verify that it actually works before implementing it.

RESPONSE:

Please see comment and response (R #2).

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R26

Work with professionals to identify factors to be considered in the mathematical formula the *Colorado River Management Plan* team indicates that it will develop to compare the results of the registration system and how much weight each factor should be given.

RESPONSE:

Please see comment and response (R #2).

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R27

Consider as equally valid expressions of interest, the following indicators that lie outside the registration system: Website hits and brochure request should be considered as analogous to registering interest since the reason people request brochures and visit web site is they are interested. They are doing their research and going through their decision making process. In fact, given the difference between the two user groups, these expressions of interest are analogous to the process of joining the wait list (or registering under the new system) from the private boater perspective. Of the people on the wait list, some want to go as soon as possible, others are interested in going sometime, maybe, and still others actually are not interested in going anytime soon.

RESPONSE:

Please see comment and response (R #2).

## General Resources

RG1

Grand Canyon National Park needs to identify a guaranteed funding source dedicated to monitoring and mitigation of impacts to resources.

RESPONSE:

Clarifying text has been added to the *FEIS* to address funding for monitoring and treatment of effects. See Chapter 2 (Elements Common to All Alternatives).

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RG2

“The suggestion to revise the Limits of Acceptable Change after the plan is implemented rather than prior renders moot the pre-determination of expanded carrying capacity.”

The *DEIS* states that, “Impacts were measured against pre-established thresholds to determine the impact intensity” (*DEIS* page 414). It is unclear from the analysis what this baseline is and how it relates to the limits of acceptable change indicators or other measures used in the analysis. We are concerned by the NPS’s stated intention to revise the limits of acceptable change as a part of this *Colorado River Management Plan* process (*DEIS* page 415). There is no actual discussion of any proposed changes in the *DEIS*. In fact, all of the analysis and proposed mitigation are discussed in the context of existing indicators. Impacts to vegetation under the current condition exceed the limits of acceptable change (*DEIS* page 419). In changing these indicators, is the NPS intending to accept a greater level of impact based on current conditions?

RESPONSE:

The *EIS* does not predetermine expanded carrying capacity. Rather, it develops elements used to determine social and physical carrying capacity for the Colorado River. The *EIS* examines the elements of use, such as trip length, launch schedule and group size, and their relationship to carrying capacity. The NPS established early in the planning process that crowding and congestion, especially from peaks in use in the high season, resulted in the considerable impacts both to resources and to visitor experience. The Modified Preferred Alternative H reduces crowding and congestion from peaks in use by evening out the launch schedule, reducing trip length and group size. Additionally, Trips At One Time under all action alternatives are reduced from 70 to 60 or below.

Additionally, the monitoring and treatment programs will serve to inform NPS managers of potential impacts and allow for actions such as adjustments to aspects of use such as group size, trip length, and user-days.

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RG3

Some respondents recommend that NPS expand educational efforts, perhaps to include a test, or revise the launch ramp video and make more time for asking the ranger questions, or have a ranger on each trip for a day.

## RESPONSE:

The NPS agrees that education is a powerful tool in the mitigation of impacts from visitors. The monitoring and treatment plan will include an educational component that addresses leave-no-trace ethics as well as other environmental and social issues. The NPS appreciates these recommendations.

## RG4

Concerned that increases in use impact a variety of resources (water resources, wildlife, archaeological resources and riparian habitats) in the old high-water zone. Therefore NPS is not living up to its mission to protect and preserve the canyon.

## RESPONSE:

The analysis of potential impacts to cultural and natural resources presented in the Environmental Consequences chapter indicates that crowding and congestion contribute significantly to resource vulnerability. Thus, while the total number of user-days is an important variable to consider in the analysis of potential impacts, groups size, TAOTs, PAOTs, UDT, and trip lengths can serve to mitigate or exacerbate the potential for impacts. While the Modified Preferred Alternative H does include an increase in total passengers and user-days, it also includes a reduction in group size, trip lengths, TAOTs, and PAOTs, as well as the number of days out of the year that more than 100 people visit attraction sites in a single day. These reductions will serve to reduce impacts from encroachment into the old high water zone caused by crowding at beach and attraction sites. Additionally, monitoring, mitigation and increased education will further promote resource protection.

## RG5

Impacts to resources already exceed limits of acceptable change. Therefore, Alternative H does not adequately protect the resources. The NPS should insist on absolute adherence to the 1989 limits of acceptable change as they relate to the irreplaceable and nonrenewable cultural resources in Grand Canyon and tie them specifically to an accurate (and current) assessment of carrying capacity.

Although some impacts, such as the operation of the Glen Canyon Dam upstream, may be considered outside the purview of the plan (although certainly not outside the influence or purview of the NPS), the location, type, and amount of recreational use is very much the focus of this plan. We are greatly concerned, however, that in designing its plan to govern recreation use on the Colorado River, and the agency has failed to ensure that this use occurs within the framework and limits of the ecological carrying capacity of the Grand Canyon, the Colorado River, and its riparian zone.

## RESPONSE:

At the time of the 1989 plan, resource management efforts were in their infancy at Grand Canyon. Since that time, the NPS has learned a considerable amount of information regarding how to apply the limits of acceptable change concept. With the implementation of the new *Colorado River Management Plan*, the NPS plans to establish a more robust monitoring and treatment program, complete with monitoring protocols, schedules, impact triggers, etc.

The NPS mission is to preserve unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. Visitation to

natural and cultural resources always has the potential to cause adverse effects. The analysis presented in Chapter 4: Environmental Consequences details these potential effects and presents mitigation efforts that would be required to reduce impacts to a minor level. See Section 4.1 for more detail on the implementation of a monitoring and treatment plan.

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RG6

NPS has subjectively determined that none of the impacts impair any of the resources, visitor experience, or socioeconomic factors.

RESPONSE:

An impairment to a particular park resource or park value must rise to the magnitude of a major impact, as defined by its context, duration, and intensity and must also affect the ability of the NPS to meet its mandates as established by congress in Grand Canyon National Park's enabling legislation. For each resource topic, the Final Environmental Impact Statement establishes thresholds or indicators of magnitude of impact. An impact approaching a "major" level of intensity is one indication that impairment could result. For each impact topic, when the intensity approached "major," the interdisciplinary planning team would consider mitigation measures to reduce the potential for "major" impacts, thus reducing the potential for impairment. The NPS finds that the Modified Preferred Alternative H presented in the *FEIS* would not result in the impairment of park resources and values for which Grand Canyon National Park was established.

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RG7

Some respondents disagree with the NPS' conclusion that an increase in overall use levels is consistent with protection resources. Impacts are a result of cumulative use. Soil compaction, depletion of cultural artifacts, damage to vegetation, and wear and tear on campsites increase in direct proportion to the number of people using the canyon. Increases in user-days will accelerate the rate at which impacts occur.

RESPONSE:

The analysis of potential impacts to cultural and natural resources presented in the Environmental Consequences chapter indicates that crowding and congestion contribute significantly to resource vulnerability. Thus, while the total numbers of passengers (and user days) are important variables to consider in the analysis of potential impacts, there is no evidence that impacts from their increase are directly proportionate. Rather, group size, number of trips and people in the canyon at one time (TAOTs and PAOTs), UDT, trip lengths and other management options can serve to mitigate or exacerbate the potential for impacts. While the Modified Preferred Alternative H does include an increase in total passengers and user days, it also includes a reduction in group size, trip lengths, TAOTs, and PAOTs, as well as the number of days out of the year that more than 100 people visit attraction sites in a single day. These reductions will serve to reduce impacts from encroachment into the old high water zone caused by crowding at beach and attraction sites. Additionally, monitoring, mitigation and increased education will further promote resource protection.

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RG8

Tie the *Colorado River Management Plan* to the Adaptive Management Program and improve communication with that federal advisory committee as it pertains to the needs and concerns of the cultural

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resources program in Grand Canyon National Park. It is unacceptable that impacts from the dam on downstream resources are continual and long term, yet they remain outside the scope of the *Colorado River Management Plan*.

Because of the existence of Glen Canyon Dam, the degree to which the health of resources in Grand Canyon can be maintained is tenuous. Yet this is a resource that simply cannot be compromised in any way due to its nonrenewable nature. The park must regularly share research and data with the Adaptive Management Program (and with the Grand Canyon Monitoring and Research Center) so that the Adaptive Management Program can be alerted when resource conditions are approaching unacceptable levels. Sediment is not only necessary for the camping beaches and riparian environment of the river corridor, it is also vital for the preservation of these archaeological sites and it must be articulated as such by the park.

RESPONSE:

Public use of the Colorado River reflected in the *Colorado River Management Plan* does interact with environmental conditions related to Glen Canyon Dam operations and the Adaptive Management Program. A number of resource overlaps exist and the NPS is working toward melding NPS management actions with those made through the Glen Canyon Dam Adaptive Management Program. For example, by establishing a Section 106 agreement for the *Colorado River Management Plan*, the NPS is providing a crosswalk between the two programs. The division between impacts from recreation and the dam has been difficult to ascertain, but this program will help to identify general impacts.

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RG9

Retain the current level of overall use and work within those parameters to further protect and preserve cultural resources.

RESPONSE:

Overall use cannot be defined by a single variable such as total user-days, passengers, or launches. For this reason the NPS has concentrated on the primary factors that cause significant impacts to resources and visitor experience. These factors are congestion and crowding in the river corridor and at specific sites. Spikes in use under current conditions resulted in higher levels of trips at one time, people at one time, trips launching in a single day and number of days that have more 100 visitors in a single day than in the action alternatives. Additionally, current condition allows the largest group size of any of the action alternatives. The Modified Preferred Alternative H results in lower levels for each of these variables, compared to current condition.

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RG10

Develop a detailed monitoring/implementation plan for resources as part of and encompassed within the *Colorado River Management Plan*, and therefore subject to public review and comment. This builds accountability and compliance beyond the *DEIS* itself.

RESPONSE:

A plan for monitoring resource and social conditions in the *CRMP* will be developed subsequent to plan approval. The purpose of the analysis in the *EIS* is to provide the public with an indication of the types of management strategies and tactics and impacts without being overly specific on actions that would reduce

long-term flexibility in addressing specific problems. Specific details regarding management adjustments will occur if monitoring indicates an adjustment is necessary. The impacts of the adjustments must be within the threshold range disclosed in the *EIS*.

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RG11

The need to decrease trampling of the camp at the mouth of Kanab Canyon is apparent, some respondents suggest restricting camping to October 1 to the last day in March, when the overall number of trips is seasonally decreased, and according to NPS data, soils are more resilient. Other restrictions could include camping to groups size of 12 or less. The NPS must consider that closing this campsite will increase visitation at other nearby camps, possibly compromising archeological resources in this area.

RESPONSE:

Administrative closures of specific campsites were deemed appropriate by the NPS for a variety of reasons. Modeling of the effects of closing these areas to overnight use was included in the river trip simulator. These closures were deemed necessary due to the limited physical nature of the camps themselves, impacts to the high water zone, removal of human impacts to water and aquatic resources, the need to provide unfettered opportunities for day use by other river parties.

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RG12

Additional mitigation tools should include: limits on campfires to address air quality and resource protection concerns, campsite restoration trips, and implementation of smaller and/or faster trips. Consider environmental friendly signs or trail markers in areas that are especially sensitive to trampling.

RESPONSE:

The NPS is committed to finding the balance between protecting cultural and natural resources and providing opportunities for a quality recreational experience. If monitoring yields evidence of unacceptable impacts, reasonable mitigations, including those suggested by the public, will be considered and implemented as appropriate.

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RG14

Administrative use is factored into carrying capacity at a rate of one trip every fourth day. Please include administrative use in the *FEIS* charts, graphs, totals, etc. and specify that it has (or has not) been factored into the impact analyses. For example, science performed on humpback chub is not factored into the impacts on the chub. For another example, tamarisk eradication work is not factored into the cumulative impacts to soil degradation.

RESPONSE:

Administrative use is a range of activities including river patrols, resource monitoring, education, and research. While the NPS does not know exact numbers, the NPS has included a certain level of administrative use in our analysis. The NPS has committed to a more rigorous review of all administrative use to account for carrying capacity, and congestion and crowding. Specific resource evaluations are addressed within the resource sections of this plan.

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## RG15

The *DEIS* does not appear to address how increased overall use will impact the resource. Cumulative impacts seem to address all the various kinds of impacts, not the overall increase. For example, it is not addressed that more campers per year at any given site will impact the site. It is not addressed that more footsteps on the same trail every year will impact the site. It is not addressed that cultural properties will be severely impacted by more trips per year, other than to say it would be offset by smaller group size and shorter trip length. Please deepen your due diligence regarding the impact of overall increased use in Grand Canyon and share the findings publicly.

## RESPONSE:

According to CEQ regulations (40 CFR 1508.7), cumulative effects are defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such actions”. Cumulative effects are considered for each of the alternatives and are addressed per impact topic.

Additionally, the impact analysis considered changes in the suite of variables (such as group size, PAOT, TAOT, UDT, user-days, etc) and how those changes were likely to impact resources and visitor experience. Please refer to Section 4.1 for a more detailed account of our methodology, including the interconnectivity of variables.

## RG16

The *DEIS* does not provide sufficient evidence that the NPS has analyzed the impacts of more groups camping on any given day. Camps that are not currently used with any frequency will see much higher incidence of use. Therefore, these campsites will be severely impacted. Additionally, regional impacts were undervalued in your impacts analyses.

## RESPONSE:

All of the action alternatives reduce the TAOT in the canyon. Thus, the NPS anticipates that fewer groups will be camping in the canyon on any given day.

Each impact analysis included an assessment of the context (localized or regional) of impacts for each alternative per impact topic. The commenter did not provide data to justify a revision of any of these assessments.

## RG17

The NPS should not increase overall use all at once; instead increase use incrementally. The NPS should complete studies regarding overall impacts of increased use.

## RESPONSE:

The implementation plan will include a phase in of all the options identified in the *Record of Decision* and the final *Colorado River Management Plan*, including use levels. Monitoring and treatment plans will be developed to determine the effects of the changes implemented in the *Colorado River Management Plan*, providing a baseline for assessing effects.

RG18

Alternative H is inconsistent with the laws, guidelines, and pre-existing management plans that mandate protection for the river corridor. The analysis in the *DEIS* makes it clear that current use levels are unsustainable. The river's beaches are disappearing at a rapid rate. In spite of mitigation measures re-initiated annually, the levels of impacts to vegetation remain unacceptable for resource protection and preservation. Air quality, water quality, aquatic, terrestrial, special status species are adversely impacted by the effects of recreation. Cultural, archeological, cave and paleontological resources are at risk from visitation. Noise and other impacts from motorboats, helicopters, and large and frequent trips degrade the river corridor's natural quiet and other wilderness characteristics. The increased use levels proposed in Alternative H will resolve none of these issues.

RESPONSE:

NPS believes that modified H is consistent with the laws, guidelines, and pre-existing management plans that mandate protection for the river corridor. Also, please see other comment and responses (RG #4 and RG #5) regarding impacts on resources from current use.

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RG19

The NPS needs a comprehensive inventory of resources (Lees Ferry- Diamond Creek and Diamond Creek-Down).

RESPONSE:

Some resources have been at least partially inventoried, either by Grand Canyon National Park or the Hualapai Tribe. Baseline resource data, collected as part of the monitoring and mitigation program will augment the inventory of resource data. NEPA does not require complete information for analyses and recommendations to be made.

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RG20

There is no evidence to support that the canyon needs a "rest" period.

RESPONSE:

Chapter 4: Environmental Consequences discusses that because spring is the growing season for many plants and animals, it is a particularly sensitive time for the resources of the Grand Canyon. Where data to specifically support this was lacking, best professional judgment prevailed using assumptions and extrapolations from scientific literature, other park units that manage river use, and personal observations of park staff.

Additionally several American Indian tribes expressed their belief that the canyon needs a "rest" or "rejuvenation" period. This concern was expressed as part of legally mandated government-to-government tribal consultations concerning impacts from NPS management of visitor use on the Colorado River. See Chapter 5.

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RG21

Today, professionally outfitted motorized recreational whitewater trips take place using environmentally friendly motors. The *FEIS* and *Colorado River Management Plan* should better explain that this type of use, at current levels, as well as at the levels proposed in the preferred alternative, does no harm to Park resources and causes no real diminishment in the quality of the visitor experience.

RESPONSE:

The NPS believes it has adequately addressed effects of professionally outfitted motorized whitewater trips and the new technology motors.

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RG22

All alternatives result in natural and cultural resource degradation.

RESPONSE:

The NPS mission is to preserve unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. Visitation to natural and cultural resources always has the potential to cause adverse effects. The NPS believes modified H will reduce impacts to natural and cultural resources over current management. See the analysis presented in the Chapter 4: Environmental Consequences for details on these potential effects and proposed mitigation efforts that would be required to reduce impacts to a minor level. See Chapter 2 (Alternatives Description) for more detail on the implementation of a monitoring and treatment plan.

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RG23

Monitoring visitor impacts relative to baseline conditions should be an essential component of any alternative, not a mitigation measure.

RESPONSE:

The NPS agrees; current conditions reflect the baseline. All monitoring and mitigation measures will be determined based upon assessing change in conditions from current.

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RG24

Alternative H is not the environmentally preferred alternative.

RESPONSE:

An explanation of how the NPS applied these laws and policies to analyze the effects of visitation of the Colorado River in the Grand Canyon resources and values can be found under “Overall Guidance For Analyzing Environmental Impacts” section of the “Environmental Consequences” chapter. An impairment to a particular park resource or park value must rise to the magnitude of a major impact, as defined by its context, duration, and intensity and must also affect the ability of the NPS to meet its mandates as established by congress in Grand Canyon National Park’s enabling legislation. For each resource topic, the Final Environmental Impact Statement establishes thresholds or indicators of magnitude of impact. An

impact approaching a “major” level of intensity is one indication that impairment could result. For each impact topic, when the intensity approached “major,” the interdisciplinary planning team would consider mitigation measures to reduce the potential for “major” impacts, thus reducing the potential for impairment. The NPS finds that the Modified Preferred Alternative H presented in the *FEIS* would not result in the impairment of park resources and values for which Grand Canyon National Park was established.

Modified Preferred Alternative H is considered the environmentally preferred alternative because it best meets the six criteria identified in Section 101 of the *National Environmental Policy Act*. Alternative H increases access equity between user-groups, provides comparable time for motor and nonmotor use, protects resources and reduces crowding and congestion by reducing trip lengths and group size while setting daily launch limits. Additionally, monitoring, mitigation and increased education will further promote resource protection while reducing safety risks and visitor conflicts. Compared to Alternative H, nonmotor alternatives (B and C), would not maintain a variety of recreation choices or achieve as great a balance between visitor use and resource use. Similarly, compared to Alternative H, alternatives that increase use by type, time period, or frequency do not adequately address resource protection needs.

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RG25

Alternative B should be chosen because it is beneficial to resources and visitor experience.

RESPONSE:

Alternative B does not provide a range of opportunities for the visitors and limits access to the river corridor. Thus it does not meet the management objectives. See Chapter 2 for discussion of why Alternative H is chosen.

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RG26

Plan needs to clarify the carrying capacity of the river.

RESPONSE:

The EIS discusses carrying capacity in Chapter 2 (Criteria for Developing Alternatives). Visitor carrying capacity is defined as “the type and level of visitor use that can be accommodated while sustaining acceptable resource and social conditions that complement the park” (NPS 1997). The EIS discusses carrying capacity both in terms of standards (such as TAOT, UDT, and PAOT) and variables (such as trip length, group size, launches per day, and user day limits).

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RG27

Increase trip length from 16 to 18 days. It would have negligible impact on the environmental factors even though it represents a potential increase over Alternative H of 1318 user-days and small increase of TAOT. The improvement of launch scheduling and lower commercial party size already offered in Alternative H seem to offset our proposed increase in noncommercial summer user-days and TAOT.

If further analysis of physical environmental factors shows an unacceptable impact from a potential 10.5% increase in summer noncommercial user-days (a less than 5% total change when all users are considered), there are ways to mitigate the effect. First, more of the small trips of 16 people for nine trips of eight people, a savings of 1,296 user-days are realized. That totally offsets the increase in user-days involved in increasing the trip length to 18 days.

RESPONSE:

The NPS believes that the modified Alternative H addresses this concern by increasing trip length in the shoulder season.

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RG28

The *Colorado River Management Plan* does not address the impacts of the Dam.

RESPONSE:

The *Colorado River Management Plan* is a visitor use plan that does not, and cannot, seek to regulate the operations of the Glen Canyon Dam. Effects from dam operations, however, are included in Chapter 4: Environmental Consequences, for each applicable impact topic.

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RG29

Conclusion statement is unclear. Are mitigations added in?

RESPONSE:

Please see clarifying text in Section 4.1 that discusses how impacts were analysed and presented in the impact analysis.

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RG30

Guides are not indistinguishable from other visitors as far as resource impacts are concerned. Counting guides reduces ratios and harms the visitor and the resource. While others do not support the NPS position that guides be counted within the group size limits because it will negatively impact the guide-guest ratio. While no company will launch trips with an unsafe number of guides, guest space will clearly be at a premium in the busy summer months when guests want to go. It is likely some companies will change their guide-guest ration policies and go out with four or maybe three guides when they used to have five to accommodate additional guests on the trip.

RESPONSE:

Human use of the environment, regardless of their status as visitor or guide, can have variable effects. However, the NPS has recognized the value of guides by retaining an appropriate guide to passenger ratio. These ratios are addressed in the concession river contracts. The NPS believes it is important to have licensed river guides as they often act as stewards and educators. One of the ways the NPS has recognized the importance of guides is by allowing larger group sizes for commercial trips.

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RG31

Commercial trips cause more impacts than private trips (and vice versa).

RESPONSE:

The NPS has no data that differentiates between impacts caused by the different user groups.

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RG32

Large commercial groups, and the ability to have larger groups, actually causes less impacts on the resource (spreads out use, passengers are concentrated on the beach).

RESPONSE:

Physical carrying capacity of the river corridor itself cannot sustain the large groups that have historically used the canyon. Between the reduction in campsites and social interaction impacts, the NPS believes that larger groups do not cause less impact. The addition of launches in the Modified Preferred Alternative H encourages more flexibility in trip types.

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RG33

A comment was raised that reliance of the park on its own staff for exclusive knowledge of resource conditions and impacts is not scientifically defensible, as those staff have various biases and the information is likely to be filtered by the NPS for presentation. The Grand Canyon RTS is not referenced as a peer-reviewed sociological study on page 26 of the *DEIS*, leading to the question of its integrity as a management tool. The NPS should engage in independent science to improve credibility of resource conditions and impacts.

RESPONSE:

The GCRTS was one of many tools used to determine carrying capacity and forecast potential impacts from each of the alternatives. Where data was lacking for this effort, best professional judgment prevailed using assumptions and extrapolations from scientific literature, other park units that manage river use, and personal observations of park staff. The GCRTS represents best available data for the information it provided. Data from monitoring of river use, as prescribed in the implementation plan, will be used to further refine the GCRTS.

---

RG34

Decrease group size (for all groups) to minimize impacts.

RESPONSE:

Group sizes for commercial users have been reduced from current; noncommercial group size has been retained except for the creation of the new, 8-person noncommercial option.

Human use of the environment, regardless of their status as visitor or guide, can have variable effects. However, the NPS has recognized the value of guides by retaining an appropriate guide to passenger ratio. These ratios are addressed in the concession river contracts. The NPS believes it is important to have licensed river guides as they often act as stewards and educators. One of the ways the NPS has recognized the importance of guides is by allowing larger group sizes for commercial trips.

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RG35

Leave any discussion of Glen Canyon Dam and its impacts out of the document.

RESPONSE:

Glen Canyon Dam is outside of the purview of this document. However, NEPA requires the NPS to include evaluation of cumulative impacts, some of them related to Glen Canyon Dam. The NPS participation in the GCD-Adaptive Management Program provides an opportunity to address environmental and visitor related impacts in a holistic fashion.

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RG36

None of the alternatives address a contingency plan for impacts from drought.

RESPONSE:

Drought conditions in the Colorado River basin do not directly affect water release flows from Glen Canyon Dam due to the “Law of the River” and water release requirements between the 7 basin states. Although it would seem logical to assume that drought conditions will reduce flows, this cannot happen under current law. Flows will not be any lower than those that have occurred over the last 30+ years of dam operations. The NPS cannot plan for natural forces, such as would occur if a side-canyon debris flow obstructed the river channel. However, pre-dam river flows, those over 90,000 cfs, would be required to remove most debris flow materials. If this condition existed, management decisions regarding NPS recreational use needs and Glen Canyon Dam operations would be required by the NPS and Bureau of Reclamation.

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RG37

Create an “ultra small” group size and increase launches.

RESPONSE:

Small groups are included as an option; however, for safety reasons and the NPS’s commitment to reduce the number of trips at one time, the NPS does not believe a group size smaller than 8 is appropriate. Any user can decide to take a small trip (as small as one) if they want.

---

RG38

Show the direct relationship between the number of passengers and impacts, then come up with a set number for carrying capacity.

RESPONSE:

Impact analyses are a combination of evaluative factors, not any one single factor. The analysis of potential impacts to cultural and natural resources presented in Section 4.1 indicates that crowding and congestion contribute significantly to resource vulnerability. Thus, while the total number of user days is an important variable to consider in the analysis of potential impacts, groups size, number of trips and people in the

canyon at one time (TAOTs and PAOTs), UDT, and trip lengths can serve to mitigate or exacerbate the potential for impacts. While the Modified Preferred Alternative H does include an increase in total passengers and user days, it also includes a reduction in group size, trip lengths, TAOTs, and PAOTs, as well as the number of days out of the year that more than 100 people visit attraction sites in a single day. These reductions will serve to reduce impacts from encroachment into the old high water zone caused by crowding at beach and attraction sites. Additionally, monitoring, mitigation and increased education will further promote resource protection.

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RG39

Several respondents outlined the various negative impacts from helicopters (including noise and impacts to visitor experience).

RESPONSE:

The NPS has no regulatory authority over helicopter use outside of Grand Canyon National Park. The NPS has analyzed the impacts from helicopter use in the cumulative affects sections of the document. Time restrictions, evening out the launch schedules, and lowering group sizes will all serve to reduce the potential impacts from helicopters.

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RG40

Several respondents outlined the various positive impacts from helicopters (including the ability to take a shorter trip, ease of access, and the opportunity for a unique recreational experience).

RESPONSE:

The NPS has no regulatory authority over helicopter use outside of Grand Canyon National Park. Exchanges are allowed in the Modified Preferred Alternative H from April to September.

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RG41

Alternative 2 protects the resource the most.

RESPONSE:

Although physical protection of the resource may appear to be best served by Alternative 2, management objectives for the entire *Colorado River Management Plan* are not met by Alternative 2.

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RG42

Don't restrict jet boat numbers; have wake restrictions instead.

RESPONSE:

The NPS's concern for jet-boats is based on congestion on the river itself, the channel size and need to accommodate the level of activity from the various users groups in the Lower Gorge. Additionally, the Modified Preferred Alternative H reduces downstream congestion downstream from Whitmore, reducing the need for additional jet-boats in the area.

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RG43

Have fewer launches in spring to protect resource.

RESPONSE:

The NPS believes that the launch schedule presented in the Modified Preferred Alternative H represents an appropriate balance between protecting cultural and natural resources and providing opportunities for a quality recreational experience, particularly given the elimination of spikes in use and the reduction in group size and trip lengths. If monitoring yields evidence of unacceptable impacts, appropriate actions to mitigate the impacts will be implemented.

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RG44

Some mitigation measures are not reasonable. Clarify what mitigations are.

RESPONSE:

Specific resource mitigation measures will be determined based upon assessing baseline condition and change over time. The draft EIS provided options for mitigation measures, any of which could reasonably be implemented. General mitigations are detailed in Section 4.1 (Introduction) and specific mitigations are also presented per impact topic in Chapter 4.

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RG45

How will adaptive management work? Can use be increased? What are the triggers?

RESPONSE:

Adaptive management is a process whereby management decisions are evaluated based upon new information. When information is obtained that suggests management decisions are not working as intended, adaptive management allows a process for modifying the management direction and providing Park managers with the information necessary to make a change. Triggers will be defined through a monitoring program, tailored to each resource.

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RG46

Eliminate Lower Gorge motors (or phase out in five years).

RESPONSE:

The range of visitor experience provided by the diversity of trip types in the canyon, including motor use in the Lower Gorge, is consistent with management objectives and zoning outlined in the draft EIS.

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RG47

No new docks in Lower Gorge (phase out in five years).

RESPONSE:

The NPS and the Hualapai Tribe have been working cooperatively on visitor facilities in the Lower Gorge. Replacement of existing docks is necessary for health and safety of visitors in the Lower Gorge.

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RG48

September use should be increased (no evidence of resource degradation beyond acceptable levels).

RESPONSE:

Please see the description for the Modified Preferred Alternative H in Chapter 2.

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RG49

Plan ignores science-based analysis of impacts.

RESPONSE:

The NPS has used all of the available data for the creation of this document. No specific research was provided by the commenter.

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RG50

Site closures are arbitrary, restrict all camping in tributary mouths.

RESPONSE:

Camping at tributary mouths has been restricted for many years except at Tapeats and Kanab. This plan closes the remaining tributary mouths to camping due to unacceptable impacts at these locations, in addition to the limited physical capacity, resource concerns, and the desire to provide day use opportunities.

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RG51

Current management exceeds carrying capacity, impairs resources and is in conflict with mandates.

RESPONSE:

The purpose of this *Colorado River Management Plan* effort is to address current management of public use of the river corridor, assess impacts and determine appropriate levels of use. The Modified Preferred Alternative H addresses the issue of carrying capacity and resource impact. The analysis of potential impacts to cultural and natural resources is presented in the Chapter 4. Also, please see comment and response (RG #6) for a discussion of impairment.

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RG52

Scientific program use should be baseline.

RESPONSE:

Current conditions provide the baseline. For many of the resources, baseline condition was established in 1978. For other resources, baseline condition was established over the past 20 years. The NPS will determine, on a resource specific basis, the appropriate baseline condition by which monitoring and assessment will occur.

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RG53

*Colorado River Management Plan* does not describe existing conditions or substantiate impacts from use (direct and cumulative).

RESPONSE:

Existing conditions have been discussed in detail in the draft document. See Chapter 3: Affected Environment.

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RG54

Site closures should apply to all groups.

RESPONSE:

Site closures do apply to all groups.

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RG55

Break down analysis into spring and fall (instead of lumping them in the shoulder).

RESPONSE:

The NPS believes it has adequately addressed seasonal analyses by evaluating shoulder seasons. Within the existing analyses, spring and fall are discussed when pertinent to the specific resource topic.

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RG56

What are the effects of not allowing resource to rest? Especially with increase in winter use?

RESPONSE:

The NPS believes the winter season will still provide a “time of rest” for resources. The modest increases in potential launches should not affect this concept.

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RG57

Negative impacts to increased use downstream Whitmore (Alternative H) not adequately analyzed.

RESPONSE:

Please see the description for the Modified Preferred Alternative H in Chapter 2. Changes to the alternative address this issue.

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RG59

*Colorado River Management Plan* does not address potential impacts to sites below Little Colorado River (from closure).

RESPONSE:

The Little Colorado River closure was modeled as part of the river trip simulator; our analyses incorporated the closure and included impacts to resources downstream of the Little Colorado River.

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RG60

There is no discussion about whether mining activity (panning and sluicing) is allowed. Can miners pull out vegetation to access soils below? Can generators be used to sluice. Can you mine near an archaeological site? Miners should need permits that state how and where mining can occur.

RESPONSE:

There are no valid mining claims in Grand Canyon National Park.

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RG61

The NPS should develop a program to rebuild the beaches and where appropriate, campsites. Also, develop a program to mitigate and remediate damage to existing beaches and campsites. To finance this, money would come from three sources. The primary public source would be from user fees and would be collected from trip participants and lottery applicants. \$10 of the Lottery Application Fee would go to this project, and \$30 would be collected from each person going down the river, commercial and noncommercial. This fund would be doubled with revenues from the dam/power side (who should actually be doing all of the funding). Additional funding would come from NPS to cover overhead (indirect) that is incurred by NPS managing this project. It would be a third and much smaller portion.

RESPONSE:

The NPS has been working with the Adaptive Management Program to determine appropriate ways to rebuild beaches without mechanical intervention. Sediment, the sand to build beaches, is a finite resource that must be managed with full consideration of Glen Canyon Dam operations. The NPS is limited as to where it can obtain the needed sediment and also how to retain it once it can capture it. In this instance, funding is not the issue. Rather, accumulating, distributing and retaining sediment over the long-term is the NPS's goal. Through the Adaptive Management Program, the NPS has identified two types of flows, beach

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building and maintenance. The NPS has learned that these flows need to occur when sediment triggers have been reached (for sediment entering the system through the Paria river) and that specific flow requirements must be met to move the sediment to where it is needed and retain it over time. Research and monitoring continues in this arena through the Adaptive Management Program. Additionally, the NPS has worked at specific beaches creating check dams and planting vegetation to hold sediment at specific campsites.

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## RG62

The relationship between the mitigation measures shown on page 236, the actions and related analysis discussed in the mitigation of effects section for each alternative, and subsequent declarations regarding the achievement of management objectives is unclear.

The general methodology for analyzing impacts discussed on pages 220 through 222 does a good job of outlining the process for an effects analysis and the criteria for evaluating change. However, this does not constitute a summary or discussion of specific actions. On page 221 there is a paragraph discussing the identification of reasonable mitigation measures. This section notes that mitigation measures were identified, considered and in some cases incorporated into the alternatives or included in carrying capacity standards and guidelines or elements common to all alternatives. Once these actions have been taken, actions previously considered as mitigation options have become management actions central to each alternative and provide a baseline for the effects analysis and comparison of alternatives. The identification and analysis of additional mitigation measures and resulting impacts allows both the agency and the public to consider additional actions that would have a positive result.

On page 221 the mitigation section goes on to state the most important mitigation measure is a monitoring and implementation plan and program. A monitoring program alone does not constitute mitigation. Monitoring is an analysis that can be used to determine whether mitigation is necessary. Only mitigation constitutes an actual adjustment on the ground.

### RESPONSE:

The text outlining the process for the effects analysis and criteria for evaluating change is part of the introduction to the Environmental Consequences chapter and is not meant to summarize specific impacts or mitigations. This text is meant to guide the reader in understanding how impacts were analyzed and how mitigations could or could not reduce impacts to a minor level. Specific impacts and mitigations are discussed for each alternative per impact topic.

In some cases impacts were identified in the early stages of the development of the alternatives. Where possible, the NPS identified mitigations for those impacts and incorporated them into the alternatives or the common-to-all elements. The NPS recognized that these actions are no longer considered mitigations once they are incorporated into the management actions. We felt that it was important for the public to understand how and why some elements came to be incorporated into the management actions. Discussion of mitigation measures in the analysis only considers those actions that are outside of the management actions. Clarifying text to this effect has been added to Chapter 4.1 (Introduction).

Monitoring is an important element of any treatment plan. While it alone does not constitute mitigation, it is a necessary component of any mitigation program.

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## RG63

Weighting factors for TAOT, beach erosion, and so on, were not enclosed by NPS for peer review.

## RESPONSE:

General methodology for analysis is discussed in Chapter 4 (Introduction). For each impact topic, assumptions, tools, and relevant data are presented. Analysts used best available data to determine which factors (such as TAOTs, UDT, and cumulative effects) influenced the potential for impacts, given the interconnectivity of variables. The commenter provided no additional data or specific guidance sufficient to warrant a change in the analysis.

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## RG64

Alternative A should not be the baseline condition from which the analysis of impacts should flow. A better condition would be circa 1976 when the park began to actively management river use/access as a more solid foundation. Then show how management changes have improved or not the various resources.

## RESPONSE:

NEPA requires Federal agencies to consider impacts from a no-action alternative. Thus, the NPS has analyzed the environmental consequences of maintaining current management practices for recreational use of the Colorado River. The NPS has provided background information about historic use levels and, where applicable, we have identified and discussed management practices that are known to result in impacts to resources and visitor experience.

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## RG65

The *Colorado River Management Plan* analysis essentially treats all alternatives as having similar impacts due to flaws in its “data” and how its evaluative criteria have been applied. For example, the impacts of diverting increased use into the shoulder and winter seasons is not systematically addressed and likely impacts on the river corridor resource, such as affecting soils and beaches, water quality, aquatic resources, vegetation and visitor experiences, are not adequately remedied. Bias in the selection and evaluation of alternatives is evident in the near uniformity of approaches that maintain summer monopolies for commercial outfitters while relegating increased access for noncommercial boaters to other seasons. The biases inherent in the *Colorado River Management Plan*’s throwaway Alternatives B, C, and D are apparent in the conclusions that air quality would represent the only beneficial impacts, while potential benefits related to natural soundscape, visitor experience and other issues are ignored.

## RESPONSE:

Chapter 4: Environmental Consequences discusses impacts from each alternative according to impact topic. As part of this analysis, changes in use types and levels are examined per season. The commenter has not offered data to refute or modify this analysis.

The NPS believes that the range of alternatives does include a variety of approaches for allowing different trip types and use levels.

Analysis of Chapter 4: Environmental Consequences includes seasonal impact ratings, ratings related to specific actions, and ratings from current condition as well as an overall impact rating. Several of the seasonal, action-specific, and “from current condition” ratings are beneficial. However, overall impact ratings for the various impact topics are often adverse, since visitation often leads to resource vulnerability.

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RG66

One of the assumptions on page 417 states: “While the effect from river runners to sites in these areas would be additive, it would be indistinguishable from damage caused by visitors using other means of access.” Mules cause much more impact to trails than backpackers and backpackers more than day hikers. And those that access the park by car?

RESPONSE:

This assumption pertains to the analysis of impacts of visitors on vegetation resources along the Colorado River. While mule trips do reach Phantom Ranch, the impacts to this area are highly localized and do not affect the vegetation resources along the rest of the river corridor. Similarly, visitors to the developed areas at the South Rim and North Rim, do not affect the vegetation resources in the river corridor. The assumption generally speaks to the difference in impacts to vegetation from visitation, be it by river runners or backpackers. The NPS has no data that differentiates between the impacts of these two groups.

## Socioeconomics

SE1

Public Law 105-391 states, “It is implicit that in the implementation of any system the NPS is required that concessions operations retain a reasonable opportunity to make a profit.” If such a mandate exists, it cannot specify the amount of profit the concessions operations are entitled to make. Given this, there is no reason for NPS to seek an allocation of commercial/noncommercial user-days that is disproportionate to current demand.

RESPONSE:

P.L. 105-391 does require that concession business opportunities provide for a concessioner to have a reasonable opportunity to realize a profit, although the commenter’s specific quote does not appear anywhere in the law. It is also correct to say that the NPS cannot specify the amount of profit that concessionaires are entitled to make only that the NPS should allow a reasonable opportunity to make a profit in its contracts with concessioners.

In the *Colorado River Management Plan*, the NPS examined current allocation from many viewpoints, resulting in numerous alternatives that recognized the high demand for noncommercial river trips. Launches, trips, user-days, and number of participants were all increased for the noncommercial market segment, while allocation for commercial trips remained approximately the same.

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SE2

The most tremendous impact on the waiting period would result from increasing noncommercial boater access. This can be done by reducing the number of commercial launch spots 20%, which would result in the commercial operators increasing their price by 20%, which would result in their profits remaining unchanged.

RESPONSE:

Modified Preferred Alternative H addresses this situation and does increase noncommercial boater access. Modified Preferred Alternative H increases the number of noncommercial user-days to 113,486, a nearly 95% increase. Total yearly noncommercial passengers are increased by about 97% to 7,051 and the annual number of noncommercial launches is increased by almost 99%, to 503. In response to comments on the DEIS, the waitlist system is being replaced by a hybrid weighted lottery for trip leaders. Additionally, a three-stage expedited transition system will be instituted to provide opportunities for people currently on the waitlist to get on the river, or to transition to the new system (see Section 2.8).

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SE3

Commercial boaters can satisfy the customer demand for trips shorter than 12 days by using exchanges at Phantom Ranch and Whitmore. Pack animal or hiking access to these exchange sites is appropriate and consistent with your obligation to manage the river as wilderness and will provide even greater opportunities for local employment.

## RESPONSE:

The NPS believes the comment is addressing how a nonmotor alternative could provide opportunities for trips shorter than 12 days, utilizing (as well) nonmotorized forms of transportation for exchanges.

The NPS analyzed a range of alternatives including nonmotor alternatives, and believes that the Modified Preferred Alternative H provides a range of opportunities for visitor experience, as well as improved protection of park resources.

The commenter is correct that a few more seasonal but not high paying jobs might result if more hiking guides and pack animal wranglers were hired to facilitate visitor exchanges (as a response to visitor demand); a small number of individuals would benefit from these few new employment opportunities. However the economic impacts of adding more hiking or pack animal support would be negligible at the county level.

## SE4

Group size should be increased. This will allow more economical trips and open them up to people that are not as wealthy as those that can currently afford trips.

## RESPONSE:

Group sizes have been modified in order to reduce impacts on the canyon resources and to improve the quality of the visitor experience. Increasing group size would not necessarily reduce the cost of a commercial trip. Larger groups often require more boats, supplies, and staff and as a result may have increased costs of operation. In addition, larger group sizes increase the adverse impacts on the resources of the canyon. Larger group sizes also affect the quality of the visitor experience because there is more crowding and noise and fewer opportunities for solitude. The variety of types of trips of various lengths at different prices does provide the public with choices. Shorter less costly trips are available.

## SE5

None of the alternatives offered in the *DEIS* adequately address the current and historic disparity between the amount of river access opportunities provided by the NPS to commercially guided outfitter customers and the amount of river access opportunities provided by NPS to the self-guided public. This disparity has resulted in a backlog of more than 8,000 permits and up to 130,000 individuals waiting to take a self-guided river trip.

## RESPONSE:

NPS believes that a full range of alternatives has been considered as required by NEPA. Equal access depends upon the measure of use. Alternative B included equal allocations of trips launching in the summer and Alternative C included near-equal launches and user-days in the summer season. Additionally, Modified Preferred Alternative H includes a significant increase in annual and summer season noncommercial launches, passengers and user-days. This increase is coupled with a transition from the waitlist to a lottery system (including incentives for clearing the waitlist) and limited repeat use to allow more individuals access to the river.

SE6

Small business impacts should be considered differently when public policy proposals are being reviewed. This is especially true when you consider the impact small businesses have on the economy at large. Small businesses contribute, for instance, nearly two-thirds of new jobs.

This impact can also be translated regionally, including the region covered by the Grand Canyon National Park. The sixteen commercial rafting companies licensed by the NPS to operate in Grand Canyon serve 19,000 park visitors each year. They collect \$30 million in revenue, most of which is spent in the Grand Canyon region as operating expenditures that contribute substantially to the local economy. In aggregate, these companies employ 667 full time and seasonal employees, with a payroll of \$4,000,000, much of which is spent locally. They also pay hundreds of thousand of dollars to the state and counties in sales and property taxes and contribute to the Hualapai Nation in the form of fees for river access and takeout fees and services.

How the allocation adjustments would be apportioned on an outfitter-by-outfitter basis has not been examined thoroughly. The impact of losing one launch (or one user day) to a small company and/or to an oar-only company is greater than the same loss to a larger company or a company who operations include motor use. The economies of scale make this so and just as this is recognized in our tax code, it must be recognized by any system the NPS adopts.

RESPONSE:

The NPS is aware of the fiscal and economic impacts that the commercial rafting business has on the local gateway communities and the firms and individuals directly involved in these businesses. The NPS is also aware of the volume and size differences among the 16 rafting companies. These differences can and do matter to the individual business firms and their employees. Apportionment of river trips is allocated based upon historic use and the NPS's responsibility to allow a reasonable opportunity for concessionaires to make a profit. The NPS, through this plan and planning effort, has been sensitive to issues relating to the smaller rafting businesses and has accommodated those concerns to the extent possible in conjunction with its overall, primary mission, which is to preserve and protect park resources, and provide for visitor use.

SE7

The EIS does not adequately address socio-economic impacts of various alternatives because it focuses solely on regional and local economies and the economics of the commercial outfitters and omits analysis of the impacts on lower income populations who cannot afford to take a commercial trip down the Colorado River. Consideration of the fact that more than 45% of all commercial passengers make over \$100,000 a year compared to 14% of noncommercial river runners and 12% of the country as a whole (Hall and Shelby, 1998) is needed. This should be addressed, particularly in light of the Organic Act's mandate not to allow commercial enterprise to interfere with free public access.

RESPONSE:

The NPS has added noncommercial launches in the Modified Preferred Alternative H.

Millions of people visit the Grand Canyon each year. With the opportunity to float the river limited to less than 25,000 people a year it is clear that the vast majority of visitors do not have the opportunity to have a river running experience regardless of their financial situation. The NPS makes park resources and programs available to all persons regardless of minority status or income level. Anyone can make use of the less expensive noncommercial trip or a less expensive commercial trip. The noncommercial trip expenses

for park fees, shuttle transportation, food, equipment, take out on the Hualapai Reservation, etc. can run in the neighborhood of \$700 to \$800 per person and commercial trip prices in the Lower Gorge begin at around \$265.

This situation may be considered a social or economic justice issue but it is not an environmental justice issue as commonly construed. Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies (U.S. Environmental Protection Agency [EPA]). Environmental justice addresses the issue of ensuring that minority or low-income populations do not bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies (EPA). Further information on the topic of Environmental Justice is available at the EPA websites listed below.

<http://www.epa.gov/compliance/environmentaljustice/>

[http://www.epa.gov/compliance/resources/policies/ej/ej\\_guidance\\_nepa\\_epa0498.pdf](http://www.epa.gov/compliance/resources/policies/ej/ej_guidance_nepa_epa0498.pdf)

SE8

Commercial river operations and helicopter transport from the river contribute significantly to the Hualapai economy. None of the alternatives that have been presented are acceptable. The Hualapai own the land along the Lower Gorge and should be able to use it however they want.

The Bar 10 Ranch helicopter exchange is a major source of revenue for the Hualapai Tribe. It is not only a large amount of money (\$250,000) and likely to grow in the future as they raise their prices, but it is almost pure profit. If the Hualapais ran another business that earned a 10% profit they would have to generate about \$2.5 million dollars, in gross revenue, to earn a \$250,000 profit, like they do on the Whitmore helicopter exchange. The analysis (Volume II Pg 687-Paragraph # 3) that states “The reduction of 300 exchanges at Whitmore results in revenue loss to the Hualapai Tribe” is totally incorrect and understates the loss of revenue to the Hualapais. First, there is no limit, nor has there been, on the number of guests that can enter at Whitmore. It has always been a natural limit of the number of companies that are allowed to use Whitmore, the number of user-days those companies have and the number of trips they take out at Whitmore. And finally, and most importantly, whether they even offer or want to offer a Whitmore-in option. It is not scientific analysis to assume that the Hualapai revenue lost from cutting the number of guest exiting Whitmore from 6,800 to 5,000 will almost all be replaced by an increase from 3,500 to 5,000 guest entering at Whitmore. How can the planning team make this assumption, when up to 6,800 could enter at Whitmore currently, but that is not happening? Many companies, can't or don't want to operate Whitmore-down trips. At the very least, this would be a loss of 1,800 exchanges, not the 300 stated in the draft, in fact the loss to the tribe would likely be far more, if some of the companies currently doing dual exchanges, were forced by the 5,000 out rule to stop using Whitmore. The loss to the Bar 10 Ranch, which is totally surrounded by Federal land, would be even greater than the loss to the Hualapais.

Additionally, a respondent questions the maximum daily passengers limit of 150 (p 79, under Alternative 4). Possibly it should be raised? The Hualapai deserve generous economic opportunity, even if it means more noise and crowding around Quartermaster.

RESPONSE:

The effects of the alternatives on the Hualapai Tribe and Bar 10 Ranch have been carefully considered, including information provided in the above comment and other comments. Both Alternative H and Alternative 4 (the NPS preferred alternatives) have been modified to address public and agency comments

in this Final EIS (see Sections 2.4.8 and 2.5.6), and the socioeconomic impact analyses for all alternatives revised as needed in Section 4.5. The exchange ratios and other inputs used in the economic calculations are based upon the best available data, and where possible are compared against actual exchange data provided by the commercial river concessioners. Assumptions concerning the number of helicopter flights needed for the number of exchange passengers were checked against the limited data made available to the NPS concerning helicopter operations at Whitmore, and found to be consistent.

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SE9

The effects of the proposed 1:1 Whitmore passenger exchange ratio are not clear. Potential negative impacts of a 1:1 Whitmore passenger exchange ratio, which would mean that roughly 3,300 people would be required to exit the canyon at one of the two other takeout locations, include crowding and congestion at take-outs, the commercial river trip launch schedule, and the types of trip options that the concessionaires would be able to offer to the public.

If *Colorado River Management Plan* intent is to achieve a one to one egress/ingress ratio then a significant concern arises regarding companies that do not currently offer a lower end trip from Whitmore down to Diamond Creek or the lake. The one to one egress/ingress ratio could force companies to use the Whitmore takeout and/or the Bar 10 Ranch may have to limit whom they provide service to (i.e. outfitters who do not use a 1:1 ratio of passengers) due to a numerical cap or lack of financial appeal.

RESPONSE:

In response to comments such as this, the Modified Preferred Alternative H has been revised to clarify that the NPS is only specifying the location, number and timing of passenger exchanges, not any aspects of helicopter flights. Assuming similar to current passenger exchange ratios, the expected number of passengers leaving the river under Modified Preferred Alternative H would be about 850 fewer than the current number. The NPS does not believe that the concern expressed in the comment would be able to materialize under those scenarios and conditions. (see also Appendix K)

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SE10

The economic study is flawed because: all data about commercial river runners came from one source, the commercial river running trade association, and this data collection technique is flawed because of the potential for upward bias by the trade association; no example of the survey instrument used by commercial firms was provided; lump sum figures reported by an industry trade group with crystal clear political motivations should be questioned and are not; there was no effort in the economic study to correct for commercial trade association bias; there was no distinction between noncommercial user-days and commercial concessions user-days; there was no differentiation between commercial firms that run motorized trips verses those that run nonmotorized trips; the potential for capitol flight by owners of river running concessions is ignored by the study; there was no consideration for wholesale concessions order of food, gear, and other services coming from outside the economic zone; and it is not pointed out that noncommercial trips are two to three times longer than commercial trips and thus food expenditures can be expected to be two to three times higher as well.

The argument that all commercial operators will derive increased revenues as a result of the implementation of Alternative H is blatantly incorrect. It is a mathematical impossibility to add 25% to operational expenses, and not suffer a corresponding decrease in viability without raising prices, which again, is not fair to the public we serve.

## RESPONSE:

The NPS used the best available information for its analysis, including many other sources in addition to the one cited in the comment. The companies operating from Lees Ferry are all NPS concessions, so the NPS has very detailed information concerning their Grand Canyon river operations, and regulates many aspects of those operations. The NPS has also involved and listened to numerous individuals and organizations in this planning process, and has acknowledged and addressed economic concerns in the development of the alternatives, the impacts analysis, and in revising the NPS preferred alternatives in part due to economic concerns raised in the comments received on the Draft EIS. The NPS is confident that the socioeconomic analysis satisfies NEPA requirements and is sufficient for informed decision making purposes.

Although some adjustments in operations would likely be necessary, there is no requirement for commercial operators to increase their operational expenses by 25% and no expectation that costs to passengers would rise by anything close to that much due to provisions in any of the alternatives. Commercial user-days could increase up to 2% (the difference between the commercial user-day cap and actual current use), and commercial passengers and commercial launches could both decrease about 7% under Modified Preferred Alternative H. Lower group sizes will initially impact those operators adversely which currently conduct trips with larger group sizes, but after adjustments are made in their equipment and operations pricing is expected to stabilize at no more than a small increase compared to current levels. Other operators that do not need to make major changes to their equipment or operations could see a beneficial effect, and no increase or even a decrease in cost to their passengers.

A decrease in revenues does not necessarily mean a decrease in profits. Concessionaires are free to react and adapt to the changing conditions created by the Modified Preferred Alternative H. Perhaps costs can be cut and productivity can be increased. The NPS is aware of the concerns of the commercial operators and its responsibility to allow a reasonable opportunity for them to make a profit. However, the primary mission of the NPS is to manage the park in a manner that preserves and protects park resources, while providing for visitor use.

## SE11

The *DEIS* states, “For socioeconomic resources, impacts would be...beneficial ...for commercial runners (Environmental Consequences: Alternative H - p. xviii).” Impacts to commercial runners will not be beneficial in several key areas: 1) The current level of flexibility in scheduling oar trips under the current people/day limits has positive impacts some companies’ operations and marketing. Under Alternative H, the loss of the flexibility is both a big change and will negatively impact some companies. 2) The loss of our longer trip options. 3) The flattening of the launch schedule which will impact our current ability to avoid normal congestion spots and times based on our knowledge of the other users and our long trip schedule. This potentially affects several commodities important to our business including opportunities for solitude experienced by our trip participants and a reasonably spread out selection of trip dates for the public to choose from.

## RESPONSE:

The NPS is aware that some of the actions called for in the alternatives may affect the operations of the 16 commercial rafting businesses. The NPS, through this plan and planning effort, has considered issues relating to the rafting businesses and has accommodated those concerns to the extent possible in conjunction with its overall, primary mission, which is to preserve and protect park resources, and provide for visitor use. The NPS anticipates that commercial operators will be able to plan for a variety of trip experiences once they become accustomed to the changes that result from the implementation of the *Colorado River Management Plan*.

SE12

Numerically, Alternative H does not take into account the additional launches needed to compensate for the proposed reduction in group size. A problem is that the plan is predicated on a launch-based computer model operating at near 100% efficiency. This level of efficiency does not occur in the real world. Group size limitations compound the launch and crowding issues because a group limit of 24 is essentially operationally unobtainable using motorboats with carrying capacities of 18 for S-rigs and 23 for J-rigs. This forces outfitters to choose between carrying 16 passenger and two guides per launch with an S-rig, and operate at a launch efficiency of only 75% by utilizing only 18 of the available 24 spots, or to run a second motorboat with five clients and a guide. The cumulative result is an unanticipated loss of the equivalent of several launches of carrying capacity. Market, travel, scheduling, and operational realities detract from peak efficiency. There needs to be provision in the plan for business and travel realities. The launch-based proposal does not have enough launches built into the commercial motor sector to mathematically continue the level of motorized service that the general public has historically received and deserves. More flexibility is needed.

RESPONSE:

Modified Preferred Alternative H has been developed to respond positively to some of the concerns raised in comments on the Draft EIS. However, the group size limits and launch limits were developed in order to protect the resources of the canyon and to protect the visitor experience.

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SE13

Because different launches have more, or less, user-days attached to them, with the longer oar trips having the most user-days attached to them, launches are not equivalent. A launch with more days represents greater loss of access for commercial companies that run longer trips.

RESPONSE:

A launch is considered one group of rafters in one or more boats beginning a river trip at a particular access point, say Lees Ferry. It is correct to note that group size, number of boats, trip length in days, and other variables can and do differ between launches. The allowed trip parameters of launches, group size, number of boats, trip length in days, etc. have all been considered in developing the alternatives, especially the Modified Preferred Alternative H. Other considerations relating to resource protection and the quality of the visitor experience have played a dominant part in developing the alternatives in order to provide as much access as possible and still achieve the park's mission.

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SE14

The argument is not valid that the public should have equal access to private trips because they can't afford a commercial trip. Even with equal access, the fact is, few people are qualified or have the desire to do a private trip. Though private trips may be less expensive to go on, economics is not even a factor regarding the decision to go on a private trip.

One-time costs are hardly negligible regarding the running of an efficient operation, particularly regarding the purchase of additional cycles of river equipment.

## RESPONSE:

The high demand for noncommercial river trips as evidenced by a long waiting list argues against there being few people with low desire or inadequate skills for noncommercial trips. Increased access for noncommercial trips is a part of Modified Preferred Alternative H, which was developed in response to public comments on the Draft EIS. However, although user-days would be about equal between the sectors in Modified Preferred Alternative H, even with the increased noncommercial access the commercial river running businesses would have an estimated yearly passenger count of more than 10,000 people over and above that allocated to the noncommercial river runners. Regarding the decision to go on a noncommercial trip—the basic economics of supply and demand states that price does matter. In addition, there are many differences between the commercial and noncommercial trips and individual preferences also come into play.

## SE15

A new socioeconomic analysis should be undertaken by the planning team that looks more closely at some of the unique characteristics of each river company and takes into account economies of scale regarding larger and smaller companies.

## RESPONSE:

The NPS is aware of the differences among the 16 rafting companies. Larger firms can and sometimes do benefit from economies of scale. Economies of scale are present when successive increases in inputs, such as labor or capital, result in more than proportionate increases in output. However, some smaller companies can also be in situations where they can benefit from economies of scale. The fact that there are 16 companies, which come back year after year to offer rafting services, is an indication that companies of varying sizes can be and are viable enterprises.

## SE16

In the *DEIS* the NPS states that noncommercial demand “greatly exceeds supply,” but never fully explains why this is the case, nor does the NPS ever characterize the demand and supply situation for commercially guided trips. The fact is that the current demand for commercially guided trips falls short of supply. Every year outfitters are forced to heavily promote commercially guided trips to sell their allotted use. In recent years they have also been forced to offer steeply discounted trip prices. How can the NPS assert that demand exceeds supply for one segment of river users, while at the same time allowing another segment to manufacture additional demand through advertising and discounts? Noncommercial demand outstrips supply due solely to the unwillingness of the NPS to adjust the balance of use in response to increasing noncommercial demand.

## RESPONSE:

The demand for noncommercial trips greatly exceeds the supply of noncommercial trips because the price, in dollars, is relatively low. These trips are allocated through waiting rather than through a market, like the commercial trips, where supply and demand as measured in dollars is more influential.

Demand at the approved rates for commercially guided trips sometimes falls short of supply, primarily in shoulder seasons. In primary seasons, it may be that a concessioner could charge far more than its approved rates and still fill its trips, but the NPS does not permit this. Most concessionaire operations wish to run

fully booked trips. It is to their financial advantage to not have empty seats (and foregone income) on any of the trips they can offer. Furthermore, the NPS does adjust the balance of use in the Modified Preferred Alternative H.

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SE17

The draft plan proposes adding a paragraph to the Commercial Operating Requirements that would make it logistically impossible for some companies to conduct a seven-day trip with Bright Angel exchange. Too little time in the “wilderness” is the stated reason for the change. Some three-day and five-day passengers say that partial trips have allowed them to experience the river when they wouldn’t otherwise have time; to afford a river trip when they could not otherwise; to “try” the river to see whether they’d like a longer trip and, in many cases, to have a Grand Canyon hike in connection with a river trip. They consider the hike to be part of an integral Grand Canyon experience, not one that makes their river time “too short”. Only one of the sixteen concessionaire companies would be affected.

RESPONSE:

The four-day minimum trip to Phantom has been eliminated from the Final EIS (see Section 2.7.5).

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SE18

Because Grand Canyon National Park hears only from private boaters (whereas the general public’s communications are shunted to the outfitters) the park has gotten a one-sided voicing of what they choose to call “demand” and are concluding there’s an inequity. The presence of an institutionalized waiting list on the private side, and the absence of it on the commercial side, doesn’t mean the privates have more “demand.”

RESPONSE:

The commenter may be concerned about the proposed adjustable split allocation, which is no longer the NPS preferred allocation option in this Final EIS (see Section 2.2.1.3).

The NPS has not concluded that there is a specifically quantifiable inequity in demand. However, the NPS does believe that more noncommercial opportunities as described in the Modified Preferred Alternative H would improve the visitor experience on the Colorado River.

The basic economics of supply and demand states that higher quantities of a good or service are obtained at lower prices and lower quantities are obtained at higher prices. The commercial trip represents a service offered at a higher price than the noncommercial trip. The presence of an institutionalized waiting list on the private side does indicate that the quantity of noncommercial river trips demanded at the relatively low dollar cost does exceed the available supply.

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SE19

Other criteria were unfortunately and obviously overridden solely by economic considerations that benefit a small group of concessionaires at the expense of the park’s resources and the public.

## RESPONSE:

Many criteria were considered in the development of this river management plan. The NPS is charged with the dual responsibility to protect the resources of the park and to provide for visitor use. The NPS has struck a balance between these two mandates. Development of the NPS preferred alternatives (Modified Preferred Alternatives H and 4) has responded to these two goals. There is a history of visitor use of the river through commercial and noncommercial river running trips. This river management plan maintains these historic uses at levels that have been determined sustainable with respect to the resources of the canyon and also maintain the quality of the visitor experience. It is true that there are a small number (16) of business firms that conduct commercial river trips and these businesses and their employees receive fiscal compensation for providing their services. It is also true that many people who can afford a commercial trip, but could not by themselves run the river as part of a noncommercial trip, benefit from these enterprises providing river running goods and services. The public benefits from the opportunities to experience the river as part of a guided trip.

## SE20

Many pages of detailed economic information were received concerning subjects such as income and wealth, employment and other economic trends, social factors, and consumer choices, as well as a proposed study.

## RESPONSE:

Such detailed information is not appropriate for reproducing in this summary of comments, but it is available for examination as part of the administrative record. The NPS carefully examined and considered all of the information received. Additional studies may be considered as part of the monitoring and implementation plan developed after the *Record of Decision*.

## SE26

You would be killing businesses by only having 20 groups at a time going down the river. What if someone has to take two trips of 50 people everyday just to make a comfortable living, what would that person do?

## RESPONSE:

None of the alternatives suggest that a figure as low as 20 be the maximum number of TAOT (please refer to Chapter 2). The Modified Preferred Alternative H proposes that the number of TAOT to be allowed on the river be 60. This is only a reduction of 10 when compared to the no action alternative.

The NPS analyzed a range of group sizes, and concluded that due to eroding beach size and other impacts, that maximum group sizes should be reduced from current levels to those described in the Modified Preferred Alternative H. The business opportunity for new contracts on the river, while they will provide for an opportunity to realize a profit, will not provide for use levels beyond those described in the Modified Preferred Alternative H.

SE27

Franchise fees average 8.9% representing \$2.6 million annually to the park. The report fails to mention a dollar figure the privates contribute. How can any decisions be made without this information? There should be three fee schedules. Commercial, infrequent private users, (with less than three trips over 10 years), and frequent private boaters, paying approximately the same as commercial passengers.

RESPONSE:

Noncommercial boaters pay a \$100 fee per passenger to the park for the costs of issuing and administering their noncommercial permits.

Decisions are made based on the best available data, and also, based on the NPS goal of preservation of park resources and providing for visitor experience. Income to the park is not a primary consideration in the decision making process, although it is analyzed as part of that process.

In the Final EIS, the suggestion regarding differential pricing for various types of river user is applied but with only two fee schedules: one for commercial participants and one for noncommercial visitors.

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SE28

If commercial passengers have a greater impact on the environment than the general public, consider imposing an extra fee to fix. If some companies are more likely to have problems, see if they can change logistics to avoid the problem. Require the companies who create excessive cost to the park be financially responsible.

RESPONSE:

There is currently no data that suggests a differentiation of impacts between commercial and noncommercial boaters in the Grand Canyon. Grand Canyon National Park staff monitors the operations of the commercial businesses. Problems that are identified are attended to as quickly as possible to protect the canyon's resources and maintain the quality of the visitor experience.

The NPS at Grand Canyon has strict commercial and noncommercial operating requirements for its river runners, designed to minimize impacts to park resources as well as to provide safe and enjoyable visitor experiences. Logistics as well as other measures will continue to be considered as part of the monitoring and implementation plan conducted following the *Record of Decision*.

## Soils Resources

S3

Page 174 of the *DEIS* mentions the most recent data shows 214 campsites between Lees Ferry and Diamond Creek. Of these, there are 55 large camps (36 people), 106 medium-sized (13-24 people) and 53 small (12 or fewer). This data shows groups of more than 24 are too large for almost 75% of all camps. A recommendation was made the measurement of large trips at one time (LTAOT), be used to analyze the competition for large campsites. A breakdown of LTAOT would look like this:

- Alternative B has 2 commercial oar groups launching each day with a trip length of 16 days. This means up to 30 groups of 25 people could be using a large campsite on any given night (55% of large campsites).
- Alternative C has a higher group size but these groups would also occupy up to 55% of the large campsites on any given night.
- Alternative D would occupy up to 38 large campsites on any given night or 69% of the large campsites.
- Alternative E would occupy up to 34 large campsites or 62%.
- Alternative F would have up to 53 groups occupying the 55 large campsites or 96% during May and June!
- Alternative G would occupy up to 34 large camps or 62%.
- Alternative H would occupy up to 42 (76%) of the large campsites on any given night.

Since smaller groups will also be competing for these campsites and the large campsites are distributed unevenly throughout the canyon these “occupancy rates” for large campsites in Alternative’s D through H are too high and may cause irreparable impairment to the resource.

High occupancy rates will cause two results: large groups will occupy medium-sized campsites resulting in resource damage, and large campsites will be occupied so frequently (and some more than the average percentage given) that resource damage will result at those campsites.

Since large campsites (and campsites overall) are disappearing the problem will only get worse in the future. Given the limited number of large campsites, it is recommended that the maximum group size should be no more than 16 including guides for all trips. The NPS must demonstrate that proposed group sizes and trip launches in Alternative H will not impact large camps, and must show how Alternative H will decrease campsite competition.

### RESPONSE:

The NPS developed and used the river trip simulator in our analyses to model trip scheduling, congestion, crowding, and campsite availability. The variables that went into the model incorporated campsite size data, as well as trip length and group size. The reduced group size in the Modified Preferred Alternative H and current campsite availability is consistent with the physical carrying capacities in the canyon. The monitoring and monitoring program that is part of the implementation plan will include a campsite carrying capacity evaluation component so that NPS may assess the results of the strategies that have been chosen. If there are unacceptable impacts, the adaptive management program will provide the avenue for making necessary changes.

S4

Several of the assumptions for analyzing impacts (pages 225-226 of the *DEIS*) are not consistent or specific enough through the analyses. For example,

Beach size. Flow levels of 5,000 - 25,000 cfs over the 10 year plan window. Can the park guarantee this flow range? What about daily fluctuating flows should this regime return (experimentally or otherwise)?

Larger group sizes use more space. What number constitutes “larger” or “smaller” etc. Again, impact analysis assumptions (p.226) concerning group size do not give numbers. For example, the soils analysis uses this concept, yet does not compare impacts by numbers. Is this where the *DEIS* arrives at the small group number of 8?

All maximum trip sizes (commercial and noncommercial) should be reduced to lower numbers, closer to eight total, but possibly add two to three for commercials. Smaller groups are better able to achieve minimum impact camping. Again, impacts analysis assumptions (*DEIS* page 226) concerning group size do not give numbers. For example, the soils analysis uses this concept (referencing Hendee et al. 1990), yet does not compare impacts by numbers. Is this where the *DEIS* arrives at the small group number of eight?

RESPONSE:

Natural flow regimes were highly variable prior to the closure of the gates at Glen Canyon Dam. Since 1963, however, flows have been fairly predictable, although there have been periods of extremely low flow in the mid 1970’s and extremely high flows in the mid 1980’s. There is never a guarantee about flows, although we do know that a total of 8.23 million acre feet must be released from Glen Canyon Dam each year. Recreational boating will adjust, as it always has, to flow levels.

Campsite capacity sizes of small accommodating 1-12 people, medium 13-24 and large 25-36 were established several decades ago and have been carried through subsequent studies. One of the research studies to be included in the *Colorado River Management Plan* mitigation and monitoring plan will be one to determine exact carrying capacities of each river runner campsite in Grand Canyon National Park. The current trend is a reduction in beach sizes from the loss of sediment in the main-stem due to the presence and operations of Glen Canyon Dam. This trend is expected to continue despite efforts by the Adaptive Management Plan workgroup to replenish beaches. In ten years, group size may need to be further reduced to correspond to future beach capacities.

The new eight-person noncommercial trip size was chosen because small campsites have a capacity of twelve persons or less and eight is one half of sixteen, the standard noncommercial trip group size.

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S5

All soil impacts are dwarfed by the impacts on beaches and soils from the dam. As we all know, over 90% of the pre-dam beaches have disappeared and many of the remaining beaches are continuing to erode. This seriously affects both the quality of the experience and the number of people who can experience the canyon. Since the 1960s, beach erosion is by far the largest physical change in the canyon. The changes also force more intensive use of certain beaches resulting in higher visitor impacts. The smaller size of many beaches causes more spillover effects into surrounding areas.

The suggested actions in the *DEIS* are almost all restrictions on human activity with a modest amount of repair and maintenance. These are certain to NOT solve the problems. There are actions that could be taken

over time that would solve far more of the problems, could mitigate and remediate some of them, and could prevent further deterioration of the Grand Canyon river environment and the visitor experience. The fact that there is no funding for these actions now is not a reason to slight them in the *DEIS*. First, acknowledge the seriousness of the problem and the need for immediate and significant action. Second, develop a program to rebuild the beaches and where appropriate, campsites. Emphasize action first in the areas needed by river runners and also where alternatives are needed to rest some existing campsites. This program would very likely require temporary mechanical equipment to be cost effective and to move large rocks, as well as human labor. Third, develop a program to mitigate and remediate damage to existing beaches and campsites. The third item would receive 30% funding. A large-scale effort would be required and would need a budget. The money would come from three sources. The primary public source would be from user fees and would be collected from trip participants and lottery applicants. Ten dollars of the Lottery Application Fee would go to this project, and \$30 would be collected from each person going down the river, commercial and noncommercial. This fund would be doubled with revenues from the dam/power side (who should actually be doing all of the funding). Additional funding would come from NPS to cover overhead (indirect) that is incurred by NPS managing this project. It would be a third and much smaller portion.

#### RESPONSE:

Impacts from the existence and operation of Glen Canyon Dam are outside the purview of this visitor use plan. However, the NPS is an active participant in the Glen Canyon Dam Adaptive Management Program. One of the major areas of concern NPS has continuously voiced in the Adaptive Management Program is the loss of sediment and sediment dependent resources. Sediment input into the system has been reduced by over 90% from the pre-dam condition. While this reduction is significant, a good portion of the beaches still exist, albeit at smaller sizes. The beaches will reach their angle of repose, if that has not already been achieved, in the near future. System wide mitigation approaches have been proposed as part of the Adaptive Management Program and annual operating requirements of the Colorado River through Glen Canyon Dam. In addition, flow scenarios are in place to allow for additional sediment storage in the hope that the additional sediment will be available for redistribution to the shoreline environment and beaches. Maintaining lower river flows more of the time will preserve the sediment resource and “bank” the sediment for redistribution along the entire river during high flow events. Sediment storage and beach building are complex, highly variable operations that cannot be accomplished by mechanical means. A ready supply of sediment that is constantly replenished is beyond the capacities of the current river system. What is possible is management of the sediment we have available and augmenting this sediment retention with simple mitigation measures such as check dams, vegetation placement, etc... to help retain and maintain sediment in critical areas.

The reality of sediment depletion cannot be addressed solely through recreational use management. However, recreational use does affect integrity of camping beaches and the NPS recognizes that visitor use exacerbates potential loss of this limited resource. The Glen Canyon Adaptive Management Program does provide funding for continued research by GCMRC on the sediment resource and has allowed for flow alternatives specifically designed to retain sediment.

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S6

Tamarisk eradication work is not factored into the cumulative impacts to soil degradation.

## RESPONSE:

Administrative use is already addressed in the cumulative impacts section. Tamarisk eradication work is only being conducted in specific side canyons and the methods used lead to a negligible, localized impact on soils.

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S7

When looking at the sandbar situation alone, visitor numbers must be reduced. Moreover, as the beach habitat continues to decline, so should the number of visitors present in the river corridor. Visitor numbers must be determined by the amount of available sand in the system as determined by Grand Canyon Monitoring and Research Center monitoring information.

Conversely, the Grand Canyon beaches can only sustain more use if more sediment is supplied. The experimental flows of 1996 failed to provide any lasting sediment augmentation, and there is yet no evidence to suggest that further experimental flows will improve the situation. The NPS has done little to assert its role as guardian of this critical habitat component. At minimum, the management plan should be arguing ways to improve the sediment/beach situation. The management plan should argue for seasonally adjusted steady flows while opposing load following generator operations, which have proven to be more detrimental to maintaining a minimal sand balance.

Linked to the disappearance of beaches is the issue of visitor use levels. Carrying capacity is the issue central to all alternatives and drives a significant portion of the effects analysis. The dwindling size and distribution of camping beaches, along with the slow pace of research and mitigation associated with the operation of Glen Canyon Dam, should be prompting the NPS to take aggressive action on the issues of soil erosion and preservation.

## RESPONSE:

Sediment supply into the river corridor has been greatly reduced by the presence and operation of Glen Canyon Dam; diminishing beach sizes prompted the NPS to reduce group sizes throughout the *Colorado River Management Plan*. However, Adaptive Management Program experimental flows have shown the viability of moving sediment and redistributing it in the canyon. The 1996 experimental flow showed that sediment redistribution was possible in a much shorter time frame than originally thought. The 1996 flow and subsequent experimental flows have also shown the sensitivity in retaining newly deposited sediment deposits. The NPS, in conjunction with the other members of the Adaptive Management Program, are working toward mechanisms to store, retain and redistribute sediment in the system. While the trend has been reduction in beach size, the majority of beaches are retained in the same locations over time. Vegetation encroachment is also an issue, one that the NPS has incorporated into its planning efforts. Additionally, we have been working with USGS scientists on alternative system wide mitigation measures to allow for more sediment storage by documenting wind blown sand distribution patterns in the canyon with the hope of using a combination of vegetation management, flow regimes and the natural abundance of wind to rebuild some sand deposits. Adaptive management is an important tool for NPS managers so that they may use the additional research and monitoring of these critical resources to make changes if resource conditions change.

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S8

One of the most repeated arguments for the reduction in group size has been that large groups camp at ever diminishing beaches, are forced to spread out into the old high-water zone (*DEIS* page 29). Crews often sleep on the rafts. They do not set up shore camps, do not spread into the high-water zones and caution guests against doing those things. As identified in the draft agreement, there are adequate numbers of beaches that can accommodate up to 36 guests for the number of large trips that will launch. No mention of the use of cots in the impact analysis.

RESPONSE:

Human use of the environment, regardless of a person's status as visitor or guide, can have variable effects. However, the NPS has recognized the value of guides by retaining an appropriate guide to passenger ratio. These ratios are addressed in the concession river contracts. The NPS believes it is important to have licensed river guides as they often act as stewards and educators. One of the ways NPS has recognized the importance of guides is that we have allowed larger group sizes for commercial trips.

Cots may help mitigate impacts to soils in localized areas. However, persons using cots are still getting on and off boats, moving about the campsite and venturing into the old high-water zone. Persons traveling in large groups seeking solitude will place their sleeping cots away from the rest of the party. The NPS will investigate the pro's and con's of using cots, but impacts caused by large groups including crowding, congestion and resource damage in the old high water zone will not be mitigated by the use of cots.

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S9

Any soil compaction impact is trivial to the large flash floods that regularly occur wiping out all vegetation and human impacts at Kanab Creek.

RESPONSE:

Administrative closures of specific campsites were deemed appropriate by the NPS for a variety of reasons. Modeling of the effects of closing these areas to overnight use was included in the river trip simulator. These closures are necessary due to the limited physical nature of the camps themselves, recreational impacts to the resources in the old high water zone, recreational impacts to water and aquatic resources, and the need to provide unfettered opportunities for day use by other river parties.

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S12

Sandbars upstream of RM 260 stabilized years ago. The wake of a planning jetboat is minimal and there are virtually no beaches to erode. The tamarisks quickly colonize any available open space leaving only one camp below RM 242, which is at Spencer on Hualapai land.

RESPONSE:

The soils analysis was based on best available data that included NPS ranger observations and Hualapai Tribe scientist's photos. At current water levels, jet boats are traveling from Lake Mead (RM 276) up to RM 260, so most of the bank erosion from jet boat wakes is occurring below RM 260 and not upstream of it. Even though tamarisk are invading and colonizing beaches, shear cliffs that constitute the riverbanks are being eroded by jet boat wakes.

S18a

#### Cumulative Impacts

The large-scale impact of sediment loss caused by Glen Canyon Dam does not remove the NPS' responsibility to reduce impacts, which further exacerbate the loss of soil and damage to remaining ecosystems. The NPS is attempting to put off dealing with significant management changes until the next planning process that will be over a decade away. By limiting the analysis and disclosure of irreversible and irretrievable commitment of resources to the life of this planning process (page 748, Table 4-38), the NPS is implying that impacts to soil resources could somehow be reversed during subsequent planning processes.

#### RESPONSE:

The NPS is aware of the sediment losses caused by the presence and operation of Glen Canyon Dam and is working cooperatively within the Glen Canyon Dam Adaptive Management Program to address the replenishment of this resource. The sediment resource is one of the most critical to the sustainability of many of the dependent resources (beaches, backwaters, archaeological sites, native fish, etc.). The NEPA process provides the NPS the direction to evaluate long-term and cumulative impacts, but does not allow for control of those outside influences beyond the scope of NPS legal jurisdiction. The irreversible and irretrievable analysis has been modified to reflect that impacts to soil resources are expected to continue beyond the plan lifespan. See revised text Section 4.9.3.

S18b

#### Assumptions

Page 237 of the *DEIS* states, "Only a small portion of all of the soils in Zone 1 are affected by river-running activities, so regional impacts to soils are negligible for all Lees Ferry Alternatives." Given that Zone 1 covers only the river corridor and not the entire backcountry in this same geographic area, the *DEIS* does not support the assumption that all Lees Ferry Alternatives have negligible impacts on soil resources at the regional scale. This is especially true since the regional scale is Zone 1 and these impacts are occurring in sensitive and rare habitats.

#### RESPONSE:

The regional geographic area evaluated for soil impacts includes the river corridor from Lees Ferry to Diamond Creek and areas accessible to river users for a distance of 2 miles from the river corridor. Although rare and sensitive habitat is found at localized sites along the river, the regional impact analysis evaluated the total regional area affected by river runner impacts and that area was found to be relatively small in comparison to the total regional geographic area. Impacts to sensitive and rare habitats are considered under the localized impact analysis for soils.

S19

Page 254 of the *DEIS* states, "...moderate to major impacts would continue to occur to soils at specific sites in the Lower Gorge as a result of large group sizes on a daily basis." In spite of this conclusion the NPS has chosen to adopt an alternative that still allows very large group sizes and increasing daily launches.

#### Criteria for Developing Alternatives

The standards used in calculating carrying capacity are the same as those used for the Lees Ferry Alternatives. The loss of beaches in the Lower Gorge is just as relevant to group size as it is in Zone 1. Page 66 of the *DEIS* notes that the larger groups in the Lower Gorge need more space for lunch, camping and attraction sites.

## RESPONSE:

Zones 2 and 3 allow for different recreational opportunities than Zone 1. Zone 2 is natural to modified natural and Zone 3 is rural natural in relation to Zone 1, which is primitive. Larger group sizes are appropriate in Zones 2 and 3 and Limits of Acceptable Change standards are more lenient in these zones.

## S21

## Comparison of Alternatives 2 and 4

- Table 2-7 on page 81 shows that Alternative 2 and Alternative 4 both have minor to moderate effects on soil resources. However, the actual effects analysis indicates significant differences.
- Alternative 2 significantly reduces the number of people using the resource during the critical summer season when soils are most sensitive to damage.
- The creation of one overnight campsite for Alternative 2 versus three new sites for Alternative 4 would have significantly different site-specific impacts.
- Alternative 2 would eliminate pontoon boat wakes and reduce the number of daily visitors, where as Alternative 4 would allow 150 users a day.
- According to the *DEIS*, Alternative 2 would likely reduce the number of helicopter flights associated with river recreation, while Alternative 4 could potentially remain at current levels.
- Under Alternative 2 the levels of NPS staff needed to mitigate effects to minor would remain at current levels, while a higher level of staffing would need to occur under Alternative 4.

## RESPONSE:

Although physical protection of the resource may appear to be best served by Alternative 2, management objectives for the entire *Colorado River Management Plan* are not met by Alternative 2.

## S22

IMPACTS ON NATURAL RESOURCES: Soils—Mitigation of Effects—pg. 236, *DEIS*

- Prohibiting any smaller group from camping at any large campsite is not fair. Some large campsites have wonderful hikes available at those sites and by prohibiting any group from camping there automatically prohibits that group from those hikes and is patently unfair and discriminatory.
- Providing a map indicating small, medium and large campsites is totally appropriate.
- Encouraging small and medium size groups to use small and medium size camps is totally appropriate.
- Explaining to small and medium size groups that if they choose to use one of these large sites they need to expect to share a large campsite with another group.
- Prohibiting large groups from camping at small and medium camps to minimize the potential for creating larger soil disturbed areas (*DEIS*, pg 233) is totally appropriate.

## RESPONSE:

Modified Preferred Alternative H divides the year into several seasons that provide different opportunities for visitor experiences. Use levels are lower in the shoulder and winter seasons and campsite use restrictions for small groups are not as stringent. In the summer season, small groups can camp at large sites, but small groups will need to accept double camping. The NPS proposes to educate users with a campsite capacity map and to encourage small groups to use smaller beaches because 50% of the campsites

have a capacity of 24 persons or less. River etiquette would include allowing larger groups to use larger beaches to reduce the incidence of old high-water zone sensitive resource impacts. Access to attractions and trails at large campsites should not be denied to day users even if another group is laying-over at a camp. During peak use season, the Modified Preferred Alternative H adds a small eight-person noncommercial trip to allow more groups to be on the river and to use the 25% of campsites that have a capacity of 12 persons or less.

Ongoing monitoring of beaches sizes may dictate additional restrictions.

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S23

The comparison photographs on page 113 of the *DEIS* with no captions, leads one to believe that beach erosion is solely the cause of river user impacts. I would love the river beaches to look like they did in 1952. However, in order to accomplish that Glen Canyon Dam would have to be removed.

RESPONSE:

The reduction in beach size at Tapeats camp from 1952 to 1995 is primarily due to sediment loss from cumulative impacts from the presence and operations of Glen Canyon Dam. Erosion from river runner use exacerbates these impacts. See revised caption in Section 3.2.1.5 of the *FEIS*.

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S24

Two-boat motorized launches should be divided into single-boat trips. The most important reason that the NPS should allow for more single-boat motorized launches is the need to be able to camp in an already heavily-impacted Marble Canyon river section. Beach erosion has worn away so many large beaches that would previously have accommodated two boat trips. Over time, trying to force larger river groups into smaller camps will lead to severe human impact on an already threatened area. Additionally, single boat trips are able to provide better interpretation to guests, ensure safer hiking conditions, and can pass rowing trips in a less-intrusive fashion.

RESPONSE:

Alternative H was modified so that motor launches were restored in the first two weeks of September and additional motor launches were added in April to encourage one-boat motor trips.

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S25

Respondent was concerned about 10-fold increase in winter use and the impacts to soils via compaction, destruction to crusts, and elimination of recovery time for the canyon (*DEIS* pages 56, 746, 748).

RESPONSE:

Winter use in Modified Preferred Alternative H is one 16-person trip per day. Although this is an increase in number of trips per week from Alternative A, experimental winter test launches have been occurring for several years with negligible to minor impacts on soil resources. Winter noncommercial trips have a small group size with less UDT due to shorter daylight hours and colder weather. Seventy-five percent of the campsites can accommodate groups of 24 or larger, so impacts to soil crusts in the old high-water zone are

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likely to be negligible to minor. The use also occurs in a season when soils are less sensitive to impacts. The impacts of the increase in annual total user-days and total feet using the resource are fully disclosed in Chapter 4: Environmental Consequences as required by NEPA.

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S26

You have designated large campsites to have a capacity of 36. Allow the group size to also be 36 in comparison. Alternative H limits to smaller than 36.

RESPONSE:

Campsite capacity sizes of small equal to 12, medium equal to 24 and large equal to 36 were established several decades ago and have been carried through subsequent studies. One of the research studies to be included in the *Colorado River Management Plan* Implementation and Monitoring program will be one to determine exact carrying capacities of each river runner campsite in Grand Canyon National Park. The current trend is a reduction in beach sizes from the loss of sediment in the main-stem due to the presence and operations of Glen Canyon Dam. This trend is expected to continue despite efforts by the Adaptive Management Plan workgroup to replenish beaches. In ten years, group size may need to be further reduced to correspond to future beach capacities.

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S27

The Lower Gorge provides habitat for a number of important wildlife species. The continued existence of critical wildlife habitat is dependent upon maintaining healthy soil resources. The important natural resources of the Lower Gorge should not be sacrificed because of a greater public and political tolerance for a variety of motorized activities.

The *DEIS* acknowledges that continuing the current pattern of use would require a substantial increase in staff to reduce impacts to soil to a minor level. Page 254 of the *DEIS* notes that, "This level of increase would likely not be attainable."

RESPONSE:

NPS and Hualapai Tribe have been working together to address issues and concerns for the area. The NPS added the Hualapai Tribe as a cooperating agency and allocated funds to the tribe to assist with the *Colorado River Management Plan*. The NPS and tribe submitted a joint proposal for Lower Gorge alternatives in the *Colorado River Management Plan* with the exception of the pontoon boat operations. Both of the alternatives were evaluated as part of the draft document. Ultimately, the NPS is responsible for managing the river through Grand Canyon National Park.

The *Colorado River Management Plan* is a river recreation management plan with many objectives. Key components of the *Colorado River Management Plan* include visitor use and experience and tribal economics. The NPS must choose a preferred alternative that best balances visitor access and resource protection.

The CRMP Implementation Plan will include a monitoring and mitigation program, an increase in river patrols and an enhanced educational program. An adaptive management approach to implementation will allow the NPS to adjust levels of mitigation to reduce impacts in the Lower Gorge.

Zones 2 and 3 allow for different recreational opportunities than Zone 1. Zone 2 is natural to modified natural and Zone 3 is rural natural in relation to Zone 1, which is primitive. Larger group sizes are appropriate in Zones 2 and 3 and Limits of Acceptable Change standards are more lenient in these zones.

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S28

The *DEIS* discussed in detail beach erosion/over use impacts, but there was no discussion or proposal put forth to use ledge camps as alternatives. Are ledge camps counted in the number of available campsites noted?

RESPONSE:

The known ledge camps are included in the campsite database. This includes sites in the Marble Canyon and the Muav Gorge reaches. Since the number of ledge camps is relatively small and they are not distributed throughout the corridor, using ledge camps was not considered a mitigation for soils impacts. Ledge camps would still need to be accessed from the river and erosion impacts would still occur at the mooring and along trails leading to the ledges.

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S29

Page 238 of the *DEIS* states, “Longer trips have, by their nature, increased amounts of time for visitors to interact with the canyon environment. This increased time has the potential to allow greater interaction with soil resources. This is particularly true for side canyons, as longer trips are designed to allow visitors opportunities for exploration. Off-season hiking (shoulder and winter months) is more conducive to exploring side canyons, as the extreme heat of the summer precludes hiking too far from the river itself.” There are several statements here that are not supported by evidence.

Longer hikes up side canyons away from the river have more impacts on soils. Side canyons mostly are washes surrounded by rock walls, neither of which are susceptible to damage from hiking. Also, human presence in these canyons is not a new phenomenon. Some side canyons have alluvial benches but most alluvial benches are in the old high-water zone (deposited in pre-dam times) which may well be more susceptible to damage from visitors that do not have time for longer hikes and limit their exploring to near the camp. The only thing that is certain is that longer hikes do spread out the impacts instead of concentrating them on the heavily used camps and the immediate river corridor (assuming a fixed number of user-days). An obvious conclusion from this is that given most alluvial benches are in the old high-water zone then longer hikes reduces impacts on those alluvial benches. So it would appear that more UDT causes fewer impacts and avoids concentration of soil impacts.

RESPONSE:

The NPS took trip type and trip length into consideration when developing the UDT model. Assumptions for the model were based on best available data including river guides, the river trip simulator and staff expertise. Data from the monitoring program may help to refine the assumptions for the model. Because the commenter did not provide another model, no change has been made to the UDT model.

Not all canyon hikes occur in a wash bottom surrounded by rock walls. Many trails that lead into side canyons start from wash bottoms but lead up tributary banks and onto the ledges surrounding the wash. Many trails lead to archeological attractions, paleontological features, caves, or seep and springs that are not located in the wash bottom. Trips in the canyon for 30 days have a greater opportunity to hike away from river campsites, into the Old High Water Zone and up a greater number of side canyons than boaters on a 6 day trip, increasing the likelihood of soil impacts occurring in side canyons.

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S30

If there is less time spent in the uplands and side canyons, then for a fixed number of user-days there must be more time spent on the river, along the shoreline and/or the old high water zone. It might seem obvious that more time will be spent on the river since each group will have to cover more river miles per day on average. But this may not be true if the length of the trips become so short with lower-river flows that more noncommercial trips opt to use motors. Thus the following statement should be added: "shorter trip lengths will concentrate activities in the river corridor and increase crowding on the river, increase impacts along the shoreline and/or in the old high-water zone while reducing time spent in the uplands and side canyons. In particular, there is potential for increased impact in the old high-water zone that is more sensitive and already has higher impacts than the uplands and side canyons." The conclusion that "Reduced trip lengths would benefit soils in the old high-water zone, as well as upland and side canyon soils, by limiting layover days and long hikes." is unsupported. This should read, "Reduce trip lengths would reduce impacts on upland and side canyon soils which currently are not heavily impacted. Instead, impacts would increase on the most heavily impacted areas of the river (with increased crowding), along the shoreline and beaches and potentially in the old high water zone where soils are the most sensitive."

RESPONSE:

The Modified Preferred Alternative H limits noncommercial motor trips to 10 days, eliminating the respondents concern that noncommercial trips will become 25-day motor trips.

Shorter trips do concentrate impacts on the river campsites, but primarily in the new high-water zone, and not necessarily in the old high water zone, especially if group sizes are small. At some attraction sites located up side canyons, soil impacts are localized and moderate to major. The respondent makes assumptions that are incorrect, so the analysis will not be revised.

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S31

Certainly any river runner with any amount of experience in the Grand Canyon can tell stories of their experiences with flash floods and their incredible power. Since the monsoon season is July and August, these are the months with the most intense erosion. Soil crusts are most vulnerable during the hot summers. Also, some vegetation sprouts with the spring run-off and this vegetation would reduce erosion so at least the latter part of the spring run-off period is of concern.

RESPONSE:

The analysis in the *DEIS* addresses all of these points.

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S33

Data on impacts of tethering on beaches was conducted in 1976, is there more recent data or data from other rivers about the effects of tethering on beaches?

RESPONSE:

The *Colorado River Management Plan* EIS was written using the best available data.

## Natural Soundscape

NS1

Page 128 of the *DEIS* states, “Preserving the natural soundscape for the enjoyment of future generations and preventing impairment of park resources is a major component of the NPS mission.” While the agency admits “Grand Canyon’s natural soundscape is considered a disappearing resource that requires restoration, protection, and preservation,” the Preferred Alternative allows up to 2,000 helicopter flights transporting 10,000 passengers from the river at Whitmore each summer (*DEIS*, p. 366). This is unacceptable. The NPS rejected both nonmotorized alternatives even though each exceeds Park soundscape preservation objectives by eliminating motorboats and Whitmore helicopter exchanges (*DEIS* page 53). Viable alternatives including the use of horses or mules, a wilderness-compatible, traditional use, are not addressed in the *DEIS*. The NPS should eliminate noisy helicopter passenger exchanges in the Grand Canyon.

RESPONSE:

Although neither Alternative B nor C is the NPS preferred alternative, they have not been rejected as stated in the comment. They continue to be fully considered in the *FEIS*. Although those alternatives exceed the natural soundscape objectives, they do not do as well as the NPS Modified Preferred Alternative H in meeting other objectives.

Concerning consideration of stock use for passenger exchanges at Whitmore, the NPS considered and rejected such use because the NPS does not believe that it is feasible at this time to upgrade and maintain the Whitmore trail to stock standards. Additionally, the staging area on the rim and the access road would require improvements and maintenance. These facilities would be located in Grand Canyon-Parashant National Monument, administered by the NPS (Lake Mead National Recreation Area) and Bureau of Land Management. The management goals and objectives for these adjacent lands do not include these types of facilities.

The NPS has no authority over transportation outside the park boundary. Therefore, the Modified Preferred Alternative H only specifies the number, time and location that exchanges may occur, not the transportation method a visitor may choose outside the park boundary. The alternatives assume and analyze different combinations of hiking and helicopter access and egress for Whitmore exchanges.

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NS2

Policies must protect wilderness by phasing out 95% of noise from powerboats. By selecting Alternative H and continuing to allow noisy motorized traffic, the NPS continues to ignore its obligation to protect wilderness values.

RESPONSE:

Sections 3.8 and 4.8 have been added to the Final EIS addressing wilderness character. The NPS believes the *Colorado River Management Plan* alternatives fully comply with NPS policy regarding wilderness.

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NS3

Why shouldn’t someone be able to experience the natural beauty of the Grand Canyon during the summer months, without being burdened by noise from motorized craft?

## RESPONSE:

There are opportunities to enjoy the natural soundscape in the summer months without hearing motors in all alternatives evaluated in the EIS. The sound from motorized craft is not continuous in most places in the canyon, even during the summer months. The impacts analysis indicates that, in some locations under some alternatives, noise free intervals may be of very short duration and infrequent. However, with a few exceptions such as the Quartermaster area, river runners should be able to experience the natural soundscape without motorized noise during some times during the day in most locations, and, when considering only river-related noise sources, in some alternatives the majority of the time in most locations.

Noise from aircraft not associated with river operations is the most widespread noise source in the remote areas of the park, including the Colorado River corridor. Both the Draft and Final EIS consider the effects of all noise sources in the cumulative effects analyses.

Alternative F analyzed a no-motors period during the peak summer months, and Alternatives B and C are nonmotor alternatives for the entire year. Additionally, the Modified Preferred Alternative H limits exchanges to before 10 A.M.

## NS4

Has exclusive use of ELECTRIC MOTORS been considered for use along this river corridor? They are far less noisy and air polluting than traditional boat motors and therefore can curb some of the negative environmental effects of traditional motors. Perhaps there is a way to run the electric motors with solar panels that are integrated into the design of the vessels themselves (as roof canopies).

The use of electric motor boats could be phased-in to allow business to catch up with the requirements. Perhaps the Federal government could help subsidize (through grants and low/no interest loans) some of the costs associated with this to local/native tour operators.

## RESPONSE:

The use of best available technology is a mitigation measure. Electric motors, and other technologies, have been discussed or tested to varying degrees in the canyon or similar applications, but are as yet unproven and their applications hypothetical. If they prove feasible, meet performance and other requirements, and are commercially available on a reasonable basis, they may prove to be the “best available technology.” At the current time, though, they do not meet that definition.

## NS5

Information presented in the *DEIS* was very vague regarding best technology available (i.e. very quiet and clean) for motorcraft. Is there more information on how motors are determined to fit in this category and how commercial operators are required to choose and use these motors?

## RESPONSE:

The nature of “best available technology” is that it changes as new products that produce fewer pollutants are proven to work feasibly in a specific application. A newly introduced technology will not be recognized as “best available technology” until it is proven to reduce emissions as well as reasonably meet performance and other requirements for the specific application and it must be commercially available on a reasonable

basis. Four-stroke outboard motors were only recently proven to meet this definition. Technologies such as all electric motors and hydrogen fuel cells have been discussed for such applications. If they prove feasible in meeting performance and other requirements, and are reasonably commercially available, as well as providing reduced emissions, then they may provide a new standard.

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#### NS6

Some respondents feel that wilderness includes silence. Some respondents expressed shock to learn of helicopter passenger exchanges, feeling that they could trigger rock slides and adversely affect wild animals.

Some respondents feel that motors are disruptive to wildlife along the river as well as the outdoor experience for the river passenger. It is not simply the fumes, pollution, and disturbance of the motors. It is their noise that destroys the experience for both those in the boat and those who are visitors on the shoreline.

Without the sound of motors, one can enjoy an entirely different and richer experience, such as hear the calling of the white-throated Swifts as well as the delightful and varied songs or call notes of the many other songbirds, raptors, waterfowl and herons that use the canyon at the different times of the year.

#### RESPONSE:

The NPS has added a new section titled, “Wilderness Character” (Sections 3.8 and 4.8 of the *FEIS*). Wilderness includes the natural soundscape, which may include silence as a component, but which may also include quite loud natural sounds (e.g., waterfalls, thunder, rapids, and wind in vegetation) as well as bird songs. In Modified Preferred Alternative H, Whitmore passenger exchanges are limited to before 10:00 AM during the motorized months.

Under the anticipated operating conditions, the sound levels involved with helicopter flights and motorboats are not expected to cause rock slides. Potential impacts on wildlife are addressed in Section 4.2.7.

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#### NS7

Some respondents recommend implementing restrictions at Whitmore on the time of day and flying routes that could be used to minimize noise for others in the park.

Since 2001, helicopter operations at Whitmore have been characterized by a 41% reduction in total flight hours (436.5 to 257.4), and a 32% reduction in trips per year (1,746 to 1,170). These reductions are due primarily to the increased use of larger Bell Helicopter “L” model aircraft in place of the smaller and less efficient “B” model. Additional reductions of this nature are possible through improved management and the possible use of alternative aircraft, and that obtaining such improvements should form the focus of Whitmore management priorities, not the implementation of problematic regulations that suffer from unwanted and unintended consequences or undue and unnecessary reduction or limitation of public services. Reducing impacts at Whitmore can best be accomplished not by limiting the number of participants able to use the service, but by improved management of the service, such as better scheduling and the use of more efficient aircraft.

RESPONSE:

The Modified Preferred Alternative H restricts passenger exchanges at Whitmore to before 10 AM (April through September), thereby protecting the natural soundscape, a natural resource important to visitor experience quality, for at least 6 months and for the majority of the day during the mixed-use season.

The NPS has direct control over whether passenger exchanges can occur at a given location, not on the means of transportation that a visitor may choose outside the park boundary. The NPS has no control over helicopter flights on Hualapai tribal lands.

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NS8

The Organic Act, 16 U.S.C. 1, and the Redwoods Amendment, 16 U.S.C. 1a-1, impose high standards of protection for national parks, and mandate that activities within the parks are not to be exercised in derogation of the values and purposes of the park. When in conflict, resource protection always takes priority, by law, over visitor activity and use. The proposed Plan unlawfully perpetuates impairing activities (as measured by objective Wilderness mandates and other directives) such as motorized uses, crowding and concessions activities not formally found to be necessary and appropriate, all of which contribute to ongoing environment degradation and the impairment of values and purposes of the park.

RESPONSE:

Section 4.1 contains a discussion of the requirements of an impairment analysis and both the Draft and Final EIS contain impairment evaluations and determinations for applicable impact topics for each alternative (chapter 4). The impairment determinations presented in this EIS indicate that no impairment of park resources or values is expected to occur from activities associated with river recreation under any of the alternatives. In addition, the monitoring and implementation plan will determine and implement measures required to reduce impacts to appropriate levels.

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NS9

Why not allow some trips using Whitmore or the Helipad as a launch site so the noncommercial users get some benefit from the situation rather than just hearing the noise? It would increase trip diversity, make a great four to six day trip, and use up noncommercial river days.

RESPONSE:

Noncommercial river trips may currently exchange passengers virtually anywhere in the canyon if the exchange passengers comply with backcountry use policies and regulations in getting to and from the exchange point. The NPS has no authority over transportation outside the park boundary. Therefore, the Modified Preferred Alternative H only specifies the number, time and location that exchanges may occur, not the transportation method a visitor may choose outside the park boundary.

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NS10

The NPS policy to protect natural soundscape is impacted by motors and helicopters. If the NPS is serious about “preserving the natural soundscape for the enjoyment of future generations,” as its policy and GMP state, then the agency should abandon Alternative H as the preferred alternative.

RESPONSE:

While motorboats and helicopters do impact the natural soundscape, preserving the natural soundscape does not require excluding all human noise sources. As evidenced in the impacts analysis, the NPS believes that Modified Preferred Alternative H fully complies with all laws and policies, including those related to natural soundscapes.

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NS11

Pages 86 and 87 of the *DEIS* presents the agency's interpretation of Criterion 2: Interestingly, the park determines the nonmotorized Alternatives B, C, and the motorized preferred alternative "H" all equally "exceed" this criterion. Although Alternatives B, C, and H all "exceed" this criterion, of these three only the Preferred Alternative H permits continued motorboat use helicopter exchanges. Alternative H is quantitatively and qualitatively inferior to Alternatives B and C in meeting this resource protection requirement, yet it receives an identical rating to the nonmotorized alternatives.

RESPONSE:

Please see revisions to the Environmentally Preferred Alternative analysis. The Modified Preferred Alternative H has been rated as meeting, not exceeding, Criterion 2.

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NS12

The *DEIS* (p.88) presents the NPS version of Criterion 6: Given that, as reiterated in the *DEIS*, "Preserving the natural soundscape for the enjoyment of future generations and preventing impairment of park resources is a major component of the NPS mission," Alternative H and its retention of motorboats and helicopter exchanges should be rated as not meeting this criteria.

RESPONSE:

Please see revisions to the Environmentally Preferred Alternative analysis and the response to comment MISC #9.

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NS13

Generator use is the symptom, not the problem. Please crack down on noise pollution by giving warnings, giving fines, encouraging communications, and providing opportunities to report people to NPS after they've tried to communicate. Many boaters use motors to run blenders or pump water. Other boaters play loud music. Still others have parties where their voices are the problem. Generators should not be allowed in Zone 2.

RESPONSE:

The restriction on generator use remains in the *FEIS* as an element common to all alternatives; however, a phrase has been added to allow exceptions to be considered on a case-by-case basis. Violations of operating requirements can result in warnings, fines, and other penalties. Communication is always encouraged, as well as minimum impact practices, which would encourage visitors to minimize the impacts of their activities on the environment as well as on other people, including at attraction sites or when camped within sight or sound of another group.

## NS14

The *DEIS* states that the NPS has an obligation to ensure that recreational experiences are offered in an appropriate setting and that such experiences do not take place where they will cause irreparable impact to air quality, wildlife, cultural areas or the experiences of other park visitors, or other park values and resources. It is the task of the NPS to restore degraded soundscapes from degradation from noise pollution. Furthermore, the NPS will not allow visitors to conduct activities that either impairs park resources or values or that unreasonably interferes with the atmosphere of peace and tranquility or the natural soundscape maintained in wilderness. In fact, public use of motorized equipment or any form of mechanical transport is prohibited in wilderness eligible areas.

By all accounts the current management of the Colorado River is in conflict with the legal and regulatory obligations of the NPS. For the river to be open to both motorized and nonmotorized users, nonmotorized users have their respective experiences diminished with the sound and quantity of motorized river transports. These vehicles affect the solitude, quiet, clean air, and other resource values that many people expect and wish to enjoy in natural parks. Motorized river transport results in harassment and unintended impacts on wildlife, degradation of air quality related values and impacts on the natural soundscape. Many people strongly object to the degradation of the parks' inherent values, as well as how these impacts affect people and their recreational opportunities. Natural sound is vital to the visitor experience at the park and can provide valuable indicators of the health and "naturalness" of the ecosystems found in the park.

## RESPONSE:

The NPS believes it is managing the river corridor appropriately, consistent with wilderness policy and law. New sections on "Wilderness Character" have been added (Sections 3.8 and 4.8) in the Final EIS to clarify this. The NPS has determined that the continued use of motorized rafts does not preclude possible wilderness designation because this use is only a temporary or transient disturbance of wilderness values on the river.

In this EIS, the NPS has determined that no impairment of park resources or values is expected to occur from activities associated with river recreation under any of the alternatives (see Section 4.1 for a discussion of the impairment requirement and definition).

The Modified Preferred Alternative H proposes more than six months of the year when people who do not want to experience any motorized boat noise can do so.

The NPS will prepare a soundscape management plan for the park that will consider more comprehensively activities that impact the park's soundscape, and measures to reduce or eliminate those impacts.

## NS15

Motorized river transport has been widely discussed as impairment to the management of the Colorado River for over 30 years. Some respondents believe there would be a major beneficial effect on visitors' ability to experience natural quiet and solitude through the elimination of motorized river transport. In addition, there would be a substantial reduction in vehicle emissions that would provide a major beneficial improvement in opportunities to experience clean air in the parks. Not only will air quality, water quality and aquatic life be improved, but there will also be major positive effects on the natural soundscape, both in degree and in the size of the sections of the park that won't be subjected to audible noise.

NPS Management Policy 1.4.7, contains the standard that the NPS must apply in decision making to avoid impairments of the park. Given the fact that the prior *FEIS* and *Record of Decision* have concluded that current management of the Colorado River is impairing both the River and the Grand Canyon National Park's resources and values, alternatives that correct such deficiencies must be considered for the 2004 *Colorado River Management Plan* EIS. NPS Management Policy 1.4.7 also mandates that once it is determined that certain activities are causing an impairment to park resources or values, corrective actions must be taken to eliminate the impairment as soon as possible. It had been previously determined by the Director and the NPS that the above-noted impairments can be corrected. Nothing in the current *DEIS* and supporting appendices supports extending that deadline and delaying the corrective actions that must be taken to remove these impairments. Therefore, in accordance with the mandates in NPS Management Policy 1.4.7 and in light of the impairment to the parks and the corrective actions stated in prior *FEIS* and *Record of Decision* to remove the impairment, the NPS must consider and should select alternatives in the forthcoming EIS that do not delay the removal of impairments to the Colorado River.

RESPONSE:

In both the Draft and Final EIS, the NPS has determined that no impairment of park resources or values is expected to occur from activities associated with river recreation under any of the alternatives. Additionally, there has never been a determination by the NPS of impairment of the natural soundscape or other resources at Grand Canyon in any EIS or *Record of Decision* or other decision document. The definition of impairment in NPS policies is very specific, and is not met in this case (see Section 4.1).

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NS17

The NPS singles out generators (*DEIS* page 31) when the real issue is protecting visitors' opportunity to experience the natural soundscape of the canyon (*DEIS* page 12 and pages 332-367). All intrusions to the natural soundscape should be evaluated for how they might be mitigated in the Commercial Operating Requirements (COR's). Some respondents recommend, for example, the elimination of boom boxes (portable electronic music playing devices) as one of the more egregious human caused noise impacts.

RESPONSE:

The operating requirements listed in Section 2.3.1 are only those being changed or added; established procedures for changing operating requirements will not change. If monitoring data collected as part of the implementation of the *Colorado River Management Plan* indicate a need, measures may be added to the operating requirements to meet the management objective in Table 1-1 (Section 1.4.5) to "Manage river recreational use in a manner that is consistent with management zoning while minimizing the adverse effects of human caused noise impacts to the natural soundscape or natural quiet."

Additionally, the soundscape management plan to be prepared independent of the *Colorado River Management Plan* will consider such measures to minimize intrusions to the natural soundscape from all activities, equipment, and practices in the park. See also Section 4.8 regarding wilderness character.

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NS18

Some respondents recommend the use of quietest available outboard motor technology, and disallow the use of generators for inappropriate purposes. Using generators for the pumping of rafts, for example, is not appropriate (you suggest that it is), especially since raft pumping generally occurs early in the morning, which is one of the most profound periods of the day to experience the natural soundscape. Four appropriate

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uses of generators that you don't mention are (1) recharging batteries for filming, (2) electronic support of medical devices for persons with disabilities, and (3) recharging batteries for experimental electric engine propulsion of motorized rafts. Further, generator use for purposes allowed should be used onboard the raft in the motor well (away from camp) or preferentially at times when the natural sound of a rapid nearby might mask the human induced noise.

RESPONSE:

The use of best available technology for motors is a mitigation measure identified for all alternatives in Section 4.2.4. Additionally, if monitoring data collected as part of the implementation of the *Colorado River Management Plan* indicate a need, measures such as the one suggested in the comment may be added to the operating requirements to meet the management objective in Table 1-1 (Section 1.4.5) as described above. A provision has been added to the Operating Requirements section allowing limited exceptions to the restrictions in matters of safety (e.g., medical devices) or to reduce impacts to park resources or visitors. However, there are often other ways, such as solar power, to perform tasks such as recharging batteries that should be used if possible.

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NS19

Table 1-1 lists the GMP natural soundscape management objective to “Protect the natural quiet and solitude of the park, and mitigate or eliminate the effects of activities causing excessive or unnecessary noise in, over, or adjacent to the park” (*DEIS* page 12). The word “unnecessary” certainly applies to engine powered boats in the park.

RESPONSE:

The effects of different levels of mixed-use (i.e., motorized and nonmotorized use) and nonmotorized-only use is one of the major issues analyzed in this EIS. Almost all motors create some noise (even when using best available technology). Noise is only one factor in determining whether motorized boats should be allowed on the river, as evident throughout this EIS. The term “unnecessary” in the above context is not meant to be applied to whether there should be motors at all. It refers to noise that would be outside the range produced by motors reasonably available and suitable for the intended purpose (including reasonable noise controls), such as noise caused by removing a muffler, or using a very loud high-powered engine when a relatively quiet low-powered engine would meet the need. See also Section 4.8 regarding wilderness character.

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NS20

It is clear that protection of park resources, such as the park's natural soundscape, should take precedence over activities that would compromise the resources. Protection of park resources should take precedence over the desire of some to take part in activities that require engines and motors. These devices impair the natural soundscape. The fast motion and noise of motorboats does not “provide a wilderness-type river experience in which visitors can intimately relate to the majesty of the Grand Canyon and its natural and cultural resources.” While it may be necessary to have powered devices in the frontcountry (near hotels, etc.), they are clearly unjustified in the backcountry. If there is any justification for powered devices in the backcountry, it has not been presented in the *DEIS*.

## RESPONSE:

In both the Draft and Final EIS, the NPS has determined that no impairment of park resources or values is expected to occur from activities associated with river recreation under any of the alternatives (see Section 4.1).

The effects of different levels of mixed-use (i.e., motorized and nonmotorized use) and nonmotorized-only use is one of the major issues analyzed in this EIS, and Alternatives B and C have no-motors at any time. The NPS believes it is managing the river corridor consistent with wilderness policy and law, and that the Modified Preferred Alternative H provides a wilderness river experience consistent with the plan's vision and objectives. New sections on "Wilderness Character" have been added (Sections 3.8 and 4.8) in the Final EIS to clarify this. The NPS has determined that the continued use of motorized rafts does not preclude possible wilderness designation because this use is only a temporary or transient disturbance of wilderness values on the river.

The Modified Preferred Alternative H proposes more than six months of the year when people who do not want to experience any motorized boat noise can do so.

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## NS21

Motorboats are obviously not appropriate in the natural zone. However, because of sovereignty issues, it may be impossible to prevent motorboats in the Hualapai jurisdiction area. Some respondents suggest that the NPS negotiate with the tribe in an effort to protect the whole river corridor from the compromise of the natural soundscape.

If motorboats are allowed below Diamond Creek, it would provide "a diverse range of visitor experiences" (*DEIS*, 33) while saving the corridor from River Mile 0 to Diamond Creek for a "wilderness-type river experience" (*DEIS*, Vol. 1, iii).

This would allow persons that want a shorter trip to meet their desires. Shorter motorized Grand Canyon trips are also currently available between Glen Canyon Dam and River Mile 0. There are also other ways to meet the desire for shorter trips, e.g., hiking in or out at Hermit Trail or Bright Angel Trail. Diversity of visitor experience is clearly a secondary goal compared to the "fundamental" goal of resource protection. It is completely clear that there is no justification for allowing motorboats between River Mile 0 and Diamond Creek.

## RESPONSE:

The suggestion to allow motorized use below Diamond Creek and only nonmotorized use above Diamond Creek is inherent in Alternatives B and C when combined with any of the Lower Gorge alternatives in both the Draft and Final EIS. A Lower Gorge alternative with only nonmotor use was considered and rejected in deference to concerns expressed by the Hualapai Tribe during the development of alternatives for the Draft EIS.

The commenter provides examples of the diverse opportunities currently available for trips of different lengths, use of motorized and nonmotorized boats, and points to enter and exit Grand Canyon river trips. Such diversity of opportunities would continue under the Modified Preferred Alternative H, with an analysis of both their beneficial and adverse impacts in the EIS. See new Wilderness Character Section 4.8.

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## NS22

Table 2-4 (*DEIS* page 55) summarized the environmental impacts for Zone 1 on the natural soundscape, among other things. It is certainly not clear from the table that motorboats have a critical impact on the soundscape. All alternatives are classified as “overall adverse,” with some minor differentiation as to the effects. The table does not reflect that motorboats have dramatically different effects on the visitor experience than human powered boats.

In the visitor experience impact topic row of the same table, the improved experience of being on a quiet boat, moving at a natural speed, is not discussed, but should be because this is a very significant factor.

## RESPONSE:

Table 2-4 is simply a summary of the several hundred pages of analysis in Chapter 4. The impacts analysis concerning Visitor Use and Experience (Section 4.4) describes differences in expectations as well as experience for people on various types of trips.

## NS23

In an effort to understand differential impact from motoring vs. rowing, Dr. Tom Heberlein set up a two-trip experiment with one of the commercial operators that ran both ways. Two trips (one motor and one oar boat) started so they would meet at RM 110 and exchange passengers. The trips were advertised as a chance to experience both travel modes. The passengers were reportedly open-minded about both types of travel. Before the trip, the majority of the passengers said they did want to try both, although a quarter indicated they would have preferred rowing.

After the trip, the researchers gathered information about preferences, reasons for preferences, the advantages of each trip type, and one-word characterizations. Rowing was reported to be more relaxed, had more stops, was quieter, slower, and allowed a more Canyon-attuned experience, including the adventure of being able to row. Rowing also featured the social advantages of smaller, more conversational groups who could talk with crew more easily (Ingram 2003. *Hijacking a river: A political history of the Colorado River in the Grand Canyon*. Flagstaff, Arizona: Vishnu Temple Press).

Motorboat passengers reported 98 positive and 76 negative one-word descriptions. By comparison, oar powered boat passengers recorded 171 positive words and only seven negative one-word descriptions. Overall, the data showed an approximately nine to one preference for oar boats over motorboats.

## RESPONSE:

Dr. Heberlein’s research has been carefully considered in developing the EIS, along with many other studies and sources of information. The results of such research are summarized in the impacts analysis in Section 4.4, and in Appendix G. While there is certainly support for nonmotorized experiences and trip types, there is certainly also support for motorized experiences and trip types.

## NS24

The statement that “The current percentage of the park affected by aircraft noise has not yet been computed” (*DEIS*, 129) is a little surprising to us considering that noise data have been taken for years, including though 2004. The Federal Aviation Administration (FAA) and NPS have, since 1996, used models to calculate audibility and noise impacts due to aircraft. The FAA published such data for tour aircraft in 2001 showing that the criteria for substantial restoration had not been met and that only 19% of

the park area was quiet for at least 75% of the day (Final Supplemental Environmental Assessment on West End Route Changes). Compliance with the 1987 National Parks Overflights Act and enablement of the upcoming Alternate Dispute Resolution (ADR) process will require updated computations through 2004, as well as projections to 2008 and beyond. In any event, updated data will be made available soon during the ADR process (Lynn Pickard, FAA Sr. Advisor for Environmental Policy, statement made at ADR stakeholder meeting, Flagstaff, Arizona, 29 Sept 2004).

RESPONSE:

While there have been past efforts that have computed percentages of the park achieving substantial restoration of natural quiet, as of July 15, 2005, the FAA and the NPS have not jointly used and publicly “accepted” an aircraft noise model assessment of the current progress towards “achievement of substantial restoration of natural quiet at Grand Canyon National Park (Grand Canyon National Park).” It is true that noise data have been collected for years, including though 2004. It is also true that the Federal Aviation Administration (FAA) and NPS have used models to calculate audibility and noise impacts due to aircraft. The FAA published such data for air tour aircraft in 2000 showing that the criteria for substantial restoration had not been met and that only 19 percent of the park area was quiet for at least 75 percent of the day (FAA 2000). It is also true that the Federal agencies could not agree on the accuracy of this model prediction, and that FAA soon provided similar data showing that their model predicted around 40% of the park had been restored. With the two Federal agencies not being able to agree on the results and interpretation of the aircraft noise model predictions, the subsequent Model Validation Study was conducted and a report published in 2003 (HMMH 2003). Further disagreement over the results and conclusions of this study led, in part, to the ongoing Alternative Dispute Resolution Process mentioned in the comments. From these efforts a formal agreement by the Department of Interior-NPS and Department of Transportation-FAA was created to have another review of the models’ performance and usability for predicting aircraft noise conducted by the Federal Interagency Committee on Aircraft Noise (FICAN). Their review and recommendations from the study were released in March, 2005. From this effort a newer version of the FAA-INM model was selected to provide the “most reliable” estimate of progress towards achievement of substantial restoration of natural quiet at Grand Canyon National Park.

It has been agreed by the Federal agencies that by late November or December of 2005, the most current prediction of the percentage of the park affected by aircraft noise will be completed, and the first prediction by the NPS and FAA, using all aircraft in the aircraft noise model, will be made on the success of restoring natural quiet to Grand Canyon National Park.

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NS25

Some respondents disagree with the statement under the heading “Context” (*DEIS*, page 337) that states that different management zones have different sensitivities for sound impacts. While in the end we may have to accept that certain areas are significantly affected by noise and other resource losses, that doesn’t make any backcountry areas of the park less sensitive to noise. For instance, current law (PL 100-91) allows some helicopter exchanges at Whitmore. Although this is allowed, it in no way decreases the impact to the park environment. While we should strive for negligible impact for most of the river corridor, we may have to accept moderate or even major impacts at certain locations. Accepting an impact does not make the impact less minor instead of moderate.

RESPONSE:

According to NPS Management Policies (2001) Section 2.3.1.3, management zones are “prescriptions for resource condition, visitor experience, and appropriate management activities to reflect the suitability of

specific areas for those uses.” Areas determined to be suitable through the zone definitions will be less sensitive to certain types of impacts; that is, an action that moves the area away from the prescription for the zone will have more impact than an action consistent with the prescription for the zone. This sort of sensitivity consideration is common in park planning, and is why, for example, 100 square feet of vegetation removal for a campsite in a developed zone campground will be considered much less impact than the same amount of vegetation removal for a campsite in the park’s backcountry. The soundscape may also vary considerably within a zone, due, for example, to changes in vegetation type and the amount and type of human activity, which may make different soundscapes vary in terms of sensitivity within a management zone.

## NS26

The *DEIS* (pages 337, 338) discusses four “intensity” classifications: Negligible, Minor, Moderate, and Major. Such a discussion has no meaning outside of a given context. For instance, reasonable noise in a city or near an airport would be completely inappropriate in a national park, and would be ridiculous in the Grand Canyon backcountry. Some of the appropriate rules in the park would be inappropriate in a city center.

Considering that the Grand Canyon in its natural state can “give rise to inspirational/spiritual values and a sense of timelessness” (*DEIS*, 10) and that “The Colorado River corridor in Grand Canyon National Park will be managed to provide a wilderness river experience ... with as little influence from the modern world as possible ... in a wild and primitive condition.” (GMP quoted in *DEIS* at 11), the intensity classifications should be appropriately calibrated.

The table below summarizes the NPS proposal for these classifications. It also includes values that may be more reasonable, considering that these are for the Grand Canyon backcountry.

	<b><i>DEIS</i></b> <b>Class</b>	<b>Proposed</b> <b>Standard</b>
—	(percent time audible)	( percent time audible)
<b>Negligible</b>	0 – 5	0 – 1
<b>Minor</b>	5 – 10	1 – 5
<b>Moderate</b>	10 – 25	5 – 20
<b>Major</b>	> 25	> 20

Negligible – To say that 36 minutes time audible (5% of 12 hours) of noise in the inherently quiet backcountry is negligible, is not supported in the *DEIS* and is not supportable. To people that backpack to the river, any intrusion is significant. This is especially true for solo hikers. Even the suggested seven minutes (1%) is not truly negligible. The negligible classification should be reserved for scenarios that would not affect the Colorado River management when compared to the natural condition or the effects would not be apparent to the park staff or public (*DEIS*, 700). To say that a visitor would not notice 36 minutes of noise is incorrect.

Minor – Similarly, to say that 72 minutes (over an hour of audible noise, 10% of 12 hours) is only minor, is also not supported. The noise-free interval would depend on factors such as how the boats are grouped and how they were spread throughout the day. However, in several cases that we calculated, we estimated average noise free-intervals are more on the order of two hours or less, significantly less than the suggested 3.5 hours. This was assuming that all boats in a party stayed together, which gives the highest noise free-interval. Thirty-six minutes (5%) for the maximum time audible for the minor category is suggested. Anything over 36 minutes, well over half an hour, is not minor, but moderate at best. Thirty-six minutes

time audible would also translate to longer noise-free intervals, possibly approaching the number discussed in the *DEIS*.

Moderate and Major –144 minutes (20% time audible) would be a more appropriate criterion for moderate and that this is at best moderate, while 180 minutes (25%) is clearly major. The moderate-to-major cutoff for Yellowstone National Park backcountry is 20% time audible (NPS 2004. Environmental assessment temporary winter use plans Grand Teton/Yellowstone National Parks John D. Rockefeller, Jr. Memorial Parkway. At 105, 106. Available at <http://www.nps.gov/yell/winteruse-ea>).

The cutoff from major should be 20% and above, rather than 25%, considering it is for the Grand Canyon backcountry and not a theme park.

RESPONSE:

The impact thresholds used in the *DEIS* were consistent with the park's 1994 definition of substantial restoration of natural quiet (i.e., 50% or more of the park achieve "natural quiet" (i.e., no aircraft audible) for 75-100 percent of the day), which has received intense scrutiny in the courts as well as public planning processes. That is, by that definition aircraft noise could be audible up to 25% of the day in up to 50% of the park before reaching the threshold for substantial restoration of natural quiet. Therefore, 25% was also considered a logical threshold for "major" impact intensity in this EIS, and the thresholds for the other levels were derived consistent with the "major" intensity threshold. While it might be possible to use different rationales and derive many different thresholds, those used in the *DEIS* have a reasonable basis as described here and in Section 4.2.4, and they are not changed in the Final EIS. The use of different thresholds would not be likely to change the relative differences in impacts between the different alternatives.

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NS27

The cumulative impacts analysis in the *DEIS* (339, 340, 345, et al.) is quite inadequate. For instance, it does not evaluate the extent of planned development for the Grand Canyon West airport. It does not fully evaluate the number of projected flights, the number of tourists expected, the added infrastructure, and the related noise impacts within the park. There is no discussion of the need to mitigate (limit) the non-essential parts of shuttle trips. As noted in the *DEIS*, helicopters unnecessarily fly along the river (to add to the theme park aspect of the rides). While passengers may or may not appreciate this added part of the ride, it exacerbates the noise pollution.

The *DEIS* states that the number of daily commercial air tours and shuttle flights flown have not been provided to the NPS in time for consideration in the *DEIS* (page 341). These numbers should be added to the next draft of the *DEIS* or in the final EIS. The park already has data from 1997-1998, which were used to set the numbers cap.

RESPONSE:

The NPS has no authority over flights on Hualapai tribal lands, so it cannot directly control or mitigate impacts associated with the flights. However, the NPS considers deviations over the river as a problem, and will work with the Hualapai Tribe and FAA to address the problem. The effects of normal river-related shuttle flights are evaluated in the effects of the alternatives, and the effects of flights not associated with river recreation are evaluated in the cumulative effects analysis. As described in Section 4.1, cumulative effects are determined by evaluating the incremental effect of the alternative when combined with other past, present, or reasonably foreseeable future actions within and outside the area of potential effect. The

details of future planned development, number of flights, etc. are a matter of conjecture. The Hualapai Tribe and the FAA have provided only limited data on flights related to Grand Canyon West and Quartermaster operations to the NPS. The 1997-1998 data referred to in the comment only include air tours, and do not include the many other types of flights important to this analysis. Also, ranger patrols indicate that flights in the Quartermaster area have increased significantly since 1998.

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NS28

Some respondents thought the impact levels should be revised. For instance, for Alternative H (*DEIS*, 365), the estimated 39 minutes translates to 5.4%. Under the criteria that we recommend, it should be classified as moderate. We note that while the *DEIS* classified 39 minutes as negligible; since it was over 5.0 percent, by the parks own criterion it should have been classified as minor rather than negligible.

RESPONSE:

The 39 minutes in Alternative H refers to nonmotorized trip noise. In addition to the 5%, the criteria also states that negligible impact is 36 minutes or less. So the *FEIS* has been revised in response to the comment to a minor rather than negligible impact, and the other calculations and conclusions have also been re-checked and revised as needed.

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NS29

All of the alternatives that allow motorboats assume that the motorboat passengers and crew are subjected to 3.5 hours of engine noise per day (*DEIS*, 364, et al.). From where did this number come? However, accepting the 3.5 hours per day number for the sake of discussion that would be 29% of a 12 hour day. That would be a major impact by the *DEIS* criterion. Thus, all motorboat passengers are subjected to major loss of the opportunity to experience one of the quintessential park resources—the natural soundscape. Their river experiences are lessened to an unacceptable level.

Even if the motorboat passengers were subjected to no more than 3.5 hours per day of engine noise, they were robbed of the opportunity to listen to the natural sounds of the river as it floated with the current. While they may not complain of this missed opportunity, they may not even know what they missed. There is no doubt that they would have had a different river experience if the natural sounds would have been available— indeed, an experience more in tune with the park goals discussed in the introductory material in the *DEIS* and discussed in the first part of this letter. The projected exposure of 3.5 hours of engine and increased-speed wake noise is a major impact.

RESPONSE:

The 3.5 hours is an estimate based upon the assumptions detailed at the beginning of Section 4.2.4 that Grand Canyon motorboats travel an average of 40 miles per day and travel at about 10-12 miles per hour when motoring down the river. Because many motorboat operators turn off or throttle down their motors at various times, a rounded estimate of 3.5 hours of motor time to travel the 40 miles was used. The actual time a motor is used would depend upon the individual boat operator, the type of boat and motor, and other factors such as water levels (i.e., more motor time at low water levels), and actual trip length (i.e., more motor time per day for shorter trips).

Motorboat passengers choose their type of trip with the full knowledge that there will be motor noise on the boat. Section 4.4 Visitor Use and Experience considers the different expectations of motor and nonmotor passengers. While there is certainly a different experience on a motorized compared to a nonmotorized

boat, there are advantages and disadvantages to each type, and more than 70% of current commercial passengers choose motorized trips. The impacts analysis breaks out the noise on motorized and nonmotorized trips, and for points on the shore as such trips pass by, so that readers can consider the differences. Noise is but one of the many factors to consider in assessing the impacts of the different types of trips in the alternatives.

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NS30

The character of the noise should also be taken into account. While low level conversations between passengers on a boat are audible, they in no way have the impact of inappropriate engine noise. Additionally, on small boats, the conversation level is quite low as compared to large boats with engines and large numbers of people. Total group size and the number of people on an individual boat affect the river experience. Although the sound of an oar powered boat drifting through the river is not technically a natural sound, it is compatible with a wilderness experience because it is very low intensity and is not engine powered.

RESPONSE:

The impact analysis specifies sounds from the different trip types separately so that they may be considered separately as well as combined together. As implied in the comment, to some people any human noise is an impact upon the natural soundscape and a wilderness experience, while some people consider certain types of human sound and/or certain amounts of it appropriate or compatible. Please refer to the analysis in Chapter 4, Visitor Use and Experience and Appendix G regarding people's preferences and expectations on river trips.

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NS31

Why doesn't the NPS require an EIS that addresses the noise caused by motorized boats and helicopters?

RESPONSE:

This EIS extensively addresses the noise associated with motorized boats. As explained in the Issues section at the beginning of Section 4.2.4, aircraft noise is included in the analysis of impacts of the alternatives only to the extent that helicopter shuttles transport passengers who are also river passengers. Other aircraft are considered in the cumulative effects sections. The soundscape management plan (and its accompanying NEPA document) to be developed by the park independent of the *Colorado River Management Plan* will also address all noise sources.

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NS32

If you want to make changes in the way people use the area, please start with more restrictions on aircraft, perhaps limiting the flights to a few hours a day, or requiring a minimum elevation of 5,000 ft. or so while over the canyon.

RESPONSE:

As stated in Sections 1.6 and 1.7, aircraft overflights are being addressed in other planning efforts, and are under the jurisdiction of the FAA. A soundscape management plan will also be developed by the park, and it will consider noise from all sources, including overflights.

NS33

If you are already limiting the launch dates, number of passengers, and user-days this should decrease the helicopter exchanges. However, to put all your helicopter exchanges into 4 months, you increase that impact in those four months. Spread out the use and the impact will decrease. Inform all launches of the exchange if they will be in the area on a busy day! It is only a one mile stretch from upstream and downstream that is the true impact zone.

RESPONSE:

The Modified Preferred Alternative H allows Whitmore exchanges April through September. However, because the NPS has no authority over transportation outside the park boundary, the Modified Preferred Alternative H only specifies the number, time and location that exchanges may occur, not the transportation method a visitor may choose outside the park boundary. All passenger exchanges must be completed by 10:00AM local time under the Modified Preferred Alternative H.

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NS34

Some respondents commented that motors should be allowed for a portion of the year, maybe six months, but they should be almost silent (inaudible at 100 ft on still water, for example) and virtually non-polluting.

RESPONSE:

The Modified Preferred Alternative H provides for a 5.5 month motorized season, and the use of best available technology to minimize noise, air and water pollution is a mitigation measure identified for all alternatives. However, even best available technology motors may produce some noise and air pollution.

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NS35

Referring to sound pollution from motors at a given point was 8% and nonmotor trips were at 4%. This information is totally incorrect. Often motors pass a camp undetected. Possibly in a few totally quiet parts of the river ten minutes, but usually less. Where as a rambunctious row trip can be spread over 45 minutes or better?

RESPONSE:

The behavior of specific individuals or individual trips can be either more or less impacting than the averages shown in the analysis. The estimates in the analysis are based upon the methodology and assumptions detailed at the beginning of Section 4.2.4.

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NS36

Some still perceive motors to cause noise and air pollution. There is no negative impact to air quality caused by 4-stroke motors. Certainly very little disturbance to the wildlife is caused by motorized rafts, as the mountain goats walk down to water or continue to browse as rafts drift by. Guides are encouraged to idle down when passing wildlife, or any other group on the river. This courtesy has become standard operating procedure, which no one can reasonably object to who has been there.

## RESPONSE:

Behaviors that reduce impacts are always encouraged, and in some cases may become part of the commercial or noncommercial operating procedures, or part of standard operating procedures for specific companies. However, where such procedures may and do vary, they cannot be assumed to be included for impact analysis purposes. However, they may be considered in the monitoring and mitigation program.

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## NS37

There is no analysis of the loudness, or dBA, caused by outboard boat motors, helicopters, overflights or other noise sources. In the *DEIS* impacts from outboard boat motors, helicopters, and commercial air tours are equal to camp activities and hiking sounds (page 344).

## RESPONSE:

Please see revised text in Section 4.2.4.4. Estimates of the audibility of the different types of sounds in the river corridor are identified separately in the analysis, including the best available data. Decibel values alone are not very useful in assessing impacts on natural soundscapes, park visitors, and other park resources. In this case, the NPS believes that the audibility estimates presented adequately allow assessment of the relative soundscape impact differences between the alternatives using the best available data and methods. Additional monitoring and mitigation (for example, the use of best available technology) is identified as a mitigation measure. In addition, a soundscape management plan, which will examine soundscape impacts in a more comprehensive manner for the entire park, is scheduled to be prepared in the near future.

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## NS38

Noise, or natural “soundscape,” impacts are indicated as adverse in the summary table (page 55) for all alternatives, even those without motorized rafts. However, the impacts are from airplane over flights, an issue not addressed in the *DEIS*. For example, “Alternative C would have beneficial... (impact) as it would reduce noise compared to Alternative A, but even if all noise from all river recreation was eliminated from the park, the cumulative effects of aircraft noise would still be adverse and major” (page 352). So, the whole Natural Soundscape section needs to be rewritten.

## RESPONSE:

The first part of the quote in the comment refers to the direct and indirect impacts of the alternative, which do not include aircraft overflight impacts except in the vicinity of Whitmore and Quartermaster where river passengers are shuttled by helicopter (see the issues, methodology and assumptions at the beginning of Section 4.2.4). The second part of the quote refers to cumulative impacts, which do include aircraft overflights and other actions not associated with river recreation. The analysis in the Final EIS correctly separates the two situations and does not need to be rewritten.

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## NS39

The analysis looks at how far noise travels through the air but, in addition, the analysis should also be done for how far noise travels through water.

## RESPONSE:

The following text has been added to Section 4.2.4.4.5 to address the comment: “This analysis focuses on sound traveling through the air. Although sound from boat motors also travels underwater, the likelihood of significant underwater sound impacts from the type and number of motorboats used in the Grand Canyon is small enough to not warrant additional analysis. The limited information available about underwater sound propagation from outboard motors similar to the four-stroke motors used in Grand Canyon indicates that river organisms are more likely to be injured by physical contact with the propellers than by sound produced underwater by the motors (Dr. Kurt Fristrup, personal communication). Expected broadband sound levels (integrated over all frequencies radiated by the motor) are expected to be below the level of 180 dB re 1 uPa at one meter, the level above which biologists are very concerned about the potential for injury of aquatic organisms. Behavioral effects would be expected to be limited, due to the limited range at which outboard motor sounds could be detected and the relatively brief exposure that each boat would normally present. The scenario with the greatest potential for impacts would be in a calm section of the river where several boats might be spaced not much more than the maximum distance of detection. The fact that freshwater fish do not generally have very sensitive hearing and many species may not actively use sound for communication would temper concerns. In addition rapids, air bubbles, eddies, and other characteristics of the flowing river would tend to attenuate underwater noise propagation in many places.

## NS40

Page 332 of the *DEIS* states that helicopter noise is limited to the Quartermaster area for the Lower Gorge Alternatives. This is misleading as the helicopters fly in the canyon along the river to reach Quartermaster resulting in helicopter noise for a long distance downstream of Quartermaster. This should be noted in the discussion.

## RESPONSE:

Helicopter shuttles related to river passengers are limited to the Quartermaster area in the Lower Gorge, approximately River Mile 260-263. Helicopters following the river outside of that area should be on the air tour routes (i.e., above the canyon rim), and be associated with air tours or air transport rather than river shuttles.

## NS41

It should be noted that camp (evening) noise is less likely to be as intrusive for other groups since they are also probably camping (some may still not have reached their camp) and likely are not within ear shot. This is different than noise during the day when encounters between groups are more likely. There are some camps located close enough to other camps where evening noise can intrude, which is a consideration.

## RESPONSE:

An important component of a wilderness river experience is generally not having different groups camped within sight or sound of each other. In areas where that is possible, the sound of other groups when camped in the evening can be a substantial impact on visitor experience for some people. Also, the evening and nighttime is often considerably quieter than the daytime, so noise tends to be audible at greater distances.

## NS42

Boat noise at a single point in Zone 2 is given in a table. All of the alternatives have noise rated as major in intensity and the most notable thing is that the park’s Preferred Alternative 4 is the worst. On page 380-1 it simply is not credible that Alternative 4 can be mitigated to minor intensity. This is completely

unacceptable for Zone 2, which is supposed to be managed as semi-primitive (page 33). It is also clear that jetboat pickups and tow-outs (not quantified and included in the table) should not be allowed in Zone 2.

RESPONSE:

The analysis on *DEIS* pages 380-381 indicate that impact levels could be reasonably reduced to minor levels with mitigation only in Zone 2, but not in Zone 3 for Alternative 4. Although Modified Preferred Alternative 4 has several revisions compared to *DEIS* Alternative 4, the conclusions did not change regarding mitigation in the two zones.

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NS43

In the conclusion for Alternative A on page 346 a single point on the river is used to quantify the noise. A person riding on a motorized raft experiences much more noise and since the park is required to consider peak or maximum levels of noise this may be a more appropriate viewpoint and more consistent with the actual visitor experience.

RESPONSE:

The conclusions for all the alternatives consider both the noise at single points along the river corridor, as well as noise experienced by motorized boat passengers. As considered in the Section 4.4 Visitor Use and Experience, though, motorboat passengers choose to travel on such a boat, so they have different expectations and impact levels than people on shore or in other groups on the river (i.e., point locations) that may hear the motor passing by.

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NS44

Page 348 of the *DEIS* states, “Alternative A would not result in the impairment of the natural soundscape in Grand Canyon National Park.” It is not clear what constitutes impairment but since Alternative A has major adverse long-term regional impacts it is difficult to understand such a statement. Even without overflight noise, “the noise expected at a single point on the river (from river trips is) about 23% of the time audible, a moderate intensity level” (page 344). Someone on a motorized raft would “experience noise from the boat’s motor operating approximately 3.5 hours (210 minutes) per day” or 29% of the time not including noise from other groups. A more accurate statement would be: “Impacts that are subject to Park management would result in an impairment of the natural soundscape for Alternative A. It is expected that sources of noise outside of Park control (overflights, etc.) also would result in impairment of the natural soundscape.”

RESPONSE:

Both the Draft and Final EIS contain impairment evaluations and determinations for each resource impact topic and each alternative. Section 4.1 contains a discussion of the requirements of an impairment analysis and the definition of impairment as it relates to the NPS Organic Act. While impacts may be as high as “major” for some impact topics under some alternatives, the NPS has determined that no impairment of park resources or values is expected to occur from activities associated with river recreation under any of the alternatives. In addition, the NPS is considering a suite of monitoring and mitigation measures in an effort to reduce impacts to the minimum needed to accomplish goals and objectives.

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## Terrestrial Wildlife

### TW1

Some respondents expressed concern with river guides relocating rattlesnakes across the river. Relocated rattlesnakes will try to return to their native range, and is documented in *The Biology of Vipers* (Nowak et. al. 2002). Given the water temperatures in the river, it is unlikely most of these animals survive this trip. A concerted educational effort should be made to stop this practice.

#### RESPONSE:

The *Colorado River Management Plan* Implementation Plan will include an educational component, a monitoring and implementation plan and an increase in river patrols. Together these mechanisms will provide managers with the ability to educate users about appropriate ways to relocate rattlesnakes, assess impacts to rattlesnakes and enforce regulations.

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### TW2

Closure of certain areas to protect wildlife species was mentioned in the *Colorado River Management Plan/DEIS*, but does not appear to be part of the plan. Area closures impact trip planning; however, closures may have large beneficial results with minimal trip disturbance. (Example: Vasey's Paradise closure, seasonal closure of Cardena's). The loss of access to Elves Chasm would be great, but perhaps could be mitigated with special rules.

#### RESPONSE:

Site closures to protect special status species will be based upon recommendations and guidance from the U. S. Fish and Wildlife Service. In general, full closures will be used only as a last resort. In general, closures will be seasonal and only used as a last resort. Currently, the NPS proposes a seasonal closure from March 1 to November 30 along the south half of the Little Colorado River from the confluence to the park boundary (2 miles upstream). Overnight use restrictions at Kanab Creek and Tapeats Creek are in response to unacceptable levels of vegetation damage and soil compaction and erosion impacts. An Elves Chasm closure to protect Kanab ambersnail would encompass only Upper Elves Chasm and would not restrict access to the lower falls. Analysis presented in the Biological Assessment indicates that the Kanab ambersnail at Upper Elves Chasm is vulnerable to impacts from river runners, thus the park will close Upper Elves Chasm to recreational access during the peak use season (March through October). To assist in the reduction of impacts to Kanab ambersnail at Vasey's Paradise and Elves Chasm, the NPS will implement a program to educate recreational and commercial guides about protecting the Kanab ambersnail at these two locations. Seasonal closures of nest sites (with a 0.5 mile buffer) to protect Southwest willow flycatcher may occur in Marble Canyon, Grand Canyon and the Lower Gorge in critical habitat. The NPS believes that increased education of river runners on how to avoid impacting special status species will help protect many of the affected species.

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### TW3

For Alternative B, the NPS should consider altering use patterns and implementing the mitigation measures outlined in the *DEIS* to reduce the effects of spring use on soils, vegetation, and wildlife.

## RESPONSE:

The *Colorado River Management Plan/DEIS* analyzed a full range of alternatives as required by NEPA. While Alternative B may represent a viable alternative for natural resources, with or without modifications, it does not meet the management objectives for visitor use and experience, key components of the *Colorado River Management Plan*. Alternative B does not provide a range of opportunities for the visitors and limits access to the river corridor. Modified Preferred Alternative H was selected as the NPS' preferred alternative because it best balances visitor access and resource protection. Please see the Modified Preferred Alternative H with changes to spring and fall use patterns.

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## TW4

Do motorized rafts impact the canyons? How is this measured and by whom? Have motorized rafts damaged the environment or killed any plant or animal life?

Some respondents thought that the nonmotor component should be expanded to include the month of April. April is a prime month in Arizona regarding bird activity (mating, establishing nests, raising young, etc.) and whatever measures can be taken to minimize the impacts during this time is important.

## RESPONSE:

The *Colorado River Management Plan* EIS fully analyzes the effects of motorized craft on plant and animal life (see Chapter 4, Environmental Consequences).

The Modified H alternative proposes one motor trip every other day with group sizes reduced to 24 people during the first half of April. Motorized use in the second half of April only increases to one trip of 24 people per day. NPS experts believe that this level of motorized use has negligible to minor effects on terrestrial wildlife. Further study of the effects of motors on wildlife will be a component of the *Colorado River Management Plan* implementation plan monitoring and mitigation program.

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## TW5

The bottom line, for the purpose of your scoping process, is that you should include the following issues: protecting wildlife; protecting wildlife habitat from human access; setting aside a large proportion of the park for exclusive wildlife use; reducing human access (both spatially and temporally), particularly, de-paving, removing roads and trails, removing airplane (including helicopter) overflights, and removing all motorized vehicles and nonnative species (including horses, mules, and pets).

## RESPONSE:

Most of Grand Canyon National Park's 1.2 million acres are rarely accessed by human visitors. The park is a preserve for hundreds of wildlife species. Although Grand Canyon National Park backcountry is not formally designated a Wilderness Area, much of the park has been recommended for wilderness designation and is managed to preserve its eligibility. As stated in the EIS, the NPS has determined that the continued use of motorized rafts does not preclude wilderness designation because this use is only a temporary or transient disturbance of wilderness values on the river. NPS has added a new section to the EIS entitled "Wilderness Character" in Chapter 3, and "Impacts to Wilderness Character" in Chapter 4.

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TW6

Can the NPS definitely say that visitor use has a direct effect on the humpback chub? Some respondents think that wildlife become habituated to human presence. If their presence poses no direct threat, it is believed that wildlife become comfortable in close proximity to humans and continue about their daily activities, uninterrupted.

RESPONSE:

Results from peer-reviewed studies (please see references listed in the Chapter 4: Environmental Consequences section) indicate that visitors often have adverse affects on wildlife and aquatic species including displacement, flushing, avoidance, failure to feed, failure to reproduce, habitat destruction, and pollution.

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TW8

The agency's own research demonstrates that winter provides important sanctuary for wildlife species, especially migratory water fowl (*DEIS*, pages 499,456,466). Unfortunately, the *DEIS* does not clarify what constitutes appropriate recreational levels during this season. The NPS must establish winter use levels consistent with wilderness (especially wildlife) protection.

RESPONSE:

Winter use levels proposed in the modified Alternative H consist of one noncommercial, nonmotorized trip with a maximum group size of 16 persons, which is consistent with wilderness and wildlife protection.

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TW9

How will the proposed number of user-days impact wildlife and natural resources during periods of low-flows and drought conditions?

RESPONSE:

The EIS fully analyzes impacts to wildlife and natural resources (see Chapter 4), including the cumulative effects of drought on these resources. While overall use numbers may increase over the life of the plan, trips at one time, people at one time, group size trip length and launches per day have all decreased and use has been spread out through the week. Drought conditions are a natural phenomenon and the canyon resources evolved over these highly variable desert conditions, including periods of extremely low flows in the mainstem of the Colorado River. Under current Glen Canyon Dam operations, flows will not be any lower than those that have occurred over the last 30+ years of dam operations. The NPS cannot plan for "natural forces," such as drought conditions. However, pre-dam river flows varied from a few hundred cubic feet per second (cfs) to a 7-year average of 120,000 cfs. The resources of the canyon evolved with these highly variable, seasonal conditions. Nothing in this plan affects these naturally occurring conditions.

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TW10

Some respondents recommended an alternative that increases the number of noncommercial trip opportunities by adding two "small" trips a day in March to potentially reduce impacts on vegetation and wildlife during part of the critical spring reproductive months. Their modifications include moving

commercial use in March proposed under the original Alternative H to the first two weeks of September, thereby delaying the start of the nonmotor season to its historic start on September 16th. The nonmotor period would be lengthened by two additional weeks over the original Alternative H, by including the entire month of March. The mixed-use (motorized and nonmotorized) period would run from April 1st through September 15th and the nonmotor period would run from September 16th to March 31st each year.

Some respondents considered the allocation of use in Alternative H unacceptable and prefer a 9-month mixed and a 3-month motor year.

RESPONSE:

See the changes that were made in the launch patterns in the spring and fall in the Modified Preferred Alternative H.

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TW11

The *Colorado River Management Plan/DEIS* is inadequate because it fails to address the impact that the Glen Canyon Dam has on wildlife in the river and the Grand Canyon National Park and fails to protect the unique resources found in this ecosystem. Through 30 years of scientific and technical data, it has become apparent that the construction of Glen Canyon Dam in 1963 caused significant impact on wildlife, aquatic life and biota dependent on the Colorado River. Initially, it should be noted that the construction of the Glen Canyon Dam has caused a significant reduction of the high floodwaters and sediment deposition that maintained the pre-dam riparian ecosystem and sediment regime of aggradation and degradation along the river course. Diurnal fluctuating flows, flood level flows in 1983–1985 and resumption of highly fluctuating flows from 1986 to present have caused identifiable vegetation and substrate impacts. Such impacts must be considered deleterious because the sediment is approaching a nonrenewable status. As a result, vegetation changes have occurred along the river, resulting in a precipitous decline in native plant life and a rise in an unstable community of short-lived invasive species. Specifically, species such as *Alhagi*, *Salsola*, *Descuraina* and *Bromus* now compete with native species in the Old High-Water Zone and now have the ability to migrate to the New High-Water Zone.

RESPONSE:

The *Colorado River Management Plan* is a visitor use plan that does not, and cannot, seek to regulate the operations of the Glen Canyon Dam. Effects from dam operations are included in Chapter 4 under cumulative effects for each applicable impact topic. The Glen Canyon Dam EIS and the Adaptive Management Program set up a program under the Secretary of the Interior to address the long-term effects of Glen Canyon Dam operations on the natural, cultural and recreational resources and values of Glen Canyon National Recreation Area and Grand Canyon National Park. As a member of the Adaptive Management Work Group, the NPS is responsible for ensuring that resource concerns of the NPS are represented. The Adaptive Management Program sets a number of objectives for management of the Dam that are outside NPS jurisdiction. It is the NPS mission to preserve the integrity of the resources under NPS authorities; the NPS does this in the context of the Adaptive Management Program and our own management authorities. Nonnative plant species management will be addressed in the future Vegetation Management Plan.

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TW12

According to Table 2-8, on page 82 of the *DEIS*, only Alternative 2 meets vegetation, terrestrial wildlife, aquatic resources, and threatened or endangered species resource management objectives for the Lower

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Gorge. Alternative 4 (the Preferred Alternative) does not meet the plan objectives for terrestrial wildlife or threatened and endangered species. U. S. Fish and Wildlife Service recommends that the preferred and selected alternative meet the plan objectives for those resources.

RESPONSE:

The NPS and Hualapai Tribe have established specific management objectives for the Lower Gorge. Although impacts to terrestrial wildlife are important considerations to the NPS, the Modified Preferred and Selected Alternatives are a balance of impacts to various resources. The NPS believes Modified Alternative 4 best meets all the objectives identified by the NPS and Hualapai collectively (aside from pontoon boat use). Hualapai tribal operations in the visitor use area around RM 262.5 create a departure in visitor use levels and resource conditions from the rest of Zone 3. The Quartermaster area is, therefore, considered a node of activity. Modified Alternative 4 meets the majority of the natural resource management objectives identified in the EIS on a regional level; however, it does not meet the management objectives on a localized level along a two-mile stretch surrounding RM 262.5.

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TW13

The Lower Gorge provides habitat for a number of important wildlife species. The continued existence of critical wildlife habitat is dependent upon maintaining healthy vegetation resources. The important natural resources of the Lower Gorge should not be sacrificed because of a greater public and political tolerance for a variety of motorized activities.

RESPONSE:

Zones 2 and 3 allow for a different level of recreational opportunities than Zone 1. Zone 1 is primitive. In comparison, Zone 2 is natural to modified natural and Zone 3 is rural natural. Larger group sizes and motorized use are considered appropriate in Zones 2 and 3 and the Limits of Acceptable Change (LAC) standards are more lenient in these zones.

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TW14

The analysis and disclosure of irreversible and irretrievable commitment of resources on page 748 of the DIES states that implementation of mitigation for terrestrial wildlife is necessary for all of the alternatives to prevent an irretrievable or irreversible commitment of resources. Given the level of funding that might be necessary to achieve this action, the *DEIS* and the Record of Decision should include mitigation measures that the NPS can reliably implement. Instead, the NPS is proposing mitigation that is dependent on monitoring to actually alter the potential impacts of several alternatives including Alternative H.

RESPONSE:

The NPS fully intends to fund implementation of the *Colorado River Management Plan*, including monitoring and mitigation. Clarifying text has been added to the *FEIS* in Chapter 2, Elements Common to All Alternatives that describes the possible funding options. See the Biological Assessment in Appendix F for conservation measures the NPS will employ to protect special status species.

TW15

While the impact of river runners is generally concentrated in a physically small area, those impacts can have a much larger ecological foot print if the damage is occurring in rare habitat components or in a significant percentage of a species overall habitat. The cumulative effect of habitat destruction in a riparian area or a unique side canyon can be significant if it is occurring all along the Colorado River corridor and to a species that has little ability to move to unaffected habitat.

RESPONSE:

The terrestrial wildlife and threatened and endangered species analyses of the *DEIS* considered the effects of recreational use on rare habitat and populations of species with limited numbers of individuals. Rare habitat is generally concentrated at specific sites such as springs, so the “localized” impact analyses address impacts to these sites. Localized impact ratings for the action alternatives range from negligible to major depending upon the type of species affected. The cumulative effects sections likewise examine the localized and regional effects of the dam, overflights, and backcountry hikers on the various types of terrestrial wildlife and habitat. These impact ratings range from minor to major and include an evaluation of the regional significance of the animal population and associated habitat.

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TW16

Under timing on page 445 of the *DEIS*, the NPS notes that wildlife resources are most sensitive during the spring and summer when reproduction activities occur. Under current use numbers and patterns, the *DEIS* states that disturbance impacts during this period are at a low level because the early spring breeding season experiences less recreational use. The NPS proposal to increase spring use to the degree proposed under Alternative B does not fit with an otherwise resource protection focused alternative. The effects analysis indicates that altering the spring use pattern and UDT would likely change the impacts of Alternative B from major to moderate or possibly to minor with mitigation.

The analysis for Alternative B constantly refers to increased access or potential increased access as a problem, but does not explain how this impact balance against the overall increased access under Alternative H. Under mammals on page 454, the *DEIS* notes that potential impacts from UDT would be partially offset by the substantial decrease in the maximum number of trips and people at one time under Alternative B. The *DEIS* also states that, “Smaller group sizes might result in a reduction of camping sites in the old high-water zone, which would benefit all species groups.” However, the *DEIS* does not provide any rationale or data for concluding that Alternative H has fewer overall effects on wildlife than Alternative B. If the determination of effects relies on impacts related to UDT or early spring use, then the *DEIS* does not clearly display this information.

Table 2-4 on page 56 of the *DEIS* indicates that implementation of Alternative B will have a negligible to major effect on terrestrial wildlife resources. The determination of a major effect is not supported by the effects analysis. The effects analysis for Alternative H, which indicates a potential impact of negligible to moderate, displays identical conclusions to those of Alternative B for impacts to reptiles and amphibians, birds and mammals. The only difference noted in the *DEIS* relates to winter use impacts on bats. Both alternatives would have up to a moderate impact on bats, with Alternative H said to have a range of minor to moderate. However, page 447 notes that all caves are closed except through a permitting process. The *DEIS* does not specify whether permits are for research or general use. Are NPS regulations regarding this closure being violated or is the analysis also including disturbance to crack and crevice dwelling bats outside of caves? Impacts to bats from human visitation to caves has been well documented in Grand

Canyon National Park. Page 455 of the *DEIS* notes that “Even a small group disturbing cave bats could have adverse, long term, major and often irreversible impacts.” If disturbance to bats has reached the point where major impacts are occurring, the NPS should consider additional mitigation measures.

While Alternative B best protects wildlife resources, the NPS should analyze a version of Alternative B with the following recommended improvements.

1. The NPS should look at altering use patterns to reduce the effects of early and possibly late spring use on wildlife.
2. The NPS should incorporate the additional mitigation measures on page 445 relating to reducing site-specific impacts to wildlife habitat into another level of alternative analysis clearly displaying the possible benefits.
3. Include a discussion on how possible changes to the limits of acceptable change indicators for soil and vegetation would impact wildlife habitat.
4. If disturbance to bats has reached the point where major impacts are occurring, the NPS should consider additional mitigation measures.
5. As with overall numbers, the NPS needs to clearly relate trip length reduction to resource protection objectives, especially because it is not clear why trip lengths are shorter under Alternative B, which also has the lowest overall numbers of users, than under Alternative H, which retains motors and increases annual users to over 26,000 people.

#### RESPONSE:

While Alternative B may represent a viable alternative for natural resources, it does not meet the management objectives for visitor use and experience and socioeconomics, key components of the *Colorado River Management Plan*. Alternative B does not provide a range of opportunities for the visitors and limits access to the river corridor. Modified Preferred Alternative H was chosen as the park’s preferred because it best balances visitor access and resource protection.

See seasonal use pattern changes that were made in the Modified Preferred Alternative H in Chapter 2: Description of Alternatives.

Per Superintendent’s Compendium, “All caves/mines are open to the public and staff by permits. All non-permit entries are restricted pending inventory and subsequent classification. Caves/mines classified as “restricted to use by permit only” will be subject to use restrictions according to its classification. Class 1 caves are open to the public without permit. Currently, the only Class 1 cave in Grand Canyon National Park is Cave of the Domes. All other caves require a permit for entry.

The impact analysis does include effects on crack and crevice dwelling bats. Upon revisiting the impact analysis for Alternative B, specifically the effects of recreational use on bats, the impact rating has been changed to negligible to moderate effects. The cumulative effects ratings range from moderate to major. The *Colorado River Management Plan* Implementation plan will include a cave monitoring program, enhanced education for visitors on the fragile nature of caves, and increased river patrols. Gates have been installed in Stanton’s Cave and Rampart Cave to protect bats, archaeological and paleontological features. The NPS would prefer to use bat gates as a last resort. Appropriate mitigation measures will be employed based upon the results of the monitoring program.

The NPS will be enhancing the Limits of Acceptable Change (LAC) standards that were developed in the 1989 Colorado River Management Plan and will include standards for terrestrial wildlife and special status species. The idea is for the NPS to activate mitigations before impacts reach the major threshold or the LAC standards are exceeded.

TW20

The NPS needs to work with surrounding landowners to develop a plan to halt the degradation of important habitat areas. The *DEIS* acknowledges that effective mitigation will require funding, staffing and monitoring.

RESPONSE:

The NPS, Hualapai Tribe, Lake Mead National Recreation Area, and Parashant NM have been working together to address issues and concerns for the Lower Gorge area. The NPS added the Hualapai Tribe as a cooperating agency and allocated funds to the tribe to assist with the *Colorado River Management Plan*. The NPS and tribe submitted a joint proposal for Lower Gorge alternatives in the *Colorado River Management Plan* with the exception of the pontoon boat operations. A range of alternatives was evaluated as part of the draft document and impacts to natural resources were fully disclosed as required by NEPA. Ultimately, the NPS is responsible for managing the river through Grand Canyon National Park.

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TW21

Alternative 2 is most protective of the river's wildlife resources. Some respondents support decreased group sizes, fewer daily launches, and the implementation of daily passenger limits launching from Diamond Creek as well as reduced allowable upriver travel. Pontoon boat operations and associated facilities should be eliminated in the Quartermaster area and jet skis should be eliminated from the Lower Gorge. These operations and facilities constitute a substantial environmental contamination risk (*DEIS*, page 287).

RESPONSE:

The NPS and Hualapai Tribe have established specific management objectives for the Lower Gorge. Modified Alternative 4 best meets the objectives identified by the NPS and Hualapai collectively (aside from pontoon boat use), recognizing that more than terrestrial wildlife needs to be considered. Hualapai tribal operations in the visitor use area around RM 262.5 create a departure in visitor use levels and resource conditions from the rest of Zone 3. The Quartermaster area is, therefore, considered a node of activity. Modified Alternative 4 meets the natural resource impact topic management objectives on a regional level, however, does not meet the objectives in the localized two-mile stretch around RM 262.5. There are already regulations in place that ban the use of jet skis in the Lower Gorge.

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TW22

Can the environment stand the longer trips? Under the most damaging scenario in summer, Alternative A, all but one of the physical environmental indicators are unimpaired. Under Alternative H, none of the physical indicators are impaired.

RESPONSE:

The NPS heard during public scoping that noncommercial users want greater access to the river and an increase in the number of launches per year. Reduced trip length provides more people access to the river and is one of the tradeoffs that needs to be made in order for the NPS to respond to this request without degrading the natural and cultural resources of the canyon. The modified H alternative addresses the respondent's desire for longer trip lengths by increasing trip length in the shoulder season when fewer users are on the river.

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TW23

Regarding wildlife, more people lead to increased opportunities for disturbance. Increase visitor use by ten-fold in the winter eliminates wildlife private time. More people brings more opportunity to impact habitat. Increased use increases opportunities to stress mothers with young.

RESPONSE:

Winter use levels proposed in the modified Alternative H of one noncommercial, nonmotorized trip with a maximum group size of 16 persons is consistent with wilderness and wildlife protection.

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TW25a

Some respondents commented that motors have no effect on bighorn sheep:

Certainly very little disturbance to the wildlife is caused by motorized rafts, as the mountain goats walk down to water or continue to browse as rafts drift by. Guides are encouraged to idle down when passing wildlife or any other group on the river. This courtesy has become standard operating procedure, which no one can reasonably object who has been there.

RESPONSE:

There are no mountain goats in Grand Canyon National Park. The NPS believes that the respondent is referring to bighorn sheep.

The peer reviewed research referenced in Chapter 4: Environmental Consequences Terrestrial Wildlife supports the *DEIS* author's statements that bighorn sheep do not habituate or become desensitized to motor sounds.

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TW25b

Other respondents commented that motors affect bighorn sheep: "bighorn sheep. .do not habituate or become desensitized to repeated helicopters flights." Bighorn sheep become agitated when a helicopter flies over them, exploding the silence with its racket.

RESPONSE:

While the nonmotor alternatives may have beneficial affects on bighorn sheep over current condition, they do not meet the management objectives for visitor use and experience or socioeconomics, key components of the *Colorado River Management Plan*. They reduce the range of opportunities for the visitors and they limit access to the river corridor. Modified Preferred Alternative H was chosen as the park's preferred because it best balances visitor access and resource protection.

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TW26

Modifications for campsite improvement below Separation are acceptable. It's a non-natural environment and beneficial for users as long as it does not affect animal habitat (such as rookeries). When the reservoir is back up, you won't know the difference.

## RESPONSE:

RM 243 to Lake Mead is currently being considered for designation as southwest willow flycatcher critical habitat. Any manipulation of vegetation along this stretch will require consultation with the U. S. Fish and Wildlife Service. Campsites on the south bank will be created as needed, one at a time, if and when Hualapai River Runner overnight trip use increases. All facilities will be located above the old high water zone on Hualapai land.

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## TW27

Page 443 of the *DEIS* states under management objectives: "... minimizing human caused wildlife disturbance and reducing habitat alteration." From the prevalence of ruins in the Grand Canyon we know that humans have inhabited the canyon for a long time and at times in great numbers. This management objective needs to acknowledge the historical presence of man and distinguish between human impacts on wildlife that may be consistent (and perhaps even beneficial) with this historical presence and human impacts that are destructive.

## RESPONSE:

Grand Canyon National Park was established in 1919. The NPS attempts to preserve conditions as they were when the park was established. This goal is often hindered by outside influences including the effects of Glen Canyon Dam, air pollution from metropolitan areas, and the introduction of exotic species. Human use has been a part of the landscape for the last 10,000 years. Managing for human use prior to 1919 is not an objective of this management plan. Grand Canyon National Park manages resources based upon current ecological conditions and historic changes since 1919. The *Colorado River Management Plan* EIS thoroughly examines the effects of the proposed action described in Modified Preferred Alternative H (including reduced group sizes and trip lengths, new launch patterns, increased winter use) on the resources of the Colorado River corridor through Grand Canyon National Park per NEPA requirements.

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## TW29

On page 446 one of the assumptions is, "User discretionary time provides an indicator of the opportunity for a certain proportion of river recreationists to adversely interact with individual animals and their habitat." From page G-14, "First, [UDT] may help suggest relationships between use levels and certain biophysical or cultural impacts."

It appears there is no research to support whether UDT adversely or beneficially impacts any animals and their habitat. Therefore this assumption should be deleted. User discretionary time is used although there is no research documenting a positive or negative effect due to UDT. Increased UDT would result in a spreading out of people and reducing impacts in high visitation areas, which probably would have a beneficial impact.

## RESPONSE:

User discretionary time was just one of the tools used to analyze effects of the alternatives on terrestrial wildlife. The analysis of potential impacts to cultural and natural resources presented in the Environmental Consequences chapter indicates that crowding and congestion contribute significantly to resource vulnerability. Thus, while the UDT was an important variable to consider in the analysis of potential impacts, groups size, number of trips and people in the canyon at one time (TAOTs and PAOTs), total

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number of user-days, and trip lengths can serve to mitigate or exacerbate the potential for impacts. Assumptions for the UDT model were based on best available data including river guide experiences, river trip simulator data and staff expertise. Data from the monitoring program in the *Colorado River Management Plan* implementation plan may help to refine the assumptions for the model. As the respondent did not provide a better model, the NPS will not revise the analysis.

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## TW30

The statement on page 451 regarding the effect of helicopters on bighorn sheep indicates that there are major effects and that helicopters should not be allowed at Whitmore. This should be classified as a major, localized, adverse impact.

## RESPONSE:

The impact rating was determined to be moderate since this intensity threshold best met the level of impact under current conditions. An impact rating of major would require that “Population numbers, population structure, genetic variability, and other demographic factors for species might have large, short-term declines with long-term population numbers considerable depressed. In extreme cases, species might be extirpated from the park, key ecosystem processes like nutrient cycling might be disrupted, or habitat for any species might be rendered not functional.” The effects of helicopters on bighorn sheep in the localized Whitmore area do not reach the major threshold.

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## TW31

The conclusion for Alternative B states that recreational use would increase throughout the entirety of spring and summer. Alternative A has 121,869 user-days while Alternative B has 107,419 user-days in the summer so the statement is not true using the user-day measurement.

## RESPONSE:

Several tools were used to measure use including user-days, number of passengers, number of trips at one time, number of people at one time and UDT. Although summer user-days decrease from Alternative A to Alternative B, shoulder season user-days increase from 43,103 in Alternative A to 50,339 in Alternative B. UDT increases from 53,721 in Alternative A in the shoulder season and from 294,506 in the summer season to 125,081 in Alternative B in the shoulder season and 431,444 in the summer season.

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## TW32

The summer user-days for Alternative C are 90.4% of the current summer user-days. The March–April user-days for Alternative C are 73.5% of the current summer user-days. So Alternative C has smaller numbers of users in the canyon during this sensitive period for wildlife than current summer use. This should result in a beneficial impact to terrestrial wildlife. The lower use is spread out over the entire sensitive period that should have an adverse impact on terrestrial wildlife. The lack of motors and helicopters should have a beneficial impact on terrestrial wildlife. Combined, Alternative C should have a beneficial to no change impact compared to Alternative A. The analysis completely ignores the smaller number of users in the canyon and places almost all emphasis on the March–April months. If Alternative C really does have use in the spring that is problematic, then why not just reduce the use levels in the spring for Alternative C? Such a reduction for two months would not have a big impact on the overall alternative. This could be easily achieved by shifting use from spring to fall during the shoulder season so that

Alternative C is similar to Alternative A in that regard. Since there is so much focus on two months where use levels are lowest of the sensitive period for wildlife with no mention of the rest of the four months where use levels are significantly higher this issue seems to be contrived.

RESPONSE:

User days are only one way of measuring use and not all user-days affect natural resources equally because of differences in the number of daylight hours in the winter and summer seasons as well as differences in trip type pace and logistics. The UDT model to predict effects to the environment takes into account group size, trip length, trip type, rate of travel, and number of user-days. The impact rating for Alternative C takes into account the complex interaction of all the components of the alternative including UDT, group size, trip length, launch patterns, seasonality of use, user-days, crowding and congestion as modeled by the Grand Canyon River Trip Simulator, and does not use a simplistic approach.

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TW33

Increased use of firewood is cited as an impact even though it is possible for the park to ban the use of firewood. Even if the ban was not completely followed, driftwood use would likely decline from present. This appears to be a contrived issue.

RESPONSE:

Dead and downed wood, as well as driftwood, provides habitat for small mammals and insects. NEPA requires that an EIS divulge possible impacts to terrestrial wildlife. As no ban is currently in place, the alternatives were analyzed without this mitigation measure. Increased winter use could potentially reduce the abundance of habitat for small mammals and insects as wood is burned for campfires. The *Colorado River Management Plan* Implementation plan will include a monitoring plan to determine if increased winter use will reduce the presence of firewood in the corridor. A mitigation action such as a ban on firewood collection and a requirement to carry in charcoal and/or wood for fires may be instituted if monitoring indicates the need.

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TW34

A “huge increase in winter use” is cited on page 456. Current winter use is 6,159 user-days compared to summer use of 121,869 user-days. A “huge” increase in winter use for Alternative C results in 82,959 user-days which is still only 68% of the current summer use. If such levels of use are problematic during the winter for wintering waterfowl then the summer use levels should really be problematic for summer waterfowl.

RESPONSE:

Wintering waterfowl are only present during the winter season. These are species that are not found in Grand Canyon during the summer months.

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TW35

The *DEIS* conclusion that Alternative H best meets these needs is not borne out by the analysis. The issues identified related to terrestrial wildlife during the scoping process for the Colorado River Management Plan (*Colorado River Management Plan*) indicate an increasing set of potential impacts as the effects analysis

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moves from soils, to vegetation and into the species which require these resources for habitat production. The *DEIS* acknowledges this link and expansion of effects on page 441 when stating, “Habitat modification indirectly affects terrestrial wildlife.” Like the issues of soil and vegetation, habitat loss is directly linked to the issue of beach erosion and the resulting determination of carrying capacity.

The issues identified on page 441 of the *DEIS* deal with the potential indirect, direct, and significant effects identified on pages 441 and 442. The *DEIS* makes it clear that these impacts are tied to human use patterns.

Laws and policies governing the NPS direct the agency to conserve wildlife for future generations; preserve and restore natural ecosystem diversity and function; and to minimize human impacts on native plants, animals, ecosystems and the natural processes that sustain them (Page 443).

RESPONSE:

The Modified Preferred Alternative H was chosen as the park’s preferred because it best balances visitor access and resource protection. As described in Chapter 4 of the EIS, modifying the human use patterns as described in the preferred alternative will have beneficial effects on soils, vegetation and most terrestrial wildlife over current conditions. Evening out launch patterns, reducing group sizes and trip lengths, and limiting trips at one time on the river to 60, will help to reduce habitat modification, soil and vegetation impacts.

The NPS developed and used the river trip simulator in our analyses to model trip scheduling, congestion, crowding, and campsite availability. The variables that went into the model incorporated campsite data, as well as trip length and group size. The group size and campsite availability is consistent with the physical carrying capacities in the canyon. The monitoring and mitigation program that will be part of the implementation plan will include a campsite biophysical impact evaluation component so that we may assess the results of the strategies we have chosen. If NPS discovers that there are unacceptable impacts to soils, vegetation and terrestrial wildlife, the adaptive management program will provide the avenue for making necessary changes.

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TW36

The public scoping issues identified a potential impact from passing motorboats disturbed nesting chicks. How could they do that? Could it not be regarded that talking people passing by on rowboats might also disturb them?

RESPONSE:

Direct disturbance to avian species from noise and the presence of humans at present levels of river use is an ongoing adverse, short-term, moderate impact. This conclusion is based primarily on a review of literature as no studies have been undertaken by the NPS in Grand Canyon to measure the disturbance of effects on avian species along the river corridor. Several studies on waterfowl and raptors have indicated temporary impacts such as flushing (see references in Chapter 4: Environmental Consequences). Repeated human disturbance can lead to increased expenditures of energy as birds fly from crafts, increased vulnerability to predation, reduced foraging efficiency, and abandonment of territories. Wakes from motorized rafts may drown young birds or flood nests located in riparian thickets along the river. Repeated human presence in breeding areas can alter species richness, abundance and composition.

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TW37

Some respondents would like to see access to all rivers only at a few selected points, and no boating or rafting or other river running, because they feel that there is absolutely no reason why humans should have access to 100% of the world's scanty remaining wildlife habitat.

RESPONSE:

Boat access to the Colorado River through Grand Canyon National Park occurs only at Lees Ferry and Diamond Creek. Take-outs currently occur at South Cove on Lake Mead. The NPS mission at Grand Canyon National Park is to preserve and protect the resources while also providing for the human enjoyment of these same resources. When you consider the enormity of the 1.2 million acres in Grand Canyon National Park, river runners have access to a very small percentage of wildlife habitat. Even along the 277 mile river corridor, the majority of river runners visit established campsites and attractions sites that constitute a relatively small percentage of all of the corridor wildlife habitat. That is why the regional impact rating is much lower than the localized impact rating.

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## Threatened, Endangered And Sensitive Species (Special Status Species)

### TES2

U. S. Fish and Wildlife Service agree that aquatic resources in tributaries and springs are sensitive and prone to impacts of recreation. The *DEIS* states that at least 62 of 261 recreational sites have an aquatic feature. The sites that contain listed or special status species or their habitat should be evaluated for current and expected effects to the species. A site-specific plan should then be developed to reduce or eliminate the adverse effects.

#### RESPONSE:

The NPS will work with the U. S. Fish and Wildlife Service to manage river use consistent with the Endangered Species Act.

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### TES3

The *DEIS* states that a partial closure of the Little Colorado River will be a common element of all alternatives. Why limit playing in the Little Colorado to the first 300 feet? It is stated that the purpose of these restrictions is to protect the spawning and young-of-the-year humpback chub, an endangered species. The Grand Canyon humpback chub population has declined significantly over the last 15 years, thus the reduced catch rates near the confluence may be due to an overall decline as opposed to effects from recreation. Some scientists suggest there is no indication that fish behaviors or spawning are negatively impacted by human visitation. Shore habitats are important to humpback chub from spring to autumn; if a closure is necessary, a closure from March 1 to November 30 may be more effective at reducing effects.

Solution: Please reconsider the closure of the Little Colorado River because it is scientifically unnecessary and would have profound impacts to river travel and would negatively affect congestion and resource impact issues. Swimming and wading in the Little Colorado is the highlight of many people's trip in the hot summer. Only if there is conclusive proof that this activity endangers the humpback chub should swimming and wading not be allowed.

Some respondents recommend that NPS fund and implement a study to examine the effects of recreation on native fish in Grand Canyon, including humpback chub. Where data on the effects of recreation are limited, it is suggested that NPS test closures to better determine their effectiveness. For example, one method could be to turn closures on and off in alternating two-year blocks and monitor changes in variables such as population size and water quality.

#### RESPONSE:

Please see modification to Operating Requirements in Chapter 2. No boats will be allowed to enter or park in the Little Colorado River. To stop in the vicinity of the LCR, boats that launched from Lees Ferry may park upstream or downstream of the confluence. Swimming and wading in the LCR will be allowed year round in the northern half of the river. The southern half of the river from the confluence to the park boundary (located approximately two miles upstream) will be closed to river runner swimming and wading from March 1st to November 30th. River runners hiking the Little Colorado River who need to cross between the north and south sides will be allowed to wade and cross at the established crossing (marked by cairns), approximately .2 miles upstream of the confluence. Camping and fishing bans will remain in place.

The purpose of these restrictions is to protect native fish habitat (including phragmites along the south bank of the LCR) and spawning and young of the year humpback chub (an endangered species).

A study to determine the effects of swimming and wading on native fish behavior, habitat and food sources will be incorporated into the *Colorado River Management Plan* implementation plan. See the Biological Assessment (Appendix F).

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#### TES4

It's reported the humpback chub are most sensitive to disturbance by human encroachment at the confluence of the two rivers where eggs and fry are found. The rapid a half-mile or so upstream is enjoyed by many and not recognized as a spawning location; therefore, it should remain open to public use.

The section on page 518 of the *DEIS*, states that the humpback chub display modified behavior patterns in the Little Colorado River as they are not captured as frequently in the lower two kilometers of the reach as they were historically (Minckley 1989, 1990). However, this statement is speculation from grey literature, and there is little evidence to suggest adverse impact to humpback chub from boaters. The author may have been referring to the fact that adult chub "hide" in the shade provided by motorboats parked inside the mouth of the Little Colorado River. The Department has not found additional evidence that recreational use in the Little Colorado River has had an adverse impact on native fishes.

On page 528, the discussion of impacts to humpback chub neglects to analyze the impacts in the summer months when spawning is winding down and the sensitive period when juveniles are present.

Also on page 518, there is discussion of the effects of swimming in the lower Little Colorado on the humpback chub but there is no discussion of boats, especially motor rigs, entering into the lower Little Colorado.

#### RESPONSE:

Please see modification to Operating Requirements in Chapter 2. No boats will be allowed to enter or park in the Little Colorado River. To stop in the vicinity of the LCR, boats that launched from Lees Ferry may park upstream or downstream of the confluence. Swimming and wading in the LCR will be allowed year round in the northern half of the river. The southern half of the river from the confluence to the park boundary (located approximately two miles upstream) will be closed to river runner swimming and wading from March 1st to November 30th. River runners hiking the Little Colorado River who need to cross between the north and south sides will be allowed to wade and cross at the established crossing (marked by cairns), approximately .2 miles upstream of the confluence. Camping and fishing bans will remain in place. The purpose of these restrictions is to protect native fish habitat (including phragmites along the south bank of the LCR) and spawning and young of the year humpback chub (an endangered species). Please see the Biological Assessment (Appendix F).

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#### TES5

Some respondents were concerned about the relationship between recreation and the spread of exotic species. Spread and establishment of exotic species is an ever-increasing threat to native species, including listed and special status species that are often particularly vulnerable. This problem should be considered in relation to the proposed action and develop means to address it.

RESPONSE:

Management of exotic species is addressed in the *Grand Canyon National Park Resource Management Plan* and will be addressed in the future Vegetation Management Plan. The NPS plans to enhance river runner education as a component of the *Colorado River Management Plan* implementation plan. The NPS will incorporate information on how river runners spread exotic species including plants such as bromes and mollusks such as the New Zealand mudsnail into an educational DVD and/or web-based orientation program.

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TES6

The consideration of endangered and threatened native fish in the Colorado River at Grand Canyon within the *DEIS* is not adequate and requires consultation with the U. S. Fish and Wildlife Service. Impacts on each listed species are not set forth explicitly. In addition, it is not clear from the *DEIS* whether or not NPS has consulted with U. S. Fish and Wildlife Service with respect to this Plan.

RESPONSE:

The NPS initiated formal consultation with the U. S. Fish and Wildlife Service on June 24, 2005. Please see the *Colorado River Management Plan* Biological Assessment in Appendix F.

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TES7

Coordinate closely with other programs, such as the Glen Canyon Adaptive Management Program, the Little Colorado River Watershed Project (LCRMOM), and Arizona Game and Fish Department programs such as the conservation strategies for bluehead and flannelmouth sucker (*Catostomus discobolus*, *Catostomus latipinnis*) and bring the *Colorado River Management Plan* into legal compliance with the relevant laws, policies and management plans as set forth below, most notably in regard to wilderness and resource protection mandates.

- The Organic Act, and Redwoods Amendment
- The Wilderness Act
- The Concessions Policy Act
- NPS Management Policies, and Director's Orders
- The Grand Canyon Master Plan and General Management Plan
- The Colorado River Management Plan (prior incarnations)
- The Backcountry Management Plan
- The National Environmental Policy Act, and CEQ Guidelines
- The Administrative Procedure Act
- The Endangered Species Act
- National Wild and Scenic River Act

RESPONSE:

The NPS does coordinate its activities with other land management agencies and programs, in particular the Glen Canyon Dam Adaptive Management Program, Lower Colorado Multi Species Cooperation Program, U. S. Fish and Wildlife Service, Arizona Game and Fish, Hualapai Tribe, Lake Mead National Recreation Area, Glen Canyon National Recreation Area, and Bureau of Land Management and is in legal compliance with the laws, policies and management plans listed.

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## TES8

The NPS should analyze a Lower Gorge alternative with the following improvements:

- The Surprise Canyon closure should be implemented and enforced to protect relict leopard frogs.
- Implement management changes to protect southwestern willow flycatcher nests from large wakes particularly during time periods associated with nesting and rearing behavior.
- Analyze closing nesting areas to reduce impacts to minor for the southwestern willow flycatcher.

## RESPONSE:

The above represent resource specific mitigations that will be added as possible management tools in the *Colorado River Management Plan* Implementation Plan. Closures as mitigations will be used based upon recommendations from and under the guidance of the U. S. Fish and Wildlife Service. In general, full closures will be used only as a last resort. Currently, the NPS proposes a seasonal closure from March 1 to November 30 along the south half of the Little Colorado River from the confluence to the park boundary (2 miles upstream). Overnight use restrictions at Kanab Creek and Tapeats Creek are in response to unacceptable levels of vegetation damage and soil compaction and erosion impacts. An Elves Chasm closure to protect Kanab ambersnail would encompass only Upper Elves Chasm and would not restrict access to the lower falls. Analysis presented in the Biological Assessment indicates that the Kanab ambersnail at Upper Elves Chasm is vulnerable to impacts from river runners, thus the park will close Upper Elves Chasm to recreational access during the peak use season (March through October). To assist in the reduction of impacts to Kanab ambersnail at Vasey's Paradise and Elves Chasm, the NPS will implement a program to educate recreational and commercial guides about protecting the Kanab ambersnail at these two locations. Seasonal closures of nest sites (with a 0.5 mile buffer) to protect Southwest willow flycatcher may occur in Marble Canyon, Grand Canyon and the Lower Gorge in critical habitat. The NPS believes that increased education of river runners on how to avoid impacting special status species will help protect many of the affected species.

The mtDNA ND2 genetic analysis of the leopard frog tadpoles discovered in Surprise Canyon in 2004, indicates that this population of leopard frog is more closely related to the lowland leopard frog *Rana yavapaiensis* than the relict leopard frog *Rana onca*.

## TES9

The Resource Management Objective for Threatened or Endangered Species is, "Protect all threatened, endangered, sensitive, and candidate species and their habitats from impacts associated with river recreational activities. Although Alternative 4 is the park's preferred alternative, Alternative 2 is the only alternative to meet the objective. The *DEIS* indicates that Alternative 2 is most protective of the river's resources. Alternative 4, the Preferred Alternative, does not meet this goal and the impacts cannot be reasonably mitigated to minor. Even Alternative 2 would require increased mitigation to achieve this goal.

The analysis beginning on page 529 of the *DEIS* makes it clear that Alternative 2 is expected to have the overall fewest negative impacts to threatened, endangered and sensitive species. This alternative is expected to benefit American peregrine falcons, bald eagles, and California condors. Impacts to Mexican spotted owls would remain at the negligible level.

Alternative 4, the preferred alternative, is expected to affect threatened, endangered and sensitive species at the same levels as Alternative 1, or the existing level, which violates the NPS's legal obligation to protect these species and their associated habitat. Removal of habitat necessary for the recovery of the southwestern willow flycatcher to create three new additional campsites as discussed in Alternative 4 is not justified by the analysis.

RESPONSE:

Although physical protection of the resource may appear to be best served by Alternative 2, it does not meet management objectives for the entire *Colorado River Management Plan*. A range of alternatives was evaluated as part of the draft document and impacts to natural resources were fully disclosed as required by NEPA. The NPS, Hualapai Tribe, and Lake Mead National Recreation Area have been working together to address issues and concerns for the Lower Gorge area. The NPS added the Hualapai Tribe as a cooperating agency and allocated funds to the tribe to assist with the *Colorado River Management Plan*. The NPS and Hualapai Tribe have established specific management objectives for the Lower Gorge and the NPS and tribe submitted a joint proposal for Lower Gorge alternatives in the *Colorado River Management Plan* with the exception of the pontoon boat operations. Modified Alternative 4 best meets all the objectives identified by the NPS and Hualapai collectively (aside from pontoon boat use), recognizing that more than TES species needs to be considered. The Hualapai visitor use area around 260 mile canyon represents a departure in visitor use and resource condition from the rest of Zone 3 and is considered a node of activity. Modified Alternative 4 meets the natural resource impact topic management objectives on a regional level, however, does not meet the objectives in the localized two-mile stretch around RM 262.5.

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TES10

Alternative B is the best of the offered alternatives, but still negatively impacts one species. The “reasonable mitigations to consider” on page 514 are not a part of any alternative and should be included.

RESPONSE:

While Alternative B may represent a viable alternative for natural resources, it does not meet the management objectives for visitor use and experience and socioeconomic, key components of the *Colorado River Management Plan*. Alternative B does not provide a range of opportunities for the visitors and limits access to the river corridor. Alternative H was chosen as the park’s preferred because it best balances visitor access and resource protection.

Specific mitigation measures will be described in the *Colorado River Management Plan* implementation plan. Type and levels of mitigation will be based upon results of the monitoring program. NPS has analyzed the alternatives without specific mitigation measures because without appropriate baseline data on the effects of recreational activities on TES species, it would be difficult to determine exactly which mitigation measures should be employed. Also, mitigation measures for TES species may cause adverse effects to other resources including visitor use and experience. Specific conservation measures for special status species are outlined in the Biological Assessment in Appendix F.

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TES11

Populations in the Little Colorado River have declined 75% and no gains have been made in the establishment of a second population of humpback chub in the Colorado River mainstream. While the NPS is fully within its rights to participate in the Adaptive Management Work Group, the NPS alone has the responsibility to ensure the future integrity of Grand Canyon’s native river ecosystem.

RESPONSE:

The Glen Canyon Dam EIS and the Adaptive Management Program set up a program under the Secretary of the Interior to address the long-term effects of Glen Canyon Dam operations on the natural, cultural and recreational resources and values of Glen Canyon National Recreation Area and Grand Canyon National Park. As a member of the Adaptive Management Work Group, the NPS is responsible for ensuring that

resource concerns of the NPS are represented. The NPS cannot, and does not, abdicate any of its responsibilities. However, the Adaptive Management Program sets a number of objectives for management of the Dam, some of which are outside NPS jurisdiction. It is the NPS mission to preserve the integrity of the resources under NPS authorities; the NPS does this in the context of the Adaptive Management Program and our own management authorities.

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### TES13

Respondents appreciate the attempt to populate the canyon with additional colonies of the Kanab ambersnail and support the establishment of additional colonies at Deer and Tapeats Creeks, thus eliminating the need to close Elves Chasm to visitation. Although ambersnails are more easily accessible in Elves Chasm, they tend to occur in areas that are generally avoided by hikers. Also, the Elves Chasm population appears to be increasing; thus recreation does not appear to have an overall impact to the population, although adverse effects likely do occur at a small scale. With regard to Kanab ambersnail, some respondents recommend that NPS develop and implement a public information program to educate recreations and commercial guides about protecting the Kanab ambersnails in Vasey's Paradise and Elves Chasm.

Additionally, some respondents wanted a better explanation of the closure of Vasey's Paradise. Does this mean that it is not open to visitor use (even for viewing)? Perhaps less drastic actions are warranted, such as "no swimming" at Elves Chasm.

### RESPONSE:

Closures as mitigations will be used based upon recommendations from and under the guidance of the U. S. Fish and Wildlife Service. In general, full closures will be used only as a last resort. Currently, the NPS proposes a seasonal closure from March 1 to November 30 along the south half of the Little Colorado River from the confluence to the park boundary (2 miles upstream). Overnight use restrictions at Kanab Creek and Tapeats Creek are in response to unacceptable levels of vegetation damage and soil compaction and erosion impacts. An Elves Chasm closure to protect Kanab ambersnail would encompass only Upper Elves Chasm and would not restrict access to the lower falls. Analysis presented in the Biological Assessment indicates that the Kanab ambersnail at Upper Elves Chasm is vulnerable to impacts from river runners, thus the park will close Upper Elves Chasm to recreational access during the peak use season (March through October). To assist in the reduction of impacts to Kanab ambersnail at Vasey's Paradise and Elves Chasm, the NPS will implement a program to educate recreational and commercial guides about protecting the Kanab ambersnail at these two locations. Seasonal closures of nest sites (with a 0.5 mile buffer) to protect Southwest willow flycatcher may occur in Marble Canyon, Grand Canyon and the Lower Gorge in critical habitat. The NPS believes that increased education of river runners on how to avoid impacting special status species will help protect many of the affected species.

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### TES15

The *CRMP* only attends to resource issues connected with recreation and does not address other river resource concerns such as removing nonnative species, improving the population numbers and habitat conditions for native species—including endangered species such as the Kanab ambersnail, southwestern willow flycatcher, and humpback chub—and reintroducing extirpated native species.

### RESPONSE:

Restoration and recovery of the natural processes and native species to Grand Canyon's river corridor are General Management Plan management objectives. These objectives will be addressed in the Grand Canyon

National Park Resource Stewardship plan. The Colorado River Management Plan is a recreation management plan.

TES16

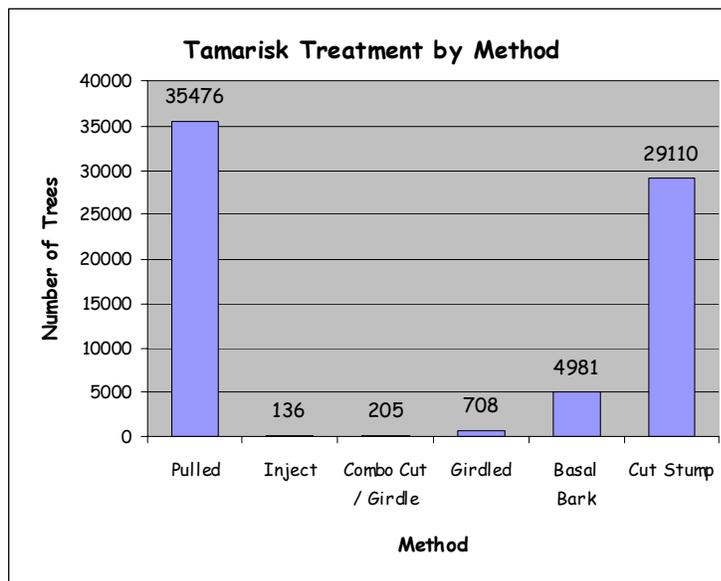
Tamarisk eradication is a concern. How toxic to people and animals is the herbicide used on some of the projects? Do these big cuts affect the birds and other wildlife using habitats and springs in the area such as the southwestern willow flycatcher or the bighorn sheep (because the mess that was created was huge tangles . . .thinking of the spring upstream of market on river right . . .and the stream bed up Bed Rock Canyon near “the balanced rock”)? The NPS could “enlist the help” of boaters in some of the projects. You could inform them about when to cut and where not to cut/pull up the tamarisk or camel thorn or whatever is on the list. In some places, however, tamarisk removal would possibly mean the further demise of the beaches or soil there.

RESPONSE:

Tamarisk removal and treatment only occurs in the side canyons and not along the mainstem Colorado River (See Tamarisk Eradication EA at [www.nps.gov/Grand Canyon National Park](http://www.nps.gov/GrandCanyonNationalPark)). A mixture of 75% JLB Oil to 25% Garlon 4® is used and applied directly onto cut stumps. The amount used is very low over a vast acreage. During the life of the project, herbicide applicators used a total of 62.5 mixed gallons on all trips combined; this is equivalent to 15.625 gallons of Garlon4 concentrate and 46.875 gallons of JLB Oil. The skilled applicators and the direct target application methods used led to such a small amount of herbicide applied.

The graph below shows that the majority of the trees controlled during Phase I of the AWPf funded project were pulled by hand - with no herbicide used.

The total tamarisk canopy cover removed from the project sites was 40,804 square meters. In total, crews removed tamarisk from 1,819 hectares (4,496 acres) of infested land in 70 separate project locations. The cuts were not considered big and the removal of tamarisk in side canyons has led to beneficial effects to the water table, benefiting native flora and fauna. Please see the Environmental Consequences section of the Tamarisk Eradication EA at [www.nps.gov/Grand Canyon National Park](http://www.nps.gov/GrandCanyonNationalPark)).



TES17

There is no discussion of reintroduction of species, current programs, and the applicable guidelines.

RESPONSE:

The *Colorado River Management Plan* is a river recreation plan. The future Resource Stewardship plan will address these management issues.

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TES18

Page 153 of the *DEIS* notes that with regard to the southwestern willow flycatcher: “Legal challenges have put the issue of critical habitat in doubt in Grand Canyon, but a resolution of the situation is expected in August 2004 (Ward, pers. com. 2004).”

If there is a question about the issue of critical habitat then this should be mentioned in the EIS. Since the Draft EIS was released in October, this information should have been updated and certainly should be updated for the Final EIS.

RESPONSE:

Southwestern willow flycatcher proposed critical habitat designation (RM 243 to Lake Mead) public comment period closed on May 31, 2005. The U. S. Fish and Wildlife Service is currently reviewing comments and will make a final decision (per the Court’s order) on or by September 30, 2005.

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TES19

Page 521 of the *DEIS* states, “As the southwestern willow flycatcher is a late nester, the very large increase in late spring and early summer UDT could increase the potential for impacts that might begin to approach the major impact level if mitigation measures such as closures or restrictions on access to nesting areas were not instituted.”

Also from page G-14 it states, “First, [UDT] may help suggest relationships between use levels and certain biophysical or cultural impacts.”

It is clear there is no data to determine whether UDT has a beneficial or detrimental impact. If there was evidence that UDT had a significant detrimental effect then it might be reasonable to err on the side of caution. But, the statement is made elsewhere that increased UDT increases the amount of time spent in side canyons and uplands. More time in side canyons and uplands with a fixed number of user-days means less time spent near the river. Southwestern willow flycatchers live near the river as noted on page 153.

“Typical nesting habitat contains dense, riparian woodland vegetation averaging 13 to 23 feet tall with a dense canopy cover (U. S. Fish and Wildlife Service 2002d).”

Thus, the logical conclusion is that increased UDT probably would have a beneficial effect. Thus the statement on page 521 is more likely false than true. UDT is used in other alternatives with regards to the southwestern willow flycatcher that suffers from the same problems as just discussed. First there needs to be a discussion of the various variables (user-days, number of users, UDT, etc.) and which are likely to be good measures for that particular case. There appears to be an over-reliance on UDT, which is a new measure and has no support in the literature.

RESPONSE:

UDT was just one tool used to measure impacts to special status species in the impact analysis. Trip type, trip length, user-days and numbers of passengers were all part of the UDT model. Not all passengers will spend UDT exploring up side canyons, although trips with longer trip lengths have more opportunities for layover days and, therefore, more opportunities to spend UDT hiking up side canyons. As noted in Appendix G, some trips may stay near campsites. Shorter trips during seasons with high UDT are more likely to concentrate use along the river while longer trips are more likely to use side canyons.

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TES20

Page 157 and 468 of the *DEIS* states that sign of the Mojave population of the desert tortoise (*Gopherus agassizii*) was recently discovered near the river corridor. We also understand that the sign was discovered in an area that is used extensively by recreationists. We recommend that consideration of the effects of the proposed action on this species be included in a BA.

RESPONSE:

This species was included in the Biological Assessment; see Appendix F.

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TES21

All listed species and their habitat within the zone of influence (2 miles on either side of the river) of the proposed action should be considered and addressed in a biological assessment. Recreational use of launch sites, takeouts, beaches, side canyons, caves, springs, hiking trails, and any other attractions that overlap listed species habitat in the zone of influence should be examined for possible effects.

RESPONSE:

Please see the Biological Assessment in Appendix F.

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TES22

The *DEIS* states that California condors (*Gymnogyps californianus*) could be affected by interactions with recreationists in the river corridor. Respondents recommend that a plan be developed to address such situations in the future. For example, such a plan could include inform recreationists of the seasonal possibility of such incidents and the proper course of action. A plan could also include a course of action that would be followed by Grand Canyon National Park staff when such incidents occur. The plan could also include reminders to recreationists regarding the effects of trash on condors and the importance of removing all trash from the river corridor. Respondents are also concerned about the possibility of condor-helicopter interactions in the Whitmore and Quartermaster areas. If condors spend time in either of these areas, then the potential for such interactions, including the possibility of collisions, needs to be addressed. If the helicopter use in either of those areas is not under the authority of NPS, but is part of or directly related to the project, any anticipated effects should at least be considered as cumulative or interrelated and interdependent effects (please see our comment for pages 216 and 340).

## RESPONSE:

The effects of helicopter use on condors were analyzed in the cumulative impacts section of Chapter 4 Special Status Species. The NPS has no authority over helicopter use and is only able to regulate whether passengers are allowed to exchange at Whitmore and Quartermaster. Wildlife biologists from Grand Canyon National Park and Lake Mead have teamed up with the Federal Aviation Administration (FAA) to train pilots on how to avoid collisions with condors. Efforts to educate river runners on human condor interactions have been a success. No incidents have been reported in over two years.

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## TES23

Some respondents believe that some recreational activities can adversely affect the Kanab ambersnail (*Oxyloma haydeni kanabensis*), humpback chub, and southwestern willow flycatcher (*Empidonax traillii extimus*), and recommend NPS develop a comprehensive program to study the effects of recreation on the ecology of the Grand Canyon, with emphasis on imperiled species such as humpback chub, Kanab ambersnail, and southwestern willow flycatcher.

## RESPONSE:

The NPS believes that the Special Status Species analysis in Chapter 4: Environmental Consequences section of the EIS adequately addresses impacts to Special Status Species according to NEPA requirements. A comprehensive study, as well as an enhanced educational program, will be part of the *Colorado River Management Plan* implementation plan.

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## TES24

Pages 514, 519, and 532 of the *DEIS* lists closure of southwestern willow flycatcher nesting habitats to recreation as a potential mitigation measure for both the Lees Ferry and Lower Gorge management areas. We agree that closures may be necessary, and that adverse effects to willow flycatchers may be occurring due to recreation-related disturbance. The NPS should fund monitoring for flycatchers, consider closing areas that contain occupied nest sites, and incorporate information about flycatchers and areas of Grand Canyon known to be important to flycatchers into a public information and education program. The NPS should work with appropriate agencies to implement the Southwestern Willow Flycatcher Recovery Plan and develop goals for implementing the recovery plan within the *Colorado River Management Plan*. In addition to land-based activities, the use of helicopters and motorized boats may also contribute to disturbance of flycatchers. Those activities also be examined in relation to their overlap with known flycatcher occurrences and existing habitat.

Overall, the Department believes that a decrease in number of individuals in a party with the subsequent increase in trips will have an adverse effect on a larger area of flycatcher habitat. Larger group sizes with less trips resulting in more concentrated impacts in time and area with less frequency are recommended.

To more accurately assess the potential impacts that the preferred alternative may have on threatened and endangered species, a more thorough explanation of why the preferred alternative would be advantageous is necessary. The preferred alternative would increase river use between May and August by about 37%, and the mitigation proposed for southwestern willow flycatchers is to close the breeding areas.

This is the peak breeding-season for flycatchers and the Department has concerns regarding closure enforcement. The document mentions the closures on page 528, however, NPS should more fully describe how the breeding areas would be closed and enforced.

If closures are to be used, the Department suggests including those areas with territorial birds and not limit closures solely to nesting habitat. There are areas with territorial males and pairs where no nests have been found, and habitat for resident birds needs to be protected. Additionally, the Department recommends including areas that had resident flycatchers within the last five years. However, these areas should be surveyed annually and if at the end of the second survey period when a minimum of two protocol flycatcher surveys have been conducted and no birds were found, then it may be acceptable to reopen these areas to day-use until April 15th of the following season.

RESPONSE:

Although fewer groups with larger group sizes may benefit southwestern willow flycatcher, degradation of native vegetation, soil and water resources as well as archeological sites in the old high water zone and up side canyons would be perpetuated under this scenario. Reduction of impacts to Special Status Species is only one of many management objectives of the *Colorado River Management Plan*. Areas that are closed to visitation to protect TES species will not be impacted by the increase in annual user-days in Modified Preferred Alternative H, because access will be restricted to these sites. The *Colorado River Management Plan* implementation plan will include increased funding for on-river patrols to enforce closures. Southwestern willow flycatcher studies are currently being conducted in the Marble Canyon stretch from RM 25-57 by Grand Canyon National Park and below Diamond Creek by SWCA. The *Colorado River Management Plan* implementation plan will include a monitoring program that will fund long-term monitoring of known territories and potential habitat. Closures will be initiated based upon the recommendations of the U. S. Fish and Wildlife Service. See the Biological Assessment in Appendix F.

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TES25

Pages 518 and 519 of the *DEIS* indicates bald eagles (*Haliaeetus leucocephalus*) wintering in the river corridor could be adversely affected by recreational activity. The NPS should develop protective measures for areas that can be identified as roosts consistently used by bald eagles. For example, for those roosts that are consistently used, seasonal buffer zones could be implemented around the roosts to keep foot traffic a certain distance away from the roost(s). The *DEIS* indicates that motors on boats are not used at all times when on the river. Thus, as long as safety permits, seasonal restriction of use of motors when motorized boats pass within a certain distance of known consistently used roosts may be another example of an appropriate protective measure.

RESPONSE:

There is only one known consistently used roosting site that is located up Bright Angel Creek off of the river. The NPS will continue monitoring these roosting eagles in the vicinity of Phantom Ranch. Monitoring of wintering bald eagles has indicated that roosting sites along the river change from year to year and no regular patterns have emerged. If this changes in the future, the mitigations offered here will be considered. The NPS will encourage river trips to avoid stopping near Nankowep Creek (RM52) in March if bald eagles are observed in the area.

TES26

Under Alternative B, increased UDT is given as the reason for anticipated moderate or major impacts to the Kanab ambersnail, the humpback chub, Mexican spotted owls, bats and the southwestern willow flycatcher. The *DEIS* is clear, however, that the relationship between UDT and impacts has not been established. On page 28, the *DEIS* states that, “Because several assumptions about human behavior on river trips were used to develop the quotient, UDT is a relative indicator rather than a definitive carrying capacity standard.” The assumption that discretionary time leads to increased adverse impacts is not supported in the *DEIS*. In addition, the *DEIS* needs to explain how potential impacts related to discretionary time balance against the overall increased access under Alternative H.

RESPONSE:

UDT was just one of several tools used in the impact analysis to obtain an intensity rating. Impact ratings were assigned to alternatives based upon the entire suite of alternative components including group size, trip length, number of launches per day, trips at one time, number of passengers, number of user-days as well as UDT. The analyses of potential impacts to cultural and natural resources presented in the Environmental Consequences chapters indicates that crowding and congestion contribute significantly to resource vulnerability. Thus, while the total number of user-days is an important variable to consider in the analysis of potential impacts, groups size, number of trips and people in the canyon at one time (TAOTs and PAOTs), UDT, and trip lengths can serve to mitigate or exacerbate the potential for impacts. While the Modified Preferred Alternative H does include an increase in total passengers and user-days, it also includes a reduction in group size, trip lengths, TAOTs, and PAOTs, as well as the number of days out of the year that more than 100 people visit attraction sites in a single day. These reductions will serve to reduce impacts to special status species particularly in the old high-water zone caused by crowding at attraction sites and large groups using small sized beaches. Additionally, monitoring, mitigation and increased education will further promote resource protection.

---

TES27

The NPS preferred Alternative H is expected to have major impact on six threatened, endangered and sensitive species. Alternative B is expected to have a major impact on one species. The aforementioned needs to be included in the analysis of alternatives.

RESPONSE:

The impact analysis includes these data.

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TES28

The NPS has failed to document that impacts to humpback chub are greater from oar trips in Alternative C than Alternative H. The NPS must provide supporting documentation for this claim.

RESPONSE:

The fact that impacts to humpback chub are expected to be greater under Alternative C over Alternative H does not have to do with whether river runners are traveling in oar boats or motorized boats. In the common to all section, boats (of any kind) are no longer allowed to enter the Little Colorado River. The impact rating for effects to humpback chub from each of the alternatives was based upon the interaction of all of the measures of use including number of passengers, user-days, UDT, trip length, group size and number of days more than 100 people per day would be visiting the Little Colorado River in the summer season.

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## TES29

The only condition that changed from moderate to major when moving from the current condition to preferred Alternative H was to threatened and endangered species. How could this be? Beyond the park mission to protect the resource, special status species have more clout under the law than just about any value down there. And with the proposed limitations at the Little Colorado River, the worsening conditions seemed counter-intuitive. Here's the answer I was given. "The chub are not the only species of concern; there are several, bats for example. According to the biologists, the user impacts of critical concern are the significant user increase in the shoulder seasons and winter, and especially the dramatic increase in discretionary time." That reply suggests why commercial motor was placed in March, having less discretionary time (*DEIS* Appendix H). The NPS should cut winter use in half, reduce March to two small noncommercial trips (consistent with the Joint Recommendations), and increase use progressively in April, lighter first half and heavier in the second half.

## RESPONSE:

See launch pattern changes in the spring and fall in the Modified Preferred Alternative H. As a result of these changes, impact ratings for specific special status species have been modified (see Section 4.2.9, Special Status Species of the *FEIS*).

## TES30

The Mexican spotted owl (*Strix occidentalis lucida*) is most likely to be affected by recreational activity in owl territories during the breeding season and by disturbance from helicopter use that will occur under the proposed action. The *DEIS* provides some information regarding the occurrence of owls within the zone of influence of the proposed action. However, it is not clear where the occurrences are in relation to recreational use of side canyons. The species can potentially be affected by recreation in side canyons where owls occur or may occur. All known occurrences of the species, as well as unsurveyed habitat, that could be affected by ground-based recreational should activity be closely examined and the effects addressed. Similarly, if the zone of influence of helicopter use associated with the proposed action overlaps owl occurrences and habitat, the possible effects of that activity should be fully analyzed.

## RESPONSE:

The Federal Aviation Administration regulates helicopter activity in the river corridor. Although the number of river runners exiting and entering at Whitmore and Quartermaster affect the number of helicopter flights in these locations, the NPS only has regulative authority over whether or not passenger exchanges occur at these locations. Effects to Mexican spotted owl (MSO) from helicopter use were addressed in the cumulative impacts section. Helicopters at Whitmore and Quartermaster have moderate to major effects on MSO under Alternatives modified H and modified 4. The majority of MSO pacs are located up side canyons over 2 miles away from the river corridor, with only 5 within three miles; therefore, direct effects from river runners hiking side canyons under Modified Preferred Alternative H are moderate. The NPS initiated a radio telemetry study in 2004 and is currently monitoring MSO territories and radio collaring and radio tracking owls to obtain additional information about these owls. The NPS is in the process of designing a natural soundscape study to collect information on whether MSO avoid areas with suitable habitat that have higher levels of human induced noise (including aircraft) than currently occupied territories (see the Biological Assessment in Appendix F).

TES31

Beaches and sandbars have diminished significantly because of Glen Canyon Dam operations. These sand deposits are essential for the recovery of endangered native fish. Alternative H wholly ignores this and advocates increasing use, contrary to published reports from the Grand Canyon Monitoring and Research Center, and others that conclude the habitat is degraded.

RESPONSE:

The modified alternative does not ignore the size of sand deposits in the canyon and increase use arbitrarily. The NPS developed and used the river trip simulator in our analyses to model trip scheduling, congestion, crowding, and campsite availability. The variables that went into the model incorporated beach size data, as well as trip length and group size. The group size and campsite availability is consistent with the current physical carrying capacity in the canyon. The monitoring and mitigation program that will be a part of the implementation plan will include a campsite carrying capacity evaluation component so that NPS may assess the results of the implementation of the Modified Preferred Alternative H and strategies that have been chosen. If there are unacceptable impacts to special status species, the adaptive management program will provide us the avenue for making necessary changes.

The analysis of potential impacts to cultural and natural resources presented in the Environmental Consequences chapter indicates that crowding and congestion contribute significantly to resource vulnerability. Thus, while the total number of user-days is an important variable to consider in the analysis of potential impacts, groups size, number of trips and people in the canyon at one time (TAOTs and PAOTs), UDT, and trip lengths can serve to mitigate or exacerbate the potential for impacts. While the Modified Preferred Alternative H does include an increase in total passengers and user-days, it also includes a reduction in group size, trip lengths, TAOTs, and PAOTs, as well as the number of days out of the year that more than 100 people visit attraction sites in a single day. These reductions will serve to reduce impacts to TES species. Additionally, monitoring, mitigation and increased education will further promote resource protection. See specific mitigation measures for native fish in the *FEIS* Section 4.2.8 Aquatic Resources and Section 4.2.9, Special Status Species and specific conservation measures for threatened, endangered and candidate species in the Biological Assessment in Appendix F.

TES32

On page 137 (and Table 3-10 on page 148) of the *DEIS*, reference is made to a “3c” species. It is not clear if that reference is to the old list of 3c species that was once maintained by the U. S. Fish and Wildlife Service. The U. S. Fish and Wildlife Service list of Category 1, 2, and 3 species no longer exists.

RESPONSE:

Although the U. S. Fish and Wildlife Service no longer maintains a list of Category 1, 2, 3 species, Grand Canyon National Park biologists and botanists have decided to monitor species once considered species of concern within the park. The NPS is in the process of conducting a full inventory and creating a list of Grand Canyon National Park species of concern.

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TES33

Alternative B best protects threatened, endangered and sensitive species in the river corridor, but some respondents recommend that the NPS analyze a version of Alternative B with the following recommended improvements.

- analyze the impacts of altering use patterns to reduce the effects of early and possibly late spring use on TES species.
- analyze the impacts of implementing the mitigation and monitoring measures outlined in the *DEIS* to reduce the effects of recreational use on TES species.
- add education and outreach to park visitors as mitigation and clearly identify and prioritize mitigation measures.
- require groups to use like sized campsites as proposed in the second mitigation measure on page 236 to reduce impacts to vegetation providing habitat to TES species.
- include a discussion on how possible changes to the limits of acceptable change indicators for soil and vegetation would impact wildlife habitat.
- as with overall numbers, the NPS needs to clearly relate trip length reduction to resource protection objectives, especially because it is not clear why trip lengths are shorter under Alternative B, which also has the lowest overall numbers of users, than under Alternative H, which retains motors and increases annual users to over 26,000 people.
- incorporate additional mitigation measures for vegetation, terrestrial wildlife and TES species into another level of alternative analysis clearly displaying the possible benefits.
- while the *DEIS* shows that a reduction in visitor numbers will decrease resource impacts, it does not clearly justify the specific reduction of visitor numbers by almost half in Alternative B. The *DEIS* should clearly relate specific numbers to resource impacts.

RESPONSE:

While Alternative B may represent a viable alternative for natural resources, it does not meet the management objectives for visitor use and experience and socioeconomics, key components of the *Colorado River Management Plan*. Alternative B does not provide a range of opportunities for the visitors and limits access to the river corridor. Alternative H was chosen as the park's preferred because it best balances visitor access and resource protection. Many of these mitigations to protect TES have been added to the modified Alternative H and will be addressed in the monitoring plan and enhanced educational program: components of the *Colorado River Management Plan* Implementation Plan. (See response to TW # 16).

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TES34

If the NPS determines that beach, habitat or campsite closures are necessary for protection of TES species it is important that these measures be accompanied by education and enforcement.

RESPONSE:

An increase in river patrols, resource monitoring activities and educational information will be included in the CRMP Implementation Plan.

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## TES35

Page 152 of the *DEIS* states that brown pelicans (*Pelicanus occidentalis californicus*) are infrequent winter migrants. However, recently a number of pelicans occurred in the river corridor, and there were some incidents of interaction between the birds and recreationists. Although these situations may be rare, a contingency plan should be developed to address such situations in the future. For example, such a plan could include informing recreationists of the seasonal possibility of such incidents and the proper course of action. A plan could also include a course of action that would be followed by NPS staff when such incidents occur. The NPS should work with the U. S. Fish and Wildlife Service to develop appropriate protocols, which could address other listed species.

## RESPONSE:

NPS will develop a plan in consultation with the U. S. Fish and Wildlife Service. The *Colorado River Management Plan* Implementation Plan will include an educational component that will include the creation of a DVD and/or website that would update the river runner orientation to include information on how to behave if a brown pelican is encountered.

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## TES36

The *DEIS* also states that the Yuma clapper rail (*Rallus longirostris yumanensis*) and the western yellow-billed cuckoo (*Coccyzus americanus*) are known to occur in the Lower Gorge. Known occurrences for those two species, as well as any other habitat, should be analyzed to determine if the habitat for those two species has been, or is likely to be, affected by recreational activities.

## RESPONSE:

These two species are infrequent visitors to Grand Canyon National Park. Very little data have been collected (Grand Canyon files indicate only 3 observations between the two species) and the sample size is too small to make any inferences. Surveys for these birds and potential habitat will be included in the monitoring and mitigation component of the *Colorado River Management Plan* Implementation plan.

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## TES37

Page 447 of the *DEIS* states that side-canyon hikes probably result in the greatest impacts in terms of vegetation trampling and disturbance to sensitive biological resources. Most such side-canyon activity is probably associated with certain regularly visited canyons and/or attractions. Some of those canyons or attractions may contain listed or special-status species or their habitat. Each of those particular canyons/attractions should be identified, the effects to specific listed species effects should be identified, and measures to address those effects be explored. The U. S. Fish and Wildlife Service would like to help develop appropriate measures that can be incorporated into the proposed action.

## RESPONSE:

The NPS has identified the locations of the known TES species affected by river recreation (see Affected Environment Chapter 3). Further inventory and monitoring will be included in the *Colorado River Management Plan* Implementation plan. Appropriate mitigation measures were identified in Chapter 4: Environmental Consequences. The NPS will work closely with the US FWS during consultation to address additional measures that can be implemented to protect TES species from recreational impacts. See the Biological Assessment in Appendix F.

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TES38

Peer-reviewed scientific analysis of several resource impacts should be vigorously pursued, including 1) analysis of trailing impacts; 2) harassment of protected waterbirds by watercraft (especially bald eagles, wading birds, and shorebirds; Brown et al. 1989, Brown and Stevens 1997, Stevens et al. 1997); 3) impacts of off-river hiking on the ecology of tributary streams; and other topics related to visitation impacts. These physical, biological, and sociological elements should be considered in the context of a rigorous long-term monitoring program, information that should feed back to improve overall river management.

RESPONSE:

The NPS proposes a rigorous long-term monitoring and mitigation program to address visitor impacts to natural resources in the canyon.

---

TES39

Number of visitors for Alternative C in the summer months (when high water causes the river's edge to approach closer to the ambersnail habitat) is 62% of the number for Alternative A. That does not seem to imply that Alternative C could cause the snails to be extirpated while Alternative A does not have that effect. To have a major impact would require the Elves Chasm population to also be extirpated and it appears very unlikely that both would occur in Alternative C. Thus it appears that a major impact is not warranted for Alternative C.

RESPONSE:

A TES species does not have to be extirpated for the impact rating to be major. The intensity threshold for a TES major impact rating is "Impacts to sensitive species would be measurable, and the severity and timing of changes to parameter measurements are expected to be outside natural variability for long periods of time or even be permanent; changes within natural variability might be lone term or permanent. Populations of species might have large declines, with population numbers significantly depressed. In extreme cases, a species might be at risk of being extirpated from the park, key ecosystem processes like nutrient cycling might be disrupted, or habitat for any species might be rendered not functional. Substantive impacts would occur during key time periods. Impacts would be long term to permanent. A major effect would equate with an adversely affect with or without a jeopardy opinion under section 7 of the Endangered Species Act."

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TES40

In regards to the statement that peregrine falcons do not occur in the Grand Canyon during the fall and winter is incorrect, as indicated on page 517, 4th paragraph. These falcons are regular fall migrants through the Grand Canyon region and a portion is resident, including throughout the winter.

RESPONSE:

See revised text in Section 4.2.9 in the *FEIS*.

---

TES41

The Department believes that the southwestern willow flycatcher occupancy in the reach around RM 262.5 will be negatively impacted as a result of Alternative 5. Additionally, we suggest that any new docks constructed should be placed in areas away from potential flycatcher habitat. The discussion regarding closures also pertains to this section of the river.

RESPONSE:

The NPS has not chosen Alternative 5 as the preferred alternative. Construction of a dock at RM 262.5 would require a separate compliance document with its own Biological Assessment and consultation with the U.S. Fish and Wildlife Service, as well as an Army Corps of Engineers 404 permit.

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TES42

Page 148 of the *DEIS* lists incorrectly Western red bat as *L. blossevillii*. This scientific name comes up on a search of *L. borealis* Museum of Vertebrate Zoology at Berkeley as a South American subspecies.

RESPONSE:

*Lasiurus blossevillii* is the correct genus species for the Western red bat that inhabits the Grand Canyon. This subspecies is found across the southwestern and far western areas of the United States and south into Mexico and Central America. In New Mexico and Arizona, this bat has been captured in riparian habitats. Please see inserted NPS photo of *L. blossevillii* captured at Grand Canyon National Park in 2002 in the *FEIS* Section 4.2.9.

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TES 43

The Southwest river otter, it should be spelled out *Lontra*. If you used Hoffmeister, you should probably use *Lutra* instead of *Lontra* because you can't find *Lontra* in the Hoffmeister index.

RESPONSE:

In 1987, a change was made in the taxonomy of the family Lutrinae. New World otter species were separated from Old World *Lutra* into the genus *Lontra* (de Jong 1987). All otters in the United States are *Lontra canadensis* (Hall 1981). The subspecies *Lontra canadensis sonora* is considered the only native Arizona river otter species. Hoffmeister 1986 was not used as a taxonomic reference, but to describe that the southwest river otter is a rare inhabitant of the aquatic communities in Arizona.

## **Tribal Concerns**

T1

A lot of money went into running all types of charts and statistics for river runners. The Tribes deserve the same level of analysis.

RESPONSE:

The best available information was used for all the economic analyses, including information for neighboring tribal communities such as Cameron, Leupp, Tuba City, Gap-Bodaway and Peach Springs. See discussion in Chapter 3, Socio-Economic conditions.

---

T2

The NPS should collect a fee for the Tribes to compensate them for the entire visitation on their lands.

RESPONSE:

The NPS will continue to notify visitors of required tribal permits and fees, and NPS concession contracts will continue to require concessioners to comply with tribal permitting requirements on tribal lands. The NPS is willing to discuss with neighboring tribes a reciprocal arrangement for the collection of fees from visitors who enter tribal lands from the park or who enter the park from tribal lands.

---

T3

The Department of Interior (DOI), as trustee and controller of tribal purses, should be responsible for patrolling tribal lands for trespass (or pay the Tribes to patrol it), since they don't have a user day allocation below Lees Ferry.

RESPONSE:

The NPS, as a department within DOI, has limited responsibilities relative to tribal lands. Unless law enforcement activities have been transferred to individual tribes, the Bureau of Indian Affairs has legal jurisdiction on tribal lands. The NPS has no jurisdiction on tribal lands and cannot patrol them.

---

T4

We appreciate the considerations the NPS has given to improving Native American access to recreational opportunities, and recommend that all tribes with cultural affiliations be included in those discussions, and that no tribes be excluded from the future considerations even though they do not presently participate in discussions.

RESPONSE:

The NPS at Grand Canyon maintains consultative relationships with over nine (9) separate federally recognized tribes. None are excluded from any discussions we have relative to park management. See Chapter 5, Consultation and Coordination.

---

T5

The NPS should work with the Hualapai or other tribal governments to provide cultural seminars for visitors at the Lees Ferry launch point.

RESPONSE:

Enhanced visitor education is a key component to implementation of the *Colorado River Management Plan*. All affiliated Indian tribes will be invited to participate in the development of cultural information. Affiliated Tribes participate in the annual Guides Training seminar in order to provide cultural information.

---

T6

Tribal concerns/issues/messages may be best received by the general visitor when presented as part of the full spectrum of issues that are covered on a river trip/faced by the resource. Some concessionaires would be very excited to either enhance our existing interpretive programs or to operate special focus trips.

RESPONSE:

The NPS believes that the Tribes themselves can best present tribal messages and information. Every effort will be made to incorporate the Tribe's perspectives into all available interpretive information, whether the information is provided through the NPS, educational materials or concessionaires.

---

T7

If the NPS determines that it can allow one special interest group to obtain a full-river concession contract they will be opening the possibility of being required to allow many, if not all, special interest groups this same benefit. Additionally, it seems very arbitrary for the NPS to recommend to the DOI its support for the Hualapai's efforts to obtain a noncompetitive full-river concession contract.

RESPONSE:

Please see modifications to text in Section 2.8.2 Issues Related to Culturally Affiliated American Indian Tribes.

---

T8

Suggest having the Hualapai full-river trips be administrative or taken from private allocations. Do not take from commercial allocations.

RESPONSE:

Please see modifications to text in Section 2.8.2 Issues Related to Culturally Affiliated American Indian Tribes.

---

T9

The anticipated increase in overall use represented by Initiative #2 has not been factored into the physical carrying capacity of the resource. If the NPS decides to advance this initiative, include in the legislation the following points:

1. The anticipated use must be factored into the physical carrying capacity of the resource so that the NPS may manage the use consistent with the mission, and
2. The American Indian tribe awarded the legal right to conduct river operations in the Grand Canyon must answer to NPS authority consistent with all resource and visitor protection standards at an equivalent level required of any Grand Canyon National Park river concessionaire.

RESPONSE:

Please see modifications to text in Section 2.8.2 Issues Related to Culturally Affiliated American Indian Tribes.

---

T10

The Apache Tribe regards continued powerboat use on the river as inconsistent with the NPS obligation to protect Grand Canyon as a wilderness and, pursuant to Executive Order 13007, as a Native American sacred site.

RESPONSE:

While we appreciate the Apache Tribe's perspective, the NPS believes that our obligations relative to wilderness and E.O. 13007 are met through our management of Grand Canyon National Park. See also wilderness discussions in Chapter 1 and modified text in Chapter 4 related to wilderness character.

---

T11

Raise the pontoon passenger limit from 150 per day. Economic opportunity is more important than noise and crowding.

RESPONSE:

The Modified Preferred Alternative H has been modified to allow for 480 passengers per day. Pending favorable review of concession operations and monitoring data, allowable passengers per day could increase to 600.

---

T12

Why should the NPS support the Hualapai Tribe's efforts to obtain legislation authorizing a full river non-competitive contract? You are creating a monopoly.

RESPONSE:

Please see modifications to text in Section 2.8.2 Issues Related to Culturally Affiliated American Indian Tribes.

---

T13

Restriction in the Little Colorado River will limit access to the Salt Trail and Beamers Cabin, as well as Hopi access to the salt mines.

RESPONSE:

Restrictions will not limit access to these areas; Salt Trail Canyon enters the canyon well upstream of the closure area; the Salt Mines are along the main stem of the Colorado River and are unaffected (and are also closed to public use). Access to Beamers Cabin is unaffected from the south bank and is allowed at the designated crossing from the north bank. Please see new language on the LCR restriction in Chapter 2: Operating Requirements.

---

T14

The NPS should offer a full river concession to the Navajo, Havasupai, Hopi, Zuni and Paiute Tribes, in addition to the Hualapai Tribe.

RESPONSE:

Please see modifications to text in Section 2.8.2 Issues Related to Culturally Affiliated American Indian Tribes. Additionally, while informal inquiries have been received from tribal members, none of the other tribes have formally expressed interest in such an opportunity.

---

T15

NPS has trust responsibility to INCREASE economic assets of the Hualapai Tribe. Increase take-out prices, since tribal members have only half the income of the river runners.

RESPONSE:

The NPS has no trust responsibility to “increase” economic assets of the Hualapai Tribe. However, the NPS has worked with the tribe on evaluating tribal business opportunities as they relate to the *Colorado River Management Plan*. See discussion in Chapter 3, Socio-Economic conditions, for more specific information.

---

T16

Suggest increasing education about tribal lands and concerns.

RESPONSE:

The NPS proposes to increase education concerning tribal lands and concerns through our enhanced visitor education program. All affiliated Tribes will be invited to participate in the development of the program to ensure accurate portrayal of tribal concerns.

---

T17

Justify why allocation is being considered. Why 2,500 user-days, and where will these come from? If from commercial allocation, how will the loss to the sector be allocated? Why is this going to take place in the spring and summer months?

RESPONSE:

Please see modifications to text in Section 2.8.2 Issues Related to Culturally Affiliated American Indian Tribes.

---

T18

A full river allocation should not be given to the Hualapai. Instead support their already thriving business in the Lower Gorge.

RESPONSE:

Please see modifications to text in Section 2.8.2 Issues Related to Culturally Affiliated American Indian Tribes. Also, please see the Modified Alternative 4 (Lower Gorge), which allows for increased economic opportunities for the Hualapai Tribe.

---

T19

The Navajo boundary issue has not been presented.

RESPONSE:

Text in Chapter 3: Adjacent Lands has been modified to present the Navajo Nations perspective on the boundary.

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T20

As proposed in the *DEIS*, 960 pontoon passengers/day seems too high, especially if they are camping.

RESPONSE:

Per NEPA requirements, the EIS provides for a range of alternatives. The pontoon boat passengers are only in the canyon 30 minutes and do not camp.

---

T21

Will the campsites be created exclusively for Hualapai use?

RESPONSE:

The campsites the NPS proposes would be located on tribal lands and should be available for use by non-HRR trips through tribal permits.

---

T22

Provide a cap with targeted reductions for helicopter use, provide incentives to those that don't use helicopters, and compensate the tribes for lost revenue.

RESPONSE:

The NPS does not have jurisdiction to regulate helicopter use on Hualapai tribal lands; however, the NPS may regulate the number of park visitors who utilize various exchange points along the river in the park.

After analyzing various alternatives and the direct and indirect effects of those alternatives, including effects on the Hualapai tribal economy, the *FEIS* establishes the number of exchanges permitted at various points along the river.

---

T24

It appears that there is a misstatement in the *Colorado River Management Plan/DEIS*: “road and boat access to the river by way of the Hualapai tribal lands” implies that people use the road to go down to picnic on the river.

RESPONSE:

Tribal members and visitors do access the Colorado River at Diamond Creek for a variety of day uses, including picnicking.

---

T25

Do not allow helicopter take-outs for Lees Ferry trips at RM 262 (Quartermaster Canyon).

RESPONSE:

Quartermaster is not currently prohibited as a take-out and is not used by the Grand Canyon river concessioners as a take-out, exchange, or put-in. NPS has the authority to prohibit use of this area as a take-out, exchange, or put-in, but at this point the NPS has not made a determination on the appropriateness of this exchange.

---

T26

Require pontoon boats to comply with Coast Guard requirements. Include regulation by NPS in a MOU with Coast Guard.

RESPONSE:

See Chapter 2, Elements Common to All Lower Gorge Alternatives, Operating Requirements for Pontoon Boats.

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T27

Have a combined NPS/Tribal Office at Diamond Creek.

RESPONSE:

The NPS has discussed providing a “ramp manager” to assist the Hualapai with the Diamond Creek take-out location. Given our attempts to distribute launches evenly among days of the week, thereby distributing take-outs evenly among days of the week, the NPS anticipates that less congestion and crowding will occur at Diamond Creek, alleviating the need for an NPS presence.

---

T28

HRR trips take place in a haphazard and inappropriate manner that jeopardizes resources and visitor safety. Extending an upper canyon license would have dangerous repercussions for the general public.

RESPONSE:

Please see modifications to text in Section 2.8.2 Issues Related to Culturally Affiliated American Indian Tribes.

---

T29

We agree that the effects that may result from the use of helicopters in these areas should be included in the effects analysis. If such use were not actually part of the proposed action or any Federal action, then any effects would be considered cumulative effects under NEPA. However, if the use of the helicopters would not occur “but for” the proposed action, then any effects that would result would be directly related to the action and would be considered to be interrelated and interdependent effects.

RESPONSE:

The NPS believes that we have adequately addressed impacts from helicopter use, given our legal authority and jurisdiction.

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T30

HRR must not be allowed to up-run the Lower Gorge above Separation Canyon.

RESPONSE:

There is no proposal to allow HRR (or any other boats) to up-run above Separation Canyon.

---

T32

*DEIS* merely states tribal concerns, but does not contain a full and specific discussion of how each was addressed.

RESPONSE:

The inclusion of tribal concerns in the *EIS* is meant to illustrate the concerns that the NPS has heard from affiliated Tribes. Many of the responses to the concerns are addressed specifically through on-going government-to-government consultation.

---

T33

Tribal user-days should come from the existing concessionaires, either by taking all user-days from the two newest companies, or by taking a percentage from each.

RESPONSE:

Please see modifications to text in Section 2.8.2 Issues Related to Culturally Affiliated American Indian Tribes.

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T34

There are no alternatives that describe how the Tribes finally receive a user day allocation.

RESPONSE:

Please see modifications to text in Section 2.8.2 Issues Related to Culturally Affiliated American Indian Tribes.

---

T35

*DEIS* proposes to devastate the economy and culture of the Hualapai Tribe (since limits will have massive adverse impacts on tourist activities that fund governmental, social, and environmental activities). These impacts are not accurately stated in the *DEIS* and the *FEIS* must be revised to accurately state the devastating social, cultural and economic impacts that the preferred alternatives will have on the Hualapai Tribe. *DEIS* misstates the tribe's positions on many issues and has misrepresented tribe's preferred alternative.

RESPONSE:

As a cooperating agency for the *Colorado River Management Plan*, the Hualapai Tribe worked with the *Colorado River Management Plan* Planning Team to address issues of mutual concern and to develop a range of reasonable alternatives for Lower Gorge recreational use. As part of that effort, the Tribe reviewed and commented on administrative drafts. Tribal comments and text were incorporated throughout the development of the *EIS*. Data used for analysis of impacts to resources, visitor experience, and socioeconomic resources were provided by tribal representatives who were then given several opportunities to review and comment on analysis methods and results. To date, no specific data have been provided to guide modifications of the analysis. Furthermore, the socioeconomic analysis (Section 4.5), indicates that the implementation of the Alternative 4 in the *DEIS* and Modified Alternative 4 in the *FEIS* allow for substantial growth in tribal revenues.

---

T36

Prior plans did not include attacks on tribal sovereignty and tribal rights, rather both parties worked to manage areas of mutual interest and concern on a government-to-government basis. Remove provisions related to tribe's activities in the Lower Gorge from the *FEIS* and deal with these activities on a government-to-government basis.

RESPONSE:

The agreements reached between the NPS and Hualapai Tribe were specific regarding government-to-government relationships and the need to include the Lower Gorge in the *Colorado River Management Plan* process. The Tribe requested cooperating agency status in a letter to the superintendent in July 2002.

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The cooperative agreement between the Tribe and the Park for the *Colorado River Management Plan* clearly identified the Tribe as a cooperating agency in the NEPA process and provided funds for tribal participation. The Lower Gorge has always been a part of the discussion, with full knowledge and approval of the Tribe.

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T37

NPS must accurately assess the non-Indian adverse impacts on tribal property and water rights

1. NPS does not count user-days below Diamond Creek
  - a. Appropriate, since NPS has no jurisdiction (36.CFR 7.4C)
  - b. Inappropriate because it constitutes an exemption for concessionaires
2. Restrictions apply only to Tribal activities and are thus discriminatory
3. NPS does not count user-days below Whitmore (another commercial exemption)
4. No estimate of use from Lees Ferryalts in the Lower Gorge
  - a. No discussion of impacts from non tribal use
  - b. No discussion of mitigation of these impacts
  - c. No discussion of alternatives to “exemption”

RESPONSE:

1. The Lower Gorge has several access points (Diamond Creek, Quartermaster Canyon, and Lake Mead) as well as an increase in types and levels of use. While some trips camp in the Lower Gorge, the majority of visitors this area stay for less than a day (e.g., river runners) or even less than one hour (helicopter passengers). For this reason, the user day system does not adequately measure of use. See Chapter 2: Criteria for Developing Alternative for a more in-depth discussion of recreational use in the Lower Gorge.

2. Restrictions such as group size, trip lengths and launches per day apply to all trips launching at Diamond Creek in the Lower Gorge. Lower Gorge trip length limits apply to continuation trips as well, coupled with the commercial operating requirements, launch limits, and group size limits applicable to all trips launching from Lees Ferry.

3. User days are counted from Lees Ferry to Diamond Creek.

4. Potential impacts from recreational use, as well as reasonable actions to mitigate impacts, are discussed for all Lees Ferry and Lower Gorge alternatives. See Chapter 4: Environmental Consequences for text that clarifies how non-tribal use has been incorporated into the analysis. Additionally, predicted levels of continuation trips were used in the development of Lower Gorge alternatives and were a key component that led to the inclusion of new campsites in several alternatives. While non-tribal trips are not assessed user-days, their continued presence in the Lower Gorge was an element of each of the Lower Gorge alternatives. The range of alternatives was developed cooperatively between the Hualapai Tribe and Grand Canyon National Park.

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T38

Part of the reservation is in the park, but since these are not Federal lands, they are not under Park’s jurisdiction, thus the Hualapai’s activities in the Lower Gorge cannot properly be considered in the EIS. Regulating use on tribal land constitutes a taking of the tribe’s senior federal reserved water rights (in violation of federal law).

## RESPONSE:

As mentioned in Section 3.7.8 of the *DEIS*, the NPS and the Hualapai Tribe disagree about the location of the northern boundary of the Hualapai Indian Reservation. In a November 25, 1997, letter from John D. Leshy, the Solicitor of the Department of the Interior, to Earl Havatone, the Hualapai Tribal Chairman, Mr. Leshy, interpreting the January 4, 1883, Executive Order creating the reservation, concluded “that it was the intention of the United States not to include the bed of the Colorado River in the Reservation” and that the executive order fixed its boundary “at the high water mark of the [southern bank of the] Colorado River.” The tribe asserts that its reservation extends to somewhere north of the southern bank of the river. Mr. Leshy’s opinion remains the Department of the Interior’s official position on this issue; a copy of his November 25, 1997, letter is included in Appendix M to the *FEIS*. In developing the *DEIS*, the NPS consulted extensively with the tribe in an attempt to fashion alternatives that accommodated tribal interests and that avoided the disagreement between the United States and the tribe over the location of the reservation’s northern boundary.

The Grand Canyon National Park Enlargement Act, Pub. L. No. 93-620, 88 Stat. 2089 (1975), codified as amended at 16 U.S.C. §§ 228a-228j (2000), clearly and unambiguously establishes the boundary of Grand Canyon National Park in the Lower Gorge (from River Mile 164.8 to River Mile 273.1) as being on the southern bank of the Colorado River. In a February 24, 2005, letter from Robert C. Eaton, an attorney in the Office of the Field Solicitor in Santa Fe, to Susan M. Williams, one of the Hualapai Tribe’s attorneys, Mr. Eaton set out the NPS’s position on this issue. To date, no response to that letter has been received. Even if the Hualapai reservation extends to somewhere north of the river’s southern bank, as the Hualapai Tribe asserts, that portion of the reservation lies within Grand Canyon National Park. Mr. Eaton’s letter remains the NPS’s official position on this issue; a copy of his February 24, 2005, letter is included in Appendix M to the *FEIS*.

The NPS has clear authority to regulate all commercial activities on the Colorado River within Grand Canyon National Park. 36 C.F.R. Section 1.2 (2004) describes the scope and applicability of the NPS regulations and states in pertinent part: “(a) The regulations contained in this chapter apply to all persons entering, using, visiting, or otherwise within: (3) Waters subject to the jurisdiction of the United States located within the boundaries of the National Park System, including navigable waters and area within their ordinary reach (up to the mean high water line in places subject to the ebb and flow of the tide and up to ordinary high water mark in other places) and without regard to the ownership of submerged lands, tidelands, or lowlands.”

One of the regulations applicable to “[w]aters subject to the jurisdiction of the United States located within the boundaries of the National Park System” is 36 C.F.R. Section 5.3, which states, “Engaging in or soliciting in any business in park areas, except in accordance with the provisions of a permit, contract, or other written agreement with the United States, except as such may be specifically authorized under special regulations applicable to a park area, is prohibited.” Thus all commercial activities on the Colorado River within Grand Canyon National Park, including activities conducted by the Tribe, must be conducted in accordance with a permit, contract, or other written agreement with the United States. That is true regardless of whether the reservation includes all or part of the river or whether the Tribe owns an interest in all or part of the riverbed.

The Hualapai Tribe’s reserved water rights have not yet been quantified or adjudicated by a court of law, i.e., they are only claimed rights. The United States may or may not support all of the tribe’s claimed rights when they are filed in a court of law. The United States Supreme Court has observed that when Congress has directed or authorized the Secretary of the Interior not only to protect

Indian trust resources, but also to perform other important federal functions (such as administering a national park containing a world-renowned natural wonder), the Secretary “cannot follow the fastidious standards of a private fiduciary... The Government does not ‘compromise’ its obligation to one interest that Congress obliges it to represent by the mere fact that it simultaneously performs another task for another interest that Congress has obligated it by statute to do.” Nevada v. United States, 463 U.S. 110, 128 (1983). In developing the *FEIS*, the Secretary of the Interior, acting through the NPS, has attempted carefully to balance her trust obligations to the Hualapai Tribe and her obligation to administer Grand Canyon National Park in a manner consistent with the statutes authorizing the NPS and establishing the park. Doing so is not a breach of her trust responsibility.

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T39

Draft does not justify why the NPS thinks that the boundary is at the high-water mark.

RESPONSE:

The Grand Canyon National Park Enlargement Act, Pub. L. No. 93-620, 88 Stat. 2089 (1975), codified as amended at 16 U.S.C. §§ 228a-228j (2000), clearly and unambiguously establishes the park’s boundary in the lower gorge (from RM 164.8 to RM 273.1) as being on the southern bank of the Colorado River. In the Department of the Interior Solicitor’s November 25, 1997, letter to the Tribal Chairman, the Solicitor concluded that the Hualapai Reservation extends only to the high water mark on the southern bank of the Colorado River. A copy of Mr. Leshy’s November 25, 1997, letter is included in Appendix M to the *FEIS*.

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T40

Hualapai tribal activities are not subject to NEPA.

RESPONSE:

All federally permitted and most federally funded activities are subject to review under NEPA. Whether a particular Hualapai tribal activity is subject to NEPA review depends on whether it is federally permitted or funded.

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T41

Whitmore helicopter exchanges are on tribal lands and similar to the Lower Gorge, regulation of these exchanges is beyond the jurisdiction of the park.

RESPONSE:

The NPS has stated in the document that it does not regulate activities on tribal lands. The NPS does, however, have a responsibility to regulate public use that it permits in Grand Canyon. The Modified Preferred Alternative H acknowledges that passenger exchanges at Whitmore may or may not occur via helicopter.

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T42

*Colorado River Management Plan* does not address environmental impacts of contract provisions (camping etc).

## RESPONSE:

Through the *Colorado River Management Plan* analysis, the NPS has analyzed recreational use throughout the river corridor. The majority of visitor use is through contract providers. This use is the greater part of the use analyzed for environmental impact.

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T43

The NPS should have another concessions contact that includes Indian preference.

## RESPONSE:

Please see modifications to text in Section 2.8.2 Issues Related to Culturally Affiliated American Indian Tribes.

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T44

On October 11, 2005, the Hualapai Tribe, acting through its attorney, submitted to the NPS an additional comment letter on the Administrative Draft *FEIS*. Furthermore, on October 12, 2005, the Hualapai Tribe submitted to the NPS a document titled, "Hualapai Tribe's Proposed Action and Preferred Alternative." Although those documents were submitted to the NPS after the deadline for receiving comments on the Administrative Draft *FEIS*, the NPS reviewed them carefully and determined that they contain no new substantive comments. The NPS believes that all of the substantive comments in the tribe's October 11, 2005, letter previously were contained in the tribe's January 31, 2005, comment letter on the *DEIS* and already have been summarized and responded to in this volume of the *FEIS*. Nevertheless, in the interest of clarity and at the risk of unnecessary repetition, the NPS will respond to the three most significant comments in the tribe's October 11 comment letter: (1) implementation of the NPS preferred alternative will result in an illegal taking of the tribe's senior federal reserved water rights; (2) the NPS lacks authority to regulate the Colorado River through the Lower Gorge because the reservation encompasses part or all of the Colorado River; and (3) the *DEIS* "relies on stale information" about the tribe's current commercial enterprises in the lower gorge.

## RESPONSE:

- (1) As discussed in the response to comment T #38 above, the tribe's water rights are, at this point, only claimed rights that have not been quantified or adjudicated by a court of law. The tribe has no right to conduct unfettered commercial operations in a national park simply because it is trying to enhance its future water right claims, and the NPS has not duty to permit the tribe to do so.
- (2) As discussed in the response to comment T #38 above, in the November 25, 1997, letter from John D. Leshy (See Appendix M), the Solicitor of the Department of the Interior, to Earl Havatone, the Hualapai Tribal Chairman, Mr. Leshy concluded that the January 4, 1883, Executive Order creating the reservation fixed the reservation's northern boundary "at the high water mark of the [southern bank of the] Colorado River." Mr. Leshy's letter remains the department's official position on that question. Furthermore, as discussed in the response to comment T #38 above and in the February 24, 2005, letter from Robert C. Eaton, an attorney in the Office of the Field Solicitor in Santa Fe (See Appendix M), to Susan M. Williams, one of the Hualapai Tribe's attorneys, the Grand Canyon National Park Enlargement Act clearly and unambiguously establishes the park's boundary in the Lower Gorge (from RM 164.8 to RM 273.1) as being on the southern bank of the Colorado River.

Under 36 C.F.R. subsection 1.2(a)(3) the NPS has the authority to regulate the Colorado River within Grand Canyon National Park, regardless of whether the reservation includes part of all of the river or whether the tribe owns an interest in part or all of the river's bed. Mr. Eaton's letter remains the NPS's official position on that question.

- (3) The NPS has checked its numbers against the numbers provided by the tribe in its October 11 letter and believes that the NPS's numbers are accurate.

The tribe's October 12, 2005, document titled, "Hualapai Tribe's Proposed Action and Preferred Alternative" essentially proposes that certain important substantive questions—the determination of "safe load capacity" in the Lower Gorge, the issuance of an Indian-preference full-river concession contract, the tribe's construction of docks for its commercial operations in the Quartermaster Canyon area, and the collection of tribal fees by the NPS—be addressed through an elaborate negotiation process between the NPS and the tribe that would be subject to binding arbitration.

The NPS has worked in good faith with the tribe for more than five years under the October 2000 Memorandum of Understanding By and Among the Hualapai Tribe, the Grand Canyon National Park, and the Lake Mead National Recreation Area and through the development of the *DEIS* to address those questions. The *FEIS* includes and represents the NPS's best efforts to fulfill its statutory mission, to balance a number of competing legal, economic, and social interests, and to accommodate the tribe's concerns.

## Vegetation

V1

Why not create new camps in the tamarisk—it is a non-native, invasive species? It may be also possible to clear and remove some of the tamarisk and restore beaches by reduction of the encroaching vegetation. Also, NPS could create a campground at Phantom Ranch for river trips and charge a fee—make it a requirement of the exchange to stay there.

RESPONSE:

The NPS will consider restoring campsites that have been used historically by river runners, but that have become overgrown with non-native and native vegetation. The locations of these camps will be determined based upon the results of the *Colorado River Management Plan* Implementation plan-monitoring program. The NPS will not consider creating new camps in the Lees Ferry to Diamond Creek stretch, since creating new campsites will not alleviate old high water zone impacts that are occurring due to sediment loss and large group sizes.

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V2

It would be helpful to break up vegetation discussion in the *FEIS* into biological zones: Riparian (near Colorado River), Desert, and Aquatic (side streams and springs).

RESPONSE:

The *EIS* is already organized along these lines. The riparian zone of the commenter is represented by both the new and old high-water zones in the *EIS*, the desert of the commenter is represented by the upland/desert scrub in the *EIS*, and the aquatic of the commenter is included within the wetlands in the *EIS*.

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V3

Page 409 of the *DEIS* states, “The vegetation resources throughout much of Grand Canyon National Park’s remote backcountry are minimally impacted, with natural resources intact and functioning. However, throughout the river corridor and some side canyons, human impacts have directly and indirectly altered vegetation on individual plant and community levels, often disrupting the interactions between physical and biological processes.” This is a bit misleading. Much of the backcountry activities, such as hiking, lead to vegetation impacts along trails. In contrast, in the river corridor, impacts along most of the banks are minimal to nonexistent with larger impacts concentrated where river groups commonly land for camping, attraction sites, and lunch breaks. Although river groups generally have less impact than hikers, the hiking use levels are lower and spread out somewhat throughout the park. The important point is that most of the river corridor has almost no impact with a small percentage of the river corridor bearing the brunt of the effects. Desert vegetation is more fragile but the small area of impact does not pose an overall threat throughout the river corridor. In contrast, aquatic vegetation is concentrated near water that also tends to be the small percentage of the river corridor impacted by river runners. Aquatic vegetation is significantly impacted but much of the reason is overuse in the summer season (due to heat making water attractive) and spreading out use throughout the year will have a major beneficial impact on aquatic vegetation. Other than aquatic vegetation, invasive species have a much broader impact on the entire river corridor than the small percentage directly impacted by river groups. The following quote on 409 acknowledges over use during the summer months: “Much of this damage is a result of river runners...finding comfortable (usually shady) areas to eat or rest during lunch breaks.”

## RESPONSE:

See revised text, “The vegetation resources throughout much of Grand Canyon National Park’s remote backcountry are minimally impacted, with natural resources intact and functioning, except for at localized sites such as campgrounds and along trails. Similarly, at localized sites throughout the river corridor and some side canyons, human impacts have directly and indirectly altered vegetation on individual plant and community levels, often disrupting the interactions between physical and biological processes.” New text in the vegetation impact analysis in Chapter 4: Environmental Consequences has been added to expressly state that regional impacts on vegetation are negligible. The Modified Preferred Alternative H would cap the user-day limits for March - October at current levels, while increasing winter use. Thereby, any growth in user-days would come in winter, when impacts on herbaceous aquatic vegetation are likely to be relatively small.

## V4a

There is discussion on page 410 about impacts to campsites and impacts from large groups. There is also discussion about the loss of beaches that are often used for camping. There should be more discussion of the types of impacts within a camping area such as the following: “Campsites tend to have a common kitchen/group area, cleared areas large enough for tents, a potty area, and trails connecting everything. The common area often is located near the water to minimize the carrying of gear so any loss of vegetation is in the new high-water zone. Trails usually are not very wide so while there is loss of vegetation it usually is not large in cross-section. Tent sites are much larger in cross-section than trails with intentional removal of rocks and sticks and sometimes subject to improvement. Tent sites also, unlike common area, may be located in the old high-water zone especially in larger groups.”

## RESPONSE:

Two indicators of vegetation impacts that are used by the NPS in campsite monitoring studies are barren core areas and number of trails (Brown and Jalbert 2003). Barren core area is measured by multiplying length by width. Because trails can be of great length (from the boat mooring site, through the campsite and into the old high-water zone), campsite trails can actually have a larger barren core area than tent sites. Most campsites contain more than one trail, with some sites having over 50 trails. Where multiple trailing occurs, the sum of the trail barren area can be much greater than the barren core area of the campsite common area. One of the problems with larger groups is that they spread out into the old high-water zone to establish secluded tent sites. Creating tent sites, as well as trails, in the old high-water zone, causes damage to native plants, cryptobiotic crusts and archeological sites. See Chapter 4: Environmental Consequences Vegetation, Soils and Cultural Resources sections, the most sensitive resources are found in the old high-water zone.

## V4b

Cots are not listed as a mitigation measure. Not only are cots cooler for sleeping in the hot summer months, but also they drastically reduce the need to clear sticks, rocks and vegetation for a tent sites since the person is suspended above the ground and only touches the ground in four places.

## RESPONSE:

Cots may help mitigate vegetation impacts in localized areas. If all persons using cots sleep side by side in the new high-water zone, cots could potentially reduce tent site impacts. However, many boaters lay tarps under their cots and some take them into the old high-water zone. Different parties may place the cots in

different locations on different nights and although the cot is elevated off the ground providing vegetation with some protection, footprints are still made while setting up the cot. The use of cots may have localized, beneficial effects to vegetation at campsites, but it will not mitigate all of the other adverse impacts caused by large groups including crowding, congestion, and resource damage in the old high-water zone at attraction sites.

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V5

Page 410 of the *DEIS* states, “recreationists on longer trips that layover at sites have more time to explore the old high-water zone and upland areas and to hike to nearby attractions, increasing both the area of possible impact and the probability of impacts.” The above statement is at best misleading. Assuming that every group visits the most popular attraction sites, such as Elves Chasm, then a longer trip will have 128 visitors to an attraction site compared to 144 visitors for a shorter trip. Thus, attraction sites with high impact will be impacted MORE by shorter trips. Longer trips will spread out the impacts over a wider area, not just the immediate river corridor, thus reducing the impacts on the high use areas and probably reducing impacts in the old high-water zone since they will spend more time hiking farther away from the river. Page G-15 states that, “the relationship between trip length and discretionary time is unknown.” This directly contradicts the statement on page 410.

One of the assumptions on page 417 states, “Longer trips have, by their nature (i.e., UDT) more time for visitors to interact with the canyon environment. This increased time has the potential to allow greater access to sensitive vegetation resources.” From page G-14: “First, [UDT] may help suggest relationships between use levels and certain biophysical or cultural impacts.” Shorter trips, by their nature, encourage hikers to cut across vegetation instead of following the trail, thus creating multiple trailing and impacting sensitive vegetation resources. This is at least as plausible as the stated assumption. Since there is no data to back up the assumption and it is mere speculation whether UDT has adverse or beneficial impact the assumption should be deleted.

RESPONSE:

The quote “recreationists on longer trips that layover at sites have more time to explore the old high-water zone and upland areas and to hike to nearby attractions, increasing both the area of possible impact and the probability of impacts,” specifically addresses longer trips that layover at sites. Data from river guide and private boater itineraries indicate that most trips that layover at sites do so to hike to an attraction site located up the side canyon adjacent to the campsite. The NPS acknowledges that a small percentage of trips may sit all day at the campsite. When trip lengths are greater than 14 days, trips have more opportunity to layover and therefore more time to interact with the canyon environment including the old high-water zone and nearby attractions. Since the Grand Canyon staff have no data to show that one type of user is more likely to use minimum impact practices than another type of user, UDT is based upon amount of time in the canyon (trip lengths), group size, number of daylight hours, average amount of time needed on the river to move from one camp to another at 8,000cfs, and amount of time spent doing camp chores for each trip type. See Appendix H. UDT was just one of several tools used in the analysis of each alternative. Assumptions for the UDT model were based on best available data including river guide and private boater itineraries, the river trip simulator and staff expertise. Data from the monitoring program may help to refine the assumptions for the model.

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V6

Page 410 of the *DEIS* discusses invasive species but neglects to mention the role of the dam. Most native species are adapted to periodic flooding (such as the cottonwood) while invasive species such as the salt cedar are not. While the actions of people running the river may accelerate the spread of invasive species, they are not the cause of the native species reduced ability to compete with the invasive plants.

Page 416 of the *DEIS* states, “The Glen Canyon Dam and the spread of exotic species have localized regional, adverse, long-term year-round, moderate to major effects on vegetation.” This is a very good statement. The NPS has little control over the dam or the introduction of exotic species. River groups have about the same amount of control over these problems so modifying their behavior will not solve regional vegetation problems although there may be localized problems that can be improved. It should be added for perspective: “Past history of the Grand Canyon includes people that lived in the canyon. These peoples created trails (including multiple trailing), used local vegetation, and introduced exotic plants such as corn and use levels at times certainly were much, much higher than the use levels contemplated in any of the alternatives from Lees Ferry to Diamond Creek. And yet such use is not considered unnatural much less destructive. So human use in and of itself is not the problem but the levels and type of use should be considered for their impacts.”

RESPONSE:

Please see the cumulative impacts discussion in Chapter 4: Environmental Consequences Vegetation section, where the lack of periodic flooding affecting the spread of non-native species is discussed. River runners directly contribute to the spread of exotic plant species. Seeds of red brome, ripgut brome and cheatgrass are transported throughout the river corridor by recreationists on their socks. One of the goals of the *Colorado River Management Plan* is to determine the appropriate levels and types of use on the Colorado River through Grand Canyon National Park (see the Modified Preferred Alternative H). Land use prior to the establishment of Grand Canyon National Park in 1919 does not lessen the mandate of the NPS Organic Act or dictate current river management.

V7

On page 415 under Timing it should also be noted that impacts to vegetation are more likely during high water. By definition, since the new high-water zone is underwater at high water, camping by necessity must occur in the old high-water zone. High water generally occurs in the spring and summer.

The two most important factors for impacts to the old high-water zone are group size and timing of high flows. High flows occur in the spring and summer when vegetation is most vulnerable and which corresponds with the period of highest use in Alternative A. Furthermore, the operation of large commercial motor rigs are problematic at low flows thus they primarily operate at high flows in conjunction with their large group sizes that use campsites reduced in size by the high water. A real reduction in impacts to the vegetation in the old high-water zone would reduce group sizes during higher flows in the spring and summer. Do any of the alternatives attempt to do this?

On page 424 it states “... including the spring when plants are most susceptible to damage.” This is in conflict with the statement on page 415 of the *DEIS* that states, “...plants are most sensitive from spring into summer.” The user day levels should be compared over the entire period when vegetation is most sensitive to damage. Under such a comparison the statement further down on page 424 about Alternative C, “Increased use in critical months would have localized, adverse, short- to long-term, seasonal, moderate impacts to vegetation” appears not to be justified.

RESPONSE:

Flows are regulated by the Bureau of Reclamation at the Glen Canyon Dam, with flow regimes fluctuating daily from 5,000 cfs to 20,000 cfs. The new high water zone is not inundated at flows of 20,000 cfs.

Several alternatives include reducing group sizes during the spring and summer. For example, Modified Preferred Alternative H would reduce maximum group sizes to 32 people in the summer and 24 people the rest of the year (page 52; also see Table 2-2 on page 36) for commercial motor trips and commercial oar trips. Modified Preferred Alternative H also creates a new small noncommercial group size of eight people.

Statement on page 415 has been revised to remove the word “summer.”

Alternative C doubles user-days and number of passengers in the spring from current condition and triples UDT. The moderate intensity rating was in part based on this substantial increase in use in the critical spring season. Impacts are expected to be measurable and perceptible and would adversely affect the overall size, viability, integrity, interrelationships or function of plant communities in localized areas. Mitigation to offset adverse impacts would be extensive and the impacted areas would require more than a year to recover.

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V8

One of the assumptions on page 417 of the *DEIS* states: “As there is no data to empirically support or refute the position that commercial trips cause less resource damage than noncommercial trips, the assumption is made that all individuals could equally adversely affect or benefit vegetation resources.” There is data that shows larger group size causes more vegetation impact and since all groups over 16 people are commercial then this statement is false. This assumption should be changed and there should be an assumption that vegetation impacts are related to group size. This is implicitly acknowledged on page 423 where it is stated the “. . .the reduction from maximum group size from 43 to 25 would decrease the likelihood of impacts from social trailing and campsite expansion in the old high-water zone and upland areas.”

RESPONSE:

See revised text, “Noncommercial and commercial groups are considered to behave similarly at campsites; however impacts to vegetation from small groups compared to large groups are different. Large groups tend to spread out more and affect old-high water zone vegetation, especially on smaller beaches.”

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V9

The statement on page 424 for Alternative C: “The annual increase in user-days and total passengers would result in more use of the limited number of campsites, with direct and indirect impacts to vegetation use.” This should be changed to note that the greatest increases in user-days and passengers occurs primarily during the fall and winter when vegetation is the least sensitive.

There is reason to suppose that vegetation might benefit from a break in winter from use to recover from high-use the rest of the year.

RESPONSE:

Alternative C doubles user-days and number of passengers in the spring from current condition and triples UDT. The moderate intensity rating was in part based on this substantial increase in use in the critical spring season. Impacts are expected to be measurable and perceptible and would adversely affect the overall

size, viability, integrity, interrelationships or function of plant communities in localized areas. Mitigation to offset adverse impacts would be extensive and the impacted areas would require more than a year to recover.

Vegetation is dormant in the winter and trampling impacts have less of an effect. This is one reason why the increase in use in the Modified Preferred Alternative H was placed in the fall and winter months.

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#### V10

In many of the alternatives there are statements about “potential” use of standing and fallen trees for fires instead of driftwood (and on page 432 it is likely, not potential). It is clear that increased use in the shoulder and winter seasons would require a change to the regulations regarding fires. Most backcountry areas already severely restrict or prohibit fires. Should require bringing your own charcoal or firewood if you want to have fires to greatly reduce use of standing or fallen trees. A survey of campfire policies along with damage to standing and fallen trees should be presented for both backcountry camping in national parks and permitted rivers. The present policy in Grand Canyon National Park is less restrictive than most and that restricting fires reduces damage to standing and fallen trees. The main reason that the park is less restrictive is the presence of larger amounts of driftwood than most other Southwestern rivers. A policy that restricted campfires using driftwood to more or less during the winter months would probably be more appropriate than the present policy. Summer and shoulder seasons should allow fires using charcoal or wood that is brought on the trip.

#### RESPONSE:

The monitoring and mitigation component of the *Colorado River Management Plan* implementation plan will study the effects of increased winter use on abundance of driftwood, and standing and fallen trees. Banning driftwood use for winter campfires and requiring that charcoal or firewood be carried in may be a mitigation measure that results if impacts are deemed unacceptable.

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#### V11

Alternative 3 on page 437 states, “two additional campsites with supply storage.” It appears that these are in Zone 2, which is not an appropriate use for an area that is supposed to be managed as semi-primitive. It also does not appear to be necessary. The attitude toward removal of vegetation for the campsites for Alternatives 3 and 4 is remarkable in its contrast to the rest of the section on vegetation. Should we worry about every broken branch elsewhere and then just whack away a large area for two new campsites with no concern?

#### RESPONSE:

Zone 2 is characterized as semi-primitive—a transition from a primitive, wilderness-like setting to a social setting resulting from increased use and variety of activity. It is also classified as a natural to modified natural environment due to the influence of Lake Mead, which begins near Separation Canyon (RM 240). Due in part to sediment depletion from Glen Canyon Dam, camping beaches are limited in the first 18 miles. Camping areas below Separation Canyon are limited due to lake effects, such as vegetation growth. The development of two additional campsites through vegetation removal is appropriate in a semi-primitive ROS classification in a natural/modified environment. The addition of shade structures, picnic tables, toilets, etc. at these campsites would not be appropriate in this zone, but would be in Zone 3, which is classified as a rural natural setting. All facilities will be placed above the historic high-water mark on Hualapai Tribal lands outside of the park.

According to ROS, a Semi-Primitive classification is “[an] area [that] is characterized by a predominantly natural or natural-appearing environment of moderate to large size. Concentration of users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but are subtle. The natural setting [in a semi-primitive class] may have subtle to moderately dominant alterations, but would not draw the attention of [visitors] within the area.” Vegetation removal for campsite creation will be conducted in a methodical manner only after consultation with the U.S. Fish and Wildlife Service.

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V12

Page 438 of the *DEIS* states, “Three campsites would be added, requiring vegetation.” I do not think that this is true. Usually campsites do not require vegetation.

RESPONSE:

See revised text. It should read, “Three campsites would be added, requiring vegetation removal.”

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V13

One consideration the NPS probably has considered is the possibility that exotic vegetation will make a run in “taking over” uncamped beaches. This will need to be monitored closely, as the numbers of campable beaches continue to decrease because of the erosion effects of Glen Canyon Dam.

RESPONSE:

The *Colorado River Management Plan* implementation plan will include a monitoring and mitigation program to assess the effects of exotic vegetation encroachment on campsite beaches throughout the river corridor. The types of vegetation management including the removal of invasive exotic plant species will be determined based upon the results of the monitoring program.

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V14

Only Alternative 2 meets Vegetation, Terrestrial Wildlife, Aquatic Resources, and Threatened or Endangered Species Resource Management Objectives for the Lower Gorge. Alternative 4 (preferred alternative) does not meet the plan objectives. The preferred and selected alternative should meet the plan objectives for those resources.

RESPONSE:

Although physical protection of the resource may appear to be best served by Alternative 2, management objectives for the entire *Colorado River Management Plan* are not met by Alternative 2. The NPS and Hualapai Tribe have established specific management objectives for the Lower Gorge. Modified Alternative 4 best meets all the objectives identified by the NPS and Hualapai collectively (aside from pontoon boat use), recognizing that more than vegetation needs to be considered. The Hualapai visitor use area around 260 mile canyon represents a departure in visitor use and resource condition from the rest of Zone 3 and is considered a node of activity. Modified Alternative 4 meets the natural resource impact topic management objectives on a regional level, however, does not meet the objectives in the localized two-mile stretch around RM 262.5.

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V15

Page 137 (and Table 3-10 on page 148). Reference is made to a “3c” species. It is not clear if that reference is to the old list of 3c species that was once maintained by the U. S. Fish and Wildlife Service. The U. S. Fish and Wildlife Service list of Category 1, 2, and 3 species no longer exists (Page 148 of the *DEIS*). It is not clear where the Species of Concern category for Federal Status in Table 3-10 is derived from. However, Region 2 of the U. S. Fish and Wildlife Service does not maintain a list of Species of Concern. In addition, the U. S. Fish and Wildlife Service list of 3b species no longer exists.

RESPONSE:

Although the U. S. Fish and Wildlife Service no longer maintains a list of Category 1, 2, 3 species, NPS biologists and botanists have decided to monitor species once considered species of concern within the park. The NPS is in the process of conducting a full inventory and creating a list of Grand Canyon National Park species of concern. Grand Canyon beavertail cactus, Kaibab agave, McDougall’s yellowtops and Cave-dwelling primrose are considered Grand Canyon National Park species of concern.

V17

Implementation of many of the mitigation measures listed on pages 415 and 416 of the *DEIS* would have a beneficial result in reducing the level of impact to vegetation and allowing for successful restoration of heavily impacted sites. The NPS should incorporate these “additional” mitigation measures into another level of alternative analysis clearly displaying the possible benefits. For instance, the idea of restricting beach use and group sizes to compatibly sized campsites has been proposed as additional mitigation to reduce impacts to both soils and vegetation. In both sections the level of information presented in the *DEIS* does not allow us to determine if such mitigation would result in a significant positive impact. Any table or other discussion in the *DEIS* referencing the impacts of additional mitigation must be backed up by a corresponding level of analysis in the project record.

RESPONSE:

Specific mitigation measures will be described in the *Colorado River Management Plan* implementation plan. Results from the rigorous, long-term monitoring program will determine what mitigation measures will be employed. If the NPS discovers that there are unacceptable levels of impacts as a result of the implementation of the modified alternatives, the adaptive management strategy will provide the NPS with the avenue for making appropriate adjustments.

V18

The health of vegetation along the river corridor is directly linked to the health of soil and to the disappearance of beaches. Vegetation loss also contributes to soil compaction and erosion. As a result, the issues of visitor use levels and carrying capacity are central to all alternatives and should drive a significant portion of the vegetation effects analysis.

RESPONSE:

All alternatives were the product of modeling that was based upon the physical and social carrying capacities of the river corridor. Differing visitor use levels measured in user-days, passengers and launches coupled with varying group sizes, trip lengths and seasonal UDT drove the complete and thorough analysis. The analysis meets the requirements of NEPA.

The NPS developed and used the river trip simulator in our analyses to model trip scheduling, congestion, crowding, and campsite availability. The variables that went into the model incorporated campsite size data, as well as trip length and group size. The group size and campsite availability is consistent with the physical carrying capacities in the canyon. The monitoring and mitigation program that will be part of the implementation plan will include a campsite capacity and biophysical impact evaluation component so that NPS may assess the results of the strategies that have been chosen. If NPS discovers unacceptable impacts, the adaptive management program will provide us the avenue for making necessary changes.

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V19

Need to implement a plan that will move towards restoration of plant communities, not just protection of an existing condition. The vegetation effects analysis for the physical and biological processes on multiple spatial scales (*DEIS* page 409). The *DEIS* states that the variables within the alternatives that have the greatest potential to impact vegetation are group size, trip length, UDT, launch schedule, user-days and the total number of yearly passengers. Only Alternative B comes close to using these variables to create an overall use pattern that would emphasize protection of vegetation resources.

RESPONSE:

The *Colorado River Management Plan* is a visitor use plan, not a vegetation management plan. The plan has many objectives including those for visitor use and experience and socioeconomics. Alternative B does not provide a full range of opportunities for the visitors and limits access to the river corridor. The NPS believes that the modified Alternative H best balances visitor access and resource preservation. Restoration of plant communities will be addressed in the Resource Stewardship plan and future Vegetation Management plan.

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V20

Could the NPS enlist the help of private and commercial trips to remove non-native plants?

RESPONSE:

Nothing precludes the NPS from accepting volunteer help from noncommercial or commercial boaters. The NPS currently uses commercial boaters in volunteer projects through the Colorado River Fund program. Anyone from the public is encouraged to volunteer to participate in inner canyon vegetation program management through the website [www.nps.gov/gov](http://www.nps.gov/gov). There are a limited number of positions that are based on availability of funding.

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V21

Groups should not use campsites that are too small for them but it should be stated that “groups should not plan on using campsites that are too small for them but if another group is already occupying the planned campsite and there is no viable campsite of the proper size, a group may occupy a smaller campsite but should endure crowding rather than seeking to modify or expand the smaller campsite to accommodate themselves.” However, it should not be mandatory that groups not use sites that are too big for them. Many large sites are large because they are popular and have been expanded through past use. If big groups can only use big campsites then, effectively, we will have designated campsites that can only be used by commercials.

## RESPONSE:

The NPS intends to continue the first come first served method of campsite “assigning.” In conjunction with an enhanced education program to enlighten users about old high water zone impacts, the NPS will distribute a map of campsite locations and capacities and encourage users to camp at appropriately sized camps.

## V22

More emphasis should be made at having orientation to respect vegetation and fragile soils. A survey of the research literature on this topic generally shows that biological impacts occur early when visitors first trample and compact vegetation. The fact is that hundreds of users staying on trails have limited impacts, but it only takes one party with bad practices to spoil a spot. After campsites and trails are established, the best means of controlling and limiting impacts is through education for all visitors in order to make sure that everyone knows what actions and practices are expected of them.

## RESPONSE:

The *Colorado River Management Plan* implementation plan will include an educational component that will enhance the current river runner orientation. The product will be a DVD and/or web based program and will include topics such as respect for vegetation and fragile biological soil crusts. The NPS currently has a number of vegetation and soils site bulletins that are available for distribution.

## V24

The *DEIS* does not appear to contain any discussion or analysis of how wilderness designation, or the removal of motorized boats, might effect vegetation resources. This is an unusual omission. As with soil resources, most of the benefits would derive from establishing smaller group sizes and scattered daily launch patterns that would provide a quality wilderness experience for visitors. Fewer daily launches would also decrease crowding and reduce impacts to beaches, soils, and vegetation that are exacerbated by increased competition for campsites.

## RESPONSE:

Grand Canyon National Park has, in the development of action alternatives, reduced group size (including guides in group size calculations), PAOTs and TAOTs; thereby meeting NPS Management Policies 2001 that state, “the NPS must manage recommended wilderness as a wilderness until action has been taken by Congress to either designate wilderness or remove it from consideration.” The Modified Preferred Alternative H effectively reduces group size for commercial motors and oars from 43 to 32 (May through September 15) and further reduces them to 24 for the remainder of the year. Although moderate to high levels of use occur from May through September, the reduction in group size, trip lengths, and launches reduces the total number of people on the river at one time within Grand Canyon National Park and fundamentally meets wilderness-like standards, especially during the shoulder and winter months. The analysis of alternatives B and C addressed the effects of removing motorized use.

## Visitor Use And Experience

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### General VUE Comments

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#### VUE1

The NPS should provide for educational and other “special” trips (i.e., academic, science, artists, and geology trips) and allow these to be scheduled during appropriate times.

#### RESPONSE:

NPS currently allows for and appreciates the value associated with educational and other “special” trips. The Modified Preferred Alternative H provides opportunities for these types of trips to continue, especially with the extension of the mixed-use season (April 1st through September 15th).

#### VUE9

Administrative use should be considered as it relates to possible crowding and congestion in the peak seasons, as well as for carrying capacity (especially when admin use constitutes close to 30% of river use).

#### RESPONSE:

Average administrative use is approximately 17 percent of total river use. Of this, 11% is Grand Canyon National Park operations, and 16% is Grand Canyon Monitoring and Research Center research. Administrative use was considered in PAOT and TAOT calculations for all alternatives, as they relate to possible impacts to the physical and social carrying capacities. Administrative use will be considered an addition to the recreational user-day allocation described in all of the alternatives, to the extent necessary to conduct adequate monitoring, mitigation, and education based on resource protection, visitor safety, and scientific needs.

#### VUE25

The overall increase in use pushes the physical capacity of the resource right to its breaking point and ultimately homogenizes the use. The NPS should factor in the need for commercial flexibility.

#### RESPONSE:

Alternatives were created within the constraints of the physical and social carrying capacities of the Colorado River corridor. In order to be a viable alternative, levels of impact had to be within acceptable levels. The NPS also believes that the commercial operators will find many continuing opportunities to serve Grand Canyon’s public within the Modified Preferred Alternative H. Nothing in our proposal precludes commercial outfitters from customizing their trips to suit their needs. The NPS has consciously not included nightly camp designations in the Modified Preferred Alternative H to allow for flexibility and the continued freedoms afforded to visitors.

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VUE137

Although Lees Ferry can be congested at times, the current plan has worked for many years. The kinks in the system have been worked out and continue to do so. Why start a whole new plan that will only bring more confusion?

RESPONSE:

A revised Colorado River Management Plan is needed to address both long-standing and recent issues concerning resource protection, visitor experience, and public services along the river; to consider the impacts of NPS river management on federally recognized American Indian Tribes whose reservations adjoin Grand Canyon National Park; and to fulfill the requirements of a 2002 agreement that settled a lawsuit about the river management plan.

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VUE19

Address motor support dory and kayak trips in the *Colorado River Management Plan* by allocating the use as nonmotorized (as they always have been) and allowing for 16-day trip lengths for them.

The reduced size of commercial oar trips during the shoulder season will greatly increase the cost of trips that require support boats, and thus reduce the diversity of options available to meet the Visitor Experience objective. Trips using dories will be severely impacted.

RESPONSE:

Alternatives were created within the constraints of the physical and social carrying capacities of the Colorado River corridor. In order to be a viable alternative, levels of impact had to be within acceptable levels. The NPS also believes that the commercial operators will find many continuing opportunities to serve Grand Canyon's public within the Modified Preferred Alternative H. Nothing in our proposal precludes commercial outfitters from customizing their trips to suit their needs.

Companies offering trips using dories may or may not be impacted in the shoulder seasons. Many factors affect the business costs associated with the various types of river trips. It will be up to the individual river running companies to adjust their operations to accommodate the various changes that result from implementation of this *Colorado River Management Plan/EIS*. The Modified Preferred Alternative H allows motor support trips to count as oar trips (in terms of launches, trip length and group size), given that they occur in the motor period and the motor support stays with the rest of the group.

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VUE33

Putting more people on the river will increase such undesirable conditions as increasing competition for campsites, attraction sites, interactions with other trips, campsite sediment depletion and compaction, and will ultimately lower the quality of a Grand Canyon river trip.

RESPONSE:

The NPS is very concerned with increasing impacts and undesirable conditions on the fragile resources of the canyon. In order to address this concern, key trip variables (launches per day, group size, trip length, seasonality, and user-day limits) were identified early in our analyses as being responsive to changing

resource conditions, like diminishing campsites. An important decision regarding the carrying capacity of the river corridor was to reduce trips at one time (TAOTs) from the maximum current level of 70 to 60 and to provide seasonal variations in the number of trips at one time. According to NPS analyses and simulator modeling output data, the leveling out of launches, the reduction of the maximum number of trips launching per day, and the reduction of group size all contribute to the quality of a Grand Canyon river trip. For more information, see Visitor Use and Experience impact analysis in Chapter 4 (Environmental Consequences).

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VUE34

Why was so much emphasis given to perceived interaction conflicts and bottlenecks as a basis for limiting launches? Why not allocate campsites via their size capacity? Was any analysis given to allowing groups self-determination in their camping/recreating choices rather than reducing trips in hopes of reducing unwanted interaction?

RESPONSE:

The basis for limiting launches or changing from a user-day system to a launch-based system was due not only to crowding and bottleneck issues, but also to the number, size, distribution, and expected lifespan of camping beaches and the number, types, and condition of natural and cultural resources. Please refer to VUE #38 for information about campsite capacity assignments and camping choices. Again, it was not only the necessity to reduce unwanted interaction that drove the reduction of launches, but the impacts to the physical and social carrying capacities, as well.

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VUE36

Do not eliminate motorized single boat trips of 12 to 21 people, as these are the most flexible river trips available, since they can travel quickly and safely to alternative camps when crowding at campsites is encountered.

RESPONSE:

The NPS has not suggested eliminating single motorized launches. However, to address public concern, we have the Modified Preferred Alternative H to address motorized single boat trips by providing the opportunity for this type of trip during the motorized season (April 1<sup>st</sup> – September 15).

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VUE54

A mechanism should be in place that forces concessionaires to offer opportunities to kayak or raft the river under their own control. No companies offer the opportunity to row and only offer kayak trips.

RESPONSE:

Some commercial operators do currently offer motor-supported kayak trips as part of their range of services. Commercial operators face liability constraints in allowing clients, for example, to paddle their own private raft while carrying other passengers. For this reason, commercial operators do not offer this as an option.

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The Modified Preferred Alternative H provides increased access for noncommercial boaters and also revises the way in which noncommercial permits will be issued. The commenter may find that this increased noncommercial access answers an underlying concern, which may be how to go on a Grand Canyon river trip without the long wait currently encountered on the waitlist system.

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VUE65

Our motorized seven-day split trip with a Bright Angel exchange fills a niche that no one else is servicing. It's a substantial portion of our revenue, but it's a minor part of the aggregate commercial mix, one that visitors appreciate, and one that adds to the total variety of river-based Grand Canyon experiences available. It's a better exchange because it involves hiking instead of helicopters, and the hiking is on a corridor trail. Please don't eliminate this unique trip type and please delete the COR proposal of hiking exchanges requiring guides from the *FEIS*.

RESPONSE:

The NPS believes the commenter is concerned about the 4-day minimum trip to Phantom Ranch requirement in the *DEIS*, in the first part of this comment. This requirement has been removed from the *FEIS*. The NPS also believes that the commercial operators will find many continuing opportunities to serve Grand Canyon's public within the Modified Preferred Alternative H. The NPS is currently conducting a re-inventory of campsites to determine and assign capacities for the development of a river map, depicting the size and locations of campsites, as a tool for river runners in the future in the Modified Preferred Alternative H instead. This map will alleviate the confusion over campsite locations, capacities, and the necessity to assign campsites. Also, see comment and response in Operating Requirements (OR #10) to address the second half of this comment.

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VUE133

Closing certain attraction sights, such as Elves Chasm and the Little Colorado River, will not negate the negative impacts brought on by increased use.

Also under Alternative H there will be more time when groups are neck-in-neck with one another, as opposed to short contacts. This too will negatively affect visitor experience and should be avoided.

RESPONSE:

These particular closures are meant to protect endangered species: at Upper Elves Chasm the Kanab ambersnail and at the Little Colorado River the humpback chub. As shown in Alternative H in the *DEIS* and the Modified Preferred Alternative H in the *FEIS*, once closed to visitation the increased use will not affect or increase impacts to those sites, since both were modeled with these closures. People will continue to have access to Lower Elves Chasm and the northern half of the Little Colorado River, including the riffle. Please refer to the Operating Requirements section of Chapter 2 in the *FEIS* for more information about seasonal closures.

According to the visitor use and experience analysis of the Modified Preferred Alternative H, the "time in sight" of one another would be within wilderness standards. Both the 1975 (Shelby and Neilson 1976) and 1998 (Shelby 2000) Grand Canyon National Park studies show "time in sight" tolerances for wilderness at 15% or less, which equates to about 45 minutes per day when applied to a five hour "on-the-water" period. See the impacts analysis for the Modified Preferred Alternative H in Chapter 4: Environmental Consequences and Appendix G—Visitor Use and Experience for more information.

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VUE146

Has the hiking exchange been documented to be feasible? Has the planning team talked to the Bar 10 Ranch about their willingness to even provide a shuttle service from the ranch to the rim? It is my understanding that they are not interested in that service. If they are, what is the cost? The trail needs a lot of work. Is the trail repair cost known? Is there money in the budget? Most importantly if someone had trouble on the trail, like they do on the Bright Angel, would the NPS be in a position to assist them in a reasonable time? Will there be rangers to walk and monitor the trail? A few years ago about 10 of the river companies spent a few days at the ranch looking at the road shuttle options, and hiking the trail.

RESPONSE:

The impacts of hiking exchanges at Whitmore were evaluated in Chapter 4 (Park Management and Operations, Visitor Use and Experience, Adjacent Lands, and Socioeconomics). See new text added to the Modified Preferred Alternative H for details on modifications to Whitmore exchanges.

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VUE154

Kayak trips actually increase the crowding/congestion problem with more boats and more people.

RESPONSE:

There are a number of ways to measure perceived crowding, including the number of people at one time, trips at one time, group size, encounters, launch patterns, etc. Although a kayak trip may have no more people in it than any other group of its type (whether private or commercial), the fact that it has many smaller boats may add to some people's perception of crowding. Others prefer to see several kayakers instead of one large trip.

The NPS analyzed a full range of alternatives for group size and launch patterns. It did not choose to restrict the numbers of boats launching within trip types, since it believes that a range of recreational experiences should be available to visitors at Grand Canyon.

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VUE159

The *DEIS* needs to do a better job of describing what a typical river runner wants to experience.

RESPONSE:

As the *DEIS* describes, it is difficult to profile the "average" or "typical" Colorado River runner and therefore, difficult to describe what every river runner wants to experience. More detailed information on "visitor characteristics" that summarizes key elements of most trips is available, however, in Shelby and Neilson 1976; Bishop et. al. 1987; Hall and Shelby 2000; Stewart et al. 2000; and Jonas 2002.

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VUE160

What good is a natural resource if almost nobody can experience it? The experience of seeing this canyon makes a person a better steward.

## RESPONSE:

It is difficult to understand what the commenter is trying to say in this comment, since most action alternatives, including H and the Modified Preferred Alternative H not only increase launches, but user-days and passengers, as well. In other words, more people will have the opportunity to run the Colorado River than currently do.

## VUE168

The *DEIS* fails to address the range of recreational opportunities. Classifying or specifying types of trips can provide a useful analysis but it can also reduce the range of opportunities between the types of trips. Currently, there are only two basic types of trips: commercial and noncommercial. By classifying trips the NPS has eliminated the range of recreation trips.

It is in fact illegal for noncommercial trips to hire a guide. Is there a demand for semi-commercial trips? Would such trips provide an enhanced experience for participants over what is currently available? Is there a viable way to provide such trips? None of these questions are addressed in this document even though it is an issue that was identified in the scoping meetings and in the quote above.

## RESPONSE:

Specific opportunities available to individual boaters depend on their choice of craft, type of trip (commercial/noncommercial or motorized/nonmotorized), trip duration, season, group size, and other variables. The visitor use and experience analysis (Section 4.4) describes patterns of existing use and impact levels that help define the range of recreation opportunities available under existing management (Alternatives A and 1) or other management strategies (Alternative B through the Modified Preferred Alternative H in the Upper Gorge and Alternative 2 through Alternative 5 in the Lower Gorge).

The NPS does not have a category considered a “semi-commercial” trip. An activity is either commercial or it is not. NPS-53 defines a commercial service as “Any or all goods, activities, services, agreements or anything offered to park visitors and/or the general public for recreational purposes, which uses park resources, (and) is undertaken for or results in compensation, monetary gain, benefit or profit to an individual, organizations, or corporation, whether or not such entity is organized for purposes recognized as non-profit under local, state or federal laws.”

36 CFR 5.3 says that “Engaging in or soliciting any business in park areas, except in accordance with the provisions of a permit, contract, or other written agreement with the United States, except as such may be specifically authorized under special regulations applicable to a park area, is prohibited.” A noncommercial group may hire equipment, purchase pre-packaged food, etc. outside park boundaries at its discretion. However, a noncommercial group may not hire services to be rendered within park boundaries, such as a guide, because this blurs the distinction between a commercial (guided) and noncommercial (self-guided) trip.

## VUE174

Allowing a variety of visitor experiences has been severely limited by constraining outfitters into providing similar experiences. For example, without helicopter use in March and April, all motor companies will be providing nearly identical eight-day trips. In addition, the reduction of launches available in combination with the reduction in group size would also require that every launch be maximized with a two-boat trip of

28 guests, run at 100% of capacity from March 1 through the entire season, only to fall short of our current user day capacity. This forces everyone into identical group sizes. This mandated group size will take away the opportunity for any variety of groups or group experience. There will be no more one-boat trip opportunities, unless outfitters simply relinquish these days to private users through the adjustable split allocation system by not filling their allocations. This is simply not a business reality, nor is it fair to the larger public.

RESPONSE:

The Modified Preferred Alternative H in the *FEIS* has several modifications from Alternative H in the *DEIS*, including allowing helicopter exchanges at Whitmore during the entire motorized season (April – September) and the elimination of an adjustable split allocation system. Also, the Modified Preferred Alternative H increases the amount of launches in the second half of April and the first half of September to provide more opportunities for people to run the river from a variety of trip types, group sizes, and trip lengths. See new text describing the Modified Preferred Alternative H and the impacts analysis in Chapter 4 (Environmental Consequences) for more information.

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VUE175

River encounters may decrease by count in summer months; however, the duration of encounters and repetition of encounters of a September oar only (three launches per day) launch scenario will increase. The nature of encounters during this time will extend beyond passing other trips on the water. There is the natural extension to crowding/encounters at campsites and side canyons.

RESPONSE:

The Modified Preferred Alternative H in the *FEIS* modifies September launches from Alternative H in the *DEIS*, allowing mixed-use during the first half and a nonmotorized second half. The launch scenario during the 2<sup>nd</sup> half of September helps to ensure that river and attraction encounters stay within wilderness-like standards (less than 2 or 3 encounters per day), since two oar trips may launch every day and up to three oar trips may launch every other day. Also, group size is reduced starting in September from 32 to 24 (including guides for commercial trips) through April, and remains the same (16) for noncommercial trips; thus reducing social impacts, such as crowding, large group encounters on the river and at attraction sites, and campsite competition for river runners.

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VUE176

Maximum group sizes in all alternatives are reduced from the current situation that is beneficial. However, maximum group sizes and number of large groups are much larger than can credibly be supported by the number of large campsites in Zone 1 of the Grand Canyon.

RESPONSE:

Key trip variables (launches per day, group size, trip length, seasonality, and user-day limits) are responsive to changing resource conditions, like diminishing campsites. An important decision regarding the carrying capacity of the river corridor was to reduce trips at one time (TAOTs) from the maximum current level of 70 to 60 TAOTs and to provide seasonal variations in the number of trips at one time. According to NPS analyses and simulator modeling output data, the leveling out of launches, the reduction of the maximum number of trips launching per day, and the reduction of group size, and trip lengths all contribute to the

capability for large groups to camp on large campsites in Zone 1 of the Grand Canyon river corridor. For more information, see Visitor Use and Experience impact analysis in Chapter 4, Environmental Consequences.

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#### VUE182

While some aspects of Alternative H are improvements (smaller maximum group size, for example), the overall quality of the visitor experience and the recreational values that are encompassed within that experience will be seriously compromised.

#### RESPONSE:

The quality of one's experience depends on a myriad of factors, including one's perspective, past experiences, preference, and expectations. In the Modified Preferred Alternative H, for example, someone who takes a river trip in the summer months, expecting to see or hear no more than two parties on their trip would be disappointed. That person could, however, choose to take a river trip in the shoulder or winter seasons when their expectations could be met. See Chapter 4: Environmental Consequences, for information on how the Modified Preferred Alternative H reduces social impacts from the current condition in different seasons (including crowding, trip length, group size, camp competition, river and camp encounters, scheduling issues, and exchanges).

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#### VUE162

Bob Powell's 2003 survey for the NPS, reported river trip participant/visitor satisfaction at 99%. Given the high ratings for commercial services, major changes of the type proposed should be considered only as last resort and only in response to critical problems.

#### RESPONSE:

A revised Colorado River Management Plan is needed to address both long-standing and recent issues concerning resource protection, visitor experience, and public services along the river; to consider the impacts of the NPS' river management on federally recognized American Indian Tribes whose reservations adjoin Grand Canyon National Park; and to fulfill the requirements of a 2002 agreement that settled a lawsuit about the river management plan. Alternatives were created within the constraints of the physical and social carrying capacities of the Colorado River corridor. In order to be a viable alternative, levels of impact had to be within acceptable levels. The NPS also believes that the commercial operators will find many continuing opportunities to serve Grand Canyon's public within the Modified Preferred Alternative H. Nothing in our proposal precludes commercial outfitters from customizing their trips to suit their customer's needs.

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#### VUE163

Alternative H falls short of what most river runners would say was a "once in a lifetime" experience.

#### RESPONSE:

There is almost universal recognition, reflected in public scoping comments, of the special nature of the resources and the experiences in the park's river corridor. People used terms, such as superlative, life

changing, unique, and awe-inspiring to describe the canyon and their experiences while floating the river, hiking side canyons, and viewing and learning about scenery, wildlife, and the park's natural and cultural resources. Preserving the special values of the river corridor identified by the public and improving recreational opportunities for visitors while protecting resources are included in the objectives for this plan.

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#### VUE190

Some respondents thought that commercial services should be improved. Respondents commented that the quality of commercial services will not be improved and may actually suffer, for the following reasons: 1. The increase in private users who are less familiar with the resource and have the maximum amount of UDT will have a big impact on our ability to avoid contacts. 2. The shortening of possible commercial trip length maximums will force us to drop our 17 and 18 day offerings. 3. The group size limit addresses a relatively small percent of commercial trips but pushes those few trips into additional launches creating more contacts. 4. The one oar launch/day instead of the maximum people/day limit results in a total loss of scheduling flexibility. Commercial companies re-create their schedules every year to address interest expressed in periodic, special focus trips that are longer or shorter or more intense for operations and to try out new trip types. 5. The contact peaks and troughs that are eliminated by Alternative H were actually taken advantage of by some companies (operated by resource savvy and trip type behavior savvy guides) to avoid other groups; some companies even typically tried to launch mid-week so they start out traveling in a trough.

#### RESPONSE:

Alternatives were created within the constraints of the physical and social carrying capacities of the Colorado River corridor. In order to be a viable alternative, levels of impact had to be within acceptable levels. The NPS also believes that the commercial operators will find many continuing opportunities to serve Grand Canyon's public within the Modified Preferred Alternative H. Nothing in our proposal precludes commercial outfitters from customizing their trips to suit their needs. See new text describing the impacts associated with the Modified Preferred Alternative H in Chapter 4: Environmental Consequences.

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#### VUE192

Some respondents feel that unbalanced activism by conflicting user groups and lack of knowledge with regards to the benefits different types of users gain from running the Grand Canyon have led to a biased informal attitude towards management philosophies. The management plan, however, has reasonably included the perspectives of all groups. Nevertheless, a better understanding of the benefits of the "less worthy" trips would certainly help inform future discussions with regards to the most equitable management philosophy.

#### RESPONSE:

The NPS believes it meets the management objective of providing a diverse range of river trip opportunities for visitors to experience the Grand Canyon National Park under current management, as well as under the Modified Preferred Alternative H. Commercial passengers and noncommercial boaters are and will continue to be provided a variety of recreational opportunities to run the river in the Modified Preferred Alternative H through several different means (e.g., motorized/nonmotorized trips) with various trip lengths and group sizes.

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## VUE193

There is no alternative that decreases the total number of user-days. Does the NPS feel that carrying capacity has not been met? Does Alternative H represent maximum carrying capacity? Is it higher? Does the park know what the maximum carrying capacity is? If not, how can the NPS justify continually increasing the total number of user-days in a resource that should definitely have its capacity measured in order to meet the NPS' dictate to protect and preserve the resources it oversees?

## RESPONSE:

The NPS is very concerned with increasing impacts and undesirable conditions on the fragile resources of the canyon. The *Draft EIS* develops elements used to determine social and physical carrying capacity for the Colorado River. All of the action alternatives were created within the constraints of the physical and social carrying capacities of the Colorado River corridor.

An important decision regarding the carrying capacity of the river corridor was to reduce trips at one time (TAOTs) from the maximum current level of 70 to 60 and to provide seasonal variations in the number of trips at one time. The *DEIS* also examines the elements of use, such as trip length, launch schedule and group size, and their relationship to carrying capacity. The Modified Preferred Alternative H reduces crowding and congestion from peaks in use by evening out the launch schedule, reducing trip length and group size.

## VUE194

## Uniqueness of Grand Canyon

The record clearly shows that slower, nonmotorized craft offer a superior opportunity of the best the canyon offers. Unfortunately, the nonmotorized alternatives are penalized in the Visitor Experience section (p.62) for not offering non-conforming, short motorized trips and the preferred alternative "meets" the criterion by offering a variety of trip lengths (motorized). While the offering of a "variety of trip" does not trump the agencies requirement to protect resources, the option for a variety of trip lengths the nonmotorized trips afford through hiker (and possibly mule) exchanges at Phantom Ranch and Whitmore is not evaluated. The NPS simply ignores the inherent advantage of enjoying Grand Canyon's unique qualities the nonmotorized alternatives provide in favor of an alternative that fails to meet the agency's legal responsibilities.

## RESPONSE:

The two nonmotorized alternatives (Alternatives B and C) do not meet only one of the three Visitor Use and Experience management objectives; specifically to "Provide a diverse range of quality recreational opportunities for visitor to experience and understand the environmental interrelationships, resources and values of Grand Canyon National Park. They do, however, meet the other two management objectives, as stated in Table 2-5 in Chapter 2.

The NPS has strived to find equitable solutions for all our users, recognizing that the river can only sustain a certain number of users at one time. In creating our alternatives, we have attempted to provide the greatest access to the greatest number of users consistent with resource protection. The NPS believes it is important to provide diverse trip types and opportunities and feel that 18 to 21 days are appropriate trip lengths during the shoulder seasons, with increases to 25 days during the winter because of the knowledge of changing environmental conditions.

VUE196

The Criterion 3 discussion talks about “balance” and “parity in access to a wide variety of people.” When these are weighed, it should be remembered that the national parks were themselves created to provide some balance to the developed world outside the parks. Mechanized recreation, which is quite available outside the parks, need not be included inside the park to provided balance. Indeed, providing unneeded mechanized recreation in the parks destroys the balance by continuing our society’s proclivity for mechanization. Additionally, mechanized river recreation will likely be available below Diamond Creek and between Glen Canyon Dam and River Mile 0. Thus, we strongly disagree with the statements in Table 2-9 (*DEIS*, 89, 90) that Alternatives B and C do not meet Criteria 3 and 4.

RESPONSE:

Please refer to the response to MISC #9.

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VUE202

To make up for the reduction in group size, some companies would need to increase the number of boats going down the canyon by 22%, or by 32 boats each season to compensate for the decrease of eight people in each group. This is after an automatic shift to all two-boat trips. This 22% increase in the number of boats down the canyon each year and the congestion and impacts associated with 32 more motor boats each season from one company alone, does not accomplish the stated objectives of reducing perceived crowding, maintaining a primitive experience, nor is it environmentally preferable. Additionally, if the proposed reduction in launches is extrapolated out to all motor trip providers, there are not enough motor launches available for each company to operate at the current motor use levels. This calculation is accomplished by dividing the percent of motor launches available for each company under Alternative H, by the percent of motor participants each company has historically taken down the canyon. This total is then divided by the maximum group size available per season. Numerically, Alternative H does not take into account the additional launches needed to compensate for the proposed reduction in group size. Alternative H is not capable of being implemented without increasing the proposed number of motor launches, group size, or both.

RESPONSE:

Alternatives were created within the constraints of the physical and social carrying capacities of the Colorado River corridor. In order to be a viable alternative, levels of impact had to be within acceptable levels. In restructuring the launch calendar and through our analyses provided by the river trip simulator, the NPS is confident that congestion and crowding, especially at attraction sites, will be greatly reduced from current conditions. Spreading use across the week, month and season will reduce the impacts that occur today.

The NPS also believes that the commercial operators will find many continuing opportunities to serve Grand Canyon’s public within the Modified Preferred Alternative H.

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VUE203

Duration of contacts between groups will have numerous negative consequences for the quality of the river experience.

It is difficult to express adequately the degree of negative impact increased trip encounters will have on all of these trips. Contacts today are more tolerable than they will be under Alternative H because most of the time, you only contact the same group once (when one trip passes the other), or on occasion you might see the same trip several times in a day or two, but then one trips gets ahead and the other falls behind. Under the status quo, subsequent contacts are with different groups and are generally brief. Consequently, they have a “novelty value” that makes them more tolerable.

In contrast, under Alternative H most of the longer trips, whether commercial or noncommercial, will find themselves playing tag for their entire trip with other groups that they launched with at Lees Ferry. Since all groups will be headed to the same scenic attractions, on the same overall schedule, it is likely that they will have repeated contacts with each other, as well as numerous opportunities to compete for camps with the same groups each day. This will greatly detract from the visitor experience on all trips that find themselves in this unfortunate situation. In short, the social perception of the contacts (“novel” vs. “repetitious”) is an important distinction and directly impacts the quality of the experience. This appears obvious to experienced river runners, but is not noticed by the Grand Canyon RTS model.

Seeing the same people continuously over the course of the trip will be worse than having the same number of encounters with different groups, for several other reasons as well. First, repeated competition for campsites and private time at attraction sites will lead to conflict and animosity between visitors who have expected a “wilderness-like” experience. Second, seeing the same groups day in and day out will seriously compromise the “social integrity” of groups. River trips - both commercial and noncommercial - normally engender a special bonding among trip members that contributes greatly to the experience. This shared experience is an important connection as it maintains the love of Grand Canyon and the Colorado River over time. Blurring of this group identity, or social integrity, will be a consequence of too many, too frequent contacts with the other groups traveling on the same schedule. This intangible, but extremely significant, aspect of extended river trips is well known to all guides, repeat noncommercial boaters, and experienced commercial passengers alike; it is one of the things that makes a Grand Canyon river trip a “trip of a lifetime” for many participants. Alternative H will destroy one of the more significant aspects of the visitor experience for trips that are forced to travel on the same schedule.

Solution: Congestion is better than a steady stream of contacts. Please consider returning to the people/day limits that provide both flexibility and peaks/troughs in river travel patterns. The NPS needs to monitor contacts occurring under Alternative H, perhaps via requiring, using, and reviewing trip contact logs. This information should be analyzed and published. Please require this of all trips: science trips, Grand Canyon Monitoring and Research Center trips, NPS administrative educational and “show-me” trips, commercial and private. This would help to provide information about trips not included in the generalized TAOTS used by the NPS for the *DEIS*. It would have the added benefit of providing the NPS and the whole river community with actual information about the use patterns of trip types that are currently lacking in oversight. No system of accountability for these trips behaviors and standards exists today. There is no system to monitor these trips or to address non-compliance with river etiquette issues and resource impacts: what guidelines are applied in lieu of NCORs and CORs for these other trip types? NPS VIP trips and research/Grand Canyon Monitoring and Research Center trips and their impacts to river travel and the etiquette that is so necessary for smooth river operations.

#### RESPONSE:

Encounter levels were a key issue in the development of alternatives, and all the launch patterns were designed to avoid exceeding current summer averages. The uneven launch patterns under current management appear to cause some particularly high encounter days. During recent years, about 40% of all encounters are “repeat encounters” with a group seen previously that day (Hall and Shelby, 2000). This suggests many encounters are related to “leap-frogging” by groups on similar schedules.

Repeat encounters are exacerbated by the current uneven weekly use patterns that often launch many similar trips on the same days. Patterns that spread out different types of trips will reduce repeat and overall encounter rates; thus reducing the perception of crowding and congestion. All action alternatives have more even launch patterns that spread out different types of trips throughout the year and reduce the number of trips at one time (TAOTs), which effectively reduce river encounters from the current condition. The Modified Preferred Alternative H reduces these perceptions of crowding and congestion from peaks in use by evening out the launch schedule, reducing trip length and group size.

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VUE205

Regarding Alternatives D and G: How do alternatives that are basically low-use and high-use versions of the mixed-motor/no-motor case have much greater visitation for the low-use alternative? This defies any sensible explanation and either must be explained in greater detail to substantiate the numbers or the entire table must be deleted.

RESPONSE:

The NPS assumes the commenter is referring to the predicted visitation levels at major attraction sites in their comment and has responded accordingly. Alternatives D and G differ in several aspects. The maximum total number of trips at one time (TAOT) and available UDT play important roles in affecting visitation levels at major attraction sites. Shorter trip lengths and less UDT in Alternative G affect visitation levels by allowing less time for people to interact with their environment or visit attraction sites than they could under Alternative D. For example, people on river trips under Alternative D would have more time to visit every site; whereas, people under Alternative G would have less time to interact with their environment, resulting in more of a fast-paced river experience.

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VUE206

The NPS should phase out the recreational use of motorboats, helicopters and other motorized equipment on the Colorado River in Grand Canyon National Park in accordance with the Wilderness Act and other legal requirements. Protection of wilderness character was a “Major Issue and Area of Controversy” raised by the public. In fact, it was THE major issue raised by the conservation community. We implore the agency to provide management actions that accomplish that task.

RESPONSE:

In response to this comment, the NPS has added sections on Wilderness Character in Chapter 3: Affected Environment and Chapter 4: Impacts to Wilderness Character.

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VUE208

Those of us who are in the industry and are familiar with the statistics know that technology and guiding skills have significantly closed the gap between the safety record of large motorized rafts and smaller rowing and paddling craft. However, this is not common knowledge and the perception of most potential Grand Canyon visitors is that the motor boats are safer. The fear of rafting in a small craft represents another real and significant barrier that drives demand for the motorized experience.

## RESPONSE:

Demand is influenced by many factors, including perceptions of safety. The NPS cannot influence one's perception other than possibly through education. NPS statistics show that the majority of incidents occur on shore, are environmentally influenced, or occur because of preexisting conditions. So, even though motorized and nonmotorized rafts are about equally safe, the majority of accidents are not boat related.

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## VUE209

Converting a portion of our motorized use to nonmotorized use is not a fair option. Some companies supply motorized trips because that is what their guests want. The challenge of marketing these trips, purchasing a new fleet of rowing boats, frames, and associated equipment, expanding existing facilities to warehouse and maintain this rowing equipment, and hiring and training at least eight new guides to run rowing trips is not a reasonable expectation. Especially since this would be in addition to the four new motor boats and guides we would need to operate the 32 more motor boats trips a year that the proposed reduction in group size requires. This unintended consequence of introducing more boats into the canyon is not the primitive type of experience discussed in the *DEIS*.

## RESPONSE:

Alternatives were created within the constraints of the physical and social carrying capacities of the Colorado River corridor. In order to be a viable alternative, levels of impact had to be within acceptable levels. The NPS also believes that the commercial operators will find many continuing opportunities to serve Grand Canyon's public within the Modified Preferred Alternative H. Nothing in our proposal precludes commercial outfitters from customizing their trips to suit their needs. The NPS does not anticipate forcing any motor river concessioner into providing oar trips. Changes in launch patterns and group sizes reflect the NPS goal of reducing adverse impacts to the physical river environment and improving visitor experience. The NPS believes that its concessioners will adapt to the changes in their operating patterns successfully.

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## VUE210

Criterion 2 - is "To assure safe, healthful, productive, and pleasing surroundings, the river environment should be free of many of the day-to-day urban experiences the public leaves behind when they enter into the Grand Canyon environment" (page 86). Crowding is the significant criteria. "One important consideration is the opportunity to experience the natural soundscape of the canyon without the intrusion of boat and helicopter motor noise" (page 87). Then the NPS contradicts itself by stating that motorized trips and helicopter exchanges best provide the means of meeting these standards. The NPS indicates that Alternative H "exceeds" this criterion with 860 motor boats (page 52, two motor rigs per trip) and over 2,700 helicopter trips. The only other alternatives with an "exceed" rating are the no-motor alternatives.

## RESPONSE:

Please refer to the response to MISC #9 and Soundscape (NS #11). Please see revisions in the Environmentally Preferred Alternative analysis; Modified Preferred Alternative H has been rated as meeting, not exceeding, Criterion 2.

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VUE220

If possible, some portion of the substantial user fee should be allocated to enlarging or recovering campsites that have been lost due to the operation of the Glen Canyon Dam.

RESPONSE:

Please refer to the response to (VUE #30) regarding the monitoring and implementation plan. The NPS will be considering all possible funding sources for monitoring and mitigation, including fee demo funds, franchise fee funds, special park use permits and funds through special regulations. It is the intention of Grand Canyon National Park to pursue long-term permanent solutions to guarantee funds for monitoring and mitigation and other implementation needs for the life of this plan.

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VUE223

“The widest range of beneficial uses of the environment without degradations” means nonmotorized rafting, hiking and other non-intrusive actions. The NPS gives an “exceeds” rating (page 89) to the two Alternatives (F and H) that have the highest adverse environmental (motor and noise) impacts. The two options that have the least environmental degradations (B and C) get “does not meet” grades.

RESPONSE:

Please refer to the response to MISC #9.

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VUE224

An examination of the extent to which education techniques are used within private and public groups would be an effective way to examine whether or not current methods are effective in minimizing negative behaviors. Research has demonstrated that certain tools have an impact on various negative behaviors.

RESPONSE:

The NPS has included education as a mitigation tool for all users, including commercial passengers and noncommercial boaters. The monitoring and implementation plan will have an educational component. See the Modified Preferred Alternative H regarding mitigation measures in Chapter 4: Environmental Consequences.

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VUE226

Build a gondola system at or near Whitmore take out docking point. The gondola could be designed to look like Indian ruins (at pedestal and power equipment sites).

RESPONSE:

Building a gondola system (whether designed to look like Indian ruins or not) at Whitmore is outside the scope of this planning effort and inconsistent with the recreational opportunity spectrum classification for Zone 1 (Lees Ferry to Diamond Creek) within the Colorado River corridor. Zone 1 is characterized as a primitive setting within recommended wilderness with very limited facilities, with the exception of Lees Ferry, Diamond Creek, and Phantom Ranch.

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VUE227

It is important that the NPS explain trip length reduction to preserve protection objectives and explain why trip lengths are shorter under Alternative B with the lowest overall number of users, than under Alternative H, which is keeping motors and increases the number of people to more than 26,000.

RESPONSE:

The NPS has strived to find equitable solutions for all our users, recognizing that the river can only sustain a certain number of users at one time. Alternatives were created within the constraints of the physical and social carrying capacities of the Colorado River corridor. In order to be a viable alternative, levels of impact had to be within acceptable levels. The NPS attempted to modify the alternatives to address public access and suggestions for different trip lengths, but the number of trips at one time (TAOT) would exceed our carrying capacity of 60 TAOT in Alternative B if trip lengths were lengthened. An important decision regarding carrying capacity was to reduce trips at one time from the maximum current level of 70 to 60 and to provide seasonal variations in the number of trips at one time. Please refer to the response to VUE207 for more detail.

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VUE228

In the Lower Gorge, a maximum group size of 100 for Alternative 1 is way too high. Lunch and attractions would have a major impact. Alternative 2 is much more reasonable with a group size of 30.

RESPONSE:

As stated in the impact analysis of the Lower Gorge Alternative 1 in Chapter 4: Environmental Consequences - Visitor Use and Experience, "Under current management, there are minor to moderate adverse group size impacts associated with large commercial continuation trips, and moderate to major adverse impacts for the 10 boat/80 person day use trips, especially when stopped for lunch or for attraction site visits." Alternative 2, because of the reduction of group size, would have moderate to major beneficial impacts on visitor experience.

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VUE229

Page 622 should note that Table 4-29 shows that Alternative H, the preferred alternative, is at the top of the alternatives for probability of encounters at high use sites (85%) in the summer, median number of people encountered at high use sites in the summer (30) and the probability of encounters at lower use sites in the summer (50%).

RESPONSE:

See new text in Modified Preferred Alternative H in Chapter 4: Environmental Consequences, Visitor Use and Experience. (See Section 4.4.5.1.1 for more information)

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VUE230

The NPS has not considered use of cots on the beach in determining campsite carrying capacity. Passengers love them. It keeps them off the ground; they don't worry about snakes or insects crawling into their

sleeping bags. The cots have legs that are approximately 16-inches high; consequently the cot also serves as a bench seat. They fit into the tents that we offer our guests. However one fringe benefit of the cot is that it is not as critical to find a level campsite as when sleeping directly on the ground. Cots can be leveled with rocks under the legs. Cots can also be used in rocky areas with rocky ledges. One place comes to mind, the camp that is a mile or so before Havasu, that has many rock ledges. Cots work just fine there. Cots allow camping in areas that others would pass up because there would not be a place large or level enough to lay a sleeping bag on the ground. Cots provide flexibility in condensing the camp sites and people can sleep closer together, which is very helpful in a small campsite.

RESPONSE:

The NPS will consider monitoring the effects of using cots at campsites within the Colorado River corridor.

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**Launches Comments**

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VUE3

Don't give commercials the "prime" season launches; they should have winter launches too.

RESPONSE:

Through the public process, the NPS has attempted to provide a wide range of opportunities for all our visitors. Noncommercial opportunities are available year-round, including the summer season.

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VUE14

Allow a launch to be considered a single launch, whether it is a two-boat motorized trip or two single-boat motorized trips.

RESPONSE:

A launch is considered to be a river party traveling together, camping together, and sharing meals and experiences. The number of craft launching is not regulated.

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VUE136

Create more launches by taking away from commercial allocations instead of decreasing self-guided trip lengths.

RESPONSE:

The NPS has strived to find equitable solutions for all our users, recognizing that the river can only sustain a certain number of users at one time. In creating our alternatives, the NPS has attempted to provide the greatest access to the greatest number of users. Reducing the noncommercial trips by 2 days will allow many more noncommercial trips to launch.

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VUE40

Create a sub-category with the noncommercial venue for ultra-small groups, from solo to four people and up to two rafts or four kayaks, and allow one launch per week. Allow only those with self-guided experience to use this type of launch and require them to only camp at undesignated, small campsites.

RESPONSE:

Any noncommercial launch can contain any number of water craft, as long as the number of people per group are at or under the maximum group size limit set forth in this EIS. With the flexibility we hope will be the outcome of this plan, the NPS anticipates greater diversity in trip types. Additionally, with the creation of the eight-person noncommercial trip type (April 1–August 31), we hope to provide additional opportunities for the very type of group mentioned in the comment.

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VUE55

The endless parade of commercial motor trips is a more significant detractor from the experience than would be obtained with fewer launches and groups maintaining a spread over the river. Twice as many launches taking half as many days is the same number of user-days, but the impact is far greater, because of traffic and crowding at attractions.

RESPONSE:

In moving to a launch-based system and through our analyses provided by the river trip simulator, the NPS is confident that congestion and crowding, especially at attraction sites, will be greatly reduced from current conditions. Spreading use across the week, month, and season will reduce the impacts that occur.

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VUE69

Please model and consider several scenarios to address the loss of flexibility for commercial oar launches: a) Once a week allow two oar launches on the same day; keep all other variables; b) Twice a week allow two oar launches on the same day; keep all other variables; c) Allow oar companies to launch more than one trip/day, as long as another day that week goes without a commercial oar launch. Two privates could be scheduled that day instead; d) Allow unused motor slots to be picked up by oar companies.

RESPONSE:

The NPS has used every tool available in structuring the launch scenarios we have provided in the *FEIS*. One of our biggest concerns was trips at one time (TAOTs). As the NPS attempted to modify the alternatives to address public access and suggestions for alternative launch scenarios, we found that TAOTs (one of the carrying capacity standards) would be violated. Modified Preferred Alternative H does allow river runners flexibility in launching more than one non-motorized trip a day at certain times of the year.

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VUE108

Schedule launches for motors in the morning and nonmotors in the afternoon. This will reduce congestion/passing at least in the early days of the trip.

RESPONSE:

Launch schedules are flexible and the NPS anticipates continued cooperation and communication between all trips launching at Lees Ferry.

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VUE111a

By reducing the number of daily launches to no more than four per day, you will reduce the number of encounters to an acceptable level. But this could lead to commercial users running bigger trips to offset not selling in shoulder seasons, which will in turn decrease visitor experience. The alternative chosen by the NPS should ensure that group encounter limits comport with best science research.

RESPONSE:

The NPS believes that the Modified Preferred Alternative H addresses the concerns voiced by this comment regarding larger commercial trips. Commercial trip group sizes have been reduced in all seasons from the current condition.

The NPS believes that it has used the best available tools and research to analyze the alternatives. Please see Appendix G: Visitor Use and Experience for detailed information on what research findings were used in determining encounter impacts in the *Colorado River Management Plan/EIS*.

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VUE111b

The NPS should consider buying permits as they come up for renewal.

RESPONSE:

The NPS administers concessions contracts and permits under P.L. 105-391, which limits such services to those as are considered “necessary and appropriate” for the public use and enjoyment of the area. If a Park determines that such services are necessary and appropriate, they are to be provided under appropriate levels under a concessions contract or contracts.

If the NPS determines such services are no longer necessary and appropriate, they may be ended. There is no provision for the NPS to “buy” permits back from those to whom they have been issued. If the service is still considered necessary and appropriate, the NPS will issue a new contract for those services. If the service is no longer determined to be necessary and appropriate by the NPS, no such contract will be issued.

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VUE143

Launches should be a mix of motor and nonmotor trips, preferably at least, three motor to one nonmotor.

RESPONSE:

The NPS believes it has adequately addressed the mix of motor and nonmotor use in the Modified Preferred Alternative H launch scenario.

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VUE149

One of the greatest crowding problems is seven day-trips launching on Sunday after eight day-trips on Saturday. The catch-up point is always the Deer Creek to Havasu area. Nothing in this plan addresses this problem. Even with reduced numbers of launches there would be 8–10 trips at each place at one time. (six motor trips from two days plus commercial oar and private trips) The *Colorado River Management Plan* should eliminate some of this overlap of trips.

RESPONSE:

The river simulator model used to develop the alternatives examined the congestion and crowding issues described in the comment. Our analysis of the Modified Preferred Alternative H suggests that the NPS will not have this problem under the new launch pattern. Monitoring and adaptive management measures will be developed and implemented to address this concern and changes may be necessary if the congestion and crowding continues.

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VUE175

The current level of use should be capped and spread out from the summer to shoulder and winter months. There should be no increase in overall use.

RESPONSE:

The NPS believes this task has been accomplished through Modified Preferred Alternative H. Use is measured in a variety of ways. While the overall number of people who can experience the canyon may increase, the number of people at any one time will be less than occurs today.

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VUE183

Motor and oar trips move at very different paces with (most often) very different agendas. The exceptions would be some of the attraction sites. Motor trips launching on the same day with the same schedule travel at generally the same pace, working to dodge each other and other trips. Due to the use of a motor and their shorter trip length, they have added mobility. Conversely, oar trips on the similar schedules have limited ability to dodge each other.

Solution: To mitigate unforeseen encounter issues, the NPS should retain three motor trips, 1.5 commercial oar trips, and 1.5 private launches per day in the first two weeks of September.

RESPONSE:

Modified Preferred Alternative H has addressed this concern by adding motor use back into the first two weeks of September.

## Seasonal Comments

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VUE11

Please do not allow motor trips for administrative use during the nonmotor season, as this disrupts the nonmotorized recreational experience.

RESPONSE:

All administrative trips must go through a minimum tool analysis to determine the appropriate mode of travel. Every attempt is made to preserve the sanctity of the nonmotorized seasons. However, there are times when motorized use is appropriate due to specific project needs that ultimately benefit resources in the canyon.

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VUE22

Move motor launches from March to April and extend to September 15.

RESPONSE:

NPS also saw the advantages of changing the mixed-use season from March 1 through August 31 to April 1<sup>st</sup> to September 15th. See the Modified Preferred Alternative H description and analyses in text.

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VUE35

Designate motorized river use to specific times of the year to mitigate congestion and campsite competition.

RESPONSE:

Motorized use is restricted to 5 ½ months in the Modified Preferred Alternative H and reduces congestion and camp competition.

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VUE48

If you spread out the motor season in September into October and offer more motor launches during the spring with longer trip lengths, you would be able to cut down on the motor use during the peak summer months.

RESPONSE:

Please see the Modified Preferred Alternative H. The first half of September is designated as motorized, along with April. The NPS has strived to find equitable solutions for all our users, recognizing that the river can only sustain a certain number of users at one time. In creating the alternatives, the NPS attempted to provide the greatest access to the greatest number of users consistent with resource protection. Reducing trip lengths will allow more trips to launch.

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VUE52

Please allow complete flexibility between commercial oar and commercial motor launches in the 1.5 commercial launches in April, without designating which type.

RESPONSE:

The NPS Modified Preferred Alternative H addresses the flexibility issue and is responsive to the needs expressed by the public regarding this issue. Designating trip types is essential in order to insure appropriate levels of TAOTs are maintained (thus reducing congestion, crowding and resource impacts).

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VUE58

Consider making March and April row-only months and the month of September a month with the same characteristics as the summer months.

RESPONSE:

Please see the Modified Preferred Alternative H. March is designated as nonmotorized, along with the 2<sup>nd</sup> half of September. The NPS has determined that April should remain a mixed-use month.

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VUE61

Please allow commercial nonmotor launches in September and October at historic levels and motor launches in the first half of September. Not allowing commercial launches at these times would restrict the access of the general public.

RESPONSE:

Please see the Modified Preferred Alternative H description and analyses.

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VUE62

Although no commercial use is provided for in March in Alternative H, we hope that the new plan will allow the park with the flexibility to allow an occasional noncommercial oar launch during this month and make exceptions to the rules on a case-by-case basis.

RESPONSE:

Based upon public comment, Modified Preferred Alternative H provides for noncommercial use year-round, and commercial use would no longer be permitted in March.

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VUE66

The oar launch limits in September, specifically the change from people/day limits to just one oar trip allowed per day, have a negative impact on some companies and represent a lost commodity. Changing access in this manner does not seem necessary and is not in the public's interests. What is the rationale behind the NPS' decision to so severely restrict the potential for general public access during this month?

RESPONSE:

Please see the Modified Preferred Alternative H description and analyses. Based upon public comment, increasing commercial oar launches have been provided for in September.

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VUE70

We suggest a more meaningful definition of the “no-motor season”: September 15<sup>th</sup> should be the last day any motor trip could be on the river above Diamond Creek. The “mixed-use” and “no-motor” seasons, consequently, would refer to the presence or absence of motorized craft above Diamond Creek, rather than launches at Lees Ferry.

RESPONSE:

Please see text in the Modified Preferred Alternative H for a definition of the no-motor season.

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VUE118

If the *Colorado River Management Plan* is intended to “enhance recreational opportunities” as stated, it would not require a significant portion of commercial clients to travel during March and early April when it often snows and is prohibitively cold for this type of user group. September and October are much more appropriate months. Having to travel during the month of March is certainly not an “enhanced recreational opportunity”, as the *Colorado River Management Plan* states it is intended to provide. It is a hardship that most paying Americans are not capable of surviving with any degree of enjoyment, nor is it the type of experience that they deserve. Commercial clients self-select trips like this because they want to see the canyon and enjoy having the experience, not to overcome hardship and adversity to make it through intact. Commercial motor clients deserve the opportunity of a motor trip during shoulder months like September and October, rather than March and early April.

RESPONSE:

NPS also saw the advantages of changing the mixed-use season from March 1 through August 31 to April 1st to September 15th in the Modified Preferred Alternative H. Commercial oar trips would be able to launch every other day in October in the Modified Preferred Alternative H. Please see text for more information about launches, trip types, seasonality, and impacts for the Modified Preferred Alternative H.

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VUE120

If the park is not open throughout the year for boats with motors, is this not a sufficient time limitation for the larger expeditions? And does this not provide enough time for those who want to experience the Grand Canyon in a more traditional manner?

RESPONSE:

The NPS believes the full range of alternatives provided in the *FEIS* addresses the diversity of opportunities provided for all users.

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VUE124

There are very few trips in the winter months. Days are short and it is often cold. The use in the winter is minimal at best and certainly underused. Propose the elimination of the nonmotor season as a solution to benefit the noncommercial use of the user-days they have previously been unable to use.

RESPONSE:

The NPS believes the full range of alternatives provided in the *FEIS* addresses the diversity of opportunities provided for all users.

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VUE125

Some respondents cannot support any alternative that does not include June, July, or August as a nonmotor month and suggest the nonmotor months of Alternative H be August through January.

RESPONSE:

The NPS believes it has developed and analyzed a full range of alternatives, including two year-round nonmotorized alternatives B and C, and a mixed motor/nonmotor alternative F, in which July through December were nonmotorized. The impact analyses determined that these alternatives did not meet the management objectives for the Colorado River corridor. Oar trips may launch throughout the year and the Modified Preferred Alternative H provides an additional 3 ½ months of nonmotorized opportunities, from current conditions, for a 6 ½ month nonmotorized season.

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VUE157

The park should maintain present noncommercial trip lengths in all seasons.

RESPONSE:

The NPS has strived to find equitable solutions for all users, recognizing that the river can only sustain a certain number of users at one time. In creating alternatives, the NPS has attempted to provide the greatest access to the greatest number of users consistent with resource protection. Reducing the noncommercial trips by two days will allow many more noncommercial trips to launch.

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VUE176

Another alternative is to open up winter launches to a separate lottery or allocation system. When only 2% of noncommercial boaters and zero percent of commercial passengers would choose a winter launch, the NPS should not force 32% of the noncommercial rafters' user-days into a undesired launch season. Private boaters who have been on a wait list for 20-30 years should not be forced to accept a winter launch for their once in a lifetime trip.

RESPONSE:

The Modified Preferred Alternative H provides opportunities for people to take noncommercial river trips throughout the year, not only during the winter. In all, the Modified Preferred Alternative H provides

noncommercial boaters 56 additional launches in the summer; 101 additional launches in the shoulder seasons; and 92 additional launches in the winter. The NPS believes most, if not all, of these launch dates will be eagerly requested and claimed.

The permit system in no way “forces” private boaters to accept winter launches, but it does allow those who are interested to request those dates. Noncommercial boaters should list only the dates they are willing to accept.

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VUE180

One can only assume that Alternative C, with only four trips of similar trip lengths launching each day would create fewer daily contacts and less congestion problems than Alternative H’s six motorized and oar-powered trips, each traveling at considerably different speeds. Alternative C’s “meets” rating is qualitatively and quantitatively superior to Alternative H’s rating, and the process should demonstrate that fact.

RESPONSE:

The NPS believes that the analyses provided in the *FEIS* are complete. Although on the surface, it would appear that Alternative C would have fewer impacts, the mix of trip types, lengths, group sizes all combine to reach analysis thresholds. Alternative C does not provide as diverse a range of quality recreational opportunities for visitors to experience and understand the environmental interrelationships, resources, and values of Grand Canyon National Park. The Modified Preferred Alternative H meets all three visitor use and experience management objectives.

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VUE181

“The widest range of beneficial uses of the environment without degradations” means nonmotorized rafting, hiking and other non-intrusive actions. The NPS then gives an “exceeds” rating (page 89) to the two Alternatives (F and H) that have the highest adverse environmental (motor and noise) impacts. The two options that have the least environmental degradations (Alternatives B and C) get “does not meet” grades.

RESPONSE:

Please refer to the response to MISC #9.

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VUE198

It seems counterintuitive to ban motors from noncommercial trips during the winter. This is the time when it’s coldest in the canyon, and the drier one can stay the better. Private trips launching during the winter are also essentially hiking trips with boats, and it’s more efficient to get from hike to hike on a motorboat. Please allow noncommercial trips to run motors December 15 through February 28 (or 29).

RESPONSE:

The Modified Preferred Alternative H does not allow commercial or noncommercial motor use in the winter season. This provides for a variety of recreation opportunities, both with and without the influence of motorized transport.

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VUE225

The agency's own research demonstrates that winter provides important sanctuary for wildlife species, especially migratory water fowl (*DEIS*, pages 499,456,466). Unfortunately, the *DEIS* does not clarify what constitutes appropriate recreational levels during this season. The NPS must establish winter use levels consistent with wilderness (especially wildlife) protection.

RESPONSE:

Please see response to comment in Terrestrial Wildlife (TW #8).

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### **Trip Length Comments**

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VUE23

It is inappropriate to decrease trip lengths as a mechanism to create more launches for the noncommercial user group (especially when research shows trip length is the 3<sup>rd</sup> highest ranking distinguishing feature of a Grand Canyon river trip). 16 days is not enough time to enjoy the canyon. 18 days is more reasonable.

RESPONSE:

The NPS has strived to find equitable solutions for all users, recognizing that the river can only sustain a certain number of users at one time. In creating alternatives, the NPS has attempted to provide the greatest access to the greatest number of users consistent with resource protection. Reducing the noncommercial trips by two days will allow many more noncommercial trips to launch.

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VUE27

Make trip length equal for both commercial and noncommercial motorized use, instead of allowing 16-18 day trip lengths for noncommercial trips and only 10 days for commercial trips.

RESPONSE:

Modified Preferred Alternative H has reduced the number of days for motorized noncommercial trips from 16 days to 12 based upon public comment.

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VUE47

Why limit commercial motors to only 10 days? One motorboat for 12-16 days has less impact, tangible and visual, than six rowboats going down stream for 16 days.

RESPONSE:

The NPS has strived to find equitable solutions for all users, recognizing that the river can only sustain a certain number of users at one time. In creating alternatives, the NPS has attempted to provide the greatest access to the greatest number of users consistent with resource protection. The NPS believes it is important to provide diverse trip types and opportunities.

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VUE57

Please allow for waivers for longer motor trips (i.e., hiking, geology trips) to provide an opportunity for the commercial passenger to interact with the resource in ways that no other trips provide for.

RESPONSE:

Please see the Modified Preferred Alternative H. Additional days were added to commercial motorized trips in the shoulder seasons to address this concern.

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VUE68

The NPS' proposal to limit commercial motorized trip lengths to 10 days or less would significantly, and unnecessarily, restrict the concessionaires' ability to offer specialized motor trips, and therefore reduce the range of trip options available to the public.

RESPONSE:

Please see the Modified Preferred Alternative H. Additional days were added to commercial motorized trips in the shoulder seasons to address this concern.

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VUE100

It is not clear why trip length is reduced under Alternative B when the *DEIS* acknowledges that fewer visitors can allow longer trips without increased resource impacts. Winter trips should definitely go back to 30 days. Day-length, flow levels, and inclement weather can match up to be hardships not reasonably met in 18 days.

RESPONSE:

The NPS has strived to find equitable solutions for all users, recognizing that the river can only sustain a certain number of users at one time. In creating alternatives, the NPS has attempted to provide the greatest access to the greatest number of users consistent with resource protection. The NPS believes it is important to provide diverse trip types and opportunities and feel that 18 to 21 days are appropriate trip lengths during the shoulder seasons, with increases to 25 days during the winter because of the knowledge of changing environmental conditions.

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VUE103

Shorter motorized trips are currently available between Glen Canyon Dam and River Mile 0. There are also other ways to meet the desire for shorter trips (e.g., hiking in or out at Hermit Trail, Bright Angel Trail, Hermit Trail, etc.) Diversity of visitor experience is clearly a secondary goal compared to the "fundamental" goal of resource protection. It is completely clear that there is no justification for allowing motorboats between River Mile 0 and Diamond Creek.

RESPONSE:

The NPS has strived to find equitable solutions for all users, recognizing that the river can only sustain a certain number of users at one time. In creating alternatives, the NPS has attempted to provide the greatest

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access to the greatest number of users consistent with resource protection. The NPS believes it is important to provide diverse trip types and opportunities.

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VUE104

The *DEIS* states that long trips below Diamond Creek occur infrequently, in which case the NPS needs to make a clear case to justify why trip length limits need to be implemented at all.

RESPONSE:

The NPS has worked with the Hualapai Tribe in addressing the needs for a range of opportunities in the Lower Gorge. Physical carrying capacity, particularly the limited beaches, was factored into the decision to limit the number of days allowable in the Lower Gorge.

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VUE119

Alternative H should be modified to more closely approximate Alternative E. Specifically, the mixed-use season would decrease to 6 1/2 months (from 9). Motors would be allowed March 15 through September 30. The nonmotorized use season would increase to 5 1/2 months (from 3). Motors would not be allowed to launch in March and between September 16 and December 31.

RESPONSE:

Please see the Modified Preferred Alternative H.

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VUE126

Some respondents support the restriction of motorized trips to 10 days to Diamond Creek with certain exceptions. During the May through August summer season, 10 days is more than adequate. In April, September, and October extended hiking trips are becoming more common and allowances for longer durations should be granted during those time frames, which also coincide with lower water levels.

RESPONSE:

Please see the Modified Preferred Alternative H. Additional days were added to commercial motorized trips in the shoulder seasons to address this concern.

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VUE127

The Alternative H description of motorized vs. nonmotorized use is confusing. "Alternative H is a mixed motor/no-motor alternative that would divide the year into two six-month periods, with use occurring from March through October and nonmotorized use from September through February." After reading this statement it is unclear if September and October are mixed-use or not. Please clarify.

RESPONSE:

Please see the corrected text in Chapter 2.

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VUE140

Trip lengths should stay the same.

RESPONSE:

The NPS has strived to find equitable solutions for all users, recognizing that the river can only sustain a certain number of users at one time. In creating alternatives, the NPS has attempted to provide the greatest access to the greatest number of users consistent with resource protection. The NPS believes it is important to provide diverse trip types and opportunities.

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VUE141

How will a row trip get to Quartermaster Canyon in a reasonable amount of time to meet a take-out boat, and where will they camp? (And who wants to row 20 miles of lake anyway?)

RESPONSE:

Please see the Modified Preferred Alternative 4. Jet boats will be allowed to pick up passengers at Separation Canyon (as is currently the practice).

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VUE142

For safety reasons, it is necessary to factor in the flexibility of a layover day.

RESPONSE:

Nothing in any of the alternatives limits the ability to have layover days.

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VUE145

Time and money are both precious commodities. The reality is that most people cannot afford to spend more than a week on vacation. Rowing trips, while wonderful and highly sought after, present a tremendous barrier to most people. That barrier is time. To see the entire Canyon on a row boat, it is a minimum of a two week commitment. Another reality that distinguishes a full-canyon rowing trip from a full-canyon motor trip is cost. It just makes sense that longer are much more expensive. This difference in overall price is also a driving factor behind the high demand for motorized trips.

RESPONSE:

The NPS has strived to find equitable solutions for all users, recognizing that the river can only sustain a certain number of users at one time. In creating alternatives, the NPS has attempted to provide the greatest access to the greatest number of users consistent with resource protection. The NPS believes it is important to provide diverse trip types and opportunities. There are a variety of trip types to accommodate all our visitors, including Lees Ferry to Phantom, Phantom to Whitmore, and Diamond Creek to Lake Mead.

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Additionally, shorter trips are available on other comparable rivers in the southwest, in particular Westwater, Lodore, San Juan, and Canyonlands.

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VUE150

Trip length could be discussed from what is NEEDED to get from Diamond Creek to take out on Lake Mead (South Cove at the moment) to what is tolerable. Camps are limited access and routes or trails out to the North Rim for example are few to non-existent.

RESPONSE:

Please see the Modified Preferred Alternative 4. Jet boats will be allowed to pick up passengers at Separation Canyon (as is currently the practice), providing additional flexibility in transporting passengers to Lake Mead.

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VUE151

The reduction in trip lengths in Alternative H is misguided. The most efficient use of user-days and allocation splits does not necessarily mean best use of overall discretionary time.

RESPONSE:

The NPS has strived to find equitable solutions for all users, recognizing that the river can only sustain a certain number of users at one time. In creating alternatives, the NPS has attempted to provide the greatest access to the greatest number of users consistent with resource protection. The NPS believes it is important to provide diverse trip types and opportunities.

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VUE152

Trip length/size adjustment should be made, with larger trips having less time, and smaller trips more time to reflect how group size affects impact as being more equitable.

RESPONSE:

Trip size and trip length do not necessarily relate directly. In the alternatives, the NPS has strived to find equitable solutions for all users, recognizing that the river can only sustain a certain number of users at one time. In creating alternatives, the NPS has attempted to provide the greatest access to the greatest number of users consistent with resource protection. The NPS believes it is important to provide diverse trip types and opportunities.

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VUE153

Even if you shorten the maximum summer trip length, do not shorten maximum noncommercial trip lengths for spring, fall, winter from 21 to 18 days, or 30 to 25 days respectively.

RESPONSE:

The NPS has strived to find equitable solutions for all users, recognizing that the river can only sustain a certain number of users at one time. In creating alternatives, the NPS has attempted to provide the greatest access to the greatest number of users consistent with resource protection. The NPS believes it is important to provide diverse trip types and opportunities and feel that 18 to 21 days are appropriate trip lengths during the shoulder seasons, with increases to 25 days during the winter because of the knowledge of changing environmental conditions.

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VUE155

Why are there minimum trip lengths to Phantom Ranch? First of all, if no-motors were allowed that wouldn't be an issue and second if motors were allowed a shorter trip wouldn't impact those on the river much if any more.

RESPONSE:

Please see Section 2.7.5; minimum trip length requirements have been eliminated in the Final EIS based upon public comments.

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VUE156

Maintain a 21-day maximum length for noncommercial oar trips during the summer and shoulder seasons for the following reason: 1) As stated in Appendix G of the *DEIS*, 51% of noncommercial users want longer trips, whereas the majority of commercial users don't. 2) Oar-powered noncommercial trips need more time to cover the same distances. 3) The rareness and singularity of drawing a noncommercial permit, and the greater effort involved in putting a noncommercial trip together, justify a greater effort involved in putting a noncommercial trip together, justify a greater allotment of user-days. A 21 day trip allows a greater expansiveness and calm befitting the Grand Canyon.

RESPONSE:

The NPS has strived to find equitable solutions for all users, recognizing that the river can only sustain a certain number of users at one time. In creating alternatives, NPS has attempted to provide the greatest access to the greatest number of users consistent with resource protection. NPS believes it is important to provide diverse trip types and opportunities and feel that 18 to 21 days are appropriate trip lengths during the shoulder seasons, with increases to 25 days during the winter because of the knowledge of changing environmental conditions.

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VUE164

The discussion on page 591 of the *DEIS* on trip length is rather dismal. All the alternatives reduce trip lengths despite what is presented in the *DEIS*. More importantly, the effects of shorter trip lengths are not even broached. It should be noted in the management plan that reducing trip lengths while keeping user-days fixed will result in greater impacts on high use attraction sites. This is because each person will visit an attraction site at most once and the number of visitors is highly correlated with the number of people going down the river. And reducing trip lengths while keeping user-days fixed results in more people going down the river.

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RESPONSE:

The NPS has strived to find equitable solutions for all users, recognizing that the river can only sustain a certain number of users at one time. In creating alternatives, NPS has attempted to provide the greatest access to the greatest number of users consistent with resource protection. The NPS believes it is important to provide diverse trip types and opportunities and feel that 18 to 21 days are appropriate trip lengths during the shoulder seasons, with increases to 25 days during the winter because of the knowledge of changing environmental conditions. The NPS believes that the concerns voiced in this comment have been addressed through Modified Preferred Alternative H.

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VUE169

If there is an impact because trip lengths are too short then “the longest allowable trip lengths” should not be included in the conclusion as something that needs to be mitigated. This is not just a minor issue; it is the “third highest ranked distinguishing feature of a Grand Canyon river trip.”

RESPONSE:

The NPS believes that the concerns voiced in this comment have been addressed through Modified Preferred Alternative H.

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VUE170

“Although this alternative provides the longest allowable trip lengths of any alternative, it has a minor to moderate adverse impact to most visitors, based on research findings.”

The sentence makes no sense. What does “it” refer to? What research findings? I have seen no research concerning trip lengths and in fact the analysis of trip length is either missing or often wrong. What does “most visitors” mean? Hikers? Boaters?

RESPONSE:

In terms of the level of importance to visitor experience, the “length of time traveling through an undisturbed environment” was the third highest ranked distinguishing feature of a Grand Canyon river trip (Hall and Shelby 2002). Data show that nearly one-third of commercial passengers and 51% of noncommercial users felt their trip lengths are too short under current management, which probably has a regional, adverse, long-term, moderate impact on their river trips. See the modified text in Chapter 4 (Environmental Consequences) Visitor Use and Experience impact analysis in the *FEIS*.

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VUE207

Many contacts are multiple contacts between two groups that occur on the same day (another source of interpretation and manipulation) that may only be approximated by using Brownian motion. The actual average observed contacts can be impacted by multiple contacts especially around places like Phantom Ranch. If this is a problem then it would suggest that restrictions around exchanges at Phantom Ranch would be more appropriate than altering the management of the entire river. The Draft EIS suggests that most trips of a particular type are within plus or minus one day of the average. Looking at the alternatives

with small differences between travel times of different types of groups it appears that the smaller differences within each group would not significantly change the conclusions of this model.

It is probably best to separate out the convective and diffusive components since the choice of contact probability can change the relative importance of each component. For the convective component the average number of people encountered is dramatically reduced when trip speeds are similar. This is consistent with our intuition although some may be surprised at the degree of reduction.

#### RESPONSE:

The NPS believes the river simulator model that we used to help formulate alternatives to be sound. The river simulator model calculated speeds of river trips by grouping them in terms of trip type and looking at the 300 trip reports (summer Colorado River trip reports from 1998 through 2002) to see how long, on average, trips took in between stopping points (i.e., attraction sites). This was averaged over many different trip reports and also over varying flow regimes, although the overall average flow regime during the data collection period was about 19,000 cfs.

Obviously, all trips don't travel at the same speed; motor and oar trips travel at different speeds. In different reaches of the river, these speeds will vary as the baseline water speed also varies. Moreover, variations in the flow releases from the dam affect the speeds in which river trips travel. Each trip in the river simulator model goes the speed that is appropriate for that trip type. Depending on the stops each trip makes, one group might or might not encounter another group.

Two indicators (used in both the 1975 and 1998 studies) are helpful for understanding attraction site encounter impacts. The probability of meeting another group reflects the opportunity to find solitude at attraction sites and is relevant for both lower and higher use sites. At sites with multiple groups (which is more likely at the five higher use sites), the question becomes "how many people is too many" as measured by the average number of people observed.

While it may seem intuitive to suggest that "the no-motor alternatives have the smallest average number of people contacted daily," the time spent in contact is actually higher, since a motor boat with a large group size would pass by quickly and be gone, whereas an oar contact would take up more time. So, time in sight is an important indicator, not simply the number of people that are encountered.

Please see Chapter 4, Environmental Consequences, for the impact analysis on visitor use and experience regarding encounters and their impacts to visitors. Also, see Appendix G for more information regarding encounters and use levels.

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#### VUE192

As a mitigating factor for losing the capability for 18-day summer trips, trip organizers should continue their river trips beyond Diamond Creek and take out at the next available site, at least two more days down river. This allows less time between Lees Ferry and Diamond Creek, but that reach of river is only one of many that river runners can enjoy.

There may be a trade off between more launches and longer trips, but a choice is necessary between shorter trips and more launches; it is our greatest advantage to accept the shorter trips to maintain the greater number of launches.

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RESPONSE:

In the Modified Preferred Alternative H, the maximum noncommercial oar trip length would be reduced to 16 days for trips launching in the summer, 18 days September 1-15, 21 days in the remainder of the shoulder seasons, and 25 days in the winter. Also, noncommercial motor trips would be reduced to 12 days in the summer, 12 days in the shoulder seasons, and no-motor trips would be allowed in the winter. It would continue to be up to the individual groups to decide where they'd like to take out at; whether at Diamond Creek or continue onto Lake Mead.

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### **Group Size Comments**

VUE135

Provide opportunities for “small launches” (eight-seat trip) to better use noncommercial user-days and to provide boaters with diverse opportunities.

RESPONSE:

The NPS Modified Preferred Alternative H provides for this special opportunity.

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VUE26

The small group trip size is an excellent idea and should be implemented with campsite restrictions, since there are more campsites in the small category than there are large campsites and would increase the diversity of trips offered.

RESPONSE:

The NPS has included the small trip option in the Modified Preferred Alternative H to allow for diversity in trip types. The NPS has consciously not included nightly camp designations to allow for flexibility and the continued freedoms afforded to visitors.

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VUE22

Retain the group size of 32.

RESPONSE:

The group size of 32 was retained in the Modified Preferred Alternative H for commercial motor and oar trips, May – August.

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VUE41

Endorses Alternative H, but with a group size of 24 to correlate with diminishing beach sizes.

RESPONSE:

The Modified Preferred Alternative H reduces group size to 24 for all commercial trips, September – April.

VUE50

Opposes the element of Alternative H allowing groups as large as 32 persons, since large groups place more impacts on campsites because visitors spread out into the natural habitat surrounding the central impacted site. Too large a group also harms the experience for other visitors who seek a wilderness experience.

RESPONSE:

Reduction of group size is a component of the Modified Preferred Alternative H. Under current conditions, groups as large as 43 are now utilizing the diminishing campsites. The NPS believes reductions to 32 (and 24 during the shoulder seasons) are an appropriate response to the physical and social carrying capacities.

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VUE64

Why are commercial trips allowed to have more participants than private trips? Trip size limits should apply equally to commercial/noncommercial trips.

RESPONSE:

The NPS has strived to find equitable solutions for all users, recognizing that the river can only sustain a certain number of users at one time. In creating alternatives, the NPS has attempted to provide the greatest access to the greatest number of users consistent with resource protection. The NPS believes it is important to provide diverse trip types and opportunities and believe that a 16-person group size is the appropriate maximum group size for noncommercial trips.

Based on 1999–2002 data, average group size for both motorized and nonmotorized noncommercial trips is 13, although winter and shoulder season trips tend to be smaller. Noncommercial trips tend to have fewer people per raft, but seldom have more than eight rafts per trip.

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VUE76

Modify Alternative H to reduce commercialized motor group size from 36 to 30 and commercial nonmotor group size to 25 people during mixed-use periods and reduce to 20 people during nonmotorized periods. Noncommercial trip sizes should remain the same, but with a new (small) group size of 8.

RESPONSE:

Reduction of group size is a component of the Modified Preferred Alternative H. Under current conditions, groups as large as 43 are now utilizing the diminishing campsites. The NPS believes reductions to 32 (and 24 during the shoulder seasons) are an appropriate response to the physical and social carrying capacities.

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VUE78

Please increase the group size to allow more summer launches, so that wonderful trips will not have to be pushed into the unusable seasons of the year.

RESPONSE:

The group size of 32 was retained in the Modified Preferred Alternative H for commercial motor and oar trips, May – August. The NPS believes reductions to 32 (and 24 during the shoulder seasons) are an appropriate response to the physical and social carrying capacities.

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VUE79

Group size should be kept at 36. Some suggested increasing to as many as 42-44 with fewer trips going down the canyon. The more concentrated use makes sense, as there are fewer groups to avoid. Why only allow 32 people on a launch when a campsite will accommodate 36?

RESPONSE:

The group size of 32 was retained in the Modified Preferred Alternative H for commercial motor and oar trips, May–August. The NPS believes reductions to 32 (and 24 during the shoulder seasons) are an appropriate response to the physical and social carrying capacities.

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VUE81

A fully flexible group range should be allowed and encouraged (i.e., from 8 to 32 in the summer and up to 24 in the shoulder seasons).

RESPONSE:

The group size of 32 was retained in the Modified Preferred Alternative H for commercial motor and oar trips, May – August. The NPS believes reductions to 32 (and 24 during the shoulder seasons) are an appropriate response to the physical and social carrying capacities.

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VUE82

Although guides provide important educational services, they still have indistinguishable social and ecological impacts as visitors.

RESPONSE:

All users have an impact, be they visitors, guides, researchers or park managers. The NPS has incorporated the impacts from all users in consideration of the analyses provided in the *FEIS*.

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VUE83

A maximum group size somewhat higher than Alternative H is recommended and that a single maximum group size limit should apply across the entire motor and nonmotor mixed-use period.

RESPONSE:

The group size of 32 was retained in the Modified Preferred Alternative H for commercial motor and oar trips, May–August. The NPS believes reductions to 32 (and 24 during the shoulder seasons) are an appropriate response to the physical and social carrying capacities.

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VUE84

Blanket group size reductions do not take into consideration special and unique trips that normally require an above normal amount of guides to safely manage the trip (i.e., kayak trips require a safety guide to passenger ratio of anywhere from 1:3 to 1:5 depending on skill levels of passengers and special populations

require numerous aides and assistants in addition to regular guides). Since all of the kayak trips done by one company have been off-season by demand, a group size restriction of 24 with a 1:3 safety ratio would mean only 14 kayak clients would be able to go on a Grand Canyon river trip and would effectively put an end to any profitable off-season kayak trips.

RESPONSE:

The NPS does not mandate passenger to guide ratios, although we recognize the importance of safety for all our visitors. Each company will modify their trips to accommodate the appropriate levels of support needed to provide for safe and quality visitor experiences.

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VUE85

The addition of the small noncommercial trip is an excellent idea, but 10 is a better number for a noncommercial trip.

RESPONSE:

The NPS has included the small trip option in the Modified Preferred Alternative H to allow for diversity in trip types. The NPS believes an eight-person launch best accommodates our vision for providing this diverse opportunity within the physical constraints of the canyon.

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VUE86

The change in group size is not a good idea and should be kept at current levels.

RESPONSE:

The NPS believes reductions in maximum commercial group size to 32 (and 24 during the shoulder seasons) are an appropriate response to the physical and social carrying capacities.

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VUE87

The park must reduce all maximum trip sizes to 16 people.

RESPONSE:

The NPS believes reductions in maximum commercial group size to 32 (and 24 during the shoulder seasons) are an appropriate response to the physical and social carrying capacities. The NPS also believes that a 16-person group size is the appropriate maximum group size for noncommercial trips.

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VUE102

Set visitation at a level that will protect the river's disappearing beaches. The increase in annual numbers of boaters to 26,317 in Alternative H is unacceptable and the park must not delay a decision to adjust visitor numbers downward.

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RESPONSE:

Although annual use increases, Modified Preferred Alternative H spreads out this use throughout the year, resulting in a reduction in peak use from current.

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VUE130

It doesn't appear to me that people going more than once a year would change the number of launches (The plan states that it is a launch-based system.) during the year and so what is the point of having a trip go with 14 people instead of 16 people by excluding two people who have been down already this year and who could contribute to this trip's safety and experiences. This is a pointless regulation that reduces the visitor experience and costs money to implement. Allow people to run the river more than one time per year if they can.

The primary question is whether or how much repeat-users restrict access to those with little or no previous trip experience. This issue is completely ignored by the NPS. My own experience is that a wait of five years should be acceptable and a 10-year wait should be the maximum allowed before an alternate system of awarding permits is adopted. In the absence of data about repeat use, it is suggested that a permit system using the following methods:

1. Separate the applicants into two groups: a) those with two or fewer previous trips, either commercial or private, b) those with more than two trips.
2. Award a portion (75%) of the slots to category "a" in sequence of addition to the list.
3. Award the balance of the slots to category "b" by lottery with some preference given to time on the list.

RESPONSE:

The limit of one trip per year was created in response to public concern regarding repeat use: "How is it fair that while I am forced to wait years upon years for my chance to go on a river trip, others are going on trips through the Grand Canyon multiple times per year?" By restricting users to a maximum of 1 trip per year, the NPS believes this will allow more noncommercial passengers the opportunity to take a Grand Canyon river trip in much less time than the current waitlist would have been able to.

The NPS disagrees with the assertion that same year repeat use is necessary for the safety of trips. The NPS believes one can obtain the experience needed to safely run a Grand Canyon river trip through rafting other equally difficult rivers. Please see new text for the modified preferred permit option in Section 2.8.1.2.6 and 4.4.8.7 for the 'Hybrid' Weighted Lottery Permit System.

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VUE177

What is the NPS' determination/justification that crossing paths with a 40 person motorized flotilla is any more acceptable than running into a four 10-person private groups or having to share a campsite with another group? If commercial trips and hence their use/impact upon the resource is being allocated based upon a "user day cap" (p 30 User Day Limits), why are private trips limited through launch limits? If this is based upon a qualitative and individually subjective guess regarding people's values then why are commercial and private trips treated differently?

The total launches per day should be based on the total number of people and not the number of groups. For example, if there are 50 user-days allocated April 1. Permits should be allocated until a total of 50 bodies

launch regardless of the number of trips. I have no problem with varying size groups (some large and small) to meet this number.

RESPONSE:

The NPS has determined that a launch based system is the best system to use to manage recreational use along the river. However, historical precedence has been a component of the planning process. The noncommercial sector has no caps because of the launch based system. In the draft *Colorado River Management Plan/EIS*, the NPS melded the two systems, launch based and user-day, in hopes that it could eventually eliminate the user-day system all together. Our goal is access for all visitors while preserving the natural, cultural, and recreational values of Grand Canyon National Park.

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VUE184

Some respondents support lowering group sizes. However, there will need to be considerations for exception for trips such as shoulder season trips for people with disabilities. Some trips require a significant amount of support staff to provide safety both on river and land, monitoring of medical conditions, transferring passengers on and off rafts and short distances up side canyons.

Solution: For Grand Canyon National Park and commercial companies to continue to offer people with disabilities access to Grand Canyon river trips, some flexibility needs to be available for scheduling and group size of these trips. These trips are not large in number of annual launches and therefore should have group size waivers and launch type. Specifically, some trips designated (chartered) for persons with disabilities are combination oar and motor for reasons that pertain to safety and hauling of adaptive gear.

RESPONSE:

The NPS has evaluated the commercial group size limits in this EIS. The group size data includes all commercial trips including those that provide services for persons with disabilities. The NPS will continue to support these types of services and may consider staff/guide-to-passenger ratios on a case-by-case basis.

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VUE195

The current commercial group size (36 commercial passengers) is too large and should be reduced. The preferred alternative's group size of 32 is indefensible and must be reduced to below 20 people. The agency should establish a maximum trip size based upon environmental criteria designed to preserve the ecological integrity and wilderness character of the river, as well as sociological criteria regarding the quest for solitude and the avoidance of crowding that are designed to enhance the quality of the wilderness experience. There is no justification for allowing either commercial or noncommercial trip sizes to be larger than the other.

RESPONSE:

The NPS has strived to find equitable solutions for all our users, recognizing that the river can only sustain a certain number of users at one time. Reduction of group size is a component of the Modified Preferred Alternative H. Under current conditions, groups as large as 43 are utilizing the diminishing campsites. The NPS believes a reduction to 32 (and 24 during the shoulder seasons) for commercial trips are an appropriate response to the physical and social carrying capacities of the river corridor.

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VUE215

If a river runner is part of a large group then that impacts them the whole trip. How is that short-term? As far as groups that encounter them, the effect is major and lasts well beyond the actual encounter. It is curious that the phrase “nonmotorized boaters” is used. Small motorized groups (commercial and noncommercial) are also impacted.

RESPONSE:

Please see corrected text in the conclusion statement for Alternative A in Chapter 4, Environmental Consequences—Visitor Use and Experience.

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### **Beaches & Campsite Comments**

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VUE32

River campsites accessible by hiking trails should be both limited to hikers or to rafting groups of comparable size, since backpackers are strictly limited in numbers and there are only a few campsites accessible by foot trail.

RESPONSE:

The analysis of potential impacts to visitor use and experience presented in the Environmental Consequences chapter of the *DEIS* indicates that encounters between river users and hikers would most likely increase at specific locations, such as popular beach campsites. The Modified Preferred Alternative H lowers river group sizes in the shoulder seasons in part because both hiking and river groups use some of the same sites.

As explained in the EIS, potential mitigation measures to reduce adverse impacts include educating both user groups about specific sites where encounters may be expected and encouraging sensitive users to avoid those places. Also, NPS is currently re-inventorying campsites to determine and assign capacities for the development of a river map, depicting the size and locations of campsites, as a tool for river runners and hikers in the future.

Encounters between hikers and river users will also be addressed in the upcoming Backcountry Management Plan.

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VUE38

In the analysis of campsite densities, the authors are inaccurately comparing size and quantity to “high quality,” which are not the same things (pg. 340). Since large groups on commercial motorized trips travel an average of 40 miles per day and a critical reach stretch is within 25-40 miles, large groups have no problem finding large campsites to accommodate them, which leaves the noncommercial and commercial oar groups of smaller size little problem finding medium-sized camps.

RESPONSE:

Using a list of qualitative criteria (e.g., proximity to attraction sites, availability of shade, boat mooring qualities), primary camps were defined as having more positive than negative attributes and were used more

consistently than secondary sites (defined as those with more negative than positive attributes). Over three-quarters of the camps available at all water levels are primary sites, but these campsites are not distributed uniformly throughout the canyon. “Critical reaches” are reaches of the river where campsite densities are relatively lower and where large and medium-sized primary camps are particularly scarce. In these critical reaches, which are 25 to 40 miles long, competition for the few high-quality camps is sometimes a source of visitor conflict.

The NPS believes the Modified Preferred Alternative H will reduce impacts to visitor experience over current management. Smaller group sizes and spreading out launches to the shoulder seasons help address the issue of diminishing beaches and beach sizes, although ongoing monitoring of beaches may dictate additional restrictions may be necessary if beaches and beach sizes continue to diminish. See the analysis presented in the Environmental Consequences Chapter (4) for details on effects to visitor use and experience and proposed mitigation efforts that would be required to reduce impacts to a minor level.

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VUE39

Assign a capacity to campsites, so that if a small group camps at a large campsite, they can expect another group to join them.

RESPONSE:

The NPS is currently conducting a re-inventory of campsites to determine and assign capacities for the development of a river map, depicting the size and locations of campsites, as a tool for river runners in the future. This map will help alleviate the confusion over campsite locations, capacities, and the necessity to assign campsites. Campsite sharing may be encouraged.

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VUE42

Restricting campsite use will be a compliance nightmare. Without posting name signs at each campsite, confusion over locations can and does occur, whether or not campsites are assigned.

RESPONSE:

As page 588 of the *DEIS* states, “Most formal scheduling or time limits are likely to be opposed by most boaters. A less intrusive option is to publicize information about camps where encounters can be expected and urge sensitive users to avoid those places during certain times of the day and/or year.” Under the Modified Preferred Alternative H, mitigation measures would be employed on a site-specific basis.

The NPS will be conducting a re-inventory of campsites to determine current carrying capacities as part of the monitoring program in the *Colorado River Management Plan* Implementation Plan. An updated river map depicting the size and locations of campsites will be distributed to river runners. River trips will be encouraged to camp at appropriately sized beaches. Ongoing monitoring of beach sizes may dictate more stringent regulations in the future.

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VUE43

Provide a river map depicting size and locations of campsites, encourage double camping on larger beaches, and recommend the number of people each can accommodate.

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RESPONSE:

The NPS is currently conducting a re-inventory of campsites to determine and assign capacities for the development of a river map, depicting the size and locations of campsites, as a tool for river runners in the future. This map will help alleviate the confusion over campsite locations, capacities, and the necessity to assign campsites. Campsite sharing may be encouraged.

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VUE45

Assigning campsites would eliminate the opportunity for smaller groups to camp at larger campsites like Bass Camp that has few smaller camp alternatives, especially for groups who plan on hiking trails in that area.

RESPONSE:

Small groups CAN camp at larger campsites with the expectation that they may encounter other groups at them. The Modified Preferred Alternative H has the addition of a small, noncommercial group size during the peak use season and in the spring to allow more groups to be on river at the same time and enable small groups to double camp at larger campsites like Bass for groups who plan on hiking trails in that area. Also see response to VUE #43 for more information.

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VUE46

If the number of beaches and beach sizes are expected to diminish, how will the increased use under Alternative H not increase the adverse affects to visitor experience? Where will people camp?

RESPONSE:

The NPS believes the Modified Preferred Alternative H will reduce impacts to visitor experience over current management. Smaller group sizes and spreading out launches to the shoulder seasons help address the issue of diminishing beaches and beach sizes, although ongoing monitoring of beaches may dictate additional restrictions may be necessary if beaches and beach sizes continue to diminish. See the analysis presented in the Environmental Consequences Chapter (4) for details on effects to visitor use and experience and proposed mitigation efforts that would be required to reduce impacts to a minor level.

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VUE77

There should be no restrictions on small groups having to camp at certain camps and be excluded from others. Campsite sharing should be encouraged instead.

RESPONSE:

The NPS is currently conducting a re-inventory of campsites to determine and assign capacities for the development of a river map, depicting the size and locations of campsites, as a tool for river runners in the future. This map will help alleviate the confusion over campsite locations, capacities, and the necessity to assign campsites. Campsite sharing may be encouraged, since 25% of all campsites along the river corridor have a capacity of 12 or less.

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VUE148

If someone wants to spend 18 days or more, then let them camp at non-standard areas so as to not impact others.

RESPONSE:

18-day river trips are allowed for commercial and noncommercial oar trips in non-peak seasons under the Modified Preferred Alternative H. Camping will continue to be restricted to beaches, as to not impact the old high-water zone. See the analyses presented in the Environmental Consequences Chapter (4) for details on effects to soils and vegetation regarding impacts in the old high-water zone.

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VUE173

When site specific problems arise, they should be addressed on a site specific basis, not “formal scheduling or time limits” (page 588).

RESPONSE:

As page 588 of the *DEIS* states, “Most formal scheduling or time limits are likely to be opposed by most boaters, . . . A less intrusive option is to publicize information about camps where encounters can be expected and urge sensitive users to avoid those places during certain times of the day and/or year.” Under the Modified Preferred Alternative H, mitigation measures would be implemented on a site-specific basis.

For example, as a component of the *Colorado River Management Plan* Implementation Plan, the NPS will be conducting an inventory of campsites to update camping capacities in order to develop a river map that would depict the size and locations of campsites and act as a tool for river runners in the future. This map will help alleviate the confusion over campsite locations and capacities, as well as the need to assign campsites; although ongoing monitoring of beaches may dictate additional restrictions.

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VUE221

As campsites (diminishing in number) are not spread evenly, canyon capacity from trip simulation models, or based on TAOT, should be very conservatively applied. The creation of any conditions that in the future could motivate the park to consider assigned camping, is unacceptable and completely unworkable in the 225-mile Lees Ferry to Diamond Creek corridor. More thought may need to go into administration options, especially in regard to the benefits versus hardships of requiring group registration/permitting.

RESPONSE:

Alternatives were created within the constraints of the physical and social carrying capacities of the Colorado River corridor. In order to be a viable alternative, levels of impact had to be within acceptable levels. The NPS has strived to find equitable solutions for all our users, recognizing that the river can only sustain a certain number of users at one time. It also believes the Modified Preferred Alternative H will reduce impacts to visitor experience over current management. Smaller group sizes and spreading out launches to the shoulder seasons help address the issue of diminishing beaches and beach sizes, although ongoing monitoring of beaches may dictate additional restrictions may be necessary if beaches and beach sizes continue to diminish.

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The NPS is also currently conducting a re-inventory of campsites to determine and assign capacities for the development of a river map, depicting the size and locations of campsites, as a tool for river runners in the future. This map will help alleviate the confusion over campsite locations, capacities, and the necessity to assign campsites.

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### **Helicopter & Motor Use Comments**

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VUE94

How many visual scars of helicopter transport crashes on the canyon wall must occur before they too will reach a threshold of unacceptability? Why is the stench of the gasoline-powered boats not a part of the equation of quality for river users? There are very few places to go to and be away from society and be a part of nature, the incursion of motors degrades the value of the canyon for all involved.

RESPONSE:

The Modified Preferred Alternative H provides for nonmotorized opportunities from September 16 through March 31 (3 ½ more months than current management provides) in which no-motors, including helicopter exchanges, can operate in Zone 1 of the Colorado River (with the exception of those trips launching at the end of the mixed-use season). People who are sensitive to motorized use and/or helicopter noise may plan their river trips accordingly. Additionally, the NPS does not authorize, nor can it regulate, any of the helicopter operations in the canyon.

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VUE95

Helicopters are noisy, like motor rigs, but it is easy to camp out of earshot and the takeouts are already overcrowded in the summer. Helicopters should be allowed. They also could create the opportunity in March through May and September through November for short noncommercial trips. Why not allow some trips using Whitmore or the Heli pad as a launch site so the noncommercial users get some benefit from the situation rather than just hearing the noise? It would increase trip diversity, make a great four to six day trip, and use up noncommercial river days.

RESPONSE:

Helicopter exchanges provide access for some people to the Colorado River at Whitmore. Under Modified Preferred Alternative H, these will continue to be offered during the mixed-use season (April through September) before 10 A.M. The NPS believes there is an appropriate range of opportunities in the current set of alternatives and must consider the effects of helicopter noise relative to natural quiet. Since the NPS does not regulate helicopter use, any additional opportunities would be outside our jurisdiction.

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VUE 96

Eliminate noisy helicopter passenger exchanges. Natural sound, the *DEIS* concludes, is vital to the visitor experience at the park. Although the NPS admits helicopter noise significantly impacts the natural soundscape of the wild canyon, the preferred Alternative H allows for up to 10,000 people on 2,000 flights in and out of the river corridor each year. Viable alternatives including the use of horses or mules—a wilderness-compatible, traditional use—should be addressed.

RESPONSE:

The Modified Preferred Alternative H restricts passenger exchanges at Whitmore to before 10 A.M. (April through September); thereby protecting the natural soundscape, a natural resource important to visitor experience quality, for at least 8 hours of each day and 6 months per year. The NPS has considered animal pack use options for Whitmore exchanges, including the use of horses or mules, but due to impacts on adjacent lands (staging areas, trail heads, stock facilities, etc.), including Grand Canyon-Parashant National Monument, these were eliminated from further analysis.

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VUE98

If you allow exchanges at Whitmore, the door is open legally for other types of commercial helicopter sightseeing, and again it is inappropriate to have that kind of commercial activity that far up on the river. Move it downstream to Diamond Creek or below.

RESPONSE:

The NPS has no regulatory authority over helicopter use outside of Grand Canyon National Park. NPS has analyzed the impacts from helicopter use in the cumulative effects sections of the document. Time restrictions, evening out the launch schedules, and lowering group sizes will all serve to reduce the potential impacts from helicopters.

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VUE93

It would be nice to have a summer period of time without motorboat or helicopter exchanges so that natural quiet can be enjoyed. In the visitor experience resource/management objectives listed in the table (on page 62), the improved experience of being on a quiet boat and moving at a natural speed, is not discussed, but should be.

RESPONSE:

The Modified Preferred Alternative H restricts passenger exchanges at Whitmore to before 10 A.M. (April through September); thereby protecting the natural soundscape, a natural resource important to visitor experience quality, during the summer months for the majority of the day.

Opportunities to experience the natural soundscape of the canyon during a nonmotorized season are components of the management objectives for Visitor Use and Experience, as expressed in Table 2-5 in Chapter 2, and throughout the analysis in Chapter 4: Environmental Consequences.

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VUE187

The list of recreation values listed on pages 164-165 of the *DEIS* does not provide any evidence of public demand for motorized trips or helicopter exchanges for the pure sake of enjoyment of motorized trips and helicopter rides.

RESPONSE:

The list of recreation values listed on pages 164-165 of the *DEIS* summarizes the key recreational attributes of Grand Canyon river trips based primarily on boater responses to a survey question about qualities that make the Grand Canyon better than other rivers in a survey conducted by Hall and Shelby in 1998. This

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survey did not specifically address public demand for motorized trips or helicopter exchanges. See *History of Use and Recreational Demand* for helicopter exchanges in Sections 3.4.2.5.2 of the *FEIS* for more information.

VUE189

The impacts on the experience from motors and helicopters are impacts that have not been adequately considered in the *Colorado River Management Plan*.

RESPONSE:

Impacts of motors and helicopter noise on visitor experience were analyzed in the *DEIS* in Chapter 4: Environmental Consequences. The Modified Preferred Alternative H has provided for a 6 ½ month nonmotorized season compared to a 3 month nonmotorized season in the current condition. Furthermore, the Modified Preferred Alternative H restricts passenger exchanges at Whitmore to before 10 A.M. (April through September); thereby providing natural quiet, an important visitor experience quality, for at least 8 hours of each day and 6 months per year.

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### **Whitmore Exchange Comments**

VUE7

Reducing passenger ingress/egress at Whitmore will place more stress on the two remaining take-out locations, Diamond Creek and Lake Mead.

RESPONSE:

The Modified Preferred Alternative H will continue to allow commercial motorized companies to exchange passengers at Whitmore, as “grandfathered use” (See Appendix K for more information about assumptions used in Whitmore passenger exchange calculations). The evening out of launch patterns, the elimination of spikes in use, and the reduction of group size in the Modified Preferred Alternative H will place less stress at Diamond Creek and Lake Mead than currently occur (Alternative A).

VUE66

The 1:1 exchange rule is not explained in the *DEIS*. Please clarify your intent and this rule and make it fair to our guests. As a practical matter, it would be impossible to ensure an exact 1:1 exchange on every trip, due to last minute cancellations and/or no-shows.

RESPONSE:

The NPS has eliminated the 1:1 exchange ratio in the Modified Preferred Alternative H and has allowed the continued use of commercial motorized companies to exchange passengers at Whitmore, as “grandfathered use.” (See Appendix K for more information about assumptions used in Whitmore passenger exchange calculations)

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VUE76

Some respondents propose modifying Alternative H to allow helicopter exchanges any time a motorized raft might arrive in the vicinity of Whitmore between April 5 and Sept 20 for a total of 6,600 passengers out and up to 6,600 passengers in and allowing hiking exchanges any time of the year.

RESPONSE:

The Modified Preferred Alternative H restricts passenger exchanges at Whitmore to before 10 A.M. (April through September). See new text added to the Modified Preferred Alternative H for more details.

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VUE87

Suggest scheduling the helicopter during a certain time of day so that trips that don't wish to hear or see the helicopter can run past Whitmore exchange site before the helicopter arrives. Another suggestion was to run helicopter exchanges only from 9 to 11 am.

RESPONSE:

The Modified Preferred Alternative H restricts passenger exchanges at Whitmore to before 10 A.M. (April through September). See new text added to the Modified Preferred Alternative H for more details.

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VUE88

Suggest making the helicopter exchange season consistent with motorboat use on river. Some respondents also suggested possibly allowing helicopter use throughout the year.

RESPONSE:

The Modified Preferred Alternative H restricts passenger exchanges at Whitmore to before 10 A.M. (April through September). See new text added to the Modified Preferred Alternative H for more details.

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VUE89

Without helicopter exchanges you limit the number of general public that can enjoy a river trip. Consider all those folks who benefit by this service in ending or beginning their trip in the Grand Canyon, many of whom choose to travel in these lesser-traveled months. A hike out at Whitmore would be brutal with no shade or water and then what is the option at the top to return to Bar 10 Ranch?

RESPONSE:

The Modified Alternative H has allowed the continued use of helicopter and hiking exchanges during the mixed-use season. Exchanges must occur before 10:00 AM. This would continue to provide an opportunity for people to begin or end their Grand Canyon river trip at Whitmore either by helicopter or the Whitmore Trail.

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VUE91

Why is there an upper limit on the number of people flying out at Whitmore (5,000)? This number is about 500-700 below what is needed.

RESPONSE:

The Modified Preferred Alternative H allows exchanges at Whitmore as “grandfathered use;” thereby providing commercial passengers the opportunity to exit their river trip via helicopter during the mixed-use season at Whitmore. For passengers beginning their river trips at Whitmore, an estimated 3,635 would be transported in by helicopter and 400 would hike in for a total of 4,035 passengers entering the river corridor. Using the average percentage of total Lees Ferry passengers exchanging at Whitmore from 1998 to 2003, this would result in an estimated 5,715 passengers exiting the river corridor at Whitmore. (See Appendix K for more details about assumptions used in Whitmore passenger exchange calculations.)

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VUE185

The actual aesthetic impact of the helicopters is minimal and easily avoided. Since 2001, helicopter operations at Whitmore have been characterized by a 41% reduction in total flight hours (436.5 to 257.4), and a 32% reduction in trips per year (1,746 to 1,170). These reductions are due primarily to the increased use of larger Bell Helicopter “L” model aircraft in place of the smaller and less efficient “B” model. Reducing impacts at Whitmore can best be accomplished not by limiting the number of participants able to use the service, but by improved management of the service, such as better scheduling and the use of more efficient aircraft.

RESPONSE:

The Modified Preferred Alternative H restricts passenger exchanges at Whitmore to before 10 AM (April through September); thereby protecting the natural soundscape, a natural resource important to visitor experience quality, for at least 6 months and for the majority of the day during the mixed-use season.

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VUE219

Hiking in and out at Whitmore is not a viable option. The *DEIS* contemplates an additional 2,500 hiking out on the Whitmore Trail and a corresponding 2,500 passengers hiking in, with their luggage. Unless the NPS requests that these hiking exchanges happen, the reality is that most trips will continue on downstream creating the already mentioned pressure on the lower egress points. It is not even clear that hiking exchanges at Whitmore are viable. The owners of the Bar 10 Ranch are reluctant to operate the vehicle shuttle that would be necessary to move passengers over the nine mile road from the rim to the Ranch. The road is extremely rough, would be difficult and expensive to improve and maintain, and officials from Grand Canyon-Parashant National Monument, who would have responsibility for the road, have already said they won't improve or maintain it. It would be impossible for the concessionaires to operate such a vehicle shuttle, particularly without the cooperation of Bar 10 Ranch or the federal government. A large number of the people who take a Grand Canyon river trip are not physically capable of making this hike. This problem is compounded by the nature of the trail to be used. Currently, a portion of the trail is buried under a rock slide (common in that area). Yet another barrier to access would be erected if guests are required to hike. The alternative is an eight-day river trip that is impossible for many due to time constraints, money, and physical capabilities.

## RESPONSE:

Alternatives were created within the constraints of the physical and social carrying capacities of the Colorado River corridor. In order to be a viable alternative, levels of impact had to be within acceptable levels. The NPS also believes that the commercial operators will find many continuing opportunities to serve Grand Canyon's public within the Modified Preferred Alternative H. Nothing in the proposal precludes commercial outfitters from customizing their trips to suit their needs. Whitmore exchanges will be allowed to accommodate trips launching during the motorized season (April 1 through September 15). It is assumed that the exchange levels will be similar to current condition. Please see new text added to the Modified Preferred Alternative H for more details.

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**Drought Comments**

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## VUE-D1

The park must include an analysis of how the alternatives will accommodate a low flow run-of-the-river condition, precluding the operation of large motorized watercraft. Also of concern was the failure to analyze an event that would obstruct the river channel such that large motor boats could not pass through.

## RESPONSE:

The analysis assumes flows will be consistent with the annual operations plan for Glen Canyon Dam, prepared by the Bureau of Reclamation annually. The flow regime is consistent with the *Record of Decision* on Glen Canyon Dam operations, and it assumes minimum releases to meet the requirements of the 1922 Colorado River Compact. Flows will remain in the range of 5,000–25,000 cfs, with the possibility of short-term experimental releases of up to 45,000 cfs.

The NPS cannot plan for natural events, such as would occur if a side-canyon debris flow obstructed the river channel. However, pre-dam river flows, those over 90,000 cfs, would be required to remove most debris flow materials. If this condition existed, management decisions regarding NPS recreational use needs and Glen Canyon Dam operations would be required by the NPS and Bureau of Reclamation.

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## VUE-D2

Reducing the maximum number of winter and shoulder season days (trip length) combined with the current and projected low flow can make oar trips very difficult. The NPS should consider flow when determining maximum trip length.

## RESPONSE:

Compared to Alternative H in the *DEIS*, trip length has been increased in the Modified Preferred Alternative H during the shoulder seasons. The NPS believes that 18 days during the first two weeks of September, 21 days the remainder of the shoulder season, and 25 days in winter is adequate for noncommercial oar trips to traverse the 226 miles of the Colorado River to Diamond Creek. Under current Glen Canyon Dam operations, flows will not be any lower than 5,000 cfs. Effects from dam operations are included in Chapter 4: Environmental Consequences.

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## Methodology & Analysis Comments

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VUE73

Although the *DEIS* appears to value controlling TAOTs over PAOTs, they should not minimize the importance of PAOTs as an indicator of crowding. Two minor ways possibly to reduce PAOTs is to reduce group size on commercial nonmotor trips to 24 (not including guides), and to provide a launch option, whereby on days when only one noncommercial trip is scheduled to depart, two commercial one-boat motor trips could launch in the place of one two-boat motor trip.

RESPONSE:

The NPS factored in PAOTs as well as TAOTs in every alternative scenario to reduce adverse impacts, including crowding. NPS examined the suggestion to substitute the two commercial, 1-boat motor trips for one commercial, 2-boat motor trip, but the number of trips at one time exceeded our maximum carrying capacity of 60 TAOTs. An important decision regarding carrying capacity was to reduce trips at one time from the maximum current level of 70 to 60 and to provide seasonal variations in the number of trips at one time. Another way in which the NPS has reduced PAOTs was to reduce commercial trip size during the shoulder seasons from the current levels to 24.

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VUE112

The input files for the Grand Canyon RTS should be made available for each of the alternatives (along with the trip simulator if it is not already available).

RESPONSE:

The input files will be part of the administrative record that will be available after the Final EIS is complete and the Record of Decision is signed. The trip simulator itself is available and has been distributed to those who have requested it.

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VUE113

Using the Grand Canyon RTS to determine much of the scope of the *Colorado River Management Plan* is a major issue. The Grand Canyon RTS is an attempt to standardize river trips and in no way can possibly reflect reality. Although under Alternative H there will supposedly be less contact on the river according to the Grand Canyon RTS that is not the reality. For example, disregarding launch dates and corresponding lengths of trips, there is no way to avoid congestion. If a 15 day trip launches on Monday, a 14-day on Tuesday and a 13-day on Wednesday, all three of those trips will be in the same vicinity at the same time somewhere around Deer Creek. It is inevitable and happens often. The RTS does not take this into consideration and is not a valid projection of trip interaction.

RESPONSE:

The Grand Canyon RTS was one of many tools used to determine carrying capacity and forecast potential impacts from each of the alternatives. Where data was lacking for this effort, best professional judgment prevailed, using assumptions and extrapolations from scientific literature, other park units that manage river

use, and personal observations of park staff. The RTS represents best available data for the information it provided. Data from monitoring of river use, as prescribed in the implementation plan, will be used to further refine the RTS.

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VUE114

How does use compare to other time periods, 1990s, 1980s, and 1970s or as major management policies changed? If numbers are more than in the past how can the park ensure less impact?

RESPONSE:

Use on the Colorado River has increased exponentially since the Glen Canyon Dam was constructed in 1963, which resulted in a steady flow of water in the river and made river running feasible on a year-round basis. The analysis of potential impacts to cultural and natural resources presented in the Environmental Consequences chapter indicates that crowding and congestion contribute significantly to resource vulnerability. Thus, while the total number of user-days is an important variable to consider in the analysis of potential impacts, groups size, number of trips and people in the canyon at one time (TAOTs and PAOTs), UDT, and trip lengths can serve to mitigate or exacerbate the potential for impacts. While the Modified Preferred Alternative H does include an increase in total passengers and user-days, it also includes a reduction in group size, trip lengths, TAOTs, and PAOTs, as well as the number of days out of the year that more than 100 people visit attraction sites in a single day. These reductions will serve to reduce impacts from encroachment into the old high water zone caused by crowding at beach and attraction sites. Additionally, monitoring, mitigation and increased education will further promote resource protection.

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VUE115

The scientific basis for developing and evaluating alternatives for the *DEIS* is acceptable. However, the methods used for analysis, for example weighting factors for TAOT, beach erosion, and so on, should have been submitted for peer review.

RESPONSE:

The NPS is only required to use best available information and methodology. Where data was lacking for this effort, best professional judgment prevailed, using assumptions and extrapolations from scientific literature, other park units that manage river use, and personal observations of park staff. While the NPS appreciates the professional scientific community and peer review process, the NPS believes the methods used are appropriate.

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VUE134

According to our modeling, maximum TAOTs would not be reduced to 60; they will remain at 70, approaching that peak significantly more often than currently. This is due in part to the fact that our launches are estimated at 169. That number is likely to be greater.

Some respondents feel the NPS is significantly underestimating TAOTs and PAOTs under Alternative H; there will often be 67 TAOT. The weekly spreading of use may mitigate the incidence of group encounters, but there will still be as many trips on the water May through August as there currently are in peak times.

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RESPONSE:

The maximum number of commercial oar launches in shoulder and summer is 210. The NPS estimates that 80% (169) of those launches will actually be used based upon actual data from 1998–2003. See Appendix K for an explanation of methodology used in the EIS calculations.

In implementing the *Colorado River Management Plan*, actual trips at one time (TAOT) will be monitored and adaptive management techniques taken as needed to maintain TAOT at 60 or lower (see clarification in Section 2.2.2.1).

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VUE158

Following is an attempt to quantify the meeting of the NEPA criteria. A summary table, J-7, is developed to compare alternatives. A similar analysis should be made of meeting the NPS purpose, vision and objectives.

Criterion 1 - To evaluate crowding, several factors were reviewed. They are the same criteria that NPS used. Tables 2-2,2-3 and the individual alternatives summaries are used for the evaluation.

- Crowding - Decreases in the total commercial recreational passengers -1 point.
- Crowding - Decrease in commercial recreational passengers in summer - 1 point
- Crowding - Decrease in commercial daily launches -1 point.
- Crowding - Decrease in commercial launches in shoulder season - 1 point.
- Crowding - Reduction in trips at one time -1 point. All action alternatives received a point for this factor. So it was changed to determine if the alternative spread out commercial trips to all seasons. 1 point if commercial trips provided in winter.
- Crowding - Reductions in commercial motor group size below current average of 32, or no-motor trips -1 point.
- Crowding - Reduction in summer total user-days, commercial and noncommercial. -1 point.
- Crowding - Reduction in commercial motorized trip length below 10 days, or no-motor trips - 1 point.
- Crowding - Reduction in commercial oar group size to below 32-1 point.
- Crowding - Reduction in probable summer total passengers below 15,000 -1 point.

RESPONSE:

While it might be possible to use different rationales and derive different methods of analyzing impacts, the NPS believes it has adequately addressed NEPA requirements in the Draft and Final EIS and that the methods used are reasonable.

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VUE163

The two measures used are river group encounters and time in sight. Both of these are favored by the commercial industry because it places them in a good light (although there are also some legitimate reasons to use them). But some of the alternatives consider groups of eight people. Replacing a 32 person commercial oar trip with two noncommercial oar trips each with eight people would probably result in more river encounters and time in sight. Most people would probably find the latter is more consistent with a wilderness that contradicts these measures. The other problem is that both measures used as a comparison of alternatives are amenable to manipulation, either intentional or unintentional. Too many river encounters? Just have those two groups row (or motor) a little closer together and suddenly river encounters have decreased.

## RESPONSE:

River encounters are a common social impact indicator for backcountry settings and they have received considerable attention in the recreation literature. There is considerable specific information about river encounters and “time in sight” in Grand Canyon from the 1975 and 1998 studies; the quality of encounter information is generally better than for any other river in the country (including actual encounter measurement, as well as surveys of encounter preferences). The NPS has established standards for “time in sight” in the 1989 *Colorado River Management Plan* and estimated the average time in sight of other groups during river encounters per day using those standards and data from the River Trip Simulator. See Appendix G. Visitor Use and Experience (pp. G-1-G-5) for more information.

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VUE167

Page G-14 states that:

“Because discretionary time is a new tool developed for this *DEIS*, it is potentially important in two ways. First, it may help suggest relationships between use levels and certain biophysical or cultural impacts... Second, discretionary time is a useful indicator of trip quality. Researchers have catalogued a long list of psychological benefits from outdoor recreation experiences (Driver, Brown and Peterson 1991; Crystal and Harris, 1995), several of which are probably related to the time people have for exploration activities different from down-river travel and logistics. More discretionary time may translate into improved opportunities to appreciate nature or cultural resources; experience a sense of freedom or adventure; develop new skills, self-reliance, and competence; or engage in personal or spiritual growth.”

First, this statement belongs in the main text. Second, it is stated that discretionary time may be a useful indicator of trip quality. Third, it states that discretionary time might suggest relationships with resource impacts. It appears there is no research vetting the use of discretionary time for resource impacts and the relationship between the two could be as easily anti-correlated as correlated. From this quote it can be said that using discretionary time as a measure of resource impacts (in either direction) is much less certain than trip quality. Has there been any peer-review of UDT in the scientific literature? Has there been any peer-review of how UDT is calculated, especially the much higher discretionary times for commercial trips? Where resource impacts are implied in the main document the lack of research documenting such a link needs to be noted. Furthermore any management decisions that use only discretionary time need to be re-evaluated considering it is a new tool with very little research (if any) to back up its usefulness, especially over other indicators that have some research history.

## RESPONSE:

Although the NPS recognizes the importance of information contained in the appendixes, if all of the information contained in them were in the main text (Volumes 1 and 2), the *DEIS* would have been several hundred pages longer.

Please note that Appendix G contains draft text submitted to NPS for consideration, and that the NPS clearly identified that the UDT concept was new to this planning process. NPS recognizes the limitations to the UDT concept and used it as only one of many tools. User Discretionary Time (UDT) was one tool used to determine carrying capacity and forecast potential impacts from each of the alternatives. It is based on the assumption that trip type, trip length, and seasonal daylight all affect the amount of time visitors interact with the canyon. Thus, not all user-days have the same effect on resources and visitor experience. Where data was lacking for this effort, best professional judgment prevailed, using assumptions and extrapolations

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from scientific literature, other park units that manage river use, and personal observations of park staff. UDT represents best available data for the information it provided. Data from monitoring of river use, as prescribed in the implementation plan, will be used to further refine the UDT.

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VUE172

The Hall/Shelby 2000 study states that 61% of private boaters on the river that year had already done a Grand Canyon trip (vs. only 20% of commercial visitors). This data contradicts the stats supplied to the public on the *Colorado River Management Plan* website and in materials handed out at *Colorado River Management Plan* meetings. The Hall/Shelby findings, on the other hand, are buried here, under visitor characteristics where they will not be accessed by most people, leaving them uninformed of this contradiction in NPS data/stats. This is disturbing in light of the impacts to access for the general public to accommodate the increase in private use because these stats imply that private boaters are, for the most part, getting onto the river just fine under the status quo, even with the current permitting system. The Hall/Shelby finding that 61% of privates have gone before indicates there might be something wrong with the NPS' data collection system. Perhaps the collection of private boater information via the Lees Ferry/south Rim stations is not as reliable as it needs to be. At the very least, the data ultimately given into the hands of the River Permits Office does not reflect what private boaters interviewed while actually on their trips reported to the Hall/Shelby researchers.

RESPONSE:

Since it is difficult to profile the “average” Colorado River runner, research has examined differences between the three boater groups (commercial oar passengers, commercial motor passengers, and noncommercial users), finding some useful distinctions. One of these indicates that there are substantial differences between commercial passengers and noncommercial boaters regarding river-running experience. The *DEIS* states, “About 81% of commercial passengers have never taken a Grand Canyon trip, compared to 39% of noncommercial boaters” (Hall and Shelby 2000). The dataset used in the Hall/Shelby study is different than the dataset used in the NPS statistics found on the *Colorado River Management Plan* website and distributed at the 2004 public meetings. The NPS statistical information is based on actual names and social security numbers for the full set of users within a 5-year time frame (1998 to 2002), verifiable on actual trip participant forms. The Hall/Shelby study refers to experience on any Grand Canyon trip ever (not just within 5 years), including as passengers on commercial trips. The Hall/Shelby and NPS statistical information are different because both were looking at different data sets.

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VUE186

In reference to Table 2-3 (p.53) in the *DEIS*. The total number of launches per season has to be re-calculated by the reader to be meaningful.

RESPONSE:

The *DEIS* and *FEIS* have tables that break out launches per trip type and per season in each of the alternative descriptions in Chapter 2, so the reader does not have to make such calculations.

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VUE199

Some respondents propose the use of content analysis of post trip user comments. Namely, comment letters provided by participants in the various trips available in the Grand Canyon (motorized/ nonmotorized, long/short, upper/Lower Gorge, private/commercial). Data could be solicited from commercial outfitters and from the Grand Canyon National Park to ensure in-depth coverage of all user types. These data could be examined to look for themes regarding the benefits users obtained from the river experience. The data could be collected this spring and could be analyzed and summarized over the summer.

A second component of the study could include on-site structured interviews with users and a follow-up mail survey. The on-site and follow-up interview protocols could include questions developed from information gathered in the previous analysis of comment letters and scales to measure environmental attitudes and pro-environmental behavior adapted from existing literature. The data could be analyzed with quantitative and qualitative methods to ascertain differences between user types and changes between post trip and long-term responses.

Another suggestion was for the NPS to phase in a motorless test and research period, to begin 3 years from now, to study how visitor's respond to their experience of the river as a wilderness setting (we've already had decades of opportunity to study visitor response to motorized pontoon boats, it seems fair to find out how visitor experiences change and/or improve when they are given a full opportunity to experience what wilderness is down on the river corridor. The *Colorado River Management Plan* could limit the study to 5 years, prior to adopting a final management option for the river.

RESPONSE:

The NPS has used best available data in the development and analyses of alternatives in the *Colorado River Management Plan*/EIS. With the implementation of the new *Colorado River Management Plan*, the NPS plans to establish a monitoring and implementation plan, complete with monitoring protocols, schedules, impact triggers, etc. See Section 2.3.3 for more detail on the implementation of a monitoring and implementation plan.

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## Laws & Policy Comments

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VUE135

The NPS must manage all recreational river trips within the minimum-tool mandate.

RESPONSE:

Currently, administrative river trips are subject to the Minimum Requirement Analysis (MRA). Administrative river trips include scientific research, resource management, educational, and patrol river trips. The MRA is a two-step process that 1) determines if the action is necessary for management of the areas as wilderness, 2) evaluates the appropriate methods or "minimum tool" to accomplish the objectives. The application of the minimum requirement concept for recreational trips is addressed in a new section entitled "Wilderness Character" in Chapter 3, and in Chapter 4, "Impacts to Wilderness Character."

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VUE188

This *Colorado River Management Plan* is the result of a lawsuit (GCPBA et al v. Alston et al) filed in eh

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U.S. District Court for the District of Arizona in which the settlement agreement required the NPS to address specific issues, including the appropriate level of motorized rafting use (*DEIS* page 7). The *Colorado River Management Plan* does a poor job of addressing this issue.

RESPONSE:

The NPS believes it has provided accurate background information in Previous Planning Efforts and the 2000 Lawsuit in Chapter 1: Purpose of and Need for Action in the Draft EIS.

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### **Rules & Regulations Comments**

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VUE57

The mention of “no commercial guides on noncommercial trips” rule is completely unnecessary, as it is a duplication of an existing rule from the “Noncommercial Use Affidavit” governing private trips. Furthermore, your suggested wording “Commercial guides may not be hired to assist on noncommercial trips (pg. 32) could actually obfuscate the above rule, as it could be read to imply that people who are not commercial guides could be hired, when that apparently is not the intent. However, the park does need to address the piracy issue in a productive and meaningful way.

RESPONSE:

Language regarding this subject has been revised in Section 2.7.5 of the *FEIS*. The regulations will continue to specify that no noncommercial trip is permitted to hire a guide.

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### **Monitoring & Mitigation Comments**

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VUE21

Clarify limits of acceptable change to support increasing total number of user-days that won't result in unacceptable impacts.

RESPONSE:

With the implementation of the new *Colorado River Management Plan*, the NPS plans to establish a monitoring and implementation plan, complete with monitoring protocols, schedules, impact triggers, etc.

The NPS mission is to preserve unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. Visitation to natural and cultural resources always has the potential to cause adverse effects. The analysis presented in the Environmental Consequences Chapter (2) details these potential effects and presents mitigation efforts that would be required to reduce impacts to a minor level. See Section 2.3.3 for more detail on the implementation of a monitoring and implementation plan.

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VUE30

The mitigation measure of minimum impact education is germane to all resource topics, not just Visitor Use and Experience.

RESPONSE:

As discussed in the mitigation section for several of the resource topics (Chapter 4), the NPS will increase education and encourage minimum impact practices for all users. Some of these suggestions have already been implemented and others will be considered.

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VUE31

Grand Canyon National Park should have the necessary monitoring and mitigation programs and staff in place before increasing visitor use and should include in the *Record of Decision* what actions and alternatives Grand Canyon National Park plans to implement should the impacts exceed the parameters of limits of acceptable change and Adaptive Management.

RESPONSE:

With the implementation of the new *Colorado River Management Plan*, the NPS plans to establish a monitoring and implementation plan, complete with monitoring protocols, schedules, impact triggers, etc.

The NPS mission is to preserve unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. Visitation to natural and cultural resources always has the potential to cause adverse effects. The analysis presented in the Environmental Consequences Chapter (2) details these potential effects and presents mitigation efforts that would be required to reduce impacts to a minor level. See Chapter 2 for more detail on the implementation of a monitoring and implementation plan.

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VUE63

Please explain a monitoring and implementation plan in the *FEIS*. It is inappropriate to increase use so drastically without this monitoring plan in place and able to be financed. Also, unless additional funding is planned, in addition to the monitoring funding mentioned above, there will necessarily be a revision of visitor use prescriptions. Please specify where you will get the necessary funding for mitigations in the *FEIS*.

RESPONSE:

See response to VUE #30 regarding a monitoring and implementation plan. The NPS will be considering all possible funding sources for monitoring and mitigation, including fee demo funds, franchise fee funds, special park use permits and monitoring and mitigation. It is the intention of Grand Canyon National Park to pursue long-term permanent solutions to guarantee funds for mitigation for the life of this plan.

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VUE165

In mitigation of effects on page 584 of the *DEIS*, there should be investigation of use of cots and sleeping on rafts as a means for reducing impacts as was mentioned earlier in this document in the section on vegetation.

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RESPONSE:

See response to comment under Vegetation (V #4b).

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VUE178

There is no discussion of any compromise for the recommended reduction of length of trips for noncommercial users from 18 days to 16 days (Alternative B, C, D, E, F and H); or to 14 days (Alternative G) (page 53). The NPS under this administration and its *DEIS* is willing to bend over backwards to accommodate commercial operators but ignores the long seated wishes of the noncommercial boaters to just maintain their existing trip length possibility.

RESPONSE:

The Modified Preferred Alternative H addresses this concern by offering 10-day commercial motor trips and 12-day noncommercial motor trips in the summer months (April 1–September 15) and 12-day motor trips for both sectors in the shoulder seasons. The Modified Preferred Alternative H also offers 16-day trip lengths for both commercial and noncommercial oar trips in the summer. Noncommercial oar trips are restricted to 18-days only during the first two weeks of September; whereas commercial oar trips are restricted to 18-days for the entire shoulder season. For more information, see Visitor Use and Experience impact analysis in Chapter 4: Environmental Consequences.

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### **User Discretionary Time Comments**

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VUE5

How can discretionary time be higher when trips are shorter?

RESPONSE:

UDT is the product of an effort to recognize that all user-days may not carry the same potential for impacts. For example, a person on a 10 day motor trip in the summer will have more time to interact with the terrestrial environment (UDT) than a person on a 10 day oar trip in the summer. This is due to the increased amount of time that will be spent on the water for the latter person. Similarly, a person on a 10 day oar trip in the summer will have more UDT than an individual on a 10 day oar trip in the winter. This is due to a decrease in light and an increase in camp chores (starting a pan fire, hauling more gear etc) in the winter time. While human behavior can not be precisely predicted, the data and assumptions used in developing the UDT model have yielded a useful tool that refines and contributes to the analysis of environmental consequences of the range of alternatives.

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VUE161

Who developed the UDT model and what are their qualifications? The model is speculative at best given the wide range of river trip dynamics, therefore, how can it be used as an actual measure of potential impacts?

Page 226 UDT - Does Grand Canyon National Park view UDT as time for people to do naughty things and, therefore, having more UDT equates to more adverse impacts? Is Grand Canyon National Park trying to limit UDT to decrease perceived impact from river trip participants?

## RESPONSE:

User Discretionary Time is a calculation of the cumulative amount of time people have to experience and explore the river corridor during their river trip. The type of trip (which incorporates trip speed), the length of trip, and the time of year (which incorporates seasonal availability of daylight) all affect the amount of time that visitors have to experience the Grand Canyon and interact with the environment. While this interaction carries a potential for resource impacts, that potential is weighed against other factors such as group size and the number of trips at one time. Further, UDT is also an indicator of whether visitors are allowed enough time to experience the resources and values of the Grand Canyon. UDT was but one tool used in the analysis of the Environmental Consequences. Please see Chapter 2, Carrying Capacity Standards and Chapter 4, Introduction for a discussion of how User Discretionary Time was used in the analysis. Assumptions for the use of UDT are also included per impact topic in Chapter 4.

UDT is the product of an effort to recognize that all user-days may not carry the same potential for impacts. For example, a person on a 10-day motor trip in the summer will have more time to interact with the terrestrial environment (UDT) than a person on a 10 day oar trip in the summer. This is due to the increased amount of time that will be spent on the water for the latter person. Similarly, a person on a 10-day oar trip in the summer will have more UDT than an individual on a 10-day oar trip in the winter. This is due to a decrease in light and an increase in camp chores (starting a pan fire, hauling more gear, etc.) in the wintertime. While human behavior cannot be precisely predicted, the data and assumptions used in developing the UDT model have yielded a useful tool that refines and contributes to the analysis of environmental consequences of the range of alternatives. NPS used best available data in the development of this tool, and additional data based on results of monitoring can be used to further refine the model.

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## VUE200

Appendix H notes more UDT in the fall than in the summer or spring. The NPS needs to provide additional supporting research to prove this assumption, given that the decrease in daylight hours in the spring, fall and winter decreases UDT opportunities for activities away from the river.

The NPS has failed to adequately explain and justify its use of UDT as a consideration in the *DEIS*. There is no correlation presented that shows how UDT directly impacts the resource, therefore, any consideration of UDT in ranking alternatives is questionable.

Page 238 of the *DEIS* states: “Longer trips have, by their nature, increased amounts of time for visitors to interact with the canyon environment. This increased time has the potential to allow greater interaction with soil resources. This is particularly true for side canyons, as longer trips are designed to allow visitors opportunities for exploration. Off-season hiking (shoulder and winter months) is more conducive to exploring side canyons, as the extreme heat of the summer precludes hiking too far from the river itself.”

Some respondents disagree with the NPS assumption that longer trips equate to more discretionary time. Discretionary time equates to time spent off of the river without specific duties to perform, and does not necessarily correspond to trip length. Is there evidence backing up the NPS assumptions? It could be argued with equal validity that commercial passengers on motorized trips would have the most discretionary time per user day. Comparing a 16 day oar-powered trip with an eight-day motorized trip, the shorter motorized trip would have more time for visitors to impact the resource off the river. This is because they travel faster in the water and therefore have more time on land and because motorized trips tend to be commercial where the crew does the cooking, compared to noncommercial trips where everyone is involved in camp duties.

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RESPONSE:

User Discretionary Time is a calculation of the cumulative amount of time people have to experience and explore the river corridor during their river trip. The type of trip (which incorporates trip speed), the length of trip, and the time of year (which incorporates seasonal availability of daylight) all affect the amount of time that visitors have to experience the Grand Canyon and interact with the environment. While this interaction carries a potential for resource impacts, that potential is weighed against other factors such as group size and the number of trips at one time. Further, UDT is also an indicator of whether visitors are allowed enough time to experience the resources and values of the Grand Canyon. UDT was but one tool used in the analysis of the Environmental Consequences. Please see Chapter 2, Carrying Capacity Standards and Chapter 4, Introduction for a discussion of how User Discretionary Time was used in the analysis. Assumptions for the use of UDT are also included per impact topic in Chapter 4.

UDT is the product of an effort to recognize that all user-days may not carry the same potential for impacts. For example, a person on a 10-day motor trip in the summer will have more time to interact with the terrestrial environment (UDT) than a person on a 10 day oar trip in the summer. This is due to the increased amount of time that will be spent on the water for the latter person. Similarly, a person on a 10-day oar trip in the summer will have more UDT than an individual on a 10-day oar trip in the winter. This is due to a decrease in light and an increase in camp chores (starting a pan fire, hauling more gear, etc.) in the wintertime. While human behavior cannot be precisely predicted, the data and assumptions used in developing the UDT model have yielded a useful tool that refines and contributes to the analysis of environmental consequences of the range of alternatives. NPS used best available data in the development of this tool, and additional data based on results of monitoring can be used to further refine the model.

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VUE201

Some respondents recommend not using discretionary time as a determinant for inclusion in the Final EIS request that the park provide further detail on how UDT is calculated for the alternatives, and the scientific justifications for this unit of measurement as a research or management tool.

RESPONSE:

Please see response to VUE #200.

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VUE116

Some respondents thought that motor trips spend less time in the canyon; therefore, there is less UDT that leads to less impact on the resources.

RESPONSE:

Albeit a new tool, in general, the discretionary time model suggests several hypotheses about people's free time on river trips that form the basis of assumptions used for visitor experience. These include: 1) noncommercial trips may be less efficient at daily and per trip logistical tasks because they generally view their trip as leisure time and often conduct logistics in a more leisurely pace, 2) the number of daylight hours affects the amount of time groups can spend exploring the canyon, 3) if trip lengths were equal, more efficient commercial trips would have more discretionary time than noncommercial trips, but because most commercial trips are substantially shorter, there are smaller differences between the two, and 4) motorized trips, because they are faster, take less time to go the same distance as a nonmotorized trip. Thus if a motorized trip and a nonmotorized trip had the same trip length at the same time of year, participants on the motorized trip would spend less time in transit and more time interacting with the terrestrial environment.

## Lower Gorge Comments

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VUE4

Alternative 4 is ok, but tow-outs should be allowed to RM240. Encourage visitation to this part of the canyon, don't limit it.

RESPONSE:

Please see the Modified Preferred Alternative 4; jet boat tow-outs are allowed to Separation Canyon.

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VUE49

Both Alternatives 4 and 5 should be changed. Maximum trip lengths should be five nights during the peak season (one night between DC and Separation Canyon and the rest should be left up to the river party. There is too much canyon to explore and enjoy for the NPS to limit the downstream trip length to 3 or 5 days.

RESPONSE:

The NPS has worked with the Hualapai Tribe in addressing the needs for a range of opportunities in the Lower Gorge. Physical carrying capacity, particularly the limited beaches, was factored into our decision to limit the number of days allowable in the Lower Gorge.

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VUE76

Do not limit the number of jet boat pick-ups per day. There are times when flexibility is needed in a plan to facilitate unpredicted situations.

RESPONSE:

The number of jet-boat pick ups is commensurate with the number of trips that will be coming down stream.

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VUE211

Undue restrictions on upstream jet-boat travel and the number of allowed jet-boat pick-ups per day may potentially set off yet another chain reaction of negative impacts. It is not apparent from the *DEIS* that this interconnectedness, and the full potential consequences of such potential limits on jet-boat operations, have been fully analyzed and considered. As is the case concerning Whitmore Helipad operations, it would be difficult, if not impossible, for the NPS to fully understand and appreciate such ramifications until the agency sets about the work of rebuilding the commercial launch calendar to be derived from the revised *Colorado River Management Plan*. It is this revised schedule that will capture the revised plan's purposes and goals carry its implementation forward on the ground.

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RESPONSE:

The NPS took into consideration the range and diversity of all trip types in the analyses (including the river simulation model) of the effects of Whitmore exchanges to the Lower Gorge. While the NPS acknowledges that all things are connected, we believe our analyses are sound.

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VUE212

Lower Gorge alternatives recognize that 15% of noncommercial trips beginning at Lees Ferry continue below Diamond Creek to Pearce Ferry. These trips are not specifically addressed in the alternatives. How would this use be managed under the plans? Would a second permit be required to continue to Pearce Ferry, as one of the two authorized noncommercial trips authorized in each alternative? Lower Gorge alternatives make no distinction for motor use (kicker motor picked up at Diamond Creek) by noncommercial trips continuing below Diamond Creek. Would motors be useable only below Separation Canyon, or some other point?

RESPONSE:

The Final EIS considers these trips as continuation trips and includes them in the analyses. No additional permit would be required, unless additional trip participants/boats entered or left the canyon at Diamond Creek. Motor use is allowed during the mixed-use season. During no-motor periods, motor use will continue to be allowed in the Lower Gorge from Diamond Creek to Lake Mead.

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VUE213

Some respondents think that river runners must not be allowed to up-run the Lower Gorge above Separation Canyon. Other respondents think this should be allowed since the shoreline is man-made and the noise from jet boats is no worse than the helicopters.

RESPONSE:

Up-running the river above Separation Canyon is currently and will continue to be prohibited.

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VUE216

Modify the Lower Gorge Alternative to: Phase out Motors within five year period; No NEW DOCKS - at least no LARGER DOCKS; REMOVE ALL DOCKS within five years; No Helicopter activity at Quartermaster area - Phase out into alternative source of down-river travel. THIS activity is not consistent to a vision of protecting the resources as stipulated by the Hualapai Tribe.

RESPONSE:

The NPS has been working with the Hualapai Tribe to address the range and diversity of visitor opportunities provided in the Lower Gorge. The park has worked with the Tribe and Lake Mead National Recreation Area to recognize the transition in activities from a wilderness like setting above Diamond Creek to a substantial shift from a semi-primitive experience to more of an urban oriented experience at Quartermaster. The park is continuing to work with the Tribe and Lake Mead National Recreation Area on appropriate types and levels of development at this location.

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VUE217

How can the NPS recommend that only 150 people use the pontoon boats, with Alternative 4. There is no difference between the number of pontoon boats (six to seven), then with a maximum of five boats or six boats at one time being operated. The NPS is not limiting the helicopter use, but trying to limit the number of pontoon boats and then the number of people enjoying this excursion. Alternative 5 is the way to go here. Why argue over the number of boats and how many can operate at one time. There is absolutely no one else there, it is a great income for the Hualapai Tribe, and the NPS doesn't even have a presence in that part of the canyon.

RESPONSE:

Grand Canyon river users do access the river through the Quartermaster area. Traffic on a constricted stretch of river is a potential safety hazard, especially as water levels recede. The NPS Modified Preferred Alternative 4 recognizes the limits of navigation in the area and recognizes Hualapai Tribal economic needs in the area. Please see the Modified Preferred Alternative 4 and Alternative 5 in Chapter 4: Environmental Consequences for more information about the analyses of these alternatives.

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## Water Quality

### WQ1

The *DEIS* should address the degree to which global warming may impact river operations, recreation, water quality, habitat loss, and other factors. The *Colorado River Management Plan* should document the warmest years in the past century and makes a judgment on how the river may be impacted on both the probable and worst-case scenario relative to global warming. The *Colorado River Management Plan* should also assess the prospects that Lake Powell may be essentially empty in the near future and document the current scientific consensus relative to global warming.

#### RESPONSE:

Global warming and dam operations are beyond the scope of this 10-year plan. However, water quality and quantity parameters that will be and/or are being monitored already are directly applicable to this issue. Currently, climate studies are being sought to understand groundwater flow pathways for Grand Canyon National Park seeps and springs. Dams are managed to protect water supply and rivers from drought so any mitigation will be dependent on joint BOR NPS adaptive management process.

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### WQ2

What is the park doing to improve water quality and reduce impacts from the Page water treatment facility?

#### RESPONSE:

No conclusive evidence of impacts from water treatment facilities has been documented to date. If water quality data yields evidence of impacts that can be tied to the Page water treatment facility, NPS will address ways to reduce impacts and improve water quality through adaptive management. The NPS currently advises river runners to take their drinking water from midstream of the mainstem and purify it using both a filtering system and bleach.

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### WQ3

The NPS should be far more aggressive in protecting the water quality from illness causing pathogens, and in providing ongoing monitoring.

#### RESPONSE:

Grand Canyon National Park monitors pathogens as well as other parameters, through partnerships with Coconino county, public health dept, and CDC. As part of the implementation of the *Colorado River Management Plan*, Grand Canyon National Park will institute a long term a monitor and treatment plan that will focus on the identification and mitigation of impacts from recreational use. The NPS currently advises river runners to take their drinking water from midstream of the mainstem and purify it using both a filtering system and bleach.

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### WQ4

The *DEIS* should include an action item to mitigate toxic spills that might occur in the drainage of the Little Colorado River in and above the Grand Canyon.

RESPONSE:

A spill prevention kit is required on all commercial trips. Under the *Colorado River Management Plan*, a spill prevention kit may be required on noncommercial motorized trips.

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WQ5

The Department of Energy and others have advised water managers to expect the volume of water produced by the Colorado's watershed to be reduced significantly and progressively due to climate change. Their reports state that the Colorado River reservoir levels will be reduced by more than one-third and water releases by as much as 17%, which will result in reductions in hydropower generation by as much as 40%. Scientists have also warned that the Upper Basin may not meet its obligation to deliver its full requirement of water to the Lower Basin before 2010. Such changes in Grand Canyon will reduce fine sediment storage, concentrate rocks and boulders at rapids, degrade water quality and compromise fish recovery plans. They may also impact the types and number of boats that run the river, and the number of days it may take them to complete the trip.

RESPONSE:

Dam operations and climate change are beyond the scope of this 10-year plan. However, water quality and quantity parameters that will be and/or are being monitored already are directly applicable to this issue. Currently, climate studies are being sought to understand groundwater flow pathways for Grand Canyon National Park seeps and springs. Dams are managed to protect water supply and rivers from drought so any mitigation will be dependent on joint BOR NPS adaptive management process.

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WQ6

Monitor water quality (comment also pertains to pages 263 and 284 of the *DEIS*): how does recreation alter water chemistry (e.g. temperature, turbidity, dissolved oxygen) and contaminants in the Colorado River and tributaries (contaminants include those from personal care products, human waste, outboard motor fuel and oil, etc.)? Include an investigation of the sources of contaminants in known problem areas, such as Tapeats Creek (see page 118).

RESPONSE:

The NPS does not have data that are specific to impacts on water quality from recreational use in the Grand Canyon. The proposed monitoring and mitigation program may provide these data.

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WQ7

The general methodology for analyzing impacts discussed on pages 226 through 270 of the *DEIS* does not appear to include data on water quality or levels of contamination based on actual monitoring. Instead, the *DEIS* states that evaluation of potential impacts to water quality was based on regulatory information, ambient water quality status and trends, the nature and behavior of the pollutants known to be associated with recreational use, and data from the Grand Canyon RTS program. The assumptions concerning water quality in the *DEIS* include a number of generalizations about the nature of impacts to water quality in the Grand Canyon river corridor. Under mitigation of effects, the *DEIS* lists "Initiate a program to regularly monitor levels of chemical and microbiological agents, particularly those associated with recreational use,

in mainstem and tributary waters” (page 268). Does this mean that the NPS does not currently have a regular water quality monitoring system in place for the Colorado River corridor?

RESPONSE:

Grand Canyon National Park does not have a regularly recurring, seasonal water quality monitoring program for ALL the parameters that can be affected by recreational use. Grand Canyon National Park does perform irregular monitoring along the river corridor for parameters that can indicate fundamental changes. As part of the implementation of the *Colorado River Management Plan*, Grand Canyon National Park will institute a long term a monitor and treatment plan that will focus on the identification and mitigation of impacts from recreational use.

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WQ8

We believe that implementation of many of the mitigation measures listed on page 268 of the *DEIS* would have a beneficial result in reducing the level of impact to water quality. It is unclear as to whether the NPS has actually incorporated these mitigation measures into the analysis of alternatives.

RESPONSE:

The impact analysis indicates the intensity rating for impacts from recreational use under each alternative. This rating does not include implementation of mitigation measures. The analysis does indicate whether or not impacts could be reduced to a minor intensity with implementation of reasonable mitigations.

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WQ9

The impacts to water quality caused by Glen Canyon Dam operations and sewage treatment, livestock, wildlife, runoff/flash flooding and other recreationists does not remove the NPS’ responsibility to reduce impacts that further contribute to the degradation of water quality.

RESPONSE:

The NPS agrees. While these agents of cumulative effect are beyond the jurisdiction of the NPS, Grand Canyon National Park will continue to work cooperatively with its neighbors to identify and mitigate impacts to water quality. Grand Canyon National Park does perform irregular monitoring along the river corridor for parameters that can indicate fundamental changes. As part of the implementation of the *Colorado River Management Plan*, Grand Canyon National Park will institute a long term a monitor and treatment plan that will focus on the identification and mitigation of impacts from recreational use.

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WQ10

Page 269 of the *DEIS* states, “Indirect impacts from water quality degradation in both the Colorado River and in tributaries and springs can be adverse for visitors, aquatic species and for nearby vegetation.” Given this, assumptions such as “impacts to water quality are largely short-term” apply only to direct impacts but are not true for indirect ones.

## RESPONSE:

Impacts to visitors, aquatic species and vegetation are addressed under their respective analyses. Where impacts to water quality are determined to be largely short term, it can be assumed that the indirect effects are similarly short-term, unless otherwise indicated in the analysis of other resources.

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## WQ11

According to the Draft EIS (pp. 292-295), under Alternatives 4 and 5, boat/motor repair and fuel transport and storage practices represent significant environmental risks to water quality in the Lower Gorge, but these impacts could be reduced to a minor intensity with reasonable mitigation. However, the Draft EIS does not identify the mitigation measures that would be implemented to reduce these risks. The Final EIS should identify the mitigation measures that would reduce the potential impacts of fuel or other spills under Alternatives 4 and 5. The Hualapai Tribe should ensure that all fuel, sanitation, picnic, and ancillary facilities constructed or operated on tribal lands ensure protection of water quality in the affected watershed.

## RESPONSE:

Reasonable mitigations for impacts to water quality for all alternatives are presented on page 268 of the *DEIS*. Mitigations specific to the Lower Gorge alternatives are presented on page 285 of the *DEIS*. Text has been added to the *FEIS* to include a spill prevention control plan that is developed in cooperation with the NPS, the EPA and the Hualapai Tribe.

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## WQ12

The *FEIS* should describe the facilities and operations in Quartermaster Canyon that would be added to accommodate the significant increase in daily visitors. If the NPS is unable to obtain this information in appropriate detail for the purpose of disclosure in the *FEIS*, it is recommended that the NPS provide reasonable estimates. Information should include the following:

1. Describe the toilet and washing facilities that would be added.
2. Describe how wastewater, sewage, and solid waste would be transferred and disposed in a manner that protects water quality.
3. Describe foreseeable future increases in daily visitors and associated increases in helicopter and pontoon boat rides; and the potential impacts and appropriate mitigation measures for such increases.
4. Discuss how the Hualapai Tribe will ensure protection of water quality (e.g., through contracts, enforcement authority etc.)
5. Describe how implementation of mitigation measures will be assured (e.g., through a commitment agreement, contract/permit provisions, implementation and effectiveness monitoring); how binding the mitigation commitments are; and who will be responsible for mitigation measures.

## RESPONSE:

The *FEIS* includes the following reasonable estimates:

1. 1 toilet would be needed in the Quartermaster Canyon area for every 100 visitors per hour. Toilets would be located out of the flood plain (above the high water mark) and could be vault (requiring a permanent concrete lined structure), evaporative (self-contained), or chemical type. Each type would require proper disposal. Handwashing facilities could include a portable hand washing unit (requiring proper disposal of grey water) or hand sanitizer dispenser.

2. All waste disposal would adhere to the spill prevention control plan that is developed in cooperation with the NPS, the EPA and the Hualapai Tribe. Waste would be transported in appropriate containers that will not leak or spill.
3. Because no data is available to estimate the extent of demand for Lower Gorge recreation, the impact analysis for each alternative assumes that all allowable use will be achieved. Impacts from increases from current condition, as well as mitigations that would be required to reduce impacts, have been analyzed for each alternative.
4. Text has been added to include a spill prevention control plan that is developed in cooperation with the NPS, the EPA and the Hualapai Tribe.
5. Grand Canyon National Park will be responsible for monitoring and treatment of impacts from use below the high water mark as part of the implementation of the *Colorado River Management Plan*. The NPS is exploring options for a dedicated funding source for this effort. Impacts from facilities, equipment or use above the high water mark occur on sovereign Hualapai lands. The NPS will work to facilitate the development of a cooperative spill prevention control plan that is developed between the NPS, the EPA and the Hualapai Tribe.

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### WQ13

The NPS should establish the existing water quality baseline for the Lower Gorge, and continue monitoring future water quality trends. The NPS, Hualapai Tribe, State, and other partners should assemble all existing water quality data from the Lower Gorge and its tributaries, including Diamond Creek. If water quality data are available from the mainstream near Diamond Creek, they may be useful for this purpose. Water quality in the Quartermaster Canyon area is especially important. If data are not available, conduct baseline monitoring for basic water quality parameters, including pathogen indicators, nutrients, and hydrocarbons. Periodic monitoring should then be conducted over the life of the plan. The Final EIS should discuss how baseline and periodic monitoring would be accomplished and how the information would be used to adaptively manage the river, particularly in the Quartermaster Canyon area.

#### RESPONSE:

Grand Canyon National Park monitors pathogens as well as other parameters, through partnerships with Coconino county, public health dept, and CDC. As part of the implementation of the *Colorado River Management Plan*, Grand Canyon National Park will institute a long term a monitor and treatment plan that will focus on the identification and mitigation of impacts from recreational use.

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### WQ14

The NPS should implement *DEIS* mitigation measures and altering use patterns to address spring season use impacts. For effects to soils and water quality in particular, both shoulder season trips should be limited to one launch per day. The NPS should consider periodically eliminating use (day and/or camping) during seasons or months and along river stretches—sort of a rest/rotation approach.

#### RESPONSE:

The NPS believes that the launch schedule presented in the Modified Preferred Alternative H represents an appropriate balance between protecting cultural and natural resources and providing opportunities for a quality recreational experience, particularly given the elimination of spikes in use and the reduction in group size. If monitoring yields evidence of unacceptable impacts, site-specific restrictions such as temporal closures may be considered if they would serve to appropriately mitigate the impacts.

WQ15

Page 488 of the *DEIS* states there should be some discussion of the impacts of mule waste on tributary streams (primarily Bright Angel Creek). Livestock corrals are present at Phantom Ranch and there is considerable mule waste on the trails that must have some effect on the water quality in the creek.

There should also be some discussion of hikers use of Bright Angel Creek and that the park currently encourages the use of the creek to cool off to avoid heat problems.

RESPONSE:

The impact analysis for water quality specifically addresses cumulative effects from domestic livestock and non-river related recreational activities. These impacts are considered to be outside the scope of the *Colorado River Management Plan*, but will be addressed, as appropriate, in the Backcountry Management Plan.

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## Wilderness

W1

The *DEIS* states that administrative trips will meet the minimum tool mandate. Does this mean that nonmotorized boats will be used unless there is an insurmountable reason to do otherwise? The NPS must manage all recreational river trips within the minimum tool mandate.

RESPONSE:

Administrative use, including scientific, research, resource management, educational, and patrol river trips are subject to the Minimum Requirement Analysis (MRA). The MRA is a two-step process that 1) determines if the action is necessary for management of the areas as wilderness, 2) evaluates the appropriate methods or “minimum tool” to accomplish the objectives. Generally, recreational trips are not subject to the MRA but will be permitted and managed in accordance with NPS management policies governing areas identified by the agency as “potential wilderness.” (See Appendix L)

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W2

Group size of 30 or more people, or even 20 or more, are not consistent with or appropriate in proposed wilderness and destroy wilderness character. The park must reduce all maximum trip sizes to 16 people.

RESPONSE:

Based upon physical carrying capacity and visitor experience research, the NPS has reduced group size for all action alternatives considered in this draft EIS. The largest group size in the NPS preferred alternative would only be allowed during the high use summer months. Please see new text in the visitor use and experience section of Chapter 4.

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W3

The idea of designating the Grand Canyon river corridor as wilderness does not make sense, as it limits access for far too many people.

RESPONSE:

The *FEIS* for the *Colorado River Management Plan* does not reexamine the park’s Final Wilderness Recommendation, 1993 Update. Wilderness designation requires an act of Congress, and the Grand Canyon National Park wilderness recommendation has not yet been the subject of Congressional legislation.

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W4

The *Colorado River Management Plan*/EIS should evaluate the requirement that only wilderness oriented commercial services that contribute to public education and visitor enjoyment of wilderness values or provide opportunities for primitive and unconfined types of recreation may be authorized if they meet the “necessary and appropriate” tests of the NPS Concessions Management Act of 1998 (P.L. 105-391), the Wilderness Act (P.L. 88-577 § 4(d)(6)), and the park’s Wilderness Management Plan, including the application of the minimum requirement. The *Colorado River Management Plan*/EIS should be

supplemented to include a careful analysis (for all the alternatives) of the level of commercial enterprises that are both necessary and proper. Additionally, analysis and evaluation under the National Environmental Policy Act (NEPA) for renewal of concession contracts have not been completed despite the requirement from the NPS Director's Order #12 and should be completed in the future prior to contract renewal.

RESPONSE:

In response to the comment, NPS has added new text in Chapter 1, and a new section entitled, "Wilderness Character" in Chapter 3, and "Impacts to Wilderness Character" in Chapter 4.

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W5

NPS Wilderness Management Policies state that the "NPS recognizes that wilderness is a composite resource with interrelated parts." However, wilderness was not listed as a resource to be evaluated in the *Colorado River Management Plan/EIS*. This omission has serious implications regarding the analysis of all alternatives in the *Colorado River Management Plan/EIS*. The *Colorado River Management Plan/EIS* must address wilderness character as a resource. The NPS is mandated, under law and policy, to protect the Grand Canyon, including the Colorado River, for wilderness character, until Congress has a chance to consider the proposal to designate Grand Canyon backcountry, including the Colorado River, as wilderness. The NPS must finally begin to honor the mandates of law and policy and the wishes of the American people, and lay the foundation for long-term wilderness character protection.

RESPONSE:

In response to the comment, NPS has added a new section entitled "Wilderness Character" in Chapter 3, and "Impacts to Wilderness Character" in Chapter 4.

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W6

The *DEIS* incorrectly states that Wild and Scenic River designation is beyond the scope of the analysis. This limitation narrows the exploration of alternatives and evaluation of impacts. How the Colorado River is managed could impact its eligibility for designation and the level of protection afforded the river's values. The *DEIS* should consider, analyze and disclose the impacts on the remarkable values identified for the river. Additionally, at least one alternative should include management direction consistent with the Wild and Scenic Rivers Act.

RESPONSE:

The NPS has the authority to determine the scope of the EIS for the *Colorado River Management Plan*. Additionally, the EIS analyzes impacts of recreational use on natural and cultural resources, and values associated with visitor use and experience, many of which may or may not have been identified as "outstandingly remarkable values" for those tributaries and sections of the river that have been inventoried as part of the work being conducted by Prescott College. NPS believes that nothing in this EIS or the *Colorado River Management Plan* will affect Wild and Scenic River designation.

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W7

The winter season (November through February) should allow long (30 day) trips for the wilderness experience. Shortening trip length will make private trips much less enjoyable. To remove even two days from the trip length seems unrealistic.

RESPONSE:

The shortening of trip length by a few days will provide for greater numbers of launches for noncommercial users. Additionally, the new permit system will provide greater access to the river in a much shorter period of time than currently exists. The preferred alternative, when enacted, will provide greater opportunity for more people to experience the Colorado River in Grand Canyon.

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W8

The NPS' management responsibilities include ensuring that people are provided with an opportunity to experience and enjoy wilderness values at the Grand Canyon, as a unique and diminishing recreational resource, as opposed to other recreational opportunities available throughout the country.

RESPONSE:

The NPS believes that it is providing a range of opportunities to various members of the public to enable them to enjoy the values of the greater Grand Canyon region.

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W9

Active management is not appropriate in a wilderness area. Some respondents expressed concern that building campsites was not appropriate, while others expressed their concern that Glen Canyon Dam operations affected the wilderness character of the river corridor (and was not adequately addressed in *DEIS*).

RESPONSE:

In response to the comment, NPS has added a new section entitled "Wilderness Character" in Chapter 3, and "Impacts to Wilderness Character" in Chapter 4.

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W10

Respondents voiced an opinion regarding the use of motors within a proposed wilderness and the ability to have a meaningful "wilderness river experience" with the use of motors. While some respondents believe the alternatives allowing motors did not meet the NPS' objectives for managing a wilderness, others felt that motor trips (especially those using 4-cylinder, quiet-motor technology) were not noticeably audible and that most people end their trip with a genuine appreciation and love for the canyon that they couldn't obtain in any other way.

RESPONSE:

The NPS has determined that the continued use of motorized rafts (1) does not preclude wilderness designation because this use is only a temporary or transient disturbance of wilderness values on the river and (2) is not a legal impediment to wilderness designation.

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W11

Research shows that most river users prefer less than three encounters with other groups each day. Studies in wilderness and backcountry settings show that visitors desire few encounters with others, as this is part of the “wilderness experience.” Reducing the number of daily launches to no more than four nonmotorized trips per day would reduce the potential for encounters to an acceptable level. Group size should be reduced further in keeping with the NPS’ own research that shows that most river users would not want to encounter large groups. Encounter levels meeting or exceeding wilderness-like standards.

RESPONSE:

While preferences suggest less than three encounters, tolerance levels are higher, as much as five encounters a day. The NPS developed a river trip simulator specifically to address congestion, crowding and contact rates. The NPS has attempted to provide a range of experiences for all visitors that addresses the encounter rates at various times of the year.

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W12

The NPS proposed a phase-out of motors in 1979 that has not been implemented. Some respondents favor a fair and gradual phase-out of motors for commercial operators ranging anywhere from immediately to over 15 years.

RESPONSE:

The 1979 plan was superseded by the 1981 *Colorado River Management Plan* and the 1989 *Colorado River Management Plan*. Neither of the subsequent plans proposed the phase out of motors. The NPS has determined that the continued use of motorized rafts (1) does not preclude wilderness designation because this use is only a temporary or transient disturbance of wilderness values on the river and (2) is not a legal impediment to wilderness designation. Furthermore, the NPS has determined that the motorized trips provided by commercial outfitters, which enable thousands of people to experience the Colorado River in a relatively primitive and unconfined manner (when many of them otherwise would be unable to do so), are necessary and appropriate for the public use and enjoyment of the park; will be provided in a manner that furthers the protection, conservation, and preservation of the environment; and will enhance visitor use and enjoyment of the park without causing unacceptable impacts to park resources or values.

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W13

Some respondents expressed their preference for viable alternatives to helicopter exchanges that are more compatible with a wilderness experience (e.g., pack animal support or hiking), stating that helicopter use doesn’t belong in the Grand Canyon.

## RESPONSE:

Several of the action alternatives presented in the EIS analyzed hiking exchanges at the Whitmore area. The use of mules, horses, or other stock was dismissed from analysis because the NPS does not believe that it is feasible at this time to upgrade and maintain the Whitmore Trail to stock standards. Additionally, the staging area on the rim would require improvements including hitching posts and other facilities. These facilities would be located within the Grand Canyon – Parashant National Monument, administered by the NPS (Lake Mead National Recreation Area) and Bureau of Land Management. The management goals and objectives for these adjacent lands do not include these types of facilities. Finally, any proposal that severely reduces or eliminates helicopter exchanges in the Whitmore area may prevent at least some members of the public from being able to take river trips and would have a detrimental impact on the Hualapai tribal economy.

## W14

The *Colorado River Management Plan/EIS* offers only two wilderness alternatives; one has the least number of user-days (B) and the other has an inconceivably high number of user-days. There is no middle ground. The *Colorado River Management Plan/EIS* should explore more wilderness alternatives that are viable.

## RESPONSE:

Two of the action alternatives analyzed in the EIS had no-motors year round. The other alternatives included a range of no-motors periods that were analyzed by season (e.g. shoulder and winter months). The NPS did examine a subset of no-motors alternatives and found that they violated the basic premise of this planning effort; that of reducing congestion, crowding and impacts without reducing access of visitors to the Colorado River in Grand Canyon. The NPS believes they analyzed a full range of alternatives. NPS has added a new section entitled “Wilderness Character” in Chapter 3, and “Impacts to Wilderness Character” in Chapter 4.

## W15

Tribal sovereignty and self-determination should not give license to inappropriate or unsustainable action and activities. Proposed increases for Lower Gorge commercial and overnight use go far beyond any reasonable carrying capacity. As much as the activity may provide a positive economic benefit for the Tribe, the long-term impacts of such on wildlife, visitor perception, and NPS wilderness management policies and plans needs to be more carefully addressed and mitigated.

## RESPONSE:

The NPS cannot regulate tribal resources or economic activities outside the park. However, under the Council on Environmental Quality regulations implementing NEPA, codified at 40 C.F.R. chapter V, the NPS must discuss and analyze both the direct and indirect effects of the proposed federal action, including cultural, social, economic, and health effects. Therefore, the *FEIS* appropriately discusses and analyzes the effects of the various alternatives on the Hualapai tribe, including tribal social and economic well-being.

W16

Management should cap motorized use to the 1978 level. Wilderness users should be allocated time in the peak summer season, undisturbed by motor intrusions, and more time should be allocated to no-motors than to mixed-use. Some respondent thought the motor season should be no longer than three months.

RESPONSE:

In 1978, the total use of the river was less than 13,000 visitors (commercial passengers and noncommercial users). At that time, approximately 80% of the commercial passengers participated in motorized trips, which is similar to the current proportion of motorized to nonmotorized trips. The EIS analyzed a range of mixed-use motorized periods as well as nonmotorized use periods. Alternative F analyzed a no-motors period during the peak summer months as well. The preferred modified Alternative H allows for the longest nonmotorized use period within in the range of mixed-use alternatives.

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W17

Regulation impacts the “wilderness experience.” Any kind of formal scheduling for visiting attraction sites or for assigning camps takes away from the wilderness experience. There is a point after which you sanitize the wilderness experience too much by taking away the challenging aspects of the experience. “Allowing a visitor to experience the river on its own terms” is an objective that must be preserved.

RESPONSE:

The EIS did not specifically address the formal scheduling of visitation at attraction sites or assigning camps because the NPS desire is to preserve the opportunity for visitors to experience the river on its own terms. The assignment of campsite capacities and information for users to understand the choices will allow a range of experiences to be obtained by all river users. Specific mitigation actions may be required at some point in the future if impacts to visitor experience or natural/cultural resources are unacceptable. These potential management actions are described in Chapter 4 as mitigations.

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W18

The idea of a “conduit” to the wilderness is a good one and has a precedent in the BA and Kaibab trail corridor/conduits.

RESPONSE:

The Bright Angel and Kaibab trails are within the Cross-Canyon corridor, which was excluded from wilderness due to the existing permanent facilities including structures, plumbing, phone lines, etc. The Colorado River qualifies as potential wilderness due to the absence of these features.

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W19

The present designation of the Colorado River as “potential wilderness” requires the removal of non-conforming uses (e.g., motorized watercraft, generators, and non-emergency helicopters). Bring the *Colorado River Management Plan*/EIS into legal compliance with the relevant laws, policies and management plans, most notable in regard to wilderness and resource protection mandates. Including: The

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Organic Act, and Redwoods Amendment; The Wilderness Act; The Concessions Policy Act; NPS Management Policies and Director's Orders; Grand Canyon National Park General Management Plan; Colorado River Management Plan (prior incarnations); The Backcountry Management Plan; NEPA and CEQ Guidelines; The Administrative Procedures Act; Endangered Species Act; and the National Wild and Scenic Rivers Act.

RESPONSE:

First, except for administrative uses, which are subject to the agency's minimum requirement analysis, the NPS does not permit the use of "non-emergency helicopters" in the portion of the river corridor that the agency identified as "potential wilderness." Second, neither law nor policy requires the NPS to remove all "non-conforming uses" from areas identified as "potential wilderness." Chapter 6 of the NPS Management Policies 2001 states in pertinent part, "The National Park Service will seek to remove from potential wilderness the temporary, non-conforming conditions that preclude wilderness designation." (emphasis added)

The NPS has determined that the continued use of motorized rafts (1) does not preclude wilderness designation because this use is only a temporary or transient disturbance of wilderness values on the river and (2) is not a legal impediment to wilderness designation. The NPS believes that the EIS is in compliance with the laws and policy listed by the commenter. See Section 3.8, "Wilderness Character", and Section 4.8, "Impacts to Wilderness Character."

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W20

Motors do not impair Grand Canyon's suitability for future wilderness designation. Additionally, nearly every major Wilderness Area that has been established and that historically had motorized use, allowed such uses to be "grand-fathered" in.

RESPONSE:

The NPS has determined that the continued use of motorized rafts (1) does not preclude wilderness designation because this use is only a temporary or transient disturbance of wilderness values on the river and (2) is not a legal impediment to wilderness designation.

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W21

Does it make sense that the preferred Alternative H described in the *DEIS* has more daily launches and a wider variety of trip lengths than the nonmotor Alternative C, and yet both have the same wilderness quality?

RESPONSE:

Wilderness quality combines a number of attributes, not just launch numbers. In alternative C, all launches would be constant, with trip lengths similar, resulting in nearly constant encounters. By mixing the use types, encounter rates will be reduced, allowing for improved visitor experience and resource protection.

W22

How can creating a wilderness create a “major” and adverse impact on threatened and endangered species?

RESPONSE:

In a nonmotorized alternative, the number of launches is consistent with similar trip lengths. As discussed in Chapter 4, increased trip lengths improve opportunities to visit the park, but have adverse impacts to special status species due to increased duration of visits, especially in side canyons.

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W23

On page 601 (and elsewhere) in the *DEIS*, what are “wilderness-like standards?” How do these differ from wilderness standards? Isn’t a potential wilderness supposed to be managed as if it were wilderness until Congress acts? If Zone 1 is being managed using a standard other than a wilderness standard, isn’t that in violation of the Wilderness Act?

RESPONSE:

When setting standards, the NPS recognizes the spectrum of opportunities based on when and where visitors experience the river corridor. “Wilderness-like” standards do not necessarily differ from “wilderness standards”, as they are related to river encounters. River encounters are a common social impact indicator for backcountry settings and they have received considerable attention in the recreation literature. One key concept from this literature is that encounters are important to many river users, particularly in lower use, wilderness-like settings (Vaske et al., 1986; Shelby et al., 1996). For the purposes of this analysis, the NPS adopted the experience quality indicators and standards described in the 1989 *Colorado River Management Plan*. In addition, research conducted by Shelby and Hall (1998) further described how river users defined their wilderness river experience. As stated in the EIS, Zone 1 is “characterized as a primitive setting within recommended wilderness, which provides a variety of personal experiences from solitary to social.” The final *Colorado River Management Plan* mitigation and monitoring plan will articulate the standards and indicators that will be measured to determine whether the management objectives described in the EIS are being met. The standards, in and of themselves, are not in violation of the law.

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W24

Why do the best features of the canyon (wilderness, solitude, flora, and fauna) have to take a back seat to the commercial interests?

RESPONSE:

The NPS does not believe that canyon values and resources take a “back seat” to commercial interests. On the contrary, the NPS believes that all visitors should have the opportunity to experience the canyon, regardless of how they reach it (commercial or noncommercial).

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W25

One of the natural resources that the *Colorado River Management Plan/DEIS* and the Grand Canyon National Park General Management Plan pledge to protect is natural quiet—the natural soundscape. The

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*Colorado River Management Plan/DEIS* also states that there will be the opportunity for a variety of personal experiences “ranging from solitary to social, with as little influence from the modern world as possible. The Colorado River corridor will be protected and preserved in a wild and primitive condition.” Some respondents support these goals and objectives.

RESPONSE:

Although the *Colorado River Management Plan* is not a soundscape plan, the NPS believes we are addressing natural quiet and the range of personal experiences along the Colorado River through this planning effort. See Section 3.8, “Wilderness Character”, and Section 4.8, “Impacts to Wilderness Character.”

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W26

The preferred alternative should manage the river corridor as a wilderness area.

RESPONSE:

The NPS believes it is managing the river corridor appropriately. Please see Section 4.8, “Wilderness Character.”

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W27

The NPS states in Appendix B that “Thousands of comments were received that described valued attributes of a river trip experience but did not raise issues or concerns.” Some respondents were concerned that their prior wilderness concerns may have been ignored.

RESPONSE:

In response to this comment, the NPS has added new text relative to wilderness character. See Section 3.8, “Wilderness Character”, and Section 4.8, “Impacts to Wilderness Character.”

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W28

The *Colorado River Management Plan/EIS* affirms the agency objective to provide a wide spectrum of recreational opportunities for visitors to the Grand Canyon. For example, the plan proposes to create different zones for recreation activities with varying degrees of wilderness. Nevertheless, some respondents felt it was apparent that unofficially, there was a bias in favor of the more wilderness-like activities.

RESPONSE:

Given the range of comments received on this topic, the NPS believes we have provided a balanced approach to the range of visitor opportunities.

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W29

The agency is obliged to manage existing administrative, scientific, and commercial uses of the river in compliance with the requirements of the Wilderness Act, NPS Management Policies 2001, and other relevant statutes. The determination of the methods and means employed to provide for these activities and services must be made within the context of the minimum requirement concept of the Wilderness Act. This

would mean that the minimum requirement analysis concept should be used in determining the appropriate methods and means to provide transportation and related activities along the river. Since the minimum requirement concept comprises a fundamental basis for wilderness management, the agency's responsibilities regarding the minimum requirement process, not presented in the *DEIS*, should be explicitly discussed in the *FEIS*. This should include, at the minimum, the Arthur Carhart decision matrix and accompanying text.

RESPONSE:

The NPS has determined that the continued use of motorized rafts (1) does not preclude wilderness designation because this use is only a temporary or transient disturbance of wilderness values on the river and (2) is not a legal impediment to wilderness designation.

### Miscellaneous Comments

MISC1

The effects of recreation should be analyzed and mitigation measures implemented.

RESPONSE:

The Environmental Impact Statement for the Colorado River Management Plan analyzed the effects of recreation. The implementation plan will serve to guide mitigation of those effects.

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MISC2

Allow another public comment period before the final plan. There are too many hazy areas at this time to really know what the impact will be.

RESPONSE:

The NPS believes that it has analyzed the potential effects of the range of alternatives. This was done using best available data. Some impacts may not be foreseeable and, for this reason, monitoring and mitigation will be essential components of the *Colorado River Management Plan* implementation plan. While the *Colorado River Management Plan* provides limits for many of the management variables for river use, it is appropriate to leave some details to management discretion.

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MISC3

Is a demand responsive system integral to all alternatives?

RESPONSE:

The modified preferred allocation option has several modifications from the Draft EIS, including the elimination of an adjustable split allocation system. The modified preferred allocation option is the no action option (current system), in which recreational river use in Grand Canyon would continue to be allocated between the commercial and noncommercial sectors in a set ratio (albeit a different ratio than is currently set) that will remain the same for the life of the plan. See new text describing the modified preferred allocation option in Chapter 2: Alternatives and analyzed in Chapter 4: Environmental Consequences—Visitor Use and Experience.

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MISC4

Eliminate pontoon boats/facilities in the Quartermaster area.

RESPONSE:

Chapter 4 analyzes the effects of Alternative 2, which includes the elimination of pontoon boats in the Quartermaster area. The NPS believes that Alternative 4, the Modified Preferred Alternative H, allows for economic growth for the Hualapai Tribe within the constraints of resource protection.

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## MISC6

Criterion #3 on page 87 seems a bit skewed. The second part of the criterion dealing with variation of trip opportunities should be eliminated. Beneficial use without degradation conflicts with offering a variety of trip types. Motorized use and helicopter shuttles are degrading the resource. They could be termed degradation beneficial uses. The choice must be made. Are motors and helicopters more degradational or more beneficial? The Organic Act and the 1995 Management Plan indicate they are not beneficial and should be phased out. This is the opportunity to phase them out.

## RESPONSE:

The analysis of the criterion for the Environmentally Preferred Alternative examines the aspects of river use that cause degradation to the spectrum of resources. Thus the management variables that lead to crowding and congestion become the primary focus of the analysis. Impacts from helicopters (which operate on sovereign Hualapai land) and motors have been analyzed in Chapter 4: Environmental Consequences. The NPS believes that the Environmentally Preferred Alternative analysis appropriately interprets the spirit of NEPA Section 101(b).

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## MISC7

Page 597 states, “Under this alternative, overall use levels in the winter and shoulder seasons, as measured by user-days and total passengers, would increase above current levels, but would be at lower levels than current. These levels of off-season use coincide with the lowest allowable group sizes and lower trip lengths.”

In the first sentence, how can use levels increase above current but be lower than current? In the second sentence, what are “lower” trip lengths?

## RESPONSE:

Please see corrected text for Alternative B in Chapter 4: Environmental Consequences, Visitor Use and Experience.

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## MISC8

Need for additional Group Camping once rigged. Several Thoughts to make availability without great cost:  
- One group and rigged boats at current river campsite - One group and rigged boats WITH RANGER TALK COMPLETE camp across the river. - What about the potential for camping at Rachel’s Ranch just up the Paria . . . Perhaps some of the river fees could be used to help set up a minimal type camp ground - we are out here to enjoy the wilderness and do not need fancy camping options! This might also further justify restoration (funding always seems to be an issue on special projects worthy of this type of maintenance) of the Ranch and ultimately entice many more people to see what original settlers had to do and experience - Sleeping on trailers or in vehicles at the upper parking lot is not really objectionable except by the NPS per se. Restroom facilities are down the road and boaters are perfectly capable of utilizing “pee” jars or buckets to keep the area clean. - Cooking in those areas: Excellent place for a DEMO-model kitchen set up or simply have a group do the same. - One group and rigged boats: most camp at NPS Camp Ground and a couple of boatmen be allowed to stay with the boats - Some safety concerns with w/ late night “visitors” and vandalism from “locals.”

## RESPONSE:

The NPS appreciates these suggestions and will consider them, as well as many others, as options for management and mitigation of impacts.

## MISC9

The whole analysis in the *DEIS* is summarized in the environmentally preferred alternative section (pages 86 - 91). It is this analysis where a preferred alternative is generated. Within this analysis the Council on Environmental Quality criteria are presented and interpreted. It is those interpretations that the worst prejudice against the environment and the noncommercial boaters occurs.

The analysis presents a false evaluation on how the alternatives meet NEPA criteria. The summary (Tables 2-9 and 2-10, pages 89–90, and 94-5) then gives a simple “does not meet”, “meets”, or “exceeds” grade based on the false analysis.

## RESPONSE:

The analysis of the environmental consequences of each alternative, detailed in Chapter 4, is summarized in Section 2.2.9 (Tables 2.4 and 2.5) and Section 2.3.8 (Tables 2.7 and 2.8). Summary text is also presented in the Executive Summary. These summaries were an integral component of the Environmentally Preferred analysis in Section 2.4. As required under CEQ regulations 40 CFR 1502.2(d), NEPA documents must include a section stating how each alternative analyzed in detail would or would not achieve the requirements of sections 101 and 102(1) of NEPA and other environmental laws and policies. This requirement is met by disclosing how well each alternative, meets the criteria set forth in section 101(b) of NEPA.

The Congressional Declaration of National Environmental Policy (Sec. 101 [42 USC § 4331]) states the following. “(a) The Congress, recognizing the profound impact of man’s activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high-density urbanization, industrial expansion, resource exploitation, and new and expanding technological advances and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.” The NPS believes that the Environmentally Preferred Alternative analysis adheres to this policy and adequately considers whether each alternative meets (or does not meet) the criteria set forth in this Act.

The NPS recognizes that not all aspects of this analysis are quantitative and that there may be room for alternate interpretation of some of the criteria. For this reason, the NPS carefully considered best available data, including applicable research and staff expertise as well as information gleaned from agency and tribal consultations and public scoping and comment. Therefore the NPS believes that we have followed the procedures and the spirit of NEPA Section 101(b). Furthermore, the Supreme Court has ruled, in *Strycker’s Bay Neighborhood Council, Inc. v. Karlen* 444 U.S. 223 (1980) that an agency is not required to select the Environmentally Preferred alternative, if the agency has appropriately considered a reasonable range of alternatives according to procedures set forth in NEPA.

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## **CHAPTER 3: SUMMARY OF NONSUBSTANTIVE COMMENTS**

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## Nonsubstantive Comments (Public Concerns)

### Vision/Public Process

- *Vis1 Commenters agree with Grand Canyon National Park's vision or the public process*
- *Vis2 Commenters disagree with Grand Canyon National Park's vision or the public process*
  - *Want less government regulation, not more*
  - *We must have another comment period once the NPS determines the details of the chosen alternative along with how funding will be secured for monitoring and mitigation of impacts and education of river users*
  - *Your comment system is flawed and favors only the computer literate elite. You ask people to comment on chapters and pages and yet make it very difficult to see, let alone reference passages that are supposed to be in the public domain. Frankly, I don't care how much it costs to print this thing; it's an important issue that needs the light of public scrutiny. Let's make this process fair and open!*
  - *Most of the problems we are in today are a result of many years of inaction. I support all river users paying additional fees to implement the CRMP changes, continuously assess how well they are working, and make updates to the CRMP as needed. States update hunting and fishing regulations every year to match the status of what they manage. And when necessary, new regulations are implemented almost immediately if a change in conditions requires it. The Colorado River through the Grand Canyon should be no different, and users should pay for its proactive management.*
  - *Environmental protection is given too low of a priority in the CRMP.*
  - *Please, don't rob us and our children of the wonder contained within the Grand Canyon National Park. It already sounds like visiting a highway. If you honestly don't see why this needs to be changed, then you are not proper stewards of OUR public lands.*
  - *This comment form is horrible. If you are interested in reading comments from the general public (like me), you should make it easy and clear. I am not sure which box I am supposed to use!*
  - *The complicated process of analyzing alternatives favors special interest groups who wish to prevent use of the Grand Canyon. It makes comment by the average taxpayer almost meaningless because the DEIS and even this form are needlessly complicated and discourage public comment.*
  - *The timeframe for the DEIS should be extended to 2007.*
  - *Since both the Wilderness Management Plan and Backcountry Management Plan are under consideration by the NPS and are to be coordinated with the CRMP so as to be consistent, both the Wilderness and Backcountry Management Plans should legally and practically precede any final CRMP. To do otherwise unlawfully segregates and bifurcates the Colorado River from the rest of the park when considering wilderness management issues.*
  - *The 2005 CRMP must have a clearly defined lifespan with a clearly defined end point, not to exceed 10 years.*

### Management Objectives

- *MO1 Commenters agree with Management Objectives*
  - *Management objectives all emphasize minimizing impacts, unfortunately the alternatives don't*
  - *I am a staunch supporter of managed use of the Grand Canyon*
- *MO2 Commenters disagree with Management Objectives*

- *Not enough specificity*
- *Visitor use and experience objectives should include motors/wilderness*
- *One objective should include creating a plan that is simple and transparent*
- *Doesn't consider managing the Colorado River as wilderness*
- *Providing a fair and equitable method of rationing river use is not specifically identified in the plan as a management objective*
- *The NPS is required to prioritize resource protection above all other values, including recreation. It is inappropriate for the agency to give as much weight to "providing a variety of trip type opportunities and exchange options" as to preserving natural and cultural resources. Yet this is exactly what the park is doing in its preferred alternative.*
- *The principal objective of the plan should be the restoration and recovery of the natural processes and native species to river corridor that are impacted by the activities of humans.*

### Scope of Plan

- **Sco1** *Commenters agree with Scope of CRMP*
  - *Continued use of motorized, non-motorized and non-commercial trips provides various, important recreational/public access for most visitors who wish to experience the wonders of the canyon.*
- **Sco2** *Commenters disagree with Scope of CRMP*
  - *Glen Canyon Dam operations should be included in the scope of the CRMP*
  - *Wilderness designation should be included in the scope of the CRMP*
  - *Environmental justice should not be dismissed from the impact topics*
  - *They dislike all of the proposed alternatives*
  - *The alternatives aren't consistent with the law (Organic Act, NEPA, NP Omnibus Act, etc.)*
  - *Should include requiring Page/Lake Powell to raise sewage treatment standards*
  - *Should include limits to fees charged by the Hualapai for takeouts*
  - *The range of alternatives is inadequate*
  - *You fail to address the spiritual values of the Colorado River in your DEIS. This omission amounts to discrimination against all those, including myself, who consider elements of this plan as a curtailment of our religious freedoms*
  - *It is hard to imagine how the NPS came to the conclusion that preservation of wilderness character along the Colorado river (a proposed wilderness area) wasn't one of the major "public issues and concerns"*

### Analysis

- **Ana** *Commenters express a general concern with the DEIS analysis*
  - *It is biased against private boaters*
  - *Need to insure that concessions services are "necessary and appropriate"*
  - *The analyses overstate the adverse effects of river use because they include the impacts from the dam*
  - *The alternatives are manipulatively grouped so that the preferred alternative is the only viable one*
  - *The DEIS lacks a specific implementation plan*
  - *The links between known resource conditions and impacts associated with alternatives are weak*
  - *Get rid of the user-day system and you'll come up with a better alternative.*

- *Not adequately addressing the issue of protecting wilderness character in the DEIS resulted in an inherently flawed process that affected subsequent presentations, analysis, selection of the full range of alternatives and selection of the preferred alternatives.*
- *We do not agree that revision of the LACs should be based on the carrying capacity proposed in Alternative H. The point of having specified limits of acceptable change is to trigger management changes to protect resource values. The DEIS has this exactly backwards: the management plan is being used to trigger revised criteria for resource protection. The current quality of canyon and river resources must not be further compromised. Once increased use is granted, it will be virtually impossible to “take it away” should impacts exceed the limits of acceptable change.*

### **Allocation and Registration System**

#### ○ **Current System (Option A)**

- **AlloA1** *Commenters agree with or identify advantages to Option A*
  - *The current allocation is functional and fair*
  - *The current allocation offers affordable access to commercial passengers*
  - *Options B and C are unfair*
  - *The change to the lottery system is totally undesirable.*
- **AlloA2** *Commenters identify disadvantages to or object to Option A*
  - *The current allocation is unfair and inequitable*
  - *The current allocation is not based on a demand study*
  - *The current allocation is gives too much access to commercial passengers*
  - *The current allocation is gives too much access to non-commercial passengers*
  - *Anyone with money can take a commercial trip this summer but regardless of your finances, a private trip is 20 years away*

#### ○ **Common Pool (Option B)**

- **AlloB1** *Commenters agree with or identify advantages to Option B*
  - *A common pool system is fairer because it assures allocation based on demand*
  - *Allows more flexibility for individuals*
  - *Does not give an unfair advantage to commercial companies*
  - *Works in the Boundary Waters Canoe Area*
  - *This is the only way to guarantee that one person will not be burdened with a more onerous process, a longer waiting period, or a smaller probability of success than another*
  - *This is the only process that will relieve the NPS of its burdensome and costly role (and the associated legal liability) as a referee between a relatively static number of commercial outfitters and a rapidly growing segment of the public interested in noncommercial access.*
  - *This is the only process for which demand is inherent, relieving the NPS of the additional responsibility and cost of measuring and tracking demand and periodically adjusting allocation in response, and the controversy and potential lawsuits that each adjustment is certain to create.*
  - *The total number of permit applications and the split between commercial and noncommercial applicants is not likely to vary greatly from one year to the next, allowing commercial operators to plan well in advance*

- *It will allow groups the flexibility to complete their formation after approval of a group application while reducing advantages of large groups pooling applications*
- *Currently used on Deschutes River*
- *Ends discrimination against lower income visitors.*
- *Is inherently fair and must be adopted instead.*
- *The common pool system should be phased in over 5 years: 20% of total allocation converted each year until all use has been converted to a non-allocated system.*
- **AlloB2** *Commenters identify disadvantages to or object to Option B*
  - *A common pool would not allow as many launches*
  - *A common pool can be easily “gamed”*
  - *A common pool would increase competition for trips between user groups*
  - *A common pool would impact commercial operations by eliminating predictability*
- **Adjustable Split Allocation (Option C)**
  - **AlloC1** *Commenters agree with or identify advantages to Option C*
    - *Adjusts allocations based on relative demand*
    - *We have always been unhappy with the notion that a person with enough money could go on a river trip at almost any time on short notice. We believe the adjustable split allocation best addresses this notion and serves to mitigate this seemingly unfair advantage for commercial passengers*
  - **AlloC2** *Commenters identify disadvantages to or object to Option C*
    - *It encourages gaming of the system*
    - *They favor a fixed allocation for the private and commercial sectors*
    - *It pits user groups against one another*
    - *It would increase uncertainty for commercial operators*
    - *It would be cumbersome and expensive for the NPS to maintain*
    - *They oppose the all-user registration system*
    - *It’s a one-way street in favor of private boaters*
    - *It’s a concerted effort to take away outfitter allocation and reduce public access*
    - *Would be detrimental to commercial outfitters*
    - *It’s not fair or balanced*
    - *It would create anger towards the NPS and the outfitters*
    - *It does not guarantee that one person will not be burdened with a more onerous process, a longer waiting period, or a smaller probability of success than another*
    - *It will not relieve the NPS of its burdensome and costly role (and the associated legal liability) as a referee between a relatively static number of commercial outfitters and a rapidly growing segment of the public interested in noncommercial access*
    - *Because demand is not known, the initial allocation will be arbitrary and this inequity will continue for years because of the graduated adjustment scheme.*
    - *The guarantee of a minimum allocation of 40% of launches for each sector does not support demand-based allocation*
    - *It hasn’t been thoroughly researched*

- *Does not address user perception of inequity, will not adapt to meet demand*
  - *Trends in usage could be monitored and adjustments made accordingly in the future but this should require monitoring real numbers and real yearly usage and not speculation*
  - *There are too many questions regarding how it will be implemented*
  - *Trying to compare commercial to noncommercial demand is going to lead to problems because both can easily be manipulated by different mechanisms. Commercial outfitters can spend more on marketing or offer different types of trips or simply drop the price to increase demand. Privates can talk their friends into entering the lottery or getting on the waitlist to create a spike in demand.*
  - *The waiting period should be the same for commercial and non-commercial users.*
  - *This system seems to have been designed by the commercial outfitters specifically to slow down the changes that are needed to equalize the launch ratio to a true 50/50 split.*
- **All user Registration (Option C)**
- **Reg1 Commenters agree with or *identify advantages to the all-user registration system***
    - *It measures relative demand*
    - *Improves demographic (and trip preference) information for NPS*
    - *It's more equitable, requiring the same of commercial boaters as of noncommercial ones*
    - *It will ensure that inexperienced rafters are not risking their lives.*
  - **Reg2 Commenters *identify disadvantages to or object to the all-user registration system***
    - *All-user registration is unnecessary and cumbersome*
    - *It will increase the NPS's staffing and expenses*
    - *The NPS can't afford to fund it*
    - *Individuals object to giving personal information to NPS*
    - *The data could be collected later from commercial outfitters and noncommercial permits*
    - *Encourages gaming of the system. The results will be biased*
    - *National (vs. regional) demand would be underrepresented*
    - *Would exacerbate and perpetuate conflicts between user groups*
    - *Would measure interest, but not necessarily demand*
    - *Would not reduce waiting time for private boaters to get on the river*
    - *Don't want to pay a fee to register*
    - *Takes away the right for outfitters to market their trips*
    - *Not done at any other national park*
    - *The current commercial registration system works well*
    - *Don't need the extra step when the public goes directly to outfitter websites*
    - *The public wants to contact the outfitter first, not the NPS*
    - *There's no incentive for the public to register if the outfitter is sold out*
    - *Having privates register to get a permit and commercial passengers register to contact an outfitter are two different things*

- *Commercial passengers would be at a disadvantage because they're not used to registering*
- *A demand study can be done instead for \$75-150K*
- *We're already measuring demand in the commercial sector*
- *Park rangers are better suited and equipped for helping exchange hikers than river guides, esp. in the case of emergencies*
- *The public doesn't like additional and unnecessary hoops to jump through when planning vacations*
- *I do not have confidence that the NPS would collect data accurately*
- *Its only purpose is to reduce the commercial allocation*
- *It would create additional red tape that would make it harder for individuals like me to take such a trip*
- *The correct way to measure demand is through actual bookings. People can express interest but not follow through. This could distort the allocation from the true percentage of demand.*

### **Noncommercial Permit System Options**

- **WL1** *Commenters agree with or identify advantages to the current permit system (Waitlist for Trip Leaders)*
  - *Guaranteed to get a trip eventually*
  - *Predictability, can plan around it, even if it's far into the future*
  - *I want to wait 10 years until my kids are grown up*
  - *Provides a measure of noncommercial demand*
  - *First come, first served*
  - *Contains a feature to handle cancellations*
  - *There's nothing wrong with the current waitlist that a fair allocation won't fix*
  - *The main reason the NPS wants to discontinue the waitlist is that it so graphically demonstrates the discrimination against the noncommercial sector and the NPS wants to remove any indication of that*
  - *The wait is 10-15 years, but only if you don't pick up any cancellations. I've put in for a Yampa permit in the Dino lottery for 18 straight years and have yet to draw one. Yet, through friends and cancellations, I've gone on more than 20 trips through that beautiful canyon.*
- **WL2** *Commenters identify disadvantages or object to the current permit system*
  - *They spend far too many years on the waitlist*
  - *It's not possible to plan 10-15 years in advance*
  - *Fees associated with the waitlist hide real demand*
  - *Many trips are semi-private (renting equipment, shuttle services, etc.), inflating perceived demand*
  - *Private launches are under-utilized.*
  - *Being restricted to doing only one trip while on the waitlist limits the skills of trip leaders*
  - *Current demand is inflated by people gaming the system (e.g., people listing family members)*
  - *Create a website for noncommercial permit information*
  - *Require a deposit, identification of each passenger by SSN and cancellation fees in order to thin out the waitlist*
  - *It no longer serves the increasing demand*
  - *People who know the system cheat and go with friends and sometimes serve as guides illegally*

- *People might grow old or die by the time their name comes up*
- **WG1** *Commenters agree with or identify advantages to the Waitlist for Groups option*
- **WG2** *Commenters identify disadvantages to or object to the Waitlist for Groups option*
  - *Impossible to assemble a private group one year in advance*
- **LG1** *Commenters agree with or identify advantages to the Pure Lottery for Groups option*
  - *Having groups apply rather than individuals*
  - *Allowing alternate trip leaders from within the group*
  - *Not allowing people to be in more than one group*
  - *Allowing some participant changes within a group*
  - *It works well on other rivers (e.g., the Selway)*
  - *It's a simple and straightforward system. If I don't get a permit this year, I can reapply next year.*
- **LG2** *Commenters identify disadvantages to or object to the Pure Lottery for Groups options*
  - *It's impractical and inflexible to apply as a group*
  - *By nature less fair: one person gets a trip three years in a row while another gets none*
  - *It creates a huge administrative burden*
  - *It doesn't work well on other rivers*
  - *I hate lotteries because I never win.*
- **WLG1** *Commenters agree with or identify advantages to the Weighted Lottery for Groups option*
  - *Similar to system for acquiring hunting tags*
  - *Fair since it increases one's chances after each unsuccessful attempt*
  - *Annual lotteries, like for the Middle Fork of the Salmon River, seem fair*
  - *This is a reasonable way to obtain a launch in less than 20 years*
  - *It's good as long as people who pick up cancellation trips lose their priority in the lottery weighting.*
- **WLG2** *Commenters identify disadvantages to or object to the Weighted Lottery for Groups option*
  - *Weighting should be based on the aggregate of participants' scores, not their average*
  - *Listing trip members months before you know you have a permit is ridiculous*
  - *It's unreasonable to require that groups be fully identified when entering the lottery*
  - *Do not make me register my trip participants in advance*
  - *Listing group participants should be allowed, primarily for alternate leader purposes, but not mandatory*
  - *Discounts for original group applicants are inappropriate. Costs should be borne equally by all participants on all trips*
  - *The once a year limit is unnecessarily restrictive*
  - *You should only have to list the trip leader.*
  - *Commercial boaters don't have to list all of their trip participants two years in advance.*
  - *It creates a huge administrative burden*
  - *It adds layers of unnecessary obstruction to noncommercial access*
  - *Lotteries are unfair and immoral*
  - *Someone could be on the list forever*
  - *I've been on the Salmon River weighted lottery for groups for years and never been selected*

- *Noncommercial permits should be issued by reservation rather than by waitlists or lotteries*
- *I applied for a Selway permit for 25 years and never got one*
- *Any improvements you think you can make to create fairness will help some, hurt others and won't be as fair as pure chance*
- *Lotteries never work, such as on the Rogue River and others in Idaho*
- *Please give more weight to people currently on the waitlist so that we are guaranteed a launch date someday*
- *Why sign up as a group? What about individuals?*
- *I hate lotteries because I never win.*
- *I've entered 75-100 lotteries for various rivers in the west and not once have I gotten a permit. A lottery, even a weighted one, will never be fair because supply will always be outstripped by demand. While a 10-15 year wait is a long time, it still beats the fact that you might never get a permit in a lottery, even a weighted one. Also, with enough demand, a weighted lottery will begin to act like a waitlist. The only difference is that you know how long it will be with the waitlist whereas at this point there's no way of knowing how long it might be with a weighted lottery.*
- *A weighted lottery for groups is going to be very difficult to manage if you stick to the idea of not allowing any passenger changes to the permit. You'll end up with trips that are only partially filled up and all the resultant unused user days.*
- *Trying to track a group of 16 people to make sure they're not part of any other group will be no picnic either.*
- *Two lotteries, one in winter for Summer and Fall and one in summer for Winter and Spring will be much more manageable than 12 monthly lotteries. Do them no more than 18 months out and cancellations will drop substantially.*
- *If you make the lottery free, you won't have the associated guilt that comes with charging people for nothing, i.e., the chance to lose in the lottery.*
- *It would be burdensome and unworkable for the park and the applicants.*
- *Don't list applicants to the same month each year.*
- *If private boaters must list group participants, then each outfitter must also list members of each trip the same amount of time ahead.*
- *I entered the waiting list relying on a permit in the future, for a guaranteed (as long as we kept current) river permit to run a popular river. After 7 years of applying in the ID and CO lotteries and drawing nothing, I have given up. Unless you are a member of some very large "lottery club", the chances of drawing those permits are the same as at casino slot machines.*
- *The incentive of a "weighted lottery chance" leaves me cold. Now I have a guaranteed permit if I live long enough and keep up my registration. Why should I want to give that up?*
- *A multiple pathways approach would be better.*
- **PBAG1** Commenters agree with or identify advantages to the Point-Based Auction for Groups option
- **PBAG2** Commenters identify disadvantages to or object to the Point-Based Auction for Groups option
  - *It gives an unfair advantage to large groups*
  - *It goes against the incentive of having small groups of 8 or less*
  - *Groups change over time and should not lose points based on membership changes*

## Noncommercial Permit System Transition Options

- **PSTC** Commenters express concern about the transition from the waitlist
  - *I've been on the waitlist for 10 years, what's going to happen to me under the new system?*
  - *Those who have been on the waitlist the longest should be given priority during the transition period*
  - *Being told that I cannot stay on the waitlist and finally get a guaranteed put in is not acceptable*
  - *Advocate a plan that is flexible for people who've planned for 4-5 years already*
- **PSTA1** Commenters agree with or identify advantages to the new permit system augmenting the existing frozen waitlist
  - *It's badly needed*
- **PSTA2** Commenters identify disadvantages to or object to the new permit system augmenting the existing frozen waitlist
  - *The only justification is the fact that it was frozen a long time ago*
- **PSTL1** Commenters agree with or identify advantages to encouraging people to leave the current waitlist and reduce the waitlist allocation
  - *I agree with the overall idea but I strongly disagree with the proposal of a cash refund. Unless something has changed concerning funding for the national parks, I was under the impression that money was tight and that many worthy projects went unfunded. You do not owe anybody anything. For the most part, the folks that are on the list are adults and they knew when they sent in their \$100 that they would probably never see them again, unless it was in the form of a credit for permit fees. So credits are fine, but save your money, not many people expect a cash refund.*
- **PSTL2** Commenters identify disadvantages to or object to encouraging people to leave the current waitlist and reduce the waitlist allocation
  - *No amount of money would be sufficient to encourage them to leave waitlist*
  - *Buyout should be proportional to time on waitlist*
  - *Buying out people on the waiting list would create an unacceptable management precedent. What other NPS unit would pay you not to experience the primary resource of the park?*
  - *The transition proposal aims at rushing people off the list and extinguishing it ASAP. Many people on the waitlist need a minimum of 2 years advance planning time in order to get visas, vacation time, etc.*
- **PSTL51** Commenters agree with or identify advantages to a five-year expiration of the current waitlist
- **PSTL52** Commenters identify disadvantages to or object to a five-year expiration of the current waitlist
  - *The waitlist should be eliminated only after the last person on it has been accommodated*

## Operating Requirements

- **OR1** Commenters agree with or identify advantages to operating requirements
  - *Site restrictions (Tapeats, Kanab, LCR) will protect resource*
  - *LCR restrictions will benefit humpback chub*
  - *Generators should not be used except in emergency*
  - *Support the limit on repeat use*
  - *Existing regulations need to be enforced (e.g., no camping above old high water mark)*
  - *Commercial crew/guides should be counted against group size, just like noncommercial boatmen*

- *I support the park's efforts to stop illegal commercial activities occurring on private trips through banning repeat use*
- *If you block repeat private trips, then block repeat commercial trips too.*
- *We support the limit of one river trip per year for all recreational users. We believe that any commercial repeat users are very loyal to one company and it would be easy for the company to identify any repeat users in the same year. All the various studies and historic information shows that repeat commercial users are far fewer in numbers and that they rarely repeat in the same year.*
- *Restrictions at Tapeats and Kanab will protect water quality.*
- *Restrictions on generator use will protect endangered, threatened and candidate species.*
- *Instituting the 3-night minimum to Phantom Ranch will make for a better trip for those visitors.*
- *The three nights to Phantom Ranch will make a better trip for visitors.*
- *We strongly support the restriction that commercial guides not be hired on non-commercial trips.*
- **OR2** *Commenters identify disadvantages to or object to operating requirements*
  - *LCR restrictions are unfair and limit visitor experience*
  - *Closing Tapeats, Kanab and the LCR will increase congestion and impacts elsewhere*
  - *Swimmers don't kill the humpback chub, fish do*
  - *Want to be able to raft down the LCR*
  - *People with sleep apnea need generators*
  - *Companies should not be required to accompany passengers out of the canyon, as people hike at different rates, or may want to go different directions*
  - *Having a guide ruins the hiking experience*
  - *Operators have enough requirements already, don't add any more*
  - *Oppose the restrictions on repeat use or the maximum number of trips one can take per year*
  - *Commercial crew/guides should not be counted against maximum group size*
  - *Commercial crew/guides should be counted against outfitters' user days*
  - *Commercial crew/guides should be counted as administrative use*
  - *There's no research on the effect of recreationists on the humpback chub*
  - *It's the dam that's killing the native fish, not the visitors*
  - *The park needs to address pirate trips before it addresses repeat use*
  - *You cannot limit the public to one trip per year at Grand Canyon National Park unless you are going to limit their access at all NPS units*
  - *It's unfair to be removed from the list for going twice*
  - *Privates should be able to hire guides*
  - *Repeat use should be limited to once every five years*
  - *Non commercial users should be limited to one trip every four years*
  - *After having been through a near-death river trip experience (private trip), I applaud all the commercial companies for their safe, educational trips and hope the NPS continues to allow crew members to enhance the learning, safe experiences by not making them part of the group size.*
  - *Private trips should have access to leaders with multi-trip experience, thus some leaders should be able to take multiple trips per year.*
  - *Why are you so obsessed with repeat private users? Do you really believe that if you got rid of them then your allocation problem would go away? Get real! Demand is always going to be greater than supply, so get used to it, and it's going to get even worse in the future with increasing interest by private boaters.*

- *In fact, repeat users are good stewards of the users. Only by going down there do people get a feel for the place, and then they can make good decisions that have a positive effect on the resource.*
- *I guarantee that if you continue to restrict repeat use on the private side while ignoring it on the commercial side, you'll be facing another lawsuit.*
- *Get rid of generators. They're not needed and they make unnecessary noise in a place that should be treasured for its quiet and solitude.*
- *Why are you closing Tapeats and Kanab to camping? Many beaches that receive heavy use are suffering from the same types of problems. Are you going to close them all when problems surface in other beaches? These restrictions primarily affect private boaters because noncommercial users typically use large beaches available nearby.*
- *A restriction on swimming in the LCR may be in order during spawning, but a blanket interdiction seems unnecessary and will be difficult to enforce, thereby undermining the NPS' authority re: other much more important regulations (e.g., firepans and portapotties).*
- *Whence the kitchen tarps to catch micro-trash? They seem to be having the opposite effect on the ants. They were awful when I did a trip last August.*
- *Re: forbidding privates to hire commercial guides, it appears that the NPS prefers inexperienced trip leaders and boaters who will have a greater impact on the resource. I don't think this issue is a very big problem. And if a trip leader gets a permit and it turns out none of their friends have any experience rowing the Colorado, what's the problem if they wanted to either hire or invite a guide to go along to use their expertise? Chances are s/he will help preserve the resource and increase the safety of the passengers.*
- *It seems like repeat use is so minimal that it's not really much of an issue. The statistics I saw were that 3% repeated in a 5 year period. I'd like to see that restriction taken out of the plan entirely.*
- *Counting guides in trip size limits will have many unwanted and unintended consequences. This over time will likely reduce the guide-to-passenger ratio for commercial trips. The 2003 study by Bob Powell shows that the higher this ratio, the greater the satisfaction of the guests.*
- *Electrical equipment of any type must not be allowed to operate from generators or outboard motors.*

#### **Lees Ferry Alternatives (Alternatives A–H)**

- **Alternative A (Current Condition)**
  - **AltA1** *Commenters agree with or identify advantages to Alternative A*
    - *Current condition allows for excellent opportunities for a variety of experiences*
    - *Motors allow greater access, both in terms of numbers and types of visitors*
    - *Allows motor trips in Sept.*
    - *Keep the canyon the way it is*
    - *If it isn't broke, don't fix it*
    - *Current maximum trip lengths*
    - *It is my understanding that the NPS has serious budget/personnel problems. Why are you wasting taxpayer dollars on something that you cannot efficiently implement and that will adversely affect the enjoyment of a perfect experience? I did a trip with a commercial operator in 2003 and it was excellent. If you need more money, increase the 9% surcharge, but please don't insinuate yourselves into a process that works. You'll mess it up and everyone will be annoyed.*
    - *Spend my tax money on other things in the park system.*

- *Leave things the way they are now.*
  - **AltA2** Commenters identify disadvantages to or object to Alternative A or would like to see the following changes:
    - *Current condition has unacceptable crowding*
    - *Current condition has unacceptable impacts to resources*
    - *Current condition has motors and helicopters*
    - *Current condition has unfair allocations*
    - *The Grand Canyon, our premier national park and World Heritage Site, deserves better protective and administrative management than has been afforded by the past 25 years of concessions-driven priorities*
- **Alternative B**
  - **AltB1** Commenters agree with or identify advantages to Alternative B
    - *No motors, lower use*
    - *Better wilderness experience*
    - *Better resource protection*
  - **AltB2** Commenters identify disadvantages to or object to Alternative B or would like to see the following changes:
    - *Less access*
    - *Fewer trip types*
    - *Acceptable if the noncommercial trip hours were switched with commercial trip hours*
    - *Allow winter trips for commercial groups of 21 days duration and hiking exchanges at Phantom Ranch*
- **Alternative C**
  - **AltC1** Commenters agree with or identify advantages to Alternative C
    - *No motors*
    - *Removes helicopters*
    - *Smaller group size*
    - *Fewer launches*
    - *Better wilderness experience*
    - *Better resource protection*
    - *Increases number of private boater permits*
    - *Increases use for commercial boaters*
  - **AltC2** Commenters identify disadvantages to or object to Alternative C or would like to see the following changes:
    - *Less access*
    - *Fewer trip types*
    - *More congestion due to similar trip speed*
    - *Increased vulnerability of resources*
    - *Decrease commercial use and total user days*
- **Alternative B/C**
  - **AltB/C1** Commenters agree with or identify advantages to Alternative B/C
    - *No motors*
    - *Addresses the inequity in allocation between commercials and privates.*
  - **AltB/C2** Commenters identify disadvantages to or object to Alternative B/C or would like to see the following changes:
    - *Support the Wilderness Alliance's proposal*
    - *Limiting access excessively is inappropriate*
    - *Having no motors limits access excessively*
    - *Unacceptable to commercial interests due to the elimination of motors.*
- **Alternative D**

- **AltD1** Commenters agree with or identify advantages to Alternative D
  - Motors allowed
  - Group size
  - Variety of trip types
  - Helicopters not allowed
  - Trip Length
- **AltD2** Commenters identify disadvantages to or object to Alternative D or would like to see the following changes:
  - No helicopters
  - Group size
  - Trip length
  - Unacceptable to commercials since it gives them motor launches during the winter when there's no demand for them.
- **Alternative E**
  - **AltE1** Commenters agree with or identify advantages to Alternative E
    - Motors allowed
    - Group size
    - Variety of trip types
    - Helicopters allowed
    - Trip Length
  - **AltE2** Commenters identify disadvantages to or object to Alternative E or would like to see the following changes:
    - Motors and helicopters allowed
    - Group size
    - Trip length
- **Alternative F**
  - **AltF1** Commenters agree with or identify advantages to Alternative F
    - Motors allowed
    - Group size
    - Variety of trip types
    - Helicopters allowed
    - Trip Length
    - No motors during part of summer
  - **AltF2** Commenters identify disadvantages to or object to Alternative F or would like to see the following changes:
    - Motors and helicopters
    - Group size
    - Trip length
    - No motors during part of summer
    - Unacceptable to commercial because there's no demand for motor trips before April.
    - There's way too much commercial use in Alternative F and little evidence of demand for it.
- **Alternative G**
  - **AltG1** Commenters agree with or identify advantages to Alternative G
    - Motors allowed
    - Group size
    - Variety of trip types
    - Helicopters allowed
    - Trip Length
    - High use

- **AltG2** *Commenters identify disadvantages to or object to Alternative G or would like to see the following changes:*
  - *Motors and Helicopters allowed*
  - *Group size*
  - *Trip length*
  - *High use*
- **Alternative H**
  - **AltH1** *Commenters agree with or identify advantages to Alternative H*
    - *Motors allowed*
    - *Six month no-motor season*
    - *Group size*
    - *Variety of trip types*
    - *Helicopters allowed, but restricted to peak season*
    - *Trip Length*
    - *There are advantages to reducing peak loads and spreading demand over the entire year*
    - *It's the best of a bad bunch of alternatives.*
    - *Is reasonably effective at balancing the interests of protecting natural and cultural resources and values and at allowing responsible use of the canyon by the public.*
    - *Supports increased use levels and continuing motorized use.*
  - **AltH2** *Commenters identify disadvantages to or object to Alternative H or would like to see the following changes:*
    - *No helicopters*
    - *Group size*
    - *Trip length*
    - *No motors during September/Motors allowed in March*
    - *Helicopters allowed, but restricted to peak season*
    - *Wilderness values compromised by motor use*
    - *Increases use compared to current conditions*
    - *Changes disproportionately favor private boaters*
    - *Support/do not support the coalition's proposal (GCROA, GCPBA, AW, GCRRRA)*
    - *Alternative H responds to the minority (of the people) rather than the majority with regards to the major issues*
    - *If a commercial boater wants to go every year, they would find it difficult to get a launch*
    - *Outfitters lose flexibility and access*
    - *Tripled the number of noncommercial users when the NPS is concerned with the number of contacts, beach use and resource impacts*
    - *It doesn't phase out motors quickly enough*
    - *Acceptable if noncommercial totals were substantially larger than the commercial trip numbers and no motorized trips were allowed*
    - *It doesn't adequately protect resources*
    - *It provides too much access which will damage resources*
    - *Restore Sept/Oct commercial oar trips to historic levels*
    - *You are taking river miles away from the commercial outfitters*
    - *It doesn't solve the problem of excess demand*
    - *The proposed alternative will have a major impact on 6 threatened, endangered or sensitive species*
    - *Offering more non-motorized access in Nov.- Feb. is no advantage since not many people will want to take a trip during this period*

- *Discouragingly, it is also the perceived low-hassle option for NPS; one hopes that the agency will take this opportunity to assert more of a stewardship role for this magnificent treasure*
- *Alternative H is inconsistent with the laws, guidelines and pre-existing management plans that mandate protection for the river corridor. It is instead a plan to maximize the number of visitors who are rushed through the canyon each year while implementing inadequate protections for the river's resources. The partial measures in Alternative H are more appropriate to a theme park than to one of the world's great natural wonders.*
- *The NPS is required to prioritize resource protection above all other values, including recreation. It is inappropriate for the agency to give as much weight to "providing a variety of trip type opportunities and exchange options" as to preserving natural and cultural resources. Yet this is exactly what the park is doing in its preferred alternative.*
- *Alternative H is a resource damaging status quo plan with an increase in off-season use for the general self-guided public at the cost of trip quality and permit access.*
- *Alternative H is inconsistent with numerous statements in the DEIS, the park's 1995 General Management Plan, the Grand Canyon Wilderness Recommendation, NPS Management Policies and the Wilderness Act of 1964.*
- **AltHmo1** *Commenters agree with or identify advantages to the motor schedule in Alt H:*
  - *No motors in September.*
  - *September offers the best opportunity for commercial motor-free rafting.*
  - *No motors in September is the first step to a full motor-free year.*
- **AltHmo2** *Commenters identify disadvantages to or object to the motor schedule in Alt H:*
  - *Want motors in Sept.*
  - *September is a popular motor trip month and 70% of all commercial trips are motor*
  - *Sept. in AZ is still summer*
  - *Sept. launches help reduce summer crowding*
  - *By moving use to the spring when the public doesn't want to go, the NPS is effectively reducing use by 20%*
  - *Hurts families with school-age children*
  - *Object to motorized trips in March, an "unusable" month of the year because of the weather*
  - *Adversely affects guides, shortening their work season*
  - *Motor trips get the six months of light while oar trips get the six months of darkness*
  - *Recommend a 12-month no motor season*
  - *Allow motors from Sept. through Feb. instead of the opposite*
  - *Motor launches in the first half of Sept should be restored and non-motor launches in Sept. and Oct. should remain at historic levels*
  - *I disagree with the elimination of motors in Sept. because being able to raft at that time of year when there's less direct sun helps reduce problems with pre-cancerous skin cells developing*
  - *The flora and fauna that can be seen during Sept. gave me an appreciation of the desert that would not have been possible during the peak summer months*
  - *Please don't make me take a trip in March!*
  - *Motors in spring will affect vegetation and wildlife during the critical reproductive months.*

- *Commercial outfitters will not be able to fill their quotas without the first two weeks in September.*
- *The public who leave on a motorized trip in August will be denied the helicopter lift out experience.*

### **Lower Gorge Alternatives (Alternatives 1–5)**

- **L Commenters express concern for the management of the Lower Gorge:**
  - *I oppose issuing permits to Hualapai outfitters because they have an unsafe operation and exhibit a lack of respect toward the resource*
  - *I'm glad you're working with the Hualapai and other tribes to keep their rights to the area and their historical perspective in place*
  - *Excellent service in the lower canyon taking visitors on one- and two-day trips from Diamond Creek*
  - *Eliminate jet skis and other motorized boats from this area*
  - *On the lower part of the river where the Indians have the temporary docks, that area just looks awful. It is awful. So any improvements you can help bring about would be welcome.*
- **Alternative 1 (Current Condition)**
  - **Alt11 Commenters agree with or identify advantages to Alternative 1**
    - *Current condition allows excellent opportunities for a variety of experiences*
    - *Provides opportunities for day and overnight trips*
    - *Offers opportunity for pontoon trips*
    - *Allows upstream travel to Separation*
  - **Alt12 Commenters identify disadvantages to or object to Alternative 1 or would like to see the following changes:**
    - *Current condition has unacceptable crowding*
    - *Current condition has unacceptable impacts to resources*
    - *Current condition has large group sizes*
    - *Current condition has unregulated use*
- **Alternative 2**
  - **Alt21 Commenters agree with or identify advantages to Alternative 2**
    - *No pontoon boat traffic*
    - *No motor noise, smell, congestion or blowing dust*
    - *Lower use, less crowding*
    - *Upstream travel limited to Mile 262*
    - *Better visitor experience*
    - *Smaller group size*
    - *Better resource protection*
  - **Alt22 Commenters identify disadvantages to or object to Alternative 2 or would like to see the following changes:**
    - *Less access*
    - *Fewer trip types, no pontoon use*
    - *Less opportunity for tribal economic growth*
    - *There is nowhere to camp below Separation, so boat wakes have nothing to damage*
    - *The elimination of pontoon operations would add a lot of time to any group's takeout scenario and lower an oar trip's quality for no apparent reason*
- **Alternative 3**
  - **Alt31 Commenters agree with or identify advantages to Alternative 3**
    - *Allow opportunities for a variety of experiences*
    - *Provides opportunities for day and overnight trips*

- Offers opportunity for pontoon trips
    - Allows upstream travel to Separation
    - Smaller group size
    - Better visitor experience
    - Better resource protection
  - Alt32 Commenters identify disadvantages to or object to Alternative 3 or would like to see the following changes:
    - Trip length restrictions
- **Alternative 4**
  - Alt41 Commenters agree with or identify advantages to Alternative 4
    - Allow opportunities for a variety of experiences
    - Provides opportunities for day and overnight trips
    - Pontoons allowed
    - Smaller group size
    - Variety of trip types
    - Limited pontoon use and associated helicopter transport
  - Alt42 Commenters identify disadvantages to or object to Alternative 4 or would like to see the following changes:
    - Limited upstream travel
    - Less opportunity for tribal economic growth
    - Trip length limits
    - Compromises resource protection
    - Alternative 4 is the convenience alternative, seemingly designed to try to silence the squeaky wheels of the present with little vision for the future – either in terms of future visitors or the future health of the Grand Canyon ecosystem
- **Alternative 5**
  - Alt51 Commenters agree with or identify advantages to Alternative 5
    - Allow opportunities for a variety of experiences
    - Provides opportunities for day and overnight trips
    - Pontoons allowed
    - Allows for substantial economic growth
    - Smaller group size
  - Alt52 Commenters identify disadvantages to or object to Alternative 5 or would like to see the following changes:
    - Unacceptable impacts to resources
    - Unacceptable impact to visitor experience
    - Limits upstream travel and jet boat use
    - Trip length limits
    - Commenter suggests that Alt 5 puts desires for economic prosperity and greed ahead of the care and sustainability of the river and the canyon

## GENERAL CODES

### Wilderness

- **W1** Commenters express support for wilderness management
  - Request a quality river experience appropriate to Grand Canyon National Park wilderness character
  - Request full river wilderness designation
  - Motors, whether on boats, helicopters or generators, are incompatible with a wilderness experience
  - Large group sizes are not allowed in wilderness areas

- *Wilderness builds wilderness character*
- *The river needs to be managed as wilderness according to the park's own recommendation*
- *The alternatives that have been offered do not meet management objectives. Under purpose and need for action, the plan should "provide a wilderness type river experience" and it does not*
- *It is hard to imagine how the NPS came to the conclusion that preservation of wilderness character along the Colorado river (a proposed wilderness area) wasn't one of the major "public issues and concerns"*
- *The American public deserves to have its legendary wildness protected*
- *Wilderness should be protected from oily residues, roaring motors and commercialism*
- *Too many places have become urbanized. Protect our national treasures in their natural state*
- *Once wilderness is destroyed, it cannot be replaced*
- *Protect the Grand Canyon from the invasion of modern technology*
- *The American public values the wildness of the Colorado River over any other aspect, including the convenience provided by motor boats*
- *The CRMP must make the necessary steps to restore the vital wilderness qualities of the Colorado River*
- *I want our wilderness areas protected for future generations. Our children must also be able to enjoy and appreciate the great gift we have all been given*
- *The concept of wilderness boundaries was designed with specific purposes. Yet these have been obscured by the cacophony of protests coming from those with economic reasons for diluting wilderness rules.*
- *Although the DEIS cites NPS wilderness policy and relevant portions of the park's GMP, the preferred alternative does not translate the letter or spirit of policy nor the objectives of the GMP into management actions. It fails to protect the wilderness character of GCNP. The final EIS, unlike the DEIS, must conform to NPS Wilderness Preservation and Management policy (NPS 2001).*
- *I hope that particular attention will be accorded always to that mandate in the [Organic Act] which enjoins us to keep our great parks in their natural condition. Oppose with all your strength and power all proposals to penetrate your wilderness regions with motorways and other symbols of modern civilization. Keep these bits of primitive America for those who seek peace and rest in the silent spaces; keep them for the hardy climbers of the crags and peaks; keep them for the horseman and the pack train; keep them for the scientist and student of nature; keep them for all who would use their minds and hearts to know what God had created. Remember, once opened, they can never be wholly restored to primeval charm and grandeur.*
- **W2 Commenters object to wilderness management**
  - *State that Glen Canyon Dam voids wilderness designation*
  - *Effects from motors are not permanent*
  - *Disagree with the Grand Canyon Wilderness Alliance's proposed alternative*
  - *If you want to save the rivers and canyons for the snakes and fish, close the parks, fence them off and close down the Parks Service.*

### Resources

- **Res Gen Commenters express support for the protection of natural or cultural resources**
  - *Prevent littering, erosion of beaches, pollution of the water, adverse effects of recreation on soils, vegetation and wildlife*
  - *Protect native and endangered species of plants and animals*
  - *Protect the canyon from encroaching pollution from adjacent lands*
  - *Protect caves and paleontological resources*
  - *Protect natural quiet*

- *Protect the natural soundscape*
- *Please keep the canyon clean and quiet*
- *Funneling all use into certain areas increases resource damage (e.g., more social trails)*
- *Implement monitoring and mitigation measures outlined in the DEIS to reduce the effects of recreation on soils, vegetation and wildlife*
- *The vast majority of people just wish to see the wonders of the geology, history, thrills and pure religious experience of an inner gorge trip*
- *Only allow winter motor use if most of the wildlife has migrated or hibernated*
- *Protect the resource even if it means that I and others have a smaller chance of experiencing it by the river*
- *Spreading out use won't reduce total annual impacts to beaches and other sensitive areas*
- *Ensure carrying capacity limit*
- *Camping restrictions protect sensitive areas of the park*
- *The proposed alternative will have a major impact on 6 threatened, endangered or sensitive species*
- *Resource protection should be the highest management priority*
- *The river is beautiful and must not turn into a polluted river like the one that runs through San Antonio*
- *Please protect the Grand Canyon and the Colorado river for us all*
- *Having smelled smog in the canyon, I'm concerned about overuse*
- *Protect. Conserve. Stewardship*
- *Don't rob us and our children of the wonder contained within the park*
- *Would you feel it appropriate to allow loud, booming rap music in a cathedral or art museum?*
- *The Grand Canyon and the Colorado river attract attention because they underscore the power of nature. We must not let our human technologies diminish the natural message.*
- *Will you guys never learn until we start having to treat wildlife for the same lung ailments we see kids suffering from in big cities today?*
- **CR** *Commenters express support for the protection of cultural resources*
  - *Increased use will degrade cultural resources*
  - *In accordance with the NPS Organic Act of 1916, cultural resource protection should be a higher priority than motorized trips or helicopter exchanges*
  - *Open up more sites for the public to see. Why are they off-limits except to scientists and park personnel? It's not just your canyon for the private use of the academic few. It's mine, the American publics, and I want to see it all.*

**Motors**

- **M1** *Commenters express support for motor use*
  - *Motors are not noisy*
  - *Motors allow shorter trips*
  - *Motors offer greater access to special populations*
  - *Motors are fun*
  - *Motors carry large groups*
  - *Motor trips reduce congestion*
  - *Motor trips create fewer impacts to oar trips than other oar trips*
  - *Motors are safer*
  - *Motors are more comfortable*
  - *Motors do not affect air or water quality*
  - *Motor trips are the only viable way to see the canyon*
  - *Motor trips help other trips with emergency needs*
  - *Motors have an historic precedent on the river*

- *Motors are a time-efficient way to see the whole river*
- *Allow motorized outfitters to continue in the warm summer months at the levels they need to meet demand*
- *Oar trips take a lot longer and therefore are difficult for many who can only take one week off*
- *Please consider only motorized trips to allow more people to experience the canyon*
- *Although I dislike motors, I see a need for them*
- *I dislike hearing motors while hiking on backcountry trails (e.g., Hermit, Beamer)*
- *If anything, more motorized launches should be approved*
- *The motors and helicopters presented only insignificant obtrusions to the peace, quiet and solitude of the river. I was truly amazed how quietly the motors pushed us along*
- *I am a very fit, 38 year old woman and I would not be willing to hike in and paddle myself down the river*
- *Everyone wants to enjoy the space and motors are not a big deal. If you focus on getting electric or solar-powered motors, everyone will be able to enjoy the canyon*
- *Our guide was able to remove litter from the river. This wouldn't have been possible without a motor.*
- *Keep motorized trips available to the majority of taxpayers. We have the right to experience the Grand Canyon as it has been experienced in the past!*
- *We don't need non-motorized trips that take two to three times as long.*
- *The continued use of motors will be necessary in order to achieve the recreational use increases contemplated in Alt. H.*
- *Motors allow for far greater and broader overall public access opportunities.*
- *Eliminating or significantly reducing motorized use in Grand Canyon would create a proliferation of smaller craft. This would in turn cause an explosion of on-river contacts necessitating a further reduction in use. Motors are the model of efficiency and are the very best means of fulfilling the NPS mandate of providing access to the river corridor in Grand Canyon.*
- **M2 Commenters object to motor use**
  - *Motors, including generators, are noisy and smell*
  - *Motor boats and helicopters destroy the natural quiet that the NPS is mandated to restore*
  - *Motor boats carry large groups*
  - *Motor trips are too fast*
  - *Motor trips adversely affect visitor experience*
  - *Motors adversely affect the environment, polluting the air and the water, disturbing wildlife, and further eroding the beaches*
  - *Motors give an unfair advantage in obtaining campsites*
  - *Continuing use of motor boats in the canyon allows too many fat, out of shape people to come to a place where natural selection would otherwise preclude their access*
  - *Motors disrupt hikers' wilderness experience in the canyon*
  - *If we have to have motors, keep them restricted to the summer season. No motors in the shoulder season*
  - *Motor boat wakes can be detrimental to river banks*
  - *Limit motors to emergencies only*
  - *Commercial outfitters will have a healthy business even without motors*
  - *Let Lake Powell serve the motorized boating public*
  - *The use of motors violates NPS policy (2001 Management Policies)*
  - *Visitors on motorized trips never get the full impact of the quiet vastness of the canyon*
  - *Motors do not enhance the wilderness experience nor the health of the ecosystem*
  - *I was part of the early hearings 25 years ago. I can't believe we are still stalling to do the right thing. The plan to phase out motors was fair and gradual. Instead, we have seen*

increased user days and delay after delay to the benefit of a small group of tour owners. The arguments are so much like the auto industry's complaints that they could never develop a safer or more efficient or less polluting vehicle, and then, under direct orders, they did. No one went out of business, prices didn't skyrocket and people still bought cars. Please, stop wasting time and energy. Just phase them out.

- The park must phase out motors using the timetable proposed in the 1979 CRMP.
- I want human-powered wilderness, not a motorized theme park.
- Electrical equipment of any type must not be allowed to operate from generators or outboard motors.
- While the history of motorboat use is well known, there is no specific legislation authorizing mechanical transport on the Colorado River in Grand Canyon, and the NPS should not explicitly endorse [NEPA] criteria that justify alternatives that conspicuously flaunt law and policy.
- **M-** Commenters support limiting but not eliminating motor use
  - Some alternative should include June, July or August as a non-motor month
  - Only allow winter motor use if most of the wildlife has migrated or hibernated
  - Motor boats should minimize use of motor when they encounter an oar trip
  - Is it necessary for research trips to use motors? It seems there are a lot of motors on their trips
  - The NPS should phase out motors
  - I am not opposed to motors as long as they are 4-stroke and have ultra low emissions (3-star rating).
  - Motorized trips down the canyon should be halved.
  - Only the quietest, least polluting motors should be used.
  - Motors should not be allowed to power generators.
  - Motors should not be used to pump boats.
- **Kayak** Commenters mention motor-supported kayak trips
  - Motor-supported kayak trips need longer trip lengths
  - Motor support for oar trips should be phased out
  - Motor-supported oar trips should continue to be counted as oar powered trips
  - Motor-supported oar trips shouldn't be counted as motor trips
  - Limiting motor trips to 10 days would prevent the use of motorized support rafts for kayak and paddle trips, thereby actually increasing the use of motorized rafts for those who would otherwise have kayaked or paddled
  - Motorized craft could tow kayaks or dories between rapids to decrease trip length

### **Whitmore Helicopter Use**

- **WH1** Commenters express support for helicopter use
  - Helicopters allow shorter trips
  - Helicopters offer greater access to special populations
  - Helicopters are fun
  - Helicopters are more convenient
  - Without helicopter exchanges, there'd be greater impacts on campsites below Whitmore
  - A reduction in the number of helicopter take-outs will exacerbate the congestion at Diamond Creek
  - Remove human waste by helicopter
  - While the helicopters are noisy, my household pets seem far more concerned by thunder than they are the slow building sound of aircraft. Are we to outlaw thunder?
  - If you curtail the use of helicopters during the Spring and Fall, you effectively close the canyon to senior citizens

- *I am a very fit, 38 year old woman and I would not be willing to hike in and paddle myself down the river*
- **WH2** Commenters object to helicopter use
  - *Helicopters are noisy*
  - *Helicopters adversely affect visitor experience*
  - *Helicopters adversely affect wildlife*
  - *Should be limited to emergency situations*
  - *Can trigger rock slides, endangering river users*
  - *There is no ecological justification for allowing helicopters*
  - *The incessant sound of sightseeing flights over the canyon ruins things*
  - *Helicopters for passenger exchanges should be severely limited*
  - *Helicopter tours should not be allowed in the canyon.*
  - *The helicopters at Whitmore Wash are very disruptive. The noise level, the commotion and the number of boats detract from the wilderness river experience immensely.*

### **Lower Gorge Helicopter Use (Quartermaster Area)**

- **LGH1** Commenters express support for helicopter use in the Lower Gorge
  - *Helicopters allow shorter trips*
  - *Helicopters offer greater access to special populations*
  - *Helicopters are fun*
  - *Helicopters are more convenient*
- **LGH2** Commenters object to helicopter or jetboat use in the Lower Gorge
  - *Helicopters and jetboats are noisy, smell bad, create congestion and blow dust and rocks around*
  - *Helicopters and jetboats adversely affect visitor experience*

### **Use**

- **U+** Commenters support an increase in use
  - *Increase in daily launches*
  - *Increase based on carrying capacity and beach size*
  - *Increase summer use*
  - *Don't cut commercial oar trips in Sept. and Oct.*
  - *Increase summer trips to make up for eliminating motors in Sept.*
  - *If a trip launches with, say, 10 people instead of 14, then 64 user days haven't been utilized. Why not allow another trip to launch with these?*
- **U-** Commenters support a decrease in use
  - *Decrease in daily launches*
  - *Decrease use based on carrying capacity and diminishing beach size*
  - *Decrease summer use, spread into non-peak seasons*
  - *Do not support drastically increasing the number of launches in the shoulder season*
- **Use** Commenters support spreading out use or maintaining it at current levels
  - *Want to spread out use*
  - *Don't want to spread out use*
  - *Want to maintain current levels of use for commercial outfitters*
  - *Spreading out use won't reduce total annual impacts to beaches and other sensitive areas*
  - *Insure that the bulk of trips are allowed during the summer tour season*
  - *By drastically reducing the number of trips available in Sept. and Oct., disproportionate use will be created in Mar. and Apr., undoing the good done by reducing the number of daily launches and spreading them more evenly during the week*
  - *Launches ranging from 1 to 20 per day*
  - *Spread launches out in all seasons.*

- *Humans, plants and animals are all competing for the same dwindling resources in the Grand Canyon river corridor, its eroding beaches. The NPS will not be able to avoid resource impacts from increasing overall user numbers simply by spreading trips onto the spring and fall and reducing group sizes.*
- **Admin+** *Commenters support an increase in administrative use*
- **Admin-** *Commenters support a decrease in administrative use*
  - *Some research trips are not legitimate*
  - *We are researching the canyon to death*
  - *These trips should be categorized and included in the impact analysis*
  - *Is it necessary for research trips to use motors? It seems there are a lot of motors on their trips*
  - *Research trips do not need to have motors to accommodate them*
  - *Proposed Hualapai river concession user days should be taken from administrative user days rather than commercial ones.*
- **Acc** *Commenters want to make sure access is not compromised*
  - *Access is not only limited to those with more time and/or money*
  - *People who can't afford a commercial trip and can't get a private permit are excluded*
  - *Access by disadvantaged youth, educational groups, physically-challenged and other groups is severely constrained by the high cost of commercial trips*
  - *Everyone deserves to see the Grand Canyon from the river*
  - *It distresses me that others may be denied the Grand Canyon river experience*
  - *Rafting the canyon is an experience of a lifetime. Please continue to make it possible for people to have that experience*
  - *Access should be limited to experienced rafters*
  - *Very few American citizens ever get to explore the Grand Canyon by raft. This document should be making efforts to increase this number rather than try to restrict it to a privileged selfish few*
  - *It is important to make this experience available to people at all levels of personal fitness and interest*
  - *If you look at the Organic Act or the enabling legislation that created Grand Canyon, there isn't a shred of punitive or exclusive language. It never was nor should it ever be the business of the NPS to decide who most is worthy to visit these precious resources. In fact, assuming it is done in an environmentally responsible way, the polar opposite is true.*
  - *The NPS cannot lawfully operate a system that gives noncommercial boaters an inferior right of access to the river. Discriminating against private boaters is not within its "broad discretion" because it is unlawful. Just as a state university cannot deny admission to black applicants, or put them on a long waiting list, in order to benefit the majority of applicants who are white, the NPS cannot give noncommercial applicants an inferior right of access in order to benefit the majority of the public who are not river runners. A system with a long wait for noncommercial applicants while commercial space is readily available violates the Public Trust Doctrine and the NPS Organic Act, as well as the equality of treatment provisions of the Constitution.*
  - *Current system makes commercial passengers pay a substantial portion of their trip costs just for access rights.*
  - *Motorized use plays a significant role enabling the NPS to provide greater and broader public access consistent with resource and visitor experience goals.*

**Visitor Use and Experience**

- **VUE Commenters** *express views on visitor use and experience*
  - *Need for solitude*
  - *Need for natural quiet*
  - *Shortening trip lengths creates a Disneyland type of experience*
  - *Mandating virtually the same trip lengths for commercial and private boaters launching on the same day will create a bumper car experience and animosity among groups*
  - *Grand Canyon users prefer low levels of river encounters*
  - *NPS research shows the great majority of river users prefer three or fewer encounters with other groups per day and nearly half prefer no encounters at all*
  - *Visitation should be restricted to a level that provides a quality river experience appropriate to its wilderness character*
  - *We did pass some other rafters who were obviously annoyed by our motor. I was just as annoyed by their attitude*
  - *Let those who descend the river earn their way in appreciation of the true wild character of the Grand Canyon*
  - *The true experience of the canyon is one where the large silences, the sound of rippling water and the song of the canyon wren can be heard*
  - *No other experience is comparable in terms of wilderness values and scenic splendor. But the best part of the experience is becoming engaged in the surroundings, sharing in the grand silences and shedding the daily conventions of the outside world for the unique opportunity to live life to the simple rhythms of the canyon*
  - *Often we talk about our experience. We always come back to the same things... the solitude with no cell phone noise and no computer keyboards clicking away, the friends we made on our journey, and sleeping outside under the stars*
  - *Expand the spectrum of outfitted services available to river runners.*
- **Edu Commenters** *mention visitor education*
  - *Increase funding, staff and education about tribal boundaries*
  - *In order to protect both cultural and natural resources, I suggest increased education, not increased use. A 90 minute video shown to people who are excited and ready to embark on their trip of a lifetime is insufficient. I recommend that a river ranger spend the first night on river with private groups, giving in-camp, on river and hiking orientations so that folks may be empowered with a sense of stewardship*

**Commercial/Noncommercial**

- **Com Commenters** *express support for commercial operations*
  - *Guides educate their passengers about the canyon's geology, history, resources and environmentally sound practices*
  - *Commercial operators would lose their license if they didn't keep the canyon clean*
  - *Commercial outfitters offer short trips for time-pressed people*
  - *Commercial outfitters shouldn't have to wait as long as private boaters because that's how they make their money*
  - *The majority of the people who want to go on a river trip in the Grand Canyon need and want the services of a professional outfitter licensed by the NPS*
  - *As a boatman, I appreciate having an outside authority to rely on to take the blame or credit for a policy*
  - *While we feel it's important for individuals to have access to the river, it is a dangerous trip and best left to the expertise of professional outfitters for the vast majority of people seeking a trip through the canyon's whitewater*

- *Our guide on the trip treated the river and entire ecosystem like it was God's chapel and demanded that we do the same*
- *Commercial river runners often have to rescue private boaters*
- *After having been through a near-death river trip experience (private trip), I applaud all the commercial companies for their safe, educational trips and hope the NPS continues to allow crew members to enhance the learning, safe experiences by not making them part of the group size.*
- *The popularity of noncommercial boating is a direct result of the success of commercial boating in the Grand Canyon.*
- *A passenger's chance for survival is a whole lot better on a commercial trip.*
- *Concessionaires serve a real purpose providing access to the canyon for the general public.*
- **Com-** *Commenters express disapproval of commercial operations*
  - *Commercial trips are too expensive for the common folk*
  - *As long as commercial outfitters maintain their stranglehold, Grand Canyon will be a model of inequity*
  - *Minorities and disadvantaged Americans could never afford a commercial trip*
  - *Access by disadvantaged youth, educational groups, physically-challenged and other groups is severely constrained by the high cost of commercial trips*
  - *Commercial trips are no longer as important because the number of qualified private boaters has grown tremendously over the years*
  - *Outfitters offer discounted trips to inflate commercial demand*
  - *Commercial passengers don't know the ethics of the canyon*
  - *The Colorado River is not private property, the NPS should serve public interests before private ones*
  - *Commercials should charge more and decrease use*
  - *Commercials have been getting a free ride on public land*
  - *Large unruly commercial groups can become a menace to other boaters' safety and the only way they can get down the river is on motorized craft*
  - *All of us on the trip were appalled at the number of motorized commercial trips on the river...These groups claim all the campsites, and make tying off at Havasu and other places of interest virtually impossible for private rafters.*
  - *Competitive bidding for concessions contracts is key to giving the public the best possible experience in Grand Canyon.*
  - *It is not the responsibility of the NPS to help the commercial operators remain in business.*
  - *The canyon is not a money-making venture.*
  - *I urge you to be ever on the alert to detect and defeat attempts to exploit commercially the resources of the national parks. Often projects will be formulated and come to you "sugar-coated" with an alluring argument that the park will be benefited by its adoption. Know that nature's work as expressed in the world-famous regions in your charge cannot be improved upon by man.*
- **NC** *Commenters express support for noncommercial operations*
  - *Noncommercial trips are more affordable*
  - *Allow people to choose who they'll be with for the trip of a lifetime*
  - *Allow people to experience the river as they choose to, not as outfitters want them to*
  - *Allow a more intimate experience of the canyon*
  - *Allow people to gain, develop and use their boating skills*
- **NC-** *Commenters express disapproval of noncommercial operations*
  - *Noncommercial boaters are the ones causing all of the impacts in the canyon*
  - *Nothing can be done to ensure that noncommercial boaters comply with environmental guidelines*

- *There's no incentive for them to maintain a pristine environment*
- *Private boaters are an elite, a special interest group*
- *Most people don't have the appropriate equipment, rafting experience, time and connections to take a private trip*
- *They're a small but vocal group who simply want the river to themselves when it belongs to everyone to see and enjoy*
- *Private boaters should provide proof of insurance for rescue and medical expenses.*
- *Private trips are available to mostly white elitists who would deprive the majority of the American people an opportunity to run the canyon. How many private trips have you seen with blacks or Hispanics? The answer is a big zero.*
- *I know private parties who know how to work the system and who make at least one run per year, sometimes more. It is a lie that private parties wait 18 years for a permit. Only the most inept, who don't know how to manipulate the system, ever would wait that long.*

### **Allocation**

- **Allo** *Commenters express views on allocation*
  - *Allocations should be fair*
  - *Allocations should be 50/50*
  - *Allocations should be based on a demand study*
  - *Allocations should not change*
  - *Allocations for noncommercial boaters should increase/decrease*
  - *Allocations for commercial boaters should increase/decrease*
  - *30-50% of the allocation should be private*
  - *The allocation should be 30% commercial/70% private*
  - *Privates and commercials should get the same number of launches during the summer*
  - *Allocation is an outdated system that fosters antagonism*
  - *There should be no allocation*
  - *Distribution of trips should be based on trip type and time of year, not whether commercial or private*
  - *There should be no increase for either segment without a scientific demand study*
  - *Allocations favor commercial use in all of the alternatives*
  - *There are way too many commercial boaters on the river*
  - *Allocation should be based on demand that is measured by the number of passengers rather than user days*
  - *I support fairness. Commercial users should not have a huge preference over private users. Privates should not have to wait 15 years for a trip while commercial users can get on anytime he or she wants to plop down a few grand*
  - *The changes in allocation will keep average folks from enjoying the river*
  - *Since the beginning, commercial users have been favored over private ones. This should stop.*
  - *Dinosaur National Monument has excellent river corridor use guidelines and should be a model for the Grand Canyon, especially the 50/50 launch date distribution between private and commercial users.*
  - *If you switch to user-trips (rather than user days) and go to a 50/50 split, the wait for permits will be comparable to the wait for a commercial trip.*
  - *Private and commercial boaters should have equal access in the Grand Canyon.*
  - *42% of those who join the noncommercial waitlist will drop off, be removed from the list or die before obtaining a permit and launching their own trip. On the other hand, close to 100% of those who choose a commercial trip get to launch and complete their trip within six months of expressing their desire to go.*
  - *NPS cannot give noncommercial boaters an inferior right of access; treatment must be equal.*

**Group Size**

- **GS+** Commenters express support for larger group sizes
  - Increase noncommercial group size in the shoulder and winter seasons from 8 to 16 for small trips and from 16 to 24 for large ones
  - Large commercial groups are tightly controlled and sleep on cots or boats, so their impact is small
  - Add three or four more people to the proposed group sizes and that will restore access and flexibility to outfitters
  - Reducing group sizes will increase the number of launches and uses that a campsite receives, contributing to greater wear and tear in the canyon
- **GS-** Commenters express support for smaller group sizes
  - To reduce the impact to campsites
  - Large groups spread into the old high water zone, impacting natural and cultural resources
  - Reduce group sizes to no more than 20
  - Boaters will benefit from the decreased numbers occupying campsites, taking hikes, etc.
  - Large groups of commercial passengers clog up the trails and ruin the wilderness experience for backcountry hikers
  - No wilderness area anywhere else in the US allows group sizes even approaching 30 people
- **GS** Commenters mention various group sizes
  - Make group sizes equal for both commercial and private trips
  - Retain existing commercial group sizes
  - Group sizes ranging from 2 to 45
  - Don't count guides in group size

**Trip Length**

- **TL+** Commenters express support for longer trip lengths
  - Would rather see fewer launches and keep longer trips
  - 16 days is not enough for private trips during the summer
  - Noncommercial trips need more layover opportunities
  - Private boaters need more scouting time because they're less familiar with the rapids. It's a safety issue
  - Shorter trips may compromise the safety of private trips
  - Shorter trip lengths increase the probability that private boaters will have to row in the dark
  - Want to be able to take more side hikes
  - Private boaters are on a vacation, not rowing and setting up/breaking down camp for wages
  - Shortening trip lengths creates a Disneyland type of experience
  - Mandating virtually the same trip lengths for commercial and private boaters launching on the same day will create a bumper car experience and animosity among groups
  - Shortening trips makes privates rush and adds stress
  - Set longer trip lengths; people can always go on a shorter trip
  - Although the number of motor trips that currently exceed the proposed 10-day limit are few, they are an important niche that needs to be protected
  - Increase the length of noncommercial trips to 18 days
  - People have waited a long time to go down the river, so they should be able to maximize the opportunity
  - It takes longer to get down the river with low flows
  - Inclement weather increases the chances for delays

- *There should be a way to make exceptions for special circumstances*
- *Shorter trip lengths will make day hikes impossible, thereby diminishing visitors' experience*
- *18 days during the summer, 21 during the shoulder season, and 30 during the winter*
- *Shorter trips will expand the use of motors and degrade wilderness character.*
- *Layovers should continue to be allowed as they increase the quality of the trip and are sometimes necessary.*
- **TL-** Commenters express support for shorter trip lengths
  - *Shorter trip lengths would allow for more launch dates and less time spent on waitlist*
  - *Shorter trip lengths are preferable for autistic children*
- **TL** Commenters mention various trip lengths
  - *All trips, regardless of type and season, should be the same length. There should be no disparity among commercial, noncommercial, motor and oar trips*
  - *Retain existing trip lengths*
  - *Trip lengths ranging from 1 to 30 days*
  - *Who is to say what is the best trip length; trip length is relevant only to the one who experiences it.*

### **Tribal Allocation**

- **Trib1** Commenters support options for tribal allocation
  - *Native American tribes need the money generated by tourism*
  - *The Hualapai should be given commercial launch slots in the Upper Gorge*
  - *Increase funding, staff and education about tribal boundaries*
- **Trib2** Commenters object to options for tribal allocation
  - *I oppose issuing permits to Hualapai outfitters because they have an unsafe operation and exhibit a lack of respect toward the resource*
  - *The Hualapai own the land in that part of the canyon and should be able to use it as they see fit*
  - *The trash that washes into the canyons from tribal areas is a crime. Treat it as such. Make the Indians live up to the same federal laws the rest of us have to abide by.*
  - *You accommodate religious beliefs of tribes that have little or no historical connection to the canyon. You restrict access to non Indian Americans based on folklore and superstition.*
  - *Proposed Hualapai river concession user days should be taken from administrative user days rather than commercial ones.*
  - *Nothing is mentioned in the DEIS about the motivation behind this proposal. There's no evidence indicating an actual need for this service or any demand for the same.*

### **Socioeconomics**

- **Socio** Commenters express views on the socioeconomic impact of potential changes
  - *Changes to motor season adversely affect guides, shortening their work season*
  - *Changes will result in fewer, more expensive commercial trips, thereby limiting access as well as demand*
  - *Access by disadvantaged youth, educational groups, physically-challenged and other groups is severely constrained by the high cost of commercial trips*
  - *Smaller trips means less profit for outfitters*
  - *Outfitters are there to provide a service, can make large amounts of money, and influence political decision-makers*
  - *Please continue to seek short and long term funding from other federal agencies*
  - *Anyone with money can take a commercial trip this summer but regardless of your finances, a private trip is 20 years away*
  - *Poor people can't afford to go anyway*

- *The socioeconomic impacts are being given too much weight*
- *Impacts on Indian tribes should be considered*
- *There is no analysis in the DEIS of the impacts on individuals. We spent \$600 each for an 18-day private trip. While not everyone can get the gear together to do a private trip, very few Americans can afford to spend \$4,000 for an equivalent commercial trip. The fact that there is no mention in the document of the economic effects on individuals yet suppliers' economics is given a lot of consideration is to ignore an essential issue*
- *Commercials should charge more and decrease use*
- *Commercial outfitters will have a healthy business even without motors*
- *Make the river accessible to as many economic groups as possible*
- *I encourage you to continue to monitor outfitters closely to ensure their practices maintain the integrity and beauty of the canyon. However, I would encourage you to continue to make it possible for them to make some money doing this or we all lose*
- *River rafting provides valuable revenue to scores of people who work on the river.*
- *Grand Canyon trips, whether commercial or private, are clearly for elites. But since privates pay far less, they represent a larger segment of the population.*
- *The canyon is becoming the playground for the white upper classes. There is little diversity of any kind.*
- *The current policy as well as the preferred alternative evaluate river use based upon capitalist notions instead of democratic ones. The former prefer individuals and groups with economic stakes in the enterprise instead of a more democratic lens that would consider the rights of all American citizens, present and future. Any policy that governs access to national treasures must place the rights of citizens over the rights of businesses and corporations.*
- *To encourage oar boats, give discounts to those who use "people power."*
- *It is not the responsibility of the NPS to help the commercial operators remain in business.*
- *The canyon is not a money-making venture.*
- *A past economic study commissioned by the NPS concluded that the outfitters made "exorbitant rates of return" due to the fact that the public has had little alternative but to buy their trips and, therefore, has been paying excessive prices for them. The current system involves an element of extortion because it makes commercial passengers pay a substantial portion of their trip cost just for access rights.*
- *There are presently 16 commercial outfitters on the Colorado River, most of them quite a bit larger than typical companies on other rivers. Fewer companies, of a smaller size, could still make a handsome profit. On the Chattooga River there are three outfitters. On the Youghiogheny and the Selway, there are four. The NPS has no legal obligation to keep all sixteen of these companies in business, at anywhere near their present size. On the other hand, if it turns out that noncommercial waiting times are longer under reservation systems that are quite similar, the NPS does have an unavoidable legal obligation to reduce the overall commercial volume until waiting times for noncommercial space are not longer, either by reducing the number of companies or the size of the companies, or some combination of the two.*
- *Concession contracts create temporary, not permanent, rights to do business in public parks. They cannot create private claims in the public domain. The NPS cannot give away portions of the national parks to businesses.*

## Safety

- **Safety** Commenters express views about safety
  - *Private boaters are not as prepared as commercial boaters*
  - *Commercial guides provide a quality and safe experience for visitors.*
  - *I applaud commercial companies for their safe, educational trips.*

**Special Populations**

- o **SP Commenters** mention special population needs
  - o *Inability to hike (or take an oar trip?) due to age or physical condition*
  - o *Elderly people unable to tolerate cold weather in March*
  - o *Autistic children need shorter motor trips*
  - o *Access by disadvantaged youth, educational groups, physically-challenged and other groups is severely constrained by the high cost of commercial trips*
  - o *I would rather protect the park for those you can physically meet its challenges than ruin it forever to provide access to those who cannot*
  - o *The NPS must provide access to traditionally disadvantaged groups such as blacks, Hispanics and low-income households*
  - o *If you curtail the use of helicopters during the Spring and Fall, you effectively close the canyon to senior citizens*

**Diamond Creek Operations**

- o **DC Commenters** mention Diamond Creek operations
  - o *A reduction in the number of helicopter take-outs will exacerbate the congestion at Diamond Creek*
  - o *A ranger needs to be stationed at Diamond Creek. I've seen groups with parcels and bags of rocks, stones, or ??? A ranger needs to be present to ask questions*
  - o *Move helicopter pickups to the takeout at Diamond Creek rather than the current location, which is a distraction to the solitude and tranquility of the river*
  - o *Let's improve the take out at Diamond Creek. Guess what: it's not big enough! If you were to build a better takeout using tons of fill material right up the street, the scheduling problem would go away. The Hualapai have a financial interest in increasing throughput at Diamond Creek.*

**Glen Canyon Dam**

- o **Dam Commenters** mention Glen Canyon Dam
  - o *Restore the river's natural flows to allow sedimentation*
  - o *It's the dam that's killing the native fish, not the visitors*
  - o *Adverse, long term, major impacts relate to the existence of the dam*
  - o *Floods released from the dam cause more erosion to river banks than the wake of motor boats*
  - o *The analyses overstate the adverse effects of river use because they include the impacts from the dam*
  - o *To better protect natural resources, the NPS needs to work with the BOR concerning larger releases from the dam*
  - o *Dam flows should mimic nature*

**Beaches and Campsites**

- o **Beaches Commenters** mention beaches and campsites
  - o *Oppose the campsite restrictions based on group size*
  - o *Support the campsite restrictions based on group size*
  - o *Use volunteers to help clean up beaches*
  - o *Set visitation at a level that will protect the river's disappearing beaches*
  - o *When large groups camp at ever diminishing beaches, they are forced into the old high-water zone. This puts sensitive resources at risk*
  - o *Any trip leader who allows camping above the old high water mark should be denied access for 12 months*
  - o *Where are all of the campsites for this increased use?*

- *Finding camps below Diamond Creek is always a very difficult thing*
- *Camping restrictions protect sensitive areas of the park*
- *Inconsiderate users litter the beach with beer cans (at, for example, Thunder River, Deer Creek and Tanner)*
- *Four launches per day will reduce the disturbance of beaches*
- *Have you ever considered actually building beaches where you want them rather than trying to get high water flows to do so? It wouldn't be difficult to modify dredgers used for panning for gold to build up beaches along stretches of the Colorado where there aren't many good campsites.*
- *The river corridor should be managed for maximum utilization of the available beaches. To rebuild beaches, they shouldn't have to flood the river. Instead, dredge in the area where beaches are being eroded.*
- *Beaches are kept pristine by commercial outfitters.*
- *Two motorized craft take up much less room on a beach than a flotilla of oar-powered craft carrying half as many people.*
- *I oppose layover days.*
- *The argument has been made that large groups cause spreading of campsites, yet no empirical evidence is provided to demonstrate this phenomenon. When it comes to guided trips, anecdotal evidence suggests just the opposite.*

### **Upstream Travel**

- **Upstream** *Commenters mention upstream travel*
  - *Oppose any upstream travel from Lake Mead*
  - *Do not restrict tow outs. Tow outs at mile 243 should continue to be allowed*
  - *Tow outs should be allowed from Separation on down*
  - *Tow outs are not that big of a problem. Allow them as needed below Separation.*

### **Overflights**

- **Overflights** *Commenters mention overflights*
  - *The incessant sound of sightseeing flights over the canyon ruins things*
  - *They produce an enormous reverberation of sound, resulting in several small rock falls along the walls of the canyon*
  - *Limit all commercial flights over the canyon*
  - *The drone of airplane motors was very disturbing*
  - *All aircraft (fixed wing and rotors) should be forbidden from low altitude flights over the canyon*

### **Seasonality**

- **Season** *Commenters mention seasonality*
  - *I disagree with reducing the number of commercial trips during the summer months*
  - *Allow more summer launches*
  - *Allow motorized outfitters to continue in the warm summer months at the levels they need to meet demand*
  - *Oar trips in April are too cold*
  - *Allow more summer launches to preserve the one-boat motorized trip option*
  - *Limiting helicopter use in the spring and fall will deter people from taking trips at that time*
  - *While the splendor of the canyon is beyond belief, we believe it is important to see it when the best weather is available*

**Park Operations**

- **PO1** Commenters express support for park operations
  - *These have been excellent. Whenever I've interfaced with park rangers, whether at the put in or on the river, they've been knowledgeable and courteous*
- **PO2** Commenters express dissatisfaction with park operations

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