

**Grand Canyon Working Group  
Fourth Meeting  
March 20 - 22, 2006  
Alexis Park Resort  
Las Vegas, Nevada**

**Summary of Discussion and Agreements Reached**

**Facilitators/recorders:** Lucy Moore, Ed Moreno, Tahnee Robertson

**Members Present:**

Lynne Pickard, FAA, Working Group Co-chair  
Karen Trevino, NPS, Working Group Co-chair  
Katherine Andrus, Air Transport Association  
Bill Austin, US Fish and Wildlife Service  
Mark Grisham, Grand Canyon River Outfitters Association  
Elling Halvorson, Papillon Airways  
Bob Henderson, alternate for Alan Zusman, Naval Facilities Engineering Command  
Dick Hingson, Grand Canyon Trust and National Parks and Conservation Association  
Stacy Howard, alternate for Heidi Williams, Aircraft Owners and Pilots Association  
Michael Yeatts, alternate for Leigh Kuwanwisiwma, Hopi Tribe  
Cliff Langness, King Airlines, Inc. and Westwind Aviation  
Roland Manakaja, Havasupai Tribe  
Doug Nering, Grand Canyon Hikers & Backpackers Assoc.  
Jim McCarthy, Sierra Club  
Alan Stephen, Scenic and Grand Canyon Airlines, Inc.  
John Sullivan, Sundance Helicopters, Inc.  
David Yeamans, Grand Canyon Private Boaters Association  
Charlie Vaughn, Hualapai Tribe  
Heidi Williams, Aircraft Owners and Pilots Association  
Barry Brayer, alternate for Lynne Pickard, FAA

**Superintendent's Chair:**

Joe Alston, Grand Canyon National Park

**Member/Alternate Absent:**

Alan Downer/Marklyn Chee, Navajo Nation (Two Navajo Chapter representatives were allowed by the facilitator to sit at the table: Dorothy Lee of Gap-Bodaway Chapter and Teddy Bedonie of Cameron Chapter. These chapter representatives in no way spoke for the member or alternate representing the Navajo Nation.)

**Summary of Agreements:**

**Consensus:** Meeting Summary # 3 was approved as corrected.

**Consensus:** A High Altitude Sub-group was formed for the purpose of in-depth review of airspace management issues, and to answer the question: Is it practical to move any high altitude aircraft routes from over the Grand Canyon? Caveats were attached to this task: The sub-group will not be

making decisions about flight tracks. NPS will not adversely affect the National Airspace System (NAS).

Members of the sub-group are:

- o Jim McCarthy
- o Sarah Falzarano
- o Katherine Andrus
- o Paul McGraw (ATA Air traffic specialist)
- o Dick Hingson
- o Lynne Pickard
- o Charlie Vaughn, or other representative
- o Heidi Williams, or other representative
- o Mike Loghides (LV airport, request of John Sullivan)

DAY ONE:

**Welcome:** Robert T. Herbert, Senior Policy Advisor to Senator Harry Reid, extended a warm welcome to the Grand Canyon Working Group and submitted a letter from the Nevada congressional delegation. Mr. Herbert added that the work of the group could have significant economic impact on the state and Las Vegas particularly, and that the delegation is prepared to provide whatever assistance they can to help the group and mitigate these impacts.

**Approval of Meeting Summary:** Because many had not had a chance to read the summary carefully, its approval was postponed to Day Two.

**Meeting summary format:** There was a brief discussion about the need to capture fully the content and the nature of the discussions at these meetings. The group agreed to continue using the facilitators' summary as the record for the meetings, feeling that particularly this last summary was complete and accurate. The earlier suggestion that the meetings be recorded in some way was withdrawn.

**Agenda and Protocols Review:** Alan Stephen asked that the presentation and discussion on peak day be removed from the agenda. He and others are not prepared to deal with this issue until there is more clarity on potential route changes, etc. The agenda was approved with this deletion. Lucy noted that the first three meetings had laid an important foundation for the work of the group. She anticipated that this fourth meeting would deal more directly with the specifics of the management of resources at Grand Canyon and the operations of aircraft within and above the Park. She pledged that the facilitation team would help focus discussions to maximize the efficiency and clarity of the complex issues before the group. Lucy also raised the issue of outside communication with congressional representatives, an action that is discouraged, although not forbidden, in the Protocols. She reminded the group that such actions can undermine trust within the group and that the Protocols encourage any member to come first to the group with any such plans.

The group discussed briefly the letter from Congressman Young submitted as part of the NEPA process. Some felt the letter must have been instigated by someone outside his office. Lynne explained that she questioned all those within FAA who might have had contact with Young's office or his subcommittee. She is convinced that there was no prompting from FAA. Also, with advice from Lucy she contacted the appropriate staff person at Young's office and was told that

there had been no communication with the GCWG. Young's staff are following the issues closely through the website and the scoping process and felt the need to participate in the NEPA process. Some members remained suspicious; others were not surprised that subcommittee staff could have written the letter unprompted.

**Review of Task List from Previous Meeting:** The following items are outstanding from the previous meeting.

- INM 6.2 Modeling Workshop Report needs cover sheet explaining it is a sensitivity analysis only before posting on the web site (Lynne, Cyndy)
- Provide grid point noise analysis to GCWG for review (Cyndy)
- Provide noise analysis to GCWG in metrics other than percent audibility (Cyndy, Steve)
- Once INM 6.2 is publicly available, offer it to GCWG members with GCNP baseline scenario (Lynne, Cyndy)
- Review peak day difference between different categories of aircraft – GCWG needs to decide if need more runs

**Need for Court Reporter:** At the request of the GCWG, Lynne had checked with the FAA rulemaking office, and was told that Aviation Rulemaking Committees (ARC) do not routinely use a court reporter to summarize meetings, although they are not prohibited from doing so. A court reporter is costly and can have a dampening effect on negotiations. ARCs use minutes that clearly document agreements, actions and decisions. Members agreed that this is satisfactory for the needs of the GCWG, as long as disagreements are recorded clearly as well as agreements. Lucy was asked her opinion on the use of court reporters, and agreed that in her experience it is an expensive and dampening method of producing a record, and that the transcript is so voluminous as to not be useful or accessible to the participants.

**Letter to Congressional Delegation:** Lynne and Karen explained that since the last meeting they have reconsidered the need for a letter to the congressional delegations. There have been significant staff changes within the Department of the Interior (departure of Secretary Norton and reassignment of Paul Hoffman) which raised questions about signatures on such a letter. In addition, there has been no request from any congressional staff for a report or letter on progress of the group, and some staff attended the scoping meetings and received information in that venue.

**Scope of Work/Timeline Update:** Lynne reviewed the original timeline for the group. Updating the noise analysis has taken longer than anticipated, and the proposals generated by the group will require more analysis. The time pressure is great, and it seems that more frequent GCWG meetings are necessary during this critical period. Lynne also wanted to reassure the group about an FR announcement of an FAA rulemaking which preserves the status quo overflight situation until 2011. She explained that this extension relates to a rulemaking, begun in 2000. The stay of the routes and airspace on the eastern portion of the Special Flight Rules Area is necessary in order to allow the GCWG process to complete its work. The rulemaking office automatically added 5 years to the deadline. There is no direct relationship to that rulemaking and our work, and any new rule that comes out of our work will supersede the 2011 extension.

**NEPA Update: Mary Killeen and Barry Brayer** [Handouts included copies of the posters from the scoping meetings, preliminary scoping comments, and the draft framework for integrating GCWG and NEPA.]

Barry and Mary reported on the scoping meetings held February 21 (Phoenix), February 22 (Flagstaff) and February 23 (Las Vegas). The process has been open and transparent and the cooperative relationship between agencies has been excellent. They thanked the GCWG members for their suggested changes to the scoping materials, and said that posters were changed based on those comments. Approximately 300 attended one or more of the scoping sessions, many submitting written comments or taking cards to submit before the April 27 deadline. They reminded the group that the term “alternatives” has a special meaning in the NEPA process and that the generation of proposals by GCWG members should not be considered “alternatives” at this point. The agencies anticipate generating alternatives with the help of the GCWG following analysis of the comments submitted during the scoping period. The agencies are now drafting a Request for Proposals for preparation of the EIS to submit to several vendors on the GSA contract list. FAA has taken the lead in contracting because of the need to move the process along as quickly as possible. Both agencies will be involved in the contractor selection process. Barry repeated that the agencies will look to the GCWG to advise on which alternatives merit further analysis.

Tina Gatewood explained that two alternatives are already on the table for consideration. One is the No Action Alternative, and the other is the Alternative identified as number 3 from the previous FAA analysis. It contains proposed commercial air tour route changes for the Dragon and Zuni corridors and the Marble Canyon Sector, as well as changes to the corridors and flight free zones on the east side of the SFRA.

Q: Is there a statement of purpose and need for the EIS?

A: Mary answered that the statement of purpose and need are being developed.

Q: How do the GCWG and the NEPA process intersect?

A: Karen answered that the GCWG is established as an Aviation Rulemaking Committee (ARC), with the GCWG acting in the same way a FACA committee would with respect to the development of rules and regulations. The GCWG works with the agencies to assist in the development of rules and regulations, and also to generate recommended policy changes, which will address the purpose of the ARC.

Barry added that the National Parks Overflights Advisory Group (NPOAG) was established under an ARC charter, and in response to the Overflights Act of 2000. The GCWG is a working group of NPOAG, under the same charter and same Act. If the GCWG members (stakeholders plus the agencies) reach consensus on recommendations, the two agencies will move those recommendations forward in the NEPA process. Without consensus, the creation of alternatives is left in the hands of the agencies.

Lynne referred the group to the handout that shows the integration of NEPA and the GCWG process. She explained that the agencies are bringing the stakeholders, as represented on the GCWG, into the NEPA process, to evaluate the ideas which arise during scoping, and help determine which alternatives are reasonable and which are unreasonable. The integrated timeline shows that the agencies are consulting with the GCWG at key stages.

Q: Do approved summaries of the GCWG meetings become part of the NEPA public record?

A: Barry answered that the summaries are public and posted on the [overflights.faa.gov](http://overflights.faa.gov) website. Karen added that all documents produced during scoping or the GCWG process become

part of the overall administrative record, even if they are not part of the scoping docket.

Q: Will the BIA be a cooperating agency?

A: Barry answered yes. Lucy added that Amy Heuslein was planning on being at this meeting, but had a family emergency.

**Update on Tribal Consultation: Mae Franklin:** Tribal consultation will begin with a pan-tribal meeting April 19 and 20. Each of the 13 affected tribes has received a copy of the consultation plan. Hualapai has indicated that pending council approval they would like to be a cooperating agency.

**Update on Section 7 Consultation on Overflights: Bill Austin:** USFWS representative on the GCWG Bill Austin reviewed Section 7 of the Endangered Species Act that requires other agencies to consult with USFWS about the potential effects of proposed actions on endangered species. The last formal consultation with FAA was in 1999 when the special flight rules triggered a Biological Opinion (BO) and an incidental take statement from USFWS. The FAA made a commitment to the Service to implement the recommendations in the BO, but deadlines have passed without completion. He added that the Section 7 consultation is not a public process, but the resulting documents are, of course, public. Bill anticipates that the various proposals, and eventually the preferred alternative will be the subject of analysis by USFWS under the Section 7 consultation process.

The first task, he said, is to re-visit the BO of 1999 and identify what still needs to be addressed. The current consultation among the agencies, during the development of alternatives, is informal and without deadlines. The goal is to consider potential effects on certain species. The formal consultation process will be triggered by a request from the agencies for the USFWS to evaluate its preferred alternative. The BO, due 135 days from the request, will analyze the alternative with respect to its impacts on the Bald Eagle, the California Condor, and the Mexican Spotted Owl. All BO's are on the USFWS website.

Bill summarized the tasks ahead for the three agencies:

- 1) FAA and NPS respond to USFWS on their implementation of the 1999 BO
- 2) Three agencies will meet to determine next steps
- 3) Determine date to begin the formal consultation process

Q: What is the nexus between ESA, NEPA and GCWG?

A: Austin answered that the first BO examined impacts to California Condors, Mexican Spotted Owls, and Bald Eagles. The FAA and NPS agreed to produce a report based on certain measures: monitoring, effects of overflights on species, education and awareness to pilots flying in SFRA. The agencies' next step is to report on implementation of these measures since 2001. There has been monitoring of all three species, and some education. The informal component of the consultation when the agencies can discuss the progress and receive feedback from the USFWS is critical during the formal process. Barry acknowledged that FAA is preparing to work with USFWS on the report.

**Classification of GA flights:** Lynne explained that FAA had discovered what they believed to be an error in the classification of GA flights in the model. FAA Air Traffic staff pointed out that the GA numbers in the model appeared too high, and that some of the aircraft captured as GA were actually Part 135 (air taxi for hire) and should therefore be in the commercial category. A detailed examination of the data revealed this to be true, and 76 flights (those holding Part 135 certificates

and most flying over 35,000 feet) were moved from GA to commercial. The totals remain the same, she added, but the “bins” are more accurately reflecting reality.

There was a lengthy discussion of the categorization criteria for GA and commercial flights. Some were concerned that shifting GA flights into the commercial category would simply increase the number of flights potentially exempt from regulation, if commercial flights are removed from the current equation. Others questioned the value in trying to classify aircraft at all. For someone on the ground, a member suggested, it doesn't matter if it's an air tour or not. It's an aircraft that is making noise. Others felt it was worth pursuing the GA and commercial categorization issues because the model differentiates between the two, and the group has wanted to understand as specifically as possible the contribution of these different categories. If the noise analysis is being calculated to such a level of detail, it is important, some said, to be accurate within each category. A group member suggested that the division of flights is critical to those GCWG stakeholders with a specific constituency representing a part or all of one of these categories. Whether or not a particular plane is flying for hire or not on a given day is not important since that aircraft is still a member of that particular constituency.

Most of the flights moved to the commercial category are flying in the 35,000 – 45,000 foot range. They are business jets operating on a for-hire basis. There was confusion about the Part 135 certificate and the VFR and IFR requirements, and the overlap among the categories of aircraft. Not all Part 135 aircraft are operating for hire on all flights; the same plane may be GA or commercial depending on a variety of circumstances. Although a plane may fly in different categories depending on the purpose and other factors, there is no overlap or double counting. Every flight is categorized in only one category. To further confuse the issue, many of these business aircraft are owned by multiple owners. Sorting out the categories perfectly is complex. The variables of interest to GCWG members include:

- Altitude
- Part 135 (for hire, operating with passengers)
- Part 121 (scheduled airline)
- Part 91 (when flight not being operating as a commercial flight)
- IFR/VFR (above 18k feet is IFR, but below 18k can be either)
- Performance of aircraft (prop or jet)
- Purpose of flight (for hire, recreation, business, etc.)

Q: Why does FAA classify GA and commercial differently, and what are the criteria?

A: Lynne explained there are higher safety standards for aircraft that carry passengers for hire. A Lear jet for hire has to comply with more rules than one not for hire. Paul illustrated the problem of classification as follows: Most taxi cabs in a certain city are yellow, but there are other taxis for hire that are not painted yellow. A rough categorization would result in non-yellow cabs being assumed to be not-for-hire; a more sophisticated analysis would reveal that some vehicles painted other colors were also functioning as taxis.

Q: Why were the 76 GA flights originally listed as GA?

A: They were categorized based on ETMS, which is not used by FAA to distinguish commercial traffic from GA. A manual check of N numbers showed that 76 operators hold commercial certificates. But if they hold a commercial certificate they are probably flying commercial at least most of the flights.

Q: Can you sample the 76 moved aircraft to see if they were flying on that day for hire or not?

A: A member suggested that it would not be a useful exercise since it is a small sample size on one day. Del (FAA) added that each operation was non-scheduled so that any given day may look quite different; it would be hard to get a representative figure from such analysis.

**Additional Noise Runs by Volpe:** At the last meeting volunteers (Lynne, Dick, Alan and NPS) formed a screening committee to review and forward to Volpe requests from the group for additional model runs. The screening committee reported that the process worked well, and Cyndy at Volpe was able to complete the runs requested.

*Updating GA and Commercial scenarios:* Since the initial modeling results (presented at the January/February Working Group meeting), the FAA's Air Traffic Organization has reviewed the operations that were initially categorized as GA by the ETMS database. Based on their review, 76 of these GA operations (65 daytime and 11 nighttime) were identified as Part 135 commercial air taxi operations and have been consequently moved to the Commercial category. GA and Commercial scenarios were rerun and the updated results were presented.

*Removing 4 airports:* Removing the flights from 4 airports resulting in a 76% reduction in overall Commercial operations (Las Vegas accounted for 40% of the flights that day). An observer pointed out a number typo in the presentation which Cyndy will correct for the website version. This sensitivity analysis showed that sizeable reductions in high altitude routes could produce sizeable reductions in audible noise. It did not address feasibility or impacts on the NAS.

*Noticeability/dual zone proposal:* This proposal applied noticeability to the entire Park, adding 10dB and resulting in an additional 8 per cent restoration. A member noted that an air tour representative had requested this same run be done for air tour aircraft. The request is outstanding and should be done by the next meeting.

*Lipan Point single commercial operation:* This scenario looked at a single commercial flight over Lipan Point. The results also show a smaller footprint, but the same time audible (3.5 minutes) for both the dual-zone and noticeability ambients. A member asked for a sound-time history of the flight. Cyndy responded that they have these recordings and that Appendix E of the Noise Analysis shows a sample sound-time history.

Q: Were there any features about this flight that made it more or less audible?

A: Cyndy said they chose one of the most common aircraft, a Boeing 737 modeled at 40,000 ft with 15,000 lb thrust.

Q: Does the fact that Lipan Point is so close to the edge of the Park skew the results? Do the calculations end abruptly because of the boundary?

A: No. Cyndy explained that the presentation cuts off at the boundary, but the model runs the whole contour.

Q: If the same jet was run in the heart of the Park, would the result be the same?

A: Yes, probably, with some variability depending on vegetation type. All things being equal, the footprint (edge vs middle of park) would be identical.

Q: Is there a compression algorithm for commercial flights as there is for airtours?

A: No. We have no way of dealing with the overlapping sound unless FAA provided detailed schedules and operational data of Commercial operations. The Time Audible results can thus be viewed as conservative and show a worst case scenario.

*All aircraft scenario*

*Compare noise levels of GC air tour aircraft:*

Q: Is it possible to hear a specific aircraft 11 miles out?

A: The wind is the biggest variable, so it is hard to say how many miles out a plane is audible. Helicopters (especially Eurocopters) drop off more quickly over distance.

Q: Is there a difference in technology between the two types of helicopters?

A: Cyndy answered that the main difference was found in the tail rotor and that the model accounts for this. There was discussion about the drop off in the curve for the three helicopters. The spectra data revealed the reason for the drop off. A member suggested that the noise from a helicopter is a function of its angle in addition to the distance. Kurt Fristrup added that higher frequencies are shorter in duration; lower frequencies travel further and last longer.

Representatives of helicopter tour companies responded that the EC 130 Eurocopter with its multi-blade rotor system was produced in France specifically to reduce the aircraft's noise. The performance of the EC 130 on the chart, although surprising, made sense to them given its rapid diminishment of noise at a distance. Another member added that the higher frequency ranges of these aircraft are a factor as well.

**Observer Comments:**

*Mike Loghides, Clark County Aviation Department:* Mr. Loghides objected to the hypothetical removal of four airports in the model runs, and suggested two additional runs: 1) removing flights up to 18,000 feet, and to 29,000 feet; and 2) removing all stage 2 aircraft that are exempt from quiet technology or that are hush-kitted. Lynne answered that the model runs were intended to be a gross sensitivity analysis to see the effect of big changes. Mr. Loghides also noted the discrepancy in the nighttime noise contours between the usual aircraft noise modeling in which nighttime hours are 10 pm – 7 am, and INM 6.2 runs for GCNP where nighttime is calculated from 7pm – 7 am.

*Ed Rothfuss, NPS Ranger Naturalist, retired:* Mr. Rothfuss worked 36 years for the Park Service, including the Grand Canyon, where he enjoyed the vistas, the quiet, and floating at flood stage. In the past there were times when he saw no people, no evidence of human activity. Those times are gone forever, he said. There are changes everywhere. The Grand Canyon is a world icon, he added, and a very special place. The Organic Act mandates that the Park Service choose preservation of the resource over development when the two are in conflict.

**DAY TWO:**

Roland Manakaja offered a prayer to the group for a productive day.

**Summary Approval:** The group considered the summary of meeting # 3 held in Phoenix, January 31-February 2.

Charlie Vaughn commented that the Grand Canyon visitors need to be surveyed to determine the impact of overflight noise on them. Lucy responded that this was raised and discussed at the last

meeting, as reflected on page 8, and that there are documents relating to visitor surveys on the website. She agreed to add his comment to the summary discussion section of this meeting.

Jim McCarthy asked for the following corrections:

p. 13 – First sentence should read: "Jim McCarthy said that in a meeting on another subject with Senator McCain, he had asked the senator to explain the intent of his recent letter."

p. 13 – Insert second sentence: "Jim asked if the senator intended to completely discount commercial transport, or if he intended to count their noise but not expect significant changes to their operation."

p. 18 – second bullet, strike parenthetical "46% of park is audible for 25% of the day under current conditions)"

p. 18 -- third to last bullet, "A 'budget for noise impacted area and time impacted' be established, so....

*Consensus: Meeting Summary # 3 was approved as corrected.*

Karen, who was not present at the third meeting, offered some comments on the meeting's discussions. NPS has wildlife data and will be working with Bill Austin closely. She was concerned that there is no compression data or algorithm for high altitude commercial flights. She believes that there is congruency between the model and the visitor experience. Responding to concerns about "moving the goal post" raised by Jeff Cross' presentation, she reminded the group that she and Lynne had both made a presentation on their respective authorities at a public meeting prior to creation of the GCWG. She had explained then the NPS management policies, Director's Orders, and other goals and directives governing the agency. What Jeff said was merely an elaboration on that, she said.

She told the group that NPS attorneys have said that aircraft categories cannot be looked at separately for purposes of substantial restoration calculations. It is not acceptable to say that one category has achieved substantial restoration of natural quiet, when the total aircraft picture is still in violation. She objected to the phrase "per cent restored" when applied to individual categories of aircraft, and said that the term "per cent improved" would be more accurate. Air tour representatives expressed confusion about Karen's objection, believing that substantial restoration of natural quiet has been achieved for the air tour industry. Finally, Karen asked for clarification on Heidi's comments from the Denali report about the results of educating the public about aircraft noise ("Those not made aware of overflights did not hear them.") Heidi will help Karen locate the report.

**High Altitude Commercial Flights:** Del Meadows, Manager, TRACON (Terminal Radar Approach Control), is with the Las Vegas Center that controls air traffic over the Grand Canyon. On the peak day, he said, 42% of high altitude traffic was coming into or going out of Las Vegas. He wanted the group to know that the closer flights are to the airport, converging on a single point from all directions, the harder it is to move the stream, even by a mile. The flights cannot be in a single file coming into the airport; they must be in a side-by-side configuration in order to pass at the same altitude. As you get close to a large airport, arrivals and departures need to be separated laterally. The closer they are to the ground the more separation is necessary. Robert Novia added that because of radar vectoring, each flight needs additional space on each side of the route, and without that extra space it would reduce their ability to land as many airplanes. Close to the airport the terminal radar control is 3 miles; closer than that it is visual separation. Moving one track will impact all of the others; moving LAS streams will impact the LAX streams. High altitude GA flights are on the

same route as commercial; there is no way to separate out a specific sector like GA. LAS has moved from ninth to fifth busiest airport in the country. LAX is fourth and PHX is sixth.

Members expressed appreciation for the complexity of the National Airspace System, but also recognized that FAA does change routes for safety and perhaps other reasons. Analysis of the graphic showing commercial flight tracks suggested to some that minor shift in routes may be possible. Members pointed to "white areas" between the red and blue flight tracks and asked why routes couldn't be moved 2-3 miles north into that less dense area to protect the Kanab area of the Canyon.

Del replied that the FAA Air Traffic has two mandates: safety and efficiency. They will never compromise on safety and must maintain the separation requirements. To increase efficiency there are processes which take several years. McCarran Field is undertaking a three-year process to gain 10% in efficiency. Phoenix and other airports are in the process of redrawing routes to accommodate projected growth, and to facilitate the change from ground-based to satellite-based navigation. But these changes do not involve moving routes. Even minor changes of 2 miles or less can have major impacts, he added. With respect to what appears to be "white space" he pointed out that the graphic represents only one day, and there may have been a reason for that particular configuration that day. Another day might look different. Moving tracks northward in that area could cause a domino effect that would impact Nellis Air Force Base. There has been one major route change at LAS in the last 15 years. Del added that the difference between "major" and "minor" is subjective, and that it takes 4-5 years to implement any kind of change.

Lynne added that national parks are given consideration by FAA in airspace redesign, such as consideration of Gettysburg NP in the Philadelphia redesign. Future airspace redesign can consider the needs of the Grand Canyon, but those processes are lengthy and not realistic to meet immediate GCWG goals and timeframe.

There was much discussion about the number of miles of separation needed, and the opportunity, or lack thereof, to make changes over the Grand Canyon.

Some felt that it was clearly infeasible – technically or politically -- to consider making changes to the routes to benefit the Canyon. The law was never intended to impact high altitude flights, they said, and Congressman Young has just reinforced that notion. "We're deluding ourselves to think that we are going to reroute this traffic. This horse is not going to fly." Changes in the system would involve high use and cost of jet fuel. And even if route changes were made the population explosion in the southwest is going to necessitate new airports and additional tracks. Growth will cover the southwest with high altitude tracks sooner or later.

Other members felt that it was important to know more explicitly what is possible and what is not, to justify whatever decision the group reaches. They were frustrated that the FAA seemed unwilling to consider some change, no matter how minor, and hoped for some flexibility. Besides the safety and efficiency mandates, FAA is also obligated under NEPA to consider environmental impacts, one noted. They asked for a more detailed analysis, beyond an honest opinion, of what could and could not be done. Lynne agreed that the comments of FAA staff to date did not seem to be of the detail the group desires, and pledged to respond to requests from the group for additional detail.

Another member hoped for a positive environment in which members and interests would actively want to find mutually acceptable solutions, and would volunteer ideas. He hoped for that kind of opportunity at the table.

The Hualapai representatives reminded the group that even hypothesizing about moving traffic is pointless without knowing what is important to the tribes with respect to cultural and sacred properties. The Hualapai lands are larger than the Park, and moving routes could impact the tribe. The tribe may consider asking for restricted airspace over certain areas. They urged tribal consultation as soon as possible. Tina Gatewood, FAA, noted that the tribal consultation is part of the NEPA process, and that NEPA cannot be completed without full consultations. Charlie responded that he "can't ride two horses at one time."

A discussion followed on the role of tribes in the GCWG process and the NEPA process, as well as the place of tribal consultation. The hope is that the tribes will express their needs in all forums, and not withhold information or constraints that are critical to the evaluation of options and alternatives. Hualapai is a cooperating agency with the FAA and NPS on the NEPA process, and sits as a member on the GCWG. In addition, they will have a government-to-government consultation with the two agencies. All the forums need the full participation of all the tribes, and it is hoped that they will be able to "ride more than one horse at a time." Tribal spokespersons wanted to emphasize the need for a government-to-government consultation, outside the Section 106 process, on cultural properties, Indian Freedom of Religion Act, and other issues of concern to the tribe. Karen replied that she completely agreed and hoped that the tribes would develop proposals for the GCWG to include tribal needs early in the process. Lucy emphasized that the tribal participation is critical to alert the group as soon as possible what is on or off the table.

A commercial airline representative reminded the group that the FR notice creating the GCWG required members to seek meaningful, realistic, and readily implementable solutions. Although the group may be able to assess the noise meaningfulness of changing air traffic routes, she warned that they do not have the ability to determine whether the changes are realistic. Furthermore, they most likely would not be readily implementable (by 2008). In her opinion, changing air traffic route changes are not realistic or readily implementable. Another suggested that implementable could be time-sensitive, and that some changes might be feasible in the long term, if not by 2008. A recommendation from the group, said another member, doesn't need to have its full effect by 2008. The group could recommend that FAA analyze certain route changes by 2008, and that noise impacts on Grand Canyon be included in long term NAS planning processes.

A member suggested that the Las Vegas airport needed to be evaluated in relation to the other airports that are contributing flights over the Grand Canyon. He added that all the tracks we see represent compressed flights between 25,000 and 35,000 feet.

Karen proposed creating a subgroup to explore the feasibility of moving commercial routes, with the understanding that no recommendations or decisions would come from the group and that the NAS would not be adversely impacted by the group's study process. The group would seek the answer to the following question: Is it feasible or not to move high altitude commercial routes? If so, what kinds of shifts, in what kind of timeframe would make a difference? Katherine Andrus wanted to clarify that any subgroup should be educational in nature (to inform the GCWG on airspace effects), and not in any way be part of a redesign of airspace. That would require an entirely different process and people. Robert Novia, FAA, said that he assumed the subgroup would

be interested in the "data behind the rhetoric," and asked for specific requests from GCWG members.

Some were concerned that the subgroup was being formed without consensus of the GCWG and without clarity of mission. The subgroup's work should be limited to learning in more depth about the NAS and the feasibility of moving tracks, much as the Volpe subgroup went behind the scenes to learn about the model. Lynne said that FAA could support additional data as the subgroup needed.

**Consensus:** A High Altitude Sub-group was formed for the purpose of in-depth education on airspace management issues, and to answer the question: Is it practical to move any high altitude aircraft routes from over the Grand Canyon? Caveats were attached to this task: The sub-group will not be making decisions about flight tracks. NPS will not adversely affect the National Airspace System (NAS).

Members of the sub-group are:

- Jim McCarthy
- Sarah Falzarano
- Katherine Andrus
- Paul McGraw (ATA Air traffic specialist)
- Dick Hingson
- Lynne Pickard
- Charlie Vaughn, or other representative
- Heidi Williams, or other representative
- Mike Loghides (LV airport)

**Context for Considering Options for High Altitude Commercial Flights: Carla Mattix:**

Carla reviewed the 2002 court decision and the 1987 Overflights Act, which taken together have put the GCWG in a difficult spot. The court ruled that NPS must include all aircraft in determining the noise effect on the Park, but that they may choose not to regulate any particular segment of aircraft. With the results of the noise analysis, the GCWG may not be able to achieve its goal if it cannot regulate commercial carriers. If this is the case, the group must justify that decision by showing that it has pursued potential changes and is satisfied that significant gains are impossible.

The court deferred defining audibility to the agency. The statute did not dictate specific terms. Karen added that NPS does not manage parks for "just a hair under" acceptable limits. The policy is to mitigate adverse impacts, and that may mean "giving yourself some leeway."

A member suggested that the group may need to go back to Senator McCain for clarification. Another felt that his letter, which differentiates noise from regulation, is consistent with court decisions. Another member referred to his recent paper (previously distributed to GCWG): "Basic Premises of Overflights Act: Under Challenge?" which cites other acts that also apply to protection of Park resources.

Q: What weight does congressional opinion have on agency policy-making?

A: Carla answered that although those opinions are respected, the agency is bound by the parameters of case law, administrative law and legislative history.

Q: How would the court respond if different categories of planes were regulated differently?  
A: Carla answered that they would look for an independent, rational, reasonable justification based on good science and other factors. It could not be done simply to define away the problem.

**FAA National Aviation Forecast: Lynne Pickard:** Lynne presented highlights of the most recent FAA aviation forecast, FAA National Aviation Forecast, and distributed "Aviation and the Environment: Report to Congress." Lynne pointed out that northern Arizona is in the direct path of some of the greatest density of U.S. aircraft operations and anticipated growth of east-west flights. However, noise reduction has historically advanced in the face of aviation growth, and significant levels of aircraft noise have been reduced for several million people over the past 30 years—even with strong increases in aircraft operations. The agency and industry are looking toward the next advance in technology to make aircraft quieter. The task of reducing aircraft source noise is complicated and costly. Once research is complete and the new technology is introduced, it can be 15 or more additional years until that technology is dominant in the fleet. NASA has been helpful in research, she said, but they are being pressured to do more work on space. Karen offered help with research at park units. There was discussion about the relationship between emissions and fuel burn. The engine design that created quieter aircraft increased the NO<sub>x</sub> emissions because of the higher temperatures involved. A member added that the newer Lear jet engines are more efficient, quieter and better in almost every respect.

**General Aviation Survey: Heidi Williams:** At the request of the GCWG Heidi Williams, AOPA representative, surveyed members on their flying patterns over Grand Canyon. The survey was posted on the website and sent to 250,000 members through direct mailing. Of those, 200 responded that they had flown the corridors. Most are not high-end flyers, and fly only in good weather.

Survey answers were as follows:

- Do you fly over the GCVFR through the SFRA? 22 no, 78 yes
- Most popular corridors are Zuni, Dragon, Fossil Canyon, Tuckup, in that order.
- How often do you use VFR to overfly GC?
  - 94% less than 5 times per month
  - 6% between 5 and 10 times per month
- If other than VFR altitudes, what altitudes do you fly? 92 percent fly under 14,500, most of those between 10,500 and 13,500.

Additional comments: Most respondents provided additional comments, and most of those advocated for keeping all corridors open for GA.

Heidi offered to gather more detail about the responses, and invited the group to help refine the data and the questions to produce the most useful information. She acknowledged that there is no verification mechanism for activity in the corridors.

**Presentation of Proposals from Group Members: [copies of proposals are on website]**

Elling Halvorson, with technical assistance of John Dillon:

Elling gave a slide presentation that reviewed the history of the air tour business at Grand Canyon. He began with the warning that changing routes can cause crashes, as it did in 1986. The

Overflights Act resulted in a large reduction in numbers of companies. Many flights were eliminated because of rules, some because of failing businesses. Elling noted that the Volpe model does not include above ground attenuations, which gives a conservative picture of noise. The current routes were established to be economically viable, financially sound, reasonably priced, and with the least impact. Further reduction, he added, is not acceptable. However, he presented 14 suggestions designed to improve conditions in the Canyon:

Briefly, the 14 points are:

- 1) noticeability standard for all GC (audible plus 10)
- 2) Base model analysis on 24 hours, not 10 or 12
- 3) Summer curfew by extended 30 days in spring and 30 days in fall, or by 1 hour in the summer afternoon
- 4) Non QT single engines enter Zuni at the altitude required to cross the North Rim
- 5) Air tours entering Dragon may lower altitude by 2,000 feet (terrain shield)
- 6) Move entrance/exit Dragon west, 2 miles, behind ridge (to shield Hermit's Rest)
- 7) New routes to approach and depart airport to and from Dragon, flying south of Ra Well residence to enter Canyon on more northerly bearing
- 8) Close trails under Dragon, or educate hikers
- 9) River runners not set up camp below Dragon until 30 minutes before curfew and leave camp 30 minutes after curfew
- 10) Air tour schedules distributed by boating community
- 11) All aircraft convert to quiet technology in 10 years
- 12) QT incentives – no fee, new routes
- 13) Fly Neighborly Program
- 14) Capstone II-type project for aircraft monitoring

Q: Why would you enter at the North Rim altitude?

A: Entering lower than the altitude on the other side requires a lot of "flailing of the air to get there."

Q: Why would you allow QT aircraft to see cliff dwellings in winter?

A: The cliff dwellings used to be a very popular part of our flights. We would like to restore this.

#### Quiet Canyon Coalition Proposal

Dick Hingson was assisted by observer Dennis Brownridge in presentation of the Quiet Canyon Coalition Proposal. Coalition members include: Friends of Grand Canyon, Sierra Club (multiple chapters), Arizona Raft Adventures, National Parks and Conservation Association, Grand Canyon Trust, Grand Canyon River Guides, Northern Arizona Audubon Society, Wilderness Society. The proposal is based on five principles, shown in the chart in comparison with the Quiet Canyon Coalitions principles of 1994. An additional principle, Dennis added, is the authority and the responsibility of the NPS and the GCNP. They are the experts in the Park, he said, and we should show them deference whenever and wherever possible.

1994: Quiet Canyon Coalition	2006: Quiet Canyon Coalition
NQ: 100% restored in more than 90 percent of the park	NQ: "substantially restored" in "50 percent or More" of the Park
Increase size of noise-free zones	Increase size of noise-free zones; less fragmentation, thus also aiding simplicity of analysis/mitigation; increase minimum size of contiguous quiet acreage – precisely locate largest-size & "quiet" core
Eliminate corridors – Dragon, Zuni, Fossil	Close Fossil. Retain Dragon, Zuni, but seasonally, alternating. Thus introduce increased sense of choice, visitor can choose a quiet trail, or not. Plus two GA open all year.
Route commercial jets away from the Canyon	Reroute commercial jets from a specified portion of the canyon, not whole canyon – polygon in the Heart of the Park (HOP). NAS has evolved. Needs to evolve again. Public welfare interest: to accord sufficient status, FAA can recognize at least a few parks or portions thereof.
Noise-free seasons of more than three months in the whole park	Noise-free seasons, Heart of Park only, for certain low-level route areas. Such as Dragon alternating with Zuni.

Q: What boundary line for the Hualapai is represented in the proposal?

A: Dennis acknowledged the boundary dispute, and suggested this is not the forum for discussing it.

Q: Do you have a new south route drawn? Could you use the Peach Springs airspace?

A: Dennis said he had no specific route, but that if it crossed Hualapai land, it would be up to the Tribe and the operators, who need a route from the new Boulder airport to Tusayan. There were additional questions about the source for various numbers in the proposal, including number of GA flights, number of west end tours, data on high altitude flights, proposal impacts on user groups, calculations of high altitude distances. Dennis has been studying overflights at Grand Canyon for 25 years, and works with others who do on the ground observations.

**Havasupai Comments: Roland Manakaja**

Mr. Manakaja reminded the group that the Havasupai have lived in the Canyon for more than 1,000 years. Much of their traditional land has been lost, although the Park Enlargement Act in 1975 returned some aboriginal lands. Air tours increased to the point that the tribe enacted a resolution in 1977 removing all air tour routes from reservation lands and some additional sites. The tribe has no position on high altitude commercial flights.

There are many sacred sites in, and near, the Canyon but the Havasupai have been silent not wanting to draw attention to them. Many are unmarked burial sites. A proposal to reroute helicopters from Tusayan to Supai could impact sacred sites. The tribe is also very concerned about safety and clean up issues. They feel vulnerable to plane crashes, fear the falling debris and are

concerned about the responsibility of clean up of these crash sites. "Who is responsible for the cleanup when the airplane tumbles down onto our land?"

Natural resources should not be used for gain and pleasure, he added, but should be used in reverence and for food and wildlife. He is concerned about the migratory routes of wildlife, and believes that certain birds and animals are suffering. His tribe is small and struggling to protect its culture and provide a secure future for next generations. Native people need a share of the revenue from tourism. Roland believes that compromise is possible, if funds can be directed to those who are being impacted. He also requested help in educating tribal members, especially the youth, about aircraft issues over the Canyon.

Jim McCarthy' Proposal:

Jim suggested that the "best possible proposal" is the one that requires everyone to do the best they possibly can. He was pleased that the high altitude issue was going to be handled by a subgroup. He predicted that if moving those flights adds one or two miles to a flight it might be feasible, but if there are significant increases in time and fuel costs, it is it not feasible. He looks forward to a quantitative analysis of these changes.

Jim also suggested that the group does not have to limit itself to the minimal definition of substantial restoration of natural quiet. He believes it was never the NPS intention to stop their restoration effort at 50% of the Park 75% of the time, just as the FAA does not manage to the edge of risk.

Keys to Proposal:

- Will accept the noise of the high altitude flights, if all has been done that can be done.
- We want 50 percent of the park not audible of low flying aircraft
- Raise no-fly elevation to the top of the SFAR – to 18,000 feet.
- Keep caps on max number of aircraft, to meet natural restoration every day.
- Retain curfews
- Incorporate quiet technology
- Create noise budgets based on area audible multiplied by time audible
- Prohibit below the rim flights
- Evaluate the impacts of lowering flight path (more intensity under flight path vs. reduced range of audibility due to terrain blocking).
- Route changes worth considering
- Temporary respites in certain areas (Zuni/Dragon alternating part of year, etc.)
- No intention to disturb any areas relating to Havasupai

Eastend Safe alternative, from the 2000 FSEA (Final Supplemental Environmental Assessment):

Tina Gatewood briefly presented the alternative that originated as a result of the safety concerns raised by the air tour operators for the proposed routes and airspace configuration on the Eastend as contained in the 2000 FSEA preferred alternative. It would expand the boundaries of the Desert View Flight Free Zone (FFZ) over the confluence of the Colorado and Little Colorado rivers, it would put a dog-leg in the Dragon Corridor and expand the Bright Angel FFZ over Bright Angel Trail, as well as to the southwest boundary in the vicinity of Hermit's Basin. The routes in the Marble Canyon Sector would be modified to protect the river, and the routes in the Dragon and Zuni Corridors would be modified to coincide with the changes to the corridors and FFZs.

1994 Report to Congress Recommendations:

Ken McMullen reviewed Figures 10.1, 10.2, and 10.3 from the 1994 Report to Congress which apply to only air tour and GA aircraft. Figure 10.1 Proposed Flight Free Zones to cover 82% of the Park, and they considered raising the altitude to 17,999 feet. Dragon Corridor, Black 1-A and the Green 1-A, would be one way to the airport and quiet technology only, and five years after the phase-in the route would be eliminated. Fossil would be QT aircraft only, and two way for GA and one way for air tours. Zuni Corridor would be QT aircraft only and one way for all commercial. Tuck Up would be GA only, two way, and 10,500 – 9,500 msl. In 15 years all air tour aircraft would be QT. Curfew would be from 6 pm to 8 am for commercial air tours. APIMS would be used for monitoring and safety.

Figure 10.2 is NODSS model prediction of 65% (+) of the Park substantially restored 100% of the time with implementation of the NPS recommendation.

Figure 10.3 depicted what 45% of the park would be restored 100% of the time in Fig.10.2.

NPS understands that the figures are outdated, and reflect early model predictions. They expect applicable concepts of the 1994 Recommendations to be considered among the range of alternatives in the NEPA process. Some members felt strongly that these figures and recommendations should not be considered in the NEPA process. The recommendations are no longer relevant because they are out of date, and they are extreme in their goals, they said, aiming at 80% of the Park flight free. Furthermore, the recommendations don't address the need to break out and analyze the high altitude flights. Others suggested that the recommendations did not have legal merit as NEPA proposals because of the long delay.

NPS staff responded that the 1994 recommendations represent management objectives then, and provide several key components that would be included in the range of alternatives. Chapter 9 of the 1994 Report supports the NPS assertion that the 1994 Recommendations were not limited to the minimum of 50% of the Park 75% of the time. NPS counsel added that the court has ruled that NPS could generate proposals.

**DAY THREE:**

Each person at the table reflected on the meeting so far.

Joe Alston: Joe clarified that the 1994 Recommendations are not an NPS proposal. They were put forth by the agency in 1994, and they need to be considered in the range of alternatives in the NEPA process. We must consider them, he said, and give a rationale for accepting or rejecting them. If there is a NEPA proposal, it will be what the GCWG develops by consensus in this process. The agencies are responsible for developing alternatives that are legally defensible and meet the requirements of the statute. This process demands looking at a reasonable range of alternatives, a range that will inevitably include some that meet a lot of resistance. Joe asked the group to be tolerant and consider all alternatives. In sum, the recommendations are not an NPS proposal, but they believe they need to be included in the range of alternatives.

Karen Trevino: Karen supported Joe's statement concerning the recommendations. It is not productive, she said, to try to get one alternative off the table, or to suggest that an agency change a definition. Karen also withdrew her parking lot item concerning use of the term "percent restored." However, she still believes that the term "restoration" has a specific meaning in the legal

documents, and that the term "per cent improved" is more appropriate in evaluating the contributions of different categories of aircraft. She also provided for the NEPA administrative record letters from 8 senators and 6 representatives received during the public comment period for the draft NPS management rewrite. These letters all mention noise and the protection of natural quiet. Karen said they should be considered as relevant as other congressional letters received by the GCWG.

Lynne Pickard: Lynne confessed that her expectations have been somewhat dashed in this process, and that she has had to readjust her thinking. She had assumed that the progress over the years had been significant, and that in this process "we would be doing some relatively minor tweaks to what we had put in place," and that most of the problems were with the science and measurement of restoration. But this meeting has shown her that the universe of issues is actually expanding. The process will take a lot of patience, understanding and negotiating skills. She urged the group to not give up, to work through it for the sake of all interests at the table.

Dick Hingson: Dick reminded the group of the public meeting in Mesa when the agencies rolled out the plan for the GCWG. They described two channels to reach the goal. Channel A is the GCWG and a consensus recommendation. If that fails, the agencies switch to Channel B, the regulatory process. This is our chance, he said, to impact the work of the agencies, and we have four interesting proposals so far to consider.

Bob Henderson: At times Bob said he could see a bit of agreement in the group. It is necessary, he added, to go through a storming process before reaching a "norming." "So hold onto the boat while it storms."

Elling Halvorson: Elling expressed shock with the NPS recommendations being included on the list of proposals. He felt it contradicted the groundrules of the process. He wants the process to continue, but questions the Park Service putting its proposal on the table.

David Yeamans: David said he does not want to be perceived "as a person shooting from the bushes." For him, absolute silence and no motor noise would be wonderful, and the thought of eliminating a corridor "warms my heart," but he is realistic and doesn't expect those wishes to come true. He is very encouraged that things are better than they were in 1997. On the subject of aircraft noise, his constituents give a wide range of responses, from "no more helicopters" to "I'd like to see another military jet roaring up the river." David said that he saw elements from the proposals presented that he could live with. Although Elling's recommendation about curfews on campsites is unacceptable, he saw other elements to work with. David looks forward to learning more about the FAA modeling tool for moving bundles of air traffic. He added that if we learn that these changes would be too disruptive to society, then we will have more justification to go to Congress and ask for clarification.

Heidi Williams: Heidi confessed that her upcoming wedding in July is demanding a great deal of patience and open-mindedness. She is learning important lessons she can use in the group's negotiations. "At the end of the day we all have to be open-minded."

Cliff Langness: Cliff expressed a new-found appreciation for all of the bureaucrats in the room. With all of the constraints he said he was amazed that they get as much done as they do. To develop a simple rulemaking is complex on the order of 10 to the 6<sup>th</sup>. Cliff comes from the

corporate world, and has received letters from board members urging the group to give up on the high altitude routes, and focus on redefining the definitions. The definitions are more a sacred bull, he said, than a sacred cow. He urged fellow members to discuss the definitions, sacred or not.

Teddy Bedonie: Teddy said he has a lot to learn. In his community of Cameron, elders do not want planes overhead; they want to preserve the quiet for their animals. Others in the community are working with Maverick Helicopter to bring in revenue. He does not want to say no to these developments and he believes that compromise is possible. Conflict resolution is the key. He would like to explore ways of creating quieter commercial aircraft, including the high altitude jets. He expressed solidarity with Hualapai and Havasupai, and an appreciation for the work of the FAA.

Alan Stephen: When McCain asked air tour operators and the Grand Canyon Trust if they would be willing to enter into a conflict resolution process, Alan agreed as long as it was balanced and impartial. He has been supportive because he has seen success through the ATMP process, where the agencies have been able to work together, meld cultures, and change attitudes. He expressed concern that NPS has a tendency to move the bar whenever a goal is reached. He clarified that he did not ask Joe to withdraw the 1994 recommendations. He would like to discuss them, particularly the 5 and 10 year projections for air tours. The proposals put forth yesterday are based on what has happened since 1994; the 1994 recommendations are not. There have been many changes since then. Alan thinks that it is not productive to pursue the 1994 recommendations, and he is disappointed that the Park Service is resurrecting them. He is committed to the GCWG process and will stay for the duration.

Mark Grisham: Mark said he had the sense that "a lot of participants are here with one foot in the door in case they need to be able to escape,." He hoped that eventually those doors would shut and that we would all *really* be in the room together. He said he was glad that the Whitmore Wash helicopters are still operating.

Roland Manakaja: Roland offered what he called the "native perspective." He shared a 4,000 year old origin story. The story conveyed a strong message that if humans don't take care of the earth and its natural resources, disasters, like tornadoes, floods and earthquakes will occur. In this spirit, the Havasupai consider themselves to be guardians of the Grand Canyon. Already, native people are unable to visit certain sacred sites because of outside interference. The influence of money and greed has been destructive to many native sites. Roland said that his elders were very happy that he took a stand against air tours over Supai, and that now there are none. He asked all those present to honor the land the way the Havasupai do.

Dorothy Lee: Dorothy said she was amazed and proud that the Grand Canyon – one of the natural wonders of the world – is her backyard. She did not know what to expect at this her first meeting, but the last few days have been very eye-opening for her. Like the Havasupai, her Navajo ancestors have values that include protection of the Canyon and the rim, where there are many burial sites and many active ranches. Navajo elders cannot read and are unable to see the identification numbers on low-flying aircraft that disturb their livestock. Dorothy asked who to contact in cases like this, or when a plane crashes, as it did last summer. She is not sure that plane was ever cleaned up from Navajo land. Dorothy said she would like to return to the day when horses were the only transportation, but she knew that was impossible in this busy world. She sees the rim as a quiet place for escape, but it, too, is noisy now with aircraft. The Gap-Bodaway community is in conflict

over development; some believe economic development is necessary, others that it is damaging to the traditional way of life.

Michael Yeatts: Michael, alternate for the Hopi member Leigh Kuwanwisiwma, said he had been surprised to learn that most of the problem lies with high altitude aircraft, the one category "we can do the least about." He noted that the person on the ground notices the lower air tours and GA flights more than the commercial jets, which have almost become a normal part of the soundscape. Michael did not recommend ignoring other sources of noise, but that the focus be on the lower flying aircraft. On behalf of the Hopi, he said the area of most concern is the Little Colorado River (LCR) confluence area. Hopi prefer no low altitude flights in the LCR area. If routes are to be moved, they suggest moving them where people are making other noise such as over the Bright Angel Trail. Michael added that it made sense to him to protect the areas that are already quiet and increase noise if necessary over the already disturbed areas.

Bill Austin: Bill wanted the group to know that he and others had made good progress on ESA issues. There is a plan for how to proceed, including picking up issues from the previous consultation. Bill's view of the GCWG is as a forum for exploring various options for dealing with overflight noise at the Grand Canyon. He sees an iterative process between the group and the USFWS as proposals are considered. He expressed appreciation for those who had the courage to present proposal, and he looks forward "to rolling up our sleeves, having open honest discussions and continuing the good faith effort." He acknowledged that there are some big problematic issues, but he believes it is possible to deal with them piece by piece.

John Sullivan: John acknowledged the deep emotions in the room, and thanked Roland in particular for the passion that he brings to the table. He said that he admires passionate people whatever the persuasion, and that the air tour representatives are passionate, too. "This is very real for us," he said. "This is our livelihood, this is what we do and who we are." John believes that the law is reasonable in the way it addressed the safety and noise issues, but since then the process has derailed, a victim of government and bureaucratic processes. He criticized the Park Service for changing the standard by putting the 1994 recommendations on the table. This puts the air tour industry in a very insecure position, unable to count on any current goal, never knowing if it is going to change tomorrow. He asked the agencies to make explicit once and for all what the standard is. "Aviation people deal with scientific positives because our lives depend on it." This process, he added, does not deal with scientific positives. Like his colleagues, he is pessimistic about the ability of this group to accomplish anything significant. He also noted that a successful system, like the route structure, "works on integrity," and he asked for that integrity from the agencies. His last point related to the needs of the handicapped, elderly and children, which make up a high percentage of the tour demographics. It is the experience of a lifetime for them, with huge emotional impact, and he would hate to see that compromised. Some companies offer free flights to those with special needs, and ask for no credit.

Katherine Andrus: Katherine emphasized the protocols and the goals requiring the GCWG to "seek meaningful, realistic and readily implementable solutions." She asked the group to strive for the possible, not the impossible. She identified "two elephants in the room," the commercial airlines and the definition of substantial restoration of natural quiet. There is little correlation, she said, between the definition and what people are really concerned about. She noted there is no differentiation between low and high noise levels. According to the definition, she pointed out, the canyon could be a military airspace zone with F16s flying through it for 2 hours a day, and the

definition would be met, but obviously that is not what is desirable. She recommended that the GCWG "redefine for ourselves what this group would consider success, or even just progress, instead of getting caught up in the legal issues." She hopes that the group can talk about what's possible, given the time and budget constraints. "Let's see how far we can get by 2008." Like others, Katherine was impressed with the thought that went into the proposals, and the potential for incremental improvement.

Jim McCarthy: Jim suggested it was a good idea to ask people what they need and what they could live with. He said he was glad to be finally talking about real issues and hopefully getting into real negotiations. He noted that one thing that makes this process so difficult are the values underlying the issues. "Is this a place where money is made, or a place where we need to protect its integrity?" No one, he said, has an inherent right to fly over the Grand Canyon. He senses that the FAA has aligned itself with the Las Vegas approach, while NPS has been too timid in its efforts to protect Canyon resources. He encourages the Park Service to take the lead role, and make a proposal that represents their needs. He added that the NPS goals have been constant since the 1994 Report to Congress, and that they are not shifting in his opinion. Although there has been progress and the flights are restricted to corridors, the numbers of flights have increased, and the heart of the Park is endangered. Jim thanked the facilitators, and credited them with the fact that everyone was still at the table.

Doug Nering: Doug spoke as a representative of the hiking community -- tens of thousands of hikers annually, for whom it is also the trip of a lifetime. Doug would like to see a system where there were no non-essential flights over the Grand Canyon, although he realizes that is not realistic. He used the analogy of the Crystal rapid to describe the GCWG process. The strategy on that rapid, he said, "is to row as hard as you can knowing you'll never get there, but if you don't row as hard as you can you may not be ABC ('alive below crystal')." Doug said that he understands deeply Roland's perspective, as well as the rational approaches to the issues. Both feelings and reason are important to the process. He urged the group to see the law as a guide, not a limit; "we are here to do what is right, not what is legal." Specifically, hikers seek protection of water sources where they are likely to spend the greatest amount of time. They would also like quiet in the Hermit's Rest area. Perhaps the commercial routes could be moved slightly to avoid the Kanab Basin. Doug also reminded the group of the importance of compliance and monitoring. Finally he noted that the hiking community has a great deal to lose, and has already lost trail access for a variety of reasons.

Charlie Vaughn: Charlie echoed the spiritual messages from the Havasupai and Navajo speakers, while noting that Hualapai has economic concerns as well and is in business relationships with several around the table. Charlie said that his tribe has an inherent right to make a living from the Canyon, because they actually live in and near the canyon and it provides their livelihood in many ways. He expressed concern that the proposals on the table have not gone through the tribal consultation process, the opportunity for tribes to better define their interests. He is especially concerned about the 1994 recommendations being on the table. The Park Service and the FAA have a trust responsibility to the tribes, and the BIA needs to be involved as well. Charlie was critical of the CRMP process, saying that NPS "did as they pleased." He fears that this process is biased toward an environmental and NPS outcome. The recommendations that come from this process should treat all parties equally.

Facilitator remarks: Lucy thanked members for the honesty and commitment. She felt the exercise was valuable at several levels. In terms of content, there were specific suggestions and needs

expressed. In terms of process, every voice at the table was heard, something critical in a conflict resolution process where everyone is equally important to a successful resolution. We are reminded, she said, that this is not a forum where a few powerful interests argue in front of others; it is a forum where each person represents a significant interest and is responsible for asserting those needs. Thirdly, she was struck by the layers of history we are dealing with at this table. The history may go back thousands of years, or it may go back to a disastrous meeting in Phoenix ten years ago. "We need to acknowledge the history that shapes us," she said, "but let's not write the results of this process based on that history. It is a tribute to all of you that you are here in spite of that history." Finally, there are layers of emotions that are also critical to what we are doing. It is difficult, she acknowledged, to stay at the table without getting overwhelmed by those emotions – your own and others. She said she hoped she and her co-facilitators could help sort through these challenges, and help the group deal with the tension between the values, goals, and definitions and the need for practical, specific solutions.

Air Tour Trends, focus on 2005: Norm Elrod

Norm gave statistics for air tours showing a recovery following 9/11. The drop in number of companies is due in part to consolidation and in part to some businesses folding. Elling added that Las Vegas helicopter air tour business is booming, as tourism there increases, in spite of a decrease in the Asian numbers. Sixty-five per cent are now from the US, and most of the others are Europeans. Asian tourists are less affluent, and as many as 400 a day that used to go to the Canyon by air, now go by bus.

Q: A member noted that the overall annual cap of 92,000 was not reached last year. He asked if any individual operator had reached their cap before the end of the season.

A: One operator reached the cap early and arranged for temporary transfer with another company in order to get to the end of the year. Another operator explained that east end allocations can be used anywhere in the Canyon, but the west end allocations cannot.

Q: Is similar data available for the period 1987-1990?

A: Norm answered that the 1996 rulemaking established the reporting requirement for air tours.

Q: Are waivers for the SFAR included in the chart?

A: Paul Joly answered yes.

Volpe Re-Runs: Cyndy Lee:

*East End hourly:* Cyndy presented the results of a run for an hourly analysis of a 10 hour day for east end tours, designed to see benefit or change in the contour area.

*Air Tour Related:* An air tour operator suggested that these charts should also be prepared for different part of the canyon. None of the air-tour related flights impact the east end. The blue direct flights only impact a piece of the Canyon. "We don't want people to come away thinking that the curfew isn't observed on the east end," he added.

Another operator elaborated, saying it is not so simple. The repositioning flights are empty and part 91 and are therefore not considered commercial. Moving the GA flights to commercial is a parallel problem, where flights are re-categorized based on certain criteria.

Another member observed that a human or an animal on the ground, disturbed by the noise, doesn't know or care what category the plane belongs to. He asked that all low fliers be counted, and that the air tour and air tour-related be combined.

An operator noted that counting air tours alone, or combined with air tour-related changes the result by 8%.

A member pointed out that there are other noise sources. It is important, she added, to talk about different sectors because it is helpful to see what can be regulated with what benefit and how.

A member asked what the impact to the results would be if GA below 18,000 feet (most in daylight) were added. Cyndy answered that because GA corridors are spread over the Canyon, the 50% limit could be violated. She added that she could model the flights in the four GA corridors if she were given the flight tracks and operational data. She could model them based on the corridors, but the more accurate data would come from the actual flight tracks from the constituency. Adding all aircraft, she said, would not change the contour that much, although the intensity of the sound levels would rise and fall throughout the day.

An operator emphasized the importance of having firm standards "for Volpe to shoot for." He suggested removing the repositioning flights from run. Cyndy said there is not a detailed hourly analysis for different types of air tour flights. She could show the east end late in the day when the air tours would have tapered off.

A member expressed interest in hourly numbers comparing all aircraft in the east end and the west end. Another asked about using hourly ambient numbers. Cyndy answered that the contours could change slightly depending on time of day. An FAA representative warned that hourly analysis is possible, but very costly in terms of time and money. In light of the requirement to include All Aircraft, an hourly analysis during daytime hours wouldn't yield new information.

The Hualapai representative was interested in wildlife counts in these noise-impacted areas. He acknowledged that the west end is noisy, and that this is the hub of the tribe's tourism venture. The concentration is at Grand Canyon West because there are culturally significant canyons in other areas where development is not possible. The tribe is committed to the GCW venture, which will include air tour activity.

The group had questions about numbers of visitors, hikers, and boaters in the Canyon. All that information is in the Colorado River Management Plan and on the NPS website.

**Evaluating Proposals:** Lucy suggested a process for beginning to discuss the proposals. She acknowledged the problem of beginning to evaluate with the high altitude flights still unresolved, but she urged the group to at least begin to respond to each other's ideas and look for areas of easy agreement. Another "elephant," she acknowledged, was changing definitions. She guessed that different members of the group might push to revisit definitions but that consensus on how they should be changed would probably be very difficult.

A member asked NPS if the agency believed it was feasible to achieve substantial restoration of natural quiet, as defined, by April 2008 without changing the law? Karen answered yes, it would be difficult, but might be possible. She added that NPS agreed to this process as an alternative to unilateral action by the agencies. They felt there was potential for significant improvement working within the existing law and parameters, and that everything was on the table.

An operator expressed concern that PL 100-91 cannot stay on the books as it is, because the definition of substantial restoration could change with a new Park superintendent or a new Secretary. In his opinion, legislation is 99% certain, "but we're not there yet." He added that air tour operators will not "take the hit for GA, and that's non-negotiable." Another operator suggested that the legislation decision does not have to be made now. He added that the group should not be timid about going to congress when the time is right, if they have reached consensus on the message.

A member raised concerns about the amount of work expected of the GCWG in evaluating NEPA proposals, a task she felt belonged to the agencies. She doubted her organization could support her in that level of work. This was a decision, Lucy said, for the group to make. They could take on, or defer to the agencies, however much evaluation they wanted. Tina added that NEPA does not require a multitude of proposals; there could be one proposal from this group, in addition to the No Action Proposal and the 2000 FSEIS Proposal (see above).

Some felt it was premature to evaluate the proposals at this meeting. Others were eager to at least exchange first impressions about the proposals. Two members volunteered to "say nice things" about the other's proposal. The question of whether or not to allow this level of reaction was offered for consensus. Consensus failed. This initiated a discussion of motives on the side of operators and environmentalists for opposing or supporting the evaluation of proposals. There was frustration on both sides. Operators and others felt pushed into discussions when key issues – like high altitude commercial and definitions – have not been resolved. Environmentalists and others suspected a stalling strategy, and saw no reason not to at least begin exchanging ideas, without any decision-making.

A member recommended facilitators develop a new process for talking about the proposals for the next meeting, "where we do something other than eat, sleep, use the facilities and sit around this table." Some suggested interest-based negotiation training for the group, or some other exercises for practicing negotiating. Another mentioned shuttle diplomacy, where the mediator goes between parties in different rooms. A member suggested that a small group work in parallel with the larger group to evaluate proposals and move them to the next level for consideration by the larger group. She also suggested it might be productive for the GCWG to meet without the agencies for all or part of a meeting. She thought there might be different dynamics and perhaps more creativity without the constraints of the agencies' obligations at the table. "NPS and FAA are on the hook. They have to do something regardless, and that puts them in a different position from the rest of us." Another member recommended that the BIA be represented in these discussions.

A Navajo chapter representative expressed disappointment that Window Rock was not present at this meeting, and committed to making contact with the central office on the subject of the proposals. Another tribal member urged that the Navajo President's office be involved, as well as the assigned cultural affairs representative.

Additional Proposal: Charlie Vaughn: Charlie presented a proposal which represented the thinking of the Hualapai, Navajo and Havasupai representatives at the meeting.

- Before any proposals to move air routes are considered, they must reflect proposals that are a result of the consultation process.
- Hualapai, Havasupai, and other tribal administrative flights for assessment of springs, wildlife, and cultural sites are exempted.

- Prior to tribes meeting for consultation on this issue (April 19-20), tribes will meet to identify common issues by teleconference or otherwise. Navajo has more complex governance, so Gap-Bodaway and Cameron chapters will work with Marklyn Chee to take chapter concerns to the President's office, so that an overall Navajo position is created.
- Traditional use areas must be assessed for impact. Tribes are concerned about the impact of hikers and boaters on traditional use areas, some of which lie outside tribal boundaries.
- Tribes reserve the right to expand this general proposal based on consultation regardless of the scoping deadline.

**Wrap up:** Before adjourning the group looked at the documents generated during the meeting:

- consensus items (beginning of summary)
- task list (following summary)
- data needs (following summary)
- parking lot (following summary)
- matrix of proposals (contact Tahnee Robertson, [tmr5@cox.net](mailto:tmr5@cox.net) for a copy)

They reviewed and reached agreement on the data needs. (All documents were sent to members immediately following the meeting.)

The group agreed that further modeling runs should follow the same process as before: the screening committee (Lynne, Dick, Alan, NPS) reviews, refines and prioritizes requests and forwards them to the GCWG and Volpe.

**Next Meeting:** Members were unable to find dates for the next meeting. The decision was left to the co-chairs. Meetings will be set at least two into the future for more security.

Summary prepared by Lucy Moore Associates. Please contact Lucy with any comments or corrections. 505-820-2166, or [lucymoore@nets.com](mailto:lucymoore@nets.com)

Grand Canyon Working Group  
**Fourth Meeting, March 20 – 22, 2006**  
 Las Vegas, Nevada

**Task List**

<b>What (* indicates tasks from previous meeting)</b>	<b>Who</b>	<b>When</b>
Section 7 Consultation on endangered species, iterative process beginning with tasks from previous consultation	Bill, NPS, FAA	Ongoing
Prepare INM 6.2 Modeling Workshop Report for website, with cover sheet*	Lynne, Cyndy, Steve May	asap
Provide grid point noise analysis (table and map) to GCWG*	Cyndy	asap
Provide noise analysis to GCWG in metrics other than percent audibility*	Cyndy	asap
Tribal consultation – pan-tribal meeting, followed by individual tribal consultations as needed	NPS, FAA	April 19 - 20 Pan-tribal mtg, with individual consultations
Website Documents Posted from Las Vegas meeting	Tahnee, Lynne, Steve	Asap
Send draft summary of Las Vegas meeting to members and alternates	Lucy	By May 19
Send INM 6.2 to participants, advance copy to Elling, plus 16 baseline scenarios	Cyndy	asap
Facilitators develop process for discussing and evaluating proposals at next meeting	Lucy, Ed, Tahnee, in consultation with members	By May 12
Navajo – Central government and chapters work on representation as a single seat at the table	Marklyn, Teddy, Dorothy, others as needed	Asap, by next meeting
Arrange for presentation on overflights to Havasupai leadership	FAA, Roland, Edmund	As convenient
Set date, time, location for next meeting	Lynne and Karen	Asap, by April 3
Draft agenda for next meeting	Lucy, with Lynne and Karen	By May 12

<p>High Altitude Sub-group meeting(s) to learn, in more depth, whether or not it is practical to move any high flying aircraft from over the GC. <u>Caveats:</u> will not be making decisions or specific recommendations about flight tracks; will not affect National Airspace System</p>	<p>Jim McCarthy Sarah Falzarano Katherine Andrus Paul McGraw (ATA Air traffic specialist) Dick Hingson Lynne Pickard Charlie Vaughn, or other representative Heidi Williams, or other representative Mike Loghides (LV airport)</p>	<p>Asap, before next meeting</p>
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<b>Data Request</b>	<b>Who</b>	<b>When</b>
<b>Air Tour</b>		
Run “noticeability” for air tours (and air tour related) only over whole park - <i>Already in the works</i>	Cyndy	#1 priority
Number of QT aircraft and non-QT aircraft; number of flights on peak day QT and non-QT	Norm	Now
More data on caps, by company Is this data available to the working group?	Eric	Next wk
Hourly numbers of flights by east/west, peak day, for all AT aircraft	Norm	Next wk
Intensity data on noise - air tours, commercial	Cyndy	2 wks
How does dropping Dragon 2000 ft affect % time audible? (from Elling’s proposal) – <i>submit to screening committee</i>	Cyndy	
20 mile corridor (from Elling’s proposal, Rec. 12 [b][3]) – <i>submit to screening committee</i>	Cyndy	
Any other requests for Volpe runs from other proposals – <i>submit to screening committee (w/ consideration for cost)</i>		
<b>GA</b>		
GA survey data to group	Heidi	
<b>On the Ground</b>		
People day use – river (22,000 recreational users), trails (30-40K); will have day use numbers in a few months	Jeff	
Acres in NPS figures – white and green areas on NPS maps	Ken	
Wildlife – determine audibility, and then effect on, wildlife species	Ken, Bill Kurt, Jeff	
Other surveys from other parks re drought and behavior?	Karen	
Impact on traditional use areas w/in and outside of reservation boundaries <i>Section 106 consultation process</i>	Tribal members	
<b>Other</b>		
ATA Glossary – <a href="http://www.smartskies.org">www.smartskies.org</a> , “glossary”, or read Code of Regulations (CFR) 14, Part 119	Ask Katherine for copy if interested	Now

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NPS administrative flights, 2005 or peak day 2005 data	Ken
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Move Lipan jet point __ nautical miles	
<i>Submit to high altitude work group</i>	

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SDAT Program	
<i>High altitude work group to discuss</i>	

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**Parking Lot Items – May need to be revisited at next meeting**

The Congressional Letter – The agencies had not prepared a letter to the congressional delegation, and there was a feeling that this could be delayed until there was something significant to report.

Section 7 Endangered Species Act Biological Opinion – There were questions about the timing of the B.O. with respect to this process.

Further classification of flights – There was discussion about the difficulty of classifying flights in terms of their certification and their function (commercial for hire, or not) on any given flight. The subject was tabled. Such classification may not be relevant, or if it is, the group will need more information.

Use of term "% restored" – Some prefer the term "improved" to "restored."

Time and compression algorithm for high altitude flights – The group noted that there is no algorithm for high altitude flights that accounts for time compression, as there is with overflights.