

**Grand Canyon Working Group
Third Meeting
January 31 – February 2, 2006
BIA Offices, 12th Floor
Phoenix, Arizona**

Summary of Discussion and Agreements Reached

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

Members Present:

Lynne Pickard, FAA, Working Group Co-chair
Jeffrey Cross, alternate for Karen Trevino, NPS, Working Group Co-chair
Katherine Andrus, Air Transport Association [First day and a half]
Bill Austin, US Fish and Wildlife Service
Marklyn Chee, alternate for Alan Downer, Navajo Nation
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
Leigh Kuwanwisiwma, Hopi Tribe [Day One and Two]
Cliff Langness, King Airlines, Inc. and Westwind Aviation
Doug Nering, Grand Canyon Hikers & Backpackers Assoc.
Jim McCarthy, Sierra Club
Alan Stephen, Scenic and Grand Canyon Airlines, Inc.
Rick Eisenreich, alternate for John Sullivan, Sundance Helicopters, Inc.
John Timmons, Air Transport Association [Second day and a half]
David Yeamans, Grand Canyon Private Boaters Association
Charlie Vaughn, Hualapai Tribe
Heidi Williams, Aircraft Owners and Pilots Association

Superintendent's Chair:

Joe Alston, Grand Canyon National Park

Member/Alternate Absent:

Roland Manakaja, Havasupai Tribe (spokesperson Mike Shiel presented on Day Two)

Summary of Agreements: During the meeting The Working Group made the following decisions by consensus. These agreements are also found in the body of the meeting summary, as they occurred.

***Consensus:** Anyone who is not a member, alternate or staff person must receive approval from the GCWG prior to being added to the agenda for a presentation. In preparing the agenda, Lucy will poll members and alternates by email if time for a presentation has been requested. If there are objections, the presentation may be made during the observers comment period.*

Consensus: Meeting summary from the second meeting was approved without change.

Consensus: There was consensus that the Grand Canyon Working Group will use the INM 6.2 noise model as it deliberates and makes recommendations.

Consensus: In order to determine a fair and accurate calculation of commercial air tour noise, given the 10-hour operating day in summer in the Dragon and Zuni corridors, Volpe will re-run the data first averaging the data for Dragon and Zuni operations over a 10 hour period, and second looking at the data hour by hour.

Consensus: The agencies will prepare a letter to appropriate members of Congress concerning the GCWG. A draft will be distributed to group members for review and comment. The letter will state that 1) the group has agreed to use the INM 6.2 model as it develops recommendations to address overflight noise at Grand Canyon, 2) the group is working well, but needs more time to develop recommendations, 3) there is a public NEPA process underway that is coordinated with the GCWG timeline and scope of work, and 4) the group will update the delegations when there is something significant to report..

Consensus: The group agreed on a process for bringing requests to Volpe for additional model runs. Any member may submit a proposal by sending it to Lucy who will forward it to the screening group (Lynne, NPS, Dick, and Alan) for evaluation, refinement and prioritization, and to the GCWG for review. The screening group will bring in other members or staff as appropriate depending on proposal specifics. The screening group's request to Volpe will then be distributed to the GCWG.

Consensus: There was agreement on Lucy's participation in the NEPA Scoping process. She will attend each of the three scoping sessions for the purpose of 1) answering questions about the formation, purpose and role of the GCWG; 2) assisting with communications between poster presenters and members of the public; and 3) consulting with poster presenters prior to the first meeting on communication skills.

DAY ONE:

[All presentations made by NPS, FAA or Volpe staff during the three day meeting are posted on the website: overflights.faa.gov]

Welcome and Introductions: Lucy Moore welcomed everyone to the third meeting of the Grand Canyon Working Group. She introduced her colleagues, Ed Moreno and Tahnee Robertson and explained that the three would be sharing the responsibilities of facilitating and recording the meeting.

Group members and alternates, agency staff and observers introduced themselves.

Agenda Revision and Approval: Two topics were specifically added to the overview section at 11:10 Wednesday morning: an update on the McCain letter and response, and the NPS presentation on the multi-zone approach.

Members questioned the addition to the agenda of the presentation by SATH (Society for Accessible Travel and Hospitality). Some felt that the constituency was an important one to hear from; others felt it was not representative of all handicapped visitors to the Grand Canyon. The group agreed to re-label the SATH presentation "Observers Comment." They also agreed on a process for consideration of presentations from those outside the GCWG.

***Consensus:** Anyone who is not a member, alternate or staff person must receive approval from the GCWG prior to being added to the agenda for a presentation. In preparing the agenda, Lucy will poll members and alternates by email if time for a presentation has been requested. If there are objections, the presentation may be made during the observers comment period.*

Meeting Summary: The summary from the October 26 – 27, 2005, meeting at Tusayan had been distributed to members and alternates in late November. The summary was approved as written, and will be posted on the website.

***Consensus:** Meeting summary from the second meeting was approved without change.*

Scope of Work and Timeline: Lynne reviewed the Scope of Work and Timeline, as distributed at the first meeting, and updated the group on several process issues. She apologized for the delay in the Noise Analysis, which she had hoped to distribute by the end of December. Causes for the delay were: 1) securing funding to enable Volpe to finish the work; 2) difficulty in obtaining numbers for military flights, and 3) the need to prepare a narrative to make the analysis more understandable.

The NEPA process has begun, and public scoping sessions are planned for February 21, 22, 23 in Phoenix, Flagstaff and Las Vegas. The public will be asked for any ideas or alternatives that might help the agencies substantially restore natural quiet to the Grand Canyon. GCWG members and alternates are encouraged to attend the scoping open house sessions and make comments. It is understood that they will be participating as individuals on behalf of their constituents, not on behalf of the Working Group.

NPS and FAA staff have worked hard to initiate the process in time for the results to be considered by the GCWG during its alternatives development phase. The Draft EIS is anticipated for Fall 2007; the Final in early 2008. The role of the working group will be to generate NEPA alternatives for the agencies to consider, and to assist the agencies in the evaluation of those alternatives. In answer to a question, the agencies said that the work of the GCWG will be the foundation for the final overflights plan for Grand Canyon, not an interim plan. Eleven affected tribes are being invited to be cooperating agencies in the NEPA process.

Tribal consultation also begins in February, in order to enable the GCWG to include any tribal constraints or requests in its deliberations. Letters initiating tribal consultation were sent January 30, 2006. In answer to a question, Jan Balsom answered that the BIA is copied on all tribal correspondence but usually does not participate in the consultation process. (More on tribal consultation on Day Three)

The US Fish and Wildlife Service Section 7 consultation is triggered by the NEPA alternative, but a consultation, initiated in 2000 and never completed, will be addressed first. The Section 7 consultation is not a public process. Endangered species issues will be integrated into GCWG deliberations as appropriate.

The FAA has issued an extension of the current air tour rulemaking deadline in order to preserve the status quo during the life of the GCWG. The extension applies to the east end.

Report on Modeling Workshop, January 19, 2006, Cambridge, MA: Cyndy Lee of Volpe summarized the content of the modeling workshop, offered to GCWG members who were interested in learning more about how the INM 6.2 noise model works. Group members Dick Hingson, Alan Stephen, Elling Halvorson, and Charlie Vaughn attended, as well as NPS staff Ken McMullen and Kurt Frstrup, and Greg Price (JR Engineering). The model was demonstrated using theoretical numbers – not numbers reflecting any actual day. In addition, to facilitate testing various modeling sensitivities in overnight runs, the model was run on a lower refinement and lower resolution terrain, and there were other differences from the actual current condition noise analysis.

Attendees learned how the model performs and requested certain sensitivity runs, including changing all fixed wing and helicopters to quiet technology. They also ran 25% contours, and saw how the model deals with sensitivity to ambient sound and to line-of-sight shielding. They were able to see how changes in routes, speed, altitude and terrain affected the cone of sound on the ground, the time audible and the intensity of the sound.

With its distribution to the members, alternates and observers, the workshop report is now public. However, members urged anyone who shares this internal working document with a wider audience to emphasize that the numbers and results do not reflect the current condition at Grand Canyon. Cyndy's workshop report will include a cover sheet that emphasizes the theoretical nature of the runs.

There was a request that the GCWG not equate audibility and detectability, since technically they have different meanings. The agencies explained that historically they have used the terms interchangeably to describe sounds audible to a human, and they asked that the group accept this for the purpose of this work.

Questions: [answers provided by Volpe and FAA]

Q: What was the impact of switching out conventional planes to quiet technology? Would adding helicopters produce a cumulative result?

A: Replacing all fixed-wing aircraft with DHC6QP (DeHavilland Twin Otter DHC-6 with Raisbeck modifications, i.e., Vistaliner) in the test case resulted in a decrease of 1.7% in the contour area. Replacing all rotary-wing aircraft with EC-130 (Eurocopter EC130) in the test case resulted in a decrease of 5.3% in contour area. Note: The change in area affected was greater when replacing rotary-wing aircraft because a greater number were replaced as compared with fixed-wing aircraft.

Q: Does the model show different perceptions on the ground of what is being heard?

A: The result is not subjective; the model would determine only what is audible.

Q: Did the model account for line of sight and ground attenuation?

A: The model run at the workshop accounted for the defraction of sound that would travel around a butte, for instance, but did not account for the complex reflections of sound from canyon walls, bottom, etc. The model does not account for over the ground attenuation (shrubs, brush, etc.), but assumes hard ground, over which sound travels further. Some were concerned that this lack of consideration, particularly on small slopes, could make a significant difference in results. However, the model parameters used were based on agreement with prior field measurements.

Q: What was the impact of changing flight tracks, speed, and altitude?

A: By compacting the area of flights, the amount of time audible may increase.

A: If the air speed increases, the sound is heard for a shorter amount of time, but it can be higher decibel.

A: In raising the Dragon Corridor altitude for helicopters, the cone of audibility was greater, covering more area; lowering the altitude resulted in a smaller area of audibility and an increased level of sound.

Q: What is the ambient level at night? Does ambient include non-aircraft man-made sounds?

A: Daytime ambient is typically higher and can mask more aircraft sounds; nighttime ambient might not. To model nighttime noise, the ambient is switched out.

A: NPS provided all ambient data for the model runs.

Q: Why weren't commercial aircraft modeled?

A: The run times are very long, and a run with all aircraft types was not requested.

Q: Has the model looked at the noise condition prior to the introduction of quiet technology aircraft, to determine the amount of reduction that has already been accomplished?

A: No, but it could if the Working Group wants to.

Those attending the workshop said they gained confidence in the model. Some felt that FAA staff (specifically Paul Joly) should have been present. FAA responded that FAA staff that do noise modeling did not need training on the model, and that Paul Joly did not attend because he does not perform noise modeling. Working Group members voiced support for the model. One member said that the model seems to have addressed most of the flaws in the 1997 model, giving him confidence. Another said the model was good enough for the purposes of the work of the GCWG, but he still had reservations about its exclusion of complex ground attenuation conditions, e.g., canyon reflections. There was agreement that the model provides the best available science at this time, and that it should be accepted, if not embraced.

Consensus: *There was consensus that the Grand Canyon Working Group will use the INM 6.2 noise model as it deliberates and makes recommendations.*

Noise Analysis of Current Conditions: Presentation: Cyndy Lee of Volpe distributed a report on the Grand Canyon preliminary noise analysis and gave a slide presentation. Below is a summary of the discussion following the presentation.

Variables: There was some concern that there are many variables that cannot be accounted for in the model. The model must make many assumptions – for instance, all the tours were in a certain corridor – which cannot be proven. (Operators tell us that although there is a half-mile deviation allowed from the route to accommodate certain conditions, most flights take the center course of the route.) Volpe could adjust the routes if the Working Group provides the specific information on how much variance to apply. Comparisons between the output of the model and results of measurements on the ground showed a +/- 4% variable. The 4% uncertainty in percent time audible was translated into an uncertainty in park area. After doing so, it was determined that the model uncertainty for this study was approximately 2% (plus or minus) for the air tour scenarios. In conclusion, in accordance with the FICAN report endorsing the model, these uncertainties have been accounted for since the 4% uncertainty between observer measured and modeled data included the range of uncertainties.

Air tour schedules: Because air tour schedules vary greatly from day to day, the model distributes the number of flights over the day, then applies an empirical algorithm based on field measurements to account for overlapping events.

Military flights: Only non-tactical military flights (e.g., repositioning flights) are captured on the FAA radar system. Most of the military flights over the Canyon probably are tactical. But military aircraft are captured when flying in the national airspace system and on an IFR flight plan, so anything over the Canyon should be captured.

General Aviation: There was discussion about the make up of the model's General Aviation category, and some confusion about the numbers of GA flights that should be included in the high altitude commercial category. The GA versus commercial categorization is still under review by FAA. Although the data that Volpe used included all GA flights captured by FAA's ETMS database, regardless of altitude, the assumption has been that most of the contribution comes from corporate and business jets, over 18,000 feet, and some at altitudes over 35,000 feet. These are aircraft that filed a flight plan. There is currently no data available on the contribution from the Bonanzas and Cessnas flying VFR at low altitudes. These smaller aircraft are not thought to be significant because of their low numbers, their low noise levels, and their altitude (lower cone of sound, hence smaller area impacted). Also, small planes tend to stay away from the four-mile wide Canyon corridors in the summer afternoons because of the turbulence. Grand Canyon Airlines, the only purveyor of fuel at the Park, sells only 3% of its supply to GA. But the group acknowledged that there are many assumptions and few facts. There is a need for more information about this segment of aviation that is not yet counted. NPS and FAA legal counsel agreed that the analysis should rely on more than the anecdotal information offered at the meeting. Heidi Williams and John Dillon offered to survey GA pilots to obtain more data.

Gridpoint Analysis: The group wants to see the detailed tables and maps of the 100+ gridpoints calculated by Volpe. Some members saw apparent inaccuracies in the powerpoint presentation with respect to certain points. Cyndy said the gridpoint analysis is still being worked on and will be shared with the working group for review when it's finished.

Commercial: FAA Air Traffic Enroute staff Robert Novia offered perspective on the scale and consequences of moving commercial airliners away from the Park. Although the peak day (a Monday) included over 1,200 daytime and over 400 nighttime commercial flights crossing the Canyon airspace, the busiest days for airlines are Wednesday, Thursday and Friday. Most of the planes fly between 24,000 and 40,000 feet. Military special use airspace mostly tops out at 18,000, allowing commercial aircraft to fly over the top of it, except over certain restricted areas, like Nellis Air Force Base or White Sands. At peak times, the airspace is saturated with the maximum number of jets traveling 500 miles per hours that can be handled by air traffic control. Traffic capacity puts a cap on the number of planes that can fly in a given corridor, so that moving tracks inevitably causes a ripple effect throughout the national airspace system (NAS). In addition, shifting a track a few miles results in loss of efficiency, both in time and fuel costs. There are also crew scheduling and gate utilization concerns if commercial flights were spread out over different periods of the day or night.

Ground-based navigational aids are important and are very expensive to move. A member asked if they were ever forced to move because a landowner refused to renew a lease. This has happened.

High altitude commercial and GA share routes and are managed together. If FAA Air Traffic moves a high altitude commercial route, GA would go along with it. High altitude GA routes are not independent and can't be moved independently from commercial routes.

Major airspace redesign does happen. The 2003 terminal procedures redesign for Las Vegas is still in progress; Omaha redesigned in 2004; a major EIS on Southern California airspace redesign has begun, but is held up by lack of funds. The Las Vegas anticipated changes focus on the airspace near the terminal area and should not affect the Canyon.

A member suggested that there might be minor changes in the commercial system that could make a difference to the Park. He also noted that the Overflights Act of 1987 did not mention cost as a factor in achieving substantial restoration of natural quiet. If changes were proposed, all applicable laws would need to be adhered to, including NEPA, which would look at environmental impacts from additional fuel burn, as well as socio-economic impacts. FAA will analyze impacts on the national airspace system of any proposed changes.. An NPS official also mentioned the precedence that could be set if one national park closes its airspace. Air traffic route changes for noise reduction are done to reduce significant noise of arriving or departing aircraft in an airport vicinity, but there is no precedent for enroute airspace changes to address audibility of aircraft noise. Members asked about restrictions over Washington, DC, or Salt Lake City during the Olympics, or other special cases where airspace is restricted. In general, temporary flight restrictions for security and safety are for 24 hours or less, and only apply to aircraft under 18,000 feet. They almost never affect commercial carriers.

A member asked if there were any possible changes that *could* be made. Robert answered that he was not prepared to say. Could, for instance, the placement of Las Vegas pitch and catch points (200 miles north and south of the Park,) benefit the Park? Another member noted that the tracks map showed relatively few tracks east to west the length of the Canyon and speculated that there might be room to move some tracks north or south of the Canyon.

Robert pointed out that bad weather shifts routes in those directions on any given day. Changes around terminals might have the least impact on the NAS, he added.

The group learned of Las Vegas' rapid growth, and its potential impact on aircraft noise at the Canyon. Every new hotel room in LV generates 321 airline seats per year. By 2011, McCarran Airport will reach full capacity, and in 2017 a new supplemental airport could be operational. The Draft EIS for the supplemental airport was released in December.

The Los Angeles Enroute Center -- one of 20 in the country -- controls the airspace over the Park. Two other centers have jurisdiction just east of the Park. A member requested a map showing the centers.

There was discussion about the size and configuration of the box drawn on the presentation map shown by Robert Novia and Tina Gatewood to capture flights crossing Grand Canyon. FAA's presentation of commercial flights captured a 5-mile box around Grand Canyon park boundaries. All commercial planes flying at and above 18,000 feet were captured as they enter the box, although some may fall below 18,000 feet as they leave the box. For the noise modeling of overflight activities, Volpe captured all flights within a rectangular block of airspace extending 20 nautical miles from the park boundary based on an estimate of the range of aircraft audibility. NEPA and Section 106 analyses require examining the area of potential effect, so *that* box of analysis may be different. Cyndy emphasized that the box determines the data input, but does not change the result of the modeling, i.e., flights that are not audible do not add to the calculation of noise. The area modeled does not have to be a box shape, but the more irregular the shape the more time and effort to model. The group felt it was important that the box be consistent with the SFRA boundary.

Stage 4 noise standards apply to new design aircraft over 75,000 pounds. Noise certification standards are based on specified measuring points for aircraft take-off, landing, and sideline noise.

The representative from the Private Boaters Association said his organization doesn't receive a lot of comments from its constituents on high altitude flights; they seem willing to accept the reality of the high commercial flights.

The Hualapai representative expressed concern that the noise analysis does not reflect the visitor experience as many visitors are engaged in activities and would not be attentive listeners. Thus, the modeling results show higher levels of audibility than people would report and may be biased against Hualapai economic development.

The group mentioned additional information that might be useful about commercial aircraft, including: traffic patterns, peak day and season, difference between peak and slow days, weather impacts, growth forecasts, etc. The ATA representative said we need to distinguish aircraft noise by more than percent time audible, and this will be provided by Volpe.

The group noted the lateral dispersion of the commercial tracks. FAA explained that pitch and catch points allow pilots (at a certain distance from the terminal) to "free fly" between points for higher efficiency. These grid point locations can be found in the 2000

Supplemental Environmental Assessment. [This document can be found on the website: overflights.faa.gov.]

(Discussion of the Current Condition Noise Analysis continued on Day Two.)

DAY TWO:

Member observations on the Noise Analysis: The morning of the second day, each member volunteered thoughts on the presentation and discussion of the day before:

- The process is dynamic and all parts of the noise picture are interconnected.
- The Park seems largely restored to natural quiet, except for the commercial contribution.
- Air tour operators are still interested in looking at things that can be done. They are pleased with the air tour progress on substantial restoration.
- There are still outstanding issues, like peak day.
- The model has provided very valuable information.
- The model is a very significant achievement – congratulations.
- Modeling has vastly improved in recent years.
- It was a long process and much effort to get the model where it is today; the inadequate models of the past were the root of a lot of problems; many thanks to Volpe and agency staff.
- The endorsement of the model (as individuals and as a group) is critical to this process.
- The commercial situation is very confusing.
- It is a pleasure to work with this group.
- Impressed with good will and commitment within this group.
- There is a willingness to give and take within the group.
- Seems as if the rhetoric is behind us.
- Impressed with the intelligence and sensitivity of the group.
- Getting to know each other and our interests was important; now it is time to work.
- Contour maps, showing 5% to 100% time audible would be very valuable in order to pinpoint specific sites for protection.
- It is time to revisit the air tour routes, with the goal of increasing the quality of experience for visitors both on the ground and in the air.
- It is time to get specific.
- Look at the time sensitivity of air tours with respect to how the INM allocates them throughout the day; the algorithm needs clarifying.
- Surprised that commercial flights within the "box" are controlled by one air traffic control "block" out of LA.
- Although there are costs associated with changes to the National AirSpace System, FAA does have a process for doing it.
- Important that we all keep humor alive in the group.
- Some, like the Hopi Tribe, come to the table with limited resources and technical expertise, limiting their ability for independent analysis of data and proposals. They must rely on the model and the analysis of others, putting them at an automatic disadvantage. The Tribe hopes that the consultation process will enable them to

participate at a technical level, beyond the cultural resource issues that are usually the focus of consultations.

- The Hualapai Tribe asked to have their posters included in the Scoping sessions.
- Some gridpoint analysis results in Cyndy's presentation look inaccurate.

Additional Discussion on the Noise Model:

Members identified areas of action that may or may not lend themselves to beneficial changes to the current system. They need to know the details and parameters for system components like the curfew, number of tours, altitude of tours, routes, kind of aircraft, impact of quiet technology, etc.

Members are interested in understanding better the time sensitivity of air tours and commercial flights. Are there variations during the day and night that would suggest possible changes to benefit natural quiet? What benefit in time audible might result from moving air tours or commercial flights a certain distance from the Canyon rim? What if the model analyzed the air tours by hour, instead of spread evenly throughout the day? Volpe was asked to present some results of the time audible grid point analysis. Several points were presented, but Volpe is still doing going through the results and will send a draft to the Group as soon as possible.

Members need to know the current impacts to wildlife, and potential impacts if changes are made in the air tour schedule or routes. The USFWS is interested in seeing data on species masking, the impact of noise on different species.

Discomfort remains with some members over the issue of audibility versus noticeability. They believe there is an inherent bias in the model because audibility does not reflect the visitor's reaction to various sounds. NPS explained that the law and the courts upheld their authority to define the term "substantial restoration of natural quiet."

There was discussion about the inconsistency in the definition of day as 12 hours and the fact that air tours operate fewer than 12 hours in the Dragon and Zuni corridors (10 hours during the summer peak day). This curfew applies to the east end only. Members need to know the degree of difference in model runs caused by that discrepancy.

Consensus: In order to determine a fair and accurate calculation of commercial air tour noise, given the 10-hour operating day in summer in the Dragon and Zuni corridors, Volpe is asked to re-run the data first averaging the data for Dragon and Zuni operations over a 10 hour period, and second looking at the data hour by hour.

Presentation by Havasupai: The Havasupai Tribe, a member of the GCWG, requested time on the agenda to address the group, since they did not attend the last meeting where members presented their needs and priorities. Mike Shiel, attorney for the tribe, spoke on their behalf. He described a timeline beginning in the year 1000 AD with Lief Erikson's landing on the continent and identified various milestones in the colonization of the continent by Europeans. This was to illustrate that throughout this period the Havasupai never moved from their current location; the Canyon is their home and they cannot exist elsewhere.

The reservation currently includes 187,000 acres (less than 10% of their original homelands), and they have access to an additional 93,000 acres of Park lands for gathering paint material and plants. By 1975 Havasupai members had given up their winter custom of living and roaming the two million acres above the Canyon, and were living year round in the village at the bottom. Directed by Congress, the Tribe and the Interior Secretary created a Land Use Plan that established this territory, as well as two significant areas where non-tribal members were forbidden. A tribal resolution of 1997 prohibits air tours from tribal lands. Mr. Shiel hastened to add that the tribe has many friends in both the air tour and environmental communities.

At the request of GCWG members, Mr. Shiel agreed to provide the group with a map showing the boundaries identified in the 1975 Land Use Plan. Also in answer to a question, he said that the tribe had no official opinion on commercial flights crossing the Canyon.

Introduction of Navajo staff: Marklyn Chee, alternate for the Navajo Nation representative on the GCWG, introduced staff members from the Nation's Historic Preservation Department. Tony Joe, Program Manager for Cultural Programs and Ron Maldonado, with the Cultural Resource Compliance Section, spoke briefly about their responsibilities. Mr. Joe is responsible for Section 106 (National Historic Preservation Act compliance on off-reservation sites, and Mr. Maldonado is responsible for compliance on reservation lands. Over 1,400 archaeological surveys have been completed within Nation boundaries.

In answer to a question, the Navajo representatives explained that chapters, like states in the U.S., have some degree of self-governance. But they must abide by central government laws and regulations to protect natural and cultural resources. The Nation has its own departments, similar to the federal US FWS, EPA, etc.

Marklyn reminded the group that the Hopi and the Navajo are in dispute over certain lands with cultural significance in the Zuni corridor.

NPS Presentation on Multi-zone Approach: Jeff Cross offered background on the presentation. At the end of the last meeting, Karen Trevino had suggested the group consider using a multi-zone approach instead of dual zone. The group asked for: 1) more details in writing in order to understand the approach; and 2) an opinion from NPOAG, its parent group. NPOAG, too, requested more detail in writing, and concluded that it was premature to make any judgment on which approach to use. After internal discussion, NPS decided it was not ready to produce a White Paper, but would be able to present its concept at the GCWG meeting.

Jeff explained that NPS would like to see acoustic zones that match management zones on the ground. NPS long range goals are to have areas where there is less noise more of the time, and where there is less fragmentation in terms of space and time. He emphasized that these zones are part of the Park's objectives, but that there is no intention of assigning noise standards to these areas. These zones would not result in a change of the definition of substantial restoration of natural quiet. During the consideration of various alternatives, NPS hopes that the group will consider these additional objectives for the Park, just as it will consider the objectives of other members. Objectives would include reducing noise in wild and primitive areas of the park—about 87% of the park. Joe Alston commented that the

success to date has been the removal of air tour noise from areas where the most people are in the park, and he would not want to move noise back over more people. Jeff said NPS wants to have a viable air tour industry in the park.

Air tour representatives were concerned that the multi-zone approach anticipated a future with no air tours, since the goals are to increase quiet in both wild and primitive areas, and in the more populated areas. They pointed out that SFAR 50-2 had already reduced routes considerably and resulted in a 70% improvement. "We've come a long way already," they said, "and we don't want rules changed at the 11th hour." Jeff repeated that NPS is not "moving the goal post," but is interested in finding a solution that helps meet the goal of substantial restoration while addressing the Park's on-the-ground management goals. The Park Superintendent explained that members should not be surprised by these objectives since they were developed in an extensive public process and are found in the 1994 Report to Congress, on page 184. It would be irresponsible, he added, for the Park Service to ignore these objectives in the context of the NEPA process, or the GCWG process. Jeff reiterated that the multi-zone approach is not an alternative to the dual-zone approach; it's an overlay. NPS wants the working group to examine alternatives that address more management objectives.

A recreational representative suggested that all those at the table have objectives or priority zones and ideas for achieving those objectives or protecting those zones. He could accept the Park's preferences in that context, assuming that other priorities are considered as well. Jeff agreed it would be valuable to see members' priorities and preferences mapped in one place. The recreational representative also said that what's happened with air tours over the last 10-15 years has been highly successful. Some air tour corridors are in such primitive areas that they are hard to hike and don't bother people. He doesn't want to move air tour aircraft over where more people are.

Air tour operators will present air tour alternatives at the next working group meeting. There is a lot more to discuss and more information to review before air tour alternatives are thrown around.

1994 Recommendations: In response to a request at the last meeting, Ken McMullen and Paul Joly prepared a handout with explanations for the lack of implementation of some of the recommendations in the 1994 Report to Congress.

Congressional Contact: Lynne and Joe gave an update on the exchange of letters between the agencies and Senator McCain concerning the intent of the 1987 Act with respect to commercial airlines. The agencies have received no answer to their letter of last fall. Lynne explained that she and Joe were bringing the issue to the GCWG because they believe the group should have a role in deciding what approach should be taken. The group agreed on a message they would like to deliver: that they have agreed to use the INM 6.2 model, that they are making good progress, and that they will contact the congressional delegations when there is something significant to report. The group discussed a variety of options including sending a small group to Washington, contacting congressional staffers, establishing an official congressional liaison, and having Joe make informal contact.

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. 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. McCain did not answer at first; when asked a second time, he indicated he expected the working group to negotiate that. Other members questioned the appropriateness of speaking with a member of Congress about GCWG matters without first alerting the group. Jim reassured them that he did not advocate any position. Lucy observed that the Protocols advise members to notify the group before contacting elected officials, the courts or the press. Not to do so may undermine trust.

Consensus: The agencies will prepare a letter to appropriate members of Congress concerning the GCWG. A draft will be distributed to group members for review and comment. The letter will state that 1) the group has agreed to use the INM 6.2 model as it develops recommendations to address overflight noise at Grand Canyon, 2) the group is working well, but needs more time to develop recommendations, 3) there is a public NEPA process underway that is coordinated with the GCWG timeline and scope of work, and 4) the group will update the delegations when there is something significant to report.

Outstanding Issues for Day Three: The group identified issues needing more attention:

- Method for addressing commercial aircraft and high altitude GA separate from air tour and air tour-related flights. They are the “elephant in the room”.
- How does the peak day for 2005 compare to the peak day for 1997, the year that served as the basis for allocations? Is there a relationship between allocations and peak day?
- Potential changes in routes, curfews, caps, altitudes, plane types, etc. for air tours.

The group agreed that the issue of commercial and GA contribution to noise was primary and needed to be resolved before looking at possible changes to air tours. What kind and degree of change to commercial flights would have to be made in order to make a difference in the noise levels at Grand Canyon? Are these changes feasible? Should commercial and GA aircraft be judged against a noticeability standard, instead of audibility? Is legislation the answer?

An air tour spokesperson said that if air tours are looked at separately, natural quiet has been restored. Carla Mattix, DOI attorney, clarified that legally the group cannot segment out air tours and say that natural quiet has been restored.

DAY THREE:

Commercial Flights: The group chose to look more carefully at the "elephant in the room," commercial flights at high altitude. FAA air traffic staff presented information on the management of commercial aircraft in the NAS. They said that moving routes does happen as a result of weather, turbulence, or jet streams, but the consequences are enormous for the system as a whole. Any route changes would require a NEPA process to explore the potential impact on the entire NAS, on the environment, and on the cost of transportation.

Admitting that major change in routes is probably not possible given the impact to the NAS, the group felt that it was important to explore the potential benefits that might accrue, both for the integrity of their process, and for the administrative record. Members suggested several commercial adjustments that might reduce the noise level over the Canyon.

Move routes: With the new "catch and pitch" system allowing flights to connect from one point to another with "free flight" in between, perhaps setting the points in certain locations would draw flights away from the Canyon. The same could be done with corner posts, moving routes 3 – 10 miles to the south.

Prospects for avoiding areas: A member mentioned the new Joint Planning Development Office, that will examine routing airplanes to avoid significant effects on populated areas among other issues. Could this effort also consider re-routing to avoid other key areas? Lynne explained that this plan will govern the next generation of the air transportation system in 2025. It is based on more advanced avionics and satellite navigation that will allow aircraft to separate themselves, instead of depending on ground-based controls. DOI is participating on the steering committee and one of the program's eight goals is to protect the environment including taking a harder look at prospects for reducing overflight noise of special areas like national parks. She added that it is not a silver bullet and because of timing is not available for consideration by the GCWG.

Use "play book" routes: There are alternative routes that exist to give options to both commercial and GA pilots encountering bad weather or other unavoidable problems in the established route. These are called "play book" routes. There are play book routes that avoid the Grand Canyon, but to establish these as regular routes would mean flying more miles and would require a careful analysis of impacts.

Use noticeability standard: Perhaps the use of a noticeability standard for commercial overflights and an audibility standard for air tours would bring the Park closer to compliance.

Higher altitudes at night: Since the commercial aircraft noise is more noticeable at night, and the traffic is much less, planes might raise their altitude for night flights over the Canyon. Volpe responded there is very little noise benefit in raising aircraft altitudes. Aircraft currently seek higher altitudes for fuel savings.

Continuous Descent Approach (CDA): This national initiative is looking at intercepting the glide slope at a high altitude, substantially reducing the throttle. This could be used for approaches from the east to Las Vegas. Planes approaching Las Vegas begin descent at least 100 hundred miles out. Lynne pointed out that CDA is still in a research stage and not yet available for general use.

Restrict growth: Growth in the southwest is resulting in increased air traffic. Las Vegas is responding to its 3.5% air traffic growth rate (compared to 1% nationally) by planning a new airport. Although limiting growth seems impossible, there may be ways of anticipating its impact on noise over Grand Canyon. Perhaps additional Las Vegas flights could be prohibited from flying over the Park, while leaving the current numbers in place.

Redefine the ambient: If the ambient were redefined to include the amount of commercial aircraft noise that we as a society are willing to accept, substantial restoration would be more attainable. A related question is: How much increase in ambient would make a difference? NPS legal counsel responded that aircraft noise can't be added to ambient because the ambient would then not be "natural quiet" under the Overflights Act.

Use of quiet technology: Does the commercial industry anticipate quieter aircraft in the future? Yes, but FAA expects a gradual noise reduction in the commercial fleet, rather than a dramatic drop. There is currently no proposal for another operational phase out of aircraft based on noise, as was done in the 1990's.

Reduce numbers of aircraft: A model run with half as many commercial flights will likely produced an "insignificant" reduction in noise. Eliminating all departures from one airport, like Las Vegas or Phoenix, might make little difference as well. The dispersion of the flight tracks over the entire park mean commercial flights might have to be dropped to between 1% and 10% of the current number to make a worthwhile difference, according to Volpe. GA only has 189 operations, but the dispersion of the flight tracks resulted in 70% of the park having aircraft audible 25% of the day.

The discussion resulted in the identification of potential questions for Volpe:

- How much reduction is necessary to make a difference?
- What benefit could accrue from operational changes to route, altitude, speed, descent patterns?
- What is the contribution of GA, as distinguished from commercial? What exactly does the GA category include? What is the relative contribution of corporate jets at high altitude and small planes (Cessna, etc.) at lower altitudes? (Commercial and GA are linked in the NAS, but for purposes of noise analysis may need to be separate.)
- What impact could commercial route changes have on specific sites in the Canyon?
- What would the reduction in noise be if noticeability were the standard for commercial and GA in the east end? The whole area?

Consensus: The group agreed on a process for bringing requests to Volpe for additional model runs. Any member may submit a proposal by sending it to Lucy who will forward it to the screening group (Lynne, NPS, Dick, and Alan) for evaluation, refinement and prioritization, and to the GCWG for review. The screening group will bring in other members or staff as appropriate depending on proposal specifics. The screening group's request to Volpe will then be distributed to the GCWG.

General Aviation: There was much discussion about the actual amount of noise from GA. For the NAS, commercial and GA are linked; the model, however, is able to separate them. AOPA representative Heidi Williams said that options should consider reductions from all noise sources, and that excluding only commercial aircraft was unacceptable. Members agreed they need for more information on GA. There is anecdotal information that the vast majority of GA planes captured in the model are corporate and business jets flying at high altitude, and that the smaller, low altitude flights are few and have little noise impact, but the supporting data is not there. Few of these GA flights file flight plans, according to Williams,

and their noise contribution is not quantified. They fly at low altitude in certain corridors directly over the Park. FAA staff said that there is no way to quantify VFR flights in those corridors. Williams and John Dillon (Grand Canyon Airlines) volunteered to conduct surveys to gather data on numbers of small planes actually flying over the Canyon.

Peak Day: August 8, 2005 – the peak day for all air tour and air tour related activity – was not the peak day for individual operators or for commercial or GA. Aug 8, 2005, was used as peak day for modeling because it was the day with the most air tour activity, the highest total of air tour flights. Some questioned the validity of assuming that the difference in commercial and GA peak days is insignificant. They suggested it may be necessary to establish three peak days (for commercial, GA and air tours), or have one peak day that includes all aircraft. Another possibility is to take 3 or 4 peak days during the year.

Carla explained the need to be able to justify choosing the same peak day for commercial and GA as for air tours. The assumption to date has been there is minimal variation in the commercial and GA days, unlike the strongly seasonal difference in air tour operations. If there is a significant fluctuation, the rationale of selecting peak day based on air tour peaks may not hold up. Tina Gatewood reported that the peak day for commercial and GA aircraft was not August 8, and there do appear to be more fluctuations in actual operations over the Grand Canyon than in airline scheduling.

FAA and Volpe explained that there is no relationship between the peak day and allocations and caps. The allocation of air tour flights is based on the allowable number of flights in the period May 1996 to April 1997. Total flights in 2005 have not been calculated, but may be near 75,000, or 20% below the allocation year. The industry has changed since 1997, and there may be a better approach to determining both peak day and allocations.

The air tour industry representatives will caucus to further consider issues surrounding the peak day, and report at the next meeting.

Air Tour-related Flights: The model showed 54% restoration if air tour-related flights (transportation and repositioning) are included in the air tour category. If they are excluded, the calculation shows 62% restoration. Some of the air tour-related flights fly at higher altitudes, resulting in a different contour. The group needs more information about the numbers, timing and altitude of the air tour-related flights.

FAA staff, air tour operators and Hualapai representatives will look at the route structure and altitudes for the blue direct flights and explore ways of improving the system.

INM 6.2 Model Training: Those interested in learning to run the INM 6.2 base modeling exercise can contact Gregg Fleming at Volpe for training referrals.

NEPA Process: Grace Ellis gave a slide presentation outlining the NEPA process and showing draft posters for the upcoming open house-format Scoping sessions. The sessions will be from 4:00 – 8:00 pm in Phoenix February 21, in Flagstaff February 22, and in Las Vegas February 23. Over 450 letters announcing the Scoping Process were sent to interested parties; the Notice of Intent appeared in the Federal Register; ads will be run in local papers.

There was discussion about the role of NPS in the scoping process. Some felt that the posters were misleading and presented an NPS bias. They felt that the scoping process was being rushed, and that the working group had not had time to address critical issues like the nature of the problem to be resolved. Others saw the posters presenting options and background information already published in the Federal Register or other public documents. The Park Superintendent said that it was good to have a number of examples to help the public understand some of the possibilities, but that it was not the intent to create expectations or lead people to foregone conclusions. Carla noted that this scoping process is somewhat unique in that there is no range of possible alternatives to present to the public. It is important to remind the public that these issues have a long history with both agencies and that this process is not happening in a vacuum. A member added that the Organic Act gives the agency the legal mandate to protect the resources of the Park.

Grace will send a PDF file with the draft posters to all members and alternates. Members are invited to contact Grace with any comments or suggested changes to the draft posters presented. FAA and NPS agreed to take a closer look at the posters in response to working group comments.

The eleven potentially impacted tribes are invited to be cooperating agencies in the NEPA process. Chairman Vaughn said that Hualapai would have posters at the Scoping sessions.

The GCWG process and the NEPA process are on complementary timelines. The GCWG will be able to review and evaluate any suggestions that come out of the scoping process at their next two meetings. In turn, the recommendations of the working group, due this summer, will be used as the foundation for the NEPA preferred alternative.

Members acknowledged that it is very difficult to portray something as complex as overflight noise at Grand Canyon in a simple and accessible way and still do it justice. They had suggestions for the draft posters:

- Clarify the 10 dB over audible chart, or include a handout giving more details
- Check the data on the 2003 flights for consistency with current conditions chart
- Include Hualapai posters
- Insure that there is no bias expressed, particularly in the last three posters
- Address compliance issues – either on poster or handout

There was no consensus on the posters as presented.

Those attending the scoping sessions will be Barry Brayer, Tina Gatewood, and probably Paul Joly from FAA; Mary Killeen, Grace Ellis, Ken McMullen, Sarah Falzarano, and probably Jeff Cross from NPS; Cyndy Lee from Volpe; and Lucy Moore. There was a special request that Paul Joly be present. There was a suggestion that Mike Ebersol be present to address compliance issues.

Consensus: There was agreement on Lucy's participation in the NEPA Scoping process. She will attend each of the three scoping sessions for the purpose of 1) answering questions about the formation, purpose and role of the GCWG; 2) assisting with communications

between poster presenters and members of the public; and 3) consulting with poster presenters on communication skills, as needed.

Tribal Consultation Process: Lynne repeated that the government-to-government tribal consultation process is separate from both the NEPA and the GCWG processes. It is a third way for tribes to participate in the discussion and decision-making regarding overflight noise at the Grand Canyon.

Jan Balsom, NPS, said that letters initiating tribal consultation were sent on January 31 to eleven tribes potentially impacted by this process. The timing and format for consultation will depend on initial meetings and negotiations with each tribe. Chairman Vaughn suggested a general meeting with all tribes, followed by a face-to-face meeting between the agency and each interested tribe. He was concerned that Hualapai have adequate time to review alternatives generated by the scoping process. Jan said the first general meeting will be in the next 3 months in Flagstaff or Phoenix. There will be individual meetings with any tribe who requests it as well, followed by another general tribal meeting to explain the draft document. She emphasized that the federal agencies take their consultation responsibility very seriously, and invited tribal members to talk with her further. Hopi representative Leigh Kuwanwisiwma urged the agencies to address more than just cultural issues when talking to tribes.

Member Proposal: In the interest of exploring a specific proposal, Jim McCarthy, Sierra Club, put the following package before the group. He emphasized his commitment to finding a solution that will work for everyone, although he has faced opposition already with his own constituents. When all aircraft are counted, 1% of the Park has been restored. Aircraft noise is in conflict with longstanding Park goals, and many environmentalists are unhappy with the current condition.. He hopes that everyone shares his desire to make this work and approach the problem in a spirit of give and take.

Jim's Package: In the interest of furthering discussion, Jim proposed that:

- GA be included with commercial high flyers. Be open minded about considering changes; changes may or may not be practical. (He doesn't expect the working group to have much impact on high flyers.)
- Air tour or air tour-related noise not be audible in 50% of the Canyon
- The SFAR altitude be raised
- GA routes and needs be reviewed
- The number of air tours be capped by the day, not the year, like other kinds of permits for activity in the Canyon
- The curfew be maintained at the east end
- New aircraft be no louder than current aircraft
- A budget for noise-impacted area and time impacted
- There be no flights below the rim, and that the rim be defined as a line between the top of the north rim and the top of the south rim
- In a certain number of years (10 years? 15?) all air tour aircraft utilize quiet technology

- Corridors be used on an alternating schedule, Dragon for one year, Zuni for the next year, or by parts of years, to allow special areas to be quiet during certain times and not others.
- Willingness to give up on “all aircraft” for more from air tours. Would need legislative change.

Discussion:

There was concern that the proposal contemplated changing the definition of substantial restoration 50% of the Park from 75 – 100% of the time to 50% of the Park 100% of the time. A participant suggested that the package needed to include a legislative change to resolve the air tour v. all aircraft dilemma. Another suggested eliminating some trails in the noisier parts of the Canyon.

Air tour operators at the table need to consult with other air tour operators on ideas before presenting alternatives to the working group.

Other Issues:

Recording of meetings:

A member raised the question of recording the Working Group meetings, particularly when the discussion focuses on alternatives in the context of an Aviation Rulemaking Committee (ARC). FAA agreed that discussions of alternatives need to be part of the administrative record to show that a variety of solutions were considered. Lynne will ask the FAA counsel about ARC procedures and whether or not a court reporter and transcript are necessary.

Compliance: A recreation representative told the group that achieving substantial restoration – whatever the regulations might be – depends on compliance. For his constituency of hikers and backpackers, confidence that regulations governing zones, corridors, boundaries, altitude, curfews, etc, will be adhered to and enforced is key to their acceptance of the negotiated settlement. The noise model assumes all flights are performing within certain parameters based on certain rules, or proposed rules. But there is a perception among the hiking community, he said, that not everyone flies according to the rules. Admitting the rules are complicated, he said, "I'm pretty sure I've seen people flying in places and ways they shouldn't be flying." Making pilots accountable is difficult; without an "N" number, it is impossible to file a report. He wanted his fellow working group members to know that compliance is key to helping people feel that there will be finality with the implementation of the recommendations of the group.

Knowing that there is not 100% compliance, an air tour spokesman said that his company is taking extraordinary steps to reach the highest level of compliance possible. He added that some aircraft deviate from corridors for legitimate reasons (search and rescue, contract work for the Park) and some are renegade pilots. The AOPA representative agreed that it takes just one renegade pilot to hurt the GA reputation. She added that implementing extreme measures to control the few renegades would not be fair to the vast majority of law abiding pilots. She told of an experience of a "renegade" commercial pilot "doing a 360 over the Canyon."

An FAA spokesperson said that compliance complaints are ongoing and are raised at every scoping meeting. It may be appropriate to include in the group's recommendations changes in rules for pilots and severe penalties for non-compliance. "If there are people who break the rules we need a means for reporting it," he said.

There was a request that the scoping process provide an opportunity to address compliance issues.

Visitor awareness: The AOPA spokesperson said that the EIS for Denali came out last week. Backpackers were surveyed about aircraft noise, and the results were perplexing. Those who were made aware of the overflights heard them; those not made aware did not hear them. Therefore, she concluded that "the less we educate the better."

Observer Comments: The agenda included four opportunities for observers to comment during the three days.

Steve Bassett, US Air Tour Association: Mr. Bassett asked if Volpe might be able to provide a summary of the material presented in order to help better understand the noise analysis for the next day's discussion. During another comment period, Mr. Bassett expressed concern that some of the draft posters for the Scoping sessions appeared to be leading the public toward certain alternatives. "We need to be very careful about how we communicate with the general public," he said, and recommended removing two of the posters. Lucy suggested that anyone with suggestions about the draft posters work through a member of the GCWG to communicate with Grace.

Dennis Brownridge, Friends of Grand Canyon: Mr. Brownridge said that he sees potential for improving the aircraft noise current condition at Grand Canyon. FICAN study maps show holes in the pattern of tracks where there is little population; it might be possible to re-route flights particularly on the north-south axis to and from Phoenix. He also asked why dog legs exist in some corridors and tracks, and suggested that straightening them out could be more cost effective. He urged the group to look at specific parts of the Canyon where natural quiet is particularly important, and try to adjust air traffic accordingly.

During the comment period on the third day, Dennis gave a slide presentation that included several proposals for the group to consider. His priority quiet areas in the Park are the east end (heart of the Park) and the Kanab Basin. His second priority are portions of Sanup Plateau, Marble Canyon and Toroweap Overlook. He suggested that what is important to people is the number of noise events and the length of the quiet intervals; the percent time audible is less important, he said, than the average length of the noise free interval.

He spoke of the needs of the Hopi tribal members who make religious pilgrimages to the area under the Zuni corridor between October and April each year. Perhaps air tours could avoid that area during the winter months, and return during summer months when the Hopi are not present. A member was concerned that some of the proposals in the presentation could pose safety problems for aircraft.

He noted that the maps tracking the commercial flights over the Park show less activity to and from Las Vegas, and more flying north and south from and to Phoenix. He suggested that it might be possible to shift the north-south flights slightly and achieve a significant benefit.

He also spoke of raising altitudes of GA flights. The AOPA member responded that flying at 18,000 feet requires significantly more equipment, including oxygen.

A member asked about access and numbers of visitors at Sanup. The road is not maintained, and few people take the trouble to get there. That is the appeal of the place, he added. There is an increase of visitors from the St. George area who have discovered the plateau.

Dennis would be glad to make his presentation available to anyone who is interested. He was urged to submit his ideas through the NEPA Scoping process as well.

Rob Smith, Sierra Club: Mr. Smith congratulated the agencies on making progress on this issue. He concluded that where there are airplanes, there is noise, and that the primary focus of the group should be on moving air routes away from people.

Steve Mydanik, Society for Accessible Travel and Hospitality: Mr. Mydanik traveled from Florida to give the group the perspective of the disabled traveler. He pointed out that disabilities don't always show, and that he is a living example, having limitations as a result of cancer, heart attack and diabetes. The most common disability is loss of hearing, followed by sight, mobility and hidden disabilities. The disabled in this country have \$200 billion in disposable income, and if travel were easy for them they would contribute an enormous amount to the national income. Mr. Mydanik said that disabled people want to see the Grand Canyon, just as any other visitor would, and that access by air is a blessing for them. "This population," he said, "has an immense desire to see the natural wonders of the world."

NEXT MEETING:

The fourth meeting of the GCWG will be held in Las Vegas, Nevada, beginning at 1:00 pm on March 20 and ending at 4:30 pm on March 22. [Location to be announced]

Potential agenda items include:

- review additional INM 6.2 runs
- noise and safety analysis of proposals (as available)
- proposals from members
- initial report on scoping meetings
- Heidi Williams and John Dillon survey results on GA
- air tour caucus report on peak day
- brief history of air tours pre- and post- 1987
- observer comments (once per day)
- other items TBA (e.g., hearing from any significant interests/priorities in the working group that haven't yet been articulated)

TASKS: The following list of tasks was generated from the meeting.

APPROVED AS CORRECTED BY THE GCWG AT ITS FOURTH MEETING

- Working Group Process:
 - Task list distributed to members and alternates by 2/17/06 (Lucy)
 - Prepare draft summary of Phoenix meeting and distribute to members and alternates by 3/3/06 (Lucy)
 - Prepare draft agenda for next meeting, distribute by 3/6/06 (Lucy)
 - Post presentations from third meeting on website (Tahnee, Steve May)
- Prepare INM 6.2 Modeling Workshop Report for posting on website, adding cover sheet explaining it is a sensitivity analysis only (Lynne, Cyndy, Steve May)
- Provide grid point noise analysis (tables and map) to GCWG for review. Subject to GCWG review, post on website (Cyndy, Steve May)
- Provide noise analysis to GCWG in metrics other than percent audibility (FAA, NPS, Volpe)
- When INM 6.2 is publicly available (very soon), make it available to interested GCWG members with GCNP baseline scenario (Lynne, Volpe)
- Review whether some GA traffic in preliminary baseline noise analysis is really commercial (Cyndy, Robert Novia)
- Survey VFR GA pilots (small, low altitude) that do not file flight plans on use of corridors, frequency, altitude, etc. (Heidi Williams and John Dillon)
- Run INM 6.2 model to spread commercial air tours in Zuni and Dragon Corridors over a 10-hour day with summer curfew, instead of current spread over a 12-hour day. Run the model two ways, using averaging and hour by hour methodologies, and report results back to GCWG (Cyndy, Gregg)
- Review peak day difference between different categories of aircraft, i.e., peak day for air tours is not peak day for commercial high altitude or GA. (FAA and NPS confer and bring back to GCWG)
- Submit proposals asap for additional model runs by Volpe. Proposals should be sent to Lucy who will forward them to the screening group (Lynne, NPS, Dick, and Alan) for refinement and prioritization, and to the GCWG for review. The screening group will bring in other members or staff as appropriate depending on proposal specifics. Proposals will be sent to GCWG.
 - Compare quiet technology vs. non-QT fixed wing and helicopter to see difference in contour area. (Dick Hingson)
 - Run baseline noise analysis for high altitude commercial and GA using noticeability for entire park. (Jim McCarthy)
 - Do the same noticeability analysis for all aircraft (Elling Halvorson)
 - Determine how much high altitude commercial and GA numbers would have to be reduced to achieve substantial restoration (Jeff Cross)
 - Model audibility effects of moving commercial routes 3 nautical miles (NM), 6 NM, 10 NM. (Dick Hingson)

- Prepare maps/tables for GCWG reference as alternatives are considered:
 - Map with detail of 104 modeled points and boundaries. Suggestions for detail include Havasupai, Hualapai, Navajo boundaries, trails, SFRA (Air tour routes, flight free zones, GA corridors, etc.), and landmarks., Clear overlays or multiple maps will be provided so that members can document their priorities or illustrate proposals (NPS, Sarah)
 - Map showing air tour noise analysis with air tour routes added – two maps will be created for this request:
 - continuous %Taud, all aircraft with all flight tracks (Volpe to run INM and give output to NPS)
 - continuous %Taud, air tour and air tour-related with air tour flight tracks (NPS, Sarah)
 - Map of GCNP Management Zones and SFRA (air tour routes, flight free zones, GA corridors, etc.)
 - Table showing visitor concentrations (Sarah)
- Determine need for court reporter at GCWG meetings – check procedures for ARC (Lynne, Eric)
- Prepare letter to appropriate congressional delegations, providing an update on GCWG progress -- that the group accepts the model for the purpose of their work, that they are working diligently to develop recommendations, that a public NEPA Scoping process has begun, and that as soon as there is anything substantive to report, the group will be in touch with congressional staff. (Lynne and NPS) Draft letter will be sent to GCWG for review.
- Send comments asap to Grace about NEPA Scoping presentation posters at grace_ellis@nps.gov Grace will send final version of posters to Lucy for distribution to GCWG members and alternates prior to the open house scoping sessions Feb. 21, 22, 23.
- Lucy will attend the three NEPA Scoping Open House sessions, Feb 21, 22, 23, in Phoenix, Flagstaff and Las Vegas, to serve as a resource concerning the GCWG and its role, to help prepare presenters for dealing with the public, and to help with communication if needed at the sessions.
- Develop air tour proposals, including addressing issues on peak day, for next GCWG meeting (Alan and others)

Summary prepared by Lucy Moore. Please contact here with any questions or comments at 505-820-2166, or FAX 505-820-2191, or email <lucymoore@nets.com>