Grand Canyon Working Group

Comprehensive Report

Prepared for:

Federal Aviation Administration

National Park Service

U.S. Institute for Environmental Conflict Resolution

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INTRODUCTION

This report summarizes the stakeholder consensus-seeking phase of a larger Alternative Dispute Resolution (ADR) process jointly undertaken by the Federal Aviation Administration (FAA) and the National Park Service (NPS), Grand Canyon National Park (the Park), to resolve conflicts relating to the implementation of the National Parks Overflights Act of 1987 (the 1987 Act). The Grand Canyon Working Group (GCWG) process began with the agencies' 2003 agreement to work together to implement the provisions of the 1987 Act and culminated with the December 4-5, 2007, GCWG meeting which completed the stakeholder consensus-seeking phase of the process. The purpose of this summary is to document the major steps of the process, describe the goals and the challenges, and identify some of the lessons learned for the agencies, the parties involved, and the facilitation team. It is hoped that the report will provide a thoughtful history of the GCWG that will be useful for those who took part and for those undertaking similar processes in the future.

This report documents the Grand Canyon Working Group process and fulfills a U.S. Institute for Environmental Conflict Resolution (USIECR) contract deliverable for the National Park Service, Grand Canyon National Park Interagency Agreement F001020028 (Task Agreement J8219060712) and the Federal Aviation Administration Interagency Agreement DTFAWA-03-X02064. The views expressed in the report are those of USIECR and their contractor Lucy Moore Associates, Inc.

BACKGROUND

The Need

For at least two decades agencies, aircraft operators and the public have understood the need to address aircraft noise issues at the Grand Canyon National Park. The National Parks Overflights Act of 1987 mandates that the Department of the Interior/National Park Service (DOI/NPS) and the FAA provide for the "substantial restoration of the natural quiet and experience of the park and protection of public health and safety from adverse effects associated with aircraft overflight." In addition, President William J. Clinton signed a presidential memorandum in April 1996[1] requiring that a plan to restore natural quiet be completed by April 22, 2008. Although actions had been taken over the years to improve aviation safety and reduce noise, the agencies were unable to agree on a final overflights plan.

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[1] Memorandum of April 22, 1996, "Additional Transportation Planning to Address Impacts of Transportation on National Parks"; *published at* 61 Fed. Reg. 18229 (April 25, 1996).

Identification of Agency Issues

In 2003, the FAA and DOI/NPS committed to implementing the provisions of the 1987 Act together and to resolve their differences. They sought assistance from the U.S. Institute for Environmental Conflict Resolution, an independent and impartial federal agency with expertise in environmental conflict resolution, to develop strategies for improving communication and collaboration, and to clarify agency roles and responsibilities. The first facilitated meeting between the FAA and the NPS to address Grand Canyon National Park overflights noise issues was held on February 23-24, 2004. At this meeting, the FAA and the NPS crafted the following mission statement:

> *To work collaboratively to achieve the goal of substantially restoring natural quiet to the Grand Canyon while providing a reasonable opportunity for visitors to experience the Grand Canyon safely by air tours, without adversely affecting the national aviation system.*

They also formed work groups to focus on technical, legal and administrative aspects of the new partnership. The issues identified by the agencies that would be the subject of their collaboration were:

1. **Communication between all levels of both agencies:** The two agencies, with different missions and mandates, found themselves at odds over how to proceed with resolution of the overflights issue at the Grand Canyon. Both agencies' staff and leadership experienced frustration and confusion as they tried to find common ground. Trust was becoming an obstacle to collaboration. Through their work with the USIECR and later with Lucy Moore Associates, Inc. (LMA) the agencies achieved a significant degree of agreement on how to proceed and established safeguards to ensure clear communication.

2. **Clarification of each agency's roles and responsibilities with respect to the issues:** Much of the mistrust and frustration was due to confusion over agencies' roles and responsibilities. Each agency was (and is) responsible for key elements of the overflights plan, but their approaches and values differed. The FAA is an agency that values and relies heavily on technology and science to inform their decisions – decisions that often involve safety concerns, the agency's primary responsibility. The NPS, on the other hand, is responsible for the protection and preservation of natural resources and maximizing the park experience for visitors. Science and technology also play a role in NPS decision-making, but there are other factors as well, including the subjective experience of park visitors, the welfare of wildlife, and honoring the cultural and historical aspects of national parks. Working with USIECR and later with LMA, the agencies began to understand each other's roles and responsibilities and learned to work together with more clarity.

3. **The need to resolve overflight noise issues at Grand Canyon and implement the 1987 Act:** Congress made it clear that both agencies share responsibility in implementing the 1987 Act. In considering how to proceed, the FAA and NPS chose to first consider the feasibility of a stakeholder-driven alternative dispute resolution process. Working with stakeholders in an open, focused and facilitated process offered the hope of a resolution that would consider the wide

variety of interests at play and would be credible and acceptable to those interests. USIECR and LMA helped the agency leadership on both sides understand the variety of forums and formats available and to select the one that held the most promise.

4. **The need for an overflights plan for Grand Canyon National Park: In partnership with the** GCWG the agencies were able to identify the issues that needed attention if an overflights plan was to have broad support. Further, they were able to study in depth these issues and better understand the perspectives and the needs of all the stakeholders. Finally, the GCWG developed a series of options which members negotiated at length and which gave the agencies a comprehensive foundation for an overflights plan. [The purpose, composition, structure and protocols for the GCWG are all described below, as well as summaries of the meetings, a description of the challenges and lessons learned, and a synopsis of the process.]

STAKEHOLDER ASSESSMENT

In the spring of 2004 the agencies concluded that the best way to reach a viable solution to this complex problem would be to involve interested and affected stakeholders and that a stakeholder collaboration process would require the services of a qualified and experienced neutral facilitator or team of facilitators. With the USIECR's assistance, the agencies convened a small group of representative interests to participate with them in interviews to select a contractor who could design and conduct a stakeholder assessment process. The agencies wanted to better understand the needs of stakeholders, and the potential for using a collaborative process to develop a solution to overflights noise issues at the Grand Canyon that would meet all legal requirements and enjoy the support of interested and affected stakeholders, as well as the general public. Lucy Moore Associates, Inc., (LMA) of Santa Fe, New Mexico, was awarded the contract in August 2004. LMA staff for the stakeholder assessment process included Lucy Moore, Ed Moreno and Tahnee Robertson. From August 2004 forward, the LMA facilitation team served on behalf of USIECR on the project. Mike Eng, Senior Program Manager, USIECR, who conducted the preliminary Alternative Dispute Resolution process with the FAA and the NPS, took on an administrative and oversight role.

On September 29, 2004, LMA staff facilitated a public meeting in Flagstaff, Arizona, where agency spokespersons made a commitment to support the stakeholder assessment process, and any subsequent stakeholder selection process, if the assessment findings indicated a collaborative process was feasible and desirable. During October and November 2004, LMA interviewed 46 stakeholders, representing the major affected parties with a history of involvement, or potential interest, in overflights noise at Grand Canyon National Park. These included: air tour operators (large and small; Grand Canyon and Las Vegas; fixed wing and helicopter), environmentalists, recreationalists (both hiking and boating), and representatives from the general aviation industry, the military, commercial airliners, airports, the U.S. Fish and Wildlife Service (USFWS), and six tribal governments (an additional five were contacted but were not interested). Interviewees were asked about their willingness to participate,

conditions for participation, specific hopes and concerns about such a process, and their history with the overflights issue.

Facilitators Lucy Moore and Ed Moreno presented the results of the assessment to the agencies in Washington, DC, on November 12, 2004. The report concluded that if certain conditions were met, enough key stakeholder interests would be willing to enter, in good faith, into a collaborative process with the agencies. These conditions included:

- Agency commitment to work with each other and support the stakeholder process
- Clear goals for the process and clear roles for the agencies, stakeholders and facilitators
- Good, honest communication by all parties involved in the process
- Appropriate, ground rules enforced equitably
- Adequate education for participants before and during the process
- Relevant experts available to consult with throughout the collaborative process
- The opportunity and time to build trust and relationships

The agencies considered the conditions offered by the interviewees and determined that they could abide by them. At the November 12, 2004 meeting, the agencies considered a variety of options for the structure of the stakeholder process. These included:

- Resolution of issues by the FAA and NPS without stakeholder participation
- Creation of a Federal Advisory Committee – either chartered under the Federal Advisory Committee Act[2] (FACA) or non-FACA (not charted under FACA but functioning under many of the same provisions of the Act.
- Form a Negotiated Rulemaking Committee[3]
- Establish a joint planning and collaborative problem solving effort under the National Environmental Policy Act of 1969[4]

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[2] The Federal Advisory Committee Act was enacted in 1972 to ensure that advice by federal advisory committees is objective and accessible to the public. The Act formalized a process for establishing, operating, overseeing, and terminating these advisory bodies and created the Committee Management Secretariat to monitor compliance with the Act.

[3] Congress enacted the Negotiated Rulemaking Act in 1990 (P. L. 101-648, 104 Stat. 4,969, amended 1996, P. L. 104-320, 110 Stat. 3,870) to establish a procedural framework and encourage federal agencies, when promulgating rules and regulations, to consider working with representatives of affected interests as problem-solving partners in cooperatively developing consensus on a proposed rule.

[4] The National Environmental Policy Act of 1969 was established to encourage productive harmony between human beings and the environment for present and future generations and to promote efforts, in cooperation with state, local and tribal governments and other concerned public and private organizations, to prevent or eliminate damage to the environment.

- Conduct an Alternative Dispute Resolution process guided by the Administrative Dispute Resolution Act of 1996[5]

The agencies chose to use an existing FACA committee, the National Parks Overflights Advisory Group (NPOAG), as the parent for a working group dedicated to the development of a Grand Canyon overflights plan and resolution of the outstanding 1987 Act issues. The agencies committed to following the requirements of the FACA for a negotiated rulemaking process, (although not legally required to do so), in order to guarantee an open, equitable process.

On February 10, 2005, the agencies unveiled their proposal for moving forward with a collaborative process at a public meeting in Mesa, Arizona. At the meeting, agencies received useful comments and suggestions that resulted in some changes to their plan. On March 30, 2005, the agencies issued a Federal Register notice that invited interested parties to submit applications for membership in the Grand Canyon Working Group ("Membership in the Grand Canyon Working Group of the National Parks Overflights Advisory Group Aviation Rulemaking Committee." *Federal Register* 70 [30 March 2005]: 16327-16329. Found at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2005_register&docid=DOCID:fr30mr05-138.) On May 31, 2005, the agencies published a Federal Register notice announcing that the GCWG members had been selected by the NPS and the FAA with guidance from the facilitation team and listing the names of the selected members ("Membership in the Grand Canyon Working Group of the National Parks Overflights Advisory Group." *Federal Register* 70 (31 May 2005): 30992. Found at http://edocket.access.gpo.gov/2005/pdf/05-10684.pdf.)

CONVENING THE GRAND CANYON WORKING GROUP

Purpose

The mandate of the GCWG was to provide advice and recommendations on, and to participate in any rulemaking for, a final overflights plan. As expressed in the protocols for the group, the purpose of the GCWG was to:

> *assist the National Park Service (NPS) and the Federal Aviation Administration (FAA) in fulfilling the requirements of the National Parks Overflights Act of 1987, the Presidential Memo of 1996, and other applicable laws by:*
>
> - *Participating in the review of the overflights noise analysis*

[5] The Administrative Dispute Resolution Act of 1996 authorized and encouraged the voluntary use of alternative means of dispute resolution by federal agencies for resolving issues in controversy with persons who would be substantially affected by an administrative decision.

- *Addressing issues related to overflights noise and safety*
- *Seeking meaningful, realistic and readily implementable solutions*
- *Developing recommendations by consensus, if possible*
- *Functioning as an aviation rulemaking committee for the development of recommended aviation regulations, if necessary*

Composition

The agencies' goal was to create a working group that would be large enough to include representatives of all key interests, including tribal governments, and yet small enough to allow for productive discussions and negotiations. They settled on a membership of 20 which would achieve a balance of agency, tribal, environmental, recreational, and aviation interests. In addition, the Grand Canyon National Park superintendent, although not a member, was given an honorary seat at the table. The FAA and the NPS each had one vote at the table, although the superintendent in effect acted as co-lead with the appointed NPS representative. The two agencies' members at the table served as co-chairs for the process.

Organizations, agencies and tribes were identified and asked to nominate a representative to the GCWG who would have the time and interest to commit to the process, would be able to speak for the entity they represented, and would have the skills and inclination to participate in a collaborative process. The original membership roster, announced in the May 31, 2005, Federal Register Notice was as follows:

- Katherine Andrus (Air Transport Association)
- Bill Austin (U.S. Fish and Wildlife Service)
- Alan Downer (Navajo Nation)
- Mark Grisham (Grand Canyon River Outfitters Association)
- Elling Halvorson (Papillon Airways)
- Dick Hingson (Grand Canyon Trust and National Parks Conservation Association)[6]
- Leigh Kuwanwisiwma (Hopi Tribe)
- Cliff Langness (Westwind Aviation/King Airlines)
- Roland Manakaja (Havasupai Tribe)
- Jim McCarthy (Sierra Club)[7]
- Doug Nering (Grand Canyon Hikers and Backpackers Association)
- Lynne Pickard (FAA and Working Group co-chair)
- Alan Stephen (Grand Canyon Airlines)

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[6] Dick Hingson served as representative for two member organizations that were selected for the GCWG. He was the member for the NPCA, and moved to alternate when David Nimkin replaced him in late 2006. He was alternate for The Grand Canyon Trust and sat at the table until Roger Clark was appointed as member in 2006.

[7] Roxane George replaced Jim McCarthy in 2007 as the Sierra Club representative.

- John Sullivan (Sundance Helicopters)
- Karen Trevino (National Park Service and Working Group co-chair)[8]
- Charles Vaughn (Hualapai Tribe)[9]
- Heidi Williams (Aircraft Owners and Pilots Association)
- David Yeamans (Grand Canyon Private Boaters Association)
- Alan Zusman (Department of Defense/U.S. Navy)

Each primary member was asked to identify an alternate who could serve on his or her behalf during the absence of the primary member. Alternates were encouraged to attend all meetings in order to stay informed and be ready to step in when necessary. In some cases, alternates regularly filled seats of their members. All tribes that wished to participate on the GCWG were given a seat, since one tribal group could not represent the interests of another.

Structure

The agencies were faced with different options for the structure of the stakeholder process. As explained above, they chose to create a working group of the National Parks Overflights Advisory Group (NPOAG), an existing FACA committee, rather than create a new FACA committee, or some other type of advisory process. This was particularly appropriate since several who were selected for the GCWG were also serving on the NPOAG, thus providing continuity for the two processes. The GCWG would make its consensus recommendations (as stated in the protocols) simultaneously to the parent NPOAG, the FAA and the DOI/NPS. The NPOAG would not have authority to change those recommendations, but would receive them as a courtesy from the working group.

All meetings were facilitated by LMA staff, who also prepared agendas and meeting summaries. One-and-a-half or two-day meetings were anticipated to be held quarterly for the duration of the GCWG process.

Protocols

The facilitator drafted a set of protocols for the GCWG to consider at the first meeting. The protocols covered purpose, structure, roles, decision-making, media, and groundrules for good faith negotiations. Adopted at the second meeting, the protocols (see Attachment A) included provisions for consensus decision-making, and defined consensus as unanimity. There were steps that could be taken failing consensus to achieve the highest degree of agreement possible. If the group failed to reach consensus

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[8] The new Grand Canyon National Park superintendent Steve Martin replaced Karen Trevino in 2006 as the NPS member and co-chair of the GCWG. The honorary superintendent's seat held by the prior superintendent, Joe Alston, ceased to exist.

[9] Sherry Yellowhawk replaced Charles Vaughn in the spring of 2007.

on its recommendations for an overflights plan, the decision-making would revert to the two agencies. The agencies made clear in the protocols that they were participating as full members in the consensus-seeking process. Thus, if the GCWG reached consensus on a recommendation, the agencies would honor that consensus and would support the recommendation unchanged through the OMB and legal review processes toward implementation. The group understood the incentive to reach consensus.

Other issues debated in the protocols included the commitment to the GCWG process over other options, such as congressional action or court interference. Some members felt strongly that members should pledge not to resort to other options during the life of the GCWG process. Others were reluctant to rule out all other options. The protocols state that members who are considering seeking alternative forums for support of their interests are encouraged to review such plans with the group before taking action.

There were also mixed opinions about the role of the press and the public in the process. Since the GCWG was a working group of NPOAG, its meetings would be open to the public, and, therefore, the media. The protocols outlined a media policy and a handout was developed to give to all members of the media. Video coverage of the meetings in progress was not allowed, except for background shots without audio. Members could give interviews outside the meetings, but were encouraged to speak in a way that would not damage relations at the table.

The protocols also called for opportunities for observers to address the GCWG at a designated time during each meeting.

GRAND CANYON WORKING GROUP CONSENSUS-SEEKING PROCESS

Meetings

From July 2005 to December 2007, the GCWG held 11 meetings as part of their consensus-seeking process on recommendations to the overflights plan at the Grand Canyon. Meetings began with introductions of all present, including observers, a review of the agenda, approval of the draft summary notes from the previous meeting, review of the task list from the previous meeting, and enumeration of handouts. Meetings ended with a review of any agreements reached, next steps, and a task list. Meetings also included a “public window” each day of the meeting providing an opportunity for observers to address the GCWG. Any member was free to call a caucus at any time during the meetings. Members often participated in a group dinner on the night of the first meeting day. Two of the best attended and most successful were held at a member’s home in Scottsdale. The others were held at local restaurants. A brief summary of each meeting agenda can be found in Appendix B.

Major Issues

During the life of the consensus-seeking process, the GCWG identified and addressed several key issues. The list below is by no means comprehensive.

1. **Selection of a Noise Model**: It was critical for all participants to understand and have confidence in the model that would synthesize data and analyze various scenarios relating to aircraft noise at the Grand Canyon. Through presentations, review of materials, and a workshop at Volpe[10] in Cambridge, Massachusetts, members became comfortable with the Volpe Integrated Noise Model v 6.2 (INM 6.2) and by consensus agreed to use it to guide the group's work. They acknowledged that this was a significant step for them to take in terms of building trust in the process and in each other.

2. **Definition of *Substantial Restoration of Natural Quiet*[11]**: During the assessment, stakeholders expressed concern that the definition established by the NPS be preserved. There was concern about attempting negotiations on "shifting ground." Being able to count on the definition as discussion moved forward was important. Still, there was confusion from the beginning about the meaning of some of the language, such as: "or more" in the percentage of time or percentage of the park covered. Some members were uneasy about the standard they could be held to if "or more" was interpreted broadly. They pressed for a threshold level, a minimal requirement that could be met, understanding that as time went by it might be possible to increase that level. Those desiring more than the 75 percent of the day (time) and 50 percent or more of the park as stipulated in the NPS definition were reluctant to call those figures *thresholds* that would satisfy the definition. NPS clarified for the group that those figures were seen as thresholds, with a goal of greater achievement in the future. Discomfort remained among stakeholders on both sides of the issue. Following the December 4-5, 2007, meeting of the GCWG, the NPS clarified the definition by way of a Federal Register notice [see Appendix C].

3. **Noticeability v. Detectability**: There was a healthy debate about whether the standard for noise would be based on *noticeability* (noise that is noticed by the average visitor) or by *audibility* (noise that is detectable by instrumentation). Operators felt that it was unnecessary to measure noise that was not detectable to the human ear, and that noise that did not impact the visitor experience should be discounted as well. Some other members felt that it was important to have a scientific basis for determining the noise levels, and that protection of wildlife from

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[10] The Volpe Center was established in 1970 to provide analytical, scientific, and engineering support to the newly established U.S. Department of Transportation. From the beginning, the Center was envisioned as a place where a broad range of skills could be focused on major issues that cut across the traditional modal structure of the transportation enterprise.

[11] In a 1995 Report to Congress entitled "*Report on Effects of Aircraft Overflights on the National Park System",* the NPS defined substantial restoration of natural quiet at Grand Canyon National Park to mean, "50 % or more of the park achieve 'natural quiet' (i.e., no aircraft audible) for 75-100 percent of the day."

noise interference was equally important. The differences were raised periodically, but the model results were expressed in terms of time audible.

4. **Treatment of Commercial Aircraft**: The model results revealed that the major contributor to aircraft noise over the Grand Canyon was high altitude commercial jets, resulting in 97 percent of the Park being out of compliance over 25 percent of the time. Removing all air tours would reduce the impact by only 2 percent. The group was faced with the dilemma of regulating commercial aircraft. The 1987 Act included all aircraft, but Congress had made it clear that high altitude aircraft over 18,000 feet were not to be regulated by the process. The GCWG asked for a study and presentation by MITRE[12], consultants specializing in National Airspace issues. The presentation revealed that regulation of commercial aircraft was not possible. Air tour operators were adamantly opposed to taking the high altitude flights out of the definition fearing that all the burden of achieving natural quiet would rest on their shoulders. The GCWG was faced with this choice: either exclude high altitude noise or include it and fail to comply. There were efforts to build into an agreement language that would encourage consideration of the Grand Canyon in the future when new airports were planned or when there were revisions in the National Airspace System. These efforts were opposed by representatives of the business jet industry and airports in the region (more details are provided in the Challenges section of this report.)

5. **General Aviation (GA)**: The GCWG struggled with how to quantify the noise contribution of GA aircraft. The category includes both Bonanza and Cessna aircraft flying under 10,000 feet, and business jets flying over 18,000 feet, and in some cases over 35,000 feet. There was 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 did not exist, because few of the GA flights pilots file flight plans, and GA noise contribution is not quantified. These aircraft fly at low altitude in certain corridors directly over the Park. General Aviation representatives felt that the numbers were so low as to be inconsequential. Others were concerned with the lack of data on the number and type of aircraft in this category. The group settled on anecdotal data for its work, but hoped for more exact data in the future.

6. **Dual Zone v. Multi Zone Approach**: NPS suggested that decisions related to aircraft noise reduction be based on acoustic zones that would match the Park's management zones on the ground. This multi-zone approach would decrease noise in more of the Park (up to 87 percent) and would result in less fragmentation in terms of space and time. Although the intent was not to assign noise standards to these zones, nor to change the definition of "substantial restoration of natural quiet," the issue caused distress for the operators who felt that the rules were changing and that the ultimate goal was a future with no air tours. Park members emphasized

[12] In July of 1958, MITRE was founded as a private, not-for-profit corporation to provide engineering and technical services to the federal government.

there was no intent to abolish air tours, but to overlay the Park's long term goals, as expressed in the 1994 Report to Congress[13], on the dual zone approach already in place for the consideration of alternatives. The issue remained a sensitive one for the duration of the process and contributed to a level of distrust among operators toward the NPS.

7. **Peak Day:** August 8, 2005, was determined to be the peak day for all air tour and air tour related activity, but it was not the peak day for individual operators or for commercial or GA aircraft. The date 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 assumption that the difference in commercial and GA peak days is insignificant. They suggested three peak days (for commercial, GA and air tours); or one peak day that includes all aircraft; or identify 3 or 4 peak days during the year. It was assumed that the number of commercial and GA flights per day does not fluctuate like air tour flights which are highly seasonal. Operators considered the matter over the course of the process but decided it was not a significant one.

8. **Quiet Technology (QT):** Members saw quiet technology as a positive step toward reduction of aircraft noise, but it was not a simple subject. Operators were concerned with the expense of converting their fleets and the uncertain timeframe in the production of these aircraft, most of which come from Europe. They also were eager for any resolution to include quiet technology incentives which had been mandated by Congress. Other members were concerned that the FAA definition of *quiet technology* is based on efficiency rather than actual noise. A quiet technology plane, they claimed, could be noisier than its predecessor if it carried more passengers, since the calculation is made based on noise per seat. In its final negotiations, the group supported a quiet technology incentive route for air tours, and asked for further clarification about the definition.

OUTCOMES

Failure to Reach Consensus on Recommendations

There were several factors that contributed to the failure of the GCWG to reach consensus, and the consequent lack of recommendations from the GCWG. These are described in the Challenges section below.

The goal for the GCWG process was to develop recommendations by consensus for the agencies to use in the development of an overflights plan for Grand Canyon National Park. The hope was that the group could negotiate some elements of a plan and produce consensus recommendations. As set forth in the

[13] September 1994 Report on the Effects of Overflights on the National Parks System (NPS Report to Congress published June 1995)

GCWG protocols "consensus means an agreement supported by the Working Group as a whole…" and the GCWG would have to reach consensus on any and all recommendations. Withholding of consensus would mean that consensus was not reached, and that no recommendations were issued by the group.

During summer 2007, in an effort to craft a range of options that the group could consider for consensus, facilitators talked confidentially with members about their priorities and ideas for elements of a recommendation package. In addition, certain subgroups of the GCWG formed spontaneously to preview options and establish some common ground before actual negotiations took place.

Using the information from those calls and subgroup meetings, as well as the discussion and work of the previous three years, facilitators drafted a *strawman* document (see Appendix D) which included 16 separate elements that could be components of a preferred alternative. The strawman document was prefaced with assumptions that facilitators deemed critical to acknowledge before seeking consensus. These assumptions (listed below) were intended to serve as a departure point for the negotiations, a set of principles on which there was agreement, and a reflection of the needs that should be met in any overflights plan.

- There are certain areas of the Grand Canyon that are critical for the ground visitor. Environmental and recreational interests seek relief from aircraft noise over these areas for some part of the year.
- Natural quiet is a value that the NPS is responsible for defining and protecting under law, policy and court rulings.
- There have been changes and deletions of air tour routes in the Grand Canyon since 1987. These changes are accepted by the air tour industry. Operators are willing to consider changes to these routes to benefit ground visitors, wildlife, or other park resources, as long as a viable air tour industry is maintained.
- The GA pilots need overflight access, at altitudes that accommodate small engines.
- Tribal rights to economic development and cultural protection must be honored.
- Endangered species and their habitat must be protected.
- All parties need security that this issue is resolved.

At the September 19, 2007, study session, the group attempted to reach consensus on the elements. Members agreed that in offering consensus they were supporting the concept expressed in the proposal, and that additional data and evaluation on some of the elements could change the level of support in one direction or the other. The group also understood that, although consensus might be reached on individual proposals, it would be necessary for members to evaluate the package of agreements as a whole in order to determine their level of support.

The study session resulted in consensus on the initial assumptions and tentative consensus on most of the elements, as reflected below.

Negotiating the Strawman Proposal

Below is the summary of the result of negotiations on the elements in the strawman proposal. [The full text of the strawman proposals and the GCWG's discussions are documented in Appendix D.]

Route Changes:

A.1 Changes to the Zuni Corridor

Consensus: Members offered consensus in support of a short dogleg, cutting Snoopy's nose approximately in half on the present chart. This dogleg would avoid the confluence with the Little Colorado, as the current route does, but only on the condition that the U.S. Forest Service concerns for Mexican Spotted Owl habitat and the Hopi tribal concerns for sacred shrines be addressed.

A.2 Seasonal Closure of Zuni

No consensus: All but one member offered consensus in support of Proposal 1 for a seasonal shift and a new air tour route to relieve the hiking and wildlife interests under Zuni corridor, with the understanding that safety, wildlife, environmental and economic concerns could be successfully addressed. The dissenting member supported Proposal 2 for alternating closure of Zuni and Dragon routes.

A.3 Dragon Corridor

Consensus: Members offered consensus in support of A-3, to move Dragon corridor further west to protect the Dripping Springs area. There was no consensus on an additional proposal to consider using terrain shielding for lower elevation flights.

A.4 Quiet Airplane Route from Las Vegas

No consensus: All but one member supported the QT incentive air tour route between Las Vegas and Grand Canyon, conditioned on successful addressing of the concerns listed above. The dissenting member opposed the proposal on the grounds that the Hualapai Tribe should be able to fly and adjust the route as necessary.

A.5 Marble Canyon

Consensus: Members offered consensus in support of keeping use of Marble Canyon low and improving upon the natural quiet of the canyon by protecting Nankoweap Basin.

A.6 Havasupai Administrative Flight

Consensus: Members offered consensus in support of this proposal to provide needed administrative access to the Havasupai Tribe.

Other Issues:

B.1. Allocations

No consensus: All but one member supported B-1 to maintain current caps on allocations. That member requested more site-specific evaluation of the number of allocations, the number lost due to business closures, etc.

B-2. Flight Following Technology

Consensus: Members offered consensus for B-2 to support tracking and monitoring technology for safety and management of air tours and others, as well as enforcement and compliance.

B-3. General Aviation Corridors

No consensus: All but one member supported this proposal to leave GA corridors in place. The opposing member objected to leaving the corridors in place without raising the FFZ altitude.

B-4. FFZ altitude

Consensus: Members offered consensus for B-4 to keep the FFZ altitudes as they currently are, and to study impacts to the Park. GA interests feared raising the altitude; others felt that if all four corridors were retained for GA flights, then the altitude should be raised.

B-5. Quiet Aircraft Technology

No consensus: All but one member supported B-5 which encouraged quiet technology on all tours within 12 years following implementation of the plan, with the possibility of regulation. There were concerns about the economic impact to operators, the lack of clarity about regulations and incentives, the possibility of increased noise as a result of more or larger aircraft. The dissenting member needed more certainty about economic incentives and regulatory options.

B-6. Single-engine piston aircraft altitude (Zuni)

Consensus: Members offered consensus in support of B-6 which would eliminate the long, noisy climb over the central area of the Canyon by requiring single-engine air tour piston aircraft on the Black 1 air tour entering into the Zuni corridor to enter the corridor at the height they are required to fly as they pass just South of Imperial Point.

B-7. West End

Consensus: Members offered consensus in support of B-7 to eliminate the southern portion of the Green 4 air tour route to protect the Hualapai Skywalk from interference.

B-8. Flight Free Times

Consensus: Members offered consensus in support of B-8, pending the necessary additional study of the relationship between curfews for air tours and impacts to wildlife. The proposal would allow more pre-sunset time without aircraft noise for the hiker in the winter in exchange for less in the spring and summer.

B-9. Terrain Shielding

No consensus: All but one member favored removing this proposal to explore the benefits of terrain shielding for lower altitude flights. The one dissenting member wanted to retain B-9 to ensure the issue would be addressed in the EIS.

B-10. Interpretation

Consensus: Members offered consensus in support of B-10 to pursue increased interpretive materials and access to those materials for both the air tour customer and the ground visitor.

It was understood that these decisions were tentative, dependent, in some cases, on more information, and/or on consultation with constituents. At the final meeting of the GCWG consensus-seeking phase on December 4 – 5, 2007, the group was unable to reach agreement on a key route shift which would have relieved the Zuni Corridor of air tours for part of the year. Failing agreement on this central element, the GCWG chose to not seek further consensus on the remaining items. Therefore, there were no recommendations made by the GCWG. The decisions about the content of the overflights plan reverted to the two agencies, as stated in the protocols.

Benefits of the GCWG Process

Although consensus was not reached, and therefore, no recommendations were issued, there were benefits from the experience. Final evaluations of the process showed that most of the participants, members and alternates, believed that relationships had been forged which would be important in the future. Some had developed friendships, and all said that having gone through the process, they better understood the needs and interests of the other stakeholders.

In addition, both FAA and NPS members, and other agency staff, said that they had gained a much deeper understanding of the positions of the various stakeholders. They felt better equipped to make the decisions relating to the EIS alternative and the overflights plan.

The co-chairs and almost all members expressed their appreciation of the process and felt that it was worthwhile. Many also noted that the consensus-seeking process had a positive experience and that they had new insights into negotiations and decision-making.

OTHER RELATED PROCESSES

Interagency meetings

The working relationship between the FAA and the DOI/NPS was critical throughout the process. In fact, a condition of the stakeholders' participation was the commitment and ability of the two agencies to work cooperatively and speak with one voice in dealing with interest groups. To achieve this level of cooperation, the agencies retained the services of the USEICR. Staff from USIECR worked with agency leadership to develop a Memorandum of Understanding (MOU) and to increase awareness of the

importance of clear, open communication throughout the process. The MOU was signed in January 2004 prior to hiring Lucy Moore Associates and prior to the assessment of the feasibility of a stakeholder process.

During the course of the assessment and the GCWG meetings, the two agencies continued to meet in Washington, D.C., or in Phoenix, usually with the facilitation assistance of Lucy Moore. In these meetings, the agencies were able to discuss confidential matters that might impact the negotiation process, as well as prepare for challenging issues that might be raised in an upcoming GCWG meeting. In addition, agencies took these opportunities to discuss issues that did not directly relate to the GCWG process but that needed open, honest discussion.

It was essential to resolve certain issues if the agencies were to move forward with a stakeholder process. These included:

- The selection of a noise model
- Agreement on funding and parameters of Federal Interagency Committee on Aviation Noise (FICAN)[14] study on modeling
- Jurisdiction and roles of the two agencies with respect to overflights noise
- Clarity about certain terms and definitions
- The integration of the NEPA process with a potential stakeholder process

Of these issues, the FAA and NPS agreed on the FICAN study and certain parameters for the noise model. The agencies discussed and came to a common understanding about their jurisdiction and roles, although this topic required revisiting throughout the stakeholder process. The definition of "substantial restoration of natural quiet" was assumed to be settled and minimally discussed by the agencies in their pre-GCWG meetings. That issue, however, did become the focus of conflict later when the noise model data revealed a surprising reality – that the primary contributor of aircraft noise was the commercial jet traffic. The agencies touched lightly on the NEPA process. This issue became contentious within the GCWG, as some members began to fear co-optation of their role. Agencies revisited integration of the NEPA process with the consensus-seeking process on a regular basis throughout the process.

The interagency meeting held on April 27, 2007, was particularly critical in clarifying the roles of the two agencies, and the internal decision-making protocols at the DOI/NPS. In addition, the NEPA negotiating team had reached a standstill on key questions, particularly those involving the introduction of a metrics method not previously included in the work plan for the EIS. The agency leadership present was able to determine a future course for decision-making that would move the EIS process forward. Significant interagency meetings and conference calls took place on:

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[14] The Federal Interagency Committee on Aviation Noise (FICAN) was formed in 1993 to provide forums for debate over future research needs to better understand, predict and control the effects of aviation noise, and to encourage new technical development efforts in these areas.

- September 1, 2004 – Washington, DC, to design the assessment process, provide an update on model evaluation and prepare for the public meeting
- September 28, 2004 – Flagstaff, Arizona, to receive an update on modeling progress, prepare for a public meeting announcing the assessment process and hopes for stakeholder process
- November 12, 2004 – Washington, DC, to hear results and recommendations of the assessment process and make decisions about stakeholder process
- February 10, 2005—Mesa, Arizona, to prepare for the public meeting where the report on the stakeholder assessment would be presented
- January 18, 2006 – Washington, DC, to clarify and coordinate the decision-making process for key agency issues
- June 11, 2007 – Scottsdale, Arizona, prior to the GCWG meeting, to review work of the NEPA team and prepare for the GCWG meeting
- September 18, 2007 – Scottsdale, Arizona, prior to the GCWG meeting, to review the work of the Technical Team and prepare for the GCWG meeting

In addition, there were over two dozen interagency phone calls, facilitated by Lucy Moore. Some dealt with substantive issues concerning the working relationship between the agencies. Others dealt with meeting logistics, timelines, tasks and updates.

NEPA Process

Parallel to the GCWG stakeholder process was the NEPA EIS process. From the beginning, the two processes traveled a bumpy road together. Some members of the GCWG were suspicious from the beginning that the NEPA process would derail or undermine their own negotiations, and that their efforts were, in fact, meaningless. Although the co-chairs reassured GCWG members that the two processes were separate and complementary and would be integrated at the time of the selection of a preferred alternative, some remained skeptical. Similarly there was some discomfort on the part of some of the NEPA interagency team members about the coordination with the GCWG.

The role of the GCWG members in the NEPA scoping process was a subject of concern for some. Was this subset of stakeholders receiving special access to the interagency NEPA team? Was participating in the NEPA process a violation of the commitment to the GCWG process? Would members make an end-run around the GCWG and plead their cases directly to the drafters of the EIS? On the other hand, if GCWG members were left out of the NEPA process, there could be issues of equal access raised.

In the end, the GCWG authorized Lucy Moore to assist in the design and facilitation of the four scoping open house/public meetings, and to serve as representative of the GCWG, answering any questions about the role of that group with respect to the NEPA process. In addition, some members attended some of the scoping events. The four open house/public meetings included stations where experts could

explain issues and answer questions on a variety of topics related to the EIS. In addition, the process offered participants a wide range of formats for commenting on the issues including: comment cards, flip chart recorder, court reporter, conversation with staff and experts. All four meetings were well attended, and evaluations reflected a general satisfaction and appreciation of the process.

Tribal Consultation and USFWS Section 7 Consultation

Two other processes running concurrently with the GCWG were the government-to-government consultations between the agencies and affected tribes, and the consultations with the U.S. Fish and Wildlife Service on the potential impacts to endangered species. During the life of the GCWG, members were unsure of the results of these two consultation processes and their impact on the GCWG's development of alternatives.

INM 6.2 Modeling Work Group

Prior to the formation of the GCWG, the INM 6.2 modeling team had convened, and, at the request of the agencies, had begun to evaluate available noise models for use in the development of the overflights plan for Grand Canyon. A model was needed to evaluate the contribution of noise from various aircraft, including air tours, general aviation, NPS aircraft, military, and commercial jet traffic. This would enable the GCWG to develop options in an overflights plan that would most accurately target sources of noise. The agencies understood that it was vital for the GCWG stakeholders to have a model to work with that they could understand and trust. GCWG members who were interested in the technical aspects of the model attended a special workshop at Volpe headquarters in Cambridge, Massachusetts, in January 2006. Believing in the credibility of the modeling work group scientists, and understanding their need to adopt a single noise model for their use, the GCWG agreed in early 2006 to adopt the modeling work group's recommendation to use INM 6.2.

Metrics Work Group

In early 2007, the NPS raised the prospect of using metrics to evaluate noise and set standards that were unfamiliar to some on the GCWG. The FAA was not comfortable with moving forward with the metrics approach, feeling that the listening area methodology was untested and still under development and that it was not appropriate to introduce these metrics in the EIS process. This led to the formation of a Metrics Work Group, which was commissioned to evaluate these metrics. Each agency selected a member to serve, and then together they agreed on a third member. The group, later known as the Interagency Tech Team, met several times, but did not reach any conclusions by the GCWG's meeting in December 2007.

CHALLENGES AND LESSONS LEARNED

This section offers reflections on the challenges faced by the agencies, GCWG members and facilitators during the process. Italicized portions represent the facilitator's conclusions and suggestions.

Political Visibility and Congress's Role

Political visibility can give credibility and support to a process. It can also prove an obstacle to collaboration. From the beginning of the GCWG stakeholder process, and before, this issue was the focus of elected officials. Senator John McCain was an author of the 1987 Act, and he expressed frustration with the lack of progress on the noise issue. He pushed for the FAA and the DOI/NPS to work cooperatively for resolution, and with the support of interested stakeholders, if feasible. Once begun, this process naturally remained an interest for the Senator and many other congressional representatives, particularly in the southwest states.

At the first meeting of the group, Senator McCain's office delivered a message to the GCWG encouraging commitment and perseverance, and clarifying the intent of the 1987 Act to not include regulation of high altitude commercial flights. This letter caused some surprise and concern among the group, as they realized that Washington's eyes were upon them. They had hoped that the process would be free from the influences of politics, media, and public scrutiny.

As the process continued and issues became more complex, members on both sides of a question were tempted to seek clarification and support from congressional representatives and staff. For instance, once the data revealed that the most significant contributor to aircraft noise was the high altitude commercial jet traffic, the commercial airline representative on the GCWG naturally became extremely concerned that the process would attempt to tamper with commercial jet traffic. In addition, airport representation from both Phoenix and Las Vegas, as well as the business jet industry, lobbied the co-chairs to give these interest groups seats at the table. They recruited legislators to support their position, and the political attention increased. It was tempting for parties and non-parties to seek recourse from Congress at difficult points, and particularly over this central question of whether or not the GCWG process should include high altitude commercial flights in its consideration of aircraft noise.

The agencies' budgeting process and their relations with congressional subcommittees also became a source of concern and suspicion for some members. Any contact any member had with the beltway, whether on a related issue or not, required considerable discussion by the group, and probably undermined trust. The agencies themselves were in a difficult position. At the September 2006 GCWG meeting it was clear the group would not be able to reach consensus on how to achieve NPS restoration goals without significantly impacting national airspace. The problem reverted to the agencies for resolution. FAA believed that legislation would be needed to remove high altitude (en route) aircraft flights from the equation. FAA proposed such legislation for inclusion in the Administration's bill for FAA reauthorization and received initial verbal indications of support from the DOI political level. However, fairly strong NPS concerns were expressed during the formal interagency review of the bill and time ran out for reaching a solution, so the Grand Canyon legislation was omitted from the Administration's bill.

Independently, Senator McCain drafted legislation which some felt undermined the NEPA and GCWG processes. FAA and NPS were asked to comment, and asked that the two processes continue to work through the issues. Eventually the legislation was dropped, but GCWG members expressed concern that the agencies were talking with congressional staff without their knowledge. Co-chairs explained that if

asked to comment, an agency must respond in a very short time frame and it must be confidential, putting the two agencies in a very awkward position with respect to the GCWG protocols and pledge for openness concerning contacting Congress.

> ***Facilitator's conclusion/suggestion:*** *Perhaps there is a way that a process like this can establish a formal relationship with Congressional interests, in a way that does keeps the process independent and provides some degree of support for the process. If comments on proposed legislation are requested from an agency engaged in a stakeholder process, it may be possible to waive the confidentiality requirement, or at least make it possible to alert stakeholders that the request has been made.*

History among GCWG Members

Many of the members of the GCWG had been involved in the history of the noise issue at Grand Canyon for many years, even decades. Inevitably, many of them had met each other on one battlefield after another, battlefields that included courts, Congress, and the media. There was a long history of bad feelings and unsuccessful efforts to bring parties together that burdened the GCWG from the beginning. Developing trust was particularly difficult for some with painful memories of what they perceived as abuse from the other side. During the assessment process, several spoke of this hurdle, and warned that it would be difficult to overcome this history and move on, but they were willing to give it a try. It was easy for a stakeholder under stress during the GCWG process to revert to behaviors that mimicked these previous efforts. Building trust, or even a respectful communication style, was more difficult than in most processes of this kind. Facilitators took care to allow time for each GCWG member to explain fully to the others their history, values, hopes and fears related to the Grand Canyon. This happened during the first three meetings, and occasionally during subsequent meetings.

> ***Facilitator's conclusion/suggestion:*** *Although perhaps deeper levels of trust could have been gained through role playing exercises and shared experiences like field trips, the pressure the group felt to "get the work done" made this impossible. It may have been asking too much of a group so tentative in its formation to deal with the personal and emotional component of the process dynamics. When they could, facilitators took the opportunity to use a stressful situation to reflect on the difficult history among members and explore ways of calming high emotions or easing moments of mistrust.*
>
> *The group considered a field trip – either a raft trip and/or air tour of Grand Canyon –at different points. But time was at a premium for the members, as was money for the agencies. It is possible that such an experience could have made a difference in the ability of the group to reach some level of consensus in the end.*

Data Surprise

This process was dealt a near fatal blow when, after one year of meeting, the INM 6.2 model revealed that the air tours were <u>not</u> the culprit in terms of noise, but rather it was the commercial jets flying at high altitude. The group had agreed by consensus to rely on the data generated by this model and some

members had even gone to the Volpe laboratories in Cambridge, Massachusetts, to learn the workings of the model first hand. Not long after that trip, members were surprised to learn the results of the model runs. Even if all the air tours were removed from Grand Canyon, "substantial restoration of natural quiet" as defined by the NPS would not be reached. After it became clear that making changes in the high altitude traffic patterns or schedules was not feasible for safety and economic reasons, the group faced the reality that their goal of achieving substantial restoration of natural quiet was unattainable, given the current NPS definition for this goal.

Facilitators and GCWG members considered the dilemma. The law (and its interpretations by the court) mandated the consideration of high altitude noise. Yet the technical evaluation of the feasibility of regulating commercial aircraft prohibited the group from pursuing that option. The process could simply end, since the ground had so significantly shifted as to make the goal unreachable. The restoration definition could be clarified by the NPS to account for high altitude noise, thereby redefining the goal so that it was achievable. Changing the definition was objectionable to the air tour industry, who was incensed that the process would be manipulated to make them responsible for noise reduction when clearly they were a small part of the picture. Congress could clarify its intent in the 1987 Act with respect to high altitude flights, but going to Congress was perceived as risky, and the group could not agree on what the request would be. There was reluctance to end the process, after all the effort to date, and given that there seemed to be some room for negotiation on air tour routes and timing that could benefit all.

The decision of the agencies was to continue the process, understanding that the scope and scale would be much reduced and the reduction of noise much less than hoped. The GCWG developed a menu of recommended changes to air tours that could possibly reduce noise in certain areas, or shift it to other areas, during different times of the year. There were other issues like public education, signage, and enforcement methods that seemed worth pursuing in the group. As the NEPA process progressed over the next two years, the GCWG contributed to, and reviewed, many iterations of alternatives for the Draft Environmental Impact Statement (DEIS). In the end, the GCWG failed to reach consensus on an alternative, and the crafting of the preferred alternative was left to the agencies.

> ***Facilitator's conclusion/suggestion:*** *This was a difficult moment for the group and the facilitators. There was a natural inclination not to abandon a process in which so many had invested so much work and hope. At such junctures, agency leadership and facilitators must weigh carefully the pros and cons of continuing and develop a decision-making mechanism that will take into account this natural reluctance, but provide for an objective decision.*

Changing the Definition

Resolution of the noise issues was dependent on meeting the NPS definition of "substantial restoration of natural quiet" based on the 1987 Act. The definition set the standard for substantial restoration of natural quiet. The intent of the 1987 Act was not clear to the GCWG members, nor was the definition of *substantial restoration*, which caused anxiety among members who felt that the standard for meeting the goal was not clear, and among other members who preferred the flexibility in applying a standard.

Air tour operators wanted to interpret the "50 percent or more of the Park" phrase as a threshold number of 50 percent. Environmental and Park interests emphasized the importance of the "or more" language, and denied that there was a threshold past which aircraft interests would not have to go. There was much time spent on whether or not the definitions should be formally clarified by the NPS.

When the model runs revealed that the goal of the GCWG could not be achieved under the conditions of the current definition, there was pressure to change the definition. Eventually, in the summer of 2007, the NPS took comments from members on their proposed clarification of the definition. The clarification of the definition was published in the Federal Register in early 2008, but the definition was not changed.

> ***Facilitator's conclusion/suggestion:*** *The membership was split on whether or not to change the definition. Until the model runs changed the noise landscape and made achieving the goal impossible, the NPS was determined not to change the definition. At that point, NPS opted to clarify the definition (rather than change the definition) to maintain agency direction and to keep the planning process and GCWG moving forward. Although there may have been no alternative, the agency in such a case, needs to be sensitive to the potential for conflict, and do everything possible in advance to be ready for the challenge.*

[Note: On September 20, 2008, the Federal Register published a clarification of the definition of "Substantial Restoration of Natural Quiet" at Grand Canyon National Park. A copy of this notice is attached as Appendix C.]

Changes in Membership

This process successfully dealt with the challenge of including the voices of parties not represented on the GCWG. Midway through the process, new data suggested that the group should broaden its scope to include consideration of the noise created by the high altitude jets, causing regional airports and the business jet interests great concern. At every opportunity, representatives of Las Vegas and Phoenix airports, as well as the business jet industry, pushed for seats at the table. These interests threatened to go to Congress to get seats at the table, since their interests suddenly seemed to be at stake. Reluctant to undertake the Federal Register process and change the initial makeup of the GCWG, the co-chairs and the facilitator negotiated a special status for these three interests. During working group discussions involving high altitude flights, the three representatives would be able to contribute to the conversation from the audience. When the working group was making decisions involving those interests, they would be allowed to sit at the table and participate in the discussion, although not in the decision itself. This resolved a serious distraction for the group, and avoided, or at least postponed, those groups lobbying Congress for support.

> ***Facilitator's conclusion/suggestion:*** *During the three year process, there were changes in membership that brought both benefit and distraction to the group. The need to incorporate new members and transition them smoothly into the group took time and energy. In many cases, these new personalities brought new life and energy to the group. In other cases, the result was a hardened position from an interest group that disrupted progress.*

The inclusion of the "new interests" in a way that respected the original composition of the group worked well. Adding new full members that are not part of the process from the beginning and did not participate in developing the protocols should be avoided whenever possible.

Agencies' Relationship

The agencies kept their commitment to work cooperatively to the best of their abilities, but there were times during the multi-year process when communication broke down. Like the members, the agencies were coming to the table with very different goals and interests. And like the members, some agency staff had a long and difficult history with this issue. The interagency meetings and conference calls were designed to help support the good relationship of the FAA and the DOI/NPS, and they were, to a great extent, effective. Internal staff turnover and uncertainty about decision-making protocols created challenges for the NPS and added to the stress on its relationship with the FAA. The FAA had its own challenges in dealing with congressional reauthorization and requests from Congress while maintaining commitment to resolving the overflights noise issues within the GCWG. The interagency NEPA team also experienced difficulties in reaching agreement on roles and responsibilities in the NEPA process.

The facilitation team was often unable to help with communication problems, not being included in some of the more confidential internal debates. As with the non-agency members, the agency members were plagued with some degree of mistrust.

Facilitator's conclusion/suggestion: *Constant monitoring of the interagency relationship and communication is necessary to maintain cooperation and coordination of efforts in a stakeholder process. Regular facilitated communication (conference calls, or preferably in-person meetings) is essential for agency collaboration in a complex situation like this one. In the end, facilitators can help with interagency communication only to the extent that the agencies will allow.*

Coordination with NEPA Process

Touched on above, the relationship between the GCWG and NEPA processes was not always smooth. The GCWG process was a companion to the NEPA process, and the GCWG serving as an advisory group to the NEPA staff, expected to generate NEPA alternatives for the agencies to consider and to assist the agencies in the evaluation of those alternatives.

The NEPA process was initiated by the third meeting of the GCWG in February 2006. The schedule anticipated that the results of the data analysis would be complete and ready for consideration by the GCWG during its alternatives development phase. At that point, the DEIS was contemplated for the fall of 2007, and the final EIS in early 2008. The schedule was delayed for a variety of reasons, and by December 2007 when the GCWG met for its final consensus-seeking meeting to review alternatives, analysis was not complete and a preferred alternative was not yet developed.

Some members were suspicious of, and threatened by, the NEPA process. Which track – the GCWG or the NEPA team – was responsible for developing a preferred alternative? It didn't seem feasible to do it jointly, and although there were NEPA updates at every GCWG meeting, the two processes often

seemed out of synch. Both processes were under time pressures and deadlines, but the milestones -- the development of the range of alternatives in the NEPA process and the exploration of options by the GCWG, for instance -- of each process often failed to match up. To members, it seemed that NEPA was rushing ahead without them at times, or holding them back at others. Furthermore, as time went by, the two agencies were not entirely on the same page about the relationship and authority of the two processes, increasing frustration among GCWG members.

To further complicate the relationship, the agencies had legal obligations under NEPA to consult with affected tribes and with the USFWS on endangered species. The four affected tribes and the USFWS all sat at the GCWG table as members, and yet were also dealing with the agencies through the NEPA consultation process, away from the table. At times it seemed to the other members as if the "real" negotiations on tribal and Endangered Species Act (ESA) issues were going on in this parallel process, and that they would have to accept without question the result of those negotiations.

There was anxiety about the public scoping process for the Notice of Intent to begin development of the EIS, and whether or not GCWG members were "co-hosts" with the interagency NEPA team, or simply members of the public, or something in-between. In the end, scoping went smoothly. Some members participated, and Lucy Moore served as liaison, helping design and facilitate the scoping events, and representing the GCWG by answering questions about the process. Lucy also facilitated a two-day interagency NEPA team meeting at the Grand Canyon in April 2006, which helped to integrate the two processes.

> ***Facilitator's conclusion/suggestion:*** *Although there were links between the two processes, there were moments of confusion about roles, both on the part of the GCWG members and the interagency staff on the NEPA team. Agencies and facilitators must be explicit from the beginning about the working relationship and shared roles, and carefully manage the NEPA and the stakeholder process in order to achieve coordination. In addition, agencies must take care in selecting and training staff to maximize their understanding of the challenges and benefits of coordinating the two processes.*

Role of the Public

The agencies were committed to an open, transparent process. Following the FACA guidelines (although not legally required to do so), they opened all GCWG meetings to the public. One study session on September 19, 2007, was closed to observers to enable members to discuss more openly the strawman document (see Appendix D) and explore areas of consensus. In their protocols, the GCWG members chose to provide at least one opportunity per meeting for any observer to address the GCWG. In practice, there was a "public window" each day of a meeting for observers to speak.

The makeup of the audience was mixed – agency staff, technical experts, journalists, stakeholders not at the table, alternates for members, and general public. The group agreed that any member could request to hear from an audience member at any time, assuming that person had something valuable to add to

the discussion. At times, agency staff felt free to contribute information without invitation; that was dealt with on a case-by-case basis, and did not seem to be a problem.

Not surprisingly, the most successful negotiations within the GCWG occurred during closed sessions -- East End and West End caucuses, and a closed study session at the end of the process. Having as many as 50 or 60 observers at times had a chilling effect and encouraged posturing among members.

> ***Facilitator's conclusion/suggestion:*** *The public window seemed a practical way of handling the need to allow audience members to speak. They were appreciative of the opportunity and the fact that there were rarely time limits imposed. Hearing from observers afforded a level of accountability for the process, and helped build support for the work of the group. It is also critical to have opportunities for members to negotiate in private.*
>
> *For agency staff sitting in the audience, the experience of simply observing was at times frustrating. Facilitators attempted to enforce the ground rule that audience members only speak during the public window or if called upon by a GCWG member. This was important in order to respect the process of the working group and guard against technical debates that could distract the focus of the group.*

Failure to Reach Consensus

After over three years of negotiation, the members of the Grand Canyon Working Group were unable to reach a final consensus on recommendations for an overflights plan. The group had reached tentative consensus at their second-to-last meeting on assumptions and certain elements that could have formed the basis of recommendations. But the group had defined consensus as unanimous agreement and support for the proposal, or at least a willingness to accept it. In the end, some environmental and recreational members were unable to offer consensus on the GCWG preferred alternative or *strawman* document or on any part of it.

Throughout the process, some members were dealing with vocal, engaged constituencies (boards and/or memberships) that made demands on their representatives to the stakeholder process. It appeared that these members found it difficult to walk a tightrope between the pressures from the GCWG and their own constituents. Other members were frustrated by what they saw as an about-face by members who had given tentative consensus on some items at the tenth meeting, and then reversed positions at the eleventh and final meeting.

Surprisingly, when members were asked to share their last thoughts at the end of the final consensus-seeking meeting, most were positive about the experience. They appreciated being given the opportunity to participate, and felt that they had learned a great deal about the issues and about the interests of different stakeholders. They felt they had established relationships with some of the other members that would be useful in the future, and that they developed some friendships as well. The agencies expressed thanks to the members and alternates for their hard work and patience, and said that they felt much better equipped to make difficult decisions, having participated in the process. They

had a real appreciation for the variety of interests, and hoped to develop an alternative that would both protect canyon resources and preserve the opportunity for air tours at Grand Canyon.

> ***Facilitator's conclusion/suggestion:*** *This case illustrates the importance of ensuring that the process chosen supports the desired goals. Although the agencies gained valuable information and understanding of the issues from the stakeholder process, consensus was not reached and all decisions relating to restoring natural quiet at Grand Canyon reverted to the agencies. This caused some disappointment and bitterness among participants, and raised the question: Should this have been a consensus-seeking process in the first place? The fact that it was designed to seek consensus made the process an attractive one for stakeholders. If they could reach unanimous agreement, the agencies would adopt those recommendations as their own. This is a seductive element for anyone considering devoting the time and energy to such a project. But was it realistic to think that consensus could be reached, especially after the "data surprise" which made achieving the goal of substantial restoration of natural quiet impossible?*
>
> *Another option would have been to define consensus as less than unanimous. If the rule had been 80%, for instance, consensus would have been reached on many of the proposed recommendations. Although this would have resulted in a "success," it would have undermined a significant interest at the table. The GCWG members made it clear in their protocols that consensus would mean unanimity, understanding the risk of failure if even one member refused.*
>
> *In this case, consensus decision-making insured that members would take the process seriously and participate energetically. It also carried a high risk of failure, and resulted in disappointment and some resentment in the end. But, as we saw, it seemed to be worthwhile for the agencies, and for most participants, who left with better understanding of the issues and of each other, and even with some affection.*

SYNOPSIS OF THE GRAND CANYON WORKING GROUP PROCESS

The situation faced by the FAA and the NPS is not uncommon for governing entities in today's complex world. Two agencies have dual, sometimes competing, jurisdiction over a resource and must resolve those differences in order to fulfill certain mandates. In this case, the NPS and the FAA were tasked with implementing the aircraft noise provisions of the National Park Service Overflights Act of 1987. Attempts to implement the provisions of the 1987 Act resulted in frustration on the parts of the agency staff, and affected members of the public and private industry. After decades of litigation and congressional action, the FAA and the NPS were at an impasse.

Under direction from Senator McCain the agencies sought help in breaking the impasse from the U.S. Institute for Environmental Conflict Resolution. In 2003 The USIECR provided a consultation team to work with agency leadership to improve communication and reach agreement on a process for moving

forward. This process involved assessing in 2004 the feasibility of convening a stakeholder group to work with the agencies to craft an overflights plan that would honor all needs and would allow the agencies to fulfill their mandates. If the assessment results were positive, the agencies were committed to convening a stakeholder group, believing that the characteristics of such a process – transparency, clarity, inclusiveness, fairness – would ensure a positive outcome and improved relationships among those already weary from years of battles.

The 2004 assessment recommended the use of a stakeholder process, and after consideration of various authorities and forums, the agencies chose to create a working group of the National Parks Overflights Advisory Group, an existing FACA committee. They pledged to follow the requirements for a FACA committee, although by law it was not required. Meetings were open to the public; working group members were paid expenses if needed for their participation; a facilitation team, agendas, meeting summaries, and protocols were incorporated into the collaborative problem solving process. Most important, the two agencies sat at the table, as working group members, alongside the 18 stakeholders. All members, including the agencies, participated in discussions and negotiations and offered or withheld consensus. And, critically, the agencies agreed to abide by and support whatever consensus recommendations came from the group.

The GCWG was formed in early 2005. Member organizations and agencies were identified by the two agencies and the facilitators, but each member was selected by the entity they represented. Lucy Moore Associates, Inc., was hired to facilitate the meetings and guide the process. The facilitation team assisted the group in its organizational phase to develop protocols, which were adopted by consensus at the second meeting. The group showed a deep commitment and passion about its mission and negotiated successfully some complex issues such as the definition of consensus, media relations, openness with each other about employing other strategies, and member roles and responsibilities.

The GCWG process included 11 meetings in all, plus subgroup meetings and a technical modeling workshop. Understanding the complexities of the science and dealing with the unknowns were challenges for the group. The group understood the importance of a noise model which they could trust, and spent early meetings learning about and debating the merits of different systems with the help of an INM 6.2 Modeling Team made up of experts chosen by each agency. The group's second decision by consensus was to accept the INM 6.2 model as its data source and interpreter of aircraft noise for the GCWG deliberations.

Although the assumption had been that the air tours were the greatest contributor of aircraft noise over the Park, data from the noise model proved otherwise. As described earlier in this report, this revelation was a major stumbling block for the group and the process never fully recovered from it. The incentives and bargaining positions for participating in the process shifted. It seemed that the original goal of restoring natural quiet at the Grand Canyon as defined by the NPS was unattainable, at least under the current definition. Focus of the deliberations shifted to that definition and the potential for the NPS to change the definition so that the commercial jet traffic would not be regulated. In the end, the agency clarified the definition, but not until after the GCWG consensus-seeking phase was over.

In an effort to follow the mandate of the 1987 Act and regulate aircraft noise to achieve the substantial restoration of natural quiet, the GCWG studied the National Airspace System and explored ways of adjusting flight schedules and routes to reduce noise over the Canyon. Safety and economics were the main obstacles to any such changes. Out of frustration and growing confusion, some members turned to Congress for clarification or legislative remedy – amending the 1987 Act. Airport representatives became alarmed at the prospect of interference by the group in the workings of the National Airspace System, and pressed for representation on the GCWG. Co-chairs and facilitators negotiated a role for these interests which allowed their participation in relevant discussions, but denied them a seat at the table and thus, a role in consensus decision making.

The GCWG eventually gave up the hope of either regulating the airspace or receiving clarity from Congress (which seemed to be looking for guidance from the group). Members turned to specific changes in air tour routes and schedules, and other aspects of the visitor experience at the Grand Canyon, hoping to reach consensus on recommendations to address aircraft noise issues, while understanding that achieving natural quiet was no longer possible. During the summer of 2007 the facilitation team worked with members one-on-one and developed a strawman proposal containing 16 elements of what was hoped could become a negotiated set of recommendations for the agencies to use as a basis for the Grand Canyon Overflights Plan. Although the GCWG failed to achieve consensus on a package of elements , several of the individual proposals were unanimously supported by the group. [The strawman proposal and discussion is found in Appendix D.]

The consensus-seeking phase of the GCWG process ended with the December 2007 meeting. The GCWG did not disband, however. The development of an Environmental Impact Statement (EIS) on aircraft noise at the Grand Canyon continued, with a commitment from the NPS/FAA National Environmental Policy Act (NEPA). Team to reconvene the GCWG at certain key points as the process continued. GCWG members had supported and participated in the EIS scoping meetings. Further, they had an opportunity to play a central role in crafting the preferred alternative, which would have been based on any consensus recommendation coming from the group. It was anticipated that the GCWG would be reconvened to review the Draft EIS (DEIS) preferred alternative before it was made public, and again to review the comments from the public on the DEIS. It was understood that the GCWG would have no authority to change the documents, but could make comments.

APPENDIX A: Grand Canyon Working Group Protocols

[Following are the protocols drafted by facilitator Lucy Moore for the Grand Canyon Working Group. They were discussed, revised and adopted by the group by consensus at its second meeting. More information on the Grand Canyon Working Group and its role and activities can be found on the website:
]http://www.faa.gov/about/office_org/headquarters_offices/arc/programs/air_tour_management_plan/parks_overflights_group/

PROTOCOLS

GRAND CANYON WORKING GROUP

Of the National Parks Overflights Advisory Group

These protocols are intended to govern the activities of the Grand Canyon Working Group (GCWG) and to provide guidance to help members achieve the highest level of productive negotiations.

I. PURPOSE OF THE GRAND CANYON WORKING GROUP

The GCWG, a working group of the National Parks Overflights Advisory Group (NPOAG), will assist the National Park Service (NPS) and the Federal Aviation Administration (FAA) in fulfilling the requirements of the National Parks Overflights Act of 1987, the Presidential Memo of 1996, and other applicable laws by:

- Participating in the review of the overflights noise analysis
- Addressing issues related to overflights noise and safety
- Seeking meaningful, realistic and readily implementable solutions
- Developing recommendations by consensus, if possible
- Functioning as an aviation rulemaking committee for the development of recommended aviation regulations, if necessary

II. COMMITMENT OF THE FEDERAL AVIATION ADMINISTRATION AND THE NATIONAL PARK SERVICE

The FAA and the NPS are committed to working collaboratively as full members of the GCWG to achieve the purpose of the Working Group.

The two agencies will be represented on the GCWG by individuals at the policy decision-making level.

The two agencies will fund the process on a 50/50 shared basis and commit to funding at a sufficient level, subject to the federal appropriations process.

The two agencies will implement the recommendations of the GCWG reached by consensus through rulemaking or other appropriate mechanisms, consistent with the responsibilities of the agencies with respect to the Overflights Act of 1987. Failing consensus, the agencies will continue to work collaboratively and take into consideration the deliberations of the GCWG as they move forward with decisions and implementation.

At its first meeting, the two agencies will present to the GCWG with a proposed scope of work that will guide work of the GCWG and a timeline that anticipates an April 2008 implementation date.

III. STRUCTURE OF THE GRAND CANYON WORKING GROUP

The Grand Canyon Working Group is organized as a working group under the National Parks Overflights Advisory Group, which serves as an aviation rulemaking committee, as well as an advisory group.

Policy-level members from FAA and NPS will serve as co-chairs for the GCWG.

There are 20 members of the GCWG, including the co-chairs from FAA and NPS. The members represent a balance of Federal and Tribal governments, aviation, environmental, and recreational interests. Members are chosen by the FAA and NPS, with assistance from the facilitator, through a process that is open and equitable.

Each member shall designate an alternate, chosen by the organization, tribe, agency or company that selected the member, and approved by the co-chairs.

In addition, the Superintendent of the Grand Canyon National Park will serve on the Working Group. This position will also have an alternate.

The GCWG may create task groups to take on specific assignments. These task groups will report to the GCWG.

The GCWG will report its recommendations to NPOAG and to the FAA and NPS simultaneously. NPOAG may review but not revise the work products, including recommendations, of the GCWG. NPOAG may decide to add support for, or express reservations about, the work products and recommendations of the GCWG.

IV. OPERATING PROCEDURES FOR THE GRAND CANYON WORKING GROUP

The Working Group may revisit the protocols as needed.

A third-party neutral, contracted through the U.S. Institute for Environmental Conflict Resolution (USIECR), will manage the process, providing consulting, planning, facilitation, and recording services. The facilitator will serve at the pleasure of the two agencies, as co-chairs for the GCWG. Any dissatisfaction with the facilitator or members of the facilitation team should be raised with the facilitator and/or with the co-chairs for early resolution.

Co-chairs will convene and adjourn the meetings, assist in the resolution of any conflicts, and provide leadership for the Working Group.

Facilitators and co-chairs will work closely together in developing agendas, summaries, and materials for each meeting.

Meeting summaries will be reviewed, corrected if necessary, and approved by the Working Group.

Facilitators will prepare and update a working document that reflects substantive agreements reached by the Working Group, and issues where consensus was not reached.

As much as practical, decisions of logistics, timelines and ground rules for the Working Group will be decided by the members themselves.

FAA and NPS support staff will be present and may be recognized by the co-chairs and facilitators to contribute information to Working Group discussions or respond to questions.

Members who wish to caucus during the meeting with other members, alternates, or non-members may do so by making the request to the facilitator.

Working Group decisions will be made by consensus to the extent possible. Consensus means an agreement supported by the Working Group as a whole, that does not necessarily represent any one member's ideal resolution, and that could be characterized as a decision that all members present can live with. If an emergency results in both a member and the member's alternate being unable to attend, that party may send a designee to represent their interests. The use of proxies or telephone conferencing will be a last resort. Every effort will be made to consider each situation on its merits and to accommodate the needs of individual members and of the Working Group as a whole.

If consensus is not reached, members will consider the options below to insure that every effort has been made:

- take the issue apart, and see if there is consensus on part of it
- ask the dissenting party or parties to create language which they think will be acceptable to the others
- ask the dissenting party to identify the specific needs that are not being addressed

- identify additional information needs
- ask the dissenting party or parties to meet with the co-chairs, and perhaps others as appropriate, to seek a solution
- ask parties to check with their constituents for guidance, clarification, or creative ideas

If there is still no consensus, the working group may ask members of the group to provide supporting and dissenting positions to facilitate agency decision making. Failure to reach consensus will mean that the issue reverts to the two agencies for decision.

V. PARTICIPATION OF THE PUBLIC AND THE MEDIA

Meetings of the Grand Canyon Working Group are open to the public and media. The working group may decide by consensus to close certain sessions to the public and media.

Observers will be allowed at least one opportunity to speak during each meeting, as provided in the agenda.

GCWG meetings may not be audio or video recorded by any means, unless specified times are agreed upon by the Working Group.

Comments made by Working Group members or alternates and agency staff are considered off the record. Members of the public or media may interview or discuss any issue with members, alternates or agency staff before or after formal sessions, or during breaks.

Members may not be restricted in the type of comments they make to the public or the media for publication, but are urged to refrain from criticizing the Working Group or the collaborative process that is under way, or from making statements that will undermine trust among members.

Facilitators, members, alternates and agency staff do not have authority to speak on behalf of the Working Group unless specifically delegated that responsibility by the members.

VI. RESPONSIBILITIES OF GRAND CANYON WORKING GROUP MEMBERS AND ALTERNATES

- GCWG members and their alternates will participate in all activities of the Working Group in good faith. Good faith means participation that is open, honest and dedicated to a resolution that meets the needs and respects the interests of all members of the GCWG.
- GCWG members and their alternates are committed to using this process to address and resolve issues of overflights noise. Individual members are urged not to turn to other

forums, such as the courts, Congress the public or the media, for resolution of differences, without a full discussion of such action in advance in the Working Group. Members who are asked to appear before legislative or judicial bodies are asked to make this disclosure to the GCWG in advance of their appearance.

- GCWG members and their alternates will strive for collaboratively developed consensus-based solutions. Effective collaboration involves appreciating the needs and ideas of others, being clear and honest in the expression of your own needs and ideas, and generating ideas and options that consider the needs of others.

- GCWG members and their alternates will treat others in the process with respect and patience. In any public or private discussions of the process, members will be respectful of each other and aware of implications of what is said for the relationships and trust among members.

- GCWG members and their alternates will represent their constituencies effectively. They will report regularly to their constituencies and will bring to the Working Group the views of their constituencies, as appropriate. They will be able to speak and act with authority when decisions are required.

- GCWG members will attend all meetings and devote necessary time between meetings. Understanding that there may be reasons for inability to attend, the alternate will take the place of the member, with full rights and responsibilities. Alternates are encouraged to attend all meetings. The member is responsible for keeping his/her alternate informed on the process.

- Members and alternates will assist the facilitator in maintaining the schedule and enforcing the Working Group's operating procedures and responsibilities.

- Members and alternates will strive to build productive relationships with all members that are based on the ability to trust each other and respect each member's point of view.

Adopted by consensus at the second meeting, October 26-27, 2005

APPENDIX B: Meeting Agenda Summaries

Meeting # 1: July 13 – 14, 2005, in Flagstaff, Arizona:

The goal of this initial meeting was to establish the beginning of a productive working relationship among members, including the two agencies. Time was taken for members to introduce themselves. The protocols discussion also offered an opportunity for members to begin to understand each other's concerns. Agencies presented background material on the history of the issue.

Specifically, the agenda included:

- Members and alternates introduced themselves, including their connection to the Grand Canyon, aviation, etc.
- Agencies made presentations on the historical, legal and technical milestones relating to overflight noise at the Grand Canyon.
- Co-chairs presented a draft Timeline and Scope of work for the GCWG
- Members discussed the draft protocols, with emphasis on the following:
- Definition of "consensus"
- Participation/absences
- Commitment of members to the process
- Dealing with the media
- How to focus on substantial restoration of natural quiet without limiting issues, discussion, and potential solutions
- Presentation from Modeling Work Group on progress made in developing parameters for a noise model at the Grand Canyon
- Members identified needed documents, maps, other data
- Letter distributed from Senator John McCain concerning high altitude commercial flights

Concerns raised:

- Definition of natural quiet – too strict? Or appropriate?
- Role of commercial flights – counted or not? regulated or not?
- Military noise – contribution to noise landscape?
- Tribal flights – counted or not? regulated or not?
- Noticeability v. detectability – what is the goal – visitor satisfaction or protection of the resource?

Meeting # 2, October 26 – 27, 2005, Squire Inn, Tusayan, Arizona

This meeting included a group dinner at El Tovar Lodge, and a field trip to demonstrate acoustic equipment and an opportunity for the members to experience noise levels at the Canyon, much as

visitors would. Members continued to build a working relationship and increase their understanding of each other's needs.

Specifically, the agenda included:

- Members finalized protocols and adopted a media policy
- Reviewed tribal consultation requirements
- Presentations by each tribal GCWG member concerning values, needs, priorities
- Other members made presentations on values, needs, priorities
- There was a presentation and discussion on the status of recommendations in 1994 NPS Report to Congress
- Members heard technical presentations on:
- Basic acoustic information
- Overview of components of Grand Canyon noise analysis
- Ambient data collection for summer 2005
- Air tour data and peak day for summer 2005
- Other aviation data
- Trends in air tour activity—past and present

Concerns raised:

- Selection of the peak day
- Authority of previous plans, alternatives over the GCWG process – will the 1994 NPS Alternatives be included? If so with what priority?

Meeting # 3, January 31 – February 2, 2006, BIA Offices, Phoenix, Arizona

Prior to this meeting, some GCWG members had attended a workshop at Volpe headquarters in Cambridge, MA, to better understand the INM 6.2 noise model which will be the basis for calculating aircraft noise in the development of alternatives and negotiation of recommendations.

Volpe staff and members reported that the trip was very helpful.

Specifically, the agenda included:

- Co-chairs reported to the members:
- Scope of Work and Timeline for GCWG process
- Concept for coordinating NEPA and GCWG processes
- Clarification of scope of work – on and off the table
- A noise analysis presentation
- NEPA team members described the EIS public scoping process
- A spokesperson for the disabled tourists' constituency addressed the group

- Havasupai representatives offered relevant background information on their values, needs and priorities
- Modeling Workshop Report (January 19-20, Volpe offices, Cambridge, MA)
- NPS staff presented a White Paper on Dual Zone v. Multi-zone approaches to resource protection

Concerns raised:

- The zone approaches will lay an extra set of criteria on the overflights management plan
- The relationship between the NEPA process and the GCWG process is not clear, and there is danger that the NEPA process will subsume the GCWG
- What role might GCWG members play in the upcoming public scoping process?

Meeting # 4, March 20 – 22, 2006, Alexis Park Hotel, Las Vegas, Nevada:

This meeting saw surprising results from the modeling runs: high altitude commercial flights are the major contributor (by far) to the aircraft noise over the Canyon. Removing all air tours would not result in figures even close to the substantial restoration standard. There was also a focus on general aviation aircraft and questions about the extent of their contribution to the noise landscape.

Specifically, the agenda included:

- Updates on timeline, NEPA process, tribal consultation, USFWS Section 7 consultation
- General Aviation survey report
- Process for proposal presentation and discussion
- Presentation of members' proposals
- High Altitude Commercial Flights:
- Report on additional Volpe INM 6.2 runs relating to high altitude commercial flights
- Context for considering options for high altitude commercial flights
- Review 2002 court decision
- Review of 1987 Overflights Act
- FAA National Aviation Forecast

Concerns raised:

- The need to regulate (and the possible prohibition to do so) high altitude flights in order to achieve substantial restoration of natural quiet
- The change in incentives for some parties to participate fully

Meeting #5, May 31 – June 2, 2006, Chaparral Suites, Phoenix, Arizona

With the news that the high altitude commercial flights are the major contributors to overflight noise, the group grappled with its future. Was it still possible to fulfill their purpose as stated in the protocols? Should they cease to exist, or could they take on some smaller tasks, like public education. The conclusion was that there was reason to stay together, and that more information was needed on whether or not high altitude flights could be regulated, or moved in some way.

Specifically, the agenda included:

- Co-chairs clarified role of GCWG with respect to the NEPA process
- NEPA team updated tribal consultation and USFWS Section 7 processes
- Presentation on the administrative record laws, how to document processes, importance of being aware when emailing and other communications
- Report from NPS and FAA on administrative flights, 7711 flights and other non-scheduled flights
- High altitude subgroup report
- New model runs from Volpe
- Members attempted to plot ideas and proposals generated to date on maps for the purpose of comparing and contrasting. Some work done in caucuses.
- Members reflected seriously and spoke of their commitment and cautions about continuing to participate in the GCWG.

<u>Concerns raised:</u>

- Members discussed the "new landscape" that identifies high altitude flights as the major contributor to overflights noise at the Canyon.
- Is the GCWG able to fulfill its mission?
- What can the GCWG do to resolve the high altitude commercial and GA issue?
- Is there an incentive and willingness for each member to continue serving on the GCWG?
- Is there a different forum or format, with different goals, in which we could continue to work productively together?
- Are there other issues that lend themselves to this group's talents and interests – like public education, pilot compliance and enforcement, signage on trails, incentives for quiet technology?

Meeting #6, July 25 – 27, 2006, Four Points Sheraton, Phoenix, Arizona

This meeting featured the presentation by MITRE, consultants hired to research the potential for changing high altitude commercial flight patterns and schedules to accommodate the need for reduced aircraft noise at Grand Canyon. Observers representing airports and business jet constituents expressed concern that the GCWG was attempting to impact the high altitude flights.

Specifically, the agenda included:

- Co-chairs reported on revisions to GCWG process
- NEPA team updated members on NEPA process, including tribal consultation
- USFWS member spoke on Section 7 consultation
- MITRE consultants presented the results of their high altitude commercial flight runs, as well as the changes from ground-based to satellite-based management of commercial aircraft
- Volpe presented new model runs
- FAA previewed a safety analysis plan for proposed changes to Zuni and Dragon corridors
- Members clarified the composition, structure, groundrules and goals for the East and West End sub-groups, then broke into groups to work on potential changes to air tour operations and routes

Concerns raised:

- Credibility of the MITRE presentation
- Implications for the GCWG process and goals
- Possible additions to the GCWG membership – airports and business aircraft

Meeting # 7, September 27 – 28, 2006, Crowne Plaza, Phoenix

East and West End sub-groups met the day before this GCWG meeting to work on their

proposals. David Nimkin joined as a new member representing National Parks

Conservation Association, replacing Dick Hingson who had been serving as alternate

for that group. Prior to this meeting, co-chairs developed a strategy for meeting the needs of the airport and business jet constituents. Representatives from McCarran International Airport and the Phoenix International Airport, as well as the business jet association were permitted to sit at the table and participate in discussions relating to high altitude flights. They were not added to the GCWG as members, and were not able to offer consensus.

Specifically, the agenda included:

- Denver Service Center, contractor for the preparation of the EIS, were introduced
- MITRE staff, contracted to study the potential for regulating high altitude flights, gave a presentation
- Volpe gave a noise modeling report
- East and West End groups continued reported on their previous day's meetings, and continued to meet
- NEPA team updated members on draft EIS alternatives, tribal consultation and USFWS Section 7 consultation

Concerns raised:

- The dilemma of how to meet the goal of substantially restoring natural quiet while being unable to regulate high altitude commercial flights, as the MITRE study showed
- Some questions about the credibility of the MITRE study
- The temptation to ask Congress to clarify the Act of 1987
- The change in incentives for significant changes to routes and operations
- The need to represent the interests of airports and business jets in the process

Meeting # 8, December 12 – 13, 2006, Chaparral Suites Resort, Scottsdale, Arizona

This meeting was for the purpose of discussing proposals for aircraft under 18,000 feet only. The debate on how to handle high-altitude commercial flights had reached a standstill at the previous meeting, and the group agreed to limit this meeting's discussion to avoid further stalemate.

Maps were posted on the walls and given as handouts to facilitate the understanding of the various proposed alternatives (both agency and member-generated) to be presented by the NEPA team during the meeting.

Specifically, the agenda included:

- Review of protocols on consensus
- NEPA team presented for discussion:
- Description of process for incorporating comments from the last meeting
- Review of timeline for completion of EIS and role of GCWG
- Alternatives under 18,000 feet
- Modeling implications and assumptions for the alternatives
- Brief presentation of baseline noise analysis with new compression algorithm
- East End/West End subgroup meetings

Concerns raised:

- The contemplated revision by the NPS of the definition of substantial restoration of natural quiet – the need for clarity v. the need for flexibility
- The apparently limited potential for making significant impacts on the aircraft noise level over the Canyon

Meeting # 9, June 12 – 13, 2007, Chaparral Suites Resort, Scottsdale, Arizona

This meeting saw the installation of Steve Martin, new Superintendent at Grand Canyon National Park, as the official NPS representative and co-chair. Karen Trevino took an ex-officio seat as representative of the NPS Sounds Program. Facilitators were asked at the end of the meeting to prepare a strawman set of alternatives for consideration by the group at the next meeting.

Specifically, the agenda included:

- Co-chairs updated members on:
- draft legislation
- clarification of agency decision-making roles
- GCWG involvement and identification of preferred alternative
- overall timeline
- NPS Co-chair offered his ideas on an updated substantial restoration definition and plans to publish it in the Federal Register
- NEPA team updated members on tribal involvement and cooperating agency status of BIA and Hualapai
- Members heard presentation of NEPA alternatives and impact analysis process
- Members saw demonstration of Google Earth capacity
- Volpe offered noise modeling update
- Technical work group updated members on noise metrics and impact topics

Concerns raised:

- The "shifting sands" of the definition and the need for clarity on a threshold to reach
- The need to retain flexibility in order to manage adaptively as technology changes
- The fear that NPS was introducing a new metric that some saw as untested
- The need to use all possible tools to achieve the goal
- The inability to have productive negotiations over proposals raised by one constituency or another – need for a strawman proposal

Meeting # 10, September 20, 2007, Chaparral Suites Resort, Scottsdale, Arizona

This meeting included a one-day study session (September 19) where members reviewed the alternatives in the strawman proposal developed by facilitators and discussed tentative consensus. This study session was closed to the public. On the second day, the GCWG held a regular public meeting, where they summarized their work in the study session.

Specifically, the agenda included:

- report on FAA reauthorization
- NEPA update
- the definition of substantial restoration Federal Register schedule
- modeling results
- report from Technical Work Group on metrics, planning on peer review

Member concerns:

- The alternatives should generate significant benefit to the visitor and wildlife
- The alternatives should not impact air tour business
- Some members needed to check with constituencies on items of consensus
- Some additional data and test flights were needed before consensus could be offered.

Meeting # 11: December 4 - 5, 2007, Scottsdale, Arizona:

At this final consensus-seeking meeting, members focused on certain elements that would be key to a recommendation from the GCWG. Although tentative consensus had been reached on several of the 27 elements reviewed in the strawman proposal at the last meeting, the group understood that those agreements were contingent on constituency approval and additional information. The main element discussed in seeking consensus was the seasonal respite – every part of the Canyon would be free from overflight noise during some part of the year. The group failed to reach consensus on a seasonal respite concept. The agencies asked the group to further comment on other elements of an overflights plan, for their edification, as they moved forward.

These included:

- Quiet technology
- Allocations
- Curfews
- Blue Direct route

Other agenda items included:

Description of the FAA Aviation Rulemaking Committee process, in anticipation that the GCWG would serve in that capacity.

Concerns raised:

- Failure to reach consensus
- Next steps for the GCWG, in the NEPA process and the ARC process
- Need for a final report to describe the process and its outcomes

Final reflections by members on the process revealed a general satisfaction with the experience. Relationships had been built that would serve members in the future. There was increased understanding of the historical, technical and legal aspects of the issue. There was a deeper appreciation for other perspectives at the table. The agencies expressed thanks to the group for their commitment and hard work, and said they felt much better prepared to make the decisions necessary to craft the best possible overflights management plan.

APPENDIX C: Federal Register Notice, September 24, 2008, clarifying the definition of Substantial Restoration of Natural Quiet at Grand Canyon National Park

55130 Federal Register / Vol. 73, No. 42186 / Wednesday, September 24, 2008 / Notices

1 National Park Service. 1995. *Report of Effects of*
Aircraft Overflights on the National Park System,
Report to Congress, July.
2 United States Air Tour Association, et al., Petitioners v. Federal Aviation Administration, et
al., Respondents; Grand Canyon Trust, et al., *Intervenors*, 353 U.S. App. D.C. 213; 298 F.3d. 997;
2002. U.S. App.
3 National Park Service. 2001. *Director's Order* #12 and Handbook: Conservation Planning, Environmental Impact Analysis and Decision *Making,* January.
The application will be processed in accordance with the regulations set forth in 43 CFR part 2300.
Fred O'Ferrall,
Chief, Branch of Lands and Mineral Resources.
[FR Doc. E8–22347 Filed 9–23–08; 8:45 am]
BILLING CODE 3410–11–P
DEPARTMENT OF THE INTERIOR
National Park Service
Public Notice: Clarifying the Definition of ''Substantial Restoration of Natural Quiet'' at Grand Canyon National Park, AZ
AGENCY: National Park Service, Department of the Interior.
ACTION: Notice of Disposition of Public Comments and Adoption of Clarification.
SUMMARY: On April 9, 2008, the National Park Service (NPS) published a Public Notice of agency policy in the **Federal Register** with the above title (73 FR 19246–19248), clarifying the NPS definition of substantial restoration of natural quiet at Grand Canyon National Park (GCNP) to distinguish between aircraft noise generated above and below 17,999 feet mean sea level (MSL), and requesting comments on the proposed clarification. Specifically, the NPS proposed the following clarification:
(a) Substantial restoration of natural quiet at GCNP will be achieved when the reduction of noise from aircraft operations at or below 17,999 feet MSL results in 50% or more of the park achieving restoration of the natural quiet (*i.e.*, no aircraft audible) for 75% to 100% of the day, each and every day; and
(b) The NPS defines the substantial restoration of natural quiet from all aircraft above 17,999 feet MSL to mean that there will be an overall reduction in aviation noise generated above 17,999 feet MSL above the park over time through implementation of measures in accordance with Federal Aviation Administration (FAA) commitments.
The NPS also clarified that 50% of the park is a minimum in the restoration goal.
The public comment period was open from April 9 to May 9, 2008. The NPS received and analyzed 127 comments in response to the Public Notice. Comments were received from the National Air Transportation Association; environmental groups (*e.g.*, Sierra Club, Audubon Society, and Grand Canyon Trust); air tour operators; and the general public. Comments

beyond the scope of this clarification may be considered in the development of the Environmental Impact Statement for Special Flight Rules in the Vicinity of Grand Canyon National Park (EIS).

DATES: The clarification as published on April 9, 2008, is effective immediately.

FOR FURTHER INFORMATION CONTACT: Ken McMullen, Grand Canyon National Park, 823 N. San Francisco St., Suite B, Flagstaff, AZ 86001, Telephone (928) 779–2095.

SUPPLEMENTARY INFORMATION:

Background

In response to the comments received pursuant to the publication of the NPS Public Notice in the April 9, 2008 **Federal Register**, the NPS explains the reasons for and the expected effects of the proposed clarification below and in the Discussion of Comments to follow.

Reasons for the Clarification

The notice published on April 9, 2008 in the **Federal Register** clarifies the definition used by GCNP for achieving substantial restoration of natural quiet as mandated by the 1987 Overflights Act (Pub. L. 100–91) (Overflights Act). This clarification of the definition is necessary to address current aircraft noise impacts, to comply with the intent of recommendations provided in the 1995 Report to Congress 1, and to respond to a 2002 U.S. Court of Appeals decision.2 The provisions of Special Federal Aviation Regulation (SFAR) 50–2 have not resulted in substantial restoration of natural quiet at GCNP. Given the volume of high altitude commercial jet and general aviation traffic overflying the Grand Canyon above 17,999 feet MSL, the substantial restoration goal as previously defined cannot be attained.

Discussion of Comments

The NPS received 127 comments regarding the clarification of the definition of the ''substantial restoration of natural quiet'' at GCNP. Of those, 40 comments were substantive in nature while 87 were not substantive. NPS Directors Order 12, *Conservation* Planning, Environmental Impact Analysis, and Decision Making,3 defines substantive comments as those that raise, debate, or question a point of fact or policy. Comments solely in favor of or against the proposed action are not considered substantive. Also, a large number of comments were received that did not address the proposed clarification regarding 17,999 feet MSL; many addressed other issues that commentors said should be addressed in the EIS. While such comments are not substantive for this clarification, they will be considered as the EIS is developed. Substantive comments about the clarification are summarized and responded to below.

1. One commentor suggested the addition of the word ''such'' for clarity, so that Part (a) would read: ''Substantial restoration of natural quiet at GCNP is achieved when the reduction of noise from aircraft operations at or below 17,999 feet MSL results in 50% or more of the park achieving restoration of natural quiet (i.e., no such aircraft audible) for 75% to 100% of the day * * *''

NPS Response: The NPS believes that Part (a) of the clarification as stated in 73 FR 19246–19248 is sufficiently clear to address only those aircraft at or below 17,999 feet MSL. Therefore, the suggested change is not made.

2. Comments were received urging NPS to clarify that Part (b) is not a definition of the statutory term, but rather policy goals based upon FAA commitments. Two commentors stated that the FAA commitments are alluded to but not specified.

NPS Response: Part (b) of 73 FR 19246–19248 clarifies but does not redefine the NPS goal for substantial restoration of natural quiet from all aircraft above 17,999 feet MSL above the park. This goal is supported by FAA policy commitments to: (1) Actively pursue efforts to continue to reduce aircraft source noise throughout the aviation system. The recently introduced NextGen Aviation Reform Act strengthens the FAA's research and development capability and includes a performance objective for lower noise aircraft technology; (2) when the FAA is engaged in airspace redesign that affects a national park and there are alternative choices consistent with safety, operational, and environmental parameters, the FAA will give favorable consideration to alternative routes away from sensitive park resources; and, (3) as the FAA transitions to a more dynamic, satellite-based technology, future navigational flexibility will allow the FAA to reconsider opportunities to reduce national park overflights that are

APPENDIX D: Strawman Discussion and Consensus Document

Grand Canyon Working Group
September 19 & 20, 2007
Chaparral Suites, Scottsdale, Arizona

The Grand Canyon Working Group met in a closed study session on September 19 and in open session on September 20 for the purpose of reviewing, discussing, and seeking consensus on the items in the strawman document. This document was prepared by facilitators after confidential talks with GCWG members.*

ASSUMPTIONS: Lucy reviewed the assumptions underlying the Strawman proposals.

There are certain areas of the Grand Canyon that are critical for the ground visitor. Environmental and recreational interests seek relief from aircraft noise over these areas for some part of the year.

Natural quiet is a value that the Park Service is responsible for defining and protecting, under law, policy and court rulings.

There have been changes and deletions of air tour routes in the Grand Canyon since 1987. These changes are accepted by the air tour industry. Operators are willing to consider changes to these routes to benefit ground visitors, wildlife, or other park resources, as long as a viable air tour industry is maintained.

The GA pilots need overflight access, at altitudes that accommodate small engines.

Tribal rights to economic development and cultural protection must be honored.

Endangered species and their habitat must be protected.

All parties need security that this issue is resolved.

CONSENSUS: The group reviewed and clarified each of the proposals below. After discussion and identification of concerns, members were asked for a show of consensus on each item. The group used the show of thumbs:

Thumb up = support

Thumb to the side = can live with it

Thumb down = cannot live with it

"Consensus" is defined as all members supporting or being able to live with the proposal. Lack of consensus is reflected as “no consensus,” with notation of number of dissenters and reasons.

* An alternative strawman document had been sent to some GCWG members and to facilitators from an anonymous source. This document was not used in this process.

The group agreed that in offering consensus members were supporting the concept expressed in the proposal, and that additional data and evaluation on some of the items could change the level of support in one direction or the other.

The group also understood that, although consensus might be reached on individual proposals, it will be necessary for members to evaluate the package of agreements as a whole in order to determine their level of support.

STRAWMAN PROPOSALS

A. ROUTE CHANGES:

A-1. Changes to the Zuni Corridor

There would be a short dogleg, cutting Snoopy's nose approximately in half on the present chart. This dogleg would avoid the confluence with the Little Colorado, as the current route does.

Discussion: Examination of maps and charts revealed that this proposed change to the route was already being implemented, although the chart has not been updated to reflect the actual route being flown.

Thereafter, rather than flying the route North toward the Nankoweap Rapids area, the air tour would fly straight across from the exit of the Little Colorado Loop to pick up Green 1A and Black 1 south of Imperial Point.

Discussion: This change is illustrated in Alternative F. There was support for this route adjustment because of the benefit to ground visitors, protection of the Nankoweap area, and possible relief to Point Imperial. On the peak day, 48 fixed wing and 53 helicopters flew the current route.

The USFWS has concerns, however, about impacts to Mexican spotted owl PACs, and the Hopi Tribe has two shrines in the area that need to be protected.

Members identified concerns:

Endangered species: USFWS needs more data on the number and amount of increase of flights over this area, as well as the altitude and frequency of flights. An adjustment may need to be made in order to protect species in the Nankoweap area.

Hopi practices: The Hopi Tribe is concerned that the Little Colorado gorge area be free of loud noises during times of pilgrimage and ceremonies. The Salt Trail is visited during the summer solstice and in November. In addition, there are various shrine locations in the area .

Consensus: Members offered consensus in support of A-1, on the condition that the concerns of the USFWS and the Hopi Tribe can be addressed.

A-2. Seasonal closure of Zuni

Consider strategies to give respite in the Zuni area during hiking season.

For instance, close Zuni Corridor for 2 – 3 months in exchange for a new fixed wing and helicopter route (short and long, the short route also being a weather alternate) coming off Dragon to the west, in the far eastern portion of Toroweap/Shinumo FFZ east of Supai. This can be called the two-headed Dragon route. During the other 9-10 months, both Dragon and Zuni would be open and the new route would be closed.

Discussion: Members considered a variety of ways of shifting routes to provide respite for the ground visitor during certain months of the year. All parts of the canyon would experience some period of quiet, and visitors would be able to plan their activities accordingly. The periods of respite most acceptable to operators are the winter months (November 15 – February 15), when there are fewer ground visitors to take advantage of the quiet. A member suggested that the winter hiker might particularly appreciate the quiet at that time. Highest ground use is in March and April and from the end of September to early November. Overlapping dates for respite – December to April – could be feasible.

Some favored development of a new route, called the Two-headed Dragon, which would be open only during months when the Zuni and Dragon would be closed. [Proposal 1, below] Others favored closure of the Zuni and Dragon alternately for certain months of the year, for instance spring and fall. [Proposal 2, below] There were differences of opinion about optimal times for the shifts or closures.

Proposal 1: Seasonal Shift/Two-headed Dragon: Give respite under Zuni and Dragon corridors for certain period(s) of the year, by shifting air tours to new routes.

Members identified concerns with Proposal 1:

- Impacts to the Bass Trail
- Impacts to boaters
- Impacts to endangered species, especially in early spring
- Impacts to cultural sites, including eagle nests near Cameron
- Safety issues
- Training costs and timing for air tour pilots
- Navajo access to a corridor
- Impact to park resources of increased numbers of ground visitors in quiet areas
- Timing of seasonal shift to benefit ground and air visitors

Proposal 2: Alternate closure Zuni and Dragon: Some environmentalists favored alternate closure of the two existing corridors during certain period(s), on the grounds that this would significantly increase the amount of natural quiet in the Canyon. Air tour operators expressed concern that this was not feasible, in terms of safety and economics.

Members identified concerns with Proposal 2:

- Need for two air tour routes, for safety and economics
- Closing Zuni would result in no fixed wing route

No consensus: All but one member offered consensus in support of Proposal 1, above, with the understanding that the concerns above could be successfully addressed. The dissenting member supported Proposal 2.

A-3. Dragon Corridor

Create a dogleg in the Dragon Corridor Route that would put the corridor farther west, protecting Dripping Springs and the trails associated therewith. [Consideration should be given to lowering the altitude of the route to use terrain shielding.] Upon exiting the Canyon, air tours would fly south on a new route flying away from the Park Boundary Road. The present route follows Boundary Road for some distance and then turns toward the airport. This new route would eliminate any conflict with the private residences in the vicinity of Ra Well and would protect the West Rim Drive of the Park.

Discussion: Modeling results have shown that lowering altitude is unfavorable to ground users. The group agreed to consider A-3 for consensus, deleting the second sentence (see above).

Consensus: Members offered consensus in support of A-3, with the second sentence deleted.

A-4. Quiet Airplane Route from Las Vegas

There would be scenic airplane tours from Las Vegas, for only Quiet Technology aircraft, at the vicinity where Blue Direct North crosses the Colorado River, allowing a descent to Rim level for about 10 miles and then proceeding back to Blue Direct North to the Grand Canyon National Park Airport. All aircraft would then return to Las Vegas on Blue Direct South as presently permitted. There could be curfews established for the scenic deviation.

Discussion: The group discussed the legal mandate for a fixed-wing Quiet Technology incentive route between Las Vegas and Grand Canyon, and the pros and cons of the proposed route. Operators explained that curfews were not possible because of the long time lapse between departure from Las Vegas and arrival over the Canyon. There may be other ways of timing flights to allow quiet in the

morning and evening for the ground visitors. The proposed route can be modified, but must preserve a "quality air tour" for the operator.

Members identified concerns:

- Impacts to Hualapai cultural properties
- Impacts to Navajo and Hopi ochre collection, Pumpkin Spring sites and other TCPs
- Impacts to boaters:
- increased river crossings (from 1 to 4)
- flying parallel to river
- Parashant Wash
- Currently quiet camping beaches
- Safety concerns/liability for flights *not* originating from Grand Canyon West
- Need to ground-truth the route
- Need to offer "quality air tour"

No consensus: All but one member supported the QT incentive air tour route between Las Vegas and Grand Canyon, conditioned on successful addressing of the concerns listed above. The dissenting member opposed the proposal on the grounds that the Hualapai Tribe should be able to fly and adjust the route as necessary.

A-5. Marble Canyon

The Black 4 and 5 air tour routes would be preserved, but limited to Quiet Technology Aircraft only. Seasonal limits would be established. There would be a priority on no increase in degradation of the natural, cultural and historic resources at Marble Canyon.

Discussion: The group discussed maintaining the air tour routes over Marble Canyon, while providing protection from degradation of the resources in the future. Members saw this as an opportunity to pro-actively protect a unique low-noise area, rather than seeking to undo development after the fact. They discussed keeping the routes as mapped, and establishing seasonal limits and limits on number of flights. Movement of route may result in not being able to see the Canyon. Navajo residents suffer from occasional low-flying aircraft. [This could be a repositioning flight or a GA pilot. NPS will provide residents with incident report form.]

Consensus: Members offered consensus in support of A-5.

A-6. Havasupai Administrative Flight

The proposed dogleg in Havasupai administrative flights would be implemented.

Consensus: Members offered consensus in support of A-6.

B. OTHER CONSENSUS TALKING POINTS

B-1. Allocations

Current caps on allocations would be maintained.

Discussion: The group asked how close operators are to reaching their caps. In the East End flights are roughly at 90% of the limit, and some operators are nearing their limits. In the West End flights are about 50% of the cap. Some flights have been lost as a result of operators going out of business. Some were interested in looking at specific locations with respect to proximity to cap levels.

No consensus: All but one member supported B-1. He felt that the question of caps needed more site-specific evaluation.

B-2. Flight Following Technology

Air tour companies, agencies and tribes would work together to implement flight following and compliance technology for tracking and route management, as well as for enforcement and fees, for air tours.

Discussion: One effective technology is the Capstone 2 program. The group discussed the expense ($ 40,000 per aircraft more or less) and the potential for joint sponsorship of the program with FAA, and perhaps lowering the price by purchasing as a group. The group understood that for GA pilots participation would have to be voluntary, not mandatory.

Consensus: Members offered consensus for B-2.

B-3. General Aviation Corridors

GA corridors will remain open, provided that concerns of tribes and others are met (through modifications, etc.)

Discussion: Although the original proposal had been to close one GA corridor, the GA member asked that consideration be given to maintaining all four corridors, given the ability to address the concerns of tribes and others. If those concerns cannot be successfully addressed, closure of a corridor may be on the table. Havasupai would prefer closure of Fossil, but is willing to work with others on caps or other

restrictions to the corridor. FAA and NPS emphasized their commitment to address tribal interests, and reminded the group that tribal consultation is ongoing in the NEPA process. Members were willing to explore the potential for modifications to meet concerns.

Members identified concerns:

- Number of GA flights above the FFZs, and the potential for increase
- Impacts of Fossil to Havasupai quality of life and TCPs
- Impacts of Fossil to ground visitors
- Impacts to economics (Bar-10 takeout, etc.)

No consensus: All but one member supported B-3. The opposing member objected to leaving the corridors in place and not raising the FFZ altitude.

B-4. FFZ altitude

FFZ ceilings will remain at current altitude, subject to future evaluation of impact on park.

Discussion: The group discussed the FFZ ceiling and its relationship to the GA corridors. Very few (3 or 4 out of several hundred) GA planes fly over 14,500 feet. Some favor raising the ceiling, in the interest of reducing current GA traffic in the FFZ and protecting the FFZ against future increases in GA flights. Some fear growth in the small jet industry will impact the FFZ; others say that class of aircraft will fly in the 30,000 feet range. Some support a raised ceiling particularly if all four corridors are preserved. GA interests oppose raising the ceiling in any case. A member suggested an adaptive management approach for addressing the FFZ altitude that would be based on future GA growth.

Members identified concerns:

- Impact to ground visitors of flights over 14,500 feet – current and future
- Impact to GA aircraft if FFZ ceiling raised

Consensus: Members offered consensus for B-4.

B-5. Quiet Aircraft Technology

The goal is to have all QT aircraft. All aircraft on all air tour routes are encouraged to be QT within 12 years after plan implementation. There will be economic incentives to facilitate this conversion, depending on the results of the economic analysis. Following conversion, there may be regulatory options.

Discussion: Members are supportive of conversion to QT, understanding that this is an opportunity for significant improvement. Modeling shows that if all fleets were QT, the Park would be 68% restored. The NPS Sounds Program representative cautioned that potential QT improvements have never been ground-truthed and repeated her request that this be acknowledged so that appropriate adaptive approaches are tailored including long term monitoring.

The group discussed the nature of incentives, which are legally required. Some felt that being allowed to fly air tours in the SFRA should be considered an incentive. Others suggested a variety of incentives, tailored to the east and west ends, including reduction of the overflight fees and QT incentive routes. The group also considered the feasibility of economic *dis*incentives following the conversion period – like reduction of caps -- for those with non-QT aircraft. A member said it was important to understand that some of the options are incentives, and others are punitive.

Members raised the possibility of federal assistance from FAA to help manufacturers offer incentives. Lynne discouraged the group from relying on federal assistance. She added that FAA has considered financial incentives for accelerating next generation aircraft into the U.S. fleet, but this has not been favorably viewed based issues of costs and of appropriate use of federal dollars to support the private commercial sector.

Operators pressed for a voluntary, not a mandatory program, based on the expense of the technology, the uncertainty of delivery dates due to manufacturing delays, and competition from military demands. Current delivery dates are 2011 and later. Ten years is not possible, they said. A smaller operator pointed out that his mixed fleet aircraft have multiple uses – air tour, transport, search and rescue, film, etc. Their economic viability depends on their ability to be efficient, and that depends on their ability to be flexible in using different aircraft for different purposes.

Operators explained the expense in converting to QT – as much as ten times the cost of non-QT aircraft. A $100,000 single engine plane would be replaced with a $1,500,000 QT aircraft, for example. The cost of the aircraft is higher, as well as operating and maintenance costs. A large operator must invest $ 100,000,000 for complete conversion, and the price is rising.

The group discussed the definition of Quiet Technology and the concept of passenger efficiency. There is some concern that FAA's Quiet Technology definition is based on a passenger/noise efficiency ratio and not on actual noise reduction, if a larger aircraft is substituted for a smaller aircraft. FAA explained that noise standards for quiet technology are based on the weight of the aircraft and the energy needed to take off. Energy determines noise and there are tiers of noise standards pegged to size and weight of aircraft. The quiet technology aircraft plan for the Grand Canyon is a separate issue. There was concern among some that noise could actually increase under a Quiet Technology scenario since the program will be based on noise/ passenger efficiency ratio as set forth in the FAA definition for Quiet Technology for the Grand Canyon, however the group was assured by NPS and FAA lawyers that would not happen given the statutory limitations set forth in the 2000 Act. Operators oppose a one-for-one passenger exchange concept; they are unable to fill all their current seats now for a variety of reasons including

weight limits and the increase in passenger size. For west end companies the long distances make filling every seat impossible.

Some favored regulatory options as well as incentives. Operators opposed any regulatory options until after the conversion period.

Members identified concerns:

- Potential for economic impact to some operators and Hualapai Tribe, if certain companies are unable to meet the requirement.
- Impact of regulatory options to industry prior to end of conversion period
- Potential for increase in noise as a result of QT aircraft
- Inability to predict delivery dates for QT aircraft
- Expense of conversion
- Lack of clarity about incentives and regulatory options

No consensus: All but one member supported B-5. The dissenting member needed more certainty about economic incentives and regulatory options.

B-6. Single-engine piston aircraft altitude (Zuni)

Single-engine air tour piston aircraft on the Black 1 air tour entering into the Zuni corridor would enter the corridor at the height they are required to fly as they pass just South of Imperial Point. This change will eliminate the long, noisy climb over the central area of the Canyon. Single-engine Quiet Technology Aircraft would fly in the Zuni Corridor as defined above.

Consensus: Members offered consensus in support of B-6

B-7. West End

Preserve access to Green 4 and Blue 2. Modify Green 4 and the SFRA boundary (as shown in Alternative F) to eliminate southern portion of route and protect the Hualapai Skywalk.

Discussion: The Hualapai member explained the proposal to modify Green 4 and the SFRA boundary to protect the skywalk area. The route would reverse direction on far side of the river, and exit over Horseflat Mesa, as shown in Alternative F. The route has been test flown with FAA.

Consensus: Members offered consensus in support of B-7.

B-8. Flight Free Times

Study the possibility of adjusting curfews to balance interests of air and ground users with minimal impact to wildlife.

Discussion: There was concern and some confusion about the original proposal in the Strawman to shift curfew times to allow more quiet time before sunset for ground visitors in the winter, in exchange for shorter curfew times in the fall and spring. The group agreed that the topic was not resolved, but merited further study.

Members identified concerns:

- Impacts to wildlife foraging in early morning hours in early spring, during breeding season, if curfew were shortened in the spring
- Need for curfew to be expressed in hour blocks for clarity and consistency for air tour operators
- Need to maintain current curfew in September for air tour business
- Impact to ground visitor if curfew shortened in fall and spring
- Need to clarify this is east end proposal only
- Need to establish relationship between air tours and wildlife, level of impact if any

Consensus: Members offered consensus in support of B-8, pending the necessary additional study.

B-9. Terrain Shielding

Explore the benefit of using terrain shielding (above the rim) as an adaptive management tool to reduce noise to ground visitors in the design of air tour routes.

Discussion: Although lowering Dragon 1,000 feet (below the rim) showed no substantial difference in the time audible contour, other examples might result in a difference. There was support for continuing to explore the potential benefits in certain situations, and for including terrain shielding in the NEPA evaluation of routes

Members identified concerns:

- Impact of flying below the rim – visibility, as well as noise
- Impact of flying low for long periods of time, to gain benefit of terrain shielding

- Higher flights increase audibility over wider area

The group decided that terrain shielding may be useful in reducing noise to ground visitors, but that it should be characterized as a tool, rather than a proposal.

No consensus to remove B-9 from Strawman: The one dissenting member wanted to retain B-9 to insure the issue would be addressed in the EIS.

B-10. Interpretation

The interpretive component of the air tours would be increased and enhanced by a coordinated effort between the companies and NPS.

Discussion: Members spoke of the importance of maximizing the air tour customer's experience with enhanced interpretive offerings. In addition, the group supports improved information for ground visitors to enable them to make choices about when and where to hike, and to be sure their exectations about aircraft noise are realistic.

Consensus: Members offered consensus in support of B-10.

Summary of strawman discussion and consensus prepared by Lucy Moore.

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