

**Grand Canyon Working Group
Strawman Discussion and Consensus
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 groundtruth 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 groundtruthed 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 *disincentives* 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 expectations 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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