National Parks

Air Tour Management Plan (ATMP) Program

Implementation Plan

DRAFT: Version 2

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VERSION TRACKING

Version Number	Date	Description/Changes
Version 1	**9/30/05**	Version 1 of the Implementation Plan (IP) was the first version available for the development of air tour management plans (ATMPs) at applicable national park units in accordance with the National Parks Air Tour Management Act of 2000 (NPATMA). The IP was developed jointly by the Federal Aviation Administration (FAA) and the National Parks Service (NPS) with support from the John A. Volpe National Transportation Systems Center (Volpe Center). Version 1 was described as a "living" document that was expected to change in response to evolving issues.
Version 2	**9/21/07**	Version 2 of the IP incorporates information learned from the development and preparation of various ATMP National Environmental Policy Act (NEPA) documents, in particular the Mount Rushmore National Memorial Draft Environmental Assessment. Major changes in Version 2 related to: (1) the format and approach to the assessment of environmental impact categories, (2) the use of various noise metrics for both inside and outside of the park boundaries, (3) clarification on the use of ambient conditions and maps (e.g., Natural Ambient and Existing Ambient without Air Tours), (4) updating the list of national park units and those for which ATMPs are required, and (5) a change in the definition of what constitutes the proposed (or federal) action for ATMPs. Version 2 of the IP has also been reorganized to be more user-friendly by grouping like appendices together, creating Chapter 3 from the information that was in Appendix SS, Version 1, moving detailed acoustic information to the appendices, and improving and updating the flow charts and other reference materials in the main text and appendices.

ACRONYMS

ACHP	Advisory Council on Historic Preservation
ADM	Alternatives Development Meeting
ADR	Alternatives Development Report
ADT	Alternatives Development Team
AGL	Above Ground Level
APE	Area of Potential Effect
ATMP	Air Tour Management Plan
AWP	FAA Western Pacific Region
BLM	Bureau of Land Management
CATEX	Categorical Exclusion
CBR	Coastal Barrier Resources
CBRA	Coastal Barrier Resources Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CMO	Certificate Management Office
CZM	Coastal Zone Management
CZMA	Coastal Zone Management Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
ΔL	Change in Exposure
dB	Decibel
dBA	A-Weighted Decibel
DEM	Digital Elevation Model
DMS	Document Management System

DNL	Day-Night Average Sound Level
DO-12	National Park Service Director's Order #12 and Handbook
DOI	Department of Interior
DOT	Department of Transportation
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
ERA	Experimental Research Area
ESA	Endangered Species Act of 1973
ETMS	Enhanced Traffic Management System
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FICAN	Federal Interagency Committee on Aviation Noise
FOIA	Freedom of Information Act
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
FSDO	Flight Standards District Office
FSS	Flight Standards Service
GCNP	Grand Canyon National Park
GIS	Geographic Information Systems
GMP	General Management Plan
HHS	Department of Health and Human Services
INM	Integrated Noise Model
IOA	Interim Operating Authority

IP	Implementation Plan
L_{50}	50-Percentile Exceeded Sound Level
L_{Aeq}	A-Weighted Equivalent Sound Level
L_{eq}	Equivalent Sound Level
L_{max}	Maximum Sound Level
MAB	US Man and Biosphere Program
MOU	Memorandum of Understanding
NAS	US National Airspace System
NEH	Number of Events per Hour
NEPA	National Environmental Policy Act of 1969
NFI	Noise-Free Interval
NHPA	National Historic Preservation Act of 1966
NLT	National Leadership Team
NMFS	National Marine Fisheries Service
NNL	National Natural Landmarks
NOA	Notice of Availability
NOI	Notice of Intent
NPATMA	National Parks Air Tour Management Act of 2000
NPOAG	National Parks Overflights Advisory Group
NPRM	Notice of Proposed Rulemaking
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRI	Nationwide Rivers Inventory
NV	Natural Variability
PA	Programmatic Agreement

PMAD	Peak Month Average Day Schedule
PMT	Project Management Team
QT	Quiet Technology
RCRA	Resources Conservation and Recovery Act
RNA	Research Natural Area
ROD	Record of Decision
SHPO	State Historic Preservation Officer
T	Time Period
TA	Time Audible
TAA	Time Above Ambient
TAF	Terminal Area Forecast
TAT	Time Above Threshold
T&E	Threatened and Endangered
THPO	Tribal Historic Preservation Officer
3-D	Three-dimensional
TSCA	Toxic Substances Control Act
TPY	Tons per Year
UNESCO	United Nations Educational, Scientific and Cultural Organization
USDOT	US Department of Transportation
USFS	US Forest Service
USFWS	US Fish and Wildlife Service

SIGNATORIES

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1.0 INTRODUCTION

1.1 IMPLEMENTATION PLAN: PURPOSE AND ORGANIZATION

This Implementation Plan (IP) is a guide for the Federal Aviation Administration (FAA), the National Park Service (NPS), and other associated agencies and contractors to successfully develop and implement Air Tour Management Plans (ATMPs) at applicable national park units according to the requirements of the National Parks Air Tour Management Act of 2000 (NPATMA).

Developed jointly by FAA and NPS with the help of the John A. Volpe National Transportation Systems Center (Volpe Center), the IP defines processes and methodologies to complete ATMPs and associated National Environmental Policy Act (NEPA) of 1969 documents and includes guidance for managing ATMPs once they are in place. This IP tiers off of the signed FAA and NPS Memorandum of Understanding (MOU), which was executed on January 27, 2004 (see Appendix A-1). The MOU is the principal agreement between FAA and NPS with regard to NPATMA**.** The IP supports and provides operational details generally covered in the MOU. In addition, the IP includes details about the roles and responsibilities of FAA and NPS, whom NPATMA designates as lead and cooperating agencies, respectively, for the purposes of ATMP development and compliance with NEPA. This plan is not intended to supersede FAA or NPS orders but instead to supplement them for purposes of preparing an ATMP. The IP is not applicable to other non-ATMP FAA or NPS projects.

This IP considers a wide range of concerns within the context of dynamic issues. The scope may expand over time, and new directions may be identified as experience is gained. It is considered a "living" document that may be changed in response to evolving issues. Recognizing the potential need for updates, FAA and NPS will periodically conduct a formal review of the IP as appropriate and make updates where needed. The review will be carried out by staff members from both FAA and NPS offices responsible for ATMP/NEPA development. The signatory for the FAA Western Pacific Region is the Manager, Special Programs Staff, and for NPS it is the Natural Sounds Program Manager.

Chapter 1 of the IP provides an overview of the ATMP program. Chapter 2 provides information on developing ATMPs and environmental compliance documents. Chapter 3 includes detailed guidance on environmental impact analysis procedures. Chapter 4 gives guidance for implementing, updating, and amending existing ATMPs. The appendices provide examples of documents used throughout the ATMP development process.

1.2 ATMP LEGISLATIVE BACKGROUND

Congress passed NPATMA, effective on April 5, 2000 (Public Law 106-181, 114 Stat. 61, Title VIII) (see Appendix A-2 for a copy of NPATMA and Appendix A-3 for a copy of FAA implementing regulations found at 14 CFR Part 136, National Parks Air Tour Management). A key element of the legislation and the national rule to implement NPATMA is the use of ATMPs to regulate commercial air tour operations over units of the national park system.

According to NPATMA, the objective for ATMPs is to develop acceptable and effective measures to mitigate or prevent significant adverse impacts, if any, of commercial air tour operations upon the natural and cultural resources and visitor experiences in national park units as well as tribal lands (those included in or abutting a national park). NPATMA also designates FAA as the lead agency in assessing environmental impacts of commercial air tour operations under NEPA and NPS as the cooperating agency. NPATMA requires that FAA and NPS solicit the participation of any Indian tribe whose tribal lands are or may be overflown by aircraft involved in a commercial air tour operation over the park or tribal lands to which the plan applies as a cooperating agency. Further, NPATMA specifies that both FAA and NPS must sign the environmental decision documents for an ATMP. It also requires that any methodology adopted by a federal agency to assess air tour noise under its provisions must be based on reasonable scientific methods. FAA plans to combine the process of developing ATMPs with the NEPA review process at each park unit in the ATMP program.

1.3 ATMP PROGRAMMATIC GOALS

Congress found that FAA has sole authority to control airspace over the United States and to preserve, protect, and enhance the environment by minimizing, mitigating, or preventing the adverse effects of aircraft overflights on public and tribal lands. NPS has the responsibility of conserving the scenery and natural and historic objects and wildlife in national parks and of providing for the enjoyment of national parks in ways that leave them unimpaired for future generations. The protection of tribal lands from overflights is consistent with protecting the public health and welfare and is essential to the maintenance of the natural and cultural resources of Indian tribes.

The long-term programmatic goals of FAA and NPS are to produce ATMPs within a reasonable timeframe for all park units with commercial air tour operations while promoting the protection and/or enhancement of the park resources and the visitor experience and providing for park commercial air tour operations where appropriate. Other long-term goals will be developed as the program progresses.

In developing ATMPs, it is the goal of FAA and NPS to:

- Ensure safety of all commercial air tour overflights of national park units.
- Develop acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations on the natural and cultural resources and on visitor experiences in the park and tribal lands.
- Work together to implement NPATMA.
- Consider each agency's responsibilities and obligations under other laws, policies, plans, and regulations and to incorporate the requirements of both.
- Comply fully with NPATMA and the NEPA decision-making process.

For areas where there are several park units in close proximity, one ATMP may be prepared to address commercial air tours over these park units.

1.4 ATMP SCOPE

The national park system is defined as any area of land and water administered by the Secretary of the Interior through NPS, such as a park unit, monument, historic property, parkway, recreational area, and other similar designations. Currently, there are approximately 400 NPS areas in the United States (see Appendix A-4). For the purposes of this program and document, "national park" is defined in NPATMA as any unit of the national park system; however, it does not include other lands under NPS control that are not specifically designated units of the national park system. Many of these park units are reported to have commercial air tour overflights that are pertinent to NPATMA (see Appendix A-5 for a list of ATMP park units with commercial air tours). Figure 1-1 provides a general overview of the distribution of parks requiring ATMPs.

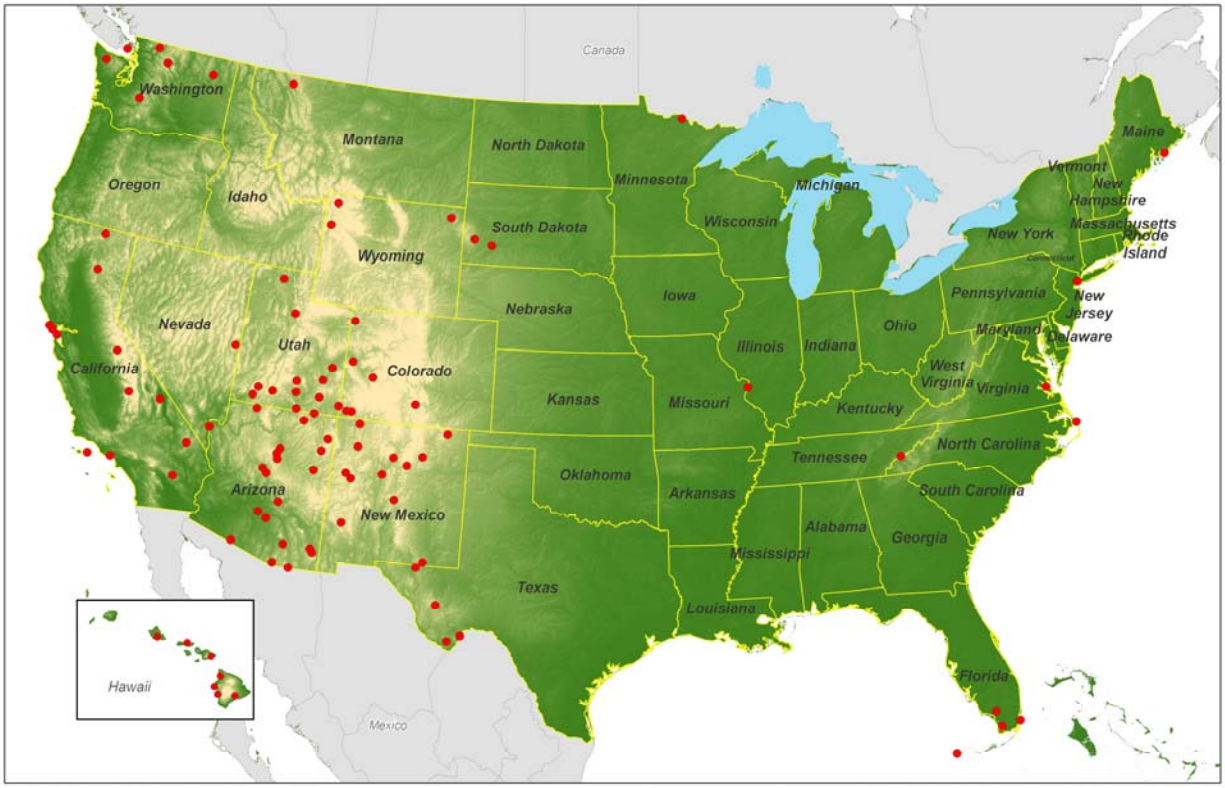


Figure 1-1. National Park Units with Requests for Air Tours (February 2007)

ATMPs apply to commercial air tour operators who currently conduct or propose to conduct flights for sightseeing purposes over a national park unit, within ½ mile outside the boundary of a national park unit, or over tribal lands, during which time the aircraft flies either less than one mile horizontally from any geographical feature within the park (unless it is more than ½ mile outside the boundary) or below an altitude of 5,000 feet above ground level (AGL) (National Parks Air Tour Management, Final Rule, October 25, 2002, 14 CFR Parts 91 and 136) over the

park unit, except solely for purposes of takeoff or landing or, if necessary, for the safe operation of the aircraft.

According to NPATMA and Public Law 109-115,[1] the following are exempt from ATMP development requirements: (1) Grand Canyon National Park (GCNP); (2) tribal lands within or abutting GCNP; (3) air tour operators who, while flying over or near Lake Mead National Recreation Area solely as a transportation route, conduct an air tour over GCNP; (4) air tour operators flying over Hoover Dam in the Lake Mead National Recreation Area en route to GCNP; and (5) any land or waters located in Alaska. In addition, Section 806 of NPATMA "prohibits" commercial air tour operations in the airspace over the Rocky Mountain National Park.

As of February 2007, based on the current applications on file, ATMPs will be required for approximately 85 national park units and tribal lands nationwide. This is originally based on the FAA Federal Register Notice dated October 7, 2005, and on supplemental records maintained by FAA's Flight Standards Service (FSS).[2] Due to resource limitations, it is necessary to prioritize the order of these applications and to initiate ATMPs over the course of several years. (For prioritization guidance, refer to Section 2.2.)

[1] Public Law 109-115, dated November 30, 2005, is entitled "Transportation, Treasury, Housing and Urban Development, the Judiciary, the District of Columbia, and Independent Agencies Appropriations Act, 2006." Section 177 of the Act amended the original language in NPATMA related to the exemption clause for Lake Mead National Recreation Area to include air tour operators flying over Hoover Dam en route to GCNP as also exempt.

[2] Federal Register Notice (Vol. 70, No. 194), FAA Supplement to Notice of Interim Operating Authority (IOA) Granted to Commercial Air Tour Operators Over National Parks and Tribal Lands Within or Abutting National Parks, October 7, 2005.

2.0 DEVELOPING ATMPS AND ENVIRONMENTAL COMPLIANCE DOCUMENTS

2.1 AGENCY ROLES AND RESPONSIBILITIES

The roles and responsibilities for the ATMP program are outlined in accordance with NEPA definitions for lead and cooperating agencies and in the FAA/NPS MOU. This subsection further defines these roles.

According to the Federal Aviation Act of 1958 (49 U.S.C. App. Section 1301 et seq.) and as found by Congress in NPATMA, FAA is responsible for managing the safe and efficient use of the navigable airspace of the United States. FAA has sole authority to control airspace over the United States as well as authority to preserve, protect, and enhance the environment by minimizing, mitigating, or preventing the adverse effects of aircraft overflights on public and tribal lands.

According to the NPS Organic Act of August 25, 1916 (16 U.S.C. Section 1 et seq.) and as found by Congress in NPATMA, NPS is responsible for administering federal park units, monuments, and other units of the national park system to conserve the scenery, the natural and historic objects, and the wildlife therein, and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.

Due to the goals, missions, and responsibilities of FAA and NPS, there are some procedural differences, such as how the two agencies implement NEPA in accordance with Council on Environmental Quality (CEQ) regulations found at 40 CFR Parts 1500-1508. Since NPATMA has designated FAA as the lead agency and NPS as the cooperating agency, while actions taken under NPATMA will be according to FAA regulations and guidance, they will also take into account NPS directives and guidance. As lead agency, FAA is responsible for the preparation of appropriate NEPA documents; therefore, FAA NEPA regulations and guidelines will be used as the basis for the NEPA process. Since NPS has special expertise in and jurisdiction by law over resources in national park units that may be affected by commercial air tour operations, and since NPS also signs the decision, NPS NEPA policies, regulations, and guidelines (in particular, the interdisciplinary approach and other practices recommended by Director's Order (DO)-12) will be used to develop NEPA documents. All relevant information identified by NPS relating to the potential impact on park unit resources will also be utilized. The result will be the preparation of environmental documents that are consistent with both FAA and NPS NEPA regulations. In instances where it is clear that agency requirements are so different that they cannot be integrated, both sets of requirements are to be met. This agreement recognizes the joint responsibility for a decision. For practical purposes, the signing of an ATMP decision document is to be delegated by the FAA Administrator and NPS Director to their designees.[3] (See Appendices A-6 and A-7 for a list of FAA and NPS regional offices.)

[3] As of September 5, 2007, the NPS Director has not yet delegated this authority.

Based on decisions made in a January 2004 NPS/FAA meeting, NPS and FAA have jointly established the purpose and need for action (see Section 2.9) in all air tour planning efforts and will formulate alternatives, determine whether or not there are significant adverse impacts, and decide on any necessary and justified mitigation to be applied. FAA will consult with NPS in accordance with its US Department of Transportation (USDOT)/FAA Order 1050.1E, Environmental Impacts: Policies, and Procedures, and NPS will cooperate and coordinate with FAA in accordance with NPS DO-12.[4]

As prescribed under NPATMA, abutting tribes will be invited to participate as cooperating agencies where applicable. Should such a tribe choose not to participate as a cooperating agency, the tribe will continue to be included in the planning process, consistent with the requirements of the Presidential Memorandum of April 29, 1994, Government-to-Government Relations with Native American Tribal Governments. The term "tribal lands" in NPATMA and in this document means Indian country (defined in Section 1151 of Title 18 of the US Code) that is within or abutting a national park unit.

2.1.1 Management Organization and Decision Makers

On the programmatic and national level, the ATMP program is implemented by the FAA Western Pacific Manager, Special Programs Staff, and the NPS Natural Sounds Program Manager. Each ATMP and associated environmental documents will require personnel at the national, regional, and field levels of both FAA and NPS to actively participate in the evaluation. To successfully implement the ATMP program, an interagency National Leadership Team (NLT) and a Project Management Team (PMT) are required. All teams shall reflect NPS and FAA interests equally.

- **National Leadership Team:** The NLT has been delegated decision-making authority and will work with FAA and NPS headquarters and regional offices, local FAA field offices, and superintendents of national park units in coordinating the ATMP program and developing individual air tour plans. The NLT will be made up of FAA and NPS representatives and coordinated under the leadership of the FAA Western Pacific Manager, Special Programs Staff, and the NPS Natural Sounds Program Manager. The team will develop guidance and policy for the ATMP process, ensure consistency of background materials for field personnel, provide any necessary training to field personnel, provide public involvement

[4] Currently, NPS NEPA implementation policy is provided in DO-12 and its associated handbook. Any references to DO-12 refer to both the DO and the handbook. The handbook has been revised and remains under review by CEQ as of August 2005. Although not much has changed between the two, it is important to note that NPS policy is in transition. For ATMPs that are underway, until such time as the new policy is approved, DO-12 direction will be followed as it applies to air tour management planning implementation. For example, how NPS documents its impairment finding in an environmental analysis could change in the revision. However, the DO-12 requirement for making an impairment finding in an EA or EIS for each appropriate impact topic will be followed until the new policy is in force.

guidance, and coordinate development of ATMPs and associated environmental documents. These guidance elements are documented in the appendices of this IP.

- **Project Management Team:** At the park-unit-specific level, a PMT, made up of regional and local FAA and NPS personnel, will supplement the NLT as needed and as available. The PMT will use local expertise and input for planning and environmental data acquisition and analysis and for determining scheduling, scope, and type of public involvement; local roles and responsibilities; scope of the ATMP and associated environmental documents; affected air traffic operations; and notification and consultation with relevant Native American tribes and other cultural entities involved under Section 106 of the National Historic Preservation Act of 1966 (NHPA). The park-unit superintendent may consult with the FAA Western Pacific Manager, Special Programs Staff, and the NPS Natural Sounds Program Manager or appoint a contact person for the park, in addition to other staff as needed, for project planning, document review, or in response to analysis requests from FAA. Team activities and document production may be assigned to a third-party contractor on behalf of FAA or NPS. Each agency (FAA or NPS) or contractor will appoint a project manager and/or contact person to communicate with agency team members or consultants.

2.2 PARK PRIORITIZATION

FAA received applications for operating authority from existing and prospective commercial air tour operators to fly over specific units of the national park system or abutting tribal lands. Applications for over 130 parks and tribal lands were received by the closing date of January 20, 2003.[5] Recognizing resource limitations and the need to prioritize the completion of ATMPs, the following criteria should be considered when prioritizing ATMP project locations:

Criterion 1. New entrants: Paragraph 40128(a)(2)(F) of NPATMA requires FAA to give priority to an application in which a new-entrant commercial air tour operator is requesting operating authority. The objective is to fully comply with this mandate in the prioritization of park units for completion (see Section 2.3.1 for further guidance on new entrants).

Criterion 2. Level of activity: This criterion considers the number of operations reported within all applications for operating authority over a given park unit. The level of activity is one possible indicator of the complexity of issues likely to be encountered in developing the ATMP. The objective is to prioritize park units with higher air tour activity to the extent that there are agency resources that can address the complexity. To the extent that higher activity levels have a potential for safety issues, it is appropriate to elevate these park units in importance.

[5] On January 27, 2005, FAA published a notice of opportunity for commercial air tour operators granted interim operating authority (IOA) under NPATMA to review and self-correct annual authorizations (70 FR 3972). The self-corrected numbers were identified in a subsequent Federal Register notice (70 FR 36456).

Criterion 3. Geographic location: This criterion considers the proximity of affected park units to one another and the distribution of selected park units among regions and field offices. The first objective is to develop ATMP projects for park units in close geographic proximity concurrently to ensure consistent environmental analysis and to minimize travel and other resource expenses. FAA and NPS will consider combining several national park units based on geographic proximity within a single ATMP, especially when the units share operators and have common issues. The second objective is to distribute the workload among regions and field offices equitably; FAA and NPS should determine the availability of park-unit staff and Flight Standards District Office (FSDO) staff to participate at the level described in this plan early, and local resource availability should play a large role in scheduling the park unit for an ATMP.

Criterion 4. Known public or agency priority: This criterion considers known priorities of various stakeholders. Several park-unit locations have a known interest in expediting development of the ATMP. There are also park units for which FAA or NPS would prefer postponing ATMP action to a later date. The objective is to accommodate the interests of FAA and NPS to the maximum extent possible. FAA and NPS will meet to discuss monitoring issues periodically and no less than once per year.

Criterion 5. Other considerations: Examples include unique circumstances at particular park units such as the Lake Mead National Recreation Area and the Parashant National Monument. In addition, it was suggested, at the National Parks Overflights Advisory Group[6] (NPOAG) meeting at Zion National Park in November 2006, that park units with questionable interim operating authority (IOA) numbers be considered as a priority. Parks that may be eligible for an expedited ATMP process may also be prioritized.

2.3 CHANGES IN THE ATMP DURING THE NEPA PROCESS

2.3.1 New Entrants

The status of a new-entrant commercial air tour operator (new entrant) could change throughout the ATMP development cycle.

- The addition of a new entrant would occur if an operator submits an application for commercial air tour operations over a national park unit in accordance with NPATMA.
- Secondly, an existing new entrant is approved for interim operating authority by the FAA Administrator and NPS Director in accordance with NPATMA and becomes an operator.
- Lastly, a new operator may withdraw a request for operating authority.

[6] Section 805 of NPATMA requires that, within one year after enactment, the Administrator of the FAA and the Director of the NPS jointly establish an advisory group to provide continuing advice and counsel with respect to commercial air tour operations over and near national parks. Accordingly, on April 5, 2001, FAA and NPS jointly established NPOAG. On October 10, 2003, the FAA Administrator signed FAA Order 1110.138; on January 20, 2006, this order was amended and became FAA Order 1110.38A, the NPOAG Charter.

The state of ATMP development should also be considered as follows:

ATMP Development in Process (Initiated but Not Finalized)

There is potential for the alteration of existing conditions with the addition of a new operator granted IOA. If the change in the number of IOA flights has minor or no effects on existing conditions, it is suggested that development of the existing NEPA be continued. If the change in status notably alters existing conditions, there are three options:

1. Make minor changes to the document if the drafted alternatives are flexible enough to allow the change in operations.

2. Complete the current NEPA document as well as a supplemental NEPA document.

3. Restart the alternatives development process.

ATMP Development Finalized

The ATMP will specifically state how new entrants are to be addressed once the plan is finalized.

2.3.2 Changes in Operations

There is also a possibility that the status of operations issued under IOA for a particular park unit could change during the NEPA process. This could occur due to the financial situation of a particular operator, market demand for air tours in general, or simply a personal decision by the individual operator or company to discontinue air tours at a particular park. In any case, when a change occurs during the NEPA process, FAA and NPS should first make an informed decision about whether the changes are likely to be temporary in nature or permanent. If temporary, it would most likely be appropriate to continue with the NEPA document, clearly disclosing in the Environmental Assessment (EA) or Environmental Impact Statement (EIS) the temporary nature of the changes.

An example of a temporary change occurred at the Mount Rushmore National Memorial ("the Memorial") during development of the Draft EA, when Rushmore Helicopters ceased operations in 2006 due to pilot insurance reasons. Rushmore Helicopters comprised the majority (5,200 of 5,608) of total air tour operations at the Memorial. FAA contacted the owner of Rushmore Helicopters to confirm the status of the situation, which was indeed characterized by the owner as "temporary" in nature. As a result, FAA and NPS agreed to continue with the EA, assuming the IOA number of operations at 5,200.

The FAA and NPS also discussed the IOA conditions at Haleakala and Hawaii Volcanoes National Parks, where the number of existing operations are less than IOA conditions. The FAA and NPS will decide whether to use IOA numbers for Haleakala and Hawaii Volcanoes as the no action alternative or to adjust them based on more recent operational information. It is important to address this early in the NEPA process, before modeling of impacts occurs and/or a decision is made on how to define existing conditions in the NEPA document's section on affected environments.

If FAA and NPS determine that a change in operations at a park is permanent and will notably alter existing conditions, there are four options:

1. Make minor changes to the document if the draft alternatives are flexible enough to allow the change in operations.
2. Complete the current NEPA document as well as a supplemental NEPA document.
3. Restart the alternatives development process.
4. Discontinue or close the NEPA ATMP project.

An example of the fourth option occurred in January 2007, when FAA and NPS agreed to close the Kalaupapa EA ATMP project after all five operators officially notified FAA that they would no longer be conducting air tours over Kalaupapa. Based on the request by the operators, the FAA updated their operating specifications by removing the interim operating authority to fly over the park.

2.4 PROJECT INITIATION AND DEVELOPMENT OVERVIEW

After a project site has been selected, the ATMP project initiation process begins with establishment of the PMT (see Figure 2-1). This section provides an overview of the initial planning steps.

The PMT will lead implementation at the project site and will be responsible for completing all elements of the development process, including the associated NEPA process and corresponding documentation, based on the CEQ implementing regulations in 40 CFR Parts 1500-1508. The PMT should hold several planning meetings (usually telephonically) and determine if collection of acoustic data is needed prior to conducting the ATMP kickoff meeting at the park. The following is a suggested list of the types of planning meetings to conduct. Additional information regarding planning the meetings and logistics is in Section 2.7, Planning Meetings.

- An internal planning meeting should be conducted (usually telephonically) to discuss the collection of acoustic data and whatever other general information (e.g., general management plans) can be obtained on park resources.
- If the decision is made to collect acoustic data, begin planning for acoustic data collection using the protocol in Appendix E-2. Planning for acoustic data collection may require several meetings.
- The PMT should decide when to hold and begin planning for the ATMP kickoff meeting. The purpose of the kickoff meeting is to provide an orientation for park staff on the ATMP program, initiate working relationships, etc.

This initial planning phase also includes investigating existing park-unit conditions and air tour activity (see Section 2.5), reviewing existing overflights (see Section 2.5.2), drafting the statement of purpose and need and the no action alternative (see Sections 2.9-2.11), and

identifying any other cooperating or resource agencies involved in the project. This data-gathering and planning phase must be completed to make an initial environmental decision to prepare an EA (see Section 2.14, Environmental Assessment) or an EIS (see Section 2.15, Environmental Impact Statement) for associated ATMP actions. The associated NEPA document and the ATMP will be prepared simultaneously.

After these initial planning steps are accomplished, the NEPA process will follow the EA or EIS process (see Figure 2-5 and Figure 2-6 in Section 2.14 and Section 2.15, respectively).

The following sections describe ATMP and NEPA procedures in more detail. Note that procedures may vary according to the unique requirements of each of the national park units.

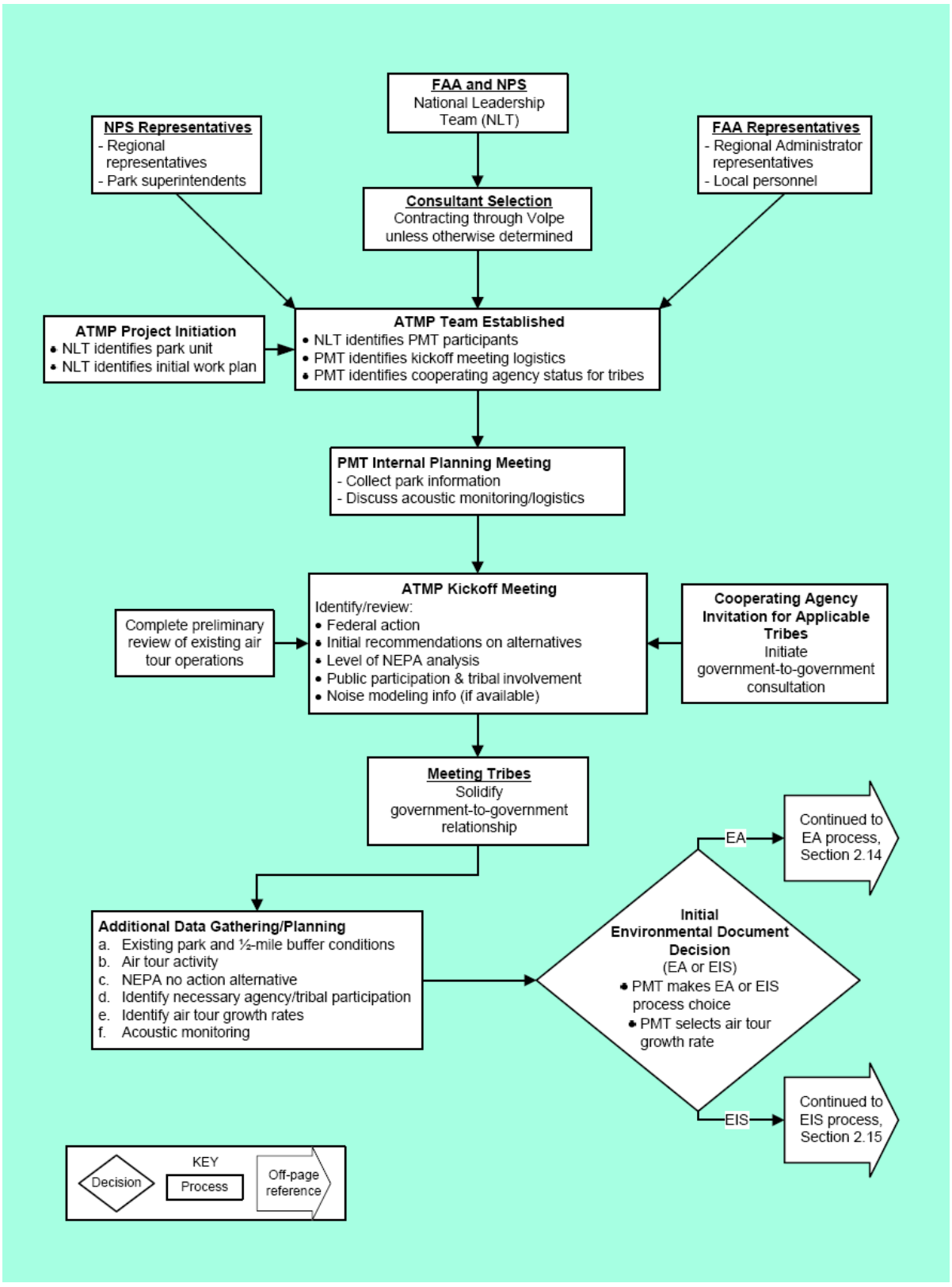


Figure 2-1. Project Initiation Process

2.5 BASELINE INFORMATION GATHERING

The PMT should begin preliminary research on the study area as soon as possible after the project is initiated. In most cases, the study area will include the park and ½-mile buffer as well as any tribal lands that abut the park and extend beyond it when appropriate. Preliminary research will include gathering information from libraries, the Internet, and local sources. For each area, the PMT should evaluate the sufficiency of existing information and identify data needs. This may be discussed at the subsequent kickoff meeting.

Research data needs include:

- Park-unit information
  - Park-unit management (e.g., general management plans, implementation plans, visitor use plans)
  - Stakeholder involvement (e.g., historical consultation practices, NEPA contact lists)
    - Agencies
    - Public
    - Tribes, if applicable
  - Natural/cultural resources information/data (e.g., resource management plans, soundscape management plans)
- Existing tribal information
  - Research completed on tribal lands
- Air tour information
  - Routes and schedules
  - Operator information
- Acoustic information
  - Aircraft source data
  - Baseline ambient sound levels
  - Park-unit-related data
- Land use information outside of the park
  - Land use management plans within the ½-mile buffer
  - Other applicable land use information beyond the ½-mile buffer when determined appropriate

Acoustic information will be a key component in baseline data gathering since accurate, scientifically based assessments (in accordance with NPATMA) of potential noise impacts of commercial air tour operators are necessary. Scientifically based assessments are also addressed by CEQ regulations at 40 CFR 1502.22, 1502.24, and 1503.3 (b), (c), and (d). Depending on the sufficiency of existing data or similar geographic data that can be modeled for use at a particular park unit, additional acoustic monitoring may be required. Protocols for data collection, including establishing acoustic zones, sampling strategies, and instrumentation, are described in

Appendix E-2 and are subject to change and improvement. In addition, the PMT may plan an acoustics monitoring workshop before or concurrent with the kickoff meeting to initiate and determine strategies for data collection.

2.5.1 Growth-Rate Forecasts

As part of the baseline data collection, an air tour growth-rate forecast may be developed for each park unit. Some park-unit forecasts may be based on forecast information that has already been gathered for other nearby parks. These forecasts should consider local factors, including park visitor counts; FAA terminal area forecasts (TAFs); local aviation projections; individual and future forecasts for air taxis; tourist visitor projections for area attractions; discussions with park-unit staff, FAA, air tour operators, and local and regional transportation agencies; and other related factors (see Appendix E-7 for an example of a growth-rate forecast report).

Optimally, the air tour growth-rate forecast for each park unit should be based on the expected growth of air tours at that park unit. The expected growth of air tours should take into consideration the historical growth of such tours as well as any factors that did not exist in the past and that might impact the growth in the future. An example of such a factor would be a decision by a cruise line to increase the number of ships docking at a port near to the park unit three years in the future. Another example would be a recent dramatic drop in intercity airfares in the United States. In both of these examples, it is likely that more visitors would come to the locale, some of whom would take an air tour.

Direct information on the expected growth of air tours at park units is generally unavailable. If it does exist, it will tend to be proprietary and not available to the public or to government analysts. There are exceptions, however. For example, some park units keep accurate records of park air tour operations for various reasons, including the assessment of fees for those operations.

If direct information on the expected growth of air tours at park units is unavailable, one or more proxies whose behavior is expected to be similar to that of air tour growth will need to be identified. A variety of proxies should be considered, including local area visitor counts, park visitor counts, TAFs, and air taxi growth at all local airports serving the park, to name a few.

Before analysts decide on a proxy, they should consult local experts who may have special knowledge of the demand for or growth of air tours or of how air tours and other variables match up (i.e., if they do). Such experts may include park-unit management, air tour operators, local FAA officials, local and regional transportation agency officials, local and regional economic development organization officials, and staff at local and regional tourism booster groups. In considering the information obtained, the biases, if any, of those providing the information must also be taken into account.

In addition to consulting local experts, analysts should plan to review the scholarly literature on leisure studies as well as the professional literature on tourism and travel for relevant materials. A review of the scholarly literature on environmental studies would also be worthwhile since the "use" of our national park system can be viewed as both a leisure activity (recreation) and an environmental activity (i.e., the "use" of an environmental resource).

There is no standard technique that should or must be used for estimating the growth of air tours. In general, however, the simpler the technique, the better the analysis will be. Analysts should consider all appropriate techniques during the planning phase of their growth-rate-forecast effort, including qualitative techniques such as expert judgment and the Delphi technique and quantitative techniques such as trend analysis and other statistical approaches, keeping in mind that a single method is likely to be best for all situations. Analysts should be reminded that, when dealing with growth rates, the geometric rather than the arithmetical mean should be used.

When doing quantitative forecasting based on historical data, there are several general rules of thumb to keep in mind. First, a projection of x years into the future should be based on at least $x + 1$ year of historical data. Of course, this is not always possible because of changes that may have occurred in the recent past. Second, forecasts of the future should be based only on that portion of the past that the future is expected to resemble. If the future is expected to be nothing like the past, then use of historical data for forecasting would be inappropriate and another approach, such as expert judgment or the Delphi technique, should be tried.

2.5.2 Preliminary Review of Existing Overflights

The PMT will perform a brief preliminary review of existing overflights. Even though the review is not part of the formal NEPA process, it is the next step in baseline information gathering and it facilitates development of the ATMP alternatives. The review will be one to two pages in length with appropriate maps.

Through research completed for baseline information gathering and opinions of impacts obtained from local NPS and FAA officials, the PMT should have a significant amount of information about existing air tours, flight routes, major park-unit features, and visitor use areas. During baseline information gathering, a request for supplemental data (Appendix F-1) should have been sent to existing operators. The supplemental data request will require Office of Management and Budget approval and it should be submitted for approval in advance. All of this information will be used to create overlays of key resource elements (including high visitor use areas) and existing air tours. The PMT will review potential impacts based on noise modeling of existing overflights. Some testing of measures to reduce impacts may also prove helpful. This review will not be a decision paper but an informative paper; analysis should be general but should focus on basic environmental and safety factors. Testing of ways to lessen impacts in order to minimize them is acceptable.

The preliminary review will be one of the tools used to determine preliminary alternatives. The report should be provided to kickoff meeting participants at least two weeks prior to the meeting.

2.6 ACOUSTIC INFORMATION

This acoustic guidance was developed for unique application to ATMPs within national parks. It is especially tailored to the evaluation of air tour aircraft noise in national parks and to the legislative requirements of NPATMA. It does not establish policy, precedent, or standards for the noise assessment of other FAA or NPS projects.

The determination of noise impacts requires (1) an accurate quantification of the Existing Ambient without Air Tours and the Natural Ambient conditions (Section 2.6.1) and (2) an accurate quantification of the sound sources within that environment. These data are then used for computer modeling (Section 2.6.2). Aircraft source data, ambient sound levels, and other park-related data are required for accurate, scientifically based assessments (in accordance with NPATMA) of potential noise impacts of commercial air tour operators. (Information regarding impact analysis can be found in Chapter 3.)

2.6.1 Ambient Data

Ambient data collection in national parks must follow specific, standardized methodology and protocols to be scientifically defensible and comparable to other studies. Appendix E-2 provides a more detailed discussion for the following guidelines:

- Identifying acoustic zones
- Planning the acoustic study, including:
    - Identifying park management zones and soundscape issues
    - Selecting season(s) to measure
    - Identifying equipment considerations (security, solar, etc.)
    - Selecting measurement locations
    - Selecting measurement duration for each location
    - Identifying any other special locations, data needs, and timing considerations
- Equipment types and setup guidelines
- Data to be collected
- Data reduction, analysis, and reporting
- Development of ambient maps

As more is learned from acoustic inventory and long-term monitoring efforts, protocols such as the numbers and locations of sites, time of year to monitor, and measurement period duration will undoubtedly be refined to reflect the current state of acoustic knowledge. For example, if an inventory reveals that two different habitats/topographic zones have the same acoustic characteristics, it may not be necessary to monitor both zones.

The fundamental purpose for acoustic data collection is to characterize the Existing Ambient without Air Tours and the Natural Ambient sound conditions for the primary acoustic zones in a park. FAA and NPS have agreed that the Natural Ambient and the Existing Ambient without Air Tours will be used for computer modeling and provide a basis against which potential impacts can be assessed.

Natural Ambient: All natural sounds in a given area (wind, streams, wildlife, etc.), excluding mechanical, electrical, and other human-caused sounds. Natural Ambient sound is considered synonymous with the term *natural quiet,* although the former term is more appropriate.

Existing Ambient without Air Tours: The composite, all-inclusive sound associated with a given environment, excluding the acoustic equipment's electrical noise and the sound source of

interest, in this case, commercial air tour aircraft. *Note:* In the normal NEPA impact assessment process, the potential impacts of a proposed action are considered before the activity is authorized. However, in the case of air tours the action is ongoing and, as a result, the action being considered contributes to the ambient sound levels. In order to assess the potential impacts of air tours, the sounds of the air tours must be removed.

Natural Ambient allows NPS to quantify and understand the natural quiet or natural soundscapes of a park, a resource that it is required to preserve or restore as part of its mission. Existing Ambient without Air Tours allows both FAA and NPS to determine the noise-related impacts of the ATMP alternatives, including impacts associated with the No Action alternative.

Additionally, FAA and NPS have agreed that the median, or the 50-Percentile Exceeded Sound Level (L_{50}), will be used as the statistical descriptor to present the ambient information for both Existing Ambient without Air Tours and Natural Ambient.

L_{50}: The median sound level measurement for any specific period of time. L_{50} is applied to either Natural Ambient or Existing Ambient without Air Tours, where 50 percent of the measurements are louder than the L_{50} and 50 percent are quieter.

2.6.2 Computer Modeling

The FAA's standard methodology for aircraft noise assessments, the latest Integrated Noise Model (INM) version,[7] will be used to assess aircraft noise within the entire park, as it is the best-practice modeling methodology currently available for evaluating aircraft noise in national parks ("Findings and Recommendations on Tools for Modeling Aircraft Noise in National Parks," Federal Interagency Committee on Aviation Noise [FICAN]). In accordance with Section 808 of NPATMA, any methodology adopted by a Federal agency to assess air tour noise in any unit of the national park system shall be based on reasonable scientific methods.

The two primary input parameters required in the INM modeling effort are the ambient sound level maps and the aircraft source and schedule data. These data are utilized by the INM to compute various metrics (see Section 2.6.2.2) (1) as contours, (2) as points located on a regular grid spaced at consistent intervals apart, and/or (3) at user-specified "sensitive locations" (e.g., an endangered species habitat).

INM's output data, presented in a series of graphics and tables, will then be used in the quantification of the existing environment, as well as of changes in sound level resulting from the various alternatives being considered. Modeling will also allow the analysis of potential noise impacts resulting from changes in operating conditions, including the number and frequency of operations, routes, altitudes, and aircraft technologies as well as geographic and/or temporal restrictions.

[7] Since 1978, the standard methodology for aircraft noise assessments has been FAA's INM, a computer program used by over 700 organizations in over 50 countries to assess changes in noise impact. Requirements for INM use are defined in FAA Order 1050.1E, Environmental Impacts: Policies and Procedures, and Federal Aviation Regulations (FAR) Part 150, Airport Noise Compatibility Planning.

2.6.2.1 Aircraft Data

Modeling of aircraft requires detailed information regarding the aircraft being flown within that environment. In accordance with the ATMP FAA Advisory Circular Number 136-1 dated October 25, 2002, commercial air tour operators were required to submit the types and numbers of aircraft and the number of annual operations in their applications for operating authority. This information was necessary to determine the types of air tour aircraft flown within each affected park.

In addition to source data, aircraft operational data are required for accurate, scientifically defensible modeling of both existing and future conditions as well as for modeling alternatives in support of NEPA analyses. However, operational data, including aircraft types flying on particular routes, actual flight routes, altitudes, speeds, number, frequency of operations, and performance, were not required by the ATMP Advisory Circular and therefore were not submitted. These data are necessary to perform accurate computer modeling. Sources of the additional aircraft data include direct queries to local FSDOs and air tour operators, radar databases, and observations during site visits. These sources are also an invaluable resource for obtaining other types of aircraft data (on commercial jets, general aviation aircraft, military aircraft, and agricultural operations) for use in the modeling and assessment of cumulative impacts as required by NPATMA.

It should be noted that, for many parks, detailed air tour route and schedule data have not been historically recorded. However, most tour operators are willing to provide some of these data upon request. For tour operators who do not have data available (e.g., ad hoc operators who operate only a handful of tours annually), it may be possible to approximate air tour routes based on limited knowledge of points of interest within the affected parks and tour durations (i.e., tour operators "sell" sights and flight times).

In support of the assessment of noise impacts due to air tours, FAA and NPS must also consider the potential cumulative impacts due to non-air-tour aircraft operations (e.g., commercial, military, and general aviation aircraft). For park units in close proximity to relatively large airports, these other types of aircraft operations, particularly high-altitude aircraft overflights, may be modeled. To account for these operations, the Enhanced Traffic Management System (ETMS) database may be queried. The ETMS database contains aircraft flight and position records for all aircraft filing a flight plan and operating in the US National Airspace System (NAS). Modeling of high-altitude overflights would be performed using the methodology outlined in the recent FICAN Study. FAA and NPS have agreed that the use of ETMS data will be determined on a park-by-park basis. These operations are typically accounted for within Existing Ambient without Air Tours, which excludes air tour aircraft but not other types of aircraft.

2.6.2.2 Output Descriptors

INM has the capability to compute a number of noise-related descriptors and to generate contours and grid points. Potential descriptors are typically grouped into three categories: (1) event-based descriptors, related strictly to numbers/counts of aircraft operations, such as number of aircraft events; (2) time-based descriptors, which are amounts or percentages of time

during which the acoustic environment satisfied a particular criterion, such as percentage of time the aircraft were audible; and (3) level-based descriptors, which are decibel values computed from aircraft events or comparisons with a user-specified threshold to determine the change in noise exposure due to an aircraft event.

A fundamental difficulty in describing the sounds in national park units is that no single metric or measure can adequately describe acoustic conditions. Rather, a combination of acoustic metrics and measures are needed. The following descriptors have been agreed upon for use in ATMP analyses. These may be modified as more experience is gained with ATMPs. All descriptors might not be used in all ATMPs.

- *Time Audible (%TA):* The percentage of time that air tour aircraft sound levels are audible, including the percentage of the park area within which air tour aircraft are audible. *Note:* Because two ambients—Natural Ambient and Existing Ambient without Air Tours—have been agreed upon for use in computer modeling, this metric will be modeled twice, once for each baseline ambient.
- *Time Above Ambient (%TAA):* The percentage of time that air tour aircraft sound levels (in A-weighted decibels) exceed a user-defined threshold in a given area during a given time period. *Note:* Because two ambients—Natural Ambient and Existing Ambient without Air Tours—have been agreed upon for use in computer modeling, this metric will be modeled twice, once for each ambient. Additional modeling for other thresholds will be performed on a park-by-park basis.
- *Time Above (Threshold) (%TA(T)):* This metric is similar to %TAA; however, other thresholds, such as 65 dBA (%TA65), may be used to assess potential impacts, such as speech interference.
- *A-weighted Equivalent Sound Level (L_{AeqT}):* A logarithmic average (on an energy basis) of A-weighted air tour aircraft sound levels over a specific time period (T).[8]
- *Change in Exposure (ΔL):* The algebraic difference (in A-weighted decibels) between air tour aircraft sound levels and ambient sound levels during a given time period. *Note:* Because two ambients—Natural Ambient and Existing Ambient without Air Tours—have been agreed upon for use in computer modeling, this metric will be modeled twice, once for each ambient condition.
- *Maximum Sound Level (L_{max}):* The maximum sound level (in A-weighted decibels) associated with the loudest air tour aircraft event occurring during a modeling assessment. *Note:* FAA and NPS have agreed to compute this metric at user-specified "sensitive locations" (e.g., an endangered species habitat).

[8] In accordance with FAA Order 1050.1E, the Day-Night Average Sound Level (L_{dn} or DNL) is used as FAA's primary metric in NEPA analyses. For parks, which do not have nighttime air tour operations, DNL and L_{Aeq} are equivalent. Thus, FAA and NPS have agreed to use L_{Aeq} as a reasonable surrogate for DNL in such situations. Additionally, the L_{Aeq} metric computed for a time period less than 24 hours would yield a higher decibel value as opposed to an L_{Aeq} for a 24-hour time period because the sound energy is logarithmically averaged within a smaller time period. Thus, the L_{Aeq} for parks with only daytime air tour operations (e.g., 12 hours, from 7 a.m. to 7 p.m.) is a more conservative metric than DNL.

INM does not calculate two additional metrics, but it was agreed that they are needed. These metrics will be determined using the acoustic observer logs taken during the ambient measurements and will be documented in the measurement report to be developed for each park. (*Note:* NPS will discuss the use of these metrics further with the individual parks, and the results of those discussions will be incorporated into the process accordingly.)

These two metrics are:

- *Number of Events per Hour (NEH):* The number of air tour operations audible within a specified time period, ideally each hour during the day (for which sufficient operational data exist).
- *Noise-Free Interval (NFI):* The length (mean, minimum, and maximum) of continuous periods of time during which only natural sounds are audible.

2.6.2.3 Other Modeling Considerations

FAA and NPS have agreed that the number of operations to be modeled per "day" will be defined as an average day of operations during the peak month (i.e., Peak Month Average Day, or PMAD). This assumes that the number of flights during the peak month is reasonably stable. For parks for which FAA and NPS agree that a winter analysis of air tours is appropriate, a similar approach for winter modeling will be used: a "day" will be defined as the average number of operations per day during the peak winter months (December-February).

2.6.2.4 Example Model Output

As stated earlier, INM output data, presented in a series of graphics and tables, will be used in the quantification of the existing environment as well as of changes in sound level resulting from the various alternatives being considered. Modeling will also allow the analysis of potential noise impacts resulting from changes in operating conditions, including the number and frequency of operations, routes, altitudes, and aircraft technologies as well as of geographic and/or temporal restrictions. Figure 2-2 and Figure 2-3 show noise maps for Mount Rushmore National Memorial, using L_{eq} and TA, respectively.

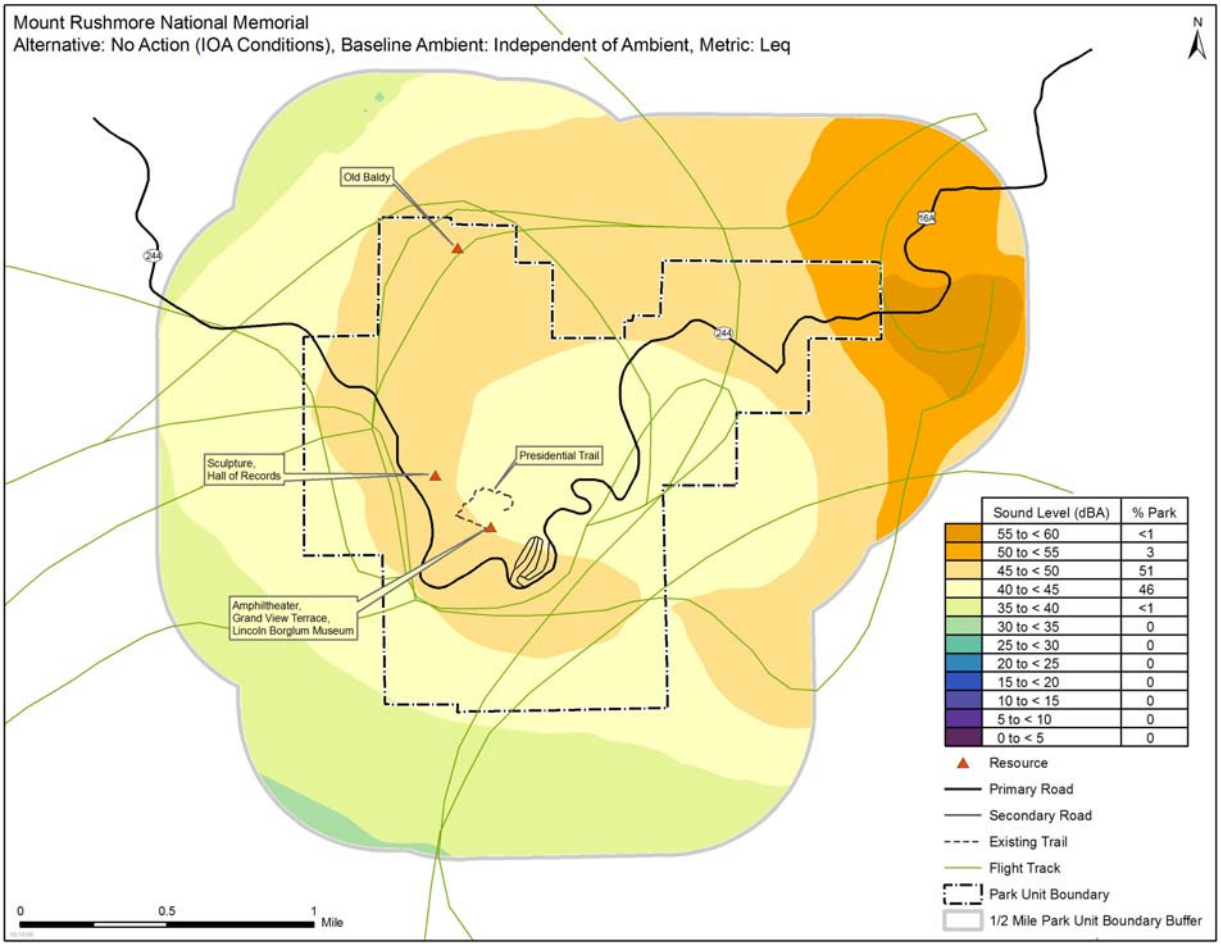


Figure 2-2. Example Output Noise Contour for Mount Rushmore National Memorial: Equivalent Sound Level (2006)

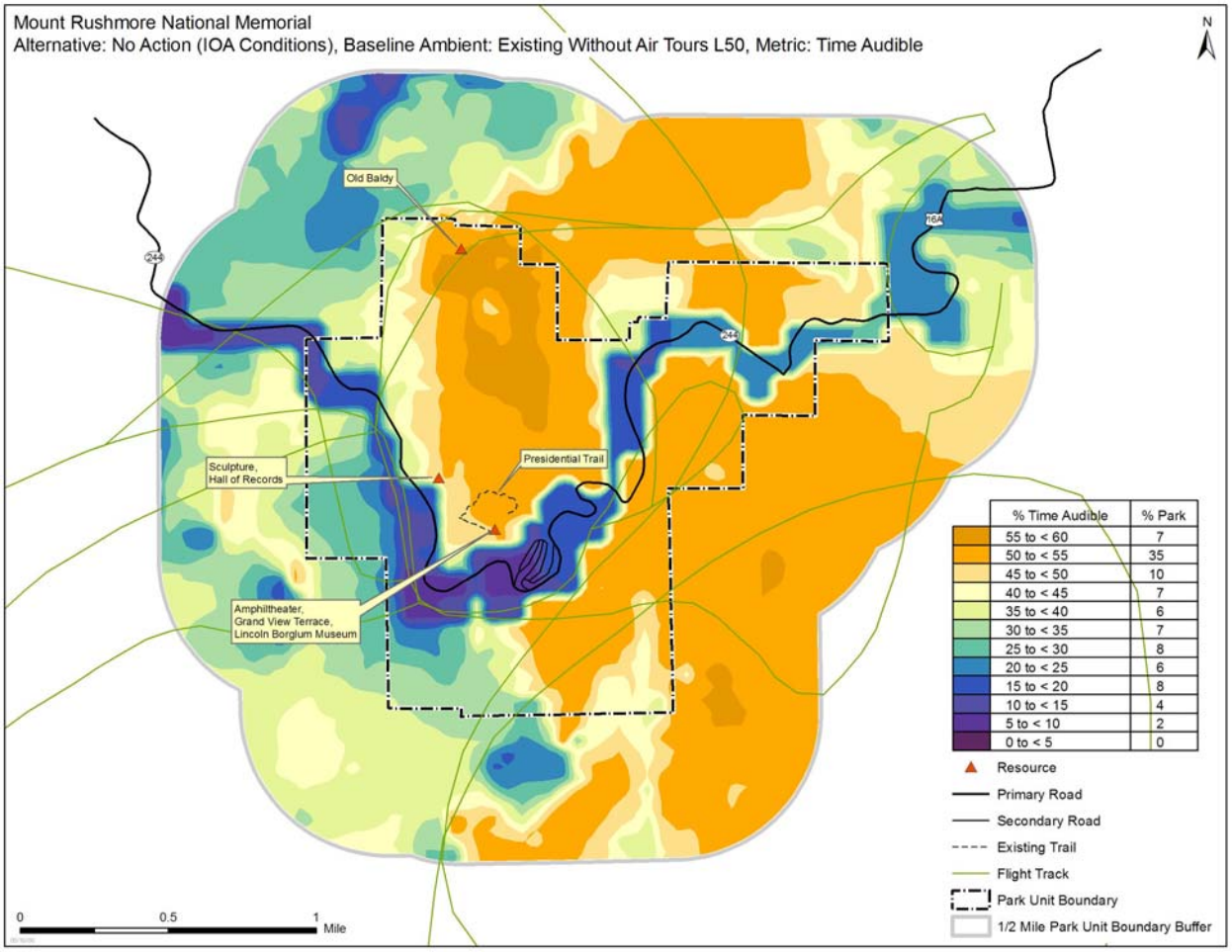


Figure 2-3. Example Output Noise Contour for Mount Rushmore National Memorial: Time Audible (2006)

2.7 PLANNING MEETINGS

Prior to publicly initiating an ATMP, project planning meetings are necessary. Examples include an internal planning meeting and a field orientation trip for the PMT, an acoustic monitoring site-selection meeting, and a kickoff meeting to include regional FAA and NPS personnel.

2.7.1 Internal Planning Meeting

The internal planning meeting for PMT members should take place before the kickoff meeting. The NLT representative will brief local FAA and NPS participants before the initial meeting. The briefing will be on the ATMP program and purposes of the meeting. After local participants have been briefed, the internal planning meeting will take place telephonically unless an on-site meeting is deemed appropriate. Key points to be covered include:

- Identification/verification of local FAA/NPS personnel

- General identification of stakeholders, including Native American/tribal communities and potential cooperating agencies
- Identification of persons who should attend the acoustic monitoring site-selection meeting or kickoff meeting
- Confirmation of logistical details for the acoustic monitoring site-selection meeting or kickoff meeting, including start times, agenda, team member responsibilities, and meeting approach and type
- Use of established communication channels among team members
- Identification of readily accessible or available information

2.7.2 Acoustic Monitoring Site-Selection Meeting

The acoustic monitoring site-selection meeting can occur concurrent with the internal planning meeting, as a separate meeting, or concurrent with the kickoff meeting. The preference would be to have the monitoring sites selected prior to the kickoff meeting so that acoustic monitoring information is available for review and discussion at the kickoff meeting.

At a minimum, this meeting should be attended by the acoustic monitoring team (NPS or Volpe Center), Natural Sounds Program and FAA ATMP project managers, and appropriate park staff. A site-selection informational package comprising draft maps that include data layers of land cover, sensitive and important resource locations, and known flight routes should be provided to attendees. The agenda should include:

- Overview of the ATMP program
- ATMP acoustic monitoring protocol, including acoustic zones, monitoring times, attended logging methods, and computer modeling
- Goals and objectives of acoustic monitoring
- Site-selection criteria (consider ½-mile buffer also)
- Examples of analytical results
- Review of resource maps
- Selection of monitoring locations
- Logistics of getting to the monitoring sites
- Next steps in the ATMP process

For additional information concerning the site-selection process, refer to Appendix E-2.

2.7.3 ATMP Kickoff Meeting

The kickoff meeting will introduce NPATMA and the program to local FAA and NPS personnel and will initiate working relationships and, more specifically, relevant internal discussions about the ATMP/NEPA process. Concurrent with the kickoff meeting, all involved FAA and NPS representatives and contractors will make an orientation visit to the park.

Kickoff Meeting Informational Package

Prior to the kickoff meeting, the PMT should review the checklist for pre-kickoff and kickoff meetings (see Appendix B-1). In addition, the PMT should develop a pre-meeting informational package and distribute it to all potential meeting attendees. This package should include the kickoff meeting introduction summary (see Appendix B-2)**,** the meeting agenda (Appendix B-3), and draft maps, including data layers of known flight routes, land cover, monitoring sites (if previously selected), and park resource locations. Pre-meeting teleconferences should be held to finalize meeting logistics and responsibilities.

Meeting Attendees and Content

Because the role of the PMT is evolving at this early planning stage, the NLT should confirm participation in the kickoff meeting by local NPS and FAA personnel with an invitation letter. (Appendix B-4 shows an example of the invitation letter.) A separate letter should be sent to tribes. (See Appendix B-5 and Section 2.12.4 for more information on tribal participation in the kickoff meeting.)

Personnel who should attend this meeting include:

- NPS Natural Sounds Office representative
- FAA Western Pacific Region (AWP) representative
- Park-unit superintendent
- Park natural resource experts
- Park cultural resource experts
- Other pertinent park-unit staff
- Regional FAA personnel and/or administrator
- Local FSDO representative
- Air traffic personnel
- NPS regional representative
- Recognized tribal leaders (applicable only to NEPA cooperating-status tribes)
- Contractor(s), if applicable

If possible, park staff should lead discussions on park-unit resources and FSDOs should lead discussions on air tour operations. Both park-unit personnel and FSDOs should be advised of these roles well in advance of the meeting by their respective agencies' PMT members.

During roundtable discussion of the day's topics, the following additional issues should be addressed:

- Potential involvement of air tour operator(s), appropriate Native American tribe(s), any other resource agencies and stakeholders (e.g., State Historic Preservation Officers (SHPOs), US Fish and Wildlife Service (USFWS), states), and all other potentially interested or affected parties. If appropriate, FAA should solicit the participation of any Native American tribe(s) whose tribal lands are within or abut the national park unit and are or may be overflown by aircraft involved in air tour operations over the national park or tribal lands, as a cooperating agency.

- Historical Section 106 consultation and tribal consultation processes taken by the park unit (see Section 3.4.2.1 for further guidance).

- Sufficiency of existing baseline information data.

- Other commercial air tour issues and requirements, including those associated with applications for IOA and the impacts of air tours on park-unit resources and values.

- Compliance with the NEPA process, and whether to initiate an EA process or to proceed directly to the preparation of an EIS.

- Specific alternatives to be developed and incorporated into the scoping process.

- Establishment of a proposed schedule to complete the ATMP and NEPA process, keeping in mind that the ATMP and associated NEPA document will be developed simultaneously.

- Scope of public involvement at each stage. This will include discussions on the political and public context in which the ATMP is to be developed, appropriate public involvement strategies, historical public involvement and scoping campaigns at the park unit to date, and tentative decisions on how many public meetings should be held and where.

- Determination of the scope of work based on the anticipated parameters of the project and whether or not to concurrently initiate the process relative to more than one park unit.

- Identification of products generated during the ATMP planning process (e.g., scoping letter, newsletters, alternatives workbook, NEPA compliance documents, Web site).

To follow up on current baseline data collection and to aid in future planning, team members should ensure they have or retrieve the following information:

- Other available park-unit plans, including but not limited to the park's general management plan (GMP), resource management plan, implementation plans, and visitor services plan. The ATMP should closely correlate with park-unit planning, since park-management zoning (contained in the GMP) establishes the surface activity management

prescription to ensure resource protection and high-quality visitor experiences. The ATMP should consider park management zoning, along with zoning criteria, desired resource protection, and visitor experiences for each zone.

- NEPA and Section 106 consultation mailing lists, if available, identifying information on other stakeholders including local, state, and/or federal agencies.

- Logistical plans for potential future meetings (public meetings, agency meetings, and 106 meetings as applicable), such as where to hold future meetings, how to publicize them, local holidays or other cultural considerations to be aware of, and formats for presentations.

- A list of local libraries where informational packets may be displayed for public review.

- Publications in which to post scoping notices, length of posting, and to whom mailed notifications should be sent.

It is important to be aware of park-unit-specific cultures in advance of the meeting. (Refer to Appendix C-15 for a summary of lessons learned using information from previous meetings.)

2.7.4 Team Orientation Trip

Concurrent with the kickoff meeting, the PMT should plan a team orientation trip to familiarize team members with the park unit's resources and values as well as areas located within ½ mile of the park. This trip is not a required element of the NEPA process but is a suggested procedure in DO-12 so that an assessment team may establish a working knowledge of the study area. The trip should be planned in advance, if possible, with the cooperation of the local park-unit staff. Ideally, the superintendent and other resource specialists would create an itinerary that would showcase the park-unit-specific natural and cultural resources, noise-sensitive areas, areas of high visitor and high air tour use, or areas that are representative of air tour impacts/issues.

The purposes and goals of the orientation trip are to:

- Confirm with park-unit staff how the current or proposed park-unit overflight(s) relates to the park unit's purpose, significance, management zoning, visitor experiences, Native American lands, and other aspects of the park unit.

- Enhance team members' familiarity with park-unit resources and issues related to the existing status of commercial overflights and other air tour issues.

- Identify FAA safety and operational concerns.

- Identify Native American concerns.

- Identify potential alternatives.

- Experience resources unique to the park unit within the context judged by the park superintendent as most useful for experiencing the key resources and values for which the park unit was established.

- Identify areas outside of the park that may be sensitive to air tour operations.

During the team orientation trip, team members may begin to assemble an initial list of issues and concerns of park-unit staff and visitors, interested citizens, organizations, and other government agencies; this list would be refined during the scoping process. The team should keep in mind that potential air tour issues can be categorized as those that may affect (1) park-unit resources and visitor experiences (e.g., disturbance to critical wildlife, noise effects on various user groups), (2) air tour operators (e.g., safety problems, economic viability of operations, visitor demand to see additional park resources), and (3) sensitive areas within the ½-mile buffer of the park.

2.8 INITIAL DECISION PROCESS TO DETERMINE LEVEL OF NEPA REVIEW

Discussions concerning the appropriate level of analysis (EA or EIS) should occur early in the ATMP process and should be addressed at the kickoff meeting. If an EA is initiated, the decision to switch to an EIS can be made at any point during the EA process when it becomes apparent, based on CEQ, NPS, and FAA guidance, that an EIS is required. The PMT should follow the decision process to prepare an EIS, as outlined in Section 2.15, at the earliest point in the process that it becomes appropriate. It is important to clarify that an EA is not necessary if FAA decides to prepare an EIS; thus, once a decision to prepare an EIS is made, no further resources should be spent on completing an EA and making an official finding.

Throughout the NEPA process, the PMT will be responsible for ensuring that the NEPA documentation being conducted for each park unit is appropriate based on CEQ, FAA, and NPS guidance. If it becomes clear that it is appropriate to switch to an EIS process, the PMT should recommend this to the NLT and provide all relevant documentation supporting the rationale to develop an EIS.

After FAA and NPS document their opinions on the reasons to switch to an EIS process, there will be a meeting to provide a forum for both FAA and NPS members of the PMT to discuss the decision and review relevant information. Regardless of whether a consensus is reached, the documentation prepared by each agency, along with the information discussed at the meeting, will be shared with the NLT.

After conferring with the PMT and reviewing all relevant documentation provided, the NLT will advise FAA and NPS signatories on whether or not to proceed with an EIS. If the two agencies disagree on the appropriate level of analysis, the prescribed dispute resolution process in the FAA and NPS MOU (see Appendix A-1) will be followed to allow them to address the sources of the disagreement and try to reach a mutually agreeable solution. If such a solution cannot be reached, then FAA, as lead agency in the ATMP program, will be responsible for the ultimate decision to prepare an EA or switch to an EIS.

2.9 PURPOSE AND NEED STATEMENT

FAA and NPS jointly developed the purpose and need language for the federal action of establishing an ATMP at a unit of the national park system. The language below (with appropriate modifications for acronyms) will be used for all ATMP NEPA documents.[9]

The purpose and need for this project stem from enactment of the National Parks Air Tour Management Act of 2000, wherein the US Congress directed FAA, in cooperation with NPS, to establish an ATMP for any national park or tribal land for which such a plan is not in effect whenever a person applies for authority to conduct a commercial air tour operation over the park. The objective of the ATMP is to develop acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon the natural and cultural resources and visitor experiences (49 U.S.C. 40128(b)(1)(A) and 40128(b)(1)(B)). *<Insert the number of applications received for the subject park>* persons have applied to FAA for operating authority to conduct commercial air tour operations over *<Insert Park Name>*, which triggers the need to develop an ATMP at this park.

The determination of significant adverse impacts, if any, for this ATMP will be made by FAA and NPS, based on the National Parks Air Tour Management Act of 2000, the Federal Aviation Act of 1958, the National Environmental Policy Act of 1969, the NPS Organic Act of 1916, the park's enabling legislation, other pertinent environmental laws, and the purposes and values of the park (identified below). The agencies will provide appropriate mitigation in the ATMP, where justified, consistent with the above authorities.

The specific purposes and values of *<Insert Park Name>* are derived from the park's authorizing legislation and mission statement and are as follows:

Purposes

- *<Insert purpose number 1>*
- *<Insert purpose number 2>*
- *<Insert purpose number n>*

Resources and Values

- *<Insert resource and/or value number 1>*
- *<Insert resource and/or value number 2>*
- *<Insert resource and/or value number n>*

FAA recognizes the public demand for air tours over *<Insert Park Name>* and the need to accommodate air tour operations to the extent that such operations are consistent with the safe

[9] This language was taken verbatim from the purpose and need language developed by FAA and NPS at a meeting in January 2004.

and efficient use of navigable airspace and are consistent with the purposes and values of the park.

2.10 Proposed or Federal Action

FAA Order 1050.1E describes the proposed action as the proposed solution to the problem that meets the purpose and need for the action.

NPS DO-12 states that the majority of actions in the NPS involving NEPA do not have a specific or even conceptual "proposed action" from the onset of the process. DO-12 specifically states the following in Section 2.3: "As explained above (in Section 2.1(3)), you may state your park's proposal quite generally, such as 'provide an extended experience for visitors at the north rim of the Grand Canyon'." This is essentially a restatement of the park's intent to accomplish its stated objectives or purpose. Alternatives would then be a range of options for fulfilling the stated proposal (e.g., lodge, campground, cabins), with no one way identified as preferred over another until the draft NEPA document is completed.

For ATMPs, the proposed or federal action is the establishment of an ATMP at the park in accordance with 14 CFR Part 136 and the subsequent approval of FAA operating specifications authorizing air tour operations in the ATMP.

2.11 No Action Alternative

FAA Order 1050.1E and other FAA guidance does not provide further information about the no action alternative other than what is stated in CEQ's 40 Most Asked Questions (Question 3).[10]

NPS DO-12 states that the no action alternative is almost always a viable alternative, and it also functions as a baseline of existing impacts continued into the future. If the no action alternative would violate a law or park-unit policy, DO-12 recommends also analyzing a "minimum management" alternative. For additional guidance in defining a no action alternative, refer to CEQ's 40 Most Asked Questions (Question 3).

For the ATMP program, the no action alternative is defined as the IOA conditions, which may include any voluntary agreements. It is assumed that voluntary agreements with air tour operators would continue. If there is no IOA and applications have been submitted from new entrants, then the no action alternative is no air tours. If this no action alternative becomes the agency-preferred alternative, an ATMP will still need to be developed, codifying those conditions.

If existing commercial air tour routes and other operational information needed to describe current conditions are unavailable, FAA will need to make reasonable assumptions. These assumptions will be based on the best available information from interviews with the operator,

[10] CEQ website for NEPA's 40 Most Asked Questions: http://ceq.eh.doe.gov/nepa/regs/40/40p3.htm.

visits to operators, FSDO staff, and information from local park-unit staff. If the operator does not provide route information, FAA will assume that tours fly throughout the park unit.

2.12 SCOPING AND PUBLIC INVOLVEMENT

2.12.1 General Guidance

FAA Order 1050.1E contains no formal FAA scoping requirements for EAs. FAA guidance on scoping is deferred unless there are project-specific concerns, particularly for the EA process.

NPS DO-12 general guidance states that "NPS should always make a 'diligent' effort to involve the interested and affected public (1506.6(a)) on a proposal for which an EA is prepared. This is a requirement of NEPA, and in the NPS, it means public scoping sessions, public review of EAs, responses to comments, and other measures normally reserved for EISs if the issuing office believes such measures are needed to comply with the diligence standard." DO-12 strongly encourages park units to conduct public scoping or request public input on all EAs and EISs before analysis begins, especially when there is pubic interest or the public is affected.

For ATMPs, the knowledge of local NPS staff will be used to develop the scoping approach at each park unit. Scoping will be conducted prior to analysis. DO-12 specifies a scoping period of at least 45 calendar days, which will be used for the ATMP process. In addition to scoping, a public involvement program should be established based on the level of controversy associated with developing an ATMP at a particular park unit. Public involvement programs are discussed in Section 2.12.5.

2.12.2 Public Scoping

The PMT, with the help of local NPS personnel, will develop a list of names and addresses of members of the public who might potentially be affected by or interested in the ATMP, including (at a minimum):

- Local air tour operators and their representatives
- Local park unit users and their representatives
- Groups with special interests in the park unit (such as local friends groups, landowners within and adjacent to the park unit, Native Hawaiians, and Native Americans)
- As appropriate, representative congressional offices

The PMT should notify all persons on this list about the project through written correspondence with informational enclosures (i.e., scoping packet).

2.12.2.1 Scoping Packet

The first step in the scoping process is preparing the scoping packet.

FAA Order 1050.1E suggests preparing a scoping document even though this step is optional.

NPS DO-12 suggests relaying specific project information to the public.

For ATMPs, the scoping packet should be made available to the general public for review through a variety of sources. The PMT will send the packet to local libraries, post it on the ATMP website, and mail it directly to the consulting parties identified by the local park unit during the kickoff meeting. The packet should consist of the following:

- Project description
- Identification of the federal action
- A map
- A description of any alternatives and issues to date
- A request for comments

The packet should be brief yet provide sufficient information about the federal action to allow the public to respond with informed and specific comments. (A sample scoping packet is included in Appendix C-1.)

2.12.2.2 Notice of Intent

FAA Order 1050.1E requires that a Notice of Intent (NOI) be prepared for an EIS but not for an EA.

NPS DO-12 requires that an NOI be prepared for an EIS; a public notice for scoping is also required for an EA.

For ATMPs, an NOI will be prepared for both an EA and an EIS. The PMT will prepare and issue an NOI in the Federal Register and in newspapers identified at the kickoff meeting. As the lead agency, FAA will be responsible for publishing the NOI.

The purpose of the NOI is to (1) inform the public about the project, issues, process, and schedule, and (2) request comments on the proposed scope of the project. (See Appendix C-2 for a sample NOI.)

The NOI should present the following information:

- Description of the project, purpose and need, and objectives.
- Description of the federal action and possible alternatives, if any, to date.
- Dates of the scoping period (it will last 45 calendar days).
- Location and availability of the scoping packet (e.g., local libraries identified at the kickoff meeting).
- Location, date, time, and format of the scoping meeting, if applicable.
- FAA and NPS contacts.

- Information on submitting comments to the Docket Management System (see Section 2.12.2.4).

FAA should mail the NOI directly to contacts on the local park units' scoping list who were identified during the kickoff meeting. The NOI and the public scoping packet can also be mailed together. The scoping period begins when the NOI is published.

2.12.2.3 Public Scoping Meeting

FAA and NPS guidance does not require a public scoping meeting for an EA; however, if appropriate, a scoping meeting(s) can be held. Scoping meetings provide the opportunity to present additional background on the action and solicit input from those interested and affected parties in attendance. Both FAA and NPS require scoping for an EIS; a scoping meeting for an EIS, although suggested, is not required.

For the ATMP, if a public meeting is planned during the scoping period, a minimum of 30 days' public notice should be given via written invitations (per FAA Order 1050.1E). Details about a proposed public meeting should also be published in the NOI. The public meeting(s) should be conducted at a location(s) in or near the appropriate national park unit. Meeting-room costs should be minimized as much as possible, and every effort should be made to hold meetings at free/public venues. Parking should be provided to the public free of charge. In order to address any potential environmental justice concerns among populations with a language barrier within the affected environment, interpreters may be provided at public meetings upon request in order to adequately relay project information. During logistics planning, the need for special support such as a signer and/or translator should also be addressed. The public scoping meeting checklist (see Appendix C-3) should be reviewed when preparing for the meeting.

The meeting should focus on the ATMP legislation (a sample agenda is presented in Appendix C-4). Comments will be recorded by the PMT during the meeting and submitted to the administrative record as official meeting minutes. Comments can also originate from comment cards handed out at the beginning of the meeting (see Appendix C-5). Individuals who would like to be kept informed of the park units' ATMP/NEPA process can fill out an "interest card" at the scoping meeting (see Appendix C-6).

For FAA and NPS presenters, the PMT will prepare a one-page summary of all public outreach opportunities. Included in the outreach summary is information on newspapers, dates of publications, where and what material was available for public review, date of availability, and other pertinent information. (The format for the public outreach summary is found in Appendix C-7.)

FAA's *Community Involvement Manual*[11] contains guidelines for conducting meetings. NPS public involvement guidelines (particularly DOs #2 and #12) should also be taken into account when planning and conducting meetings.

If a letter is an invitation to a meeting, it should include the appropriate logistical information and should be sent at least 30 days prior to the meeting. As stated in Section 2.12.1, the scoping period will last 45 calendar days.

2.12.2.4 Comments

Both FAA and NPS guidance agree that comments will be considered in preparing the NEPA document. The process for addressing comments for an ATMP project is summarized below.

Document Management System

The Docket Management System (DMS) is a DOT online electronic database for storing official public records. The NOI will include information requesting that comments be submitted online or by mail to the DMS. During the scoping period, any comments that are also received by FAA and NPS by mail, e-mail, and the ATMP Web site will be posted to the DMS. This will ensure that all submitted comments are maintained on one common record management system, which is available for review on the Internet by interested parties. FAA will be responsible for opening and closing the docket. All comments received (written or oral) will be included in the DMS record and analyzed in the comment summary document. Information on the DMS is provided in Table 2-1.

Table 2-1. Using the US Department of Transportation's Docket Management System (DMS)

DATA REQUIRED	DESCRIPTION
Who are contacts at DMS	800-647-5527: General telephone number
What to provide to DMS	• An authorized FAA representative should be the main contact with DMS, as DMS requires the acting DOT agency to open/close dockets. • DMS should be called prior to publication of the document to obtain docket number for inclusion in any public notice, etc. • The docket is not opened until a document is submitted. In the ATMP Program, dockets are opened via the following three ways (all three are done): 1. FAA ATMP project manager/staff person submits a document(s) (e.g., NOI, scoping document, Draft NEPA document(s)) on the DMS Web site via the normal comment submission process; *and*

[11] FAA-EE-90-03, *Community Involvement Manual,* August 1990.

DATA REQUIRED	DESCRIPTION
	2. FAA staff person from FAA's Office of Rulemaking submits a copy of the official Federal Register publication to the DMS; *and* 3. DMS automatically downloads a PDF file of the actual Federal Register publication and posts it on the DMS site. • While this methodology may result in multiple copies of the same document, it guarantees that the docket is open, documents are available for public review, and comments may be submitted by the date and time listed on the notice.
What to provide to commenters	• Docket number and instructions to identify this unique number at the beginning of the comments. • URL where they may submit online comments using docket number: http://dms.dot.gov/. • Address where they may send written comments: Docket Management System Docket No. *XXX-XXXX-XXXXX* US Department of Transportation Room Plaza 401, 400 Seventh Street, SW Washington, DC 20590-0001 • Instructions on submitting comments in person (e.g., "You may review the public docket containing comments in person in the Dockets Office between 9 a.m. and 5 p.m., Monday through Friday, except federal holidays. The Dockets Office is on the plaza level of the NASSIF Building at the Department of Transportation at the [above] address.").
What to do with comments	• All comments submitted to DMS are reviewed by the docket staff to be posted on the DMS site. • If any comments are submitted directly to FAA, NPS, or Volpe, the agency should directly send them to DMS with instructions to post them on the DMS site. This process ensures that each and every comment appears on the DMS for public review and is assigned a unique docket number. • At the end of the comment collection period, all comments may be downloaded, and the appropriate comment analysis procedure may begin.

Cautionary note: Experience has shown that the exact information above varies on occasion. This list should be used as a guide, and final information should be discussed with the DMS contact individual well before service is needed.

Scoping Comments Analysis and Summary Document

After the scoping period, the PMT will analyze written and oral public/agency comments and confirm or modify the ATMP scope (refer to Appendix C-10 for an overview of the comment analysis process). The process condenses scoping comments into a workable set of relevant

issues (40 CFR 1502.2). Comments and/or issues will be addressed during the NEPA process and, if necessary, within the NEPA document. Substantive comments dealing with specific issues relating to potential environmental consequences, analytical or NEPA processes, and non-specific general concerns are separated from each other and further organized in a way that facilitates response. Future analyses and alternatives will therefore reflect relevant issues identified through the scoping process.

During the comments content analysis, a scoping comment summary is created (see Appendix C-11). The summary lists each issue or process identified through the public involvement process and illustrates the item with key statements created by the analyst, using the words of the commentators as much as possible. Responses are documented in table format and can consist of a note of acknowledgment and an explanation or a brief indication of how the comment content will be reflected or addressed in the NEPA process. The summary table will be a tool used in the alternative development process. In some cases, such as what occurred for Haleakala and Hawaii Volcanoes National Parks, an EA may transition to an EIS and there would be two scoping comment summaries. When this occurs, it should be clear, in the scoping summary analysis/document, which comments came from which scoping process.

After the scoping process is completed, the PMT should prepare a public participation summary document that identifies all public participation activities carried out for the particular park unit. This document should include a summary of the activity, how the scoping was publicized, any corresponding materials, and meeting attendance sheets and minutes when applicable. (See Appendix C-12 for format.) The summary will not be incorporated into the NEPA document, but it may be referenced as a supporting document.

2.12.3 Agency Scoping

FAA Order 1050.1E does not require scoping for an EA but rather states it is optional at the discretion of the responsible FAA official. Scoping for an EIS is required by FAA Order 1050.1E, and it represents an early and open process for determining the scope of issues to be addressed in an EIS and identifying the significant issues related to an action (40 CFR 1501.7). There are no requirements for a public or agency scoping meeting or for a specific number of meetings; however, FAA Order 1050.1E states that scoping meetings provide the opportunity to present additional background on the action and to solicit input. Consultation with appropriate agencies is initiated at this point. Local units of governments, federal and state agencies, and tribes should be consulted early in the process of preparing an EIS. FAA points out that, along with DO-12, the NEPA process can be a framework for complying with several other environmental or related laws, such as the National Historic Preservation Act and Executive Order (EO) 12898, which addresses environmental justice.

NPS DO-12 requires scoping for all EAs. Although public scoping is encouraged when an interested or affected public exists, issuing offices are required only to involve appropriate federal, state, and local agencies and any affected Indian tribe. Agency scoping (including scoping with applicable Indian tribes) is required for an EIS.

For ATMPs, FAA and NPS will consult with appropriate local, state, and federal agencies for both the EA and the EIS to inform them about the ATMP program and/or projects and to obtain

their input so that FAA can further identify the potential issues and impacts, collect documented baseline environmental conditions, and consider mitigation options.

FAA and NPS should compile a list of applicable agencies and governmental stakeholders who should be involved with scoping at the kickoff meeting.

To meet this goal, the PMT will plan an agency scoping meeting. If an agency meeting is agreed to at the kickoff meeting, agencies (including applicable tribes) will be invited by certified-return receipt mail to participate in scoping and submit their comment to the DMS (see Section 2.12.2.4). (Refer to Appendix C-8 for a sample agency scoping meeting agenda.)

To initiate consultation for compliance with other applicable laws, the following agencies must be contacted directly:

- State Historic Preservation Office (Section 106 of the National Historic Preservation Act)
- US Fish and Wildlife Service (Section 7 of the Endangered Species Act)
- National Marine Fisheries Service (if applicable) (Section 7 of the Endangered Species Act)

2.12.4 Tribal Scoping and Consultation

Indian tribes, both those whose tribal lands are contiguous with a park unit for which an ATMP is being prepared and those traditionally associated with such a park unit, must be consulted during ATMP preparation pursuant to NEPA, NPATMA, FAA Order 1210.20 (American Indian and Alaska Native Tribal Consultation Policy and Procedures), and many other US laws (refer to US treaties with tribes, the American Indian Religious Freedom Act, the National Historic Preservation Act, EO 13175, EO 12898, and Executive Order Facilitation of Cooperative Conservation). Indian tribes whose tribal lands are or may be overflown by aircraft involved in a commercial air tour operation over the park or tribal lands to which the ATMP applies will be invited to participate as cooperating agencies in the NEPA process.

Federally recognized tribes can be stakeholders in the ATMP process, but unlike other stakeholders they are sovereign governments who must be consulted on a government-to-government basis. The PMT should coordinate consultation with scoping and post-scoping NEPA analyses, but consultation with tribes may need to be kept somewhat apart from public review processes. FAA uses standard letters to initiate government-to-government relationships with tribes, followed by a personal phone call. A letter sent *certified mail receipt requested* will invite the tribe to join a government-to-government relationship. Contents of the letter may vary among tribes (Section 3.4.2 outlines this process). During the scoping process, a separate letter, *certified mail receipt requested,* should be sent to the tribes, and the tribes should specifically be invited to the agency scoping meeting if one is being held. However, inviting the tribe to participate in the scoping meeting does not satisfy the government-to-government consultation requirement. (See Appendix C-9 for an example of a Government-to-Government scoping invitation letter.)

Consultation meetings are normally conducted face-to-face, although sometimes teleconferencing may be feasible. Meetings should be truly interactive and should aim at achieving results. Often, important formalities will need to be observed. It is often appropriate to hold meetings on reservations, at places of a tribe's choosing, and according to tribal rules. The assistance of persons knowledgeable in how a given tribe "does business" will often be critical to facilitating consultation and avoiding unnecessary conflict. Most NPS park units retain staff to protect cultural resources, and consultation is often a significant part of their duties. These staff should be included early in the process to provide a starting point for consultation on air tour planning, but in general they should not be used in the consultation process since it could compromise their relationships with tribes for other park-unit-management purposes. If, through the consultation process, FAA, NPS, a commenter, or a consulting party provides or identifies any information that should not be released (i.e., locations of culturally sensitive sites), then that information may be redacted from public release both for the protection of the site identified and any cultural sensitivities. This would apply to publication within the EA or EIS, release under the Freedom of Information Act (FOIA), or public release of the Administrative Record.

Ideally, the end result of consultation is a written agreement of some kind, but very often tribes are not willing to enter into such agreements even if a fundamental agreement in principle has been reached. Where a written agreement is not possible, the PMT will document the consultation and how the results have influenced and been reflected in the ATMP and NEPA documents. A written record of the consultation must also be filed with the affected FAA Regional Tribal Consultation Official according to FAA Order 1210.20, Section 8(b).

The PMT should closely coordinate tribal consultation with consultation under Section 106 of the NHPA, but it is important to understand that tribal consultation does not substitute for Section 106 consultation, or vice-versa. The PMT must consult with tribes even if no Section 106 properties or issues are involved, and it must perform a Section 106 review even if no tribes are involved.

2.12.5 Other Public Involvement Opportunities

FAA Order 1050.1E states that FAA's Community Involvement Policy Statement (dated April 17, 1995) affirms FAA's commitment to make complete, open, and effective public participation an essential part of its actions, programs, and decisions.

NPS DO-12 has no additional requirements, although the agency suggests that, if there is large-scale interest in a proposal, other opportunities such as workshops and additional meetings or hearings may be conducted.

For ATMPs, NPATMA requires at least one public meeting to be conducted sometime during the planning process; currently this will occur after the draft NEPA document is released to the public. The PMT, including local park-unit staff, will determine the appropriate kind(s) and type(s) of additional public meetings (if any) and plan the associated logistics. The team will conduct the public meeting(s) at a location(s) in or near the appropriate national park unit.

Public involvement programs should be established on a park-by-park basis and include conducting structured public meeting(s) and other workshops and providing supplementary

public informational material (e.g., brochures, newsletter-style progress updates, or public posters). The purpose of such activities would be to bring attention to the process, invite public participation, and solicit concerns of local citizens over the potential impact(s) of ATMPs in an informal atmosphere of information exchange. The PMT will be responsible for determining the scope of public involvement (discussed at the kickoff meeting). The public involvement program is initiated by the issuing of an NOI.

2.12.5.1 ATMP Web Site

FAA maintains the ATMP program Web site at http://www.atmp.faa.gov. The ATMP Web site is part of FAA's public outreach program for increasing awareness of national park ATMPs. Not only does it provide background information on the history of and current happenings within the ATMP program (through links to legislation and updates on park ATMP news), it also offers practical information, such as guidance to commercial air tour operators on how to apply for operating authority. Status and background information regarding NPOAG and other program information is also posted on the Web site. Additionally, links to the main FAA and NPS Web sites and to the DOT DMS and Federal Register are presented.

Specific news items about ATMP development at a particular park unit may be posted on the ATMP Web site under the "Program Information" page that links to active park ATMP projects. Such items may include links to Federal Register notices, scoping documents, and other draft or final documents or notices. Individuals who want to receive information about a specific park ATMP project may register to do so on the Web site; these people shall also be added to NEPA mailing lists and should receive e-mail and/or regular mail notification as relevant public participation events occur (e.g., initiation of scoping) or milestones are reached (e.g., publication of the final ATMP).

Such postings of documents or mailings to registered users shall occur via coordination with the appropriate FAA project manager. FAA fully maintains the Web site and controls all content that appears on it.

2.13 ALTERNATIVES DEVELOPMENT

FAA Order 1050.1E states that there is no requirement for a specific number of alternatives; however, the range of alternatives should be commensurate with the nature of the action and the agency experience with the environmental issues involved. FAA may include alternatives proposed by the public or another agency. However, the basic criteria for any alternative must be met: it must be reasonable, feasible, and achieve the project's purpose.

NPS DO-12 has three provisions for alternatives: (1) there should be a range, (2) they should be technically and economically feasible, and (3) a "no action" option must be included. Alternatives are generally driven by ways of conducting air tours to address issues regarding impacts on park purposes and values, within the context of the purpose and need for action (including safety). Not all alternatives will meet all park needs equally well: for example, an alternative that emphasizes visitor experience could increase impacts on wildlife. Not all alternatives will meet the desires of air tour operators. One or more alternatives could be formulated as attempts to optimize between benefits and impacts for all resources, values, and

uses. All alternatives that are analyzed in detail in an environmental document should meet criteria in the purpose and need for action, and other reasonableness criteria.

For ATMPs, a very large or an infinite number of possible alternatives exist for formulating NEPA alternatives. NPATMA (under the section on the contents of an ATMP) lists various types of ATMP scenarios or conditions that can be applied to air tour operators, such as maximum or minimum altitudes, time-of-day restrictions, restrictions for particular events, and maximum number of flights per unit of time. These conditions should be incorporated when appropriate to help structure the alternatives. The geographic area of each park/tribal unit, the list of possible mitigation measures identified in NPATMA, and the decision on what/where/when to apply the possible mitigation measures are all factors that drive the very large or infinite number of possible solutions. CEQ's 40 Most Asked Questions states (in Question 1b): "When there are potentially a very large number of alternatives, only a reasonable number of examples, covering the full spectrum of alternatives, must be analyzed and compared in the EIS." For ATMPs, the two ends of the spectrum, also considered boundary conditions, are "no restrictions on commercial air tour operations" (referred to as "no restrictions") and "no commercial air tour operations" (referred to as "no air tours").

The two bounding alternatives should be presented to the public during scoping. The bounding alternatives will be processed using the same reasonableness criteria established for all alternatives. Bounding alternatives do not need to be carried forward within the EA or EIS in all cases, as determined on a park-by-park basis, provided that the rationale for not doing so is adequately justified in the alternatives section of the EA or EIS. Figure 2-4 provides a flowchart of the alternatives development process.

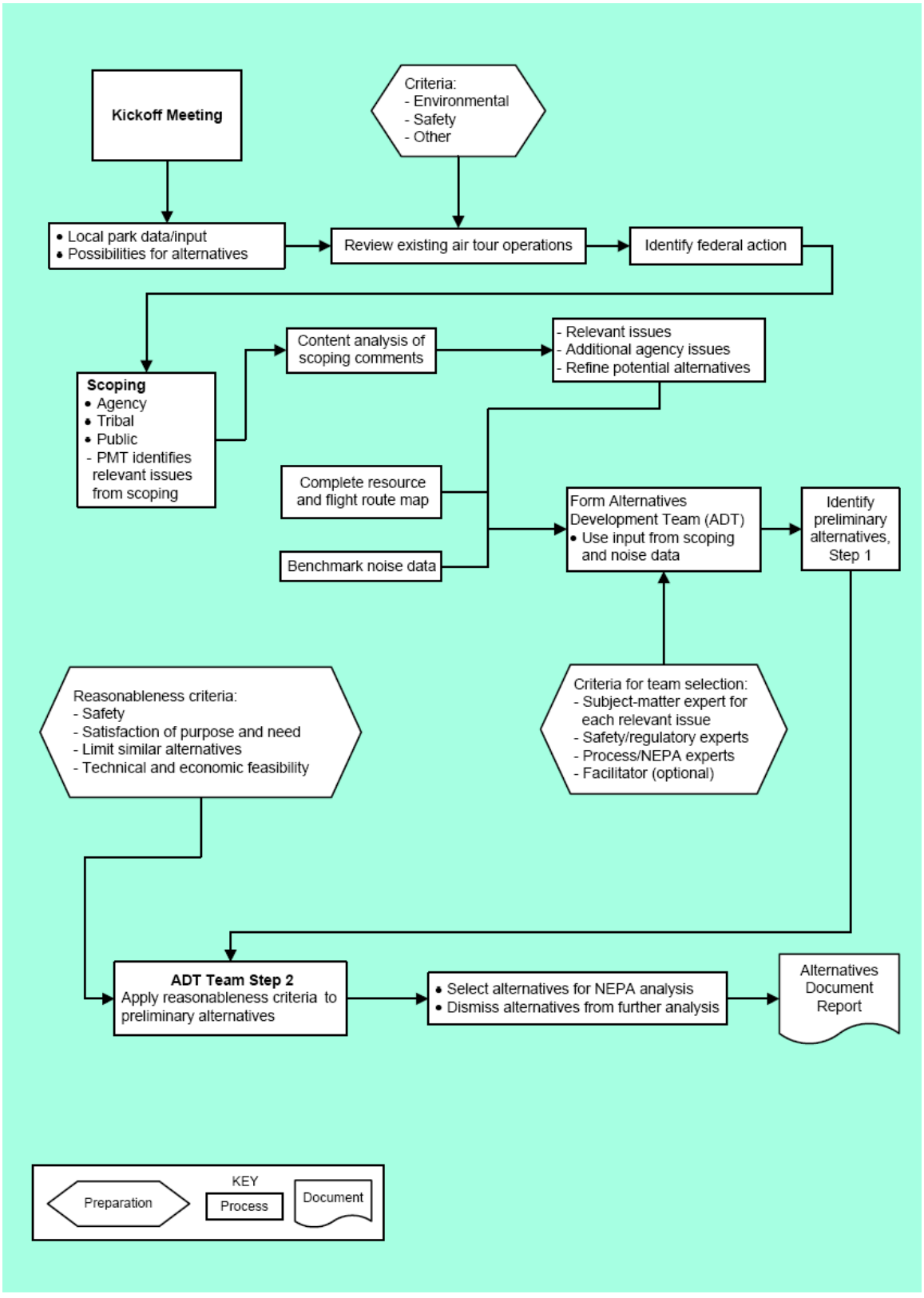


Figure 2-4. Alternatives Development

2.13.1 Alternatives Development Team

To facilitate the identification and screening of alternatives, an Alternatives Development Team (ADT) will be formed to develop a range of alternatives, using a two-step process, after scoping is complete. As a result of scoping and its related comments, a tangible list of potentially significant issues will be developed. This list will serve as a springboard for the alternatives development process. Methods to reduce potential impacts can be applied during both steps of the development process.

The ADT will include:

- Representatives from FAA and NPS
- Subject-matter expert for each significant issue
- Safety/regulatory expert
- NEPA process expert
- Facilitator (suggested)

Tribes identified as cooperating agencies should be invited to participate in the ADT. In those instances, an invitation letter should be sent, followed by a personal phone call. (An example of a tribal invitation letter to the ADT is found in Appendix D-4.)

2.13.2 Common Elements of Alternatives

Certain elements, including applicability, relationship of the ATMP to other FAA regulations, enforcement guidelines and responsibilities, adaptive management, and quiet technology incentives, may apply to all alternatives (see Chapter 4 for management and enforcement of ATMPs).

2.13.2.1 Adaptive Management

Adaptive management is an integrated method for addressing uncertainty in natural resources management, examining alternative strategies for meeting measurable goals and objectives, and, if necessary, adjusting future management actions according to what is learned (Federal Register, Vol. 65, No. 105, June 1, 2000). Adaptive management is appropriate in natural resources and visitor use management when complete baseline information is unavailable for park resources. It is also appropriate when there is a need to take immediate action but the impacts to the resources from that action are unknown. Adaptive management procedures are also appropriate when environmental conditions or management needs change following ATMP implementation. If impacts occur beyond the scope of impacts disclosed in the NEPA document, change to an ATMP may be necessary.

Development of a specific adaptive management process will be addressed during scoping and formulation of alternatives for each ATMP. The adaptive management program or process will

be presented in the alternatives section of the ATMP/NEPA document and will also be part of the decision document.

An adaptive management strategy should (1) identify the uncertainty and the questions that need to be addressed to resolve it, (2) develop alternative strategies and determine which experimental strategies to implement, (3) integrate a monitoring program to detect the necessary information for strategy evaluation, and (4) incorporate feedback loops that link implementation and monitoring to a decision-making process that results in appropriate changes in management. This process provides systematic feedback for management and allows for adjustment of activities to mitigate unplanned or undesirable outcomes.

For example, an adaptive management program for an ATMP may address a sensitive species present at a park unit where data gaps include unsurveyed areas within a park or unknown sensitivity of a species to aircraft overflights. During the development of an ATMP alternative, best available knowledge would be used to define routes or altitudes to avoid a critical area of habitat. Due to uncertainty about sensitivity, a program would be developed to monitor the species and to determine the best management practice to protect it, such as the use of several proposed avoidance distances by route, altitude, or both. If monitoring or new information indicated that a specific avoidance distance was the preferred distance, the ATMP could be modified without additional analysis. Other circumstances where adaptive management would be appropriate could include the discovery of new sensitive species or new information regarding the location of a sensitive species in a park unit, which may require periodic adjustment of routes or altitudes in the ATMP.

2.13.2.2 Quiet Technology (QT) Incentives

NPATMA states that the ATMP shall include incentives for the adoption of quiet technology (QT) by operators conducting commercial air tour operations over a park unit. Incentives could include measures such as relief from caps, curfews, or use of preferred routes. Other kinds of incentives may become evident as alternatives are being considered for individual parks. Incentives could also include measures to encourage voluntary adoption of QT. Every ATMP will include some QT incentive.

The decision to be made shall consider the impacts disclosed in an environmental document (an EA or EIS) and supporting analyses and will provide for incentives to operators consistent with the reduction of impacts (i.e., noise) that are demonstrated by using approved QT aircraft. Approved QT aircraft are those listed in the Final Rule: Noise Limitations for Aircraft Operations in the Vicinity of Grand Canyon National Park (Federal Register, Vol. 70, No. 59/March 29, 2005; 14 CFR Part 93). NPOAG recommended to FAA and NPS (at the NPOAG meeting of June 21-22, 2005) that this rule be applied for purposes of air tour management planning as well. (See Appendix F-2 for the FAA Advisory Circular dated June 13, 2006, which contains the measured or estimated noise levels for aircraft currently used for commercial sightseeing operations in the GCNP special flight rules area.)

It is recognized that use of QT does not eliminate the sound of aircraft, and it may not reduce impacts on other sensitive park-unit resources or values, especially those that are associated with the presence or sight of tour aircraft. Therefore, it should be further noted that any incentives that

are applied must not result in unacceptable impacts on other resources or other noise-sensitive areas within the park. Also, if some restrictions are deemed necessary for purposes not related to sound (e.g., visual quality or proximity of aircraft to a sensitive species), they would not be available for relief in the use of incentives for reducing noise.

INM uses sound and operational characteristics of the aircraft that are currently being flown to model noise impacts of aircraft. The model is capable of applying operational characteristics of QT-approved aircraft so that differences between the QT and non-QT aircraft may be determined.

For ATMPs that are currently underway as of August 2005, a strategy for dealing with QT incentives must be devised since they were (in some cases) not considered overtly in the development of alternatives for those park units. The following strategy is to be implemented for those plans. First, the incentive will be ascertained for the decision by starting with the agency-preferred alternative and running the sound-impact model with use of approved and reasonably available QT aircraft. Second, decision makers will inspect the results, comparing sound impacts of the agency-preferred alternative with those that may be achieved using QT. This will be the basis for describing an incentive in the decision or plan. Further modeling may be done if incentives seem feasible in allowing not only more flights but also different routes or altitudes. In this regard, features of different alternatives may be combined as long as they are consistent with one another and unacceptable impacts do not result from the combination. The rationale for the incentive and its basis in further analysis shall be described in the decision document.

For future ATMPs, a different approach may be necessary. At a minimum, consideration of incentives should be part of the alternatives development process when caps are being evaluated, desired routes are being curtailed on the basis of noise impacts, or noise-sensitive resources are being protected. Technical details for such an analysis remain to be worked out, but it would appear to require iterative model runs for at least several alternatives in the environmental document: one for aircraft currently being used and another for QT aircraft. Prior to alternatives development and in combination with preliminary noise analysis, an assessment should be done to show the degree to which quieter aircraft would reduce impacts on noise-sensitive resources of the park.

2.13.3 Application of Growth-Rate Forecasts to Alternatives

Growth-rate forecasts will be used to determine the amount of growth in air tour operations that would occur at a particular park under certain circumstances. Appendix E-7 contains air tour growth forecasts for Haleakala National Park in Hawaii. The growth rate for Haleakala was estimated to be 1.3 percent per year based on a 10-year time period. Section 2.5.1 contains a description of factors that are considered in calculating air tour growth at national parks. Typically, a 10-year period is considered.

Growth-rate forecasts are used to determine (1) the socioeconomic impacts to air tour operators when their growth is restricted due to a cap on the number of operations, (2) the level of impact upon natural and cultural resources, visitor experiences, and tribal lands (if applicable), and (3) the increase in air tour operations if there are no restrictions.

For example, if a cap is placed on air tour operators, there is a lost potential opportunity for operational (and economic) growth. The financial or economic impact of restricting growth on operators can be quantified to some degree and will be discussed in the economic impacts section of the EA or EIS (see Section 3.7.2). The INM would be used to model the increase in noise impacts that would result from unrestricted growth or additional operations over a 10-year period. Although not as easily quantifiable, an assessment of visual impacts can also be made by knowing the number of additional aircraft that would potentially be visible.

In summary, forecasting the growth rate of air tour operations for a particular park aids in the assessment of impacts and can also help to structure alternatives during the alternatives development process.

2.13.4 Alternatives Development Meetings

The ADT should plan an Alternatives Development Meeting (ADM) to present baseline scenarios and develop preliminary alternatives. The ADM is not a public meeting but rather a meeting between FAA and NPS with contractors. (A sample agenda for the meeting is found in Appendix C-13.**)** ADMs may be conducted in person or by teleconference if possible. In specific cases, the alternatives may be limited or very evident due to various circumstances; in those cases, telephonic meetings are suggested.

Prior to the ADM, the ADT will model several air tour scenarios for use in the development of preliminary ATMP alternatives:

- *Iterative analysis* (see also Appendix E-3): This analysis consists of modeling single air tour aircraft operations on existing air tour routes. The results can be used to perform an iterative analysis of the appropriate number of air tour operations given certain operating conditions (routes, altitudes, type of aircraft) relative to park impairment thresholds.
- *Benchmarking analysis* (see also Appendix E-4): This analysis consists of modeling the bounding alternatives (a "no air tours" and a "no restrictions" scenario as well as a "no action" scenario—i.e., IOA conditions). The results are the noise footprints for the bounding and no action alternatives. Bounding alternatives may or may not be carried through detailed NEPA analysis depending on site-specific refinement criteria developed in Step 2.

Using these air tour scenarios, the ADT will conduct a brainstorming meeting to develop alternatives that address the issues identified as potentially significant (see Section 2.13.5). The meeting should be conducted "charrette" style, with ideas exchanged freely and each of the significant issues addressed.

To begin the brainstorming, the no action alternative and the bounding alternatives will be considered. A capable facilitator should moderate the meeting and ensure that all issues have been addressed. If the significant issues identified for a specific meeting are numerous, the ADT may be divided into subteams to more adequately address individual issues. Subteams would then reconvene to identify and discuss potential project alternatives. Any restrictions proposed at this stage will be for discussion only. The justification for restrictions will be discussed during the second stage of the alternatives development process (see Section 2.13.6). ADMs should

address Steps 1 and 2 of the alternatives development process; this may require two separate meetings.

2.13.5 Preliminary Alternatives Development: Step 1

The first step will be to identify preliminary alternatives, using information from scoping and noise modeling. Informational sources include:

- Significant issues identified through scoping (using content analysis presented in Section 2.12.2.4).
- Suggested alternatives from scoping.
- Additional issues identified by agencies.
- Completed maps of natural and cultural resources and flight tracks.
- Information on park-unit visitor use and experiences, and regional socioeconomics.
- Noise-modeling report, which will characterize park-unit sound environments and present the results of the iterative analysis (see Appendix E-3) and the benchmarking analysis (see Appendix E-4).

Once the ADT has reviewed the materials, the team should convene to develop the range of alternatives and confirm park-unit-specific issues and park-unit-management concerns. The issues list from scoping and resource maps prepared for the alternatives development process may also be updated based on the input of participants. The team should then discuss the components and reasonableness criteria for the alternatives as well as the three baseline scenarios, using brainstorming to derive issue-driven criteria and alternatives. Because those suggested actions to reduce potential impact will be presented as part of each alternative, they are not particularly considered to be "mitigation" at this time. The team should suggest "ways to reduce impacts" that can be part of the alternative. Ways to lessen impacts that are suggested after the Draft NEPA document is completed will be referred to as mitigation. Consequently, the Finding of No Significant Impact (FONSI) and the ROD can further reduce the potential impact of an alternative by offering mitigation.

The outcome of this session should be a list of preliminary alternatives and screening criteria.

2.13.6 Refinement of Alternatives: Step 2

The ADT will apply reasonableness criteria to the preliminary alternatives, including the bounding alternatives, to limit the proposed alternatives only to those that (1) meet safety criteria, (2) satisfy the purpose and need, (3) avoid repetition of similar alternatives, and (4) are technically and economically feasible. If other site-specific screening criteria have been developed, they may be used to refine the alternatives list.

The end result of this refinement process will be (1) alternatives that will be analyzed in the NEPA document and (2) alternatives initially considered but dismissed from further analysis in

the NEPA document. Refined alternatives should be presented to recognized stakeholders (SHPO, National Marine Fisheries Service [NMFS], USFWS), who will be provided with an opportunity to comment (see Section 2.13.7). This is key to Section 106 and Section 7 consultations, since efforts to lessen and avoid adverse impacts will be confirmed through this process.

Methods to reduce potential impacts on natural, cultural, and socioeconomic resources should be considered for alternatives both before and after consultation with recognized stakeholders. After the alternatives have been refined, the ADT will note specific reasoning for advancement or dismissal of each alternative in the NEPA document and will describe in detail the refinement process and corresponding decisions about alternatives. The ADT will also include the reasoning behind any air tour operational restrictions in the alternatives.

2.13.7 Alternatives Development Report

After the ADT has completed the alternatives development process, the results of the meetings will be documented in an Alternatives Development Report (ADR). This report should include all relevant information about the process, such as lists of significant issues, preliminary alternatives, screening criteria, alternatives initially considered but dismissed from further analysis, and alternatives that are to undergo detailed analysis.

The ADT will provide a summary of the Draft ADR to meeting participants, relevant project staff, and recognized stakeholders (SHPO, NMFS, USFS) associated with the project. The Draft ADR may be made available to the general public for a 30-day review and comment period. Public notice of the report shall be provided (through local newspapers and direct mailings using project mailing lists). The Draft ADR may also be sent to appropriate tribes for review and comment (refer to Appendix D-5 for a sample letter). Subsequent comments will be addressed in the Final ADR.

2.14 Environmental Assessment (EA)

2.14.1 Draft EA Process

The ATMP Environmental Assessment (EA) process is illustrated in Figure 2-5. The Draft EA will follow the table of contents outlined in Appendix E-1. A completed Draft EA will be signed by FAA as the lead agency and by NPS as the cooperating agency.

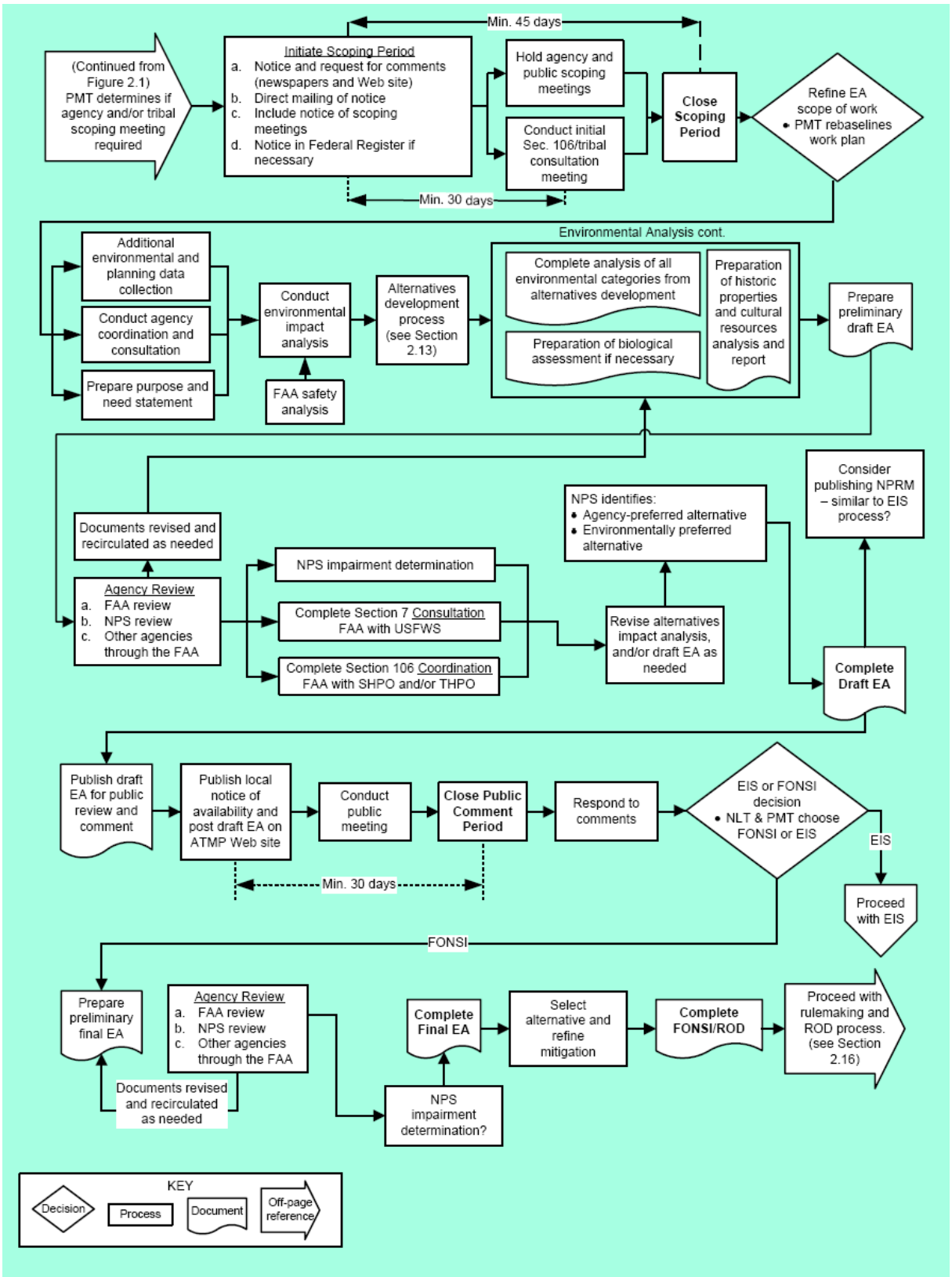


Figure 2-5. Standard EA Process

2.14.1.1 NPS Impairment Determination[12]

Consideration of impairment (as it applies to resources and values of a national park) is required in NPS decision making (NPS Management Policies 2006, Section 1.4.5). An action is considered an "impairment" if, in the manager's professional judgment, it "would harm the integrity of the park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources."

NPS has specific guidance on impairment determination. DO-12 states that environmental documents will evaluate and describe impacts that may constitute an impairment of park resources and values. The first step is to determine the context and intensity level of the effect (negligible, minor, moderate, or major) per DO-12. Essentially, all impacts constituting impairment are major adverse impacts, but not all major impacts constitute impairment. Consequently, if the analysis identifies a major adverse impact, a determination must be made as to whether or not this major effect constitutes impairment by applying the criteria from NPS Management Policies 2006, Section 1.4.5. A statement regarding whether or not an impact constitutes impairment is included in each topic of an NPS NEPA document. NPS does not need to make impairment determinations on socioeconomics and visitor use and experience. According to the Organic Act, visitor experience cannot be impaired the same way park resources can be impaired. Resources have to be unimpaired to be enjoyed.

Since FAA is the lead agency but NPS signs the decision document, a preliminary draft of the EA will be provided to the park-unit superintendent to consider impairment based on the park unit's enabling legislation and other pertinent direction. The superintendent may supply a broad statement on impairment after reviewing the EA. The statement on impairment should be placed at the front of the final Draft EA document or in the concluding statement for each relevant impact topic.

2.14.1.2 Public Distribution/Comment Period of an EA

FAA Order 1050.1E states that the opportunities for public participation for a Draft EA should be provided to the extent practicable, although FAA typically provides for a 30-day comment period. Order 1050.1E also states that EAs should be coordinated with agencies outside of FAA when an action involves resources protected by special-purpose laws or administrative directives. Notification by FAA of the availability of an EA is not necessarily made in the Federal Register.

NPS DO-12 states that the EA is to be sent out for review by the interested and affected public, including affected agencies and tribes, for a minimum of 30 days. The notice that an EA is available for review is, at a minimum, to be published in the local newspapers of record, posted on the NPS Web site, noticed in the Federal Register, or otherwise made broadly known to the public. This action, coupled with public distribution through mailing, begins the 30-day review period. The notice should appear in a visible location in the paper (e.g., not in the legal notices section), and anyone who requests a copy of the EA should receive one, until a reasonable

[12] Impairment is not applicable to FAA environmental review.

number of copies have been distributed. If an EA must be rewritten to address substantive new issues or incorporate new alternatives based on public comment, another 30-day review period must be provided before a FONSI can be issued.

For ATMPs, Draft EA notification will be published in the local newspapers. Individuals or agencies that have specifically requested to be kept informed about the ATMP NEPA process will be notified. The ATMP Web site will also announce the availability of the Draft EA for public review. The PMT may adjust the process according to local project circumstances. A 30-day review period will be allowed. During this time, the public and consulting parties can respond formally to the draft by posting written comments to the DMS. (See Table 2-1 for information on the use of DMS for comment submission.)

2.14.1.3 Public Meeting

FAA Order 1050.1E does not require a public hearing, meeting, or workshop for the purpose of obtaining comment on a Draft EA. If FAA decides to conduct any one of these, it should ensure that the Draft EA is available for public review at least 30 days before the event occurs.

NPS DO-12 states that workshops, meetings, hearings, or other opportunities to give oral input on an NPS EA are not required, but they may be appropriate if there is large-scale interest in a proposal. If such a meeting is scheduled, it should take place no sooner than 15 days from the time it is advertised or the notice of availability of the EA is published in the local paper of record, whichever is later. The review period must extend a minimum of 15 days beyond the date of such a meeting. NPS officials should track comments made at public meetings for later response.

For ATMPs, NPATMA specifically states that the public should be allowed to review and comment on the ATMP but does not specifically indicate when. Having a public meeting after the Draft EA is distributed allows public comments to be incorporated into the process early to help guide the development of the ATMP and comply with NPATMA. Therefore, for the ATMP program a public meeting will be held during the Draft EA public comment period. The public meeting should follow a process and format similar to the public scoping process and format identified earlier but refined as conditions suggest The public meeting format should allow for discussion and exchange between the agency presenters and the meeting attendees. Appendix C-14 is a checklist for a NEPA public meeting.

2.14.1.4 Agency-Preferred and Environmentally Preferred Alternatives

FAA Order 1050.1E does not require identification of either the environmentally preferred or the agency-preferred alternative in an EA.

NPS DO-12 requires the identification of the agency-preferred and environmentally preferred alternative in both the Draft and Final EA.

For ATMPs, both the agency-preferred and environmentally preferred alternatives, which could be different, will be identified in the Draft and Final EA for NPS but may not be identified in the Draft EA by FAA.

2.14.2 Final EA Process

As with scoping comments, the comments received on the Draft EA document must be processed, analyzed, and responded to accordingly. The process for analyzing the comments is presented in Appendix E-6. Comments will be organized in a corresponding summary table and will be included in the public participation summary as outlined in the scoping section (2.12). All substantive comments will be addressed in the Final EA document. They will be addressed as deemed appropriate, depending upon the nature of the comment and whether it merits a change in the EA or can be responded to by explanation or clarification.

After the comment period closes, the PMT will prepare a Final EA, which will include responses to substantive comments received from agencies, organizations, Native American tribe(s), affected air tour operators, and the general public on the Draft EA.

A preliminary draft of the Final EA will be provided to the park-unit superintendent to reconsider impairment in the same fashion as that undertaken for the Draft EA. The Final EA will be signed by the FAA Administrator and NPS Director or their officially designated representatives.

2.15 Environmental Impact Statement (EIS)

2.15.1 Draft EIS Process

The Draft Environmental Impact Statement (EIS) process, illustrated in Figure 2-6, is very similar to the Draft EA process. The Draft EIS will follow the same general table of contents as the EA outlined in Appendix E-1. A completed Draft EIS will be signed by FAA as the lead agency and by NPS as the cooperating agency.

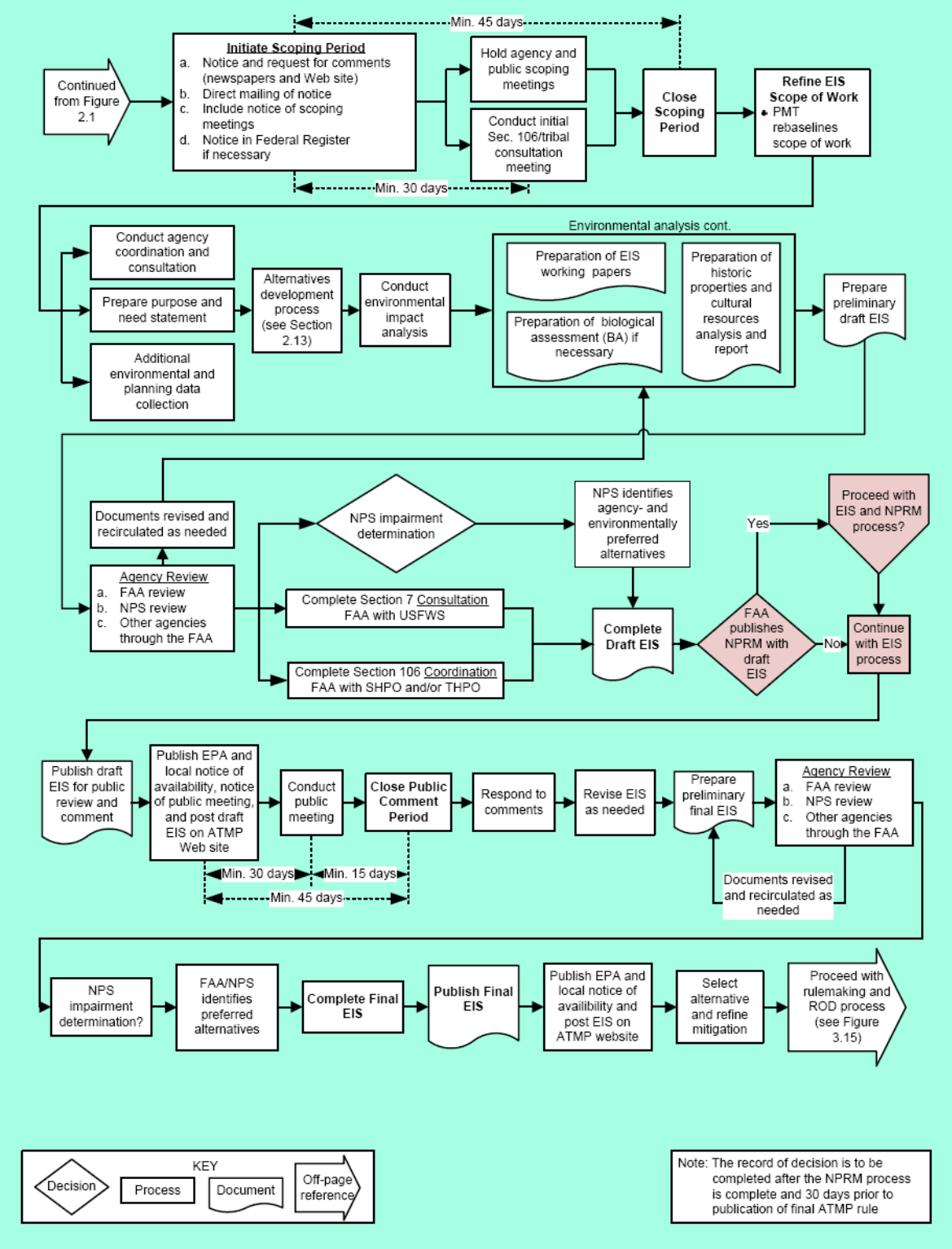


Figure 2-6. Standard EIS Process

2.15.1.1 NPS Impairment Determination

Refer to Section 2.14.1.1 for NPS Impairment Determination for an EIS.

The EIS impairment determination follows the same steps as for the EA. A preliminary draft of the EIS will be provided to the park-unit superintendent to consider impairment based on the park unit's enabling legislation and other pertinent direction. The superintendent may supply a broad statement on impairment after reviewing the EA. The statement on impairment should be placed at the front of the final Draft EIS document or in the concluding statement for each relevant impact topic. NPS will conduct a second round of impairment consideration prior to the preparation of the Final EIS.

2.15.1.2 Public Distribution/Comment Period of an EIS

FAA 1050.1E states that the FAA official shall ensure that the Draft EIS is sent to interested parties, libraries, and other public venues to provide the public the opportunity to review and comment on the document (see 1050.1E par. 508d). Immediately following that distribution, the FAA official shall file five copies accompanied by a letter to EPA certifying that FAA has distributed the Draft EIS for public review and comment. EPA will normally publish a Notice of Availability (NOA) of the Draft EIS in the Federal Register two weeks after receiving FAA's certification of distribution. The required comment period for a Draft EIS is a minimum of 45 days.

NPS DO-12 requires that the Draft EIS be available for public review for a minimum of 60 calendar days from the day the EPA NOA is published in the Federal Register. In addition, NPS is required to file an NOA with the Federal Register at the same time that the appropriate number of copies are sent to the EPA. The Draft or Final EIS must be transmitted to all appropriate agencies and must be available to the general public. Copies must be sent to:

- All federal agencies that have jurisdiction by law or special expertise, and all appropriate federal, state, or local agencies or Indian tribes.
- Any interested or affected individuals or organizations.
- Anyone who requests a copy.

NPS DO-12 also states that it is acceptable to send an electronic copy or make an electronic copy available if the person requesting it has access to such a copy. After all printed copies have been distributed, the person requesting the EIS should be directed to the nearest library or government office that has a record copy.

For ATMPs, an NOA of the Draft EIS will be published in the Federal Register consistent with both FAA and NPS guidance. In addition, an NOA will be published in local newspapers of record and posted to the FAA ATMP Web site. Copies of the EIS will be sent to all federal agencies that have jurisdiction by law or special expertise and all appropriate federal, state, or local agencies or Indian tribes as well as other interested parties. There should be a master mailing list for each ATMP park. The Draft EIS will be made available at local libraries and other public venues to provide the public the opportunity to review and comment on the document.

There will be a 45-day comment period for public review of the Draft EIS. During this time, the public and consulting parties can respond formally to the Draft EIS by posting written comments to the DMS. (See Table 2-1 for information on the use of DMS for submittal of comments.) Both FAA and NPS will make every effort to accept and respond to late comments if possible without extending the comment period. Requests for extending the comment period will be considered and judged on the basis of criteria presented in DO-12 and FAA policy.

2.15.1.3 Public Meeting

FAA Order 1050.1E does not require a public meeting for an EIS, but typically some type of meeting is held to obtain oral input.

NPS DO-12 states that opportunity for oral input may be provided on a Draft EIS. If so, the meeting/hearing should take place no sooner than 30 days from the time EPA's NOA is published. NPS DO-12 references the CEQ regulations that state a public meeting is required if:

- Substantial environmental controversy over the proposed action or substantial interest in holding the meeting exists.
- Another agency with jurisdiction over the action has requested a session and has provided supporting reasons for its request.

The format may be a "workshop," meeting, hearing, or other option, but attendees must be allowed to express reasonable substantive concerns with the Draft EIS.

For ATMPs, NPATMA specifically states that the public should be allowed to review and comment on the ATMP but does not specifically indicate when. Having a public meeting after the Draft EIS is distributed allows public comments to be incorporated into the process early to help guide the development of the ATMP and comply with NPATMA. Therefore, for the ATMP program a public meeting will be held during the Draft EIS public comment period. The public meeting should follow a process and format similar to the public scoping process and format identified earlier but should be refined as conditions suggest.

The public meeting format should allow for discussion and exchange between the agency presenters and the meeting attendees. Appendix C-14 is a checklist for a NEPA public meeting.

2.15.1.4 Agency-Preferred and Environmentally Preferred Alternatives

FAA Order 1050.1E does not require identification of a preferred alternative in the Draft EIS. CEQ regulations state that the agency's preferred alternative, or alternatives if one or more exists, should be identified in the Draft EIS and in the Final EIS unless another law prohibits the expression of such a preference. FAA Order 1050.1E states that the Final EIS must specifically and individually identify the preferred alternative and the environmentally preferred alternative.

NPS DO-12 requires (as with the EA) that NPS identify the agency-preferred and environmentally preferred alternatives in both the Draft and Final EIS.

For ATMPs, NPS and FAA will follow their respective policies as stated above.

2.15.2 Final EIS Process

As with scoping comments, the comments received on the Draft EIS must be processed, analyzed, and responded to accordingly. The process for analyzing the comments is presented in Appendix E-6. Comments will be organized in a corresponding summary table and will be included in the public participation summary as outlined in Section 2.12 on scoping. All substantive comments will be addressed in the Final EIS as deemed appropriate, depending upon the nature of the comment and whether it merits a change in the EIS or can be responded to by explanation or clarification.

A preliminary draft of the Final EIS will be provided to the park superintendent to reconsider impairment in the same fashion as that undertaken for the Draft EIS.

It is possible that FAA and NPS PMT members may not agree on the agency-preferred alternative. In this event, the conflict resolution process will be invoked in an attempt to make adjustments and come to agreement. Should this not be possible, the two different agency-preferred alternatives will be disclosed in the EIS, along with the judgments and rationale for each.

The Final EIS will be signed by the FAA Administrator and NPS Director or their officially designated representatives.

2.16 NEPA Decision Document

2.16.1 Finding of No Significant Impact (FONSI) for an Environmental Assessment

After an EA has been completed, a Finding of No Significant Impact (FONSI) is prepared if there are no significant impacts and an EIS is not required.

FAA Order 1050.1E states that the FONSI shall briefly describe the action, its purpose and need, and the alternatives considered, including the no action alternative, and assess and document all relevant matters necessary to support the conclusion that the action is not a major federal action significantly affecting the quality of the human environment. The FAA Order states that the degree of attention give to different environmental factors will vary according to the nature, scale, and location of the action; thus, depending on the complexity and degree of impact of an action, a FONSI may range in content from a simple conclusion supported with pertinent facts to a more detailed analysis.

In addition, the FONSI shall:

- Determine the action's consistency or inconsistency with community planning and document the basis for the determination.
- Present any measures that must be taken to mitigate adverse impacts on the environment and which are a condition of project approval. The FONSI should also reflect coordination of proposed mitigation commitments with, and consent and commitment from, those with the authority to implement specific mitigation measures committed to in the FONSI.

- Reflect compliance with all applicable environmental laws and requirements, including interagency and intergovernmental coordination and consultation, public involvement, and documentation requirements (FAA Order 1050.E, paragraph 403, and Appendix A). Findings and determinations required under special-purpose environmental laws, regulations, and executive orders, if not made in the EA, must be included in the FONSI, which may be combined with a decision document, sometimes called a Record of Decision (ROD) or FONSI/ROD.

FAA Order 1050.1E also states that the issuance of a FONSI does not mean that FAA has decided to act, only that it has found that the action will not have a significant impact on the environment. Public notification of a FONSI varies as appropriate. In certain cases, a 30-day public comment period is required before proceeding with the action. The Order also indicates that if the FAA decides to proceed with the proposed federal action, then a FONSI/ROD documenting the decision may be prepared. The Order recommends preparation of a ROD for circumstances where there are mitigation measures to reduce potentially significant impacts below applicable significant thresholds, actions that are highly controversial, actions closely similar to those normally addressed in an EIS, or actions that have no precedent. Since the proposed action is of a unique nature and involves an action without FAA precedent, a FONSI/ROD will be prepared.

NPS DO-12 states that a FONSI serves two functions in the NPS: it is the "proof" that no significant impact would occur if the proposal is implemented, and it explains the rationale used in selecting the alternative for implementation. Therefore, after describing the action, a FONSI should follow the list of significance criteria, and any measures integrated into the selected alternative that apply should be explained. The environmentally preferable alternative as indicated in the EA must also be identified. If it is not the selected alternative, reasons for non-selection must be clearly stated. In a FONSI, the reasons must be described for rejecting all alternatives except for the one ultimately selected. From the facts presented in the analysis in the EA and summarized in the FONSI, the FONSI must indicate that, after a review of the impacts, the alternative selected for implementation will not impair park resources or values and will not violate the NPS Organic Act.

For ATMPs, the FONSI shall incorporate the requirements of both FAA and NPS as described above. A ROD will always be required even when a FONSI is concluded and shall include the requirements detailed for a ROD in Section 2.16.2, in accordance with CEQ regulations (1505.2) and other FAA and NPS requirements. The Administrator and the Director shall sign the environmental decision document.

2.16.2 Record of Decision (ROD) for an Environmental Impact Statement

FAA Order 1050.1E states that, following the time periods described in 40 CFR 1506.10 (i.e., 90 days from DEIS NOA issuance and a 30-day waiting period for FEIS NOA issuance), the agency's decision maker may make a decision on the federal action. The ROD presents the agency's official decision on the action, identifies applicable mitigation and monitoring actions required, and can be used as necessary to clarify and respond to issues raised in the Final EIS. The ROD may discuss preferences among alternatives based on relevant factors, including economic and technical considerations and agency statutory missions. The ROD shall identify

and discuss all factors, including any essential considerations of national policies that were balanced by the agency in making its decision, and state how those considerations entered into the decision. The ROD shall state whether all practicable means to avoid or minimize environmental harm from the alternatives selected have been adopted and if not, why they were not. The Draft ROD should accompany the proposed FEIS during the internal review prior to approval only when headquarters' concurrence is required.

NPS DO-12 states that, when an EIS has been prepared, the ultimate choice of an alternative, mitigation measures, and decision rationale are documented in the ROD in accordance with CEQ (1505.2). In addition, the ROD must indicate that, after a review of the impacts, the alternative selected for implementation will not impair park resources or values and will not violate the NPS Organic Act.

For ATMPs, a ROD will be prepared in accordance with CEQ regulations (1505.2) and other FAA and NPS requirements:

- State what the decision was.
- Identify all alternatives considered by the agency in reaching its decision, specifying the alternative or alternatives that were considered to be environmentally preferable. An agency may discuss preferences among alternatives based on relevant factors, including economic and technical considerations and agency statutory missions. An agency shall identify and discuss all such factors, including any essential considerations of national policy that were balanced by the agency in making its decision, and state how those considerations entered into its decision.
- State whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted and if not, why they were not. A monitoring and enforcement program shall be adopted and summarized where applicable for any mitigation.
- State that the selected alternative will not impair park-unit resources (NPS Organic Act, 16 U.S.C. 1, 2, 3, and 4).

In accordance with NPATMA, the Administrator and the Director shall each sign the environmental decision document for ATMPs required by Section 102 of NEPA.

2.17 ADMINISTRATIVE RECORD

An administrative record file is a collection of documents that form the basis for an agency's decision, in this case the selection of an alternative for the ATMP. Relevant documents that were relied upon for the selection of the agency-preferred alternative, as well as relevant documents for the alternatives that were considered but ultimately rejected, should also be included.

Items that should be kept in the record include notes of meetings where key decisions about the content of the environmental document were made, issues that were examined, alternatives, notes, public comment letters, minutes of meetings, phone calls, e-mail, and documentation of public involvement efforts. Issues identified by the preparers and others should be included with follow-up documentation on how the issues were resolved.

There are no prescribed methods for maintaining an administrative record. Records may be organized chronologically by document date, with undated documents listed at the beginning. An index must contain a complete and accurate identification of the documents in the record. A computer-based database index in the form of a spreadsheet, such as MS Access or Excel, allows easy reference and tracking of records. An administrative record will be prepared for all ATMPs.

2.18 OPERATIONS SPECIFICATIONS

Upon meeting the procedural requirements in NPATMA and completing the NEPA environmental documentation, an ATMP for a national park is established after issuance of the FONSI/ROD. In accordance with NPATMA, IOA granted for commercial air tour operators shall terminate 180 days after an ATMP is established for a park. The FAA would then update paragraph B057 of the Operations Specifications, also known as "Ops Specs" for the commercial air tour operators in accordance with the ATMP. If the ATMP does not limit the number of air tour operations for any time period, the Ops Specs for the commercial air tour operators who were included in the ATMP will be updated to reflect the authority to conduct operations. For those national park units where the ATMP prohibits any air tour operations, the FAA, along with removal of the IOA, would update the Ops Specs to reflect that no operations are authorized over the particular park unit. For those park units where the ATMP includes a limitation on the number of commercial air tour operations for any time period, the FAA and NPS will need to conduct an open competitive process for evaluating proposals to provide commercial air tour operations over the park in accordance with NPATMA Section 40128.(a)(2)(B) (see Section 2.19).

2.19 COMPETITIVE BIDDING FOR LIMITED-CAPACITY PARKS

The FAA and NPS will develop procedures to solicit competitive bids for national park units where the ATMP limits the number of commercial air tours. In making a selection from among various proposals submitted, the FAA and NPS shall consider the following relevant factors:

- The safety record of the person submitting the proposal or pilots employed by the person.
- Any quiet aircraft technology proposed to be used by the person submitting the proposal.

- The experience of the person submitting the proposal with commercial air tour operations over other national parks or scenic areas.
- The financial capability of the person submitting the proposal.
- Any training programs for pilots provided by the person submitting the proposal.
- The responsiveness of the person submitting the proposal to any relevant criteria developed by the NPS for the affected park.

The timeframe for selection and issuance of operating authority for the new commercial air tour operators will be made prior to any mandatory termination of IOA due to ATMP establishment.

3.0 ENVIRONMENTAL IMPACT ANALYSIS PROCEDURES

3.1 GENERAL GUIDANCE

3.1.1 Introduction

This guidance in Chapter 3.0 has been specifically developed to meet the unique requirements of NPATMA. NPATMA requires environmental reviews of air tour operations over national parks to support decision making by both FAA and NPS on ATMPs. This guidance reflects a combination of FAA and NPS guidance and practices under their respective authorities, which would not be applicable for either agency alone or for other programs or actions.

The assessment of commercial air tour operations on units of the national park system is different in many respects from other aviation assessments. Air tour aircraft operations differ from average national air transportation system operations, since air tours are occurring in most cases seasonally and only during daylight hours. Air tour aircraft, by nature, fly low for sightseeing purposes, and in national parks they operate relatively close to the ground in low ambient noise environments. These factors require specialized noise assessment. Their relatively low altitude also puts them, at times, below the mixing height for emissions, requiring specialized air quality assessment that is not necessary for the usual en route aircraft. The assessment of visual effects is more rigorous when aircraft are in closer visual range of ground visitors in national parks and have more potential to intrude on scenic views.

For all of these reasons, this guidance is highly specialized and is not applicable to other types of environmental impact analyses that FAA and NPS prepare.

3.1.2 Impact Analysis Format

General

The purpose of the environmental consequences section of the EA or EIS is to identify sources of potential environmental impacts that might be associated with implementation of the ATMP and to provide a comparative analysis of ATMP alternatives.

FAA and NPS anticipate that there may be impact topics for which no impact will occur. For example, no construction or physical development will likely be authorized or indirectly result from ATMP implementation; therefore, construction impacts are not likely to occur. If no impact is determined for any impact topic, then a summary statement explaining the reasoning behind the conclusion is to be included. These summary statements and conclusions may be included together in a separate subsection in the environmental document, or they may be provided under each topic. In any case, at least the 18 impact topics identified in FAA Order 1050.1E must be addressed in the environmental document. Additional impact topics are included in this section in order to address impacts on park visitors or resources covered by NPS guidance.

Format for the Environmental Consequences Section of an EA or EIS

Each impact topic should address any conflicts with park or other planning actions, any impacts associated with the category, and the severity of the impacts (see Table 3-1 for the list of impact categories). The format for the section on environmental consequences should list the impact category and then discuss "Issues," "Methods for Analyzing Impacts," and impacts (both direct and indirect). (See Table 3-3 for a definition of types of impacts according to CEQ regulations, 40 CFR Parts 1500-1508.) The impact analysis can be organized by ATMP alternative or by a subset of the impact category such as the different noise metrics within the soundscape section, followed by a comparison of the alternatives within that subset of components. The discussion of impacts will include any applicable thresholds of intensity identified in this guidance. The impact descriptors e.g., "minor" and "major") are used for comparative purposes only and do not indicate whether an impact exceeds the threshold for significance under NEPA or under levels (e.g., "negligible," "minor," "moderate," "major") discussed in NPS guidance. In addition, not all impact categories will use these descriptors, such as consistency determinations with NPS plans. The descriptors are also used by NPS to assist with the NPS impairment determination that will be included in the Draft and Final EA or EIS for each applicable impact category. (See Section 2.14 for a more detailed explanation of NPS impairment determination.)

Table 3-1. Impact Categories to Be Analyzed in an ATMP NEPA Document

Impact Category	FAA[1] Review Requirement	NPS[2] Review Requirement	NPS Impairment[3] Determination Requirement
NOISE AND SOUNDSCAPE RESOURCES			
Noise and Soundscape Resource Impacts	Yes	Yes	Yes
Noise in Areas Outside National Park Boundaries	Yes	No	No
LAND USE			
Adjacent Non-Park Land Use Compatibility	Yes	No	No
Consistency with NPS Land Use Plans	Yes	Yes	No
Farmland Impacts	Yes	Yes	No
Wild, Scenic, and Recreational Rivers	Yes	Yes	Yes
Wilderness Areas	Yes, under 4(f)	Yes	Yes

Impact Category	FAA[1] Review Requirement	NPS[2] Review Requirement	NPS Impairment[3] Determination Requirement
Other Specially Designated Areas within the National Park	No	Yes	Yes
HUMAN RESOURCES AND VALUES			
Scientific Resources	No	Yes	Yes
Historic, Architectural, Archaeological, and Cultural Resources	Yes	Yes	Yes, DO-28 and Management Policies 1.4.6
Visitors and Visitor Experience (Ground-Based and Air Tour)	No	Yes, DO-12 and Management Policies	Yes, Management Policies 1.4.6
BIOLOGICAL RESOURCES			
Fish and Wildlife (including Threatened and Endangered [T&E] Species and Critical Habitat)	Yes	Yes	Yes
Plants (including T&E Species and Critical Habitat)	Yes	Yes	Yes
PHYSICAL RESOURCES			
Air Quality and Visibility	Yes	Yes	Yes
Coastal Resources	Yes	Yes	Yes
Wetlands Resources	Yes	Yes	Yes
Floodplains	Yes	Yes	Yes
Water Quality	Yes	Yes	Yes
SOCIOECONOMIC IMPACTS			
Social Impacts	Yes	Yes	No
Economic Impacts	Yes	Yes	No
Environmental Justice	Yes	Yes	No

Impact Category	FAA[1] Review Requirement	NPS[2] Review Requirement	NPS Impairment[3] Determination Requirement
Children's Environmental Health and Safety Risks	Yes	No	No
Public Health and Safety	No	Yes	No
Secondary (Induced) Impacts	Yes	No	No
OTHER			
Construction Impacts	Yes	Yes	No
Energy Use and Consumable Natural Resources	Yes	Yes	Yes
Hazardous Materials, Pollution Prevention, and Solid Waste	Yes	Yes	No
Light Emissions, Night Sky, and Visual Impacts	Yes	Yes	Yes
DOT Act Section 4(f) Impacts	Yes	No	No
Cumulative Effects	Yes	Yes	Yes

[1] Per FAA Order 1050.1E, Environmental Impacts: Policies and Procedures.
[2] Per NPS DO-12 Handbook.
[3] Per NPS, Interim Final Guidance on Assessing Impacts and Impairment to Natural Resources, April 2003.

The format for the impact analysis provides the reviewer with a standardized approach, with some flexibility on presentation depending on the impact category. This approach can be used to easily compare the impact discussions for each alternative. An example of the approach is as follows:

Air Quality

1. Introduction and Issues
2. Methods for Analyzing Impacts
3. Impact Analysis (direct and indirect):
    - Alternative 1: No Action (IOA conditions)
    - Alternative 2: No Air Tours

- Alternative 3, 4, etc.: <Insert title>

A summary of impacts will be provided as a conclusion to the environmental consequences section or at the end of the alternatives chapter. A matrix table, such as the example provided below, indicating the category and severity of impacts by alternative for comparative purposes, should be used when it would be helpful. Note that the table does not include all impact categories and is only a generic example to illustrate how information can be displayed. (See the Mount Rushmore National Memorial EA for a project-specific, more comprehensive example.)

Table 3-2. Summary Matrix for Environmental Impact Categories

Impact Category	**Alternative 1 No Action (IOA Conditions)**	**Alternative 2 No Air Tours**	**Alternative 3 (Title)**	**Alternative 4 (Title)**
Soundscape	**Exceeds minor**	**Minor**	**Minor**	**Major**
Noise Outside of Park Boundaries	**Not significant**	**Not significant**	**Not significant**	**Not significant**
Consistency with NPS Land Use Plans	**Inconsistent**	**Consistent**	**Consistent**	**Inconsistent**
Adjacent Non-Park Land Use Compatibility	**Compatible**	**Compatible**	**Compatible**	**Compatible**
Wilderness (comparison analysis)	Lowest	Highest	Highest	Lowest

Cumulative impacts and mitigation measures for the various alternatives will be discussed in a separate section of the EA or EIS. Typically, this would be most appropriate at the end of the chapter on environmental consequences, after all impact categories have been analyzed.

Table 3-3. Types of Impacts

Direct impacts: Caused by the action and occurring at the same time and place.
Indirect impacts: Caused by the action and occurring later in time or farther in distance but still reasonably foreseeable. May include growth-inducing impacts; impacts related to induced changes in the pattern of land use, population density, or growth rate; and impacts related to air, water, and other natural systems, such as ecosystems.

Cumulative impacts: Impacts on the environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of which agency (federal or non-federal) or person undertakes them. Can result from individually minor but collectively significant actions taking place over a period of time.

The following section presents guidance on the background of each impact topic, a discussion of the analysis process to be applied, and any applicable thresholds or standards for evaluating the intensity or significance of impacts. For some resource impact topics, FAA and NPS do not have quantifiable definitions of thresholds for significant impacts. Uncertainties over significance may, in many cases, be resolved by applying best-management practices: for example, by designating air tour routings that avoid the most noise-sensitive areas and the potential for significant impact. FAA and NPS will either reach common determinations on the severity of air tour impacts or the views of both agencies will be expressed individually, along with supporting reasons, in the interest of full disclosure to the public and to inform decision makers.

3.2 NOISE AND SOUNDSCAPE RESOURCES

3.2.1 Noise and Soundscape Resource Impacts

Introduction

According to NPS Management Policies (2006), Section 4.9, park natural soundscape resources encompass all the natural sounds that occur in parks, including the physical capacity for transmitting those natural sounds and the interrelationships among park natural sounds of different frequencies and volumes. Natural sounds occur within and beyond the range of sounds that humans can perceive, and they can be transmitted through air, water, or solid materials. The NPS will preserve, to the greatest extent possible, the natural soundscapes of parks.

Analysis of the sound environment (soundscape) is applicable to every ATMP. The analysis of sound impacts is a key index to evaluating the impacts of air tours on other resources and the values of a national park unit. Sound impacts are effectively determined by modeling air tours over the entire area of the park and the ½-mile buffer. The sound impacts of air tours (as displayed through audibility, L_{max}, time above ambient, and other metrics) can be overlaid on identified noise-sensitive aspects of other resources and values to display the congruities. This is essentially a map exercise. To analyze the secondary impacts of noise on other resources, metrics must be selected with regard to the properties of sound that most affect those resources or values where overlaps occur. In short, the analysis of noise/sound is a precursor to analysis of other resources, and a variety of metrics will facilitate the assessments.

Impacts related to land use, wildlife, visitor experience, and cultural resources have noise components. The impacts of noise on those resources are presented under their respective topic headings.

The physical characteristics of tour aircraft, number of flights, altitude above ground at which aircraft operate, routes being flown, and operational flight procedures all have a bearing on the

physical impact of sound on the surface area of a national park unit. The impact is also variable, depending upon acoustic properties of the ground surface and terrain as well as natural and manmade ambient sound conditions. A national park unit comprises management zones or special land and resource designations, which have specific objectives and different tolerances for sound. Air tours may have a greater or lesser sound impact on an area, depending upon the type of management zone. A greater impact would be anticipated in areas managed for natural conditions and a quality of solitude. Other lands where development exists may be affected to a lesser degree because of higher levels of visitor or management activity apart from air tours. Noise from commercial air tours can be inappropriate in some areas, depending upon the character of the affected lands and the values and purposes for which they are managed; for example, Native American and historic sites with sacred aspects.

Analysis Methods and Presentation

Noise modeling will be conducted utilizing the latest version of FAA's INM. Section 2.6 of this implementation plan provides acoustic information, including guidance on noise monitoring, air tour data collection, noise modeling, the use of noise metrics, and analysis outputs such as data tables and maps (see also Appendix E-2).

The following indicators (metrics) have been agreed upon for use in ATMP noise and soundscape analyses. These may be modified as more experience is gained with ATMPs. All metrics might not be used in all ATMPs.

Time Audible (%TA)

Time Above Ambient (%TAA) (A-weighted)

Equivalent Sound Level (L_{eq} or more technically L_{AeqT})

Change in Exposure (ΔL)

Maximum Sound Level (L_{max})

Number of Events per Hour (NEH)

Noise-Free Interval (NFI)

Because of the multiple metrics, the soundscape analysis is best presented by metric rather than by alternative, as in the example below.

Noise-Metric Components of Soundscape

- Time Audible (Natural Ambient): Alternative 1, 2, 3, 4, etc. (includes a description of all alternatives in comparative form)
- Time Audible (Existing Ambient without Air Tours): Alternative 1, 2, 3, 4, etc. (includes a description of all alternatives in comparative form)

- Time Above Ambient: Alternative 1, 2, 3, 4, etc. (includes a description of all alternatives in comparative form)

The impact assessment will be presented in a narrative fashion, supported by map illustrations of metrics overlaying the park management zones and tabular data. Alternative comparisons will be made using a table format or other appropriate means.

Threshold of Significance

FAA has a predefined threshold of a significant noise impact, which would occur if analysis shows that the action will cause noise-sensitive areas to experience an increase in noise of DNL 1.5 dB or more at or above the DNL 65 dB noise exposure when compared to the no action alternative for the same timeframe. However, FAA's NEPA guidance (FAA Order 1050.1E) states that this threshold does not adequately address the effects of noise within a national park where other noise is very low and a quiet setting is a generally recognized purpose and attribute. NPS does not have a singular, widely acceptable threshold of significance for noise impacts to soundscapes. However, NPS is required to restore degraded soundscapes to their natural condition wherever possible and will protect natural soundscapes from degradation due to unnatural sounds (noise) (NPS Management Polices 2006, 4.9).

Air tour aircraft operations differ from average national air transportation system operations in that air tours occur, in most cases, seasonally and during daylight hours. In addition, air tour aircraft, by nature, fly low for sightseeing purposes, and in national parks they operate relatively close to the ground in low ambient noise environments and include a high proportion of helicopters.

FAA and NPS have reviewed their respective agency guidance materials that can contribute to determinations of the severity of air tour noise impacts. NPS has draft guidelines for noise and soundscape impacts in its *Interim Final Guidance on Assessing Impacts and Impairment to Natural Resources* (July 2003). In this guidance, which is not specific to aircraft and is not mandatory, NPS has proposed quantifiable criteria that may be applied to describe the effects of noise on park soundscapes as "negligible," "minor," "moderate," or "major." For the purposes of defining air tour noise impacts, FAA and NPS have agreed that levels of impact that are in the "negligible" or "minor" categories pursuant to these interim NPS guidelines would not normally have a significant impact on park soundscapes. NPS guidelines for "minor" impact are presented in Table 3-4.

Table 3-4. NPS Minor Levels of Impact[13]

Management Zone	Minor Level of Impact: Percentage of Time That Non-Natural Sounds Are Audible and Percentage of Zone Affected
Administration and Visitor Use Areas	Human-caused sounds from the proposed action are audible less than 10% of the time in 100% of the zone (< 10 %TA in 100% of area) and do not exceed 60 dBA (≤ 60 dBA L_{max}).
Motorized Travel Corridors	Human-caused sounds from the proposed action are audible less than 25% of the time in 100% of the zone (< 25 %TA in 100% of area) and do not exceed 60 dBA (≤ 60 dBA L_{max}).
Non-Motorized Travel Corridors and Transition Areas	In 25% of the zone, all mechanical human-caused sounds may be audible 10% of the time (≤ 10 %TA in ≤ 25% of area) and do not exceed 60 dBA (≤ 60 dBA L_{max}).
Backcountry, Research Natural Areas	In 10% of the zone, all mechanical human-caused sounds may be audible 10% of the time and may not exceed the Natural Ambient sound level (≤ 0 %TAA).
Designated and Recommended Wilderness	In 10% of the zone, all mechanical human-caused sounds may be audible 5% of the time (< 5 %TA in 10% of area) and may not exceed the Natural Ambient sound level (≤ 0 %TAA).

The application of the above guidelines to considerations of significance on park soundscapes does not preclude significance based on the potential consequences of noise on other categories of resources, such as wildlife. The guidelines also do not preclude determinations that commercial air tour noise is inappropriate in certain contexts.

It is not likely that air tour noise will be as high as FAA's normally applied threshold of significance. For parks, which do not have nighttime air tour operations, DNL and L_{Aeq} are equivalent. Thus, FAA and NPS have agreed to use L_{eq} as a reasonable surrogate for DNL in such situations. Additionally, the L_{eq} metric computed for a time period less than 24 hours would yield a higher dB value as opposed to an L_{Aeq} for a 24-hour time period because the sound

[13]Based in part on NPS's *Interim Final Guidance on Assessing Impacts and Impairment to Natural Resources (July 2003).*

energy is logarithmically averaged within a smaller time period. Thus, the L_{Aeq} for parks with only daytime air tour operations is a more conservative metric than DNL. Should air tour noise exposure cause an increase of L_{eq} 1.5 dB at or above the L_{eq} 65 dB level compared to the no action alternative for the same timeframe, FAA would make a determination of significant impact. NPS does not use FAA's threshold or regard it as appropriate to assess impacts to soundscapes, but NPS agrees that noise at the FAA threshold level would be significant while emphasizing that significant impacts could occur at lower levels in a national park setting. FAA guidance agrees that special consideration regarding significant noise impact needs to be given in a national park setting, although FAA guidance does not incorporate a soundscape approach to noise. Similarly, FAA does not use NPS's guidelines for levels of impact but agrees that noise at the NPS-defined "minor" level would not be significant while emphasizing that insignificant impacts could still occur at higher levels.

Air tour noise that is above the minor level of impact according to NPS Interim Impairment Guidance and below FAA's surrogate threshold of significant level of impact will be further assessed consistent with considerations of context and intensity as described in CEQ regulations, best available information, and reasonable scientific methods (Section 808 of NPATMA). All metrics used in the noise analysis will be reviewed and considered. Uncertainties over significance may, in many cases, be resolved by applying best-management practices; for example, by designating air tour routings that avoid the most noise-sensitive areas and the potential for significant impact. FAA and NPS will either reach common determinations on the severity of air tour noise or the views of both agencies will be expressed individually with supporting reasons in the interest of full disclosure to the public and to inform decision makers.

Cumulative Impact Considerations

The process to be followed for assessing cumulative effects is identified in Section 3.13. The impact-level criteria discussed above apply to the direct and indirect impacts of a specific alternative stated in terms of sound indicators, either measured or modeled. The cumulative impacts analysis must present all current and reasonably foreseeable future impacts on the soundscape and add the impacts for each alternative to the total.

With respect to noise and soundscape, the cumulative effect of all sounds in a park unit comprises the Existing Ambient with Air Tours environment (sounds of nature, humans, and mechanical noise, including air tours and other aircraft overflights). The variable factor in the analysis will be the difference in the cumulative effect on sound of air tour alternatives. To examine the contribution of air tours to the current soundscape, three comparisons are performed:

1. The Natural Ambient is compared to the Existing Ambient without Air Tours. This provides information on the contributions of all human-caused sounds at the present time except the sound source of interest (air tours) on the natural soundscape. Human-caused sounds may include park visitors, amphitheater programs, vehicular traffic, and some aircraft overflights (high-altitude commercial jets, general aviation, and military aircraft).

2. The Natural Ambient is compared to the Existing Ambient with Air Tours for all alternatives.

3. The Existing Ambient without Air Tours is compared to the Existing Ambient with Air Tours for all alternatives. The cumulative effect is essentially a cumulative L_{eq}, determined by adding the noise exposure due to air tours to the Existing Ambient without Air Tours. The sound-level addition is performed logarithmically.

3.2.2 Noise in Areas Outside National Park Boundaries

Introduction

Each ATMP noise analysis will extend at least ½ mile beyond the boundary of each national park unit, into areas beyond NPS jurisdiction and where NPS soundscape policy does not apply. FAA will determine noise impacts on areas outside national park boundaries consistent with FAA Order 1050.1E, Appendix A, Section 14.

Analysis Methods and Presentation

The approach to analysis and presentation will be an extension of what is done within the park unit, as described in Section 3.2.1.

Threshold of Significance

Using L_{eq} as a surrogate for DNL as previously explained in Section 3.2.1, FAA will make a determination of significant impact if air tour noise exposure would cause an increase of L_{eq} 1.5 dB or more at or above the L_{eq} 65 dB level compared to the no action alternative for the same timeframe. FAA will give special consideration to the evaluation of significance of impacts on noise-sensitive areas within any designated wilderness areas, national wildlife refuges, historic sites, and traditional cultural properties. The significance of noise impacts in such areas will be considered in consultation with the appropriate land management agency for the area or tribal authority. More information on the noise compatibility of land uses outside national park boundaries is found in Section 3.3.2.

3.3 LAND USE

3.3.1 Consistency with NPS Land Use Plans

Introduction

40 CFR Part 1502.16(c) requires the discussion of possible conflicts between the federal action and the objectives of federal, regional, state, and local (and in the case of a reservation, Indian tribe) land use plans, policies, and controls for the area concerned. If there would be immediate conflicts, or if conflicts are reasonably foreseeable in the future, the EA or EIS will acknowledge them and describe their extent.

NPS land use plans are contained in park planning documents such as general management plans. Management zones defined in a park plan will have a series of objectives or desired conditions to be met in each zone. Among these, with respect to the consistency of air tours, are the objectives for soundscape management and for visitor experience. Air tour impacts in other

impact categories may also be relevant to NPS land use objectives. With reference to the zones for a specific park unit, impacts to be disclosed are explained under those topic headings.

Discussion and appropriate documentation of any consultation and findings are applicable for every ATMP.

Analysis Methods and Presentation

1. Information on existing and planned land uses is compiled by reviewing appropriate land use planning documents for each park and consulting with NPS personnel. This information will be used to produce maps of the types and locations of existing and planned land uses. (Refer to the Mount Rushmore National Memorial Draft EA for an example of the level of detail required in the land use maps.)

2. The analysis performed in other sections of the EA or EIS (e.g., noise and soundscape resource impact, wilderness areas, visitor experience) will be cross-referenced to this section to avoid analysis duplication.

3. Air tour impacts in all relevant categories will be compared to NPS land use plans.

Threshold of Significance

There is no predefined threshold of significance. The relevant determination is the extent to which air tour alternatives are consistent or inconsistent with NPS land use plans for each park unit. When air tour characteristics of sound and sight conflict with park objectives, NPS will assume an adverse effect. Whether the adverse effect rises to the level of significance will be made on a case-by-case basis.

3.3.2 Adjacent Non-Park Land Use Compatibility

Introduction

40 CFR Part 1502.16(c) requires the discussion of possible conflicts between the proposed federal action and the objectives of federal, regional, state, and local (and in the case of a reservation, Indian tribe) land use plans, policies, and controls for the area concerned. FAA will consider the compatibility of land uses outside the park consistent with the requirements of FAA Order 1050.1E. The compatibility of land uses is normally associated with aircraft noise exposure. Any other relevant air tour impacts will also be considered.

The land use compatibility guidelines in Title 14 CFR Part 150 (Table 1) (also reproduced as Table 1, Appendix A, FAA Order 1050.1E) will normally be relied upon by FAA to determine non-park land use compatibility with aircraft noise exposure. Part 150 guidelines will be supplemented for special noise-sensitive and unique land uses outside a park where other noise is very low and a quiet setting is a generally recognized purpose and attribute—for example, certain traditional cultural properties, wilderness areas, and wildlife refuges. Tribal, federal, state, and local governments, as applicable to jurisdiction of areas adjacent to parks that are within the scope of ATMPs, will be consulted on compatibility determinations.

Analysis Methods and Presentation

1. Compile information on existing and planned land uses within the planning area outside the park by reviewing applicable comprehensive plans, tribal plans, and other planning documents; conducting field surveys; and consulting with tribes and federal, state, or local planning personnel. This information will be used to produce maps of the types and locations of existing and planned land uses. (Refer to the Mount Rushmore National Memorial Draft EA for an example of the level of detail required in the land use maps.)
2. The assessment information contained in other sections of the EA or EIS (for example, those on noise and traditional cultural properties) will be used as a basis for assessing potential land use impacts and will be cross-referenced to this section to avoid analysis duplication.
3. Air tour impacts will be compared to Part 150 guidelines for noise compatibility and supplemented as necessary to make compatibility judgments on special noise-sensitive and unique lands where other noise is very low and a quiet setting is a generally recognized purpose and attribute. Relevant air tour impacts will be compared to tribal or other land use plans to the extent applicable.

Threshold of Significance

For lands subject to the land use categories in Part 150 guidelines, FAA will consider the impact on land uses to be significant if the proposed air tour alternatives would cause noise-sensitive areas to experience an increase of L_{eq} 1.5 dB or more at or above L_{eq} 65 dB noise exposure when compared to the no action alternative for the same timeframe, or if the alternatives would result in new incompatible land uses based on Part 150 land use compatibility guidelines. If Part 150 guidelines are not sufficient, the extent and intensity of air tour impacts, using the results from metrics in the noise analysis, will be assessed in the context of special noise-sensitive and unique lands to make noise compatibility determinations. There is also a relevant determination not related to the threshold of significance regarding the extent to which air tour alternatives are consistent or inconsistent with tribal or other land use plans.

3.3.3 Farmland Impacts

Introduction

The Farmland Protection Policy Act (FPPA) regulates federal actions with the potential to convert farmland to non-agricultural uses. Prime farmlands are not commonly found within national park units. ATMPs are not expected to involve any physical construction, conversion, or other use of farmland; therefore, impacts on protected farmlands are not expected.

Analysis Methods and Presentation

1. If no construction or other physical development or no conversion of protected farmland to non-agricultural uses is involved, then a summary statement is to be included in the NEPA document. No further analysis is required.

2. If any ATMP alternative involves construction or other physical development that would result in the conversion of farmland protected by FPPA, an analysis and consultation will

be conducted with the Natural Resources Conservation Service (NRCS), informally or formally, pursuant to 7 CFR Part 658, to determine impacts.

Threshold of Significance

For FPPA-regulated farmland, scoring of the relative value of the site for preservation is performed. A significant impact would occur when the total combined score on NRCS Form AD1006 is in excess of 200 points. The impact severity increases as the total combined score approaches 260 points. Any measures necessary to mitigate or prevent significant impacts will be specified in the EA or EIS and appropriately incorporated into the selected ATMP alternative.

3.3.4 Wild, Scenic, and Recreational Rivers

Introduction

The Wild and Scenic Rivers Act as amended describes those river segments designated or eligible to be included in the Wild and Scenic Rivers System. Under Section 5(d)(1), NPS maintains a Nationwide Rivers Inventory (NRI) of river segments that appear to qualify for inclusion in the National Wild and Scenic River System but that have not been designated as a Wild and Scenic River or studied under a congressionally authorized study. All agencies must consult with NPS and other federal and state agencies having jurisdiction prior to taking any actions that could effectively foreclose or downgrade wild, scenic, or recreational review status of rivers in the Wild and Scenic Rivers System, study rivers, river segments in the NRI, or rivers or river segments otherwise eligible under section 5(d) for inclusion in the Wild and Scenic Rivers System but not in the NRI or under study. ATMPs are not expected to involve any physical construction or development, to result in water pollution, or to produce other impacts that could adversely affect or downgrade the classification of a river or river segment in the Wild and Scenic Rivers System; therefore, no significant impacts to wild, scenic, and recreational rivers are expected.

Analysis Methods and Presentation

1. Protected rivers or river segments within the ATMP planning area should be identified. If there are none or if none would be potentially affected by ATMP alternatives, then a summary statement is to be included in the NEPA document. No further analysis is required.

2. If it appears that any ATMP alternatives could affect protected rivers or river segments, there must be consultation on the effects with the specific federal agency having jurisdiction. Within national park boundaries that agency would be NPS, but outside of those boundaries it could be other agencies. If consultation with jurisdictional agencies and with NPS for all NRI rivers rules out adverse effects without further analysis, that information is to be included in the NEPA document. No further analysis is necessary.

3. The documents should describe protected rivers and river segments that are potentially affected by ATMP alternatives and should assess the type and extent of the impact that is of concern to consulted officials. With respect to the sound and sight of air tour aircraft, NPS will apply an approach that is similar to the assessment of impacts on wilderness

areas within national parks, with appropriate adjustments for rivers and river segments. Assessed impacts on biological resources may also be relevant.

Threshold of Significance

No specific thresholds have been developed. A consent determination must be made, under Section 7 of the Wild and Scenic Rivers Act, by the federal agencies that administer designated or study rivers, stating that the action will not have a direct and adverse effect on the values for which the river was or might be established or otherwise invade the river area. It must also state that, for designated rivers, the action will not unreasonably diminish the scenic, recreational, and fish and wildlife values present in the area as of October 2, 1968.

DOT Section 4(f) applies if an air tour alternative would take or constructively use (i.e., substantially impair wild, scenic, and recreational rivers). DOT section 4(f) guidance is found in Section 3.12.

3.3.5 Wilderness Areas

Introduction

Wilderness areas are established pursuant to the Wilderness Act of 1964 (16 U.S.C. 1121). Wilderness areas must be administered and managed to preserve the wilderness character of the area. The Act defines the public purposes of wilderness areas as including recreational, scenic, scientific, educational, conservation, and historical use. With the exception of a few special provisions, the Act generally prohibits commercial enterprises, permanent or temporary roads, motor vehicles, motorized equipment or motorboats, landing of aircraft, structures or installations, and all other forms of mechanical transport within a designated wilderness area. This applies explicitly to congressionally designated wilderness areas and, under NPS policy, to areas that have been recommended for inclusion based on a determination of eligibility and suitability.

NPS Management Policies (2006), Section 6.3.1, states: "In addition to managing these areas for the preservation of the physical wilderness resource, planning for these areas must ensure that the wilderness character is likewise preserved. This policy will be applied to all planning documents affecting wilderness."

Wilderness areas both inside and outside national park boundaries are anticipated to be within the scope of some ATMPs. The elements of sound and visibility that are associated with the conduct of air tours may affect the natural character and solitude of wilderness areas.

Analysis Methods and Presentation

1. The assessment should thoroughly describe the size and characteristics of the area that is subject to impact from the sight and sound of air tours.

2. The results of the noise analysis will be used to assess the effects of air tour sound on wilderness areas, with appropriate use of noise contour analysis, maps, and tabular and narrative analysis. This assessment is focused on the characteristics of the land and

resource designation and on the extent to which the sound of air tours affects the character of wilderness. Other areas of assessment address the visitor experience.

3. With respect to the sight of air tour aircraft, based on the types of aircraft being used and the altitudes at which they operate, the assessment will provide information about the locations, distances, and lengths of time that aircraft are generally in view. A map of the air tour routes and elevations can be overlaid with the map of wilderness areas. Given the air tour route structure for each alternative, areas should be drawn to reflect where aircraft are directly above or visible in the foreground and where they are visible at all relative to the wilderness area and any of its features. FAA and NPS will determine which view assessment tools are sufficient for each individual ATMP park unit during the ADM. If the ADT determines that more precise analysis is necessary, tools associated with flight visibility analysis, including Geographic Information Systems (GIS) and three-dimensional (3-D) photo-simulation, may be used. For further detail on flight visibility analysis, refer to Section 3.4.3.1, Impacts on Ground-Based Visitor Experience.

Threshold of Significance

There are no predefined thresholds of significance for the effects of the sound and sight of air tour aircraft on wilderness areas. The extent and intensity of air tour sound and sight will be assessed in the context of the wilderness resource to determine the severity of impacts of air tour alternatives and the extent to which impacts would alter the characteristics according to which an area is deemed eligible for wilderness designation.

In evaluating environmental impacts, NPS will take into account (1) wilderness characteristics and values, including primeval character and influence; (2) the preservation of natural conditions, including the lack of manmade noise; and (3) assurances that there will be outstanding opportunities for solitude, that the public will be provided with a primitive and unconfined type of recreational experience, and that wilderness will be preserved and used in an unimpaired condition. Managers will be expected to appropriately address considerations related to cultural resources management in the development and review of environmental compliance documents impacting wilderness resources.

Wilderness character is expressed through the suitability criteria by which potential wilderness is judged. These criteria, derived from the Wilderness Act, are as follows;

- The earth and its community of life are untrammeled by humans, where humans are visitors and do not remain.
- The area is undeveloped and retains its primeval character and influence, without permanent improvements or human habitation.
- The area generally appears to have been affected primarily by the forces of nature, with the imprint of humans' work substantially unnoticeable.
- The area is protected and managed so as to preserve its natural conditions.

- The area offers outstanding opportunities for solitude or a primitive and unconfined type of recreation.

Procedures for the analysis and determinations of noise and soundscape impacts within wilderness areas are provided in Section 3.2, Noise and Soundscape Resources. The methodology for conducting visual analysis is discussed in Section 3.4.3, Visitors and Visitor Experience. The analysis and determinations for noise and soundscape impacts in wilderness areas are to be reflected in a consistent manner within this wilderness area section. Conflicts with objectives in park plans related to wilderness area management will be addressed in Section 3.3.1, Consistency with NPS Land Use Plans.

DOT Section 4(f) applies if an air tour alternative would take or constructively use (i.e., substantially impair a wilderness area with multiple uses). DOT Section 4(f) guidance is found in Section 3.12.

3.3.6 Other Specially Designated Areas within the National Park

Applicability

Analysis of impacts on specially designated or unique areas may not be applicable for every ATMP. Some special areas may be accounted for in other impact topics. Specially designated areas within parks are to be managed under the legal or policy constraints associated with the designation. Some designations may be recognized and incorporated into a park's general management plan, and management objectives may supplement or localize legal and policy constraints. Some designated areas may be managed according to a specific plan developed for them. Special areas and designations may include wilderness and special wildlife and cultural or historic resources that are evaluated under those respective headings rather than in this section. Only special designations not accounted for elsewhere are to be treated in this section. Special designations may include national natural landmarks, world heritage sites, national scenic or historic trails, and other areas, many of which are more fully described below.

National Natural Landmarks

The National Natural Landmarks (NNL) program recognizes and encourages the conservation of outstanding examples of our country's natural history. It is the only natural areas program of national scope that identifies and recognizes the best examples of biological and geological features in both public and private ownership. To date, fewer than 600 sites have been designated. NPS administers the NNL program and regularly reports on the condition of NNLs. If requested, NPS will assist NNL owners and managers with the conservation of these important sites.

Established in 1962, the program aims to encourage and support voluntary preservation of sites that illustrate the geological and ecological history of the United States and to strengthen the public's appreciation of America's natural heritage. The NNL designation is made by the Secretary of the Interior after in-depth scientific study of a potential site; all new designations must have owner permission. The selection process is rigorous: to be considered for NNL status, a site must be one of the best examples of a natural region's characteristic biotic or geological

features. The NNL designation can be removed only if the values for which it was designated are lost or destroyed or if there was an error in the evaluation or designation procedures for the site. The regulations that currently govern the NNL program were revised in 1999 to better protect the interests of private landowners who participate in the program.

World Heritage Sites

The United Nations Educational, Scientific and Cultural Organization (UNESCO) seeks to encourage the identification, protection, and preservation of cultural and natural heritage around the world that is considered to be of outstanding value to humanity. This is embodied in an international treaty called the Convention Concerning the Protection of the World Cultural and Natural Heritage, adopted by UNESCO in 1972. According to UNESCO, "heritage" is our legacy from the past, what we live with today, and what we pass on to future generations. Both our cultural and our natural heritage are irreplaceable sources of life and inspiration. In the United States, NPS serves as chief steward of the nation's natural and cultural heritage. The Secretary of the Interior, through NPS, is responsible for identifying and nominating sites for inclusion in the list. There are 20 World Heritage sites in the United States, including two jointly administered with Canada. The Department of the Interior, in cooperation with the Federal Interagency Panel for World Heritage, has identified many more sites, both cultural and natural, as likely to meet the criteria for future nomination to the World Heritage List.

National Scenic or Historic Trails

National Scenic Trails and National Historic Trails are established by act of Congress (National Trails System Act of 1968) and are administered by NPS, USFS, and Bureau of Land Management (BLM), although part of or their entire land base may be owned and managed by other entities, such as state agencies. National Scenic Trails are over 100 miles long and are "located as to provide for maximum outdoor recreation potential, and for the conservation and enjoyment of the nationally significant scenic, historic, natural, or cultural qualities of the areas through which such trails may pass." National Historic Trails are generally over 100 miles long and "follow as closely as possible and practicable the original trails or routes of travel of national historical significance." Their purpose is the identification and protection of the historic route and its remnants and artifacts for public use and enjoyment.

Management of national trails is a varied and expanding system with complex jurisdictional and management arrangements. Principal uses of national trails are recreation and protection of scenic, historic, natural, cultural, and recreational values. Parts of these trails pass through or lie adjacent to NPS units. For trails assigned to it, the NPS management role is one of coordination, encouragement, designation of segments meeting eligibility criteria, and land protection as allowed by law.

Research Natural Areas

Research Natural Areas (RNAs) contain prime examples of natural resources and processes, including significant genetic resources, which have value for long-term observational studies or as control areas for manipulative research taking place outside the parks. The NPS Organic Act of 1916 and the NPS Omnibus Management Act of 1998 provide authority to establish RNAs.

Superintendents recommend areas of parks to their regional director, who is authorized to designate them as RNAs. Superintendents cooperate with other federal land managers in identifying park sites for designation and in planning research and educational activities for this interagency program.

RNAs are part of a national network of sites designed to facilitate research and preserve natural features. RNAs are usually established within examples of ecological community types, preferably those that have been little disturbed in the past and where natural processes are not unduly impeded. The tract is set aside permanently and is managed exclusively for approved non-manipulative research, which measures but does not alter existing conditions. Activities in RNAs generally are restricted to non-manipulative research, education, and other activities that will not detract from an area's research values.

Resource use should be managed to prevent any activity that could lessen the site's integrity or permit interference with ongoing research projects. Any potentially disruptive recreational pursuits should not be allowed in these tracts because of the likelihood of negative effects on the ongoing research activity.

Experimental Research Areas

Experimental Research Areas (ERAs) are specific tracts that are permanently or temporarily set aside and managed for approved manipulative research in which conscious alteration of the existing landscape (such as by cutting and burning) is part of the experiment. ERAs are usually established in parts of park landscapes previously disturbed by human or natural causes, such as abandoned developments, road beds, farmland, dumps, logged areas, and storm impact areas, but if necessary they can occur in undisturbed habitat (e.g., in areas for studies related to the impact of human use, fire ecology, pest management, or non-native species). Superintendents recommend areas of the park to their regional director, who is authorized to designate them as ERAs. Considerations pertaining to the research program and resource management are the same as those for RNAs, except that manipulative research is permissible.

Biosphere Reserves

Biosphere Reserves are sites that are part of a worldwide network of natural reserves recognized for their role in conserving genetic resources, facilitating long-term research and monitoring, and encouraging education, training, and the demonstration of sustainable resource use. A Biosphere Reserve is usually representative of a biogeographic province.

Parks may be nominated for recognition as Biosphere Reserves or as constituents of them. Specific guidance for recognition is provided by the US Man and Biosphere (MAB) program based on the general guidance of UNESCO. Working within MAB, NPS may assist in determining the suitability and feasibility of including parks in US Biosphere Reserves, participate in research and educational activities, and furnish information on Biosphere Reserves for inclusion in domestic and international information systems.

The designation of park lands as Biosphere Reserves or as constituents of them does not alter the purposes for which the parks were established, change the management requirements, or reduce NPS jurisdiction over parks. To the extent practicable, superintendents of parks that are

recognized as Biosphere Reserves will incorporate biosphere reserve objectives into general management plans, implementation plans, action plans, and park interpretive programs. Superintendents will pursue opportunities to use the designation as a framework for local, regional, and international cooperation.

To carry out the complementary activities of nature conservation and use of natural resources, Biosphere Reserves are organized into three interrelated zones: the core area, the buffer zone, and the transition area. The core area is usually strictly protected, and the surrounding "managed" area is where manipulative research and other uses compatible with protection of the core area may be conducted. Since consumptive use and manipulative research recommended in a model Biosphere Reserve's "managed use" area is usually inconsistent with national park policy, national parks typically represent the Biosphere Reserve's inner "core" area.

National Marine Sanctuaries

These sites are found in coastal and ocean waters, the Great Lakes and their connecting waters, and submerged lands over which the United States exercises jurisdiction. These areas are designated by the Secretary of Commerce due to their significance for conservation, recreation, or ecological, historical, research, educational, or aesthetic qualities. The National Oceanic and Atmospheric Administration administers these areas alone or cooperatively with other agencies. NPS assists with interpretation and law enforcement in some National Marine Sanctuaries adjacent to NPS areas. Sanctuary boundaries usually though not always extend to the high-tide line of land areas and may overlap NPS boundaries.

Ramsar Sites

These sites are a result of the Convention on Wetlands of International Importance Especially as Waterfowl Habitat. The Convention providing for listing of these sites was concluded in Ramsar, Iran, on February 2, 1971. The United States became a full party to the Convention on April 18, l987. One aspect of the Convention is its requirement that parties identify wetlands of international importance and list them under the auspices of the Convention. The listing serves to highlight the values of these sites but affects neither the management regime for these areas nor resource use within them. The Convention specifies the criteria for inclusion in the list. Contracting parties to the Convention are to formulate and implement their planning so as to promote the conservation of the wetlands in the list. Delisting by the Conference of Parties is possible if ecological or hydrological characteristics of a site deteriorate because of human interference.

Class I and Class II Areas

For information on Class I and Class II areas and the analysis of visibility impacts, see the air-quality plan and Section 3.6.1, Air Quality and Visibility.

Critical Habitat

For information on critical habitat and the analysis of impacts affecting it, see Section 3.5.1, Fish, Wildlife, and Plants.

Eligible and Proposed for Designation

Generally, if an area or habitat is "proposed," eligible, or under study for a special designation, it is treated, for management purposes, the same as if it had the special designation so as to prevent adverse effects on the resources or values that qualify the area for the special designation until the final determination is made. Federal statute or NPS guidance contains guidance for the management of areas proposed, eligible, or under study for a particular special designation.

Analysis Methods and Presentation

1. NPS will identify specially designated areas within the ATMP planning area. If there are none or if none would be potentially affected by ATMP alternatives, then a summary statement is to be included in the NEPA document. No further analysis is required.
2. The assessment should thoroughly describe the type, location, size, and characteristics of an area that is subject to impact from the sight and sound of air tours. Definitions may be found in legal or policy documents associated with an area's designation.
3. The assessment approach is similar to the analysis for wilderness areas and is focused on the extent to which ATMP alternatives would impact the characteristics of the area that affect its designation.

Threshold of Significance

There is no predefined threshold of significance for the effects of air tour aircraft on specially designated areas. The degree to which specially designated areas may be affected is dependent largely upon the nature of the designation and the characteristics of the area that made it eligible. The extent and intensity of air tour sound and sight will be assessed in the context of the defined area to determine the severity of impacts of ATMP alternatives and the extent to which these impacts would alter the characteristics for which the area is designated. Conflicts with objectives in park plans will be addressed in the section on Consistency with NPS Land Use Plans.

3.4 HUMAN RESOURCES AND VALUES

3.4.1 Scientific Resources

Some resources that are subject to ongoing or proposed scientific study or research may be affected by air tour operations. Impacts on those resources would be evaluated under other relevant impact topics. Areas that are allocated for scientific study, including RNAs, are evaluated in Section 3.3.6, Other Specially Designated areas within the national park. Some parks have zoned their lands in accordance with such designations, so those impacts would likely be discussed in the soundscape section. This topic area might be reserved for the assessment of impacts on specific research projects or investigations that are underway within a park and how the study objectives could be affected by air tour operations.

3.4.2 Historic, Architectural, Archeological, and Cultural Resources

Introduction

Detailed background information regarding historic, architectural, archeological, and cultural resources and the Section 106 consultation process is provided in Section 3.4.2.1 below. Section 106 requirements must be met. Analysis of impacts on cultural resources is likely to be applicable for every ATMP. While the analysis of impacts necessarily involves the locations of sensitive resources both in order to protect them and to evaluate alternatives, this must be done in a way that preserves the integrity of the resource or value. In many cases, the location must not be disclosed in public documents. Impact analysis in the NEPA document is to meet all of the analysis requirements of the NHPA, Section 106, so that the processes run concurrently and consistently. The authorities by which protection is mandated include the Organic Act and park-specific establishment legislation, American Indian Religious Freedom Act, NHPA, Archeological Resources Protection Act, and a variety of other laws. Section 4(f) of the DOT Act applies to the use of land from an historic site of national, state, or local significance.

Resources, locations, or structures having cultural, historic, or Native American religious significance could be impacted directly or indirectly by the sight, sound, or presence of air tours. National parks are home to sites that are sacred to native peoples as well as to some of the most solemn battlefields and burial grounds in the nation. Cultural, historic, or religious sites may be affected by sounds out of character for the resource. The use of such sites in traditional ways by Native American peoples may be affected by the sight, sound, and presence of aircraft. Historic battlefields or colonial treasures, and their interpretation, could be similarly affected. In some instances and under some conditions, potential vibration effects or air tour aircraft operations would be of concern to geologically or structurally fragile resources.

Pursuant to the Advisory Council's criteria of effect, agencies are required to take a broad view of an "undertaking's" impact and its long-range implications. Does the undertaking have the potential to alter characteristics of historic properties such as location, design, setting, workmanship, materials, feeling, and association? Will it cause visual, audible, or atmospheric intrusions not in keeping with a property or its setting or change its use? Destruction, damage, and alteration of historic materials are obvious examples. Effects may result not only from actions having a direct physical impact on cultural resources but also from undertakings near to or visible from an eligible property inside or outside a park boundary. Indirect or less immediate effects, such as increased visitor use, are also considered. Potential indirect impacts on certain types of cultural resources could result from the inadvertent disclosure of their location during an air tour.

In accordance with NPS Management Policies (2006) Section 5.3.1.7, culturally appropriate sounds are important elements of the national park experience in many parks. The NPS will preserve soundscape resources and values of the parks to the greatest extent possible to protect opportunities for appropriate transmission of cultural and historic sounds that are fundamental components of the purposes and values for which the parks were established. Examples of appropriate cultural and historic sounds include native drumming (at Yosemite National Park, for

example), music (at New Orleans Jazz National Historical Park, for example), and bands, marching, cannon fire, and other military demonstrations at some national battlefield parks. NPS will prevent inappropriate or excessive types and levels of sound (noise) from unacceptably impacting the ability of the soundscape to transmit the cultural and historic resource sounds associated with park purposes.

Analysis Methods and Presentation

Each ATMP will be treated as a separate undertaking and analyzed as follows:

1. The Area of Potential Effect (APE) will be identified and will generally include the area within the subject park unit boundary, the area within ½ mile of the park boundary, and the area within the boundary of abutting tribal land overflown by commercial air tour operations.

2. If no historic or cultural properties are present within the APE, FAA will seek concurrence on that determination from the appropriate SHPO and/or Tribal Historic Preservation Officer (THPO). A summary statement, along with the SHPO and/or THPO concurrence, is to be included in the NEPA document. No further analysis is required.

3. If historic or cultural properties are or may be present, FAA will initiate consultation early in the process with interested parties, including NPS, SHPOs, THPOs, tribal government heads, and other representatives of affected Native American tribes or Native Hawaiian organizations.

4. If the consulting parties can agree upon alternatives that would prevent or mitigate adverse effects on cultural resources in general, this will comply with applicable cultural resource requirements while avoiding unnecessary efforts to identify and evaluate specific cultural properties.

5. If such agreement can be reached, FAA's Section 106 responsibilities will be completed with the incorporation of the agreed upon alternatives into the ATMP and associated NEPA document. In this case, FAA will make and seek concurrence from the SHPO on a no adverse effect determination.

6. If such an agreement cannot be reached, FAA, in cooperation with NPS, will conduct site-specific identification and evaluation of individual historic properties and other cultural resources as necessary in accordance with Part 800.4 or 800.5-7, whichever FAA determines to be the more effective and efficient approach.

For each cultural resource, the analyst must thoroughly define the associated constraints geographically, seasonally, legally, or otherwise that have been set by previous agreement or decision. For resources or sites that must remain undisclosed, some additional agreement must be made to allow a map-based representation suitable for analysis purposes. The analyst must also define objectives or desired conditions, already established in park planning documents, that managers intend to meet by virtue of existing plans or specific agreements between NPS and affiliated tribes, SHPOs, etc., that may be affected by the characteristics of air tour impact: namely, sound, sight, and presence. These definitions may be found in or inferred from a park

GMP or other master planning document. All assumptions that are necessary to conduct the following analyses must be disclosed.

More specifically, the metrics or indicators that best describe how air tour sound impacts various cultural resources must be selected. Selection can be made from the range of metrics evaluated in the soundscape impact section. The analysis identifies map-based sites or reference areas that contain cultural resources. Once the sound indicators have been selected, the map or maps developed from the soundscape impact section for each alternative can be overlaid with maps showing where the cultural resources are located. A finding of the effect of air tour sound as well as a comparison with NPS management objectives or desired conditions is made for each cultural resource.

The use of soundscape standards (by zone) as surrogates for assessing impacts on cultural resource elements may not be appropriate, particularly since there is normally no relationship between cultural site needs and management zone allocations. Cultural needs may not be served by zone standards, so impact determinations must be specific to cultural resource elements. Selected sound metrics could provide an index to relative impacts on cultural resources, however, so these should be disclosed.

The visual analysis identifies map-based sites or reference areas that reflect cultural resource elements. For visual impacts, the analysis is focused on the relationship between the aircraft and the viewer (distance and elevation) in respect to the resource element of concern. For each resource element with associated visual concerns, descriptive information, including maps as needed, should be provided to clearly indicate the extent to which air tour aircraft are in view for each alternative and the extent to which the sight of aircraft potentially affects the resource. If deemed necessary, flight visibility analysis tools, including GIS and 3-D photo simulation, may be utilized (see Section 3.4.3.1 for more information). The visual effects of air tours as well as a comparison with NPS management objectives or desired conditions should be made for each cultural resource.

Threshold of Significance

A finding of no resources affected or no adverse effect would typically be considered a minor or negligible impact according to NPS DO-12. Section 106 regulations state that an adverse effect finding (a finding of significant impact) does not automatically trigger preparation of an EIS. The Section 106 consultation process requires consideration of alternatives and mitigation measures to avoid adverse effects. The results of this process could also affect determinations of significance under NEPA. However, it is likely that an air tour alternative meeting Section 106 criteria for adverse effect that cannot be satisfactorily mitigated would be regarded as having a significant impact. In consultation with appropriate stakeholders, SHPO/THPO, and NPS, FAA would make a "finding of adverse effect" if there is a potential for an ATMP alternative to physically destroy the property; alter the property so severely that it would not meet the requirements of the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68); remove the property from its historic location; introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's setting, provided that setting contributes to the property's historical significance; or, through transfer, sale, or

lease, diminish any long-term preservation of a property's historical significance that federal ownership or control would preserve.

Indicators of minor impacts on cultural resources include:

- The presence of significant cultural, religious, or ethnographic resources.
- Changes in the ambient sound environment that occur but remain consistent with the cultural setting as provided in management objectives, agreements, or other plans.

When significant cultural, religious, or ethnographic resources are present, human-caused noise may be perceived as inappropriate to the historic, cultural, religious, or ethnographic setting and the management objectives for the area. If air tour characteristics of sight/presence and sound conflict with cultural resource management objectives, NPS will assume there is an adverse effect.

DOT section 4(f) applies if an air tour alternative would take or constructively use (i.e., substantially impair) an historic site of national, state, or local significance. DOT section 4(f) guidance is found in Section 3.12.

3.4.2.1 Section 106 Consultation Process

General

Section 106 of the NHPA requires that agencies "take into account" the effects of their actions on "historic properties": that is, places that are eligible for or are included in the National Register of Historic Places. In the case of the ATMP program, Section 106 requires that FAA take into account the effects of commercial air tour operations managed by ATMPs on historic properties, which include properties of religious and cultural significance to an Indian tribe, as described in Section 101(d)(6)(A).

DO-12 notes that Section 106 review and NEPA are two distinct processes. They can and should occur simultaneously, and documents can be combined, but one is not a substitute for the other. The processes should be coordinated to avoid duplicating public involvement or other requirements. Information and mitigation gathered as part of the Section 106 review must be included in the NEPA document, and the Section 106 process must be completed before a FONSI or ROD can be signed on a proposal that affects historic properties. FAA and NPS have agreed that it is most efficient and effective to incorporate Section 106 compliance into the NEPA process, following procedures described in 36 CFR 800.8(c).

Each ATMP will be treated as a separate undertaking due to the range of geographic locations and the variety of potential historical properties issues. Note that several park units in close geographic proximity may be evaluated under one ATMP.

Area of Potential Effect

The APE for each undertaking will be determined on a park-by-park basis in consultation with appropriate interested parties. This notwithstanding, the APE will generally include the area

within ½ mile outside the subject national park boundary and within the boundary of any associated tribal land overflown by commercial air tour operations to which the ATMP applies. In accordance with 36 CFR 800.16(d), the APE will include the geographic area or areas within which the ATMP may directly or indirectly cause alterations in the character or use of historic properties if any such properties exist. As stated in 800.16(d), the APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.

Public Involvement

FAA will, except where appropriate to protect confidentiality concerns of affected parties, provide the public with information about each undertaking and its effect on historic properties. This will include the dissemination of historic properties information within draft ATMP and NEPA documents and at least one public meeting during which the public may provide views, data, and comments on historic properties issues, among other concerns.

Consultation

Early in the process of developing an ATMP and associated NEPA documents, FAA will initiate consultation with interested parties, including NPS, SHPO and/or THPO, tribal government heads, and other appropriate representatives of affected Indian tribes or Native Hawaiian organizations. Indian tribes whose tribal lands are or may be overflown by aircraft involved in a commercial air tour operation over the park or those having tribal lands to which the ATMP applies will be invited to participate as cooperating agencies in the NEPA process.

Historic Properties Identification of Assessment of Effects

If the consultant parties can agree upon ATMP alternatives that would prevent or mitigate adverse effects on cultural resources in general, this will comply with applicable cultural resource requirements while avoiding unnecessary efforts to identify and evaluate specific cultural properties. This approach is consistent with National Register Bulletin 38, Guidelines for Evaluating and Documenting Traditional Cultural Properties, which are expected to be relevant to many of the historic properties subject to potential effects of air tour operations, particularly tribal lands. This approach is specifically discussed in the Bulletin chapter entitled "Documenting Traditional Cultural Properties: General Considerations," in which a similar approach is outlined for the undertaking of US Air Force deployment of the MX missile system in Wyoming. FAA's Section 106 responsibilities will be completed with incorporation of the agreed-upon measures into the final ATMP and associated NEPA documents.

If an agreement cannot be reached under the approach described above, FAA, in cooperation with NPS, will conduct site-specific identification and evaluation of individual historic properties and other cultural resources as necessary in accordance with Title 36, CFR, Part 800, Section 800.4 (see also Analysis Methods and Presentation in Section 3.4.2 above). Compliance with Section 106 will be achieved on a park-by-park basis for each undertaking under Part 800, Section 800.8(c) or Sections 800.5-7, whichever FAA determines to be the more effective and efficient approach to a particular ATMP. Note that several park units in close geographic proximity may be evaluated under one ATMP and would be treated as one undertaking. All

consultation will be conducted in a manner that is sensitive to the cultural values and beliefs of the tribes and other groups.

Figure 3-1 illustrates the Section 106 process and identifies the major decisions necessary to complete the process. To initiate a government-to-government relationship with tribes, FAA will send a certified mail receipt request letter to the tribes followed by personal phone calls. (See Appendix C-9 for an example of this letter.) The content should be refined as local circumstances dictate. The letter should be sent to all applicable stakeholders, including SHPO, THPO, and Indian tribes. FAA will send letters to tribal governments before other scoping begins and should include an invitation to meet personally to begin the consultation process (for examples of letters to tribes and SHPOs, refer to Appendix D-1 and Appendix D-2, respectively).

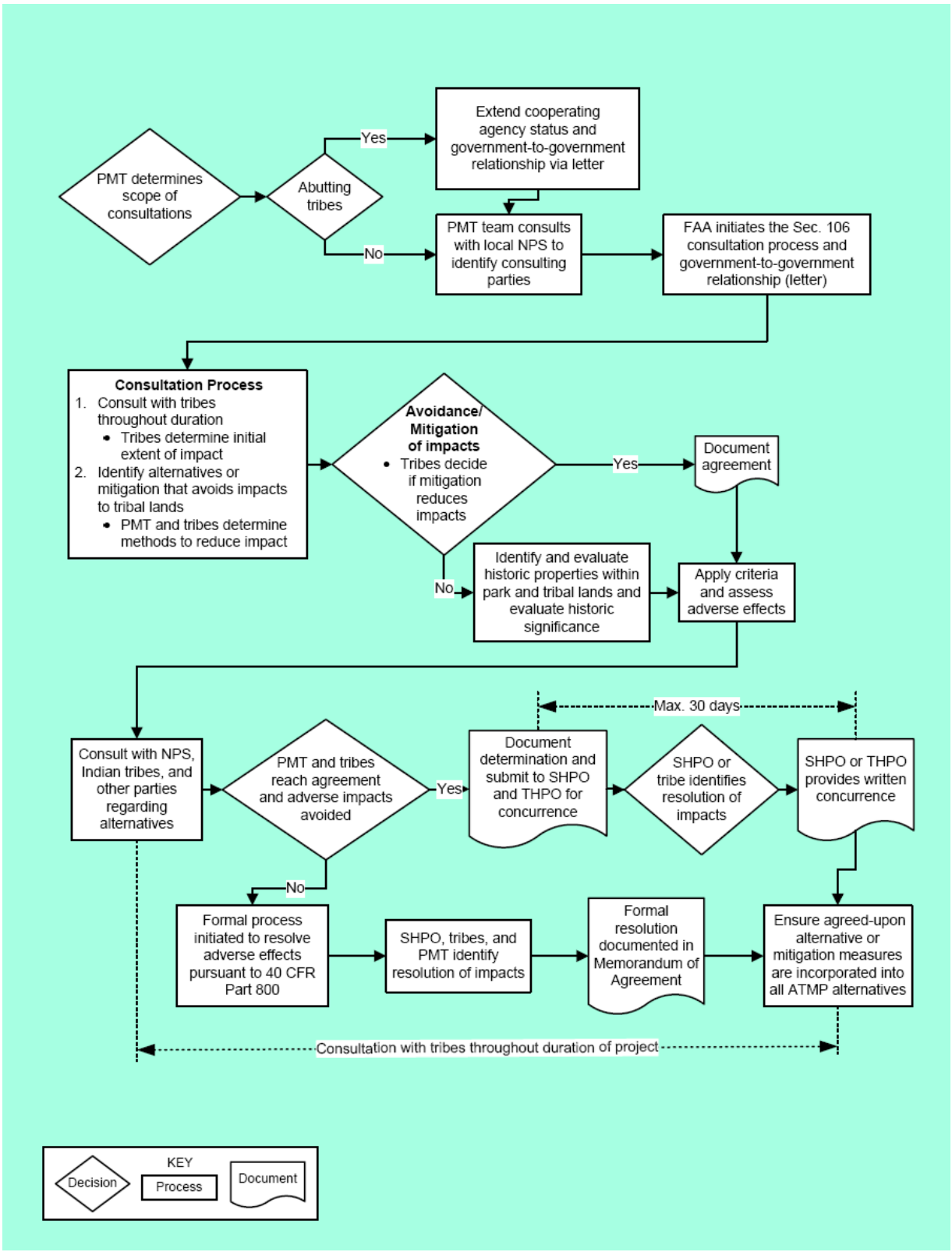


Figure 3-1. Section 106 and Tribal Consultation Process

3.4.3 Visitors and Visitor Experience

Analysis of impacts on visitors and visitor experience is applicable for every ATMP. NPATMA states that an ATMP must prevent or mitigate the significant adverse impact, if any, on natural and cultural resources *as well as* on visitor experience at a national park unit. While visitor experience is not an impact category that FAA traditionally examines, NPS has agency-wide and park-specific guidelines for managing ground-based visitors within the national park system. Air tour visitors are a category of visitors that has not been managed by NPS and is addressed as a separate topic.

3.4.3.1 Impacts on Ground-Based Visitor Experience

Introduction

NPS customarily assesses impacts of federal actions on visitors and visitor experience. This analysis presents visitors in a traditional view: as people who experience the park immediately and recreate or stay within it, generally paying a gate fee for doing so.

The sound of air tours can affect visitors when it is at variance with their expectation or expected experience. Similarly, the visual aspect of air tours (nearness, location with respect to the scenic view, and frequency of occurrence) can affect visitors. Most likely, there is a combined impact from the sight and sound of air tours; for example, an aircraft that is perceived as near and visually intrusive may also be perceived as generating more intrusive sound than a more distant aircraft at the same noise level. Conversely, the sound generated can call visitors' attention to a visual effect.

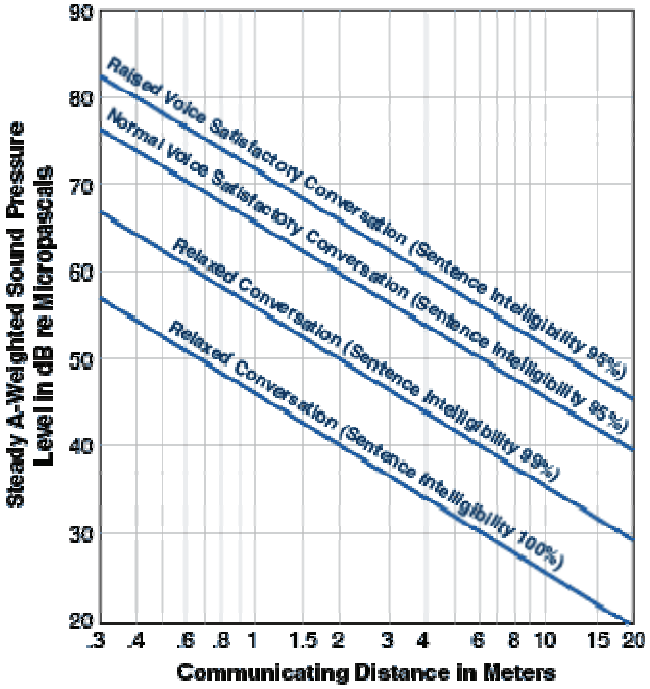
The sight and sound of air tours can more readily adversely impact visitors in wilderness areas, where the ambient noise level is very low and the sound interferes with the expectation of enjoying a natural setting. Visitors in developed areas and those engaged in motorized activities are often less impacted by air tours due to a different set of expectations as well as less sensitivity to the sound or sight of aircraft in a busier and noisier setting. Visitors at scenic overlooks can be adversely affected when aircraft are directly interposed between the visitors and the view. Visitors who are enjoying interpretive programs or other park-sponsored activities can be affected by the sight and sound of aircraft. Values held by visitors relative to types of impacts will often dictate whether or not visitors find air tour aircraft sound and sight intrusive. There is a general but direct correlation between the categories of visitors and the values generally held by people in those categories.

Analysis Methods and Presentation

For each resource element or visitor category, the analyst should thoroughly describe the visitor and visitor use trends. The analyst must also define visitor expectations as well as the visitor experience that park managers intend to provide. These descriptions may be found in, or easily inferred from, a park GMP or other master planning document, and these sources need to be appropriately identified. All assumptions that are necessary for the analyses must be disclosed.

Using the range of metrics evaluated in the Noise and Soundscape Resource Impact section, appropriate maps developed in that section for each alternative can be overlaid with maps

showing where visitors are located for each resource element (or visitor category). The resultant graphics are compared with visitor sensitivities to aircraft noise, with consideration given to the context of the site, visitor expectations, and park management objectives for each resource element. In particular, the types of NPS interpretive programs that occur within the park should be identified and the level of speech interference should be analyzed using the EPA guidelines for speech interference from noise. Figure 3-2 presents typical distances between talker and listener for satisfactory conversations in the presence of different steady A-weighted background noise levels, according to EPA data. As indicated in the figure, satisfactory conversation does not always require that every word be heard; 95 percent intelligibility is acceptable for many conversations. This is because a few unheard words can be inferred when they occur in a familiar context.



Source: US EPA, *Information on Levels of Noise Requisite to Protect the Public Health and Welfare with an Adequate Margin of Safety*, March 1974.[14]

Figure 3-2. Maximum Distances Outdoors Over Which Conversation Is Considered to Be Satisfactorily Intelligible in Steady Noise

The visual analysis identifies map-based sites or reference areas that reflect visual resource elements through either the GMP, Lake Management Plan, or facilities inventory. The analyst should consult with park staff at the beginning of the impact analysis to determine the types of issues (noise and visual) that visitors bring up that may be captured in visitor surveys, anecdotal complaints, etc.

[14] See Federal Interagency Committee on Aviation Noise Web site.

For visual impacts, the analysis focuses on the relationship between the aircraft and the viewer (distance and elevation) in respect to the ideal view or scenic area. Parks will need to define discrete points or line segments (roads/trails) of particular interest or most outstanding quality from a visual standpoint for each resource element of concern. High-quality photographs of aircraft on existing routes can be taken from these viewpoints to capture the extent of the visual impact. The selection of viewsheds will be tested for reasonableness and practicability of modeling by NPS and FAA. For each viewpoint of concern, a visual resource model can be run to express the viewshed, which would then be divided into foreground, middle-ground and distant views as follows:

Foreground: This zone is based on the distance at which landscape details can be perceived. In foreground views, an average viewer can discern individual tree limbs. The area is usually limited to ½-mile from the viewer.

Middle ground: This zone is between ½-mile and five miles from an observer. It is the distance at which masses of trees blur into a single texture.

Background: This zone extends from the middle ground (five miles from an observer) to the limits of visibility. Texture in tree stands is very weakly discernible and landscapes become patterns.

This viewshed would be overlaid by the route structure (including aircraft altitude) for each ATMP alternative. The extent of intrusiveness of air tour aircraft on the ground-based visitors' view is then determined by site, including consideration of visitor expectations and comparisons with park management objectives. Visual factors that should be considered in the analysis are (1) distance of aircraft from viewer (including height of aircraft), (2) aircraft position in relation to viewer and view, (3) visitor category and visitor expectation, (4) management objective, (5) landscape class, and (6) duration.

If during ATMP development the ATMP team determines that a more detailed analysis is appropriate, flight visibility analysis may be employed. Flight visibility analysis is an assessment tool that utilizes the Environmental Systems Research Institute's (ESRI) Arc GIS software and may be used to complement the visual impacts assessment for ATMP/NEPA analysis. The goal of flight visibility analysis is to understand what visual impacts commercial air tours may have on an observer at selected locations around the park. The result of this analysis produces a pictorial depiction of the air tour route, which distinguishes which portions are visible to an observer and which portions are obstructed. For each park, the following data should be obtained:

- Digital Elevation Model (DEM)
- Point locations of the observer
- Flight paths with elevation information
- Digital orthophotos (aerial photos)

DEMs are digital representations of the earth's surface and associated elevations. When loaded into the GIS software, DEMs give a representation of the earth's surface and a base information layer onto which other data can be added. The observer points are placed on the DEM and then

raised 1.75 meters to give an approximate location of an observer's viewpoint. The flight routes are then added. The routes are depicted accurately in the correct position above the earth's surface according to their associated flight elevation.

Using the Arc GIS Spatial and 3-D analysis tools, lines of sights are established between the observer and various points along the flight path. Whether the surface of the earth, represented by the DEM, blocks the line of sight or not is then recorded in a table. Together, this information is used to display the result in the GIS. Aerial photos can also be draped over the DEM for a more realistic effect. Figure 3-3 below is an example of a flight visibility analysis result, specifically a portion of an air tour route at Mount Rushmore National Memorial. The yellow point represents the observer, and the green lines represent where the flight is visible. The red lines represent where the observer's view of the flight is obstructed.

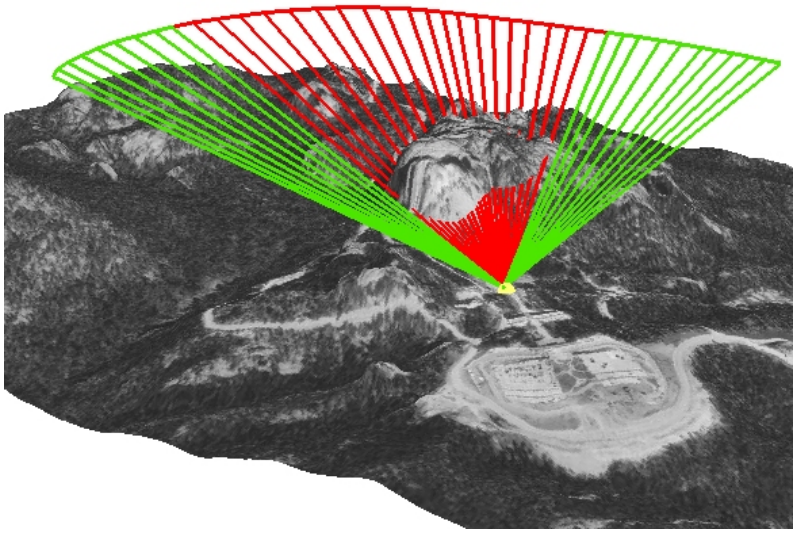


Figure 3-3. Example of Flight Visibility Analysis Output for Mount Rushmore National Memorial

Threshold of Significance

FAA has a defined threshold for most aviation noise impacts of a DNL 1.5 dB increase in noise over noise-sensitive land uses within a DNL 65 dB noise contour. However, FAA's NEPA guidance (FAA Order 1050.1E) states that this threshold does not adequately address the effects of noise within a national park where other noise is very low and a quiet setting is a generally recognized purpose and attribute. FAA Order 1050.1E states, in general, that the visual sight of aircraft, particularly at a distance that is not normally intrusive, should not be assumed to constitute an adverse impact. However, commercial air tour operations in national parks pose unusual concerns that merit further consideration with respect to potential impacts. NPS does not have quantified thresholds of significance for noise or visual impacts on visitors.

Air tour aircraft operations differ from average national air transportation system operations. In most cases, air tour operations occur seasonally and during daylight hours. In addition, air tour aircraft are, by nature, flying low for sightseeing purposes, and in national parks they are operating relatively close to the ground in low ambient noise environments. Many of these aircraft are helicopters. Both FAA and NPS have engaged in research to attempt to develop the base of knowledge necessary to propose noise criteria, particularly with respect to park visitors' experience, but there are currently no quantified national standards for use in ATMP environmental reviews.

The focus is on the potential degradation of the ground-based visitor experience from air tour noise and visual effects. Qualitative indicators will be used and include the following:

Indicators of minor impacts on visitors and visitor experience:

- Visitors are few during the time of impact.
- Most visitors would notice but not be disturbed by a change in sound or visual quality as it relates to their expected experience consistent with management objectives.
- Characteristics of the natural setting usually predominate, and other sights and sounds are experienced by visitors as appropriate to the park setting. Impacts occur infrequently and for short durations in most of the area.
- The amount of visitation, type of visitor, and visitor expectations would not be expected to change due to the action in question.

Indicators of major impact on visitor and visitor experience:

- Human-caused noise is perceived as inappropriate to the setting, where moderate numbers of visitors have an expectation of quiet and solitude most of the time.
- Noise is intrusive in some but not all areas for up to half of the daylight hours.
- Visitor programs or NPS-sponsored activities are interrupted.
- The amount, type, and patterns of visitation would be likely to be affected.
- Visitor expectations relative to the location would be likely to change.

Note that, in some cases, an impact may be more than minor but not be considered major. Therefore, an "exceed minor category" can be added on a case-by-case basis.

Each alternative will be evaluated against the indicators in order to make a judgment about the alternative's potential level of impact. For NPS, the consideration of visitor experience is reasonably consistent with stated objectives for park management zones. When air tour characteristics conflict with those park objectives, NPS would assume an adverse effect on visitor experience for classes of visitors.

3.4.3.2 Impacts on Air Tour Visitor Experience

Introduction

NPATMA provides that the objective of any ATMP shall be to develop acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon visitor experiences in addition to other resources. An ATMP may go so far as to prohibit commercial air tour operations in whole or in part. The mandate and protections in NPATMA clearly apply to ground-based visitors. However, potential impacts on air tour visitors are to be assessed under NEPA. This analysis may also assist in identifying best-management practices that can provide a satisfying air tour experience that complies fully with NPATMA.

Those who experience a national park by means of a commercial air tour are considered visitors to the park, although their experience of park resources and values is quite different in most cases from that of ground-based visitors. The air tour experience often varies, depending on weather conditions and visitors' desires with regard to such factors as length of flight and geographic features of special interest.

Analysis Methods and Presentation

The analysis of impacts of the air tour visitor experience involves consideration of the ability to view specific features within the park or within ½ mile of the park that are known to be desirable and attractive from an aerial view. The analysis will primarily be an assessment in which specific air tour features will be described, locations displayed on maps with overlaying air tour routes and no-fly zones, and conclusions drawn based on the effect of each ATMP alternative on visitor expectations of an air tour and desired view of specific features of the park from the air. The desired view may or may not be available through the various alternatives being evaluated. The difference between the desired view and the available view would be the subject of assessment by line-of-sight mechanical analysis or by a model adapted to the purpose. Consideration should be given to the importance to the air tour visitor of a particular desired view and whether other available views are likely to provide the expected quality of the visit. While air tour visitors have an expectation of a worthwhile and enjoyable tour that provides an overall sense of the park unit's beauty as well as special visual features, they may not necessarily have precise viewing goals with respect to specific park features that are not nationally famous.

Threshold of Significance

Neither FAA nor NPS has established a threshold of significant impact for air tour visitors. Qualitative indicators involve the extent to which the air tour visitor experience would be diminished (or eliminated) by proposed ATMP alternatives or restrictions, such as:

- The park unit in entirety would be unavailable to the air tour visitor or would be so restricted (geographically, by time or day, in duration) as to undermine visitor expectations.

- Desired views of specific features that do not have satisfactory substitutes would be unavailable.

- Air tour access would likely be drastically reduced or eliminated because restrictions substantially change the cost of air tour businesses.

- The visitor's opportunity to visit the park would be reduced with restrictions on air tour operations in place.

Economic effects on air tour operators are assessed in Section 3.7.2.

3.5 BIOLOGICAL RESOURCES

3.5.1 Fish, Wildlife, and Plants (Including T&E Species and Critical Habitat)

Introduction

Although fish, wildlife, and plants in the study area are inventoried and described in general in the section on affected environments in the EA or EIS, the impact analysis centers on threatened and endangered (T&E) species and critical habitat as well as other species of concern. Analysis of impacts on other species (outside of the Endangered Species Act [ESA]) will be considered as appropriate. Analysis of impacts on fish, wildlife, or plants may not be applicable to every ATMP, but Section 7 findings must be made for each. Not all park units subject to ATMPs will contain key species habitats or species that are likely to be affected by air tour activities; this may be true in urban parks or some historic sites. Dismissal of any of the three impact subtopics (fish, wildlife, or plants) will be contingent upon lack of emphasis on or non-existence of potentially affected species as a park resource or value. This determination will, of course, consider concerns by other state and federal wildlife agencies that are provided during ATMP scoping. Note that areas outside of the park within the study area may also contain T&E species and critical habitats as well as other species of concern that require impact analysis.

3.5.1.1 Fish and Wildlife

The presence of fish and wildlife (species or habitats) as recognized values or resources within the ATMP study area will require their inclusion as impact topics.

The analysis of impacts on wildlife or associated physical and biological resources is primarily related to the analysis of air tour noise. The soundscape resource assessment broadly covers the park unit, while the wildlife assessment compares results from appropriate noise metrics with mapped wildlife resource elements that have been identified by NPS (or by other relevant agencies having jurisdiction over areas outside of the park) as of some concern relative to air tours. To disclose the impacts of sound on wildlife, a selection of metrics should be made based on the properties of sound that most likely affect the wildlife/habitat at issue.

The analysis will determine whether sound characteristics associated with air tours, such as amplitude, frequency, and recurrence, can impact wildlife resources by interfering with sounds important for animal communication, including territory establishment, courtship, nurturing, predation and avoiding predators, migration, and foraging functions. Certain types and levels of sound can cause physiological and/or behavioral responses that can reduce the animal's fitness or ability to survive. Examples of physiological effects include excessive alertness, health-affecting stress, decrease in lactation of nursing females, and changes in metabolism and hormone

balances. Behavioral responses can range from mild aggravation to panic. Indirect effects associated with behavioral responses can include injury, abandonment of or damage to young, and avoidance or abandonment of habitat. In the case of populations with few members and a limited amount of suitable habitat, the results of habitat abandonment could be catastrophic to the population. These effects may be synergistic and compounded by harsh winters or water shortages. The assessment of effects is complicated because different individuals and species respond differently to the same noise stimulus.

Hearing thresholds are less well understood for wildlife, but some species can hear some frequencies at thresholds less than 0 dBA. (The dBA sound-pressure-level scale was developed relative to human hearing, for which the threshold is approximately 0 dBA.) (Fay 1988; Warfield 1973) The hearing ability of animals varies greatly between species relative to both frequency and threshold.

To the degree that impacts on wildlife are also predicated on the presence of humans or on the sight of an aircraft, the proximity and visual effect of air tour aircraft are necessary components of the analysis. The visible presence of an air tour aircraft is likely to be less of a concern for wildlife than is aircraft noise.

Analysis Methods and Presentation

The methods for analyzing impacts to fish and wildlife as presented below center on the appropriate methods for analysis as directed by Section 7 of the ESA. These efforts focus on identification of potential impacts and avoidance or minimization of these impacts to the greatest degree possible. The Section 7 consultation process is discussed in further detail in Section 3.5.1.3.

1. A list of federally listed T&E species along with designated critical habitats within the planning area will be obtained from the appropriate USFWS field office.
2. NPS will be asked to verify the list of T&E species and to provide information on other sensitive species of flora and fauna of interest in the analysis. If no T&E or species of concern are known to exist within the planning area, a summary statement is to be included in the NEPA document. No further analysis is required.
3. If federally listed, proposed and candidate species, and listed and proposed habitat are present and there may be potential impacts, consultation with USFWS is initiated (see Section 3.5.1.3).
4. The location of listed species and any critical habitat may be reflected on a base map of the study area. Species of concern include federal or state-listed T&E and candidate species, species of local economic importance, and other species of particular concern. For each species, the NEPA analyst needs to thoroughly describe the value of the habitat in terms of species population and behavior. Any known migratory or feeding patterns should also be mapped. Existing and proposed air tour routes and any proposed no-fly zones can be layered on top of the base map for easy reference.
5. The NEPA analyst must also describe management objectives or other constraints on how the areas are managed vis-à-vis the species being evaluated and habitat requirements. These definitions may be found in or inferred from a park GMP, resource management

plan, or relevant literature. All necessary assumptions for the resulting analyses must be disclosed.

6. In consultation with agencies and organizations having jurisdiction or special expertise concerning protection and/or management of affected species, the NEPA analyst will need to consider factors affecting population dynamics and sustainability for the affected species, such as reproductive success rates, natural mortality rates, non-natural mortality, and minimum population levels required for population maintenance. Qualified biologists will make an assessment regarding the extent to which an alternative may affect the species. The assessment should address at least the following areas: noise impacts, sight/presence impacts, change in critical habitat, change in effective habitat, change in population/distribution.
7. If potential impacts are identified, further modifications to the alternatives and mitigation measures should be proposed in consultation with USFWS and other applicable agencies. These efforts shall focus on preventing and minimizing harm to listed species.
8. If determined necessary, a biological assessment (per Section 7) is to be prepared by a qualified and experienced consultant, based on the best available scientific and commercial data. This information will be used by FAA, in coordination with NPS, regarding a determination of effect during consultation with USFWS or NMFS as discussed in Section 3.5.1.3.

Threshold of Significance

A significant impact on federally listed T&E fish and wildlife species or on their critical habitat would occur for any ATMP alternative that would be likely to jeopardize the continued existence of the species in question or would result in the destruction or adverse modification of a federally designated critical habitat in the affected area as determined by FWS or NMFS. Lesser impacts, including those on non-listed species of concern, could also constitute a significant impact. In consultation with NPS, FWS, and other relevant agencies having jurisdiction or special expertise, FAA will consider factors influencing population dynamics and sustainability for affected species, such as reproductive success rates, natural and non-natural mortality rates, and minimum levels necessary for population maintenance.

Minor impacts on species of concern that would not be considered significant include the following factors from a matrix developed by Roger Kroodsma and Warren Webb of Oak Ridge National Laboratory in cooperation with the U.S. Air Force (Braid 1992). This was also provided in the USDI NPS Report to Congress on Effects of Aircraft Overflights on the National Park System (July 1995, pp. 128-129).

- Non-breeding animals of concern are present in low numbers.
- Habitat is not critical for survival and is not limited to the area affected by overflights. Other habitats meeting the requirements of animals of concern are found nearby and are already used by those species.
- Occasional flight responses are expected but without interference with feeding, reproduction, or other activities necessary for survival.

- No serious concerns are expressed by state or federal fish and wildlife officials.

Qualitative indicators of major impacts that may be considered significant include:

- Impacts are detectable and the severity and timing of changes to parameter measurements are expected to be outside the natural variability (NV) for short or long periods or even to be permanent. Changes within the NV may be long term or permanent in nature.

- Population numbers and structure, genetic variability, and other demographic factors for species may have large short-term declines, with long-term population numbers considerably depressed. In extreme cases, species may be extirpated from the park, key ecosystem processes such as dune nourishment may be disrupted, or habitat for any species may be rendered not functional.

- Considerable effects are predicted on individual organisms, populations, or habitat over a large area.

- Long-term or permanent effects are predicted.

- Timing of impacts is important with respect to species or ecosystem functioning, and there would be considerable impacts during key time periods.

If air tour characteristics of sight/presence and sound conflict with fish and wildlife management objectives, NPS will assume an adverse effect. If an adverse effect is suspected, appropriate mitigation will be implemented.

3.5.1.2 Plants

The presence of plant species or habitats as recognized values or resources within the ATMP study area will require the inclusion of plants as an impact topic. The absence of land clearing or construction activities as part of the federal action precludes direct impacts on plants. According to current science, there is no known direct connection between plants and their life processes and air tour activity. Additionally, since plants would generally not be exposed to consistent high-frequency vibration, direct contact, or rotor wash from aircraft, no characteristics of air tours should affect vegetation. Moreover, if no T&E plants or plants of concern are present, they may be dismissed from further analysis.

However, if it is determined that there are T&E plant species along with designated critical habitats or plant species of interest/concern present that could be affected by an ATMP alternative, a vegetation assessment should be conducted. As mentioned previously, certain types and levels of sound can cause physiological and/or behavioral responses in wildlife that can reduce the animal's fitness or ability to survive. If impacts to fish or wildlife were found in the analysis, the analyst should determine whether these impacts would have the potential to indirectly affect plant species (e.g., through changes in community dynamics). The analysis of impacts on plants will determine whether air tours can impact plant resources directly or indirectly by interfering with their normal establishment, growth, or propagation processes.

Analysis Methods and Presentation

The methods for analyzing impacts to plants as presented below center on the appropriate methods analysis directed by Section 7 of the ESA. Section 7 consultation is discussed in further detail in Section 3.5.1.3.

1. A list of federally listed T&E species along with designated critical habitats within the planning area will be obtained from the appropriate FWS field office.
2. NPS will be asked to verify the list of T&E species and to provide information on other sensitive species of flora and fauna of interest in the analysis. If no T&E or species of concern are known to exist within the planning area, a summary statement is to be included in the NEPA document. No further analysis is required.
3. If federally listed, proposed and candidate species, and listed and proposed habitat are present, and there may be potential impacts, consultation with FWS is initiated (see Section 3.5.1.3).
4. The location of listed species and any critical habitat may be reflected on a base map of the study area. Species of concern include federal or state-listed T&E and candidate species, species of local economic importance, and other species of particular concern. For each species, the NEPA analyst needs to thoroughly describe the value of the habitat in terms of species population and behavior. Existing and proposed air tour routes and any proposed no-fly zones can be layered on top of the base map for easy reference.
5. The NEPA analyst must also describe management objectives or other constraints on how the areas are managed vis-à-vis the species being evaluated and habitat requirements. These definitions may be found in or inferred from a park GMP, resource management plan, or relevant literature. All necessary assumptions for the resulting analyses must be disclosed.
6. In consultation with agencies and organizations having jurisdiction or special expertise concerning protection and/or management of affected species, the NEPA analyst will need to consider factors affecting population dynamics and sustainability for the affected species, such as reproductive success rates, natural mortality rates, non-natural mortality, and minimum population levels required for population maintenance. Qualified biologists will make an assessment regarding the extent to which an alternative may affect the species. The assessment should address at least the following areas: noise impacts, sight/presence impacts, change in critical habitat, change in effective habitat, change in population/distribution.
7. If potential impacts are identified, further modifications to the alternatives and mitigation measures should be proposed in consultation with FWS and other applicable agencies. These efforts shall focus on preventing and minimizing harm to listed species.
8. If determined necessary, a biological assessment (per Section 7) is to be prepared by a qualified and experienced consultant, based on the best available scientific and commercial data. This information will be used by FAA, in coordination with NPS, regarding a determination of effect during consultation with USFWS or NMFS as discussed in Section 3.5.1.3.

Threshold of Significance

As discussed above, a significant impact on a federally listed T&E species or critical habitat would occur under any ATMP alternative that is shown likely to jeopardize the continued existence of species in question or to result in the destruction or adverse modification of critical habitat. Since direct impacts from an ATMP are not expected, impacts to plants are likely to be minor. However, if, through the analysis, impacts to plants are suspected, the analyst should review the thresholds for major and significant impacts presented below.

Minor impacts on species of concern that would not be considered significant include:

- Species of concern are present in low numbers.
- Habitat is not critical for survival, or other habitats meeting the requirements of plants of concern are found nearby.
- No serious concerns are expressed by state or federal fish and wildlife officials.

Qualitative indicators of major impacts that may be considered significant include:

- Impacts are detectable, and the severity and timing of changes to parameter measurements are expected to be outside the NV for short or long periods of time or even to be permanent. Changes within the NV may be long term or permanent in nature.
- Population numbers and structure, genetic variability, and other demographic factors for species may have large short-term declines, with long-term population numbers considerably depressed. In extreme cases, species may be extirpated from the park.
- Considerable effects are predicted on individual organisms, populations, or habitat over a large area.
- Long-term or permanent effects are predicted.
- Timing of impacts (e.g., seed production, flower production, and blooming periods) is important with respect to species or ecosystem functioning, and there would be considerable impacts during key time periods.

3.5.1.3 Section 7 of the ESA

Section 7(a)(2) of the ESA states that each federal agency shall, in consultation with FWS or NMFS, ensure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of a listed species or to result in the destruction or adverse modification of designated critical habitat. In fulfilling these requirements, each agency is to use the best scientific and commercial data available.

Most consultations are conducted informally. Informal consultations:

- Clarify whether and which listed, proposed, and candidate species or designated or proposed critical habitats may be in the action area.
- Determine what effect the action may have on these species or critical habitats and explore ways to modify the action to reduce or remove adverse effects to the species or critical habitats.

- Determine the need to enter into formal consultation for listed species or designated critical habitats or to conference about proposed species or critical habitats.
- Explore the design or modification of an action to benefit the species.

During consultation (see Figure 3-4), FAA, in coordination with NPS, is in contact with the local FWS or NMFS office to determine whether listed species are present within the action area (see Appendix D-3 for an example of a letter to USFWS to start the Section 7 process). Informal consultation with the Services is pursued so that conservation actions may be used to prevent any adverse effects, reducing the need for formal consulting. During the refinement of alternatives as discussed in Section 2.13.6, early informal consultation efforts help to identify potential impacts and thus help advance alternatives that avoid or reduce these impacts. The Services strongly encourage this method since projects can be designed from the outset with minimal impact to listed species. If FAA, in coordination with NPS, identifies a "no effect" determination and receives the Services' concurrence, no further consultation is required.

If FAA, in coordination with NPS, determines that listed species or critical habitat may be affected or if the Services office determines that listed species or designated critical habitats may be affected, then a biological assessment and formal consultation may be required. The biological assessment must address all listed or proposed species within the action area. A biological assessment attempts to determine whether an alternative is "likely to adversely effect" listed species and critical habitat. It also helps to determine whether a formal consultation is needed.

The contents of the biological assessment are determined according to the ESA (see 50 CFR §402.12(f)) and may include information from literature searches on identified species as well as interviews with field specialists and results of field surveys. Sections of a biological assessment that should be researched include descriptions of the species' habitat, incidence, prevalence, life cycles, behavior, migration, and reproductive patterns. Biological assessments on recent park-unit actions should be requested early and used as background information for the ATMP impact assessment. If after reviewing the results of the biological assessment, FAA, in coordination with NPS, determines that an action will adversely affect listed species or critical habitat, FAA must make a formal written request to the Services to initiate formal consultation. Formal consultation is concluded when FWS or NMFS issues a Biological Opinion, which will either be a No Jeopardy/Adverse Modification Opinion, including an incidental take statement, or a Jeopardy/Adverse Modification Opinion.

FAA may not proceed with the action if a Jeopardy/Adverse Modification Opinion is issued unless the project is modified sufficiently to enable the Services to issue a No Jeopardy/Adverse Modification Opinion.

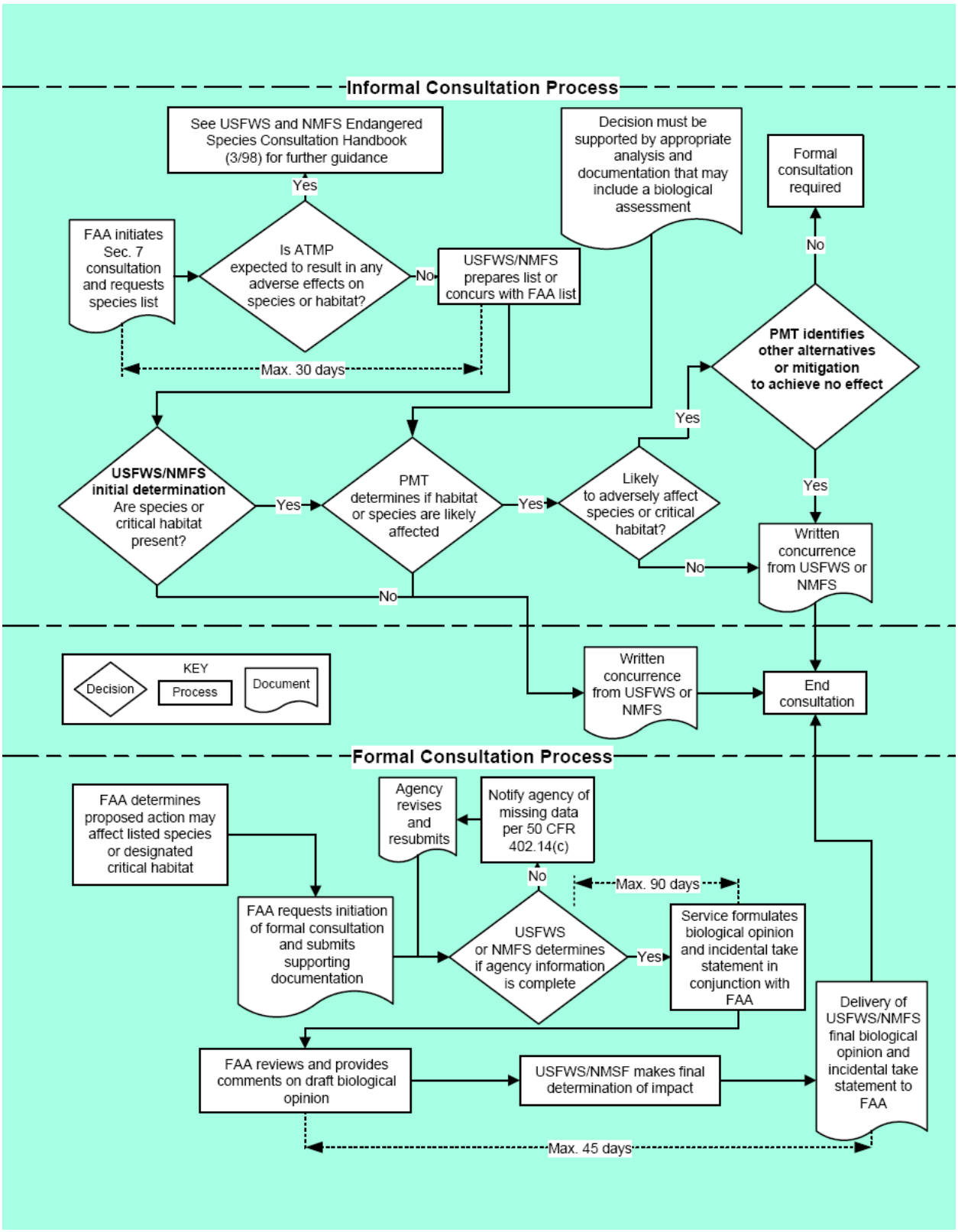


Figure 3-4. Section 7 Consultation Process

3.6 PHYSICAL RESOURCES

3.6.1 Air Quality and Visibility

Introduction

Detailed background information regarding the analysis of air quality and air-quality-related visibility impacts are provided in Appendix E-5 of this Implementation Plan. The EA or EIS must include sufficient analysis to disclose the potentially significant impact of a project or action on the attainment and maintenance of air quality standards established by law or administrative determination.

Analysis Methods and Presentation

Detailed instructions on the analysis and presentation of air quality and air-quality-related visibility impacts are also provided in Appendix E-5. The process can be summarized as follows.

1. Annual emissions inventories are calculated for the current condition (baseline) and the proposed alternatives at each park.
2. The total project emissions will be used in conjunction with pollutant concentration values from air quality monitors to determine impacts caused by ATMP air tours.
3. If the impact level for a park is found to be *negligible* based on the criteria in Section 2.1 of Appendix E-5, the emissions inventory figures and a summary statement are to be included in the NEPA document. No further analysis is required.
4. If the impact level for a park is found to be *minor*, *moderate*, or *major* based on criteria specified in Appendix E-5, Section 2.1, then dispersion, visibility, and deposition analyses may be required to determine impacts using the criteria specified in Section 2.2, based on consultation between NPS and FAA.

Threshold of Significance

FAA and NPS have determined that total air tour aircraft emissions of less than 50 tons per year (TPY) for each criteria pollutant would not be considered significant for parks in attainment status. The significance of impacts resulting from air tour aircraft emissions greater than 50 and less than 250 TPY for each criteria pollutant will be considered significant for parks in attainment status. FAA and NPS have determined that a total decrease in emissions from air tour aircraft for each criteria pollutant would not be considered significant for parks in non-attainment or maintenance status. The significance of impacts resulting from an increase in emissions of 1 TPY or greater for each criteria pollutant from air tours will be considered significant for parks in non-attainment or maintenance status.

3.6.2 Coastal Resources

Introduction

The Coastal Barrier Resources Act (CBRA), Coastal Zone Management Act (CZMA), and Executive Order (EO) 13089, Coral Reef Protection govern federal activities involving or affecting coastal resources. NPS policy is to allow natural shoreline processes, such as erosion,

deposition, dune formation, and shoreline migration, to continue without interference. Where human activities or structures have altered the nature or rate of natural shoreline processes, NPS will investigate alternatives for mitigating the effects of such activities or structures. FAA and NPS will comply with any applicable state coastal zone management plans prepared under CZMA. Coastal area guidance focuses on the physical rather than on the biological aspects of managing marine and lake shorelines within the national park system. Potential impacts of air tour operations on biological resources within coastal areas are addressed in Section 3.5.

ATMPs are not expected to involve any physical development; therefore, impacts associated with coastal resources are not expected to occur.

Analysis Methods and Presentation

1. Determine if any Coastal Barrier Resources (CBR) or Coastal Zone Management (CZM) areas are present within the planning area.

2. If none are present, a summary statement is to be included in the NEPA document. No further analysis is required.

3. If CBR areas are present, then USFWS and NPS are to be consulted on potential impacts for areas within the national park system.

4. If CZM areas are present, then the appropriate state agencies and NPS for areas within the national park system are to be consulted.

Threshold of Significance

FAA has established no specific threshold for coastal resources. When a state having an approved CZM program raises an objection to the action because it would not be consistent with the applicable CZM plan, FAA cannot approve the action unless the objection is satisfied or it is successfully appealed to the Secretary of Commerce. (See FAA Order 1050.1E, Appendix A, Section 3, Coastal Resources, for more information regarding the resolution of CBR or CZM impacts.)

3.6.3 Wetlands Resources

Introduction

Activities in wetlands are addressed by EO 11990, Protection of Wetlands; Department of Transportation (DOT) Order 5660.1A, Preservation of the Nation's Wetlands; the Rivers and Harbors Act of 1899; and the Clean Water Act. NPS manages wetlands in compliance with its mandates and the procedures described in Director's Order (DO) 77-1, Wetland Protection.

ATMPs are not expected to involve any physical construction or development; therefore, impacts associated with development within a wetland are not expected to occur.

Analysis Methods and Presentation

1. If no construction or physical development is involved or if no wetlands are present within the ATMP planning area, a summary statement is to be included in the NEPA document. No further analysis is required.
2. If wetlands are present within the planning area and an alternative involves construction, development, or other action that may affect a wetlands, then:
    a. Consultation with federal, state, or local officials will be undertaken.
    b. The location, types, and extent of affected wetland areas will be identified with the assistance of the Army Corp of Engineers and NRCS if necessary.
    c. For each ATMP alternative with a potential to affect wetlands, the extent to which the alternative will alter the hydrology, vegetation, or soils needed to sustain the function and values of the affected wetlands will be identified.
    d. The EA or EIS will reflect the results of the consultation with regulating and permitting agencies and with agencies that must review permit applications, such as USFWS, the Army Corp of Engineers, and state and local officials who have specific concerns.
    e. The EA or EIS will identify 404 permit requirements.
    f. For an action that entails new construction located in wetlands, a specific finding should be made, including:
        i. There is no practicable alternative to construction in the wetland.
        ii. All practicable measures to minimize harm have been included.

Threshold of Significance

A significant impact would occur when the proposed ATMP causes *any* of the following:

1. The action would adversely affect the function of a wetland to protect the quality or quantity of municipal water supplies, including sole-source, potable-water aquifers.
2. The action would substantially alter the hydrology needed to sustain the functions and values of the affected wetland.
3. The action would substantially reduce the ability of affected wetlands to retain flood waters or storm-associated runoff, thereby threatening public health, safety, and/or welfare.
4. The action would adversely affect the maintenance or natural system that supports wildlife and fish habitat and/or economically important timber, food, or fiber resources in the affected or surrounding wetlands.
5. The action would promote development of secondary activities or services that would affect the resources mentioned in 1 through 4 above.
6. The action would be inconsistent with applicable state wetland strategies.

3.6.4 Floodplains

Introduction

EO 11988, Floodplain Management, directs federal agencies to take action to reduce the risk of flood loss; minimize the impact of floods on human safety, health, and welfare; and restore and preserve the natural and beneficial values served by floodplains. DOT Order 5650.2, Floodplain Management and Protection, contains DOT's policies and procedures for implementing the EO. NPS DO 77-2, Floodplain Management, applies to all NPS actions, including the direct and indirect support of floodplain development that could adversely affect the natural resources and functions of floodplains, including coastal floodplains, or increase flood risks.

ATMPs are not expected to involve any physical construction; therefore, impacts associated with development within a floodplain are not expected to occur.

Analysis Methods and Presentation

1. If no construction or physical development is involved, a summary statement is to be included in the NEPA document. No further analysis is required.
2. If construction or other physical development is included in any ATMP alternative:
    a. FEMA maps will be reviewed to determine the boundaries of floodplains near the site.
    b. If the construction is not within the limits or (if applicable) the buffers of a base floodplain, that statement is to be made in the NEPA document. No further analysis is required.
    c. If the construction is within the limits or buffer of a base floodplain, it must be determined if the construction is a "significant encroachment" by:
        i. Creating a high probability of loss of human life.
        ii. Creating a high probability of substantial costs or damage, including the interruption of aviation services and equipment due to flooding.
        iii. Causing adverse impact on natural and beneficial floodplain values.
    d. Particular attention is to be given to effects of water pollution, increased runoff from impermeable surfaces, alteration of hydrological patterns, induced secondary development, and construction impacts.
    e. Appropriate consultation with NPS will be conducted for areas within a national park, as well as state and local officials.

Threshold of Significance

Floodplain impacts would be significant pursuant to NEPA if they result in notable adverse impacts on natural and beneficial floodplain values. Any measures necessary to mitigate or prevent significant impacts will be specified in the EA or EIS and appropriately incorporated into the selected ATMP alternative.

3.6.5 Water Quality

Introduction

The Federal Water Pollution Control Act as amended (commonly referred to as the Clean Water Act) provides the authority to establish water-quality standards, control discharges, develop waste-treatment-management plans and practices, prevent or minimize the loss of wetlands, and regulate other issues concerning water quality. The Fish and Wildlife Coordination Act applies to any federal action that would impound, divert, drain, control, or otherwise modify the waters of any stream or other body of water greater than 10 acres in size.

ATMPs are not expected to involve any construction or other physical development; therefore, impacts on associated water quality are not expected to occur.

Analysis Methods and Presentation

1. If the ATMP alternatives do *not* involve construction, development, or other actions affecting water quality, a summary statement is to be included in the NEPA document. No further analysis is required.
2. If construction, development, or other actions affecting water quality are involved:
    a. Consultation with federal, state, or local officials will be undertaken.
    b. Analysis will be conducted to determine:
        i. If there is the potential for contamination of an aquifer designated by the EPA as a sole or principal drinking-water resource area pursuant to Section 1424(e) of the Safe Drinking Water Act.
        ii. If the ATMP would impound, divert, drain, control, or otherwise modify the waters of any stream or other body of water.
    c. The EA or EIS will reflect the results of the consultation with regulating and permitting agencies and with agencies that must review permit applications, such as FWS, the Army Corp of Engineers, and state and local officials who have specific concerns.
    d. The EA or EIS will identify all permit requirements.

Threshold of Significance

Water-quality regulations and permitting processes will normally identify any deficiencies in the proposal with regard to water quality or any additional information necessary to make judgments on the significance of impacts. Specific significant impacts would include:

- Failure to meet applicable water-quality standards under the Clean Water Act, Safe Drinking Water Act, Rivers and Harbor Act, or State Water Quality Standards.
- Water-quality problems that cannot be avoided or satisfactorily mitigated.
- Inability to obtain required permits.
- Degradation of critical aquatic habitat needed to sustain a federally listed threatened or endangered species.

3.7 SOCIOECONOMIC IMPACTS

NEPA Section 102(2)(A) requires federal agencies to "insure the integrated use of the natural and social sciences … in planning and decision making. CEQ regulations (40 CFR 1508.8(b)) require the discussion of effects on the human environment to include economic and social, whether direct, indirect, or cumulative." Socioeconomic impact assessment can cover a variety of issues. FAA and NPS NEPA guidance does not provide a specific definition of socioeconomics. However, other Department of Interior (DOI) and DOT agencies provide definitions that are useful for the purposes of ATMP impact analysis. BLM defines social science in the context of land use planning to encompass the economic, political, cultural, and social structure of communities, regions, and the nation as a whole; social values, beliefs, and attitudes; how people interact with the landscape; and sense-of-place issues. (BLM Manual H-1601) The Federal Highway Administration (FHWA) provides detailed guidance regarding community impact analysis and defines community in part by behavior patterns that individuals or groups of individuals hold in common. A community is also defined by shared perceptions or attitudes, typically expressed through individuals' identification with, commitment to, and attitude toward a particular identifiable area. A national park is an example of an identifiable area about which people would have opinions or attitudes.

Additional requirements regarding socioeconomic impact analysis are provided in EO-12898, Environmental Justice in Minority and Low-Income Populations. This EO directs federal agencies to assess whether their actions have disproportionately high and adverse human health or environmental effects on minority and low-income populations. Both FAA and NPS have incorporated this requirement into their respective NEPA guidance as an impact topic requiring analysis.

Social, economic, and environmental justice analyses are socioeconomic in nature; however, not all of the analyses can be put in a quantitative context. Therefore, social and economic impacts are presented separately although the topics are interrelated. Due to the specific requirement to address environmental justice, a separate section is provided below for the purpose of clarity.

3.7.1 Social Impacts

Introduction

DO-12 requires the assessment of social impacts in any environmental document where they may be present. According to DO-78, proper management of the national park system requires accurate, science-based understanding of the relationships between people and parks in order to protect park resources unimpaired and provide for public enjoyment. Guidance contained in FAA Order 1050.1E generally relates to social issues associated with some airport infrastructure projects that are not relevant to ATMPs. Such issues include potential community disruption, housing relocation, and changes in transportation and development patterns. Changes in patterns of park visitation, assessed in ATMPs in the section on Visitor Use, would have the closest relationship to Order 1050.1E, which focuses on social impact guidance. The types of social issues analyzed in this section that are associated with national parks are based primarily on NPS guidance. There may be considerable overlap between an analysis of social impacts and an analysis of impacts on park visitors. Due to the direct attention to potential effects on visitors and

visitor experience in NPATMA, those impacts are separated in an individual analysis presented in Section 3.4.3.

Analysis Methods and Presentation

A social impact analysis should distinguish between people who actually use the park and pay fees for that purpose and those who may appreciate the park and its values from a distance, including those who view it from an air tour. Since the parks are national treasures, this includes people who express an interest in and appreciate the existence of a park but may never visit it. For national parks that are strongly recognized as iconic, social impacts may be national or global (as in the case of World Heritage Sites) in scope because of this. Social impact assessment also includes air tour clientele who may be described as visitors but who may or may not enter the park on the ground and pay a fee. The analysis should:

1. Identify known communities of interest through review of comments received during scoping and other consultations with stakeholders (Indian tribes, Native Hawaiians, environmental groups, air tour operator associations), as well as comments received during public review of draft environmental documents and consultation with park staff regarding groups or other associations affiliated with the park unit.

2. Review national park-unit-specific plans, social science studies, and visitor surveys to obtain information about attitudes, beliefs, and values.

3. Identify the changes, positive or negative, for each social issue that directly or indirectly results from each ATMP alternative.

4. Address social impacts that could be construed as impacts on various local, regional, and national communities concerned about national park management and expectations about the preservation of park resources and values. These are not the same as visitor impacts. Social impacts can also be construed as impacts on visitors and as interests that derive primary and secondary economic benefits from visitors. Air tour visitors could also be addressed in the social impact analysis, with reference to any controversy on environmental grounds as an indicator of social impacts.

5. Cross-reference any impacts on cultural resources or values from the Section 106 consultation process, economic impacts, and environmental justice to avoid analysis duplication. For example, ATMP alternatives may differ in how they accommodate concerns regarding air tour flights over areas sacred to that Native Hawaiians. If an alternative allows for flights over areas that Native Hawaiians want avoided, this would be construed as a negative social impact.

Thresholds of Significance

No threshold of significance has been established by FAA or NPS regarding social impacts. According to 40 CFR 1508.14, economic or social effects are not in themselves intended to require the preparation of an EIS.

3.7.2 Economic Impacts

Introduction

The Redwoods Act of 1978 addresses the potential tradeoff between human uses of a park, especially for commercial purposes, and natural resources protection. It is intended to serve as the basis for any judicial resolution of competing private and public values and interests in the national park system. The authorization of activities involving use of the national park shall not be exercised in derogation of the values and purposes for which the areas were established. This represents part of the context for economic analysis.

FAA Order 1050.1E addresses potential business relocation effects and resulting changes in employment. While these normally apply to effects resulting from some airport infrastructure projects, they would also apply to ATMP alternatives that have potential economic implications, such as effects on the economic viability of an air tour operator's business. This analysis focuses on severity of effect and is not a detailed economic analysis.

Analysis Methods and Presentation

1. Economic impacts would be assessed by collecting data on sectors of the economy relevant to air tours and determining how they might be affected by ATMP alternatives in terms of jobs and income. Reference should be made to forecasts for air tour growth rate developed for each park unit.

2. Effects on income and industry employment should be measured within the impact analysis area.

3. Positive or negative changes in economic conditions, including the distribution and stability of employment and income in affected local, regional, and national economies that directly or indirectly result from ATMP alternatives should be identified, along with short- and long-term impacts. The discussion should address issues such as shifts in patterns of demand for air tours and changes in business and economic activity to the extent that they are influenced by the ATMP alternatives.

4. The analysis should provide a basic platform to support FAA regulatory analysis requirements. Two types of regulatory analysis are generally required: cost/benefit analysis and regulatory flexibility analysis to support the ATMP rulemaking process.

Threshold of Significance

FAA thresholds of significance are based upon impacts that could result from some airport infrastructure projects, including extensive relocation of community businesses that would create severe economic hardship for affected communities, significant changes in employment, and a substantial loss in the community tax base. These are not expected ATMP impacts. Since most air tour operators are small businesses, significant impacts may occur to individual businesses or to the air tour industry locally if an alternative were to eliminate or limit air tour flights or new entrants. Economic or social effects are not in themselves intended to require the preparation of an EIS (40 CFR 1508.14).

3.7.3 Environmental Justice

Introduction

Socioeconomic impacts include those to minority and low-income communities as specified in Environmental Justice EO 12898, February 11, 1994. The term *minority* includes American Indians. Since tribal lands abutting national park units are specifically within the purview of ATMPs, potential effects on American Indian populations should receive particularly close attention. FAA Order 1050.1E states that to implement EO 12898, the accompanying Presidential Memorandum, and Order DOT 5610.2, the FAA must provide for meaningful public involvement by minority and low-income populations. Additionally, FAA must conduct analysis, including appropriate demographic analysis of the potential effects, to identify and address potential impacts on these populations that may be disproportionately high and adverse. According to NPS, current laws and policies require that the following condition be achieved regarding environmental justice:

> *Desired condition:* Incorporate environmental justice into NPS mission by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities.

Analysis Methods and Presentation

In accordance with FAA Order 1050.1E, analysts performing assessments of environmental justice impacts should be aware that the Department of Health and Human Services (HHS) poverty guidelines specified for use by DOT Order 5610.2 and the Census Bureau's poverty threshold specified for use in the CEQ and EPA environmental justice guidance differ slightly (e.g., $19,350 and $19,971, respectively, for a family of four in 2005). HHS poverty guidelines can be found at http://aspe.hhs.gov/poverty/index.shtml#latest; US Census Bureau P60 Current Population Reports (used by CEQ and EPA) can be found at http://www.census.gov/prod/www/abs/income.html.

An analysis of the effects on environmental justice will generally require the use of census data for establishing the demographic and socioeconomic baseline. The Census Bureau's poverty threshold is consistent with the best available demographic data and is appropriate for use in environmental justice impact analysis for NEPA purposes. However, the HHS poverty guidelines, which are updated every year on a nationwide basis, may also be applicable in situations where survey data are available to identify pockets of poverty within census tracts or sectors. The responsible FAA official may choose to use whichever poverty value is deemed the most appropriate. The analysis should:

1. Include demographic information about affected populations.

2. Include information about the population(s) that have an established use for the affected resource or to whom that resource is important.

3. Provide results to determine if a low-income or minority population using that resource sustains more of an impact than other population segments.

4. Identify disproportionately affected low-income and minority populations.

5. Discuss alternatives that would reduce the effect on those populations.

6. Describe possible mitigation to reduce the effect on disproportionately affected low-income and minority populations.

7. Include maps in the EA or EIS that delineate the location and number of low-income and minority populations within the affected area.

Threshold of Significance

A significant environmental justice impact would occur if significant effects, individually or cumulatively, cause disproportionately high and adverse human health or environmental effects on minority and low-income populations. In cases where a significant impact is determined, the analysis should identify mitigation that would reduce that impact below the applicable significance threshold or at least reduce the effect on the population at issue.

3.7.4 Children's Environmental Health and Safety Risks

Introduction

Per FAA Order 1050.1E, EO 13045, Protection of Children from Environmental Health Risks and Safety Risks, federal agencies are directed, as appropriate and consistent with the agency's mission, to make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children. Agencies are encouraged to participate in implementation of the Order by ensuring that their policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.

Since ATMPs are not anticipated to result in any disproportionate health and safety impacts to children, this impact category may be dismissed from further analysis.

3.7.5 Public Health and Safety

Introduction

Per NPS DO-12, Public Health and Safety is a mandatory criterion to be examined for the implementation of any action. Specifically, the analysis must consider whether the action will have material adverse effects on public health or safety. As such, Public Health and Safety will be considered in the analysis for ATMPs.

3.7.6 Secondary (Induced) Impacts

Introduction

Per FAA Order 1050.1E, if major development proposals involve the potential for induced or secondary impacts on surrounding communities, the document shall describe such factors in

general terms. Examples include shifts in patterns of population movement and growth, public service demands, and changes in business and economic activity to the extent influenced by the development. Since ATMPs will not involve major development projects induced impacts are not anticipated to result in any impacts, and this review category may be dismissed from further analysis.

3.8 CONSTRUCTION IMPACTS

Introduction

Local, state, tribal, and federal ordinances and regulations address the impacts of construction activities, including dust and noise from heavy-equipment traffic, disposal of construction debris, and air and water pollution.

ATMPs are not expected to involve any physical construction; therefore, impacts associated with physical development are not expected to occur.

Analysis Methods and Presentation

1. If no construction is involved, a summary statement is to be included in the NEPA document. No further analysis is required.
2. If construction or other physical development is included in any ATMP alternative, construction impacts are to be analyzed in the context of specific resource categories—for example, noise, air quality, water quality, Section 4(f), or biotic communities—with cross-reference to this section to avoid analysis duplication.

Significant Impact Threshold and Mitigation

Construction impacts alone are rarely significant pursuant to NEPA. Indicators of potentially significant impacts include construction in an ecologically sensitive area or construction involving significant effects related to other impact categories, such as air quality, water quality, or biotic communities, which cannot be mitigated. Any measures necessary to mitigate or prevent significant impacts will be specified in the EA or EIS and appropriately incorporated into the selected ATMP alternative.

3.9 ENERGY USE AND CONSUMABLE NATURAL RESOURCES

Introduction

The term *natural resources,* for the purpose of this discussion, refers to the use of renewable or non-renewable energy such as fuel or electricity and other consumable resources. The use of the term in this context is standard NEPA usage under CEQ regulations and is not to be confused with the term as it is used in NPATMA, which has been determined to encompass other resources of national parks, including air, coastal, and wildlife resources.

EO 13123, Greening the Government through Efficient Energy Management (64 FR 30851, June 8, 1999), encourages each federal agency to expand the use of renewable energy within its facilities and in its activities. The EO also requires each federal agency to reduce petroleum use,

total energy use, and associated air emissions and water consumption in its facilities. EO 13423, Strengthening Federal Environmental, Energy, and Transportation Management (January 24, 2007), replaced EO 13123 which sets goals for federal agency energy efficiency and requires that federal agencies conduct their environmental, transportation, and energy-related activities under the law in support of their respective missions in an environmentally, economically, and fiscally sound, integrated, continuously improving, efficient, and sustainable manner.

FAA Order 1053.1, Policies and Procedures for Energy Planning and Conservation, provides for assessing energy demands. NPS adheres to all federal policies governing energy and water efficiency, renewable resources, and use of alternative fuels as established in the Energy Policy Act of 1992. ATMPs are not expected to result in a measurable effect on local supplies of energy or natural resources.

Analysis Methods and Presentation

1. The alternatives will be examined to identify any proposed major changes in stationary facilities or the movement of air tour aircraft and related ground-support vehicles that would have a measurable effect on local supplies of energy and natural resources.
2. If there are major changes, power companies or other suppliers of energy will be contacted to determine if projected demands can be met by existing or planned source facilities.
3. If the EA identifies problems such as demand exceeding supply, additional analysis may be required in an EIS.
4. The Department of Energy may be contacted to determine additional specific analysis needed for energy use and to judge the seriousness of impacts.

Threshold of Significant Impact

The following conditions would be regarded as significant impacts:

- Major changes in stationary facilities or fuel consumption where the demand for energy will exceed local supply.
- Substantial use of natural resources that are in short supply.

3.10 HAZARDOUS MATERIALS, POLLUTION PREVENTION, AND SOLID WASTE

Introduction

The handling and disposal of hazardous materials, chemicals, substances, and wastes are governed by four primary laws: the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980; the Pollution Prevention Act of 1990; the Toxic Substances Control Act (TSCA); and the Resources Conservation and Recovery Act (RCRA) of 1976. CERCLA provides for consultation with natural resources trustees and for clean-up of any release of a hazardous substance (excluding petroleum) into the environment. The Pollution Prevention Act focuses government attention on reducing the amount of pollution through cost-effective changes in production, operation, and raw materials use. TSCA provides authority to regulate the manufacturing, processing, import, and use of chemicals. RCRA governs the

generation, treatment, storage, and disposal of hazardous wastes; it also provides a framework for the management of non-hazardous or solid waste. EO 12088 as amended directs federal agencies to comply with applicable pollution control standards.

The potential for release of hazardous materials, such as aircraft fuel or other fluids or substances associated with helicopters or fixed-wing aircraft, due to a mishap or accident is low. However, in the event of such a release or threatened release of a contaminant within a national park environment, NPS would identify, assess, and take response actions as promptly as possible to address the situation (see NPS Management Policies, 2006).

ATMPs are not expected to involve any development or other actions that would result in the generation, disturbance, transportation, treatment, storage, or disposal of hazardous or solid waste.

Analysis Methods and Presentation

1. If no such actions are involved, a summary statement is to be included in the NEPA document. No further analysis is required.
2. If required, the analysis should:
    a. Consider applicable permitting requirements, federal and state guidelines and regulations, and solid waste storage, transport, or disposal.
    b. Address the cost and feasibility of each alternative regarding avoidance or use of hazardous materials, hazardous waste, recycled materials, recycled products, and any related permits, remediation, storage, transport, or disposal.
    c. Indicate the presence of any sites listed or under consideration for listing on the National Priority List established by EPA.
    d. Hold consultation with appropriate state and federal agencies, including NPS, for areas within the national park.

Threshold of Significant Impact

Any of the following would be considered significant:

- Failure to meet applicable local, state, or federal laws and regulations on hazardous or solid waste management.
- Disposal that would adversely affect water quality or other environmental resources may be discussed under those sections of the environmental analysis.
- Actions that involve property listed on EPA's National Priority List are considered significant by definition.

3.11 LIGHT EMISSIONS AND NIGHT SKY

Introduction

FAA 1050.1E, Section 12.1, states that analysis of potential impacts due to light emissions or visual impacts associated with a federal action may be necessary. Consideration of impacts to night sky (or lightscapes) is also required by NPS Management Policies, 2006, Section 4.10.

Visual impacts of commercial air tours on people and properties covered by Section 4(f) of the DOT Act should be considered. For ATMPs, the methodologies and thresholds for assessing visual impacts to cultural resources and visitors are covered in Sections 3.4.2 and 3.4.3, respectively.

Commercial air tour operations are normally conducted only during daylight hours when aircraft light emissions will not be a factor and lightscapes and night sky will not be affected. There may be a few exceptional locations where such operations are conducted during periods of darkness. Air tour aircraft landing facilities within or in the vicinity of a national park may be a source of stationary light emissions (e.g., from airfield lighting, visual landing aids, and rotating airfield beacons) if such facilities are used during periods of darkness.

Where nighttime air tour operations occur, consideration must be given to the extent to which air tour aircraft lighting will create an annoyance among people within or in the vicinity of the park unit or interfere with their normal activities. A naturally dark night or a pristine starry night sky is an important element of scenery in a park unit and of experiencing a natural park setting especially in wilderness areas.

Analysis Methods and Presentation

1. If no commercial air tour operations occur or are expected to occur during periods of darkness and no new stationary sources of light (e.g., landing area lighting) are included directly or are likely to result from implementation of an ATMP, a summary statement is to be included in the NEPA document. No further analysis is required.

2. If commercial air tour operations occur or are expected to occur on a regular basis during periods of darkness or if new stationary sources are envisioned, the following considerations related to the amount or type of light created by aircraft or the stationary source should be addressed:

    a. Will it alter the cycle of light in the area beyond the range of natural variability?

    b. Will it create more than a negligible impact on the night sky, the number of stars, astronomical objects, and visible atmospheric phenomena?

    c. Will it be likely to alter biological processes or behavior?

    d. Will it alter historic objects, cultural landscapes, wilderness areas, or other unique resources?

3. Based on this information, conclusions will be drawn regarding the impact of aircraft and stationary source lighting on lightscapes and night sky.

4. Also based on this information, conclusions will be drawn regarding the potential annoyance caused by aircraft and stationary source lighting.

Threshold of Significant Impact

FAA and NPS have no specific threshold for light emission impacts or night sky impacts. NPS uses guidelines set forth in its Interim Final Guidance on Assessing Impacts and Impairment (July 2003) to characterize lightscape and night sky impacts as "negligible," "minor," "moderate," or "major."

3.12 DOT ACT SECTION 4(F) IMPACTS (RECODIFIED AT 49 U.S.C. SECTION 303(C))

Introduction

Section 4(f) of the DOT Act , which was recodified and renumbered as Section 303(c) of 49 U.S.C., provides that the Secretary of Transportation will not approve any program or project that requires the use of any publicly owned land from a public park, recreational area, or wildlife and waterfowl refuge of national, state, or local significance or land from an historic site of national, state, or local significance, as determined by the officials having jurisdiction over the land, unless there is no feasible and prudent alternative to the use of such land and such program and the project includes all possible planning to minimize harm resulting from such use. Where federal lands are administered for multiple uses, the federal official having jurisdiction over the lands shall determine whether the subject lands are in fact being used for park, recreational, wildlife, waterfowl, or historical purposes. National wilderness areas may serve similar purposes and shall be considered subject to Section 4(f) unless the controlling agency specifically determines that, for Section 4(f) purposes, the lands are not being used. DOT and DOI have determined that publicly owned waters of designated wild and scenic rivers are included as 4(f) properties (DOT Section 4(f) Policy Paper, revised June 7, 1989; DOI Handbook on Departmental Review of Section 4(f) Evaluations, revised October 2003). Requirements are set forth in FAA Order 1050.1E, Appendix A, Section 6, and in DOT Order 5610.1C, Attachment 2, paragraph 4. FAA also uses FHWA's 4(f) guidance to the extent relevant.

Any part of a publicly owned park, recreational area, refuge, wild and scenic river, historic site, or wilderness area serving similar purposes is presumed to be significant unless there is a statement of insignificance relative to the whole park by the federal, state, or local official having jurisdiction. DOI has declared lands of the national park system as being significant parks, recreational areas, wildlife and waterfowl refuges, and historic sites, and has stated its opinion that Section 4(f) applies to them for any use by DOT *(Handbook on Departmental Review of Section 4(f) Evaluations,* Department of the Interior National Park Service, US Fish and Wildlife Service, Office of Environmental Policy and Compliance, February 2002; revised October 2003).

DOT Section 4(f) uniquely governs transportation programs and projects subject to approval by an agency that is part of USDOT (e.g., FAA, FHWA, Federal Transit Administration). It does not apply to other agencies such as NPS. FAA must consult all appropriate federal, state, and local officials having jurisdiction over affected Section 4(f) resources when determining whether project-related impacts would use the resources. However, following consultation, determinations of Section 4(f) use by aviation programs and projects are the sole responsibility of FAA.

Use within the meaning of Section 4(f) includes not only actual physical takings of such land but also adverse indirect impacts amounting to substantial impairment (constructive use) as well. A project that respects a park's territorial integrity may still substantially impair a park and take it in every practical sense. When there is no physical taking but there is the possibility of constructive use, FAA must determine if the impacts would substantially impair the 4(f) resource. Substantial impairment under Section 4(f) is a specific standard relating to transportation use and occurs only when the activities, features, or attributes, purposes, and values of the resource that contribute to its significance or enjoyment are substantially diminished. With respect to aircraft noise, for example, noise must be at levels high enough to have negative consequences of a substantial nature that amount to a taking of a park or a portion of a park for transportation purposes. This is a different standard under different statutory authority than "impairment" as determined by NPS under NPS statutory authority.

Every ATMP NEPA document will include Section 4(f) review because every ATMP will involve a national park. Specific resources within the park that have special qualities relative to Section 4(f) review, such as historic sites, should also be identified. There may also be lands subject to Section 4(f) review within the ATMP planning area that are outside the park boundary. ATMPs are not expected to involve physical taking of land. The constructive use determination is, therefore, the most applicable. Given the objective in NPATMA for an ATMP to develop acceptable and effective measures to mitigate or prevent significant adverse impacts of commercial air tour operations, an ATMP should not cause constructive use under Section 4(f). However, it is possible that some alternatives considered during the NEPA review for an ATMP could be determined to involve constructive use.

Analysis Methods and Presentation

1. Section 4(f) review requires a complete description of all properties within the ATMP planning area subject to a 4(f) determination, both inside and outside national park boundaries, including the qualities and values that should be considered for a constructive use determination.

2. If no physical taking is involved, a summary statement is to be included in the NEPA document. Further analysis is required for constructive use.

3. For constructive use determinations, impacts of each ATMP alternative are analyzed in the context of specific categories—for example, the impacts of air tour noise on the park as a whole as well as on specially designated areas included within the purview of Section 4(f) such as historic sites within a park—to avoid analysis duplication. Constructive use determinations with appropriate cross-references are documented in the DOT Section 4(f) section of the NEPA document.

4. FAA will consult with appropriate federal, state and local officials with jurisdiction over the affected 4(f) resources, including NPS, when making constructive use determinations. NPS's views on the determinations affecting 4(f) resources at national park units will be provided to FAA and included in the NEPA document. NPS will provide comments in accordance with guidance set forth in the *Handbook on Departmental Review of Section*

4(f) Evaluations. Following consultation, FAA has the final responsibility for making the Section 4(f) determinations.

5. An FAA determination of actual or constructive use involving the selected alternative at the end of the NEPA review would require a Section 4(f) determination that there is no feasible and prudent alternative to the use of land protected under Section 4(f) and that the project includes all possible planning to minimize harm resulting from such use.

Threshold of Significance

A significant impact would occur pursuant to NEPA when an ATMP alternative either involves more than a minimal physical use of a Section 4(f) property or is deemed a constructive use that substantially impairs the 4(f) property and mitigation measures do not eliminate or reduce the effects of the use. Substantial impairment would occur when impacts to Section 4(f) resources are sufficiently serious that the value of the site in terms of its prior significance and enjoyment is substantially reduced or lost.

3.13 CUMULATIVE EFFECTS

Introduction

CEQ regulations define "cumulative impacts" as impacts on the environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of which type of agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR Part 1508.7). Pursuant to CEQ, a cumulative impact assessment is required for all ATMPs. Additional information and guidance on cumulative effects analysis may be found in the CEQ publication *Considering Cumulative Effects under the National Environmental Policy Act*, January 1997.

As described in the previous impact category sections, ATMP impacts are generally predicated on (1) the physical characteristics of sound emitted by the aircraft and (2) the optical character, or visibility, of the aircraft. The overall impact of these characteristics is further dependent upon the operational aspects of air tours: altitudes relative to the ground, routes, time of transit or time in place, and frequency of operation. Examples of other potential contributors to cumulative impacts include:

- Road or highway vehicle use
- Recreational facilities and use
- Adjacent mines or oil wells
- NPS operations
- Airports and overflights of all types
- Residential and industrial development

Resources or values at risk in the cumulative impacts analysis are those previously identified as being potentially affected by air tours. These elements may include:

- Soundscape
- Air quality, including visibility
- Visitors and visitor experience, including visual quality
- Wildlife
- Cultural resources
- Specially designated areas, including wilderness
- Section 4(f) resources
- Compatible land use
- Socioeconomics

Analysis Methods and Presentation

Direct and indirect impacts of the ATMP alternatives will have been analyzed and documented in previous sections of the EA or EIS. As a result, the cumulative impacts section of the EA or EIS should be at the end of the chapter on environmental consequences and should address impacts according to relevant impact categories. In addition, public and agency scoping comments will have been reviewed by this time in the NEPA process, and any credible and relevant information regarding past, present, and reasonably foreseeable activities should be known for use in the cumulative impacts analysis. The analysis should comprise the following:

1. List all past, present, and reasonably foreseeable activities identified and considered, including those on private and other agency lands, in and about the area(s) of concern that affect the defined resource elements. For most ATMP topics, this will likely be limited to existing and reasonably foreseeable impacts.
2. Define or refer to any previous definition of the resource or value at risk and the resource elements (or measurable indicators developed for each element). Measures should be derived from the assessment of direct and indirect effects and quantified if possible.
3. Describe or map the area(s) of concern with respect to the resource at risk or provide a reference to it elsewhere in the analysis and assess the potential for cumulative impacts.
4. If no cumulative impacts are identified within any of the impact topics, a summary statement is to be included in the NEPA document to the effect that no further analysis is required.
5. If cumulative impacts are identified, the total impact of all relevant current and reasonably foreseeable activities on the resource at risk should be assessed. The contribution of each individual source should be identified and (if possible) expressed in quantifiable terms.
6. Discuss the contribution of direct and indirect impacts on this resource to the total cumulative effect.

Since air tour impacts are generally related to the sight and sound of the aircraft, it is important to try and document other past, present, and reasonably foreseeable future actions that contribute to sound and/or visual impacts within the study area and apply them to the relevant impact categories. The contribution of air tours to the present noise or soundscape condition can be documented in the EA or EIS based on two comparisons:

1. Comparison of the Natural Ambient to the Existing Ambient without Air Tours. This provides information on the contributions of all current human-caused sounds except the sound source of interest (air tours) on the natural soundscape. Human-caused sounds may include park visitors, NPS programs, vehicular traffic, and some aircraft overflights (high-altitude commercial jets, general aviation, military aircraft).
2. Comparison of the Natural Ambient and the Existing Ambient without Air Tours for all alternatives.
3. The Existing Ambient without Air Tours is compared to the Existing Ambient with Air Tours for all alternatives. The cumulative ambient is essentially a cumulative L_{Aeq}, determined by adding the noise exposure due to air tours to the Existing Ambient without Air Tours. The sound-level addition is performed logarithmically.

To capture the collective (or cumulative) sound impacts from each alternative, the air tour noise from each alternative can be added to the Existing Ambient without Air Tours map. These sound levels can then be analyzed with respect to each of the relevant impact categories to determine the level of cumulative impact (see Figure 3-5). Cumulative visual impacts may not be as easy to quantify; therefore, a qualitative analysis could be performed.

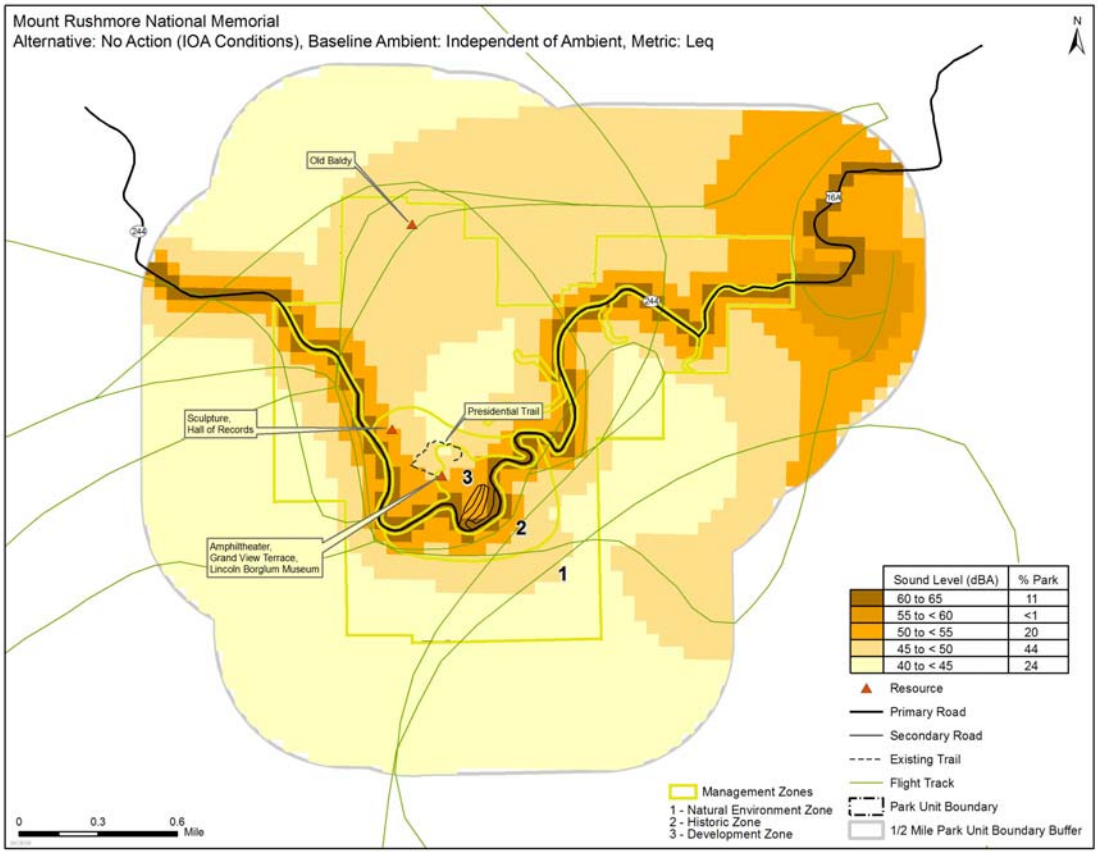


Figure 3-5. Example Output Noise Contour for Mount Rushmore National Memorial: Cumulative Noise

Threshold of Significance

No specific threshold of significance is established for cumulative impacts for ATMPs. Cumulative impacts from all relevant impact categories for each alternative should be identified and brought together. The total cumulative effect should be discussed, along with the contribution of air tours as a source in the context of what may be considered significant and what may be considered as impairment for each resource at risk. A concluding assessment of total impact for each alternative, added to the impacts of past, current, and reasonably foreseeable activities, should be provided.

4.0 MANAGING ATMPs

4.1 INTRODUCTION

This section will address how to implement, monitor and evaluate the ATMP and how and under what circumstances adjustments or adaptations could be made. This includes which thresholds would apply in a plan that regulates use in some fashion as well as what could be allowed without triggering additional NEPA analysis. These items might be addressed by applying specific monitoring and administrative practices (e.g., permitting, operator reporting, transponders, use of QT) as features of each alternative (or all alternatives), as mitigation, or as existing policy requirements that need no NEPA approvals.

4.2 COMPLIANCE MONITORING, INVESTIGATION, AND ENFORCEMENT PROCEDURES

Once established, the ATMP will be published in the Federal Register and copies made available to the public. FAA's authority for enforcement of an ATMP stems from the Federal Aviation Act of 1958 and NPATMA. FAA will monitor commercial air tour operator compliance with an ATMP through periodic, random surveillance of commercial air tour operators and appropriate investigation of credible reports of suspected non-compliance. Allegations of non-compliance with an ATMP may be reported to FAA's local FSDO or the park superintendent.

Any violation reports received by NPS, which include the necessary information outlined below, should be forwarded to FAA's local FSDO. All monitoring, investigation, and enforcement of the ATMP will be conducted by FAA in accordance with its current protocols.

Where to Report the Information

Within FAA, the FSS monitors aircraft operations. Locally, Flight Standards District Office inspectors work in either an FSDO or a Certificate Management Office (CMO). The nearest office is likely listed in the telephone directory, under the section assigned to the U.S. Government and listings under "Transportation, Department of," and/or "Federal Aviation Administration." If no FSDO or CMO is listed, any FAA facility can be called to obtain this information. FSS local and regional offices may also be found on the Internet at www.faa.gov on the FSS home page.

Providing Facts and Supporting Evidence: Witnesses, Law Enforcement, and Photographs

FAA is a safety organization with legal enforcement responsibilities. Therefore, it needs facts before an investigation can be conducted. To save time, a caller should have this information ready, along with any notes. FAA may also request a written statement.

Types of information that FAA will need include:

- *Identification:* Was the aircraft military or civil? High- or low-wing? Was the registration number on the fuselage visible? (On US-registered aircraft, this number is preceded by an upper-case "N.")

- *Time and place:* Exactly when and where did the alleged incident occur? What direction was the aircraft flying? What color was it?
- *Flight characteristics:* What was the aircraft doing? Was it engaged in any unusual maneuvers?
- *Altitude:* How high or low was the aircraft flying? On what is this estimate based? Was the aircraft level with or below the elevation of a prominent object such as a tower or other structure?

Identification of witnesses who could confirm any of the above information is also important. FAA may wish to contact them, so as much contact information as possible (names/addresses/phone numbers) should be provided.

It is also helpful to determine if local law enforcement officials were aware of the flight in question. While they have limited authority in aviation matters, they are considered by the courts to be trained observers, and their written statements or reports will make excellent evidence if the incident proceeds to trial.

If photographs or video were obtained, FAA will need to know who took the shots or footage and at what time of day; the type of camera, lens, and film that were used; the shutter speed; and the height of any identifiable landmarks that appear in the image.

FAA Actions

Once FAA has the appropriate facts, an FAA safety inspector from the local FSDO will attempt to identify the offending aircraft operator if there is enough information to warrant an investigation and the operation reported is considered a potential violation of federal aviation regulations. This can be done in several ways. Aircraft flight records may be checked against air traffic control information if available and/or sightings by other observers such as local law enforcement officers. The registered aircraft owner may need to be traced and contacted since the owner and operator may be two different entities.

Feedback

FAA welcomes assistance from NPS and citizens in identifying and prosecuting all alleged violations of federal aviation regulations. Citizens complaining about low-flying aircraft may, upon request, be advised of the results of the FAA investigation. Those who desire such feedback should give FSDO their name, address, and home and work telephone numbers. For further information, written inquiries can be directed to the Community and Consumer Liaison Division, APA-200, Federal Aviation Administration, Washington, DC 20591, and phone inquiries can be made during regular duty hours (7:30 a.m.−4:00 p.m., EST, Monday−Friday) to (202) 267-3481.

Federal Aviation Regulations

Title 14, CFR, Section 91.119 of the Air Traffic and General Operating Rules, which prescribes minimum safe altitudes for aircraft, is as follows:

§91.119 Minimum safe altitudes: General.

Except when necessary for takeoff or landing, no person may operate an aircraft below the following altitudes:

(a) *Anywhere.* An altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property on the surface.

(b) *Over congested areas.* Over any congested area of a city, town, or settlement, or over any open-air assembly of persons, an altitude of 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft.

(c) *Over other than congested areas.* An altitude of 500 feet above the surface, except over open water or sparsely populated areas. In those cases, the aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure.

(d) *Helicopters.* Helicopters may be operated at less than the minimums prescribed in paragraph (b) or (c) of this section if the operation is conducted without hazard to persons or property on the surface. In addition, each person operating a helicopter shall comply with any routes or altitudes specifically prescribed for helicopters by the Administrator.

4.3 ADAPTATIONS AND AMENDMENTS

This section will address triggers that incite needs for adaptations to an existing ATMP. The FAA Administrator, in cooperation with the NPS Director, may amend an ATMP. These amendments will be published in the Federal Register for notice and comment.

According to NPATMA, the FAA Regional Administrator will request the ATMP amendment. At a minimum, the amendment request will include:

- The park unit(s) for which the amendment to the ATMP is being proposed.
- The part(s) of the ATMP to which the amendment applies.
- Reason(s) for the proposed amendment.
- Alternatives considered.
- Potential impact(s) of the proposed amendment on the human and natural environment.
- Results of discussions with the local flight inspector and park-unit superintendent.

After receiving an amendment request, the FAA Administrator, in cooperation with the NPS Director, will identify other information from the applicant that will be necessary for an informed decision. This action does not preclude initiating the appropriate level of NEPA review based on the details of the amendment request. After receiving all appropriate information, the PMT will recommend the level of NEPA review for a specific park unit to the FAA Administrator and the NPS Director.

The FAA Administrator will place the amendment request in the Federal Register. In cooperation with the NPS Director, the FAA Administrator will consider the amendment request, public comment from the Federal Register notice, and recommendations from the PMT to reach a final decision.

4.4 ATMP REPORTING

The FAA is developing a Web-based Air Tour Operating Authority information system that will allow commercial air tour operators the ability to report the number of air tour operations they conduct. This reporting information will be available for review by FAA and NPS. These reporting requirements were recommended by the General Accountability Office and are anticipated to be included as a requirement in the FAA reauthorization legislation. The details of the type of data reporting information are still being finalized and will be included later.

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6.0 GLOSSARY

Acoustic Energy – Commonly referred to as the mean-square sound-pressure ratio, sound energy, or just plain energy, acoustic energy is the squared sound pressure (often frequency-weighted), divided by the squared reference sound pressure of 20 μPa, the threshold of human hearing. It is arithmetically equivalent to 10LEV/10, where LEV is the sound level, expressed in decibels.

Alternatives – Other options that may be selected to complete a project in which mitigation measures have been incorporated into the proposed action to avoid significant environmental effects.

Area of Potential Effect (APE) – The geographic area or areas within which the ATMP may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE for each ATMP will include the boundaries of the subject national park unit and the area within one-half mile outside the park boundary.

A-weighting – A frequency-based methodology used to account for changes in human hearing sensitivity as a function of frequency. The A-weighting network de-emphasizes the high (6.3 kHz and above) and low (below 1 kHz) frequencies and emphasizes the frequencies between 1 and 6.3 kHz in an effort to simulate the relative response of human hearing.

Backcountry – Any location in a study area subject to minimal human activity, such as designated wilderness areas or restricted, hiking, and camping areas (destinations generally located one hour or more from frontcountry locations).

Cooperating Agency – A federal agency other than the lead agency, with legal jurisdiction or special expertise to comment on the project actions of the lead agency. A state or local agency of similar qualifications or, when the effects are on a reservation, an Indian tribe, may by agreement with the lead agency become a cooperating agency.

Cumulative Effects – Effects that are the result of incremental impacts of an action, when added to other past, present, and reasonably foreseeable future actions, regardless of which agency (federal or non-federal) or person undertakes such actions.

Decibel (dB) – A unit of measure for defining a noise level or a noise exposure level. The number of decibels is calculated as 10 times the base-10 logarithm of the squared sound pressure (often frequency-weighted), divided by the squared reference sound pressure of 20 μPa, the threshold of human hearing.

Energy-Equivalent Sound Level (TEQ, denoted by the symbol L_{AeqT}) – Ten times the base-10 logarithm of the time-mean-square, instantaneous A-weighted sound pressure, during a stated time interval, T (where $T = t_2-t_1$, in seconds), divided by the squared reference sound pressure of 20 μPa, the threshold of human hearing. L_{AeqT} is related to L_{AE} by the following equation:

$$L_{AeqT} = L_{AE} - 10Lg(t_2 - t_1) \quad \text{(dB)}$$

where L_{AE} = Sound exposure level (see definition below).

The L_{Aeq} for a specific time interval, T1 (expressed in seconds), can be normalized to a longer time interval, T2, using the following equation:

$$L_{AeqT2} = L_{AeqT1} - 10Lg(T2/T1) \qquad (dB)$$

Exceedence Percentile (L_x) – This metric is the sound pressure level (L), in decibels, exceeded *x* percent of the time for the specified measurement period. The L_{50} value represents the sound pressure level exceeded 50 percent of the measurement period. L_{50} is the same as the median. The L_{90} value represents the sound pressure level exceeded 90 percent of the time during the measurement period.

Existing Ambient without Source of Interest – The composite, all-inclusive sound associated with a given environment, excluding the analysis system's electrical noise and the sound source of interest – in this case, commercial air tour aircraft.

Frequency – For a function periodic in time, the reciprocal of the period (the smallest increment of an independent variable for which a function repeats itself).

Frontcountry – Any location in a study area subject to substantial human activity, such as scenic overlooks, visitor centers, recreation areas, or destinations reached by short hikes (1 hour or less).

Hard Ground – Any highly reflective surface in which the phase of the sound energy is essentially preserved upon reflection; examples include water, asphalt and concrete.

Hertz (Hz) – Unit of frequency; the number of times a phenomenon repeats itself in a unit of time.

Impact Criteria – Thresholds, limits, or levels that may convey a sense of the magnitude of an impact to help determine the impact's significance or relative significance. Criteria bridge the gap between the impact assessment and the determination of the significance of the impact in light of the decision to be made (reference CEQ regulations at 40 CFR 1508.27).

INM Noise Model – FAA's standard methodology for aircraft noise assessments since 1978. INM is a computer program used by over 700 organizations in over 50 countries to assess changes in noise impact. Requirements for INM use are defined in FAA Order 1050.1E, Environmental Impacts: Policies and Procedures, and Federal Aviation Regulations (FAR) Part 150, Airport Noise Compatibility Planning.

Lead Agency – The agency or agencies with primary responsibility for preparing the environmental compliance document.

Line Source – Multiple point sources moving in one direction, radiating sound cylindrically. (*Note:* Sound levels measured from a line source decrease at a rate of 3 dB per doubling of distance.)

Maximum Sound Level (L_{max}) – The maximum sound pressure level, generally expressed as dBA, in a given period.

Natural Ambient – The natural sound conditions found in a study area, including all sounds of nature (wind, streams, wildlife, etc.) and excluding all human and mechanical sounds.

No Action Alternative – For the ATMP program, the no action alternative evaluates the existing commercial air tour operating conditions where the air tour operators are authorized to fly, up to number of operations granted by FAA in the Operating Specifications, referred to as Interim Operating Authority (IOA).

Noise-Free Interval (NFI) – This metric is the length of the continuous period of time during which only natural sounds are audible.

Photo-scaling – The technique of photo-scaling relies on the geometric principle that the ratio of the lengths of the bases of two similar isosceles triangles is equal to the ratio of their heights. "Similar" in this context has the geometric meaning that the vertex angles of the isosceles triangles are equal. In photo-scaling, the first isosceles triangle has the distance from the observer to the object as the height of the triangle and the known length of the object as the triangle's base. The second isosceles triangle has the camera/lens combination's focal length as the height of the triangle and the length of the recorded image as the triangle's base. This methodology uses SAE Aerospace Information Report AIR 902 as the basis for determining the Closest Point of Approach (CPA) of an object moving relative to an observer.

Point Source – Source that radiates sound spherically. (*Note:* Sound levels measured from a point source decrease at a rate of 6 dB per doubling of distance.)

Scoping – A process prescribed in 40 CFR (CEQ regulations) for eliciting public comments on a proposed action and thereby determining the significant issues to be evaluated in an environmental document and limiting the scope of study accordingly.

Soft Ground – Any highly absorptive surface in which the phase of the sound energy is changed upon reflection; examples include terrain covered with dense vegetation or freshly fallen snow. (*Note*: At grazing angles greater than 20 degrees, which can commonly occur at short ranges, or in the case of elevated sources, soft ground becomes a good reflector and can be considered hard ground).

Sound – Auditory sensation evoked by the oscillation in pressure, stress, particle displacement, particle velocity, etc., in a medium with internal forces (e.g., elastic or viscous), or the superposition of such propagated oscillations.

Sound Pressure Level (SPL) – Ten times the base-10 logarithm of the time-mean-square sound pressure, in a stated frequency band (often frequency-weighted), divided by the squared reference sound pressure of 20 μPa, the threshold of human hearing.

$$SPL = 10Lg[p^2/ p_{ref}^2]$$

where p^2 = time-mean-square sound pressure and p_{ref}^2 = squared reference sound pressure of 20 μPa.

Soundscape – Park natural soundscape resources encompass all of the natural sounds that occur in parks, including the physical capacity for transmitting those natural sounds and the interrelationships among park natural sounds of different frequencies and volumes. Natural sounds occur within and beyond the range of sounds that humans can perceive, and they can be transmitted through air, water, or solid materials. NPS will preserve, to the greatest extent possible, the natural soundscapes of parks.

Time Above Ambient – The amount of time that sound pressure levels from a specific source of interest are greater than a specific ambient sound pressure level (natural or existing).

Tribal Lands – (a) All lands within limits of an Indian reservation under the jurisdiction of the US government, notwithstanding the issuance of a patent and including right-of-way running through the reservation; (b) all dependent Indian communities within the borders of the United States, whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a state; and (c) all Indian allotments, the Indian titles to which have not been extinguished, including right-of-way running through the same [18 U.S.C. Section 1151].

7.0 APPENDICES

APPENDIX A. ATMP PROGRAMMATIC INFORMATION

APPENDIX A-1. MEMORANDUM OF UNDERSTANDING BETWEEN FAA AND NPS

MEMORANDUM OF UNDERSTANDING BETWEEN THE FEDERAL AVIATION ADMINISTRATION AND THE NATIONAL PARK SERVICE

IMPLEMENTATION OF AIR TOUR MANAGEMENT PLANNING AS DIRECTED BY THE NATIONAL PARKS AIR TOUR MANAGEMENT ACT OF 2000

I. Purpose

The purpose of this Memorandum of Understanding ("MOU") is to establish a framework for cooperation and participation between the Federal Aviation Administration ("FAA") and the National Park Service ("NPS") to implement the National Parks Air Tour Management Act of 2000, Public Law No.106-181 ("the Act").

This MOU addresses the general scope of work for producing air tour management plans ("ATMPs") and the general financial terms of agreement for each agency, and the process the agencies will use to develop and approve ATMPs and associated environmental documents.

II. Background

A. Provisions of the Act

1. Findings

The Act, which became effective April 5, 2000 (Public Law No. 106-181, Title VIII, 114 Stat. 61, codified at 49 U.S.C. § 40128), contains the following congressional findings:

a.) the Federal Aviation Administration has sole authority to control airspace over the United States;

b.) the Federal Aviation Administration has the authority to preserve, protect, and enhance the environment by minimizing, mitigating, or preventing the adverse effects of aircraft overflights on public and tribal lands;

c.) the National Park Service has the responsibility of conserving the scenery and natural and historic objects and wildlife in national parks and of providing for the enjoyment of the national parks in ways that leave the national parks unimpaired for future generations;

d.) the protection of tribal lands from aircraft overflights is consistent with protecting the public health and welfare and is essential to the maintenance of the natural and cultural resources of Indian tribes;

e.) the National Parks Overflights Working Group, composed of general aviation, commercial air tour, environmental, and Native American representatives, recommended that the Congress enact legislation based on

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the Group's consensus work product; and

f.) this title reflects the recommendations made by that Group.

2. Other Provisions

Section 803 of the Act directs the Administrator of the FAA, in cooperation with the Director of the NPS, to develop an ATMP for any national park or tribal land for which such a plan is not in effect whenever a person applies for authority to conduct a commercial air tour operation over the park. 49 U.S.C. § 40128(b)(1)(A). The objective of an ATMP is to develop acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon the natural and cultural resources, visitor experiences, and tribal lands, 49 U.S.C. § 40128(b)(1)(B). Any methodology adopted by a Federal agency to assess air tour noise in any unit of the national park system shall be based on reasonable scientific methods. Act § 808, 114 Stat. 194.

Section 803 of the Act specifies that for purposes of complying with regulations of the Council on Environmental Quality ("CEQ") implementing the National Environmental Policy Act ("NEPA") (i.e., 40 C.F.R. sections 1501.3 and 1501.5 through 1501.8), the FAA is the lead agency and the NPS is a cooperating agency.

The Act provides that "[i]n establishing an air tour management plan . . ., the Administrator and the Director shall each sign the environmental decision document required by Section 102 of [NEPA] which may include a finding of no significant impact, an environmental assessment, or an environmental impact statement and the record of decision for the air tour management plan." 49 U.S.C. § 40128(b)(2).

In establishing an ATMP, the Administrator and the Director shall: (1) hold at least one public meeting with interested parties; (2) publish the proposed plan in the Federal Register; (3) comply with the regulations set forth in sections 1501.3 and 1501.5 through 1501.8 of title 40, Code of Federal Regulations; and (4) solicit the participation, as a cooperating agency, of any Indian tribe whose lands are, or may be, overflown by aircraft involved in a commercial air tour operation.

B. Provisions of Regulations of the Council on Environmental Quality ("CEQ")
The provisions of 40 C.F.R. §§ 1501.5 through 1501.8 outline the responsibilities of, and relationships between, a lead and cooperating agency. The key elements are as follows:

1. The lead agency decides whether to prepare an environmental impact statement ("EIS"), supervises the preparation of an EIS, and may set appropriate time limits for the NEPA process.

2. The lead agency shall:

   a.) use the environmental analysis and proposals of cooperating agencies with jurisdiction by law or special expertise, to the maximum extent possible consistent with its responsibility as lead agency;

b.) meet with a cooperating agency at the latter's request;

c.) determine the scope and the significant issues to be analyzed in depth in an EIS;

d.) identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review; and

e.) allocate assignments for preparation of an EIS among the lead and cooperating agencies, with the lead agency retaining responsibility for the EIS.

3. A cooperating agency shall:

a.) participate in the NEPA process at the earliest possible time;

b.) participate in the scoping process (described in 40 CFR section 1501.7); and

c.) assume, upon request of the lead agency, responsibility for developing information and preparing environmental analyses including portions of the EIS concerning which the cooperating agency has special expertise.

Although these provisions of the CEQ regulations apply specifically to EISs, the FAA and NPS agree that they will apply to the development of ATMPs and all associated environmental documents, including environmental assessments ("EAs").

III. Implementation

A. Definitions
The definitions in the Act apply to this MOU. See 49 USC § 40128(f).

B. General
The combined directions in the Act and the CEQ regulations are distilled into the following key points related to responsibilities of the FAA and the NPS for developing ATMPs and companion NEPA review documents.

1. The Administrator of FAA, in cooperation with the Director of the NPS, shall establish an ATMP for any national park or tribal land for which such a plan is not in effect whenever a person applies for authority to conduct a commercial air tour operation over the park.

2. For the purposes of preparing environmental documents under NEPA for ATMPs, the FAA is the lead agency and the NPS is a cooperating agency. In accordance with the Act (see Section II.A.2 above), the Administrator and the Director shall both sign EAs, EISs, findings of no significant impact, and records of decision that are prepared for ATMPs.

3. The development of ATMPs and associated environmental documents under NEPA shall be a fully cooperative process recognizing and complying, to the greatest extent possible consistent with the FAA's responsibility as lead agency, with the existing legislative, regulatory, and policy mandates of both agencies.

C. Procedures

The agencies agree that ATMPs and associated environmental documents will be prepared by the two agencies with assistance, as agreed upon, from third-party governmental agencies and/or private contractors. The agencies further agree to cooperate in the selection of such third-party agencies and private contractors.

The FAA, with the knowledge and concurrence of the NPS, entered into certain ATMP related contracts prior to the execution of this MOU. Specifically, a contract was previously executed with the Volpe National Transportation Center (an entity within the U.S. Department of Transportation) to provide program management and environmental services. And, a contract was previously executed with Environmental Engineering Solutions (a private contractor) to provide environmental services in support of a limited number of ATMP projects planned for fiscal year 2003. Nothing in this MOU invalidates the selection and continued use of these contract services. The FAA and NPS agree that the previous selection of these contract services was completed in a cooperative manner consistent with the terms of this MOU and the continued use of these contract services will be subject to all appropriate provisions of this Memorandum.

The following is the framework within which the agencies agree to work in establishing ATMPs and associated environmental documents under NEPA:

1. The FAA and the NPS agree to work cooperatively throughout the process of establishing ATMPs and associated NEPA documents including the initial gathering of data, development and analysis of alternatives, preparation of draft documents, identifying and determining effects, public involvement, and final approval.

2. The FAA and the NPS, with contractor support if necessary, will conduct public and agency scoping pursuant to NEPA as determined appropriate by the FAA, in cooperation with the NPS.

3. The FAA, in cooperation with the NPS, will provide the contractor with the information necessary to prepare ATMPs and associated environmental documents under NEPA, in accordance with the agencies' roles as lead and cooperating agencies under 40 C.F.R. Parts 1500-1508.

4. In the interest of streamlining the review process it will be standard practice for all ATMP and associated environmental documents prepared by a third-party governmental agency or private contractor to be delivered to the FAA and NPS simultaneously.

5. The FAA and the NPS will (with the involvement of the contractor as appropriate):

   a.) Complete agency internal review of draft ATMP and associated environmental documents within 30 days unless otherwise agreed to by the agencies.

   b.) Exchange review comments and concerns for consideration and provide copies to any third-party agency or contractor charged with preparing the documents.

   c.) Meet as necessary to resolve issues of concern.

6. Analysis of effects of air tours on parks will require scientific data and information that may be collected by one or both agencies. Preparation of ATMPs will be a cooperative

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FAA and NPS effort, therefore parallel and serial FAA/NPS analyses of the data and information will be required to expedite ATMP development. All data collected in support of ATMP development will be exchanged in a timely fashion (dates to be agreed to by the agencies). These data should include, but are not limited to, any raw acoustic data (e.g. Larson Davis files and instrumentation settings and calibration data), meteorological data, recorded audio (.wav) files, digital audiotapes, and observer logs (in Excel or similar spreadsheet format).

7. NPS will review ATMP and environmental documents prior to their public release:
   a.) Each ATMP and associated environmental and rulemaking documents (or sections thereof, as appropriate on a case-by-case basis) will be reviewed by NPS at preliminary, draft, and final stages and their concurrence/non-concurrence signature provided to the FAA.

   b.) The signatory process of NPS review will entail the execution of a standardized ATMP & Environmental Document Concurrence Form to be prepared and agreed to by the agencies.

   c.) The ATMP & Environmental Document Concurrence Form will include the following options for NPS:
      1) Concurrence with no comment.
      2) Concurrence with minor comment on or attached to the form.
      3) Non-concurrence with a statement of reason(s) and recommended alternative solution(s), and supporting documentation and analysis.

   d.) The NPS will respond in a timely manner as agreed to by the agencies when the documents are transmitted.

D. Conflict Resolution Process

1. General Provisions:
   At any time during the process outlined below, the agencies may agree to use an alternate dispute resolution process to resolve disputes.

   Nothing in this MOU precludes the use of the CEQ referral process described in 40 CFR part 1504.

2. National ATMP Issues:
   The FAA and NPS ATMP Leadership Team shall attempt to resolve key issues relating to general procedures for air tour management planning, and associated environmental documents at the lowest effective operational level. If the FAA Western-Pacific Regional Administrator and the NPS Air Resources Division Chief are unable to reach a successful resolution, then they shall elevate the dispute though proper channels, as necessary, to appropriate FAA Associate/Assistant Administrators and NPS Associate Directors, the Administrator of the FAA and Director of the NPS, and the Secretaries of Transportation and Interior.

3. ATMP Specific Issues:
   Teams that are assigned the task of producing a park-specific ATMP shall include representatives of FAA and NPS from national, regional and local levels, as needed (see

Section E. Organization). The park-specific ATMP Team, led by a designated FAA and NPS person, shall make every effort to reach agreement on key issues relating to the ATMP or associated environmental documents or underlying analyses. If agreement is not reached, either agency representative will initiate the dispute resolution process by preparing and transmitting to the other agency representative a briefing paper. This paper shall identify and discuss the issue in dispute, set forth a recommended resolution of the issue, and provide any necessary supporting documentation and attachments. The agency representatives shall use their best efforts to meet and resolve the issue within 30 calendar days of receipt of the briefing paper. Other members of the team shall participate in such meetings and resolution as determined necessary by either representative. If a final joint resolution can be developed at this level it shall be prepared in writing and signed by both agency representatives.

If the park-specific ATMP agency team leaders are unable to reach a successful resolution, then they shall transmit a briefing paper that summarizes their efforts along with the initial briefing papers to the FAA Manager, Western-Pacific Region Executive Resource Staff and the NPS Manager, Natural Sounds Program. The managers shall use their best efforts to meet and resolve the issue within 30 calendar days. Other members of the team shall participate in such meetings and resolution as determined necessary by either representative. If a final joint resolution can be developed at this level it shall be prepared in writing and signed by both agency representatives.

If the FAA Manager, Air Tour Management Plan Program and NPS Manager, Natural Sounds Program are unable to reach a successful resolution, then they shall transmit a briefing paper that summarizes their efforts along with the initial briefing papers to the FAA Western-Pacific Regional Administrator and the NPS Air Resources Division Chief. The Regional Administrator and Division Chief shall use their best efforts to meet and resolve the issue within 30 calendar days. Other members of the team shall participate in such meetings and resolution as determined necessary by either representative. If a final joint resolution can be developed at this level it shall be prepared in writing and signed by both agency representatives.

If the FAA Western-Pacific Regional Administrator and the NPS Air Resources Division Chief are unable to reach a successful resolution, then they shall elevate the dispute through proper channels, as necessary, to appropriate FAA Associate/Assistant Administrators and NPS Associate Directors, the Administrator of the FAA and Director of the NPS, and the Secretaries of Transportation and Interior.

E. Organization

Each ATMP and its associated environmental documents will require active participation by personnel at the national, regional, and field levels of both the FAA and the NPS. An ATMP Leadership Team shall be established to work with FAA and NPS headquarters and regional offices, local FAA field offices, and superintendents of the national park units. The ATMP Leadership team will be made up of FAA and NPS representatives and coordinated under the leadership of the FAA Western Pacific Regional Administrator and NPS. The purpose of the team will be to develop guidance and policy for the ATMP process; ensure consistency of familiarization materials for field personnel; provide training to field personnel (including the production of training products); provide public involvement guidance; coordinate development of ATMPs and associated environmental documents; coordinate publication of each proposed

ATMP in the Federal Register for notice and comment; and maintain a nationwide database of all current Interim Operation Authorities ("IOA"), ATMPs, Letters of Agreement ("LOA"), and Operating Authorities ("OA") issued.

At the park-specific level of ATMP and environmental document development, the ATMP Leadership Team shall be supplemented with regional and local FAA and NPS personnel as needed and as available. The team, as supplemented will utilize local expertise and input on planning and environmental data acquisition and analysis, scheduling, scope and type of public involvement, local roles and responsibilities, scope of ATMP and associated environmental documents, affected air traffic operations, and notification and consultation with interested or affected Native American Tribes.

F. Implementation Plan
The FAA, in cooperation with the NPS, will develop an Implementation Plan. The Implementation Plan will detail and further define the process of developing and implementing ATMPs and complying with applicable environmental requirements. The Plan will be consistent with this MOU.

IV. Products and Services

The main products and services provided jointly via this MOU will be:

1. The preparation of ATMPs and associated environmental documents.

2. The development of familiarization materials for each agency's regional and field personnel to enhance their understanding of the legislative and regulatory requirements, including familiarization on conducting the planning process and production of ATMPs and associated environmental documents.

V. Authorized Officials

Officials authorized to make commitments for their agency in implementation of the terms of this agreement include, but are not limited to:

National Park Service, Washington Office
Air Resources Division Chief or
Manager, Natural Sounds Program Office

Federal Aviation Administration
Western Pacific Regional Administrator or
Manager, Executive Resource Staff, Western Pacific Region.

VI. Payment

Due to the variability of factors associated with ATMP development and the significant production costs, it is imperative that the FAA and NPS coordinate their respective annual budget requests. The NPS Manager of the Natural Sounds Program Office will coordinate such efforts with the FAA Manager, Executive Resource Staff, Western Pacific Region. The FAA shall fund 60% and the NPS shall fund 40% of any mutually acceptable third-party costs

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required to produce ATMPs and associated environmental documentation. If either agency independently hires a third-party governmental agency or a private contractor to provide ATMP-related services, the amount will not be part of the 60/40 cost sharing. This funding division is predicated upon the agencies' receiving adequate funding from Congress or other appropriate sources. The FAA and NPS will consider optional funding arrangements to successfully establish all required ATMPs.

Any payment by the United States pursuant to this MOU is subject to the availability of funds appropriated for such purpose. No provision of this MOU shall be interpreted as or constitute a commitment or requirement that the United States obligate or pay funds in contravention of the Anti-Deficiency Act, 31 U.S.C. 1341.

VII. Effective Date

This agreement shall become effective on the last signature date below.

VIII. Termination and Modification

This agreement shall remain in effect until terminated. This MOU will be reviewed every five years to determine whether modifications are needed. Modifications to this MOU may be made at any time by written agreement between the FAA and the NPS.

IX. Miscellaneous

This MOU is intended only to improve the internal management of the Executive Branch and is not intended to, nor does it, create any right, benefit, or privilege, substantive or procedural, enforceable at law or equity by any party or other individual or entity against the United States, its agencies, its officers, or any other person.

X. Signatories

APPROVED:

Marion C. Blakey
Administrator
Federal Aviation Administration

10/22/03
Date

Fran P. Mainella
Director
National Park Service

4/23/04
Date

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APPENDIX A-2. NPATMA

NATIONAL PARKS AIR TOUR MANAGEMENT ACT OF 2000 (AS AMENDED)

TITLE VIII--NATIONAL PARKS AIR TOUR MANAGEMENT

SEC. 801. SHORT TITLE.

This title may be cited as the "National Parks Air Tour Management Act of 2000".

SEC. 802. FINDINGS.

Congress finds that--

(1) the Federal Aviation Administration has sole authority to control airspace over the United States;

(2) the Federal Aviation Administration has the authority to preserve, protect, and enhance the environment by minimizing, mitigating, or preventing the adverse effects of aircraft overflights on public and tribal lands;

(3) the National Park Service has the responsibility of conserving the scenery and natural and historic objects and wildlife in national parks and of providing for the enjoyment of the national parks in ways that leave the national parks unimpaired for future generations;

(4) the protection of tribal lands from aircraft overflights is consistent with protecting the public health and welfare and is essential to the maintenance of the natural and cultural resources of Indian tribes;

(5) the National Parks Overflights Working Group, composed of general aviation, commercial air tour, environmental, and Native American representatives, recommended that the Congress enact legislation based on the Group's consensus work product; and

(6) this title reflects the recommendations made by that Group.

SEC. 803. AIR TOUR MANAGEMENT PLANS FOR NATIONAL PARKS.

(a) In General.--Chapter 401 (as amended by section 706(a) of this Act) is further amended by adding at the end the following:

"Sec. 40128. Overflights of national parks

"(a) In General.--

"(1) General requirements.--A commercial air tour operator may not conduct commercial air tour operations over a national park or tribal lands, as defined by this section, except--

"(A) in accordance with this section;

"(B) in accordance with conditions and limitations prescribed for that operator by the Administrator; and

"(C) in accordance with any applicable air tour management plan for the park or tribal lands.

"(2) Application for operating authority.--

"(A) Application required.--Before commencing commercial air tour operations over a national park or tribal lands, a commercial air tour operator shall apply to the Administrator for authority to conduct the operations over the park or tribal lands.

"(B) Competitive bidding for limited capacity parks.-- Whenever an air tour management plan limits the number of commercial air tour operations over a national park during a specified time frame, the Administrator, in cooperation with the Director, shall issue operation specifications to commercial air tour operators that conduct such operations. The operation specifications shall include such terms and conditions as the Administrator and the Director find necessary for management of commercial air tour operations over the park. The Administrator, in cooperation with the Director, shall develop an open competitive process for evaluating proposals from persons interested in providing commercial air tour operations over the park. In making a selection from among various proposals submitted, the Administrator, in cooperation with the Director, shall consider relevant factors, including--

"(i) the safety record of the person submitting the proposal or pilots employed by the person;

"(ii) any quiet aircraft technology proposed to be used by the person submitting the proposal;

"(iii) the experience of the person submitting the proposal with commercial air tour operations over other national parks or scenic areas;

"(iv) the financial capability of the person submitting the proposal;

"(v) any training programs for pilots provided by the person submitting the proposal; and

NATIONAL PARKS AIR TOUR MANAGEMENT ACT OF 2000 (AS AMENDED)

"(vi) responsiveness of the person submitting the proposal to any relevant criteria developed by the National Park Service for the affected park.

"(C) Number of operations authorized.--In determining the number of authorizations to issue to provide commercial air tour operations over a national park, the Administrator, in cooperation with the Director, shall take into consideration the provisions of the air tour management plan, the number of existing commercial air tour operators and current level of service and equipment provided by any such operators, and the financial viability of each commercial air tour operation.

"(D) Cooperation with nps.--Before granting an application under this paragraph, the Administrator, in cooperation with the Director, shall develop an air tour management plan in accordance with subsection (b) and implement such plan.

"(E) Time limit on response to atmp applications.—The Administrator shall make every effort to act on any application under this paragraph and issue a decision on the application not later than 24 months after it is received or amended.

"(F) Priority.--In acting on applications under this paragraph to provide commercial air tour operations over a national park, the Administrator shall give priority to an application under this paragraph in any case in which a new entrant commercial air tour operator is seeking operating authority with respect to that national park.

"(3) Exception.--Notwithstanding paragraph (1), commercial air tour operators may conduct commercial air tour operations over a national park under part 91 of the title 14, Code of Federal Regulations if--

"(A) such activity is permitted under part 119 of such title;

"(B) the operator secures a letter of agreement from the Administrator and the national park superintendent for that
national park describing the conditions under which the operations will be conducted; and

"(C) the total number of operations under this exception is limited to not more than five flights in any 30-day period
over a particular park.

"(4) Special rule for safety requirements.—Notwithstanding subsection (c), an existing commercial air tour operator shall apply, not later than 90 days after the date of the enactment of this section, for operating authority under part 119, 121, or 135 of title 14, Code of Federal Regulations. A new entrant commercial air tour operator shall apply for such authority before conducting commercial air tour operations over a national park or tribal lands. The Administrator shall make every effort to act on any such application for a new entrant and issue a decision on the application not later than 24 months after it is received or amended.

"(b) Air Tour Management Plans.--

"(1) Establishment.--

"(A) In general.--The Administrator, in cooperation with the Director, shall establish an air tour management plan for any national park or tribal land for which such a plan is not in effect whenever a person applies for authority to conduct a commercial air tour operation over the park. The air tour management plan shall be developed by means of a public process in accordance with paragraph (4).

"(B) Objective.--The objective of any air tour management plan shall be to develop acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon the natural and cultural resources, visitor experiences, and tribal lands.

"(2) Environmental determination.--In establishing an air tour management plan under this subsection, the Administrator and the Director shall each sign the environmental decision document required by section 102 of the National Environmental Policy Act of
1969 (42 U.S.C. 4332) which may include a finding of no significant impact, an environmental assessment, or an environmental impact statement and the record of decision for the air tour management plan.

"(3) Contents.--An air tour management plan for a national park--

"(A) may prohibit commercial air tour operations over a national park in whole or in part;

"(B) may establish conditions for the conduct of commercial air tour operations over a national park, including commercial air tour routes, maximum or minimum altitudes, time-of-day restrictions, restrictions for particular events, maximum number of flights per unit of time, intrusions on privacy on tribal lands, and mitigation of noise, visual, or other impacts;

"(C) shall apply to all commercial air tour operations over a national park that are also within \1/2\ mile outside the boundary of a national park;

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"(D) shall include incentives (such as preferred commercial air tour routes and altitudes, relief from caps and curfews) for the adoption of quiet aircraft technology by commercial air tour operators conducting commercial air tour operations over a national park;

"(E) shall provide for the initial allocation of opportunities to conduct commercial air tour operations over a national park if the plan includes a limitation on the number of commercial air tour operations for any time period; and

"(F) shall justify and document the need for measures taken pursuant to subparagraphs (A) through (E) and include such justifications in the record of decision.

"(4) Procedure.--In establishing an air tour management plan for a national park or tribal lands, the Administrator and the Director shall--

"(A) hold at least one public meeting with interested parties to develop the air tour management plan;

"(B) publish the proposed plan in the Federal Register for notice and comment and make copies of the proposed plan available to the public;

"(C) comply with the regulations set forth in sections 1501.3 and 1501.5 through 1501.8 of title 40, Code of Federal Regulations (for purposes of complying with the regulations, the Federal Aviation Administration shall be the lead agency and the National Park Service is a cooperating agency); and

"(D) solicit the participation of any Indian tribe whose tribal lands are, or may be, overflown by aircraft involved in a commercial air tour operation over the park or tribal lands to which the plan applies, as a cooperating agency under the regulations referred to in subparagraph (C).

"(5) Judicial review.--An air tour management plan developed under this subsection shall be subject to judicial review.

"(6) Amendments.--The Administrator, in cooperation with the Director, may make amendments to an air tour management plan. Any such amendments shall be published in the Federal Register for notice and comment. A request for amendment of an air tour management plan shall be made in such form and manner as the Administrator may prescribe.

"(c) Interim Operating Authority.--

"(1) In general.--Upon application for operating authority, the Administrator shall grant interim operating authority under this subsection to a commercial air tour operator for commercial air tour operations over a national park or tribal lands for which the operator is an existing commercial air tour operator.

"(2) Requirements and limitations.--Interim operating authority granted under this subsection--

"(A) shall provide annual authorization only for the greater of--

"(i) the number of flights used by the operator to provide the commercial air tour operations over a national park within the 12-month period prior to the date of the enactment of this section; or

"(ii) the average number of flights per 12-month period used by the operator to provide such operations within the 36-month period prior to such date of enactment, and, for seasonal operations, the number of flights so used during the season or seasons covered by that 12-month period;

"(B) may not provide for an increase in the number of commercial air tour operations over a national park conducted during any time period by the commercial air tour operator above the number that the air tour operator was originally granted unless such an increase is agreed to by the Administrator and the Director;

"(C) shall be published in the Federal Register to provide notice and opportunity for comment;

"(D) may be revoked by the Administrator for cause;

"(E) shall terminate 180 days after the date on which an air tour management plan is established for the park or tribal lands;

"(F) shall promote protection of national park resources, visitor experiences, and tribal lands;

"(G) shall promote safe commercial air tour operations;

"(H) shall promote the adoption of quiet technology, as appropriate; and

"(I) shall allow for modifications of the interim operating authority based on experience if the modification improves protection of national park resources and values and of tribal lands.

"(3) New entrant air tour operators.--

"(A) In general.--The Administrator, in cooperation with the Director, may grant interim operating authority under this paragraph to an air tour operator for a national park or tribal lands for which that operator is a new entrant air tour operator if the Administrator determines the authority is necessary to ensure competition in the provision of commercial air tour operations over the park or tribal lands.

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"(B) Safety limitation.--The Administrator may not grant interim operating authority under subparagraph (A) if the Administrator determines that it would create a safety problem at the park or on the tribal lands, or the Director determines that it would create a noise problem at the park or on the tribal lands.

"(C) ATMP limitation.--The Administrator may grant interim operating authority under subparagraph (A) of this paragraph only if the air tour management plan for the park or tribal lands to which the application relates has not been developed within 24 months after the date of the enactment of this section.

"(d) Exemptions.--This section shall not apply to--

"(1) the Grand Canyon National Park; or

"(2) tribal lands within or abutting the Grand Canyon National Park.

"(e) Lake Mead.--This section shall not apply to any air tour operator while flying over or near the Lake Mead National Recreation Area, solely as a transportation route, to conduct an air tour over the Grand Canyon National Park. For purposes of this subsection, an air tour operator flying over the Hoover Dam in the Lake Mead National Recreation Area en route to the Grand Canyon National Park shall be deemed to be flying solely as a transportation route." Nothing in this provision shall allow exemption from over-flight rules for the Grand Canyon.

"(f) Definitions.--In this section, the following definitions apply:

"(1) Commercial air tour operator.--The term 'commercial air tour operator' means any person who conducts a commercial air tour operation over a national park.

"(2) Existing commercial air tour operator.--The term 'existing commercial air tour operator' means a commercial air tour operator that was actively engaged in the business of providing commercial air tour operations over a national park at any time during the 12-month period ending on the date of the enactment of this section.

"(3) New entrant commercial air tour operator.--The term 'new entrant commercial air tour operator' means a commercial air tour operator that--

"(A) applies for operating authority as a commercial air tour operator for a national park or tribal lands; and

"(B) has not engaged in the business of providing commercial air tour operations over the national park or tribal lands in the 12-month period preceding the application.

"(4) Commercial air tour operation over a national park.--

"(A) In general.--The term 'commercial air tour operation over a national park' means any flight, conducted for compensation or hire in a powered aircraft where a purpose of the flight is sightseeing over a national park, within \1/2\ mile outside the boundary of any national park (except the Grand Canyon National Park), or over tribal lands (except those within or abutting the Grand Canyon National Park), during which the aircraft flies--

"(i) below a minimum altitude, determined by the Administrator in cooperation with the Director, above ground level (except solely for purposes of takeoff or landing, or necessary for safe operation of an aircraft as determined under the rules and regulations of the Federal Aviation Administration requiring the pilot-in-command to take action to ensure the safe operation of the aircraft); or

"(ii) less than 1 mile laterally from any geographic feature within the park (unless more than \1/2\ mile outside the boundary).

"(B) Factors to consider.--In making a determination of whether a flight is a commercial air tour operation over a national park for purposes of this section, the Administrator may consider--

"(i) whether there was a holding out to the public of willingness to conduct a sightseeing flight for compensation or hire;

"(ii) whether a narrative that referred to areas or points of interest on the surface below the route of the flight was provided by the person offering the flight;

"(iii) the area of operation;

"(iv) the frequency of flights conducted by the person offering the flight;

"(v) the route of flight;

"(vi) the inclusion of sightseeing flights as part of any travel arrangement package offered by the person offering the flight;

"(vii) whether the flight would have been canceled based on poor visibility of the surface below the route of the flight; and

"(viii) any other factors that the Administrator and the Director consider appropriate.

"(5) National park.--The term 'national park' means any unit of the National Park System.

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"(6) Tribal lands.--The term 'tribal lands' means Indian country (as that term is defined in section 1151 of title 18) that is within or abutting a national park.

"(7) Administrator.--The term 'Administrator' means the Administrator of the Federal Aviation Administration.

"(8) Director.--The term 'Director' means the Director of the National Park Service.".

(b) Conforming Amendment.--The analysis for chapter 401 (as amended by section 706(b) of this Act) is further amended by adding at the end the following: "40128. Overflights of national parks.".

(c) Compliance With Other Regulations.--For purposes of section 40126 of title 49, United States Code--

(1) regulations issued by the Secretary of Transportation and the Administrator under section 3 of Public Law 100-91 (16 U.S.C. 1a-1 note); and

(2) commercial air tour operations carried out in compliance with the requirements of those regulations, shall be deemed to meet the requirements of such section 40126.

SEC. 804. QUIET AIRCRAFT TECHNOLOGY FOR GRAND CANYON.

(a) Quiet Technology Requirements.--Within 12 months after the date of the enactment of this Act, the Administrator shall designate reasonably achievable requirements for fixed-wing and helicopter aircraft necessary for such aircraft to be considered as employing quiet aircraft technology for purposes of this section. If the Administrator determines that the Administrator will not be able to make such designation before the last day of such 12-month period, the Administrator shall transmit to Congress a report on the reasons for not meeting such time period and the expected date of such designation.

(b) Routes or Corridors.--In consultation with the Director and the advisory group established under section 805, the Administrator shall establish, by rule, routes or corridors for commercial air tour operations (as defined in section 40126(e)(4) of title 49, United States Code) by fixed-wing and helicopter aircraft that employ quiet aircraft technology for--

(1) tours of the Grand Canyon originating in Clark County, Nevada; and

(2) "local loop" tours originating at the Grand Canyon National Park Airport, in Tusayan, Arizona, provided that such routes or corridors can be located in areas that will not negatively impact the substantial restoration of natural quiet, tribal lands, or safety.

(c) Operational Caps.--Commercial air tour operations by any fixed-wing or helicopter aircraft that employs quiet aircraft technology and that replaces an existing aircraft shall not be subject to the operational flight allocations that apply to other commercial air tour operations of the Grand Canyon, provided that the cumulative impact of such operations does not increase noise at the Grand Canyon.

(d) Modification of Existing Aircraft To Meet Standards.—A commercial air tour operation by a fixed-wing or helicopter aircraft in a commercial air tour operator's fleet on the date of the enactment of this Act that meets the requirements designated under subsection (a), or is subsequently modified to meet the requirements designated under subsection (a), may be used for commercial air tour operations under the same terms and conditions as a replacement aircraft under subsection (c) without regard to whether it replaces an existing aircraft.

(e) Mandate To Restore Natural Quiet.--Nothing in this Act shall be construed to relieve or diminish--

(1) the statutory mandate imposed upon the Secretary of the Interior and the Administrator of the Federal Aviation Administration under Public Law 100-91 (16 U.S.C. 1a-1 note) to achieve the substantial restoration of the natural quiet and experience at the Grand Canyon National Park; and

(2) the obligations of the Secretary and the Administrator to promulgate forthwith regulations to achieve the substantial restoration of the natural quiet and experience at the Grand Canyon National Park.

SEC. 805. ADVISORY GROUP.

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(a) Establishment.--Not later than 1 year after the date of the enactment of this Act, the Administrator and the Director of the National Park Service shall jointly establish an advisory group to provide continuing advice and counsel with respect to commercial air tour operations over and near national parks.

(b) Membership.--

(1) In general.--The advisory group shall be composed of--

(A) a balanced group of--

(i) representatives of general aviation;

(ii) representatives of commercial air tour operators;

(iii) representatives of environmental concerns; and

(iv) representatives of Indian tribes;

(B) a representative of the Federal Aviation Administration; and

(C) a representative of the National Park Service.

(2) Ex officio members.--The Administrator (or the designee of the Administrator) and the Director (or the designee of the Director) shall serve as ex officio members.

(3) Chairperson.--The representative of the Federal Aviation Administration and the representative of the National Park Service shall serve alternating 1-year terms as chairman of the advisory group, with the representative of the Federal Aviation Administration serving initially until the end of the calendar year following the year in which the advisory group is first appointed.

(c) Duties.--The advisory group shall provide advice, information, and recommendations to the Administrator and the Director--

(1) on the implementation of this title and the amendments made by this title;

(2) on commonly accepted quiet aircraft technology for use in commercial air tour operations over a national park or tribal lands, which will receive preferential treatment in a given air tour management plan;

(3) on other measures that might be taken to accommodate the interests of visitors to national parks; and

(4) at the request of the Administrator and the Director, safety, environmental, and other issues related to commercial air tour operations over a national park or tribal lands.

(d) Compensation; Support; FACA.--

(1) Compensation and travel.--Members of the advisory group who are not officers or employees of the United States, while attending conferences or meetings of the group or otherwise engaged in its business, or while serving away from their homes or regular places of business, may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by section 5703 of title 5, United States Code, for persons in the Government service employed intermittently.

(2) Administrative support.--The Federal Aviation Administration and the National Park Service shall jointly furnish to the advisory group clerical and other assistance.

(3) Nonapplication of FACA.--Section 14 of the Federal Advisory Committee Act (5 U.S.C. App.) does not apply to the advisory group.

SEC. 806. PROHIBITION OF COMMERCIAL AIR TOUR OPERATIONS OVER THE ROCKY MOUNTAIN NATIONAL PARK.

Effective beginning on the date of the enactment of this Act, no commercial air tour operation may be conducted in the airspace over the
Rocky Mountain National Park notwithstanding any other provision of this Act or section 40126 of title 49, United States Code.

SEC. 807. REPORTS.

(a) Overflight Fee Report.--Not later than 180 days after the date of the enactment of this Act, the Administrator shall transmit to Congress a report on the effects overflight fees are likely to have on the commercial air tour operation industry. The report shall include,
but shall not be limited to--

(1) the viability of a tax credit for the commercial air tour operators equal to the amount of any overflight fees charged by the
National Park Service; and

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(2) the financial effects proposed offsets are likely to have on Federal Aviation Administration budgets and appropriations.

(b) Quiet Aircraft Technology Report.--Not later than 2 years after the date of the enactment of this Act, the Administrator and the
Director of the National Park Service shall jointly transmit a report to Congress on the effectiveness of this title in providing incentives
for the development and use of quiet aircraft technology.

SEC. 808. METHODOLOGIES USED TO ASSESS AIR TOUR NOISE.

Any methodology adopted by a Federal agency to assess air tour noise in any unit of the national park system (including the Grand Canyon and Alaska) shall be based on reasonable scientific methods.

SEC. 809. ALASKA EXEMPTION.

The provisions of this title and section 40128 of title 49, United States Code, as added by section 803(a), do not apply to any land or waters located in Alaska.

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APPENDIX A-3. TITLE 14 CFR PART 136-NATIONAL PARKS AIR TOUR MANAGEMENT

The recorded values must meet the designated range, resolution, and accuracy requirements during dynamic and static conditions. All data recorded must be correlated in time to within one second.

Parameters	Range	Accuracy (sensor input)	Seconds per sampling interval	Resolution	Remarks
88. All cockpit flight control input forces (control wheel, control column, rudder pedal).	Full Range Control Wheel ±70 lbs Control Column ±85 lb Rudder pedal ±165 lbs.	±5%	1	0.3% of full range.	For fly-by-wire flight control systems, where control surface position is a function of the displacement of the control input device only, it is not necessary to record this parameter. For airplanes that have a flight control break away capability that allows either pilot to operate the control independently, record both control force inputs. The control force inputs may be sampled alternately once per 2 seconds to produce the sampling interval of 1.

[1] For A300 B2/B4 airplanes, resolution = 6 seconds.
[2] For A330/A340 series airplanes, resolution = 0.703°.
[3] For A318/A319/A320/A321 series airplanes, resolution = 0.275% (0.088°>0.064°). For A330/A340 series airplanes, resolution = 2.20% (0.703°>0.064°).
[4] For A318/A319/A320/A321 series airplanes, resolution = 0.22% (0.088°>0.080°). For A330/A340 series airplanes, resolution = 1.76% (0.703°>0.080°).
[5] For A330/A340 series airplanes, resolution = 1.18% (0.703°>0.120°).
[6] For A330/A340 series airplanes, resolution = 0.783% (0.352°>0.090°).
[7] For A330/A340 series airplanes, aileron resolution = 0.704% (0.352°>0.100°). For A330/A340 series airplanes, spoiler resolution = 1.406% (0.703°>0.100°).
[8] For A330/A340 series airplanes, resolution = 0.30% (0.176°>0.12°). For A330/A340 series airplanes, seconds per sampling interval = 1.
[9] For B–717 series airplanes, resolution = .005g. For Dassault F900C/F900EX airplanes, resolution = .007g.
[10] For A330/A340 series airplanes, resolution = 1.05% (0.250°>0.120°).
[11] For A330/A340 series airplanes, resolution = 1.05% (0.250°>0.120°). For A300 B2/B4 series airplanes, resolution = 0.92% (0.230°>0.125°).
[12] For A330/A340 series airplanes, spoiler resolution = 1.406% (0.703°>0.100°).
[13] For A330/A340 series airplanes, resolution = 0.5 °C.
[14] For Dassault F900C/F900EX airplanes, Radio Altitude resolution = 1.25 ft.
[15] For A330/A340 series airplanes, resolution = 0.352 degrees.
[16] For A318/A319/A320/A321 series airplanes, resolution = 4.32%. For A330/A340 series airplanes, resolution is 3.27% of full range for throttle lever angle (TLA); for reverse thrust, reverse throttle lever angle (RLA) resolution is nonlinear over the active reverse thrust range, which is 51.54 degrees to 96.14 degrees. The resolved element is 2.8 degrees uniformly over the entire active reverse thrust range, or 2.9% of the full range value of 96.14 degrees.
[17] For A318/A319/A320/A321 series airplanes, with IAE engines, resolution = 2.58%.

[Doc. No. 28109, 62 FR 38398, July 17, 1997; 62 FR 48135, Sept. 12, 1997; Amdt. 135–85, 67 FR 54323, Aug. 21, 2002; Amdt. 135–89, 68 FR 42939, July 18, 2003; 68 FR 50069, Aug. 20, 2003]

PART 136—NATIONAL PARKS AIR TOUR MANAGEMENT

Sec.

136.1 Applicability.
136.3 Definitions.
136.5 Prohibition of commercial air tour operations over the Rocky Mountain National Park.
136.7 Overflights of national parks and tribal lands.
136.9 Air tour management plans (ATMP).
136.11 Interim operating authority.

AUTHORITY: 49 U.S.C. 106(g), 40113, 40119, 44101, 44701, 44701–44702, 44705, 44709–44711, 44713, 44716–44717, 44722, 44901, 44903–44904, 44912, 46105.

SOURCE: Docket No. FAA–2001–8690, 67 FR 65667, Oct. 25, 2002, unless otherwise noted.

§136.1 Applicability.

(a) This part restates and paraphrases several sections of the National Parks Air Tour Management Act of 2000, including section 803 (codified at 49 U.S.C. 40128) and sections 806 and 809. This part clarifies the requirements for the development of an air tour management plan for each park in the national park system where commercial air tour operations are flown.

(b) Except as provided in paragraph (c) of this section, this part applies to each commercial air tour operator who conducts a commercial air tour operation over—

(1) A unit of the national park system;

(2) Tribal lands as defined in this part; or

(3) Any area within one-half mile outside the boundary of any unit of the national park system.

(c) This part does not apply to a commercial air tour operator conducting a commercial air tour operation—

(1) Over the Grand Canyon National Park;

(2) Over that portion of tribal lands within or abutting the Grand Canyon National Park;

(3) Over any land or waters located in the State of Alaska; or

(4) While flying over or near the Lake Mead Recreation Area, solely as a transportation route, to conduct a commercial air tour over the Grand Canyon National Park.

§136.3 Definitions.

For purposes of this part—

(a) *Commercial air tour operator* means any person who conducts a commercial air tour operation.

(b) *Existing commercial air tour operator* means a commercial air tour operator that was actively engaged in the business of providing commercial air tour operations over a national park at any time during the 12-month period ending on April 5, 2000.

(c) *New entrant commercial air tour operator* means a commercial air tour operator that—

(1) Applies for operating authority as a commercial air tour operator for a national park or tribal lands; and

(2) Has not engaged in the business of providing commercial air tour operations over the national park or tribal lands for the 12-month period preceding enactment.

(d) *Commercial air tour operation*—

(1) Means any flight, conducted for compensation or hire in a powered aircraft where a purpose of the flight is sightseeing over a national park, within ½ mile outside the boundary of any national park, or over tribal lands, during which the aircraft flies—

(i) Below 5,000 feet above ground level (except for the purpose of takeoff or landing, or as necessary for the safe operation of an aircraft as determined under the rules and regulations of the Federal Aviation Administration requiring the pilot-in-command to take action to ensure the safe operation of the aircraft);

(ii) Less than 1 mile laterally from any geographic feature within the park (unless more than ½ mile outside the boundary); or

(iii) Except as provided in §136.5.

(2) The Administrator may consider the following factors in determining whether a flight is a commercial air tour operation for purposes of this part—

(i) Whether there was a holding out to the public of willingness to conduct a sightseeing flight for compensation or hire;

(ii) Whether a narrative that referred to areas or points of interest on the surface below the route of the flight was provided by the person offering the flight;

(iii) The area of operation;

(iv) The frequency of flights conducted by the person offering the flight;

(v) The route of flight;

(vi) The inclusion of sightseeing flights as part of any travel arrangement package offered by the person offering the flight;

(vii) Whether the flight would have been canceled based on poor visibility of the surface below the route of the flight; and

(viii) Any other factors that the Administrator and Director consider appropriate.

(3) For purposes of §136.5, means any flight conducted for compensation or hire in a powered aircraft where a purpose of the flight is sightseeing over a national park.

(e) *National park* means any unit of the national park system. (See title 16 of the U.S. Code, section 1, *et seq.*)

(f) *Tribal lands* means that portion of Indian country (as that term is defined in section 1151 of title 18 of the U.S. Code) that is within or abutting a national park.

(g) *Administrator* means the Administrator of the Federal Aviation Administration.

(h) *Director* means the Director of the National Park Service.

(i) *Superintendent* means the duly appointed representative of the National Park Service for a particular unit of the national park system.

§ 136.5 Prohibition of commercial air tour operations over the Rocky Mountain National Park.

All commercial air tour operations in the airspace over the Rocky Mountain National Park are prohibited regardless of altitude.

§ 136.7 Overflights of national parks and tribal lands.

(a) *General.* A commercial air tour operator may not conduct commercial air tour operations over a national park or tribal land except—

(1) In accordance with this section;

(2) In accordance with conditions and limitations prescribed for that operator by the Administrator; and

(3) In accordance with any applicable air tour management plan for the park or tribal lands.

(b) *Application for operating authority.* Before commencing commercial air tour operations over a national park or tribal lands, a commercial air tour operator shall apply to the Administrator for authority to conduct the operations over the park or tribal lands.

(c) *Number of operations authorized.* In determining the number of authorizations to issue to provide commercial air tour operations over a national park, the Administrator, in cooperation with the Director, shall take into consideration the provisions of the air tour management plan, the number of existing commercial air tour operators and current level of service and equipment provided by any such operators, and the financial viability of each commercial air tour operation.

(d) *Cooperation with National Park Service.* Before granting an application under this part, the Administrator, in cooperation with the Director, shall develop an air tour management plan in accordance with §136.9 and implement such a plan.

(e) *Time limit on response to applications.* Every effort will be made to act on any application under this part and issue a decision on the application not later than 24 months after it is received or amended.

(f) *Priority.* In acting on applications under this paragraph to provide commercial air tour operations over a national park, the Administrator shall give priority to an application under this paragraph in any case where a new entrant commercial air tour operator is seeking operating authority with respect to that national park.

(g) *Exception.* Notwithstanding this section, commercial air tour operators may conduct commercial air tour operations over a national park under part 91 of this chapter if—

(1) Such activity is permitted under part 119 of this chapter;

(2) The operator secures a letter of agreement from the Administrator and the Superintendent for that park describing the conditions under which the operations will be conducted; and

(3) The number of operations under this exception is limited to not more than a total of 5 flights by all operators in any 30-day period over a particular park.

(h) *Special rule for safety requirement.* Notwithstanding §136.11, an existing commercial air tour operator shall apply, not later than January 23, 2003 for operating authority under part 119 of this chapter, for certification under part 121 or part 135 of this chapter. A new entrant commercial air tour operator shall apply for such authority before conducting commercial air tour operations over a national park or tribal lands that are within or abut a national park. The Administrator shall make every effort to act on such application for a new entrant and issue a decision on the application not later than 24 months after it is received or amended.

§ 136.9 Air tour management plans (ATMP).

(a) *Establishment.* The Administrator, in cooperation with the Director, shall establish an air tour management plan for any national park or tribal land for which such a plan is not in effect whenever a person applies for authority to conduct a commercial air tour operation over the park. The air tour management plan shall be developed by means of a public process in accordance with paragraph (d) of this section. The objective of any air tour management plan is to develop acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations

upon the natural and cultural resources, visitor experiences, and tribal lands.

(b) *Environmental determination.* In establishing an air tour management plan under this section, the Administrator and the Director shall each sign the environmental decision document required by section 102 of the National Environmental Policy Act of 1969 (42 U.S.C. 4332) which may include a finding of no significant impact, an environmental assessment, or an environmental impact statement and the record of decision for the air tour management plan.

(c) *Contents.* An air tour management plan for a park—

(1) May prohibit commercial air tour operations in whole or in part;

(2) May establish conditions for the conduct of commercial air tour operations, including, but not limited to, commercial air tour routes, maximum number of flights per unit of time, maximum and minimum altitudes, time of day restrictions, restrictions for particular events, intrusions on privacy on tribal lands, and mitigation of noise, visual, or other impacts;

(3) Shall apply to all commercial air tour operations within ½ mile outside the boundary of a national park;

(4) Shall include incentives (such as preferred commercial air tour routes and altitudes, and relief from caps and curfews) for the adoption of quiet technology aircraft by commercial air tour operators conducting commercial air tour operations at the park;

(5) Shall provide for the initial allocation of opportunities to conduct commercial air tour operations if the plan includes a limitation on the number of commercial air tour operations for any time period; and

(6) Shall justify and document the need for measures taken pursuant to paragraphs (c)(1) through (c)(5) of this section and include such justification in the record of decision.

(d) *Procedure.* In establishing an ATMP for a national park or tribal lands, the Administrator and Director shall—

(1) Hold at least one public meeting with interested parties to develop the air tour management plan;

(2) Publish the proposed plan in the FEDERAL REGISTER for notice and comment and make copies of the proposed plan available to the public;

(3) Comply with the regulations set forth in 40 CFR 1501.3 and 1501.5 through 1501.8 (for the purposes of complying with 40 CFR 1501.3 and 1501.5 through 1501.8, the Federal Aviation Administration is the lead agency and the National Park Service is a cooperating agency); and

(4) Solicit the participation of any Indian tribe whose tribal lands are, or may be, overflown by aircraft involved in a commercial air tour operation over the park or tribal lands to which the plan applies, as a cooperating agency under the regulations referred to in paragraph (d)(3) of this section.

(e) *Amendments.* The Administrator, in cooperation with the Director, may make amendments to an air tour management plan. Any such amendments will be published in the FEDERAL REGISTER for notice and comment. A request for amendment of an ATMP will be made in accordance with §11.25 of this chapter as a petition for rulemaking.

§136.11 Interim operating authority.

(a) *General.* Upon application for operating authority, the Administrator shall grant interim operating authority under this section to a commercial air tour operator for commercial air tour operations over a national park or tribal land for which the operator is an existing commercial air tour operator.

(b) *Requirements and limitations.* Interim operating authority granted under this section—

(1) Shall provide annual authorization only for the greater of—

(i) The number of flights used by the operator to provide the commercial air tour operations within the 12-month period prior to April 5, 2000; or

(ii) The average number of flights per 12-month period used by the operator to provide such operations within the 36-month period prior to April 5, 2000, and for seasonal operations, the number of flights so used during the season or seasons covered by that 12-month period;

(2) May not provide for an increase in the number of commercial air tour operations conducted during any time period by the commercial air tour operator above the number the air tour operator was originally granted unless such an increase is agreed to by the Administrator and the Director;

(3) Shall be published in the FEDERAL REGISTER to provide notice and opportunity for comment;

(4) May be revoked by the Administrator for cause;

(5) Shall terminate 180 days after the date on which an air tour management plan is established for the park and tribal lands;

(6) Shall promote protection of national park resources, visitor experiences, and tribal lands;

(7) Shall promote safe commercial air tour operations;

(8) Shall promote the adoption of quiet technology, as appropriate, and

(9) Shall allow for modifications of the interim operating authority based on experience if the modification improves protection of national park resources and values and of tribal lands.

(c) *New entrant operators.* The Administrator, in cooperation with the Director, may grant interim operating authority under this paragraph (c) to an air tour operator for a national park or tribal lands for which that operator is a new entrant air tour operator if the Administrator determines the authority is necessary to ensure competition in the provision of commercial air tour operations over the park or tribal lands.

(1) *Limitation.* The Administrator may not grant interim operating authority under this paragraph (c) if the Administrator determines that it would create a safety problem at the park or on the tribal lands, or if the Director determines that it would create a noise problem at the park or on the tribal lands.

(2) *ATMP limitation.* The Administrator may grant interim operating authority under this paragraph (c) only if the ATMP for the park or tribal lands to which the application relates has not been developed within 24 months after April 5, 2000.

PART 137—AGRICULTURAL AIRCRAFT OPERATIONS

Subpart A—General

Sec.
137.1 Applicability.
137.3 Definition of terms.

Subpart B—Certification Rules

137.11 Certificate required.
137.15 Application for certificate.
137.17 Amendment of certificate.
137.19 Certification requirements.
137.21 Duration of certificate.
137.23 Carriage of narcotic drugs, marihuana, and depressant or stimulant drugs or substances.

Subpart C—Operating Rules

137.29 General.
137.31 Aircraft requirements.
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137.35 Limitations on private agricultural aircraft operator.
137.37 Manner of dispensing.
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137.41 Personnel.
137.42 Fastening of safety belts and shoulder harnesses.
137.43 Operations in controlled airspace designated for an airport.
137.45 Nonobservance of airport traffic pattern.
137.47 Operation without position lights.
137.49 Operations over other than congested areas.
137.51 Operation over congested areas: General.
137.53 Operation over congested areas: Pilots and aircraft.
137.55 Business name: Commercial agricultural aircraft operator.
137.57 Availability of certificate.
137.59 Inspection authority.

Subpart D—Records and Reports

137.71 Records: Commercial agricultural aircraft operator.
137.75 Change of address.
137.77 Termination of operations.

AUTHORITY: 49 U.S.C. 106(g), 40103, 40113, 44701–44702.

SOURCE: Docket No. 1464, 30 FR 8106, June 24, 1965, unless otherwise noted.

Subpart A—General

§137.1 Applicability.

(a) This part prescribes rules governing—

APPENDIX A-4. NPS UNITS SUBJECT TO NPATMA

This list was updated in April 2007. For the most up to date park list, see http://home.nps.gov/applications/parksearch/atoz.cfm.

	Park Name	Type of Unit	State
1	Abraham Lincoln Birthplace	National Historic Site	KY
2	Acadia	National Park	ME
3	Adams	National Historical Park	MA
4	African American Civil War	Memorial	Washington, D.C.
5	Agate Fossil Beds	National Monument	NE
6	Ala Kahakai	National Historic Trail	HI
7	Alagnak	Wild River	AK
8	Alcatraz	Island	CA
9	Aleutian Work War II	National Historic Area	AK
10	Alibates Flint Quarries	National Monument	TX
11	Allegheny Portage Railroad	National Historic Site	PA
12	American	Memorial Park	MP (Northern Mariana Islands)
13	Amistad	National Recreation Area	TX
14	Anacostia	Park	Washington, D.C.
15	Andersonville	National Historic Site	GA
16	Andrew Johnson	National Historic Site	TN
17	Aniakchak	National Monument & Preserve	AK
18	Antietam	National Battlefield	MD
19	Antietam	National Cemetery	MD
20	Apostle Islands	National Lakeshore	WI
21	Appalachian	National Scenic Trail	CT,GA,MA,MD,ME,NC,NH,NJ, NY,PA,TN,VA,VT,WV
22	Appomattox Court House	National Historical Park	VA
23	Arches	National Park	UT
24	Arkansas Post	National Memorial	AR
25	Arlington House, The Robert E. Lee	Memorial	VA
26	Assateague Island	National Seashore	MD,VA
27	Aztec Ruins	National Monument	NM
28	Badlands	National Park	SD
29	Baltimore-Washington	Parkway	Washington, D.C., MD
30	Bandelier	National Monument	NM
31	Battleground	National Cemetery	Washington, D.C.
32	Bent's Old Fort	National Historic Site	CO
33	Bering Land Bridge	National Preserve	AK
34	Big Bend	National Park	TX
35	Big Cypress	National Preserve	FL
36	Big Hole	National Battlefield	MT
37	Big South Fork	National River & Recreation Area	KY,TN
38	Big Thicket	National Preserve	TX
39	Bighorn Canyon	National Recreation Area	MT,WY

40	Biscayne	National Park	FL
41	Black Canyon Of The Gunnison	National Park	CO
42	Blackstone River Valley	National Heritage Corridor	MA, RI
43	Blue Ridge	Parkway	NC,VA
44	Bluestone	National Scenic River	WV
45	Booker T Washington	National Monument	VA
46	Boston	National Historical Park	MA
47	Boston African American	National Historic Site	MA
48	Boston Harbor Islands	National Recreation Area	MA
49	Brices Cross Roads	National Battlefield Site	MS
50	Brown V Board Of Education	National Historic Site	KS
51	Bryce Canyon	National Park	UT
52	Buck Island Reef	National Monument	VI
53	Buffalo	National River	AR
54	Cabrillo	National Monument	CA
55	California	National Historic Trail	CA, CO, ID, KS, MO, NE, NV, OR, UT, WY
56	Canaveral	National Seashore	FL
57	Cane River Creole	National Historical Park	LA
58	Canyon De Chelly	National Monument	AZ
59	Canyonlands	National Park	UT
60	Cape Cod	National Seashore	MA
61	Cape Hatteras	National Seashore	NC
62	Cape Henry	Memorial	VA
63	Cape Krusenstern	National Monument	AK
64	Cape Lookout	National Seashore	NC
65	Capitol Reef	National Park	UT
66	Capulin Volcano	National Monument	NM
67	Carl Sandburg Home	National Historic Site	NC
68	Carlsbad Caverns	National Park	NM
69	Casa Grande Ruins	National Monument	AZ
70	Castillo De San Marcos	National Monument	FL
71	Castle Clinton	National Monument	NY
72	Catoctin Mountain	Park	MD
73	Cedar Breaks	National Monument	UT
74	Cedar Creek & Belle Grove	National Historical Park	VA
75	Central High School	National Historic Site	AR
76	Chaco Culture	National Historical Park	NM
77	Chamizal	National Memorial	TX
78	Channel Islands	National Park	CA
79	Charles Pinckney	National Historic Site	SC
80	Chattahoochee River	National Recreation Area	GA
81	Chesapeake & Ohio Canal	National Historical Park	DC,MD,WV
82	Chickamauga & Chattanooga	National Military Park	GA
838	Chickasaw	National Recreation Area	OK
84	Chiricahua	National Monument	AZ
85	Christiansted	National Historic Site	VI
86	City Of Rocks	National Reserve	ID

87	Clara Barton	National Historic Site	MD
88	Claude Moore Colonial	Farm	VA
89	Colonial	National Historical Park	VA
90	Colorado	National Monument	CO
91	Congaree	National Park	SC
92	Constitution Gardens		DC
93	Coronado	National Memorial	AZ
94	Cowpens	National Battlefield	SC
95	Crater Lake	National Park	OR
96	Craters Of The Moon	National Monument & Preserve	ID
97	Cumberland Gap	National Historical Park	KY
98	Cumberland Island	National Seashore	GA
99	Curecanti	National Recreation Area	CO
100	Cuyahoga Valley	National Park	OH
101	David Berger	National Memorial	OH
102	Dayton Aviation Heritage	National Historical Park	OH
103	De Soto	National Memorial	FL
104	Death Valley	National Park	CA
105	Delaware	National Scenic River	PA
106	Delaware & Lehigh	National Heritage Corridor	PA
107	Delaware Water Gap	National Recreation Area	PA
108	Denali	National Park & Preserve	AK
109	Deshler-Morris	House	PA
110	Devils Postpile	National Monument	CA
111	Devils Tower	National Monument	WY
112	Dinosaur	National Monument	CO,UT
113	Dry Tortugas	National Park	FL
114	Ebey's Landing	National Historical Reserve	WA
115	Edgar Allan Poe	National Historic Site	PA
116	Edison	National Historic Site	NJ
117	Effigy Mounds	National Monument	IA
118	Eisenhower	National Historic Site	PA
119	El Camino Real de Tierra Adentro	National Historic Trail	NM, TX
120	El Malpais	National Monument	NM
121	El Morro	National Monument	NM
122	Eleanor Roosevelt	National Historic Site	NY
123	Ellis Island	National Monument	NJ, NY
124	Erie Canalway	National Heritage Corridor	NY
125	Eugene O'Neill	National Historic Site	CA
126	Everglades	National Park	FL
127	Father Marquette	National Memorial	MI
128	Federal Hall	National Memorial	NY
129	Fire Island	National Seashore	NY
130	First Ladies	National Historic Site	OH
131	Flight 93	National Memorial	PA
132	Florissant Fossil Beds	National Monument	CO
133	Ford's Theatre	National Historic Site	DC
134	Fort Bowie	National Historic Site	AZ

135	Fort Caroline	National Memorial	FL
136	Fort Davis	National Historic Site	TX
137	Fort Donelson	National Battlefield	TN
138	Fort Donelson	National Cemetery	TN
139	Fort Dupont	Park	Washington, D.C.
140	Fort Foote	Park	MD
141	Fort Frederica	National Monument	GA
142	Fort Laramie	National Historic Site	WY
142	Fort Larned	National Historic Site	KS
144	Fort Matanzas	National Monument	FL
145	Fort McHenry	National Monument and Historic Shrine	MD
146	Fort Moultrie	National Monument	SC
147	Fort Necessity	National Battlefield	PA
148	Fort Point	National Historic Site	CA
149	Fort Pulaski	National Monument	GA
150	Fort Raleigh	National Historic Site	NC
151	Fort Scott	National Historic Site	KS
152	Fort Smith	National Historic Site	AR,OK
153	Fort Stanwix	National Monument	NY
154	Fort Sumter	National Monument	SC
155	Fort Union	National Monument	NM
156	Fort Union Trading Post	National Historic Site	ND
157	Fort Vancouver	National Historic Site	WA
158	Fort Washington	Park	MD
159	Fossil Butte	National Monument	WY
160	Franklin Delano Roosevelt	Memorial	DC
161	Frederick Douglass	National Historic Site	DC
162	Frederick Law Olmsted	National Historic Site	MA
163	Fredericksburg & Spotsylvania	National Military Park	VA
164	Friendship Hill	National Historic Site	PA
165	Gates Of The Arctic	National Park & Preserve	AK
166	Gateway	National Recreation Area	NY,NJ
167	Gauley River	National Recreation Area	WV
168	General Grant	National Memorial	NY
169	George Rogers Clark	National Historical Park	IN
170	George Washington	Memorial Parkway	DC
171	George Washington Birthplace	National Monument	VA
172	George Washington Carver	National Monument	MO
173	Gettysburg	National Cemetery	PA
174	Gettysburg	National Military Park	
175	Gila Cliff Dwellings	National Monument	NM
176	Glacier	National Park	MT
177	Glacier Bay	National Park & Preserve	AK
178	Glen Canyon	National Recreation Area	AZ,UT
179	Glen Echo	Park	MD
180	Gloria Dei Church	National Historic Site	PA
181	Golden Gate	National Recreation Area	CA

182	Golden Spike	National Historic Site	UT
183	Governors Island	National Monument	NY
184	Grand Canyon	National Park	AZ
185	Grand Portage	National Monument	MN
186	Grand Teton	National Park	WY
187	Grant-Kohrs Ranch	National Historic Site	MT
188	Great Basin	National Park	NV
189	Great Egg Harbor	River	NJ
190	Great Falls	Park	VA
191	Great Sand Dunes	National Park & Preserve	CO
192	Great Smoky Mountains	National Park	TN,NC
193	Green Springs		VA
194	Greenbelt	Park	MD
195	Guadalupe Mountains	National Park	TX
196	Guilford Courthouse	National Military Park	NC
197	Gulf Islands	National Seashore	FL,MS
198	Hagerman Fossil Beds	National Monument	ID
199	Haleakala	National Park	HI
200	Hamilton Grange	National Memorial	NY
201	Hampton	National Historic Site	MD
202	Harpers Ferry	National Historical Park	WV
203	Harry S Truman	National Historic Site	MO
204	Hawaii Volcanoes	National Park	HI
205	Herbert Hoover	National Historic Site	IA
206	Hohokam Pima	National Monument	AZ
207	Home Of Franklin D Roosevelt	National Historic Site	NY
208	Homestead	National Monument of America	NE
209	Hopewell Culture	National Historical Park	OH
210	Hopewell Furnace	National Historic Site	PA
211	Horseshoe Bend	National Military Park	AL
212	Hot Springs	National Park	AR
213	Hovenweep	National Monument	UT
214	Hubbell Trading Post	National Historic Site	AZ
215	Ice Age	National Scenic Trail	WI
216	Illinois & Michigan Canal	National Heritage Corridor	IL
217	Independence	National Historical Park	PA
218	Indiana Dunes	National Lakeshore	IN
219	Inupiat Heritage	Center	AK
220	Isle Royale	National Park	MI
221	James A Garfield	National Historic Site	OH
222	Jamestown	National Historic Site	VA
223	Jean Lafitte	National Historical Park and Preserve	LA
224	Jefferson	National Expansion Memorial	MO
225	Jewel Cave	National Monument	SD
226	Jimmy Carter	National Historic Site	GA
227	John D Rockefeller Jr	Memorial Parkway	WY
228	John Day Fossil Beds	National Monument	OR

229	John F Kennedy	National Historic Site	MA
230	John Muir	National Historic Site	CA
231	Johnstown Flood	National Memorial	PA
232	Joshua Tree	National Park	CA
233 234	Juan Bautista de Anza	National Historic Trail	CA, AZ
235	Kalaupapa	National Historical Park	HI
236	Kaloko-Honokohau	National Historical Park	HI
237	Katmai	National Park & Preserve	AK
238	Kenai Fjords	National Park	AK
239	Kenilworth	Park & Aquatic Gardens	Washington, D.C.
240	Kennesaw Mountain	National Battlefield Park	GA
241	Keweenaw	National Historical Park	MI
242	Kings Canyon	National Park	CA
243	Kings Mountain	National Military Park	SC
244	Klondike Gold Rush	National Historical Park	AK
245	Knife River Indian Villages	National Historic Site	ND
246	Kobuk Valley	National Park	AK
247	Korean War Veterans	Memorial	DC
248	Lake Chelan	National Recreation Area	WA
249	Lake Clark	National Park & Preserve	AK
250	Lake Mead	National Recreation Area	AZ,NV
251	Lake Meredith	National Recreation Area	TX
252	Lake Roosevelt	National Recreation Area	WA
253	Lassen Volcanic	National Park	CA
254	Lava Beds	National Monument	CA
255	Lewis and Clark	National Historical Park	OR
256	Lincoln	Memorial	DC
257	Lincoln Boyhood	National Memorial	IN
258	Lincoln Home	National Historic Site	IL
259	Little Bighorn Battlefield	National Monument	MT
260	Little River Canyon	National Preserve	AL
261	Longfellow	National Historic Site	MA
262	Lowell	National Historical Park	MA
263	Lower East Side Tenement Museum	National Historic Site	NY
264	Lyndon B Johnson	National Historical Park	TX
265	Lyndon Baines Johnson Memorial Grove on the Potomac		VA
266	Maggie L Walker	National Historic Site	VA
267	Maine Acadian Culture		ME
268	Mammoth Cave	National Park	KY
269	Manassas	National Battlefield Park	VA
270	Manhattan Sites		NY
271	Manzanar	National Historic Site	CA
272	Marsh - Billings - Rockefeller	National Historical Park	VT
273	Martin Luther King Jr	National Historic Site	GA
274	Martin Van Buren	National Historic Site	NY

275	Mary McLeod Bethune Council House	National Historic Site	DC
276			
277	Mcloughlin House	National Historic Site	OR
278	Mesa Verde	National Park	CO
279	Minidoka Internment	National Monument	ID
280	Minute Man	National Historical Park	MA
281	Minuteman Missile	National Historic Site	SD
282	Mississippi	National River & Recreation Area	MN
283	Missouri	National Recreational River	SD
284	Mojave	National Preserve	CA
285	Monocacy	National Battlefield	MD
286	Montezuma Castle	National Monument	AZ
287	Moores Creek	National Battlefield	NC
288	Mormon Pioneer	National Historic Trail	IL, IA, NE, UT, WY
289	Morristown	National Historical Park	NJ
290	Mount Rainier	National Park	WA
291	Mount Rushmore	National Memorial	SD
292	Muir Woods	National Monument	CA
293	Natchez	National Historical Park	MS
294	Natchez Trace	National Scenic Trail	TN
295	Natchez Trace	Parkway	AL,MS,TN
296	National Capital Parks-East		Washington, D.C.
297	National Mall		Washington, D.C.
298	National Mall and Memorial Parks		Washington, D.C.
299	National Park of American Samoa		AS
300	National Parks of New York Harbor		NJ, NY
301	National World War II	Memorial	DC
302	Natural Bridges	National Monument	UT
303	Navajo	National Monument	AZ
304	New Bedford Whaling	National Historical Park	MA
305	New Jersey Coastal Heritage	Trail Route	NJ
306	New Jersey Pinelands	National Reserve	NJ
307	New Orleans Jazz	National Historical Park	LA
308	New River Gorge	National River	WV
309	Nez Perce	National Historical Park	ID,MT,OR,WA
310	Nicodemus	National Historic Site	KS
311	Ninety Six	National Historic Site	SC
312	Niobrara	National Scenic River	NE
313	Noatak	National Preserve	AK
314	North Cascades	National Park	WA
315	North Country	National Scenic Trail	MI, MN, ND, NY, OH, PA, WI
316	Obed	Wild & Scenic River	TN
317	Ocmulgee	National Monument	GA
318	Oklahoma City	National Memorial	OK
319	Old Post Office Tower		Washington, D.C.
320	Old Spanish	National Historic Trail	AZ, CA, CO, NV, NM, UT

321	Olympic	National Park	WA
323	Oregon	National Historic Trail	ID, KS, MO,NE, OR, WY
324	Oregon Caves	National Monument	OR
325	Organ Pipe Cactus	National Monument	AZ
326	Overmountain Victory	National Historic Trail	NC, SC< TN, VA
327	Oxon Cove Park & Oxon Hill Farm		MD
328	Ozark	National Scenic Riverways	MO
329	Padre Island	National Seashore	TX
330	Palo Alto Battlefield	National Historic Site	TX
331	Parashant	National Monument	AZ
332	Pea Ridge	National Military Park	AR
333	Pecos	National Historical Park	NM
334	Peirce Mill		Washington, D.C.
335	Pennsylvania Avenue	National Historic Site	DC
336	Perry's Victory & International Peace	Memorial	OH
337	Petersburg	National Battlefield	VA
338	Petrified Forest	National Park	AZ
339	Petroglyph	National Monument	NM
340	Pictured Rocks	National Lakeshore	MI
341	Pinnacles	National Monument	CA
342	Pipe Spring	National Monument	AZ
343	Pipestone	National Monument	MN
344	Piscataway	Park	MD
345	Point Reyes	National Seashore	CA
346	Pony Express	National Historic Trail	CA, CO, KS, MO, NE, NV, UT, WY
347	Poplar Grove	National Cemetery	VA
348	Port Chicago Naval Magazine	National Memorial	CA
349	Potomac Heritage	National Scenic Trail	DC,MD,PA,VA
350	Poverty Point	National Monument	LA
351	President's Park (White House)		DC
352	Presidio of San Francisco		CA
353	Prince William Forest	Park	VA
354	Pu`uhonua O Honaunau	National Historical Park	HI
355	Puukohola Heiau	National Historic Site	HI
356	Rainbow Bridge	National Monument	UT
357	Redwood	National and State Parks	CA
358	Richmond	National Battlefield Park	VA
359	Rio Grande	Wild & Scenic River	TX
360	Rock Creek	Park	DC
361	Rocky Mountain	National Park	CO
362	Roger Williams	National Memorial	RI
363	Roosevelt Campobello	International Park	ME
364	Rosie the Riveter WWII Home Front	National Historical Park	CA
365	Ross Lake	National Recreation Area	WA

366	Russell Cave	National Monument	AL
367	Sagamore Hill	National Historic Site	NY
368	Saguaro	National Park	AZ
369	Saint Croix	National Scenic River	WI
370	Saint Croix Island	International Historic Site	ME
371	Saint Paul's Church	National Historic Site	NY
372	Saint-Gaudens	National Historic Site	NH
373	Salem Maritime	National Historic Site	MA
374	Salinas Pueblo Missions	National Monument	NM
375	Salt River Bay	National Historic Park and Ecological Preserve	VI
376	San Antonio Missions	National Historical Park	TX
377	San Francisco Maritime	National Historical Park	CA
378	San Juan	National Historic Site	PR
379	San Juan Island	National Historical Park	WA
380	Sand Creek Massacre	National Historic Site	CO
381	Santa Fe	National Historic Trail	CO, KS, MO, NM, OK
382	Santa Monica Mountains	National Recreation Area	CA
383	Saratoga	National Historical Park	NY
384	Saugus Iron Works	National Historic Site	MA
385	Scotts Bluff	National Monument	NE
386	Selma to Montgomery	National Historic Trail	AL
387	Sequoia & Kings Canyon	National Parks	CA
388	Sewall-Belmont House	National Historic Site	Washington, D.C.
389	Shenandoah	National Park	VA
390	Shiloh	National Military Park	TN
391	Sitka	National Historical Park	AK
392	Sleeping Bear Dunes	National Lakeshore	MI
393	Springfield Armory	National Historic Site	MA
394	Statue Of Liberty	National Monument	NY
395	Steamtown	National Historic Site	PA
396	Stones River	National Battlefield	TN
397	Suitland	Parkway	MD
398	Sunset Crater Volcano	National Monument	AZ
399	Tallgrass Prairie	National Preserve	KS
400	Thaddeus Kosciuszko	National Memorial	PA
401	The Old Stone House		Washington, D.C.
402	Theodore Roosevelt	National Park	ND
403	Theodore Roosevelt Birthplace	National Historic Site	NY
404	Theodore Roosevelt Inaugural	National Historic Site	NY
405	Theodore Roosevelt Island	Park	VA
406	Thomas Jefferson	Memorial	DC
407	Thomas Stone	National Historic Site	MD
408	Timpanogos Cave	National Monument	UT
409	Timucuan	Ecological & Historic Preserve	FL
410	Tonto	National Monument	AZ
411	Touro Synagogue	National Historic Site	RI
412	Trail of Tears	National Historic Trail	AL, AR, GA, IL, KY, MO, NC,

			OK, TN
413	Tumacácori	National Historical Park	AZ
414	Tupelo	National Battlefield	MS
415	Tuskegee Airmen	National Historic Site	AL
416	Tuskegee Institute	National Historic Site	AL
417	Tuzigoot	National Monument	AZ
418	U S S Arizona	Memorial	HI
419	Ulysses S Grant	National Historic Site	MO
420	Upper Delaware	Scenic & Recreational River	NY,PA
421	Valley Forge	National Historical Park	PA
422	Vanderbilt Mansion	National Historic Site	NY
423	Vicksburg	National Cemetery	MS
424	Vicksburg	National Military Park	MS
425	Vietnam Veterans	Memorial	DC
426	Virgin Islands	National Park	VI
427	Virgin Islands Coral Reef	National Monument	VI
428	Voyageurs	National Park	MN
429	Walnut Canyon	National Monument	AZ
430	War In The Pacific	National Historical Park	GU
431	Washington	Monument	DC
432	Washita Battlefield	National Historic Site	OK
433	Weir Farm	National Historic Site	CT
434	Western Arctic	National Parklands	AK
435	Whiskeytown	National Recreation Area	CA
436	White Sands	National Monument	NM
437	Whitman Mission	National Historic Site	WA
438	William Howard Taft	National Historic Site	OH
439	Wilson's Creek	National Battlefield	MO
440	Wind Cave	National Park	SD
441	Wolf Trap National Park for the Performing Arts		VA
442	Women's Rights	National Historical Park	NY
443	Wrangell - St Elias	National Park & Preserve	AK
444	Wright Brothers	National Memorial	NC
445	Wupatki	National Monument	AZ
446	Yellowstone	National Park	ID,MT,WY
447	Yorktown	National Cemetery	VA
448	Yorktown	Battlefield	VA
449	Yosemite	National Park	CA
450	Yucca House	National Monument	CO
451	Yukon - Charley Rivers	National Preserve	AK
452	Zion	National Park	UT

APPENDIX A-5. LIST OF PARKS FOR WHICH ATMPS ARE REQUIRED

This list, totaling 105 park units (including National Parks (NP), National Monuments (NM), National Historic Parks (NHP), National Historic Sites (NHS), and National Recreation Areas (NRA)), was taken from the Federal Register Notice October 7, 2005, and verified against FAA's official list dated February 23, 2007.

Acadia NM
Arches NP
Aztec Ruins NM
Badlands NP
Bandelier NM
Big Bend NP
Big Cypress NP
Biscayne NP
Black Canyon of the Gunnison NP
Bryce Canyon NP
Canyon de Chelly NM
Canyonlands NP
Cape Hatteras NS
Capitol Reef NP
Capulin Volcano NM
Carlsbad Caverns NP
Casa Grande Ruins NM
Cedar Breaks NM
Chaco Culture NHP
Channel Islands NP*
Chiricahua NM*
Colonial NHP
Colorado NM
Coronado NM
Death Valley NP
Devils Tower NM**
Dinosaur NM
Dry Tortugas NP
El Malpais NM
El Morro NM
Everglades NP
Fort Bowie NHS
Fort Davis NHS

Fort Union NHS

Gila Cliff Dwellings NM

Glacier NP

Glen Canyon NRA

Golden Gate NRA (includes Alcatraz Island, Fort Point NHS, Muir Woods NM, and the Presidio of San Francisco)

Golden Spike NHS*

Governors Island NM

Grand Teton NP

Great Basin NP*

Great Sand Dunes NP

Great Smoky Mountains NP

Guadalupe Mountains NP

Haleakala NP

Hawaii Volcanoes NP

Hohokam Pima NM

Hovenweep NM

Hubbell Trading Post NHS

Jefferson National Expansion Memorial**

Joshua Tree NP*

Kalaupapa NHP*

Kaloko-Honokohau NHP*

Lake Chelan NRA (now combined with North Cascades)

Lake Mead and Parashant NRA / NM

Lake Roosevelt NRA

Lassen Volcanic NP

Lava Beds NM*

Mesa Verde NP

Mojave NP

Montezuma Castle NM

Monument Valley Navajo Tribal Park*

Mount Rainier NP

Mount Rushmore NM

Natural Bridges NM

Navajo NM

North Cascades NP

Olympic NP

Organ Pipe Cactus NM

Pecos NHP

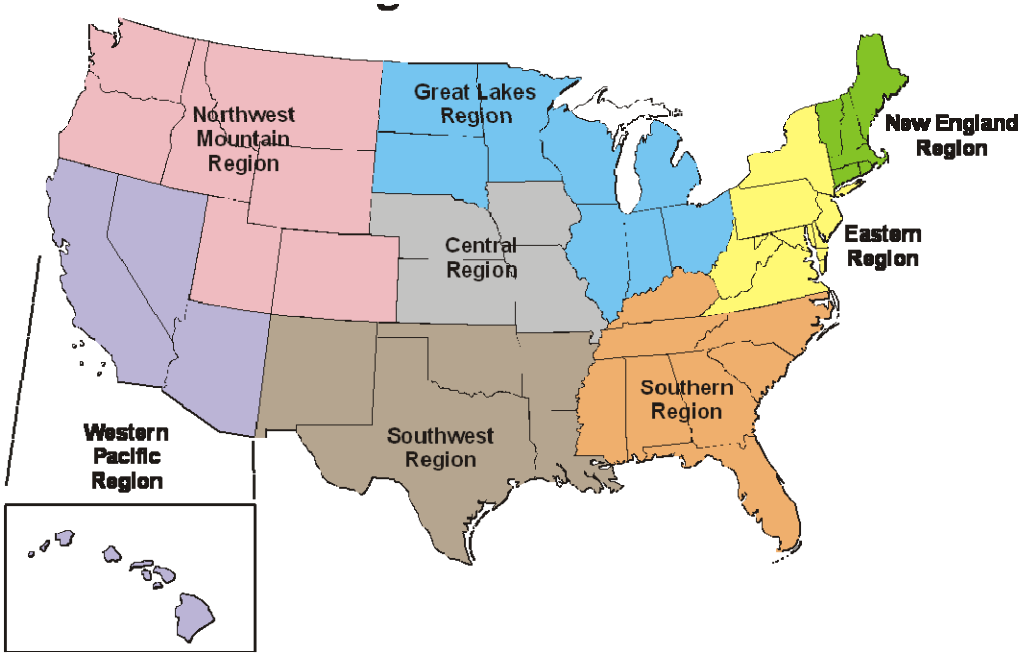
Petrified Forest NP
Petroglyph NM
Pipe Spring NM
Point Reyes NS
Puuhonua O Hoanunau NHP*
Puukohola Heiau NHS*
Rainbow Bridge NM
Rio Grande Wild and Scenic River
Sagauro NP
Salinas Pueblo Missions NM
San Francisco Maritime NHP
San Juan Island NHP
Santa Monica Mountains NRA*
Sequoia & Kings Canyon NP
Statue of Liberty NM
Sunset Crater Volcano NM
Timpanogos Cave NM*
Tonto NM*
Tumacacori NHP
Tuzigoot NM
USS Arizona Memorial*
Voyageurs NP
Walnut Canyon NM
Wupatki NM
Yellowstone NP
Yosemite NP
Yucca House NM
Zion NP

**To be verified - these parks were dropped from the program according to the FAA's official list dated February 23, 2007.*

***To be verified – these parks were not on the Federal Register list dated October 7, 2005 but were listed on the FAA's official list dated February 23, 2007.*

****Note – the following parks existed on other lists but were not listed on the official letter from Gene Kirkendall, Manager, FAA Special Programs Office, to John Jarvis, Regional Director, NPS Pacific West Region, dated October 7, 2005: Rosie the Riveter WWII Home Front NHP, Redwood NP,Muir Woods NM, John Muir NHS, Fort Point NHS, and Devils Postpile NM.*

APPENDIX A-6. FAA REGIONAL OFFICES



National Headquarters
Federal Aviation Administration
600 Independence Ave., SW
Washington, DC 20202

Central Regional Office
Federal Aviation Administration
901 Locust St.
Kansas City, MO 64106

Eastern Regional Office
Federal Aviation Administration
159-30 Rockaway Blvd.
Jamaica, NY 11434

Great Lakes Regional Office
Federal Aviation Administration
O'Hare Lake Office Center
2300 East Devon Ave.
Des Plaines, IL 60018

New England Regional Office
Federal Aviation Administration
12 New England Executive Park
Burlington, MA 01803

Northwest Mountain Regional Office
Federal Aviation Administration
1601 Lind Ave., SW
Renton, WA 98057

Southern Regional Office
Federal Aviation Administration
1701 Columbia Ave.
College Park, GA 30337

Southwest Regional Office
Federal Aviation Administration
2601 Meacham Blvd.
Fort Worth, TX 76137

Western-Pacific Regional Office
Federal Aviation Administration
15000 Aviation Blvd.
Lawndale, CA 90261

APPENDIX A-7. NPS REGIONAL OFFICES

National Headquarters
National Park Service
1849 C Street, NW
Washington, D.C. 20240
(202) 208-6843

Alaska Regional Office
National Park Service
240 West 5th Avenue
Anchorage, AK 99501
(907) 644-3510
(covers Alaska)

Intermountain Regional Office
National Park Service
12795 Alameda Parkway
Denver, CO 80225-0287
(303) 969-2500
(covers Arizona, Colorado, Montana, New Mexico, Oklahoma, Texas, Utah, and Wyoming)

Midwest Regional Office
National Park Service
601 Riverfront Drive Omaha, NE 68102
(402) 661-1736
(covers Arkansas, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin.)

National Capital Regional Office
National Park Service
1100 Ohio Drive SW
Washington, DC 20242
(202) 619- 7222(covers the District of Columbia, Maryland, Virginia, and West Virginia)

Northeast Regional Office
National Park Service
U.S. Custom House
200 Chestnut Street, 5th Floor
Philadelphia, PA 19106
(215) 597-4971
(covers Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont)

Pacific West Regional Office
National Park Service
One Jackson Center
1111 Jackson Center, Suite 700
Oakland, CA 94607
(510) 817-1300
(covers California, Hawaii, Idaho, Nevada, Oregon, and Washington)

Southeast Regional Office
National Park Service
100 Alabama St. SW
1924 Building
Atlanta, GA 30303
(404) 562-3100
(covers Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Puerto Rico, and the Virgin Islands)

APPENDIX B. ATMP KICKOFF MEETING MATERIALS

APPENDIX B-1. CHECKLIST FOR PRE-KICKOFF AND KICKOFF MEETINGS

Meeting Needs	#	Responsible Party	Confirmed
Maps			
• Land cover	1		
• Park features	1		
• Flight Tracks and Acoustic Zones Overlays	1		
• Small handouts	25?		
Agenda (handout)	25?		
"Milestones"	25?		
Attendance Sheet	1		
ATMP Brochure	25		
Presentation Details			
• ATMP DVD Video	1		
• Laptop w. DVD Player	1		
• Small Projector	1		
• Projection Screen	1		
• Set of speakers for video-hook up	1		
• Presentation Files	-		
Flip Chart	1		
Markers			
Tape			
Acoustics Brochures	25		
Other/Optional:			
Cameras - digital	1		
Batteries/disks for camera			
GPS Unit	1		
Meeting refreshments	-		
Laser Pointer	1		
Extension Cord	1		

APPENDIX B-2. KICKOFF MEETING INTRODUCTION

Content, Protocol, and Responsibilities for ATMP Initiation and Kickoff Meetings

This paper presents a brief introduction to the ATMP Program and summarizes the main goals and objectives of kickoff meetings for the initiation of the ATMP/NEPA process at units of the National Park system and abutting tribal lands. Initiations consist of a kickoff meeting and an orientation site visit to be held on separate days. Kickoff meetings include the participation of appropriate FAA representatives and NPS representatives. The FAA ATMP National Program Office and the NPS Natural Sounds Program Office are responsible for the overall ATMP Program for the FAA and NPS, respectively. The Volpe Center and private contractors will be utilized as determined necessary to provide program management and environmental analysis services in support of the ATMP Program. Accordingly, Volpe and private contractor representatives will also participate in the kickoff meetings.

Background
Congress passed the National Parks Air Tour Management Act of 2000 (NPATMA) effective April 5, 2000 (Public Law 106-181, 114 Stat. 61, Title VIII). A key element of the legislation and the national rule to implement NPATMA is using air tour management plans (ATMPs) to regulate commercial air tour operations over units of the national park system.

According to NPATMA, the objective for ATMPs is to develop acceptable and effective measures to mitigate or prevent significant adverse impacts, if any, of commercial air tour operations upon the natural and cultural resources and visitor experiences in national park units as well as tribal lands (those included in or abutting a national park). NPATMA established that ATMPs must be developed by means of public process. An Environment Assessment (EA) or Environmental Impact Statement (EIS) will be completed for each ATMP pursuant to the requirements of NEPA. As specified in NPATMA, for NEPA compliance purposes the FAA is the lead agency and the NPS is the cooperating agency. The FAA and NPS will assemble an ATMP team with expertise in aviation safety, environmental analysis, park resources, and cultural resources, among other disciplines.

Kickoff Meeting
The main objectives of the kickoff meeting are to discuss the main stages of the ATMP/NEPA process, develop an understanding of park resources and current commercial air tour operation conditions, identify potential issues of concern, and define the level of involvement and participation of all ATMP team members. The kickoff meeting will also provide the first opportunity for personal interaction between all team members for each park or tribal land, promoting the establishment of a constructive working relationship, critical for the overall success of the AMT/NEPA process.

The kickoff meeting will begin with the identification of the ATMP team members and their roles and responsibilities. The ATMP public video, prepared by the FAA, will be presented to provide a general overview of NPATMA and the ATMP Program. The video is available at the ATMP Program website at http://www.atmp.faa.gov. The kickoff meeting will provide an

overview of the ATMP/NEPA process, highlighting the main provisions of NPATMA and the main stages of the ATMP development process and the NEPA compliance process – including alternatives development, potential mitigation measures, scoping, Section 106 compliance, and public involvement opportunities. The main deliverables and overall schedule of the ATMP/NEPA process will also be presented. Park staff and FAA field representatives will play a crucial role in enhancing the team's understanding of relevant issues and concerns related to park resources and commercial air tour operations. Hence, their active participation in the kickoff meeting is essential. Discussion time will be provided to allow FAA and NPS regional and local staff the opportunity to present their concerns and provide their perspective on the relevant issues to be addressed in the ATMP/NEPA process.

Park staff will be expected to present and introduction to the park resources to complement the orientation site visit. This should include an overview of park history and mission, a discussion of the main park resources (natural, cultural, and other sensitive resources) and visitor attractions, as well as any other park information potentially relevant to the ATMP program. Park staff should discuss issues of concern related to commercial air tour operations over the park, highlighting for example particular resources or cultural or other events for which they many have concern. Park staff should also provide information related to relevant stakeholders and resource agencies to be included in the ATMP/NEPA process. Finally, park staff should provide information related to the development of the Section 106 compliance process based on previous experience, including identification of resources and groups to be considered, as well as relevant park staff as points of contact.

Flight Standards District Office (FSDO) representatives, with the assistance of Air Traffic (AT) representatives as needed, will be expected to provide an overview of the operation conditions of existing commercial air tours at the park. This should include the identification of existing operators, new entrants, and data on the number and distribution of their annual air tour operations (obtained from the applications for Operating Authority). If available, FSDO and AT staff should present information on flight tracks, including air tour routes, altitudes, and site or other operational restrictions. Emphasis on safety and operation issues related to air tour operations should be provided.

Acoustics will be a central topic during the meeting, as air tours could impact park resources and visitor experiences via the noise they create. Thus, representatives from the Volpe Center Acoustics Facility (VCAF) will lead a discussion of acoustic issues related to baseline ambient data collection and site selection. VCAF representatives will also provide a brief introduction of the acoustical monitoring systems, data collection, reduction, and analysis process and the role of computer modeling for analyzing potential noise impacts.

It is anticipated that a follow-up discussion with relevant FSDO and park personnel will be held after the kickoff meeting (at a later date) to discuss acoustic data collection and potential measurement sites in greater detail. The primary goal of this follow up discussion will be to combine the knowledge gained during the kickoff meeting and identify key areas (or acoustic zones) within which measurement sites will be selected. An acoustic zone can be defined as broad areas of the park that may have similar combinations of attributes, such as terrain, ground cover, climate, wildlife habitats, and visitor use. Any available maps and Geographic

Information Systems (GIS) data identifying park resource locations and/or flight paths brought to this discussion would be of great value for this discussion.

Orientation Site Visit

The main objective of the orientation site visit is to provide ATMP team members the opportunity to familiarize themselves with the main resources and attractions of the park. It will also allow team members the opportunity to better understand how visitors on the ground experience air tours of the park. The orientation site visit will be in the form of a guided tour or the park, lead by park staff, and may include driving, walking, and hiking. Thus, please bring water, a snack and lunch with you, and dress appropriately with comfortable clothing and footwear suitable for day hiking.

APPENDIX B-3. KICKOFF MEETING AGENDA

[INSERT NAME] NATIONAL PARK - KICKOFF MEETING AGENDA

Date: [insert date, start time, end time, and time zone]

Location: [insert room, park, city, and state]

Anticipated Attendees:

- FAA:
  - AWP Executive Resource Staff Manager:
  - Regional Administrator:
  - ATMP Project Manager:
  - FSDO Representatives:
  - Air Traffic (AT) representatives:
  - Other appropriate FAA representatives:

- NPS:
  - NSP representatives:
  - Park Superintendent:
  - Chief, Natural Resources:
  - Chief, Cultural Resources:
  - Other appropriate NPS representatives:

- Volpe Center:
  - Project Manager:
  - Acoustician:

- Other Contractor (if applicable)
  - Team Leader
  - Field Coordinator

Agenda:

8:30-8:40 Welcome and Introduction
(*FAA ATMP PM*)
- Goals and Objectives of Meeting

8:40-8:50 ATMP Team Identification and roles and responsibilities
(*FAA, NPS, and Volpe*)
- FAA (Western Pacific Region staff, FSDO staff)
- NPS (NSP staff, Regional Office, local park staff)

- Volpe

8:50-9:00 ATMP Public Video (9 minutes)

9:00-10:45 Briefing of ATMP/NEPA development process
(*discussion leader*)
- Review of The National Parks Air Tour Management Act of 2000
- ATMP/NEPA development process
  - Park prioritization
  - Project Initiation
  - Planning and Environmental Analysis
    - Proposed Action
    - Scoping Process (with input from NPS)
    - Alternatives development process
    - Section 106 and tribal consultation (with input from NPS)
  - Rulemaking
- Milestones and Schedule discussion

10:45-10:55 BREAK
10:55-12:00 General Introduction to Park Resources
(*local park staff*)
- History and mission
- Visitor attractions
- Natural and cultural resources
- Other sensitive resources

12:00-1:00 LUNCH

1:00-1:30 Existing air tour operations at the park
(*FSDOs*)
- Current and new entrant operators
- Number of existing air tour operations
- Flight tracks
- Issues and concerns

1:30-2:30 Acoustics discussion – Baseline Ambient Data
(*Volpe Acoustics Facility*)
- Site Selection Process
  - Site Selection Criteria
  - Current Air Tour Routes
  - "Acoustical Monitoring Zones"
  - Other Considerations
- Acoustical Monitoring System
- Data Collection, Reduction, and Analysis
- Computer Modeling

2:30-2:40 BREAK
2:40-3:10 Discussion of alternatives development process and mitigation measures

	(*discussion leader*)
3:10-3:30	Open discussion on any remaining matters (*All*)
3:30	Recap and Adjourn *(discussion leader)*

APPENDIX B-4. KICKOFF MEETING SAMPLE INVITATION

[INSERT DATE]

[Click **here** and type recipient's address]

Dear _____:

This letter serves as an invitation to the kickoff planning meeting (meeting) and orientation visit for [XXXX National Park Unit] as part of the Air Tour Management Plan (ATMP) Program. An orientation visit organized by park staff is scheduled for [Month day, year] at [XXX location] from [X to Y time]. Please bring water and a snack with you and wear comfortable clothes and footwear suitable for day hiking.

The meeting is scheduled for [date] ***at [XXX Location] from [X to Y time]****. The main objectives of the meeting and orientation visit are to discuss the main stages of the ATMP/NEPA process, develop understanding of park resources and current commercial air tour operation conditions, identify potential issues of concern, and define the level of involvement and participation of all ATMP team members.*

Enclosed with this invitation is a brochure on the ATMP Program, an ATMP Introduction paper that provides background and meeting information, a meeting agenda and an Orientation Field Trip information sheet. If you have any questions or if you need any additional information regarding the ATMP kickoff planning meeting, please contact one of the following ATMP Leadership Team representatives:

FAA:
[insert contact info]

NPS:
[insert contact info]

Sincerely,

[FAA Park Project Manager]

[insert contact info]

APPENDIX B-5. TRIBAL INVITATION SAMPLE LETTER TO AGENCY KICKOFF MEETING

U.S. Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
Executive Resource Staff

P. O. Box 92007
Los Angeles, CA 90009-2007

JUL 17 2003

Mr. John Yellow Bird Steele
President
Oglala Sioux Tribe
P.O. Box H
Pine Ridge, SD 57770

Dear President Steele:

The National Parks Air Tour Management Act (the Act) of 2000, directs the Federal Aviation Administration (FAA), in cooperation with the National Park Service, to develop Air Tour Management Plans (ATMPs) for National Parks and adjacent tribal lands where commercial air tour operations are conducted or are proposed. The objective of the ATMP is to develop acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon the natural and cultural resources, visitor experience, and tribal lands. In the Act, Congress found that the protection of tribal land from aircraft overflights is consistent with protecting the public health and welfare and is essential to the maintenance of the natural and cultural resources of Indian tribes.

Another important part of the Act is the designation of Lead and Cooperating Agency Status pursuant to the National Environmental Policy Act (NEPA). The Act has identified the FAA to be the Lead Agency and the National Park Service to be a Cooperating Agency for the development of ATMPs. It also directs the FAA to "solicit the participation of Indian tribes whose tribal lands [located within or abutting a National Park] are, or may be, overflown by aircraft involved in a commercial air tour operation…as a cooperating agency." More information on the Act and the ATMP Program can be found on the FAA website: www.atmp.faa.gov

We are now planning to initiate work on ATMPs and associated NEPA documents dealing with flights over Badlands National Park and the Pine Ridge Indian Reservation, which includes lands held by and in trust for your tribe. The purpose of this letter is to initiate government-to-government consultation with your tribe about preparation of these plans, in consideration of its potential environmental and cultural impacts under the NEPA, the National Historic Preservation Act, the American Indian Religious Freedom Act, and other pertinent legal authorities. In addition, this letter serves as a formal invitation for your tribe to participate as a Cooperating Agency under the NEPA for the ATMP/NEPA process for the locations listed above.

We would like to arrange for a meeting with you or other appropriate representatives in the near future. We would be pleased to come to your tribal offices, or to meet at another appropriate location of your choosing. It is our hope that this meeting will lay the groundwork for ongoing staff-level consultation and coordination for the ATMP/NEPA process for the Pine Ridge Indian Reservation. We would like, if possible, to meet sometime during the week of August 25, 2003. Can you please let me know whether this would be convenient for you, and if so, where and when you would like to meet? If these dates are not convenient, I would appreciate your thoughts about alternative dates.

We would also like to invite you, or a designated representative, to an FAA and NPS internal planning meeting to be held August 26, at Badlands National Park Headquarters, to discuss the ATMP/NEPA process for Badlands National Park and other pertinent issues.

It is our sincere desire to follow established protocol in completing the consultation on these projects. To this end, please advise us if this initial communication should be more appropriately directed to any other tribal representative.

We look forward to working with you and your staff in carrying out this important planning effort, which we hope will create positive benefits for your tribe and environment. For further information, or to discuss the project, please contact me at (310) 725-3808 or at the address provided above.

Sincerely,

Original signed by:
Stephen T. May
Air Tour Management Plan,
Program Manager

cc: Mr. Bob Rossman, National Park Service, Natural Sounds Program Office

File:
WP: ~9694046.doc
AWP-4:SMAY:SM:3802:07/17/2003

APPENDIX C. SCOPING AND OTHER MEETING-RELATED MATERIALS

APPENDIX C-1. SAMPLE SCOPING PACKET

Badlands National Park
Air Tour Management Plan
Planning and NEPA Scoping Document

April 13, 2004

Prepared by
Volpe National Transportation Systems Center
U.S. Department of Transportation

For Information Contact
Steve May
Air Tour Management Plan Program Manager
P.O. Box 92007
Los Angeles, CA 90009
(310) 725-3808

[4910-13]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Environmental Assessment for the Air Tour Management Plan Program at Badlands National Park

AGENCY: Federal Aviation Administration, DOT

ACTION: Notice of intent to prepare an environmental assessment and notice of initiation of public scoping

SUMMARY: The Federal Aviation Administration (FAA), in cooperation with the National Park Service (NPS), has initiated the development of an Air Tour Management Plan (ATMP) for Badlands National Park, pursuant to the National Parks Air Tour Management Act of 2000 (Public Law 106-181) and its implementing regulations contained in Title 14, Code of Federal Regulations, Part 136, *National Parks Air Tour Management*. The objective of each ATMP is to develop acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon the natural and cultural resources, visitor experiences, and tribal lands of the subject national park unit.

DATES:
Scoping Period: The 45-day scoping period will be initiated upon publication of this notice. Please submit any written response you may have within 45 days from the date of this Notice, or no later than Friday, May 28, 2004.

Scoping Meeting: A combined public scoping meeting has been scheduled for the Badlands National Park ATMP and the Mount Rushmore National Memorial ATMP as follows:

Subject Park	Date	Time	Location
Badlands National Park	Tuesday, May 4, 2004	6:00 PM	Holiday Inn Rapid City-Rushmore Plaza Hammons Conference Room 505 N Fifth Street Rapid City, South Dakota
Mount Rushmore National Memorial	Tuesday, May 4, 2004	6:00 PM	Holiday Inn Rapid City-Rushmore Plaza Hammons Conference Room 505 N Fifth Street Rapid City, South Dakota

ADDRESSES: Please submit any written response you may have within 45 days from the date of this Notice, or no later than Friday, May 28, 2004. Address your comments for **Badlands National Park** to:

Docket Management System
Doc No. FAA-2004-17458
U.S. Department of Transportation
Room Plaza 401, 400 Seventh Street, SW.
Washington, DC 20590-0001

You must identify the docket number FAA-2004-17458 for Badlands National Park at the beginning of your comments. If you wish to receive confirmation that FAA received your comments, include a self-addressed, stamped postcard. You may also submit comments through the Internet to http://dms.dot.gov. You may review the public docket containing comments in person in the Dockets Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Dockets Office is on the plaza level of the NASSIF Building at the Department of Transportation at the above address. Also, you may review public dockets on the Internet at http://dms.dot.gov. Additionally, comments will be received and recorded at the public scoping meetings. Please note that names and addresses of people who comment become part of the public record. If you wish us to withhold your name and/or address, you must state this prominently

at the beginning of your comment. We will make all submissions from organizations, businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses available for public inspection in their entirety.

FOR FURTHER INFORMATION CONTACT: Steve May, Air Tour Management Plan Program Manager, Executive Resource Staff, AWP-4, Federal Aviation Administration, Western-Pacific Region. Mailing address: P.O. Box 92007, Los Angeles, California 90009-2007. Telephone: (310) 725-3808. Street address: 15000 Aviation Boulevard, Lawndale, California 90261. Email: *Steve.May@faa.gov*

SUPPLEMENTARY INFORMATION: In developing each ATMP and any associated rulemaking actions, the FAA is required to comply with the National Environmental Policy Act of 1969, which calls on Federal agencies to consider environmental issues as part of their decision making process. For the purposes of compliance with the National Environmental Policy Act, the FAA is the Lead Agency and the NPS is a Cooperating Agency. The FAA Air Tour Management Plan Program Office and the NPS Natural Sounds Program Office are responsible for the overall implementation of the ATMP Program.

An Environmental Assessment is being prepared in accordance with FAA Order 1050.1D, *Policies and Procedures for Considering Environmental Impacts*. The FAA is now inviting the public, agencies, tribes, and other interested parties to provide comments, suggestions, and input regarding: (1) the scope, issues, and concerns related to the development of each ATMP; (2) the scope of issues and the identification of significant issues regarding commercial air tours and their potential impacts to be addressed in the environmental process; (3) the potential effects of commercial air tours on cultural and historic resources; (4) past, present, and reasonably foreseeable future actions which, when considered with ATMP alternatives, may result in significant cumulative impacts; (5) potential ATMP alternatives; and (6) the potential impacts on natural resources and visitor experiences. The FAA requests that comments be as specific as possible in response to actions that are being proposed under this notice.

A combined public scoping meeting has been scheduled for the Badlands National Park ATMP and the Mount Rushmore National Memorial ATMP. The purpose of this scoping meeting is to describe the ATMP development and environmental processes, obtain public input regarding the ATMP and potential environmental concerns that may be appropriate for consideration in the Environmental Assessment, and to identify alternatives to be considered. Both oral and written comments will be accepted during this meeting. Agency personnel will be available to record your spoken comments. All recorded and written comments become part of the official record. The public scoping meeting will consist of a presentation in which the National Parks Air Tour Management Act of 2000 is introduced, existing conditions at Badlands National Park and Mount Rushmore National Memorial will be described and the ATMP development process at each park unit will be explained. Following the presentation, the floor will be opened for public comments to be received.

Park-specific scoping documents that describe the project in greater detail are available at the following locations:

- Rapid City Public Library, 610 Quincy Street, Rapid City, South Dakota
- Oglala Lakota College Library, 3 Mile Creek Road, Kyle, South Dakota
- Keystone Town Library, 1101 Madill Street, Keystone, South Dakota
- E. Y. Berry Library, Black Hills State University, 1200 University, Spearfish, South Dakota
- South Dakota State Library, Mercedes MacKay Building, 800 Governors Drive, Pierre, South Dakota
- FAA Air Tour Management Plan Program Website, http://www.atmp.faa.gov/
- FAA Docket Management System Website, http://dms.dot.gov

Issued in Hawthorne, California on April 7, 2004

Steve May
Program Manager
Air Tour Management Plan (ATMP) Program

Part 1 - Introduction to the Project

A. Introduction

The Federal Aviation Administration (FAA), in cooperation with the National Park Service (NPS), has initiated the development of an Air Tour Management Plan (ATMP) for Badlands National Park pursuant to the National Parks Air Tour Management Act of 2000 (Public Law 106-181) and its implementing regulations contained in Title 14, Code of Federal Regulations, Part 136, *National Parks Air Tour Management*. The objective of the ATMP is to develop acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon the natural and cultural resources, visitor experiences, and tribal lands of Badlands National Park.

A commercial air tour operation is defined as a flight conducted for compensation or hire in a powered aircraft where a purpose of the flight is sightseeing over a national park, within ½ mile outside the boundary of any national park or over tribal lands, during which the aircraft flies below a minimum altitude of 5,000 feet (except for the purposes of takeoff or landing, or as necessary for the safe operation of the aircraft), or less than 1 mile laterally from any geographic feature within the park unless more than ½ mile outside the boundary. A commercial air tour operator is any person who conducts a commercial air tour operation.

In accordance with the National Parks Air Tour Management Act, the Badlands National Park ATMP: may prohibit commercial air tour operations in whole or in part; may establish conditions for the conduct of commercial air tour operations; shall apply to all commercial air tour operations within ½ mile outside the boundary of the National Park; shall include incentives for the adoption of quiet aircraft technology; and shall provide for the initial allocation of opportunities to conduct commercial air tour operations if the plan limits the number of such operations. The need for implementation of any of these measures must be justified and documented in the ATMP and within the finding of no significant impact/record of decision.

B. Air Tour Management Plan (ATMP) Development Process

The process is initiated in a particular location following the receipt of an application for air tour operating authority from an existing or new entrant commercial air tour operator. The FAA has received applications for commercial air tour operating authority from one existing operator and one new entrant for Badlands National Park. The ATMP planning and environmental assessment process is summarized in Figure 1. The scoping process has been initiated early in ATMP planning to ensure an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to commercial air tour operations over and within ½ mile of the national park. Following completion of the planning and environmental process, appropriate implementation actions will be taken for the selected ATMP alternative. This may include federal rulemaking (see Figure 1).

In developing the ATMP and any associated rulemaking actions, the FAA is required to comply with the National Environmental Policy Act of 1969 (National Environmental Policy Act), and its implementing regulations contained in 40 CFR Parts 1500-1508 (hereafter referred to as "the regulations"). The regulations mandate that the FAA and NPS shall, to the fullest extent possible, interpret and administer the policies, regulations and public laws of the United States in accordance the policies set forth in the National Environmental Policy Act and these regulations (1500.2(a)). The regulations also mandate that the FAA and NPS shall, to the fullest extent possible, use the National Environmental Policy Act process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment and use all practical means, consistent with the requirements of the National Environmental Policy Act and other essential considerations of national policy, to restore and enhance the quality of the human environment and avoid or minimize any possible adverse effects of their actions upon the quality of the human environment (1500.2(e) and 1500.2(f)). For the purposes of complying with sections 1501.3 and 1501.5 through 1501.8 of CEQ regulations, the FAA is the lead agency and the NPS is a cooperating agency.

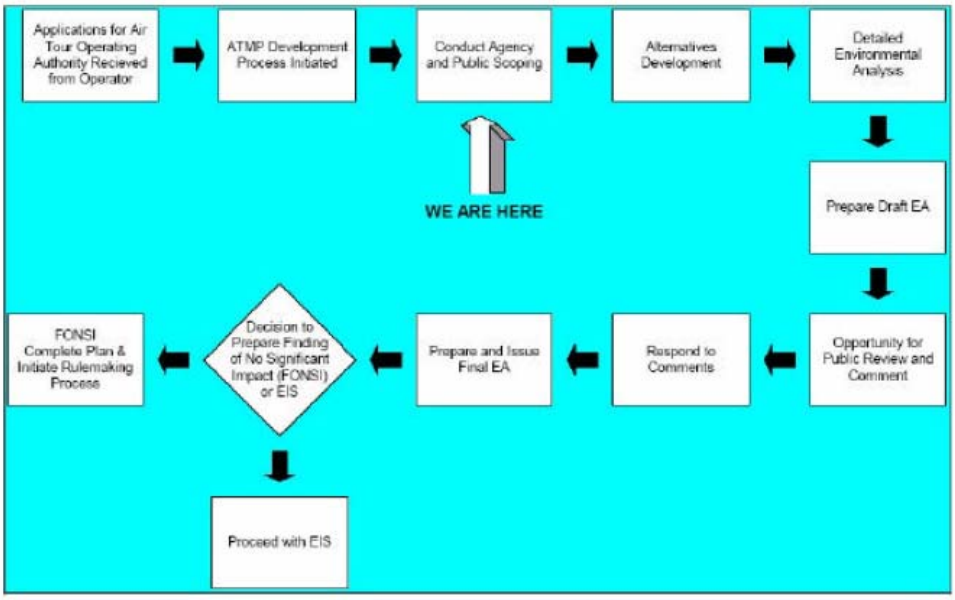


Figure 1 - ATMP Planning and Environmental Assessment Process

The FAA will, in cooperation with the National Park Service, prepare an environmental assessment (EA) in accordance with FAA Order 1050.1D. The FAA may decide to proceed with the development of an environmental impact statement (EIS) at anytime during the development of the environmental assessment. This notwithstanding, following the planned development of the environmental assessment, either a finding of no significant impact (FONSI) or environmental impact statement will be prepared. Prior to implementation of the ATMP and following any federal rulemaking actions, a record of decision will be prepared.

Additional information on the ATMP Program is available on the FAA's ATMP Website located at www.atmp.faa.gov. Interested parties may request information regarding the development of this and other ATMPs through this website.

Part 2 – Setting

A. Introduction

The discussion below summarily describes the setting for the Badlands National Park ATMP project. A description of the park's natural and cultural resources, visitor experiences, tribal lands, and commercial air tour activity are provided to assist the public and agencies in the preparation of meaningful comments. The most useful comments are those that address the scope of analysis, present significant issues, and suggest reasonable alternatives to the proposed action with the greatest specificity possible.

The planning area for the Badlands National Park ATMP project is depicted on Figure 2. The area encompasses the Badlands National Park and the area within ½ mile outside the boundary of the park. The National Parks Air Tour Management Act limits the applicability of the Air Tour Management Plan to operations conducted within this area. Although the scope of authority is limited, the FAA recognizes its responsibility under applicable environmental laws to consider impacts on potentially affected resources located in the vicinity of the Badlands National Park but in excess of a ½ mile outside the boundary of the park.

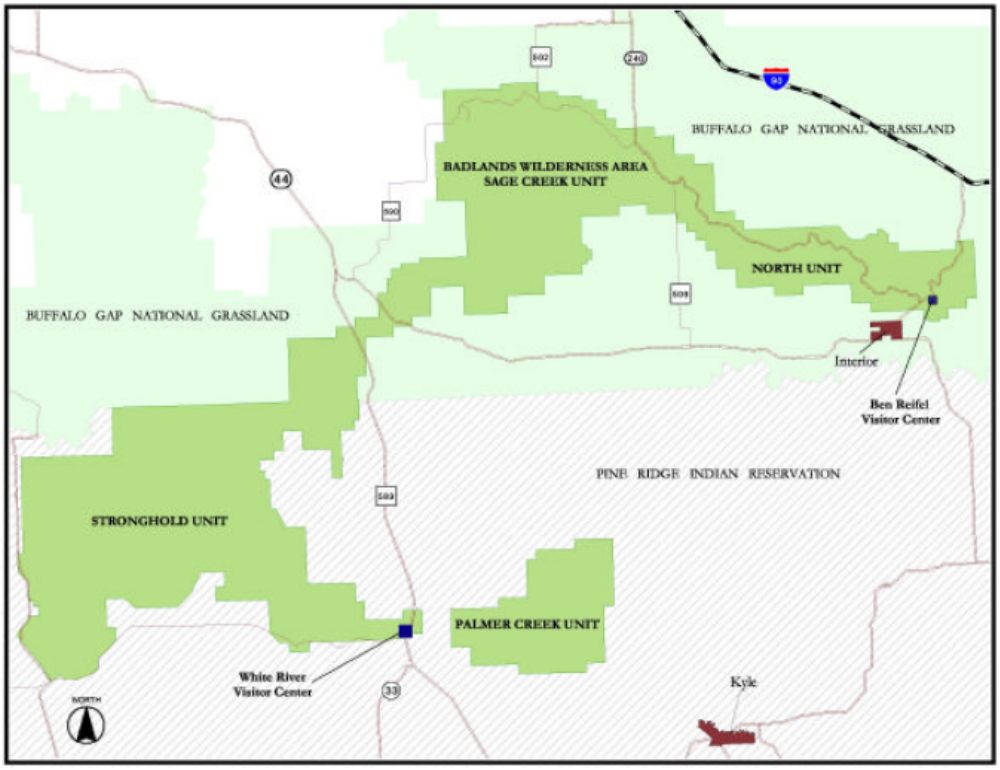


Figure 2 – Badlands National Park Planning Area

B. Badlands National Park - Natural and Cultural Resources, Visitor Experience, and Tribal Lands

Badlands National Park is located in the White River or Big Badlands area of southwestern South Dakota. Steep slopes, numerous small valleys, and sparse vegetation characterize the area. The park is approximately 244,000 acres, of which 64,000 is designated as wilderness. In 1929, Badlands National Monument was authorized "to preserve the scenic and scientific values of a portion of the White River Badlands and to make them accessible for public enjoyment and inspiration." Badlands National Monument was formally established by Presidential Proclamation on January 25, 1939. The Monument was redesignated Badlands National Park by the National Parks and Recreation Act of November 10, 1978. Other purposes defined for the park include preserving the area for science and the massive vertebrate fossil beds and other paleontological, zoological, and geological resources for the public.

The overall context for park purposes and values (including resources) is defined in NPS Management Policies 2001 (1.4.6):

- The park's scenery, natural and historic objects, and wildlife, and the processes and conditions that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features, natural visibility, both in daytime and at night; natural landscapes; natural soundscapes and smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structures, and objects; museum collections; and native plans and animals;
- Opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing any of them;

- The park's role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provide to the American people by the national park system; and
- Any additional attributes encompassed by the specific values and purposes for which it was established.

Badlands National Park purposes and values generally include all the above, since all exist or may be attributed to the park to some degree – as established under the NPS Organic Act. Descriptions of attributes, and supplementary information about them, are provided in the Draft General Management Plan (2003) for the park. Values of the park are implicit in the statements of purpose, but they are expressed specifically in the park mission statement.

Purposes

- Protect the unique landforms and scenery of the White River Badlands for the benefit, education and inspiration of the public.
- Preserve, interpret, and provide for scientific research on the paleontological and geological resources of the White River Badlands.
- Preserve the flora, fauna and natural processes of the mixed grass prairie ecosystem.
- Preserve the Badlands wilderness area and associated wilderness values.
- Interpret the history of the Sioux National and Lakota people.

Values

- A blend of the best known Oligocene fossil deposits contained within the archetypal Big Badlands formations.
- A rich and varied cultural history spanning from paleo-Indian occupation through the early 20th century homesteading period.
- A fine expanse of mixed grass prairie ecosystem.
- Badlands wilderness character that includes clean air, quiet, solitude, vastness, and natural processes.
- A setting for people to explore and appreciate, through such activities as hiking, camping, wildlife viewing, scenic drives and vistas, research, educational opportunities, and quiet contemplation.

The park boundary was established along jurisdictional lines rather than geographic features and is administratively divided into two units. The North Unit is owned by the federal government in fee simple and, like most of the early "traditional" parks, the National Park Service has sole management authority. The South Unit is located on the Pine Ridge Indian Reservation and is "trust" land, intended to be managed cooperatively by the National Park Service and Oglala Sioux Tribe. The park is further segmented administratively. It is open to grazing in accordance with tribal / Bureau of Indian Affairs regulations.

Badlands National Park is characterized by barren canyons, peaks, and ridges intermixed with large areas of mixed-grass prairie providing habitat for large numbers of wildlife and plant species. The rugged topography and variegated rocks produce spectacular visual effects. Over time, the retreat of the White River banks has resulted in a unique landscape characterized by barren badlands, including an erosional structure called a "wall." The park is considered to represent potential range and habitat for all species indigenous to semiarid mixed prairie grassland ecosystems. Badlands mixed grass prairie vegetation is characteristically diverse and found throughout the park.

The cultural and historic resources of Badlands National Park include archaeological sites, historic structures and features, ethnographic resources, and potential cultural landscapes. Paleontological resources were a major reason for establishing Badlands as a national monument, and later a national park. The region contains the largest known assembly of late Eocene and Oligocene mammal fossils in North America. Fossils from the area have provided valuable information for understanding mammalian evolution and diversity. Of the discovered fossils, most are of animals that are now extinct or different from present-day species. The vertebrate fossils preserved within the White River Badlands have been studied extensively since 1846 and can be found in museum collections throughout the world. Small percentages of the Badlands National Park have been surveyed for fossil resources. The park contains

evidence of continued use by the Oglala Sioux Tribe for traditional religious activities, particularly in the South Unit. There are several areas within the park that contain spiritual significance to the tribe.

Badlands National Park received approximately 906,000 visitors in 2002. There are approximately 730 acres of visitor services, residential, and administrative facilities. The park offers a wide range of recreational opportunities, including auto-touring with scenic overlooks, wildlife viewing, hiking, picnicking, and camping, as well as a number of interpretive and educational programs. The park is a destination for members of the scientific community who come to view, study, and research the paleontological and geologic resources. The park is also a destination for an increasing number of backpackers and outdoor recreationalists.

The number one activity of park visitors is to view the scenery. Visitors can experience the scenery along the Badlands Loop Road or Sage Creek Rim Road in the North Unit. The Badlands Loop Road is a 28-mile road that skirts the edge of the North Unit. Along Badlands Loop Road are 14 designated overlooks for travelers to view the scenery. One of the most popular overlooks is the Pinnacles Overlook, offering views of spires and canyons. Other visitors experience the scenery by exploring one of the hiking trails in the Cedar Pass area or by backpacking or horseback riding through the more remote areas of the park. The park also has eight day-hiking trails all located in the Cedar Pass area of the North Unit.

Most visitors drive through the park, stopping infrequently for short walks on park trails and overlooks. Fewer visitors hike longer distances over the maintained trail system. Information, history, and exhibits are located at the park's two visitor centers. The Ben Reifel Visitor Center is located in the Cedar Pass area of the North Unit. This visitor center offers visitor information and has exhibits on fossils, cultural history, and prairie ecology that familiarize visitors with some of the main features of the park. In the South Unit, the White River Visitor Center is located in the southeast corner of the Stronghold area, over 50 miles south of the Ben Reifel Visitor Center. This small visitor center includes park orientation and information, an exhibit area and park information. Cedar Pass Campground near the Ben Reifel Visitor Center and Sage Creek Campground off of Sage Creek Rim Road are the park's only campgrounds.

Within Badlands National Park is the Badlands Wilderness Area, the largest prairie wilderness in the United States, consisting of over 64,000 acres. Sage Creek Rim Road skirts the northern boundary of the Wilderness Area. There are no established trails, limited hiking/backpacking use, and no roads within the Wilderness Area. The area consists of the sharply eroded badland formations and an endless mixed grass prairie. Trees are scarce and there are limited areas of low lying shrubs. Most use in the wilderness is by horseback, and generally confined to day trips originating from the Sage Creek Campground, located on the northwest edge of the wilderness.

C. Commercial Air Tour Activity and Visitor Experience

There is currently one existing operator who provides commercial air tours over and within ½ mile outside the boundary of the Badlands National Park. Approximately 4,099 commercial air tour operations are authorized per year. This figure is based on the operator's application for air tour operating authority submitted pursuant to Title 14 Code of Federal Regulations Part 136. In the application, the operator was required to report the greater of the number of commercial air tour operations conducted during the twelve-month period preceding April 5, 2000, or the average number of commercial air tour operations conducted by the operator during the three-year period preceding April 5, 2000. In accordance with the National Parks Air Tour Management Act and Title 14, Code of Federal Regulations, Part 136, the annual air tour operations over and within ½ mile outside the boundary of the Badlands National Park are currently capped at the number of operations reported in the operator's application, unless otherwise authorized by the FAA and NPS, or until the ATMP is implemented.

All existing commercial air tour operations at Badlands National Park are certificated by the FAA in accordance with the requirements of Title 14 Code of Federal Regulations Parts 91 and 135. The FAA has proposed national safety standards to govern commercial air tours (Docket No. FAA-1988-4521; Notice No. 03-10) (See Federal Register 60572, October 22, 2003)

The FAA Rapid City Flight Standards District Office has developed an Air Tour Operation Plan regarding the conduct of air tour operations over and within the vicinity of Badlands National Park. This plan

identifies standard operating procedures and a safety plan for each operator. The approved air tour routes are presented in Figure 3a and Figure 3b. Compliance with these procedures is voluntary and occasionally, air tour operations are conducted in a different manner. The procedures in the FAA Rapid City Flight Standards District Office Air Tour Operation Plan are not currently enforceable as federal law or regulation.

Those who experience the National Park solely by means of a commercial air tour are considered legitimate visitors to the park although their experience of the park resources and values is quite different in most cases from that of the ground based visitor. The air tour visitor experience often varies depending on weather conditions and the desires of the air tour client/visitor (i.e. length of flight, geographic features of special interest). The experience described below is based on an air tour operation conducted in clear weather conditions and in accordance with the FAA Rapid City Flight Standards District Office Air Tour Operation Plan.

Most of the commercial air tour operations originate from and return to the helipad located just outside the northeast entrance of Badlands National Park. The flight tracks are concentrated in the eastern portion of the North Unit of the park. The air tour flight tracks take visitors over the Cedar Pass area of the North Unit, looping south of the northeast entrance over the hiking trails and the Ben Reifel Visitor Center. One track takes visitors west over the Fossil Exhibit Trail, generally flying north of the Badlands Loop Road. The air tour visitor is provided an opportunity for viewing the contrasting buttes and steep walled gullies and canyons which comprise the badland walls, badland basins, and plateaus. In addition, the air tour visitor can view extensive prairie grasslands, scenic vistas, and occasional wildlife.

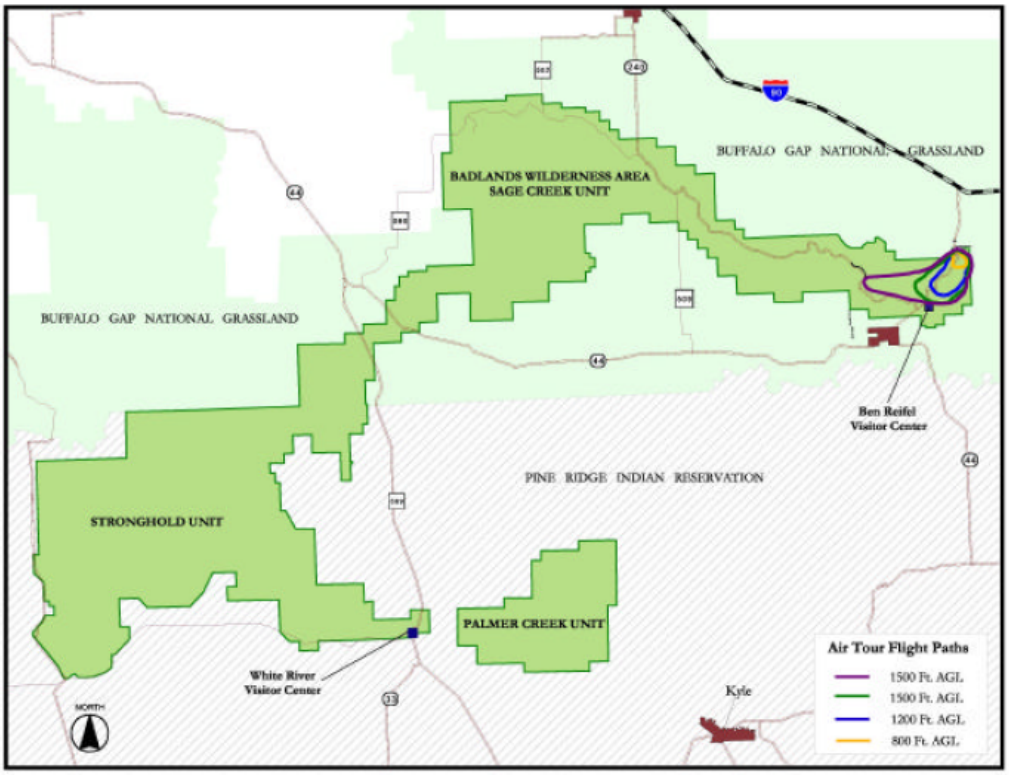


Figure 3a – Approximate Routes Identified in FAA Rapid City Flight Standards Office Air Tour Operation Plan (Vicinity View)

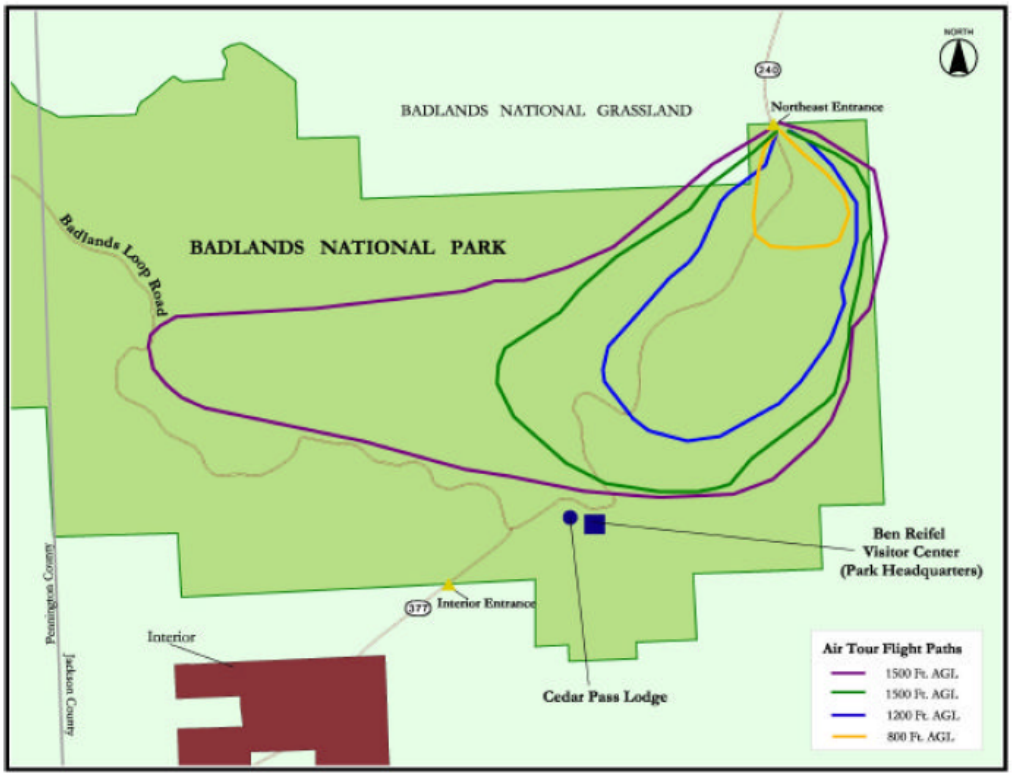


Figure 3b – Approximate Routes Identified in FAA Rapid City Flight Standards Office Air Tour Operation Plan (Close-up View)

Part 3 - Federal Action and Range of Alternatives

A. Federal Action

The federal action associated with this project is the establishment of an Air Tour Management Plan (ATMP) for Badlands National Park, which accomplishes the objective set forth in the Air Tour Management Act of 2000, which is to establish acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon the natural and cultural resources, and visitor experiences. The purpose and need for this project stem from the enactment of the Air Tour Management Act of 2000, wherein the U.S. Congress directed the FAA, in cooperation with the NPS, to establish an ATMP for any national park or tribal lands for which such a plan is not in effect whenever a person applies for authority to conduct a commercial air tour operation over the park. Two persons have applied to the FAA for operating authority to conduct commercial air tour operations over Badlands National Park, which triggers the need to develop an ATMP at this park. Following completion of the ATMP planning and environmental process, appropriate implementation actions will be taken for the selected ATMP alternative. This may include federal rulemaking. The FAA, in cooperation with the NPS, is actively preparing to make a decision on one or more alternative means of meeting the Air Tour Management Plan objective while also complying with the existing legislative, regulatory, and, to the greatest extent possible, the policy mandates of both agencies.

In Section 802 of the National Parks Air Tour Management Act of 2000, Congress found, in relevant part, that (1) the Federal Aviation Administration has sole authority to control airspace over the United States; (2) the Federal Aviation Administration has the authority to preserve, protect, and enhance the environment

by minimizing, mitigating, or preventing the adverse effects of aircraft overflights on public and tribal lands; and, (3) the National Park Service has the responsibility of conserving the scenery and natural and historic objects and wildlife in national parks and of providing for the enjoyment of the national parks in ways that leave the national parks unimpaired for future generations. The relevant FAA legislative, regulatory, and policy mandates are primarily defined by the Federal Aviation Act of 1958 (49 U.S.C. 40103(b)), the Air Tour Management Act of 2000 (49 U.S.C. 40128), and the Department of Transportation Act of 1966 (49 U.S.C. 303(c)). The relevant NPS legislative, regulatory, and policy mandates are primarily defined by the Organic Act of 1916 (16 USC 1, 2-4), the General Authorities Act of 1976 (16 USC 1a-1 through 1a-8), the Redwoods Act of 1978 (P.L. 95-250, 92 Stat. 163, 16 USC 1a-1), and the enabling legislation specific to Badlands National Park. The determination of significant adverse impacts, if any, for this ATMP will be made by the FAA, in cooperation with the NPS, based on the National Parks Air Tour Management Act of 2000 as well as the aforementioned legislative, regulatory, and policy mandates of the FAA and the NPS, other pertinent environmental laws, and the purposes and values of Badlands National Park (described in Part 2B of this document).

The Air Tour Management Act of 2000 specifies that the ATMP be developed by means of a public process. This scoping process is one of the early elements of that public process. As a result, a specific "preferred alternative" for the ATMP has not yet been identified. No determination has yet been made on the justification or need for any limitations or restrictions on commercial air tour operations over and in the vicinity of Badlands National Park with the exception of those specified in existing federal regulations. The FAA and NPS preferred ATMP alternative will be identified following scoping and following the conduct of a complete environmental analysis. The FAA and NPS may identify a preferred alternative in the draft environmental assessment, which will be made available for public review and comment.

B. Range of Alternatives

1. No Action Alternative

The environmental impacts of the no action alternative must be considered for comparative purposes in accordance with the National Environmental Policy Act and the implementing regulation of the Council on Environmental Quality regulations (40, CFR Parts 1500-1508). This is required even in situations such as this where the FAA and NPS are under legislative command to develop an ATMP. The "no action" alternative assumes the continuation of the present course of action can be expected if an ATMP is not developed for Badlands National Park. For this reason, under the no action alternative it will be assumed that the FAA Rapid City Flight Standards District Office Air Tour Operation Plan would remain in effect. It is important to note that the FAA Rapid City Flight Standards District Office Air Tour Operation Plan only applies to commercial air tour operations conducted in rotor wing aircraft, therefore, any commercial air tour operations conducted in fixed wing aircraft are not subject to the agreement. It is also important to note that compliance with the FAA Rapid City Flight Standards District Office Air Tour Operation Plan is voluntary on the part of the signatory operators and, under this alternative, the level of compliance would remain steady. Under this alternative, the FAA and the NPS would continue to have no federal regulatory authority to enforce the procedures specified in the FAA Rapid City Flight Standards District Office Air Tour Operation Plan. In addition, the existing caps on the number of commercial air tour operations and the limitations on new entrants imposed under Title 14 Code of Federal Regulations Part 136 will also be assumed to continue in effect under this no action alternative. The no action alternative will be more fully described and will be carried forward for detailed analysis in the environmental assessment.

2. No Prohibitions, Conditions, Restrictions, or Limitations Alternative

An ATMP alternative that assumes no prohibitions, conditions, restrictions or limitations on commercial air tour operations will be analyzed. The Air Tour Management Act requires any prohibition, condition, restriction, or limitation on commercial air tour operations to be justified. Under this alternative, there would be no caps, limitations, restrictions, or federally specified routes for commercial air tour operations over the park other than those specified in existing federal safety regulations.

3. Other Alternatives

The FAA, in cooperation with the NPS, will determine if any mitigation measures are justified and develop other alternatives that will incorporate such mitigation measures as deemed appropriate.

If mitigation measures are justified, a range of potential mitigation measures will be screened for possible use at Badlands National Park. Table 1 provides a list of potential mitigation measures, which may be utilized either individually or in combination. The Air Tour Management Act specifically authorizes the use of these measures when their use is justified and the need is documented. Additional mitigation measures and alternatives might be suggested by the NPS, as a cooperating agency, and by the public or by other agencies. Such alternatives could be carried through analysis in response to specific issues about the effects of commercial air tour operations on park resources and visitor experiences. Consideration of the impacts of such alternatives may also provide a basis or justification for mitigation.

Table 1 - Potential Mitigation Measures

POTENTIAL MITIGATION MEASURES – PROHIBITIONS and CONDITIONS
❖ In-whole prohibition on commercial air tour operations
❖ In-part prohibition on commercial air tour operations
❖ Establishment of commercial air tour routes
❖ Establishment of maximum and/or minimum commercial air tour altitudes
❖ Time-of-day restrictions for commercial air tour operations (including curfews)
❖ Restrictions on commercial air tour operations for particular events
❖ Maximum number of commercial air tour flights per unit of time (capacity limits)
❖ Conditions necessary for mitigation of intrusions on privacy on tribal lands
❖ Other prohibitions or conditions necessary for mitigation of noise, visual, or other impacts

Alternatives that are not practicable or otherwise do not satisfy the purpose and need for the project would not be carried forward for detailed analysis within the environmental assessment. A reasonable number of alternatives and the no action alternative will be carried forward for detailed analysis. A discussion of each of the initial alternatives not carried forward and the reasons for it not being carried forward will be included in the environmental assessment. The public will have an opportunity to view the alternatives analysis when the draft environmental assessment is distributed for public review and comment.

C. Provisions Common to All Alternatives

As required by the Air Tour Management Act, any ATMP alternative that establishes commercial air tour routes, minimum or maximum altitudes, caps, or curfews shall also include incentives for the adoption of quiet aircraft technology. This requirement will be satisfied for any alternative for which it is applicable. The incentives may include:

- Preferred routes (if any routes are proposed)
- Preferred altitudes (if any maximum or minimum altitudes are proposed)
- Partial or total relief from caps (if any caps are imposed)
- Partial or total relief from curfews (if any curfews are imposed)
- Other appropriate incentives

Part 4 - Initial List of Environmental Issues

A. Introduction

For the purposes of preparing environmental documents under the National Environmental Policy Act, the FAA is the lead agency and the NPS is a cooperating agency. The FAA and NPS have executed a Memorandum of Understanding regarding implementation of the Air Tour Management Act and development of ATMPs. The agencies have agreed, among other things, that the development of ATMPs and associated environmental document(s) under National Environmental Policy Act will be a fully cooperative process recognizing and complying, to the greatest extent possible consistent with the FAA's responsibility as lead agency, with the existing legislative, regulatory, and policy mandates of both agencies. The Air Tour Management Act specifically requires that "…the Administrator and the Director shall each sign the environmental decision document required by section 102 of the National Environmental Policy Act of 1969 (42 U.S.C. 4332) which may include a finding of no significant impact,

an environmental assessment, or an environmental impact statement, and the record of decision for the air tour management plan."

FAA Order 1050.1D, *Policies and Procedures for Considering Environmental Impacts*, sets forth specific environmental analysis procedures to be used in preparing environmental assessments and environmental impact statements. A copy of the order is available via the FAA's Website at www.aee.faa.gov/e3/1050pt1d. In accordance with this order, the impacts (including cumulative impacts) of existing commercial air tour operations and any ATMP alternatives carried forward for detailed study will be evaluated in each of the 18 environmental impact categories listed below.

B. Environmental Impact Categories

1. Impacts on air quality (including potential visibility impairment)
2. Impacts on cultural resources
3. Impacts on coastal resources
4. Light emissions and visual impacts
5. Compatible land use impacts
6. Impacts on use of (consumable) natural resources and energy supply
7. Construction impacts
8. Noise impacts
9. Impacts on properties protected under 49 U.S.C. 303 (DOT Act 4(f))
10. Secondary (induced) impacts
11. Impacts on farmland
12. Socioeconomic impacts (including environmental justice)
13. Impacts on fish, wildlife, and plants (including threatened and endangered species)
14. Impacts on water quality
15. Impacts on floodplains and floodways
16. Impacts on wetlands
17. Impacts of hazardous materials and solid waste
18. Impacts on wild and scenic rivers

C. Initial Issues

One objective of this scoping process is to assist the FAA in determining the scope and the significant issues to be analyzed in depth in the environmental assessment. As a result the FAA may identify and eliminate from detailed study the issues which are not relevant thereby narrowing the discussion of these issues in the environmental assessment. At this early stage in the planning process, the FAA and NPS are considering the following environmental issues to be particularly important:

- Potential noise impacts
- Potential impacts on visitor experience
- Potential impacts on Native American culture

The FAA is now inviting the public, agencies, tribes, and other interested parties to provide comments, suggestions, and input regarding the scope, issues, and concerns regarding commercial air tours and their potential impacts to be addressed in the environmental process and related to the development of the ATMP for Badlands National Park.

Part 5 - Sources Consulted.

National Park Service. 1982. Final Environmental Statement for the Master Plan, Badlands National Park, South Dakota. Rocky Mountain Region, National Park Service, 1982.

National Park Service. 2003. General Management Plan / Environmental Impact Statement (Region Review Draft). United States Department of Interior, National Park Service, 2003.

National Park Service. "Badlands National Park. Facts." 27 February 2004. www.nps.gov/badl/pphtml/facts.html.

National Park Service. 1992. Badlands National Park: Statement for Management. National Park Service, Badlands National Park, 1992.

APPENDIX C-2. SAMPLE NOTICE OF INTENT TO PREPARE AN EA AND INITIATE SCOPING

[4910-13]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Environmental Assessment for the Air Tour Management Plan Program at Lake Mead National Recreation Area

AGENCY: Federal Aviation Administration, DOT

ACTION: Notice of intent to prepare an environmental assessment and notice of initiation of public scoping.

SUMMARY: The Federal Aviation Administration (FAA), in cooperation with the National Park Service (NPS), has initiated the development of an Air Tour Management Plan (ATMP) for Lake Mead National Recreation Area, pursuant to the National Parks Air Tour Management Act of 2000 (Public Law 106-181) and its implementing regulations contained in Title 14, Code of Federal Regulations, Part 136, *National Parks Air Tour Managemen*t. The objective of the ATMP is to develop acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon the natural and cultural resources, visitor experiences, and tribal lands of the subject national park unit.

DATES:

Scoping Period: The 45-day scoping period will begin on April 16, 2004 and will close May 31, 2004. Please submit any written response you may have no later than May 31, 2004.

Scoping Meeting: A public scoping meeting has been scheduled for this project as follows:

Subject Park	Date	Time	Location

Lake Mead National Recreation Area	Tuesday, April 27, 2004	6:00 P.M.	Henderson Convention Center, 200 S. Water St. Henderson, NV 89015

ADDRESSES: Please submit any written response no later than May 31, 2004. Address your comments to:

Docket Management System
Doc No. FAA-2004-17460
U.S. Department of Transportation
Room Plaza 401, 400 Seventh Street, SW.
Washington, DC 20590-0001

You must identify the docket number FAA-2004-17460 for Lake Mead National Recreation Area at the beginning of your comments. If you wish to receive confirmation that FAA received your comments, include a self-addressed, stamped postcard. You may also submit comments through the Internet to http://dms.dot.gov. You may review the public docket containing comments in person in the Dockets Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Dockets Office is on the plaza level of the NASSIF Building at the Department of Transportation at the above address. Also, you may review public dockets on the Internet at http://dms.dot.gov. Additionally, comments will be received and recorded at the public scoping meeting. Please note that names and addresses of people who comment become part of the public record. If you wish us to withhold your name and/or address, you must state this prominently at the beginning of your comment. We will make all submissions from organizations, businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses available for public inspection in their entirety.

FOR FURTHER INFORMATION CONTACT: Brian Armstrong, Air Tour Management Plan Program Manager, Executive Resource Staff, AWP-4, Federal Aviation Administration,

Western-Pacific Region. Mailing address: P.O. Box 92007, Los Angeles, California 90009-2007. Telephone: (310) 725-3818. Street address: 15000 Aviation Boulevard, Lawndale, California 90261. Email: *Brian.Armstrong@faa.gov*

SUPPLEMENTARY INFORMATION: In developing the ATMP and any associated rulemaking actions, the FAA is required to comply with the National Environmental Policy Act of 1969, which calls on Federal agencies to consider environmental issues as part of their decision making process. For the purposes of compliance with the National Environmental Policy Act, the FAA is the Lead Agency and the NPS is a Cooperating Agency. The FAA Air Tour Management Plan Program Office and the NPS Natural Sounds Program Office are responsible for the overall implementation of the ATMP Program.

Environmental Assessments are being prepared in accordance with FAA Order 1050.1D, *Policies and Procedures for Considering Environmental Impact*s. The FAA is now inviting the public, agencies, tribes, and other interested parties to provide comments, suggestions, and input regarding: (1) the scope, issues, and concerns related to the development of each ATMP; (2) the scope of issues and the identification of significant issues regarding commercial air tours and their potential impacts to be addressed in the environmental process; (3) the potential effects of commercial air tours on cultural and historic resources; (4) past, present, and reasonably foreseeable future actions which, when considered with ATMP alternatives, may result in significant cumulative impacts; (5) potential ATMP alternatives; and (6) the potential impacts on natural resources and visitor experiences. The FAA requests that comments be as specific as possible in response to actions that are being proposed under this notice.

A public scoping meeting has been scheduled for this project. The purpose of this scoping meeting is to describe the ATMP development and environmental processes, obtain public input regarding the ATMP and potential environmental concerns that may be appropriate for consideration in the Environmental Assessment, and to identify alternatives to be considered. Both oral and written comments will be accepted during this meeting. Agency personnel will be available to record your spoken comments. All recorded and written comments become part of the official record. The public scoping meeting will consist of a presentation in which the National Parks Air Tour Management Act of 2000 is introduced, existing conditions at Lake Mead National Recreation Area will be described and the ATMP development process at the park unit will be explained. Following the presentation, the floor will be opened for public comments to be received.

Park-specific scoping documents that describe the project in greater detail are available at the following locations:

- Green Valley Library, 2797 N. Green Valley Parkway, Henderson, NV
- Laughlin Library, 2840 South Needles Highway, Laughline, NV
- Las Vegas Library, 833 Las Vegas Boulevard North, Las Vegas, NV
- Boulder City Library, 701 Adams, Boulder City, NV
- Henderson District James I. Gibson Library, 280 S. Water Street, Henderson, NV
- North Las Vegas Library, 2300 Civic Center Drive, North Las Vegas, NV
- Valle Vista Library, 7193 Concho Drive, Kingman, UT
- St. George Public Library, 50 S. Main Street, St. George, UT
- Moapa Valley Library, 350 North Moapa Valley Boulevard, Overton, NV
- Mojave Community College, 1971 Jagerson Avenue, Kingman, AZ
- Bullhead Public Library, 1170 Hancock Road, Bullhead City, AZ
- Phoenix Reference Library, 411 North Central Avenue, Phoenix, AZ
- Cedar City Public Library, 303 North 100 East, Cedar City, UT
- Hurricane City Library, 36 South 300 West, Hurricane, UT
- FAA Air Tour Management Plan Program Website, http://www.atmp.faa.gov/
- FAA Docket Management System Website, http://dms.dot.gov

Issued in Hawthorne, CA on April 8, 2004

Brian Q. Armstrong

Air Tour Management Plan

Program Manager, AWP-4

APPENDIX C-3. PUBLIC SCOPING MEETING CHECKLIST

ATMP Scoping Meeting Materials Checklist

Meeting Needs	#	Responsible Party	Confirmed
Attendance sheets			
Handouts			
• Public meeting agenda			
• Agency meeting agenda			
• ATMP brochure			
• Acoustics brochures			
• Badlands scoping document			
• Mount Rushmore scoping document			
• Agency presentation (2 slides/page, double-sided)			
• Public presentation (2 slides/page, double-sided)			
Public comment cards (1 per double-sided page)			
Public interest cards (2 per page)			
Name tags			
Maps			
• 8.5 x 11 Badlands			
• 8.5 x 11 Mount Rushmore			
• Poster of Badlands			
• Poster of Mount Rushmore			
Presentation details			
• ATMP DVD video			
• Laptop with DVD player			
• Projector			
• Set of speakers for video-hook up (back-up to conference room PA system)			
• Presentation files (back-up CD)			
• "Lessons Learned" from Hawaii parks			
Conference room			
• Room layout (round table for agency; auditorium for public; tables at front for panel, laptop, projector)			
• Projection Screen			
• Microphone for panel			
• Microphone for public commenters (face toward panel)			
• PA system w/speakers for microphones and laptop			
• Meeting refreshments (Agency: fruit/drinks ~10:30 am, cookies/drinks ~12:30 pm; Public: drinks 6:00pm)			
Other			
• Cameras - digital			

Meeting Needs	#	Responsible Party	Confirmed
• Batteries/disks for camera			
• Tape			
• Laser pointer			
• Extension cord			

APPENDIX C-4. PUBLIC SCOPING MEETING AGENDA

AGENDA

AIR TOUR MANAGEMENT PLAN PUBLIC SCOPING MEETING

BADLANDS NATIONAL PARK AND MOUNT RUSHMORE NATIONAL MEMORIAL

Rapid City, South Dakota

6:00 p.m., May 4, 2004

Moderation by Steve May (FAA)

PRESENTATION

6:00 p.m. Welcome

A. Welcome and reminder to sign the attendance sheets
B. Introduction of key Federal Aviation Administration (FAA), National Park Service (NPS), Volpe and EES representatives
C. Meeting purpose and structure
D. Identify the location of public comment cards

. Introduction to the Air Tour Management Plan (ATMP) Program and National Environmental Policy Act (NEPA) compliance process

A. Introduction to the program (ATMP video presentation)
B. Potential content of an ATMP
C. NEPA compliance, development of an environmental assessment
D. Present the Federal Action and its Purpose and Need
E. Overview of the nationwide ATMP Program

Current conditions at Badlands National Park

A. General introduction to Badlands National Park
B. Background and current status of air tours at Badlands National Park
C. Identification of preliminary list of important issues to be analyzed in the environmental compliance process

Current conditions at Mount Rushmore National Memorial

A. General introduction to Mount Rushmore National Memorial
B. Background and current status of air tours at Mount Rushmore National Memorial
C. Identification of preliminary list of important issues to be analyzed in the environmental compliance process

ATMP Program/Nat'l Environmental Policy Act Process (Note to Angela: I think this comes before current conditions on the slides, so move up to the appropriate place)

A. ATMP Phases

B. ATMP NEPA
C. Noise Measurements and Acoustic Support
D. Initial Issues Identified by FAA and NPS
E. Public Involvement Opportunities

PUBLIC COMMENT

7:00 p.m. Request for public participation and input on the scope, issues, and concerns related to the development of ATMP, commercial air tours and their potential impacts on natural, cultural, and historic resources.

Please Note:

- *We will be using an audio tape recorder during the public comment period for reference purposes while developing the summary of comments received tonight.*
- *If you wish to submit written comments for verbatim inclusion in the administrative file through the Docket Management System, you may use the pre-addressed comment cards on the back table or send a letter to the address on the comment cards. Comment cards are color-coded for each park.*
- *Each individual wishing to speak may do so by indicating to the moderator and speaking into the microphone provided.*

Opportunity for open/one-on-one discussion: FAA/NPS/EES personnel will be located around the room to answer questions and hear concerns.

Adjourn

LIST OF HANDOUTS

1. Meeting agenda
2. ATMP brochure
3. Acoustics brochure
4. 8.5”x11” map showing existing air tour routes at Badlands National Park
5. 8.5”x11” map showing existing air tour routes at and Mount Rushmore National Memorial
6. Public comment cards/interest cards
7. A limited number of scoping documents will be available
8. Copies of the presentation

LIST OF POSTERS

1. ATMP Program Flow Chart
2. Existing air tour routes at Badlands National Park
3. Existing air tour routes at Mount Rushmore National Memorial

APPENDIX C-5. COMMENT CARD

COMMENT CARD

I am commenting on the following park:

_____

Please print legibly

Name and Business Affiliation (if any):_____

Street Address: _____

City: _____ State: _____ Zip Code:_____

Email Address (if any): _____ Telephone number: ( ) _____-_____

COMMENTS

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Please fold along dotted lines, tape shut, apply postage stamp, and mail.

PLACE POSTAGE STAMP HERE

Air Tour Management Plan Program Manager
Executive Resource Staff, AWP-4

FAA Western-Pacific Region
P.O. Box 92007
Los Angeles, CA 90009-2007

APPENDIX C-6. INTEREST CARD

INTEREST CARD

Please keep me informed of public involvement opportunities related to the development

of the Air Tour Management Plan for _____ .

Please specify a national park unit

Please print legibly

I prefer to receive information via:
email ____ ; mail ____ *(check one)*

Name:_____

Business Affiliation (if any):_____

Street Address: _____

City: _____ State: _____ Zip Code:_____

Email Address (if any): _____

Telephone number: ( ) _____-_____ FAX Number: ( ) _____-_____

INTEREST CARD

Please keep me informed of public involvement opportunities related to the development

of the Air Tour Management Plan for _____ .

Please specify a national park unit

Please print legibly

I prefer to receive information via:
email ____ ; mail ____ *(check one)*

Name:_____

Business Affiliation (if any):_____

Street Address: _____

City: _____ State: _____ Zip Code:_____

Email Address (if any): _____

Telephone number: ( ) _____-_____ FAX Number: ( ) _____-_____

APPENDIX C-7. SAMPLE PUBLIC OUTREACH SUMMARY

FAA Air Tour Management Plan Program, Hawaii Park Units

Information on public outreach conducted to announce spring, 2004, scoping period

(1) The "Notice of Intent to Prepare Environmental Assessments and Notice of Initiation of Public Scoping" was published in the *Federal Register* on February 27, 2004; this notice announced the dates of the scoping period as well as information about public meetings.

(2) A notice adapted from that published in the *Federal Register* (changed so that they were specific to the island on which the newspaper was circulated; the Honolulu newspapers announced all the meetings) was published in the following Hawaiian newspapers on March 3, 2004:
- Honolulu Star-Bulletin (Honolulu, Oahu)
- The Honolulu Advertiser (Honolulu, Oahu)
- Hawaii Tribune Herald (Hilo, Hawaii)
- West Hawaii Today (Kailua-Kona, Hawaii)
- The Maui News (Wailuku, Maui)

(3) Scoping packages were made available at the following locations (each scoping package also had a copy of the *Federal Register* notice in it):
- Park headquarters of Hawaii Volcanoes National Park, Puukohola Heiau National Historic Site, Pu'uhonua O Honaunau National Historical Park, Kaloko-Honokohau National Historical Park, Haleakala National Park, and Kalaupapa National Historical Park.
- Molokai Public Library, 15 Ala Malama, Kaunakakai, Molokai
- Hana Public and School Library, 411 Hana Highway, Hana, Maui
- Makawao Public Library, 1159 Makawao Avenue, Makawao, Maui
- Kahului Public Library, 90 School Street, Kahului, Maui
- Kihei Public Library, 35 Waimahaihai Street, Kihei, Maui
- Lahaina Public Library, 680 Wharf Street, Lahaina, Maui
- Lana'i Public and School Library, 7 Fraiser Avenue, Lana'i City, Lana'i
- Wailuku Public Library, 251 High Street, Wailuku, Maui
- Hilo Public Library, 300 Waianuenue Avenue, Hilo, Hawaii
- Kailua-Kona Public Library, 75-138 Hualalai Road, Kailua-Kona, Hawaii
- Naalehu Public Library, 95-5669 Mamalahoa Highway, Naalehu, Hawaii
- Pahala Public and School Library, 96-3150 Pikake Street, Pahala, Hawaii
- Hawaii State Library, 478 South King Street, Honolulu, Oahu
- FAA Air Tour Management Plan Program Website, http://www.atmp.faa.gov/
- FAA Docket Management System Website, http://dms.dot.gov

(4) Letters and/or email attached to a copy of the *Federal Register* notice were sent to those members of the public who had identified themselves as interested in receiving further information via registering on the FAA's ATMP website.

(5) Letters attached to a copy of the *Federal Register* notice were sent to those members of the public who had attended public information meetings for Haleakala and Hawaii Volcanoes in February 2003, and had identified themselves as interested in receiving further information.

(6) Letters attached to a copy of the *Federal Register* notice were sent to stakeholders in cultural and historical resources, as identified by each individual parks (who sent lists of those individuals or organizations they consult with in compliance with Section 106 of the National Historical Preservation Act); these letters invited the recipients to participate in public scoping (by either submitting written comments and/or attending the public scoping meetings), informed

the recipients that further consultations would take place with them once alternatives were partially developed, and informed of them of the ATMP process in some detail.

(7) Letters attached to a copy of the *Federal Register* notice were sent to individuals identified by each park unit as those individuals who normally receive notification of that park's NEPA actions.

(8) Letters attached to a copy of the *Federal Register* notice were sent to governmental agencies inviting them to participate in a resource-agency scoping meeting held in Honolulu on March 23, 2004. These letters informed the recipients about the public scoping process and of the ATMP process in some detail.

(9) Letters attached to a copy of the *Federal Register* notice were sent to governmental agencies involved with Section 106 compliance. These letters invited the recipients to participate in a resource-agency scoping meeting held in Honolulu on March 23, 2004, and also invited them to participate in public scoping (by either submitting written comments and/or attending the public scoping meetings); the letters also informed the recipients that further consultations would take place with them once alternatives were partially developed, and informed of them of the ATMP process in some detail.

(10) Park staff at each of the park units in Hawaii were also provided with a signed copy of the letters described in #6 and #7 above, for them to distribute to those they felt may not have been on other mailing lists, but should receive information.

APPENDIX C-8. AGENCY SCOPING MEETING AGENDA

AGENDA

AIR TOUR MANAGEMENT PLAN AGENCY SCOPING MEETING

BADLANDS NATIONAL PARK AND MOUNT RUSHMORE NATIONAL MEMORIAL

Rapid City, South Dakota

9:00 a.m. to 2:00 p.m., MAY 4, 2004

Moderation by Steve May (FAA)

PRESENTATION

9:00 a.m. Welcome

E. Welcome and reminder to sign the attendance sheets
F. Introductions
    a. ATMP Team (Federal Aviation Administration (FAA), National Park Service (NPS), Volpe and EES representatives)
    b. Agency personnel attending and roles
G. Meeting purpose and structure
H. Identify recipient of post-meeting letters (senior FAA contact), and comment cards for DMS submittals if preferred

Introduction to the Air Tour Management Plan (ATMP) Program and National Environmental Policy Act (NEPA) compliance process

F. Introduction to the program (ATMP video presentation)
G. Overview of the nationwide ATMP Program
    a. National park units/commercial air tour applicants involved
H. NEPA compliance, development of an environmental assessment
    a. Present the FAA mission and role as lead agency
    b. Present the NPS role as cooperating agency
I. Present the Federal Action and its Purpose and Need
J. Potential content of an ATMP

Current conditions at Badlands National Park

D. General introduction to Badlands National Park
E. Background and current status of air tours at Badlands National Park
F. Identification of preliminary list of important issues to be analyzed in the environmental compliance process

Current conditions at Mount Rushmore National Memorial

D. General introduction to Mount Rushmore National Memorial
E. Background and current status of air tours at Mount Rushmore National Memorial
F. Identification of preliminary list of important issues to be analyzed in the environmental compliance process

ATMP Program/NEPA Process

A. ATMP Phases
B. ATMP NEPA
C. Noise Measurements and Acoustic Support
D. Initial Issues Identified by FAA and NPS
E. Section 7 Consultation
F. Section 106 Consultation
G. Schedule
H. Public Comment

AGENCY COMMENT

10:00 a.m. Request for agency participation and input on the scope, issues, and concerns related to the development of ATMP, commercial air tours and their potential impacts on natural, cultural, and historic resources

~Noon BREAK

1:00 p.m. Opportunity for open/one-on-one discussion: FAA/NPS/EES personnel will be located around the room to answer questions and hear concerns.

2:30 p.m. Adjourn

LIST OF HANDOUTS

1. Meeting agenda
2. ATMP brochure
3. Acoustics brochure
4. 8.5”x11” map showing existing air tour routes at Badlands National Park
5. 8.5”x11” map showing existing air tour routes at and Mount Rushmore National Memorial
6. Public comment cards/interest cards
7. A limited number of scoping documents will be available
8. Copies of the presentation

LIST OF POSTERS

1. ATMP Program Flow Chart
2. Existing air tour routes at Badlands National Park
3. Existing air tour routes at Mount Rushmore National Memorial

APPENDIX C-9. GOVERNMENT-TO-GOVERNMENT SCOPING INVITATION LETTER

Western-Pacific Region
Executive Resource Staff

P. O. Box 92007
Los Angeles, CA 90009-2007

U.S. Department
of Transportation
**Federal Aviation
Administration**

MAR 2 3 2004

Certified-Return Receipt

Mr. John Yellow Bird Steele
President
Oglala Sioux Tribe
P.O. Box H
Pine Ridge, SD 57770

Dear President Steele:

The purpose of this letter is to initiate government-to-government consultation with the Oglala Sioux Tribe on the development of a commercial Air Tour Management Plan (ATMP). The Federal Aviation Administration (FAA), in cooperation with the National Park Service (NPS), has initiated the development of an ATMP and an environmental document for Badlands National Park pursuant to the National Parks Air Tour Management Act of 2000 (Public Law 106-181) and its implementing regulations (14 C.F.R. 136). The objective of the ATMP is to develop acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon the natural resources, cultural resources, and visitor experiences on Badlands National Park lands and on tribal lands within or abutting the park. The FAA is sharing this advance information with you to facilitate an open and continuing basis for your participation in the planning process.

The FAA has been designated the lead agency and the NPS is a cooperating agency on this project. The FAA is required to comply with the National Environmental Policy Act of 1969 (NEPA) and other federal laws, which require the FAA to consider the potential environmental and cultural resource impacts of commercial air tours over Badlands National Park and tribal lands within or abutting the park.

The National Parks Air Tour Management Act directs the FAA to solicit the participation of any Indian tribe as a cooperating agency when tribal lands are or may be over flown by aircraft involved in a commercial air tour operation over park or tribal lands to which a plan applies. In August 2003, the FAA sent a letter to the Oglala Sioux Tribe regarding this planning effort and made an initial invitation to the tribe to be a cooperation agency under NEPA. The FAA continues to extend this invitation to the Oglala Sioux Tribe to participate in the NEPA process as a cooperating agency because the Pine Ridge Indian Reservation abuts Badlands National Park and tribal trust land is located within the park and may be over flown by commercial air tour operations. We would like to meet with you at a mutually agreed upon time to further

discuss our planning effort and address any questions you may have regarding the process and your participation. We will follow up with a phone call to schedule this meeting.

In addition, the FAA invites you to participate in an interagency scoping meeting scheduled for May 4, 2004, at the Holiday Inn Rapid City-Rushmore Plaza (505 N. Fifth Street, Hammons Conference Room, Rapid City) from 9:00 a.m. to 2:00 p.m. The FAA will soon publish a Federal Register notice that will initiate a 45-day scoping period for development of the Badlands ATMP.

The FAA invites the Oglala Sioux Tribe to participate in the agency scoping process by providing comments, suggestions, and input regarding (1) the scope, issues, and concerns related to the development of the Badlands ATMP; (2) the scope of issues and the identification of significant issues regarding commercial air tours and their potential impacts to be addressed in the environmental process; (3) the potential effects of commercial air tours on cultural, religious and historic resources; and (4) potential ATMP alternatives.

The FAA's primary point of contact for purposes of consultation and for the exchange of information on this project is Steve May, Air Tour Management Plan Program Manager. We request that the Oglala Sioux Tribe identify a point of contact to facilitate the exchange of information and to establish ongoing staff level coordination on the development of the ATMP.

Information on the National Parks Air Tour Management Act and the ATMP program can be found on the FAA website: www.atmp.faa.gov.

For further information do not hesitate to contact, Steve May, Air Tour Management Plan Program Manager, Executive Resource Staff, AWP-4, Federal Aviation Administration, Western-Pacific Region. Mailing Address: P.O. Box 92007, Los Angeles, California 90009-2007. Telephone: (310) 725-3808.

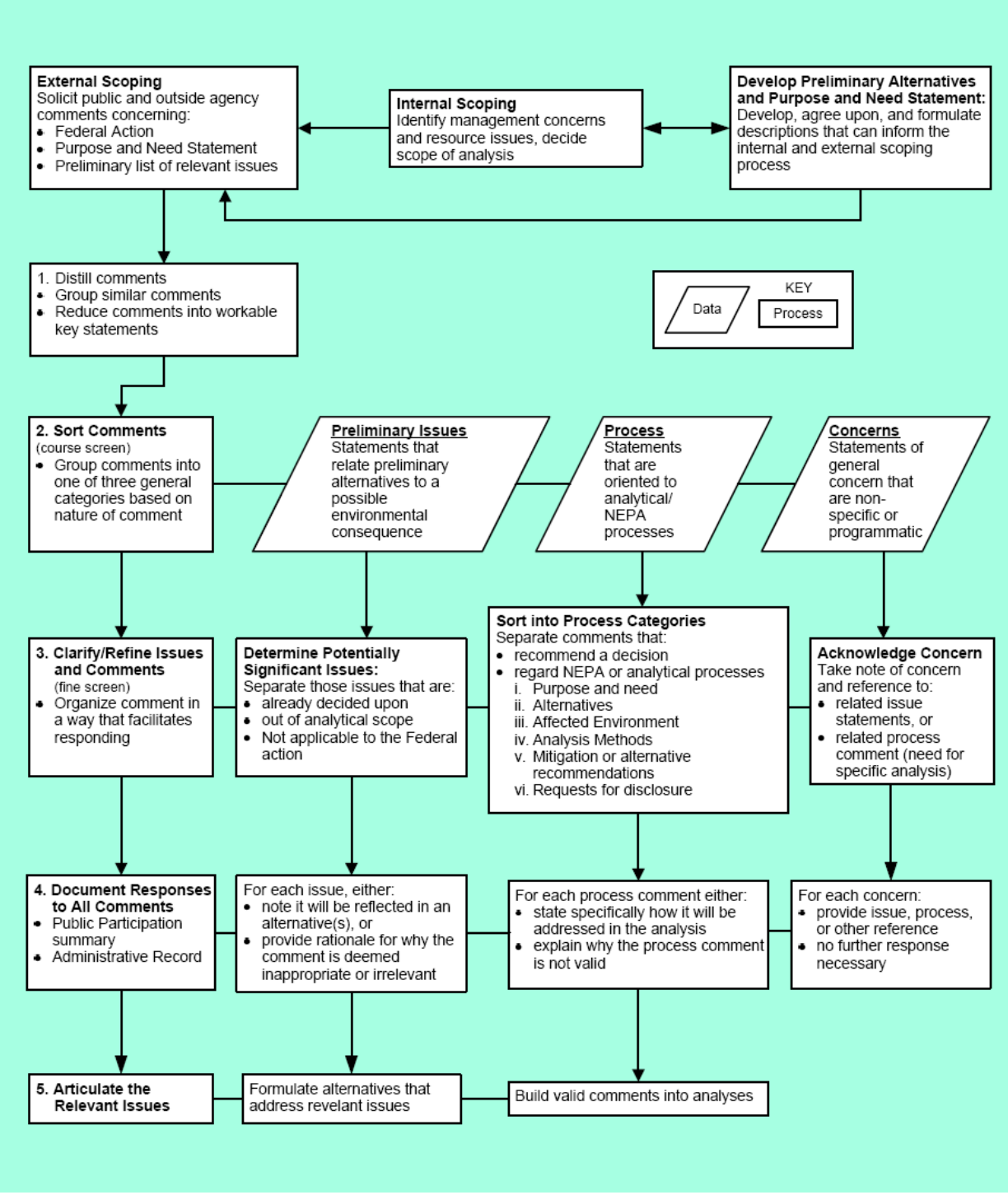
We will follow up with you by phone to confirm your receipt of this letter, to discuss your participation in this planning process, and to answer any questions you may have regarding this project prior to the scoping meeting.

We look forward to working with you and your staff in implementing this planning effort.

Sincerely,

Barry Brayer
Manager, Executive Resource Branch

APPENDIX C-10. SCOPING COMMENT ANALYSIS MODEL



APPENDIX C-11. SCOPING COMMENT SUMMARY

FAA/NPS Air Tour Management Plan Program, [insert name of national park]

Scoping Comment Summary

Background and Description of Scoping Activities

Include:

- *Dates of scoping activities*
- *Description of scoping activities (solicitation of written comments, meetings, etc.)*
- *Information on what types of comments were solicited (e.g., "The FAA invited the public, agencies, and other interested parties to provide input regarding commercial air tours as well as the scope and issues to be addressed during the ATMP process," or "The FAA solicited comments two alternatives," etc.)*
- *Description of how comments were obtained (e.g., written submission to the DMS, oral testimony at public meetings, etc.)*

Summary Table of Oral and Written Comments Received by the FAA and/or the NPS

Below table is a generic table. Additional sub-categories may be needed depending on park-specific issues and processes.

Total Written Comments Received = XX	
Total Oral Comments Received (at public meetings) = XX	
ISSUE COMMENTS **– Statements that relate current commercial air tours over XX national park to a possible environmental consequence.**	
Adverse Impacts of Air Tours	
List each issue out singly, along with number of comments	*Insert key statements that illustrate all relevant comments relating to that issue.*
EXAMPLES:	
Noise Impacts[1] (42*)	The aircraft that fly over the national parks of Hawaii, including Haleakala, are noisy. Few areas of the islands are free from aircraft, and national parks should serve as a haven free from these noises. In what should be a tranquil and majestic setting, the noise of aircraft is disruptive.
	The park visitor comes to the park to hear natural sounds or silence, and this experience is ruined by air tours. The experience of hikers and visitors inside and on the rim of the Haleakala crater, on the Kaupo Gap Trail, and in the Kipahulu area of the park must be protected from noise pollution.
Cultural Impacts (35*)	Lands within or on which the national parks of Hawaii are situated are considered sacred to Native Hawaiians, as they contain historic sites, cultural and environmental resources, burial grounds of Hawaiian ancestors, strong spiritual connections, ancient trails, and heiaus.

[1] Under this issue, only comments dealing directly with noise impacts are listed. However, it should be mentioned that noise impacts are often a component of other issues dealing with impacts on other resource categories (e.g., impacts on cultural resources from air tour aircraft noise).

	Haleakala Crater is considered an important Native Hawaiian cultural resource.
	Air space around sacred sites is also sacred and not to be tampered with.
Favorable Impacts of Air Tours	
List each issue out singly	*Insert key statements that illustrate all relevant comments relating to that issue.*
EXAMPLE:	
Visitor Experience (4*)	Air tours are a unique way of experiencing the national parks for those who cannot physically access them by other means.
PROCESS COMMENTS – Statements that are oriented to the analytical processes as well as the NEPA-specific processes that take place as part of ATMP development at XX national park.	
List each process or NEPA document sub-section to which comment applies	*Insert key statements that illustrate all relevant comments relating to that process.*
EXAMPLES:	
Level of NEPA review (3*)	Testimony and documentation already provided by the National Park Service indicate that the air tours around Haleakala meet both the context and intensity factors that determine significant impact – thus, a full environmental impact statement is warranted, rather than an environmental assessment.
Alternatives and Mitigation Methods (21*)	All air tours over national parks should be banned. The benefits from complete banishment of air tour activity from Haleakala should be examined.
	Restrictions should be placed on air tour operations, including curfews, no-fly zones, designated routes, and altitude, day-of-week, and time-of-day limitations.
	The National Marine Fisheries Service (NMFS) noted that there are already Federal regulations banning the use of any aircraft within 1,000 feet from any humpback whale, within 200 nautical miles of the islands of Hawaii. NMFS requests that FAA incorporate these regulations into the ATMP.
	For parks where the number of flights will be reduced, the FAA might implement a two to three year transition period in order to minimize the economic disruption for tour operators.
	Natural quiet should be restored to the national park for 75 percent of every day.
	Flights should be banned during the periods two hours after sunrise and two hours before sunset, which are peak visiting times for ground-based visitors.
OTHER COMMENTS – Comments that were reviewed and considered but not implemented into the analysis document because they were found to be not valid, not relevant, or not appropriate .	
Comment	**Response**
List out each dismissed comment; group similar types of comments that can be dismissed for the same rationale.	*Provide thorough rationale for comment's dismissal. A comment can be dismissed if: the issue is already decided, the issue is out of the analytical scope, the issue is not applicable to the Federal action, is speculative, or is de minimis other reasons….*
EXAMPLES:	
Visitors who visit the park solely via air tour receive a diminished visitor experience, as touching and seeing the park from the ground	The issue of how air tour visits are conducted (aside from the assignment of operating parameters by the final ATMP) or how visitors

is important. Patrons of air tours operators are not notified of the risks of air tours, including possible accidents and damage done to the parks.	should visit national park units, such that all visitors receive a quality experience is beyond the analytical scope of an ATMP. An ATMP must ensure that there are no significant adverse impacts upon "visitor experience" caused by air tour operations.

*The numbers in parentheses indicates number of comments received regarding that issue or process; some comments were counted more than once as they dealt with more than one issue or process.

APPENDIX C-12. PUBLIC PARTICIPATION SUMMARY – GENERIC TABLE OF CONTENTS

FAA Air Tour Management Plan (ATMP) Program

Public Participation Summary

The following outlines the contents and organization of material to be included in a "Public Participation Summary" folder, to be developed for each park unit during its ATMP development process.

****NOTE**: Public participation activities include meetings, consultations, correspondence, etc., with agencies and other stakeholder groups. However, activities conducted in compliance with other non-NEPA (or non-ATMP process) regulations should be recorded separately (e.g., consultations carried out in compliance with Section 106).

I. Short summary (1-3 pages, depending on extent of comments) of public participation activities

a. List name and date of each public participation activity
b. Present general categories of comments obtained from each public participation activity (general categories will be developed during the comment analysis process)

In chronological order, and for each public participation activity, make a separate section that includes the following content:

II. Name and summary of public participation activity: Name (e.g., "Public Scoping"), followed by short (1-2 sentence) description of what the activity entailed (e.g., meetings, a document on which comments were requested, etc.). After this cover page, and if activity involved the solicitation of comments, include a copy of the **"Public Comment Summary" table**, created during the comment analysis process.

a. **Summary list of how the activity was publicized to the general public** (e.g., list date and title of federal register notice; list in which newspapers and on what days each notice was published; list websites where notices were published; list verbal announcements made by the NPS or FAA to their constituents; list specific individuals or groups of individuals, agencies, tribes, or organizations to whom letters announcing the activity were mailed or e-mailed; list where and to whom fliers were made available announcing the activity; and any other method, if applicable). Behind this summary list, include the following material, as applicable:
    i. Actual copy of Federal Register notice (i.e., not just a word document, but rather an actual .pdf file or photocopy of the notice)
    ii. A copy of the each affidavit of publication (provided by newspaper) and, if not included in the affidavit, a photocopy of the newspaper notice
    iii. Photocopies of any fliers distributed
    iv. Photocopy of letter(s) that was mailed to specific individuals or groups of individuals, agencies, or organizations – after each letter, include a mailing list that shows who was sent the letter and to what address the letter was sent
b. **Summary list of material made available <u>outside of any meetings that may have taken place</u>, and exactly how it was made available** (e.g., "Scoping packets were made available at the following locations: [list all libraries, websites, park headquarters, etc]", or "The Draft EA was made available at…."). Behind this summary list, include the following material:
    i. Address list for venues where material was mailed to be made available
    ii. Any cover letter that accompanied the material
    iii. Copy of all material
c. **<u>If a meeting(s) took place in association with this public participation activity, provide, for each meeting</u>:**
    i. **Detailed meeting minutes**, accompanied by the *primary* distribution list detailing who received the minutes

1. Include transcript of meeting (if one was made), or, if a recording was made but never transcribed, state that this occurred and where the original recording may be found (probably, Admin. Record).

ii. **Agenda**

iii. **Summary list of material made available <u>during meetings</u>**
   1. Copy of material, if produced by ATMP team (for example, not necessary to reproduce park brochure—simply state in the summary list that the park brochure *was* available)
      a. Not necessary to reproduce material if it has already been included elsewhere in the Public Participation Summary folder, simply reference its location in summary list (for example, scoping documents may be been made available at a meeting as well as outside of the meeting)
   2. Include list/description of all maps, equipment, etc., that was also available for public examination

iv. **Copy of all presentation materials** – i.e., print out copies of <u>all</u> slides shown (ensure that entire, actual presentation that was shown at the meeting is what is reproduced).
   1. If video or other similar type of audio-visual tool was utilized, identify the name of the video, author (person, agency) of the video, and short description of video's content.

v. **Copy of original attendance ("sign-in") sheets**

vi. **Reference to oral comments received,** if applicable. However, summary of oral comments need not be included in this section – instead, make reference to their inclusion elsewhere in the folder (with all other comments received; see II.d., below.)

d. **Copy of all comments received**. For each category below, include comments in the following order, based on authorship: 1) individuals representing self, 2) organizations, 3) tribes, 4) state and local agencies, 5) federal agencies, 6) congress persons/mayors/governors or their representatives. Separate:
   i. Oral comments received (include telephone conversation logs) – these will either be summaries written by the receiver of the oral comment *or* transcripts of the comment (if available).
   ii. Written comments received (include written correspondence via letters, email, and submission to the Docket Management System)

APPENDIX C-13. SAMPLE ALTERNATIVES DEVELOPMENT MEETING AGENDA

FAA/NPS Air Tour Management Plan Program: Hawaii Volcanoes National Park

Alternatives Development Meeting – Agenda

Wednesday, January 12, 2004, 8:00 AM – Kilauea Military Camp

I. Introduction and Welcome
- a. Introduction of participants
- b. Meeting purpose
- c. ATMP Program status at Hawaii Volcanoes
- d. Review of National Parks Air Tour Management Act
- e. Review of reference materials:
  - i. Handouts
  - ii. Resource maps
  - iii. Noise Maps

II. Alternatives Development

STEP 1

a. Discussion of specific issues and park management concerns relevant to alternatives
b. Issues list and resource map refinement based on participants input

STEP 2

a. Components of an alternative
b. Reasonableness criteria
c. Three preliminary alternatives
d. Brainstorming session on issue driven criteria

If Step 2(f) is conducted with multiple groups, then, at end of Step 2(f), (1) the entire team will re-convene and report their findings back to entire team and (2) all alternatives will be listed for all to see and will then be re-organized such that redundant alternatives among groups are combined, etc. (i.e., rational alternative descriptions are created).

Thursday, January 13, 2004, 8:00 AM
Review and refinement of alternatives

III. Alternatives Refinement
- a. Significant issues identified during Step 1 are listed
- b. Entire team applies these issues to the alternatives developed during Step 2
- c. List of alternatives either confirmed, consolidated, or reduced based on issue screening

IV. Results of screening process are lists of:
- a. Alternatives moving forward in the NEPA analysis process

b. Alternatives considered but dropped from further analysis

V. Summary / Next Steps

a. Alternatives Report

b. 106 Group & Stakeholder review

c. Proposed Action Identification

APPENDIX C-14. NEPA PUBLIC MEETING CHECKLIST

Public Meeting Checklist

Meeting Needs		Responsible Party	Confirmed
Pre-Meeting	Meeting Date Finalized		
	Meeting Location and internal chair/table design Finalized		
	Publish Local Availability of Draft and meeting date, location and time		
	Post Draft on ATMP Web Site and identify meeting date, location and time		
	Finalize Agenda		
	Finish presentations		
	Hotel and Travel Reservations made well in advance at busy parks		
	Teleconference held prior to meeting with all participants to finalize logistics and responsibilities		
	Hire Stenographer		
Public Meeting	Attendance Sheet		
	ATMP Brochure		
	Public Comment Form		
	Public Interest Card		
	Presentation Details		
	• ATMP DVD Video		
	• Laptop w. DVD Player		
	• Small Projector		
	• Projection Screen		
	• Set of speakers for video-hook up		
	• Presentation Files		
	Markers		
	Duct Tape		
	Masking Tape		
	Acoustics Brochures		
	Laser Pointer		
	Power Strips		
	Extension Cords		
	Loud speaker sound system		
	Day/Night contact information for meeting room		
	Copy of Contract for room		
	Outside directional Placards		

APPENDIX C-15. LESSONS LEARNED FROM ATMP MEETINGS

DRAFT

Lessons Learned

Note: These Lessons Learned should be adjusted within the site-specific context of each park.

Meeting Logistics

Kickoff Specific

1. Distribute "pre kickoff meeting information package:"
    i. To be distributed in a timely manner to all potential meeting attendees
    ii. To include the following items:
        1. A 2-page introduction, meeting objectives and expectations.
        2. Maps with any known flight tracks, land cover, and resource locations, etc.
2. Develop and utilize pre-kickoff meeting telecon checklist (listing items such as: reminder on all meeting start times; team member responsibilities during meeting; etc).
    a. Schedule ATMP Team (FAA, NPS, Volpe, and Contractor) pre kickoff meeting telecon for internal coordination prior to each kickoff meeting. Verify during the discussion that presenters have a keen understanding of the background for each session as well as the Act in general.
3. Consider separate acoustics meeting (1/2 – 1 day anticipated) to discuss ambient data needs
4. Checklist of presentation materials and equipment with responsible person identified

Scoping Specific

1. Necessity of Scoping Meetings
    a. What has NPS done in past?
    b. "What did we learn NEW?"
2. Meeting Logistics
    a. Minimize meeting room costs (below $200)

   b. Parking must be provided to public free of charge
   c. Determine method of payment for meeting rooms ahead of time
   d. At **kickoff meetings** and afterwards, push local NPS and FAA for better intelligence about (i) meeting locations, (ii) how to best publicize meetings, (iii) meeting dates coordinating with local holidays, (iv) format for meeting presentations
   e. Discuss scoping meeting logistics at **kickoff meetings**
   f. Publish meeting information with no end-times
   g. Address need for Signer/Translator/Recorder ahead of time
   a. Carry white sheet in equipment bag in case no screen is available.
   b. Determine necessity of a timed comment period at **kickoff meetings**
   h. Determine dress code for public meetings at **kickoff meetings**
3. Scoping Notices
   a. Abbreviate version prepared for newspaper notices
   b. Publish for >1 day if economically feasible
   c. Make clear within notice that comments should be directed to the DMS.
   d. Discuss scoping notice logistics at **kickoff meetings** (i.e., where to publish them, for how long, whom to send mailed notifications to, etc.)
   e. Need to publish NOI sufficiently ahead of invitation letters to make sure dates in the letters match dates in NOI
4. Scoping Packages
   a. Determine necessity of such an extensive package - difficult to develop without a completed affected environment chapter
   b. Determine whether there is a value to the public to have a package to this extent
5. Invitation Letters
   a. Multiple mailing lists – should be established at **kickoff meetings**, and a master list should be created and maintained by Volpe or the contractor
   b. Format of mailing list should be compatible with "mail merge" features
   c. Essential that all letters and other material coming out of the FAA office be on proper letterhead with proper contact information and signatures.
   d. Need clarification with FAA on exactly who and how letters will be mailed
   e. 106, FWS (sec 7), DOT (4f), and government to government tribal letters must initiate consultations so there is no need for a second letter

General

1. Finalize presentations, agendas, and handouts BEFORE travel so that "on the fly" changes do not allow for error.
2. Ensure that meeting minutes submitted are comprehensive while not including direct quotes. Additionally, the meeting summary should include a short summary of issues and information gained during the orientation day.
3. Have a system for posting documents for review in place

4. Make sure emails that send documents out for review indicate the specific areas of review (when relevant) and comments due date.
5. Develop a common naming convention on documents distributed for review to eliminate confusion and "old" versions being distributed

Meeting Protocol

Kickoff Specific

1. Prepare for park specific issues
    a. Understanding of park specific cultures and dynamics to set meeting tone
    b. Create level of approach based on expected park complexity to include:
        i. Use of formal presentation slides
        ii. Integration of acoustics workshop
        iii. Discussion of EA/EIS potential depending on park

General

2. Be aware of FAA/NPS sensitive topics and, when appropriate, avoid them by:
    a. Facilitating discussion away from items under discussion at the national level, e.g. purpose and need, and the definition of "significant."
    b. Facilitating discussion away from varying interpretations of language in the Act, (recognizing that both FAA and NPS have established channels for this purpose).
    c. Referring to ATMP/NEPA documents as opposed to EA/EIS documents
    d. Not describing a parks' purpose as for "recreation"
    e. Avoiding other specific words, including "soundscape," "precedent-setting," and "dose-response" and "visitor annoyance"
3. Identify meeting facilitator clearly prior to meeting
4. Make sure the FSDO is sufficiently briefed on his/her role in the discussion
5. Create agreed upon approach to handling meeting conflicts, e.g. FAA/NPS process differences
6. Be watchful of timekeeping throughout the meeting; balance flexibility, which allows for good discussion, with timeliness and adherence to schedule.

Meeting Content

Kickoff Specific

1. Refine better presentation template
   a. Reviewing objectives of act and act-specific details
   b. Adjusting for park-specific issues
2. Adjust acoustics session
   a. Expanding of introduction
   b. Consider adjusting workshop time (approximately 1 hour) depending on park
3. Include discussion on decision points, to
   a. Describe EA/EIS decision points depending on park
   b. Include potential reasoning for EIS expansion depending on park
   c. Include cost and schedule implications
4. Refine stakeholders discussion to
   a. A request for the park's individual stakeholder list
   b. Confine discussion on any potentially controversial ones
5. Adjust Schedules' Milestones Discussion, by
   a. Present milestone dates, but identify that part of the purpose of the meeting is to review and discuss the schedule
   b. Consider moving milestones discussion to the beginning of the agenda after the process discussion
   c. Using slides instead of handout
   d. Including discussion on potential changes, due to
      i. EA/EIS process depending on park
      ii. Acoustical monitoring and analysis
6. Ensure that the 106 Compliance Process sessions are clarified and understood both by EES and meeting attendees.

Scoping Specific

2. Meeting Presentation
   a. All text should be very similar to what is in Legislation
   b. Address on the comment cards should be to the DMS address
   c. Provide copies of the presentation as handouts
   d. Need to receive NPS presentations prior to the start of the meetings

General

3. Review of meeting objectives and expectations at the start of the meeting
4. Maintain a single meeting start time on distributed agenda
5. Minimize number of drafts distributed
6. Keep presentations oriented to engender discussion by:
    a. Not reading directly from slides
    b. Presenting additional background information
7. Retain allotted time for discussion at the end of each section allowing for questions

APPENDIX D. ADDITIONAL MATERIALS FOR CONSULTATION UNDER OTHER LAWS (SEC. 106, SEC. 7)

APPENDIX D-1. SAMPLE TRIBAL LETTER (INITIATE GOVERNMENT TO GOVERNMENT RELATIONSHIP AND SEC. 106 CONSULTATION)

Western-Pacific Region
Executive Resource Staff

P. O. Box 92007
Los Angeles, CA 90009-2007

U.S. Department
of Transportation
Federal Aviation
Administration

AUG 1 6 2004

Certified-Return Receipt

John Yellow Bird Steele
President, Oglala Sioux Tribe
P.O. Box 2070
Pine Ridge, SD 57770-2070

Dear President John Yellow Bird Steele:

The Federal Aviation Administration (FAA) would like to consult with your tribe regarding the development of an Air Tour Management Plan (ATMP) for Mount Rushmore National Memorial. Through consultation, we hope to come to understand whether and how commercial air tour operations over the park affect tribal interests, and what might be done to address such effects. In accordance with the National Environmental Policy Act (NEPA), the National Historic Preservation Act, the American Indian Religious Freedom Act, and other legal authorities, we particularly want to gain an appreciation for the impacts of commercial air tour operations on environmental features that have cultural importance to your tribe, including but not limited to sacred sites and historic places, and to explore how such impacts may be eliminated or mitigated. The FAA and the National Park Service (NPS) are in the early stages of developing the ATMP. We are currently collecting the baseline data necessary to conduct the ATMP planning and environmental analysis. As the ATMP work progresses, we would like to consult with your tribe about alternatives, about the potential impacts of each alternative, and about how to prevent or mitigate adverse effects.

The National Parks Air Tour Management Act of 2000 (Public Law 106-181) requires the development of ATMPs for all national parks where commercial air tour operations are conducted or are proposed. The objective of the ATMP is to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon the natural resources, cultural resources, visitor experiences, and tribal lands. An Environmental

Assessment (EA) has been initiated for the subject ATMP project, which is outlined in detail in the Planning and NEPA Scoping Document located at the park's headquarters and the FAA's ATMP website at http://www.atmp.faa.gov/Mount_Rushmore.htm. The FAA is the lead agency and the NPS is a cooperating agency in this undertaking.

In March 2004, a letter was sent to your attention regarding this planning effort. We would now like to initiate a government-to-government relationship with your tribe for this undertaking. We would like to meet or talk with you or your representative soon to discuss your participation in this planning process and to answer any questions you may have regarding this project. I will be the FAA's primary point of contact for purposes of consultation and for the exchange of information on this project, to further these discussions. I would appreciate if you could identify a point of contact to facilitate the exchange of information and to establish ongoing staff level coordination on the development of the ATMP.

In accordance with the Air Tour Management Act, each ATMP shall apply to all commercial air tour operations conducted over and within ½ mile outside the boundary of the national park. Pursuant to section 800.16(d), the area of potential effect is to include the geographic area or areas within which the ATMP may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. We propose to begin with the assumption that the area of potential effects includes at least all lands within the Mount Rushmore National Memorial and the area within ½ mile outside the park boundary, and to adjust the area of potential effect based on initial studies and consultation about current and proposed effects. We would appreciate your thoughts on this proposed approach.

The ATMP will be developed by means of a public process, but the FAA will respect tribal confidentiality concerns to the maximum extent permitted by law. A public scoping period, one public meeting, and one agency meeting have already been held for the Mount Rushmore National Memorial ATMP project. During the scoping period and meetings, your tribe and others were invited to provide comments, suggestions, and input regarding, among other things, the potential effects of commercial air tours on cultural and historic properties. Historic properties information will be disseminated within the draft ATMP and NEPA documents. Again, the public will be invited to provide input on the potential impacts of commercial air tour operations on cultural and historic properties. These public involvement opportunities are, of course, separate from our government-to-government consultation with your tribe, but in the interest of efficiency, we hope that they can be coordinated.

In completing our section 106 responsibilities, the FAA plans to follow an approach consistent with that outlined in National Register Bulletin 38, *Guidelines for Evaluating and Documenting Traditional Cultural Properties*. The approach is specifically discussed in the Bulletin chapter entitled "Documenting Traditional Cultural Properties: General Considerations" where a similar approach is outlined for the undertaking of the U.S. Air Force deployment of the MX missile system in Wyoming. Rather than

beginning by trying to identify specific locations that are or may be eligible for the National Register of Historic Places, we propose to assume that such properties (perhaps specific locations, perhaps expansive landscapes) exist in the area, and to consult about possible impacts on the values that people ascribe to them. This will be done as part of a general effort to assess impacts on cultural aspects and uses of the environment. If we can achieve a sufficient understanding of potential impacts, and develop mutually agreeable measures to prevent or mitigate such impacts, no further identification will be undertaken. If such alternatives are not forthcoming, we will conduct such further studies as may be necessary to more specifically characterize effects and affected properties.

Under 36 CFR 800.8(c), alternatives and mitigation measures developed through consultation are presented in final environmental documents, and are adopted unless objections to such documents make it necessary to undertake further section 106 review. In this case, we expect that finalization of the ATMP and its associated NEPA documents will complete FAA's section 106 responsibilities, though we understand that in the event of objections that cannot be resolved, it may be necessary for us to consult further to develop a Memorandum of Agreement, or to seek the formal comments of the Advisory Council on Historic Preservation.

Information on the National Parks Air Tour Management Act and the ATMP program can be found on the ATMP website at www.atmp.faa.gov. If you have any questions or need any additional information, please call me at (310) 725-3808. We look forward to your response and working with you on this undertaking.

Sincerely,

Stephen T. May
Program Manager, Air Tour Management Plan Program

cc:
Bob Rossman, National Park Service, Natural Sounds Program

Consulting Parties Invited to Participate in the Section 106 Process

Mount Rushmore National Memorial

Charmaine White Face, Coordinator
Defenders of the Black Hills
P.O. Box 2003
Rapid City, SD 57709

Society President
South Dakota Archeological Society
900 Governors Drive
Pierre, SD 57501

Ben Black Bear, Executive Director
Tribal Land Enterprise
10 Legion Ave
Rosebud, SD 57570

Betty Jo Sagdalen
Keystone Area Historical Society
P.O. Box 177
Keystone, SD 57751

Society President
Preserve South Dakota
105 S. Pierre Street
Pierre, SD 57501

John Yellow Bird Steele
Oglala Sioux Tribe[1]
P.O. Box 2070
Pine Ridge, SD 57770-2070

Harold C. Frazier
Cheyenne River Sioux Tribe[1]
P.O. Box 530
2001 Main Street
Eagle Butte, SD 57625

Duane Big Eagle
Crow Creek Sioux Tribe[1]
P.O. Box 50
Fort Thompson, SD 57339

Leonard Eller
Flandreau Santee Sioux Tribe[1]
P.O. Box 283
603 W. Broad Ave
Flandreau, SD 57028

Michael B. Jandreau
Lower Brule Sioux Tribe[1]
P.O. Box 187
Lower Brule, SD 57548

Donald Grant
Omaha Tribe[1]
100 Main Street
Macy, NE 68039-0368

Mike Peniska
Ponca Tribe[1]
P.O. Box 288
Niobrara, NE 68760

Charles Columbe
Rosebud Sioux Tribe[1]
PO Box 430
Rosebud, SD 57570

Roger Trudell
Santee Sioux Tribe[1]
Route 2 Box 163
Niobrara, NE 68760

Andrew Grey
Sisseton-Wahpeton Sioux Tribe[1]
P.O. Box 509
Agency Village, SD 57262

Valentino White
Spirit Lake Nation[1]
P.O. Box 99
Fort Totten, ND 58335

Charles Murphy
Standing Rock Nation[1]
PO Box D
Fort Yates, ND 58538

Tex G. Hall
Three Affiliated Tribes[1]
404 Frontage Road
New Town, ND 58763

[1] FAA initiated government-to-government consultation with this tribe pursuant to section 106 of the National Historic Preservation Act.

Consulting Parties Invited to Participate in the Section 106 Process

Mount Rushmore National Memorial

Cynthia LaCounte
Trenton Indian Service[1]
P.O. Box 210
Trenton, ND 58853

Mike Lenoir
Turtle Mountan Tribe[1]
PO Box 900
Belcourt, ND 58316

John Black Hawk
Winnebago Tribe[1]
PO Box 687
Blackhawk Comm Ctr Hwy 77
Winnebago, NE 68071-0687

Madonna Archambeau
Yankton Sioux Tribe[1]
P.O. Box 248
100 Main St.
Marty, SD 57361-0248

APPENDIX D-2. SAMPLE SECTION 106 INITIATION LETTER–STATE HISTORIC PRESERVATION OFFICER

U.S. Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
Executive Resource Staff

P.O. Box 92007
Los Angeles, CA 90009

June 29, 2004

Mr. Peter T. Young,
State Historic Preservation Officer
Department of Land & Natural Resources
601 Kamokila Boulevard, Suite 555
Kapolei, HI 96707

Dear Mr. Young:

The Federal Aviation Administration (FAA) is initiating consultation pursuant to Section 106 of the *National Historic Preservation Act* of 1966 and Title 36, Code of Federal Regulations (CFR), Part 800 for six undertakings within the state of Hawaii. The undertakings involve the development of Air Tour Management Plans (ATMP) for the following six units of the National Park System: (1) Hawaii Volcanoes National Park;
(2) Puukohola Heiau National Historic Site; (3) Pu'uhonua O Honaunau National Historical Park; (4) Kaloko-Honokohau National Historical Park; (5) Kalaupapa National Historical Park; and, (6) Haleakala National Park. The FAA and NPS are preparing Environmental Assessments (EA) for the ATMPs pursuant to the National Environmental Policy Act (NEPA). For the purposes of NEPA and Section 106, the FAA is the lead agency and the National Park Service is a cooperating agency. The FAA intends to use the process and documentation required for the preparation of the EAs to comply with Section 106 in accordance with 36, CFR, Part 800.8(c).

The National Parks Air Tour Management Act of 2000 (Public Law 106-181) requires development of ATMPs for all National Parks where commercial air tour operations are conducted or are proposed. The objective of the ATMP is to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon the natural resources, cultural resources, and visitor experiences. Each of the subject ATMP projects is outlined in detail within the enclosed scoping documents.

In accordance with the Air Tour Management Act, each ATMP shall apply to all commercial air tour operations conducted over and within ½ mile outside the boundary of the subject National Park. Pursuant to Part 800.16(d), the Area of Potential Effect (APE) is to include the geographic area or areas within which the ATMP may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. To this end, we have determined that the APE for each ATMP undertaking will include the boundaries of the subject National Park Unit and the area within ½ mile outside the park boundary. We request your concurrence with this determination.

Attached is a list of the consulting parties identified for each park. We request your review and concurrence with this list and request that you identify any other appropriate consulting parties. Letters will be sent shortly to each party initiating the 106 process. Each consulting party will be

notified and invited to participate in all public involvement opportunities. In addition, focused meetings and consultation efforts will be conducted with Native Hawaiian organizations and representatives.

The ATMPs will be developed by means of a public process. The FAA will, except where appropriate to protect confidentiality concerns of affected parties, provide the public with information about each undertaking and its effect on historic properties. A public scoping period and at least one public meeting have already been held for each ATMP project. During the scoping period and meetings, the public, agencies, and other interested parties were invited to provide comments, suggestions, and input regarding, among other things, the potential effects of commercial air tours on cultural and historic properties. Future opportunities for public involvement will include the dissemination of historic properties information within draft ATMP and National Environmental Policy Act (NEPA) documents. Again, the public will be invited to provide input on the potential impacts of commercial air tour operations.

In completing its Section 106 responsibilities, the FAA plans to follow an approach consistent with that outlined in National Register Bulletin 38, *Guidelines for Evaluating and Documenting Traditional Cultural Properties.* The approach is specifically discussed in the Bulletin chapter entitled "Documenting Traditional Cultural Properties: General Considerations" where a similar approach is outlined for the undertaking of the U.S. Air Force deployment of the MX missile system in Wyoming. If a sufficient understanding of the potential impacts can be achieved and measures that prevent or mitigate adverse effects on cultural resources in general can be agreed upon by the consulting parties, this will comply with applicable cultural resource requirements while avoiding unnecessary efforts to identify and evaluate impacts to specific historic properties. The FAA's Section 106 responsibilities will be completed with the incorporation of the agreed upon measures into the final ATMP and associated NEPA documents.

If an agreement cannot be reached under the approach described above, the FAA, in cooperation with the NPS, will conduct site-specific identification and evaluation of individual historic properties consistent with Title 36, CFR, Part 800.4-7. In any case the FAA intends to continue to use of the NEPA process for section 106 purposes.

We look forward to your response on these matters. If you have any questions or need any additional information, please call me at
(310) 725-3818.

Sincerely,

Brian Q. Armstrong
FAA Program Manager,
Air Tour Management Plan Program

Enclosures

cc: Ms. P. Holly McEldowney, Administrator, State Historic Preservation Office, w/o enclosures
Dr. Patrick McCoy, State Historic Preservation Office, w/o enclosures
NPS Park Superintendents, w/o enclosures

APPENDIX D-3. SECTION 7 STANDARD LETTER

[insert FAA LETTERHEAD]

April 13, 2005

Field Supervisor
United States Fish and Wildlife Service
South Dakota Ecological Field Office
420 S. Garfield Avenue, Suite 400
Pierre, South Dakota 57501-5408

Subject: Air Tour Management Plan for Badlands National Park

Dear Field Supervisor,

Pursuant to the National Parks Air Tour Management Act of 2000 (Public Law 106-181) and its implementing regulations contained in Title 14, Code of Federal Regulations, Part 136, *National Parks Air Tour Management*, the Federal Aviation Administration (FAA), in cooperation with the National Park Service (NPS), has initiated the development of Air Tour Management Plans (ATMPs) for Badlands National Park. The National Parks Air Tour Management Act of 2000 (the Act) provides for the regulation of commercial air tour operations over units of the national park system through ATMPs. A commercial air tour operation is defined as a flight conducted for compensation or hire in a powered aircraft where the purpose of the flight is sightseeing over a national park, within ½ mile outside the boundary of a national park or over tribal lands, during which the aircraft flies below a minimum altitude of 5,000 feet above ground level or less than 1 mile laterally from any geographic feature within the park (unless more than ½ mile outside the boundary).

The objective of each ATMP is to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon the natural resources, cultural resources, and visitor experiences of the subject national park unit. In developing an ATMP and any associated rulemaking actions, the FAA is required to comply with the National Environmental Policy Act of 1969 (NEPA), which calls on Federal agencies to consider environmental issues as part of their decision making process. For the purposes of compliance with NEPA, the FAA is the Lead Agency and the NPS is a Cooperating Agency. In compliance with NEPA and its implementing regulations, the FAA, in cooperation with the NPS, is preparing an ATMP and associated Environmental Assessment (EA) in accordance with FAA Order 1050.1D, *Policies and Procedures for Considering Environmental Impacts*. If at any point during the NEPA process the need to prepare an Environmental Impact Statement (EIS) instead of an EA is identified, the environmental compliance process will be expanded accordingly.

A scoping period during which public, agencies, and other interested parties provided input regarding commercial air tours and the scope and issues to be addressed in the environmental

process and ATMP was held from March 31st to June 1st 2004. An agency scoping meeting was held on May 4th, 2004.

The purpose of this letter is to notify you of that concurrent with the NEPA process, the FAA and NPS intend to meet their obligations under the Endangered Species Act (ESA) of 1973. In accordance with section 7c(1) of the ESA, the Migratory Bird Treaty Act, and any other pertinent legislation, regulations or treaties regarding protection of endangered species, I am writing to request information on whether any species, or their critical habitats, which are listed, proposed to be listed, candidates to be listed, or otherwise protected may be present within Badlands National Park and its vicinity (at least ½ mile outside the boundary of the park). The FAA and NPS will use this information to determine potential effects of the development of an ATMP for Badlands National Park on those identified species and habitats.

For more information on Badlands National Park, please visit the NPS website at www.nps.gov/badl. For more information on the ATMP Program, please visit the FAA's ATMP Website located at www.atmp.faa.gov or contact me at the telephone number or email address below.

We look forward to working with you and your staff in the development of the ATMP for Badlands National Park. Please advise me of any environmental concerns that you feel should be addressed in the EA. Should you have any questions, please contact me.

Sincerely,

Stephen T. May, Program Manager, Air Tour Management Plan Program
Executive Resource Staff, AWP-4
Federal Aviation Administration, Western-Pacific Region
Mailing address: P.O. Box 92007, Los Angeles, California 90009-2007
Street address: 15000 Aviation Boulevard, Hawthorne, California 90261
Telephone: (310) 725-3818
Steve.May@faa.gov

Cc: Bob Rossman, National Park Service, Natural Sounds Program

APPENDIX D-4. TRIBAL INVITATION LETTER TO ALTERNATIVES DEVELOPMENT MEETING

Western-Pacific Region
Executive Resource Staff

P. O. Box 92007
Los Angeles, CA 90009-2007

U.S. Department
of Transportation
**Federal Aviation
Administration**

OCT 1 3 2004

Certified-Return Receipt

Mr. John Yellow Bird Steele
President
Oglala Sioux Tribe
P. O. Box 2070
Pine Ridge, SD 57770-2070

Dear President Steele:

The purpose of this letter is to formally invite the Oglala Sioux Tribe to two upcoming meetings regarding the development of the Air Tour Management Plans (ATMPs) for Badlands National Park and Mt. Rushmore National Memorial.

I have been in recent contact discussing these meetings with Mr. Jimmy Sam, Executive Director of the Oglala Sioux Parks and Recreations Authority. On Friday, October 8, 2004, I spoke with Mr. Sam via teleconference and he confirmed the tribe's interest in attending these meetings and the availability of the tribe to meet during the designated times. The two meetings are as follows:

Meeting One	Meeting Two
Purpose: To provide the Tribe with background information on the National Parks Air Tour Management Act of 2000, the process for developing ATMPs, the status of the ATMPs at Badlands National Park and Mt. Rushmore National Memorial, and to discuss the next steps involved for continuing with our government-to-government consultations, cooperating agency status, and Section 106 consultations. **Date/Time:** Monday, Nov. 1, 2004, 1:00 p.m. to 5 p.m. **Location:** Federal Aviation Administration Rapid City Flight Standards District Office 909 St. Joseph St., Suite 700 Rapid City, SD 57701 (605) 737-3050 Note: This is the 7th floor of the First National Bank.	**Purpose:** To Formulate National Environmental Policy Act (NEPA) Alternatives to the Badlands National Park Environmental Assessment **Dates/Times:** Wednesday, Nov. 3, 2004, 2:00 p.m. to 5:00 p.m. Thursday, Nov. 4, 2004, 8:00 a.m. to 5:00 p.m. **Location:** Badlands National Park Park Headquarters 25216 Ben Reifel RD Interior, SD 57750

I look forward to meeting with the Tribe and building a positive and cooperative relationship with the Tribe. Please do not hesitate to contact me at (310) 725-3808 if you have questions or need additional information.

Sincerely,

Stephen T. May
Program Manager, Air Tour Management Plan
(ATMP) Program

cc:
Bob Rossman, National Park Service, Natural Sounds Program
Jimmy Sam, Executive Director, Oglala Sioux Parks and Recreation Authority

official use only.

APPENDIX D-5. TRIBAL INVITATION LETTER TO REVIEW DRAFT ALTERNATIVES DEVELOPMENT REPORT

Western-Pacific Region
Executive Resource Staff

P. O. Box 92007
Los Angeles, CA 90009-2007

U.S. Department
of Transportation
**Federal Aviation
Administration**

MAR 11 2005

Certified-Return Receipt

Charmaine White Face
Coordinator
Defenders of the Black Hills
P.O. Box 2003
Rapid City, SD 57709

Dear Charmaine White Face:

The Federal Aviation Administration (FAA) in cooperation with the National Park Service (NPS) is developing an Air Tour Management Plan (ATMP) for Mount Rushmore National Memorial. The FAA would like to continue consulting with your organization regarding the development of this ATMP. The objective of the ATMP is to mitigate or prevent the significant adverse impacts, if any, of commercial air tours operations upon the memorial's natural and cultural resources, and visitor experience.

In developing the ATMP, the FAA and NPS are required to comply with the National Environmental Policy Act, which calls on Federal agencies to consider environmental issues as part of their decision making process. The FAA and NPS must also comply with the requirements of the National Historic Preservation Act and Title 36, Code of Federal Regulations (CFR), Part 800, *Protection of Historic Properties*. The National Historic Preservation Act requires the FAA to consult with Indian tribes when an undertaking, such as the development of an Air Tour Management Plan, may affect historic properties that a tribe attaches religious or cultural significance to. A letter sent to the Defenders of the Black Hills on August 16, 2004 by the FAA initiated the consultation process with the Defenders of the Black Hills in accordance with Section 106 of the National Historic Preservation Act and Part 800.

The FAA and NPS are still in the early stages of developing the ATMP, including the development of alternatives. An Alternatives Development Meeting (ADM) was held on November 2 and 3, 2004 at Mount Rushmore National Memorial, Keystone, South Dakota. Representatives from the FAA and NPS were in attendance. Issues raised during the previous public scoping period as well as issues, resources, and other considerations raised by NPS staff during the ADM were identified and considered during the development of multiple ATMP alternatives. A draft Alternatives Development Report has been prepared detailing the results of the ADM. Since you and/or your organization have been identified as a potential consulting party under the National Historic Preservation Act you have been invited to participate in the Section 106 consultation process for this project, a copy of the draft report is being provided for your review.

Through this consultation, we are seeking information from you to assist in identifying historic properties, which may be of religious and cultural significance to Indian tribes, and to invite your views on the potential effect the ATMP alternatives may have on these properties. Through this process we hope to better understand the park's historic and cultural resources, how those resources are used, the potential impacts of air tour operations on such resources, and to develop and evaluate alternatives or modifications to the undertaking to avoid, minimize or mitigate potential adverse effects. Our objective is to develop ATMP alternatives that will

prevent or mitigate any adverse effects of commercial air tours on the historic and cultural resources within the Park.

We are willing to discuss your participation in this planning process, to learn how your organization typically consults on the Section 106 process, and to answer any questions you may have regarding this project. As the FAA's primary point of contact for purposes of consultation and for the exchange of information on this project, please provide me with your comments on the draft Alternatives Development Report within 30 days of the date of this letter. Please send your comments to, Stephen T. May, Air Tour Management Plan Program Manager, Executive Resource Staff, AWP-4, Federal Aviation Administration, Western-Pacific Region, P.O. Box 92007, Los Angeles, California 90009-2007.

Information on the National Parks Air Tour Management Act and the ATMP program can be found on the FAA website: www.atmp.faa.gov. If you have any questions or need any additional information, please call me at (310) 725-3808. We look forward to your response and working with you on this undertaking.

Sincerely,

Stephen T. May
Program Manager, Air Tour Management Plan Program

Enclosure

cc:
Bob Rossman, National Park Service, Natural Sounds Program

APPENDIX E. DOCUMENT DEVELOPMENT AND IMPACT ANALYSIS GUIDANCE

APPENDIX E-1. AIR TOUR MANAGEMENT PLAN AND NEPA DOCUMENT OUTLINE

This generic outline specifies the chapters and sub-sections to be included in National Environmental Policy Act (NEPA) documents prepared for the ATMP Program. Depending on the type of document and park-specific issues, additional sub-sections, chapters, or appendices may be needed.

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CHAPTER 5.0 List of Preparers and Contributors

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APPENDICES As necessary

List of Reference Material to be Appended to Reduce Volume of Document:

- Alternatives Development Report
- Scoping Package
- Public Involvement Summary
- Section 7 Consultation Summary
- Section 106 Consultation Summary
- Acoustical Information
- Other Technical Support Documentation

APPENDIX E-2. DETAILED GUIDANCE ON ACOUSTICAL MONITORING

As stated in Section 2.6, this acoustics guidance was developed for the unique application to ATMPs within national parks. It is especially tailored to the evaluation of air tour aircraft noise in national parks and to the legislative requirements of the NPATMA. It does not establish policy, precedent, or standards for the noise assessment of other FAA or NPS projects.

The purpose for acoustic data collection in support of ATMPs is to characterize the ambient sound conditions for the primary acoustic zones in a park. These efforts must follow specific, standardized methodology and protocols to be scientifically defensible and comparable to other studies. Ambient sound levels provide a basis against which potential impacts can be assessed. This appendix provides guidelines for:

- Identifying acoustic zones (see Appendix E-2.1);
- Planning the acoustic study, including:
    - Selecting measurement locations (see Appendix E-2.2):
        - Identifying park management zones and soundscape issues;
        - Identifying equipment considerations (security, solar, etc.); and
        - Identifying any other special locations, data needs, and other considerations.
    - Identifying temporal considerations (see Appendix E-2.3):
        - Selecting season(s) to measure;
        - Selecting time of day and days of week to measure; and
        - Selecting measurement duration for each location.
- Equipment Types and Setup Guidelines (see Appendix E-2.4);
- Data to be collected (see Appendix E-2.5);
- Data reduction and analysis (see Appendix E-2.6); and
- Development of ambient maps (see Appendix E-2.7).

As more is learned from acoustic inventory and long-term monitoring efforts, protocols, such as the numbers and locations of sites, time of year to monitor, measurement period duration will undoubtedly be refined to reflect the current state of acoustic knowledge. For example, if an inventory reveals that two different habitats/topographic zones have the same acoustic characteristics, it may not be necessary to monitor both zones.

E-2.1 Identify Acoustic Zones

Areas of like vegetation, land cover, topography, elevation, and climate are often referred to as "acoustic zones," with the assumption that similar animals, physical processes, and other sources of natural sounds occur in similar areas with similar attributes. As a result, areas with similar attributes may have similar natural sound sources, sound levels, and propagation and

attenuation properties. In developing acoustic zones, land cover and climate/ecological domain are the two greatest technical factors influencing how sounds propagate from source to receiver. Local factors such as gradients of elevation, fire and flooding can modify physical conditions greatly. This may result in areas that are distinct acoustic zones within the same land cover type and ecological domain. For example, ponderosa pine, lodgepole pine, and subalpine fir-spruce forests are distinct ecosystems of Evergreen Forest land cover in the Rocky Mountain Ecological Division. Most park units have identified and digitally mapped primary vegetation and topographic types, and a review of these data is the first step in identifying the potential number and types of different acoustic zones in a park unit. Typically, three to five acoustic zones cover > 75 percent of the park.

With the goal of future data transferability between parks, all baseline acoustic data collected thus far have been organized in accordance with the National Land Cover Data (NLCD) and NatureServe. Developed by the U.S. Geological Survey (USGS), the NLCD is the only nationally consistent land cover data set in existence and is comprised of twenty-one NLCD subclass categories for the entire U.S. NatureServe and its natural heritage program members, with funding from The Nature Conservancy, have completed the first working classification of terrestrial ecological systems in the United States, southern Alaska, and adjacent portions of Mexico and Canada.

The number of initial acoustic zones within a particular park will be primarily determined by land cover and climate regions within that park, and not park size. Care should also be given to avoid including dissimilar ecosystems within an acoustic zone, particularly if the seasonality or types of natural sounds are expected to differ. Specific measurement locations within acoustic zones will be considered relative to other factors such as park resources, park management zones, visitor-use, wildlife habitats, and other factors.

It should be noted that natural acoustic conditions in a given acoustic zone are assumed to be similar to natural acoustic conditions in other geographic areas of that same acoustic zone type (this assumption has not been proven; it is being tested with inventory efforts by NPS and Volpe). If true, it may be possible to extrapolate acoustic data to other like acoustic zones, not only in the specific park units where the data were collected, but also to similar acoustic zones in nearby park units. This aspect of transferability to other parks needs further study, but the assumption is that like acoustic zones will have like acoustic conditions. The extrapolation of acoustic data to other similar acoustic zones will allow the federal agencies to best maximize and leverage efficient use of agency resources.

It is presently hypothesized that after a critical mass of baseline ambient sound level data have been collected, it will be statistically viable to begin generalizing data measured in one park to regions possessing similar attributes in other parks. What is not currently known, however, is how many park measurement studies will be needed to achieve statistical reliability and scientific defensibility of ambient data as this type of effort has never been attempted before. The transferability hypothesis, if proven sound, will not likely preclude measurements entirely in other parks, but it will reduce the scope of required measurements. It is anticipated that some baseline ambient sound level measurements will be necessary in all parks. The purpose

of a limited measurement campaign (probably a few days in even the later parks) is to statistically prove the hypothesis of transferability of baseline ambient sound level data on a park-by-park basis.

E-2.2 Measurement Site Selection

In most situations, the principal consideration in selecting measurement locations is to insure data are collected in the primary acoustic zones of the park. In most parks, large backcountry, natural areas make up the vast majority of the park, and data collection in such areas will insure coverage of a large proportion of most parks. At least one measurement location shall be selected within each of the primary acoustic zones**.**

Secondary considerations in selecting measurement locations include, in rough order of priority:

- Park management zones and soundscape management objectives of those zones (and associated need for baseline acoustic data);
- Park management zones and associated soundscape management objectives, particularly those relative to park resources or areas of special soundscape interest, will be considered in selecting measurement locations. Such areas of specific soundscape concerns are generally identified by local NPS personnel.
- Specific sound-sensitive areas (such as endangered species nesting area or sites of historical or cultural significance);
- Specific acoustic data needs (such as for air tour aircraft and model verification and validation; a localized sound source such as a waterfall or river rapid); and
- Assessment of specific sounds of interest may require collection of acoustic data specific to the area and source of that sound. When using models to assess potential impacts of a specific sound source, regular model verification and validation efforts are appropriate. Although most air tour aircraft acoustic data are available for use in models, additional reasonableness checks are advisable. Therefore, measurements should be made under air tour routes in most parks to provide checks of the modeling effort and to provide additional acoustic data for model input. Such measurements do not need to be continuous or for long periods, rather 4 to 8 hours of measurement per park may suffice for these efforts. Other areas of specific acoustic interest could be near a waterfall or river rapids where sound levels are specific to a localized source, and levels and attenuation characteristics of such areas are needed to develop ambient maps. For roadways, traffic sounds may be modeled using the Federal Highway Administration's Traffic Noise Model. Note: To support TNM modeling, the following input data are required: traffic volume, traffic speed, vehicle mix, and ground surface characteristics, e.g., grass, water, rock, etc.
- Equipment considerations (security, solar exposure, visibility, etc.).

Final selection of measurement locations is made through a screening process of potential sites considering all of the above factors, and in consideration of site access, equipment availability/capability, and availability of personnel to deploy and service the equipment. Overarching all of the above criteria, and in many cases the most important and limiting criterion, is site accessibility. As important as a given site may be to satisfy any of the above criteria, if it is inaccessible, measurements cannot be conducted.

A preliminary document (trip proposal) describing the above considerations, including a proposed schedule, will be developed for review. Actual number and final site locations will be closely coordinated with FAA, NPS, and park staff through correspondence, teleconferences, and an on-site meeting. An example acoustic zone map showing land cover vegetation, measurement site locations, roadways, existing air tour routes are shown below. Note: Because NPATMA includes areas ½-mile beyond the boundary of each national park unit, the acoustic zone data must also include the ½-mile buffer.

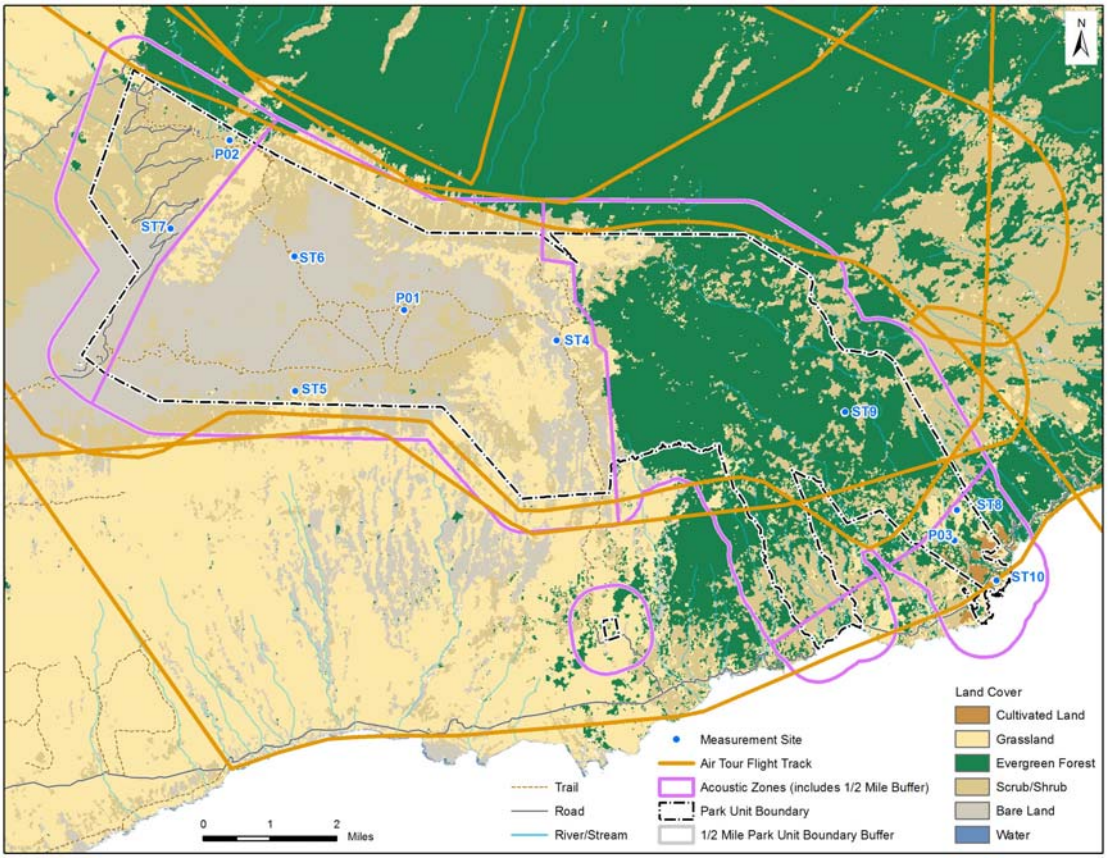

Figure E-2.1. Land Cover, Acoustic Zones, Air Tour Routes, and Measurement Sites for Haleakala National Park (2006)

E-2.3 Temporal Measurement Considerations (Daily, Seasonal, Duration)

In order to provide an accurate assessment of ambient acoustic conditions, temporal sampling must include times of potential acoustic variability, such as diurnal/nocturnal, seasonal, and annual variability. It is not economically possible to collect acoustic data in all acoustic zones over multiple years for multiple park units; however, the data must take into consideration daily and seasonal variability in the primary acoustic zones in order to insure impact assessments are based on accurate ambient data.

Time of Day Considerations

Ambient sound levels may vary as a function of time-of-day. For example, winds tend to increase later in the day, and as such it can be expected that higher ambient sound levels will be measured in the afternoon as compared with the morning. Similarly, higher ambient sound levels may occur at night due to increased insect activity. FAA and NPS have agreed that the impact assessment should be conducted using ambient sound levels during the time that the aircraft operations occur. For most parks, the majority of air tour operations occur during the day. Accordingly, all ambient maps will be based on daytime data. The specific hours to be defined as daytime will be park dependent.

Seasonal Considerations

Ambient sound levels may differ from one season to another because of factors such as visitor activity, ground cover, foliage, insect activity and wildlife activity. Acoustic data should be collected during the season (summer and/or winter) when air tours occur (not necessarily during the peak month of the activity, but during a month representative of the season when the activity occurs). Generally, peak air tour season is driven by the peak visitor season, typically the summer.

Based on the four yearlong data sets currently available, the primary summer months for these data are May-August, and the primary winter months are November-February. Generally speaking, the swing months of March and April in the spring and September and October in the fall will vary by location. Until more is learned about acoustic seasonality from more long-term data sets, we will rely on park staff to provide input on seasonality for measurement. The primary reason for considering the month during which to measure is to insure that the measurement period will yield data truly reflective of that season (± 3 dB).

It should be noted that for those parks in which regular air tours can be confirmed to occur year-round, one summer measurement period and one winter measurement period would be adequate. FAA and NPS have agreed that the decision to conduct winter measurements will be made on a park-by-park basis.

Measurement Duration

The variability of sound pressure levels over long periods (weeks, months, seasons, and years), as well as the variability of sound sources at a given location, is not well understood. Acoustic

investigators should sample for a period of time sufficient to insure that data from a sampling period do not differ significantly (± 3 dB; see discussion below on *Margin of Error*) from data collected continuously (long-term) for the same area. Based on a joint review of acoustic literature and preliminary statistical evaluation of long-term data sets from Hawaii Volcanoes National Park, Bryce Canyon National Park and Arches National Park, sampling any 25-day period in the winter and any 25-day period in the summer would usually limit measurement uncertainty to 3 decibels between the sound levels of the entire winter or summer season. As more parks are studied, more will be learned about variability of acoustic conditions in different vegetation types. Until such variability for all vegetation types and acoustic situations, measurement periods must be estimated based on discussions with park staff and those knowledgeable of sound sources at each park unit.

It should be noted that for some situations or environments, shorter or longer measurement periods may be needed. An exception to the 25-day requirement would be for measurements in close proximity to localized sound sources, which generally don't vary substantially in level, such as waterfalls, river rapids, train tracks, and busy visitor centers. The measurement period for such situations will be situation dependent, but generally, for visitor centers and travel corridors, a 10-day measurement period will be adequate. Shorter periods may be adequate for waterfalls or rivers with very little variability and for which attenuation data is needed. For the purpose of characterizing attenuation rates of such sound sources, acoustic data should be measured simultaneously at a minimum of two distinct distances from the source, so as to characterize a reference level and the rate at which sound level decreases with increasing distance from the source. In such situations, relatively short sample periods of 4 to 8 hours may be adequate (assuming little variability in the area's attenuation properties). For roadways, traffic sounds may be modeled using the Federal Highway Administration's Traffic Noise Model.

Margin of Error

In determining ambient sound levels in national parks, it is not currently economically feasible to measure all hours of all seasons in all acoustic zones; computations of ambient sound levels must be based on some sample of the hours and seasons. As such, it is necessary to establish an acceptable degree of error for the sample period relative to the entire season under study. Sound levels vary considerably in most national parks, and this variability influences establishing adequate measurement periods and acceptable margins of error. The FAA and NPS will strive to collect data that will provide a margin of error not to exceed ± 3 dB when determining natural ambient and existing ambient sound levels. That is, it is expected that no more than a ± 3 dB difference between the true ambient sound level and the sound level will be calculated from the sample period.

E-2.4 Equipment Types and Setup Guidelines

The purpose of these guidelines is to provide standards for acoustic measurement equipment and setup procedures. These guidelines are provided for general planning purposes, and there

may be situations where these guidelines do not apply. In situations where these protocols do not apply, any deviation should be thoroughly documented and rationale explained.

Calibrator

A calibrator whose performance is essentially independent of off-reference atmospheric conditions is recommended. If an environmentally sensitive sound calibrator is used, care must be taken to ensure that all measured sound level data are corrected in accordance with manufacturer's specifications.

Instrument Clocks

All clocks associated with the sound measurement effort shall be coordinated with GPS (Global Positioning System) time. This includes sound level meters, data loggers (notebook computer, Personal Digital Assistant-PDA), and all digital watches used during observer logging. For long-term measurements, at a minimum, clocks will be synchronized with GPS time at the beginning of the measurement period, and time differences with GPS time will be noted at the end of the measurement period. Acoustic data collected during the measurement period will be adjusted to correspond with GPS time.

Digital Recordings

Digital recordings should be high quality, sufficient to accurately record sounds between approximately 10 dBA and 100 dBA. Recording instruments should have a signal-to-noise ratio greater than 60 dB and have the capability to provide accurate frequency coverage, at a minimum, between 20 Hz and 20,000 Hz.

Equipment Calibration

Sound level meters, microphones, preamplifiers, and calibrators need to be calibrated by a certified facility on a regular basis. Most manufacturers recommend calibration annually. Field calibration checks and corrections shall be conducted during every site visit during field measurements and changes recorded.

Microphone Type and Placement

A random-incidence microphone is recommended for acoustic measurements in wilderness settings. Microphones can be either polarized or pre-polarized. Pre-polarized microphones tend to work better in wetter environments than polarized microphones. Generally, the microphone diaphragm should be placed 5 ft above the ground surface and oriented vertically (microphone grid facing the sky). However, microphone height may vary depending on the specific sounds being measured, plus any site-specific considerations (in national parks, bears and elk can be a problem, and microphones may need to be placed > 10 ft. Additionally, snow surfaces can vary considerably during a winter season, thus microphone height must be determined as appropriate for that situation. Any deviation should be documented and rationale explained.

Microphone Simulator

A microphone simulator shall be used to establish the electronic noise floor of the entire electrical system absent of the microphone.

Aircraft Photo-scaling System

A photo-scaling system, developed in accordance with the SAE Aerospace Information Report (AIR) 902, enables the determination of the minimum distance from an observer at the measurement site to an object - in this case, air tour aircraft. Typically, the system uses a digital camera with a fixed-focal length lens to record an image of the object.[2] Then the pixel dimensions of the object are determined, which is used to compute the slant range distance from the observer to the object. Detailed logs, including camera settings site, data, time, aircraft type, aircraft model, operator, tail number, and direction (when identifiable), were kept for later correlation with the recorded images. Slant range data can be used to correlate aircraft altitude with computer-modeled sound level data (see also Section E-2.6.2).

Sound Level Meter

Sound level meters shall be Type I or better and should perform true numeric integration and averaging in accordance with ANSI S1.4-1983.

Time Response

Fast and slow time response were developed primarily to slow needle movement in analog meters so investigators could read and record sound levels. Both fast and slow time response add a decay factor. Decay factors can give inaccurate readings, although over time there is little difference in fast, slow, or actual sound levels. New digital sound level meters, while changing numbers rapidly on the screen, store sound level data in memory for later analysis, thus, the ability to read numbers on the screen is less important. Hence, the most appropriate and accurate time response setting is "none." Generally, 1-second L_{eq} data are appropriate; however, when measuring sudden onset sound events such as sonic booms, more frequent L_{eq} data (many readings per second) may be appropriate.

Windscreen

A windscreen is a porous device used to cover the microphone in order to minimize the effects of wind and wind gusts on the sound level measurements. The effect of the windscreen on sound level measurements should be known to within +/- 0.5 dB of each one-third octave-band and be included in the reporting documentation. When using windscreens that attenuate sound

[2] As an alternative or backup to the photo-scale system, a laser range finder may be used. The limitation of using laser range finders is that most observed aircraft are more than 800 yards away, which is typically outside the instrument's maximum distance capability.

levels >0.5 dB, the amount of attenuation for each one-third octave-band must be known and corrections applied.

Equipment Setup and Periodic Site Visits

Acoustic monitors shall be placed in a location representative of the acoustic zone (or specific acoustic issue) under study and, when possible, in locations not influenced by sound sources outside that acoustic zone. Equipment used in acoustic studies should be situated so that the potential for contamination of data due to equipment-generated sound is minimized. For example, all cables and wiring of the monitoring equipment should be secured to prevent sounds that might be created in windy conditions (due to wiring hitting other objects). Hard, flat equipment surfaces, such as solar panels, should be situated away from the microphone to reduce the potential reflection of sound from these objects towards the microphone. For every measurement site, parameters of that site will be recorded, including latitude and longitude, vegetation type, land cover, elevation, aspect, exposure, distance to sound sources (natural and non-natural), and others as appropriate. Photographs of the site and surrounding area should be taken. At the start of data collection, each system deployed at a site will be calibrated and checked to ensure all components are functioning properly. In addition, periodic visits to each site (approximately once per week or as weather permits) will be performed to ensure the system is running, perform observer logging, take slant range photos, download data, recalibrate the system, and then re-initiate data collection.

E-2.5 Data to be Collected

A fundamental difficulty in describing the sounds in National Park units, including natural and non-natural components, is that no single metric or measure can adequately describe acoustic conditions. Rather, a combination of acoustic metrics and measures are needed. Decibel data alone provide an important but incomplete understanding of acoustic conditions; identification of sources of sounds in Parks, both natural and non-natural, their frequency of occurrence, timing, and duration are also required for understanding park acoustics. This section discusses the types of data that will be collected. Specific formats for acoustic data, source identification data, meteorological data, measurement location information, instrumentation, and observer data are available through the FAA/Volpe or the NPS Natural Sounds Program.

Table E-2.1 provides examples of acoustic data, measurement duration, and acoustic metrics/measures calculated from those data (right column). These metrics can be used to describe and monitor acoustic conditions in National Park units.

Table E-2.1. Acoustic Data and Associated Measurement Duration, Metrics and Measures

Data Collected:	Measurement Duration	Metric To Be Computed:
Sound Pressure Level Data (1-second L_{eq} for 1/3 octave bands, 20-20,000 Hz; dBA)	• 25 days acoustic monitoring (acoustic zones in backcountry where road and other man-made noises are uncommon • 10 days (acoustic zones in frontcountry) • 1 day acoustic monitoring at two distances (localized sound sources, e.g., waterfalls) • 4 hours to 1 day (computer model validation)	• L_{eq}, L_{10}, L_{50}, L_{90}, L_x for each hour, day, month, season, and entire measurement period • Minimum and maximum sound levels (L_{min} and L_{max}) • Natural Ambient (see Section E-2.6.1 • Existing Ambient Without Air Tours (see Section E-2.6.1)
Observer Logging and Digital Recordings	• ≥2.5 percent of the measurement period (except for concurrent logging for model validation; see below). For example, for 25 day measurement, a minimum of 15 hours logging/recording; for a 10 day measurement period, 6 hours. When possible, logging/recording periods should include all hours of concern (for example, if 0700-1900 are the hours of concern, each of those hours should be sub-sampled. • Concurrent observer logging (computer model validation)	• Time Audible • Identification of sources of sound • Distribution of sources of sounds • Number/duration of events, by source • Noise-free interval

Acoustical

Continuous, one-second, A-weighted sound levels and their associated one-third octave-band one-third octave-band un-weighted spectrum from 20 to 20,000 Hz will be collected. When measuring in very low acoustic conditions (<15 dBA), measurements should be made using ultra-sensitive, low-noise microphones whenever possible. Such equipment is very expensive and labor intensive, thus such efforts may be limited.

Meteorological

Meteorological data (wind speed, wind direction, temperature, and humidity) can improve the utility of acoustic data. Continuous, one-second wind speed data (and wind direction, outside air temperature data, and humidity when possible) will be collected. As stated earlier, previous studies in National Parks have established a strong correlation between land cover, wind speed, and ambient sound level. Sound levels also attenuate differently in cold or hot temperatures. In general, ambient noise levels tend to increase with increasing wind speeds. Depending primarily upon the vegetative characteristics of the measurement site, a substantial change in noise level can occur as wind speeds increase. For example, ambient noise level data measured

at a site containing dense foliage will indicate a strong dependence on wind, primarily due to the wind interacting with leaves.

Source Identification/Observer Logging

In addition to sound level data, knowledge of the source, duration, and distribution of sound sources is important in characterizing natural and non-natural acoustic conditions in a park. Thus, during sound-level data collection, periods of observer logging and high-quality digital recordings will be conducted in order to discern the type, timing, and duration of different sound sources. Investigators should conduct several hours of observer logging or recording playback (at least 2.5 percent of the measurement duration for that site location), during which time an individual with normal hearing logs all sources of sound during the observer log period. It is desirable to begin conducting observer logging on the hour, such as from 1000 or 1500, in order to facilitate matching the observer logging data with hourly acoustic data. When conducting logging, observers should be at least 50 ft from the acoustic monitor, and should be in the same vegetation type (acoustic zone) as the monitor.

Sound source coding involves identifying and then categorizing audible sounds into a classification of sound sources. Table E-2.2. is an example of source identification.

Table E-2.2. Example of Source Identification Data for A 7-Day Sample Period (Sample Scheme: Record 10 Seconds Every Two Minutes)

Sound Source	Number of Samples With Source	Percent of Samples with Source
No Sound Audible	1076	21.3%
Unknown	72	1.4%
Unusable data	126	2.5%
Aircraft	1608	31.9%
Vehicle	152	3.0%
Non-natural, Motor	10	0.2%
Non-natural, Other	6	0.1%
Non-natural, Unknown	96	1.9%
Wind	852	16.9%
Water Sounds	64	1.3%
Thunder	32	0.6%
Mammal	176	3.5%
Bird	1622	32.2%
Reptile	44	0.9%
Insect	410	8.1%
Animal, Unknown	40	0.8%
Natural, Other	8	0.2%
Natural, Unknown	58	1.2%

Additional information that can be determined from this data include (see Table E-2.3):

- *Number of Events Per Hour (NEH)* – The number of air tour operations audible within a specified time period, ideally each hour during the day (where sufficient operational data exists); and
- *Noise-Free Interval (NFI)* – The length (mean, minimum, and maximum) of continuous periods of time during which only natural sounds are audible.

Table E-2.3. Example NEH/NFI Data

	Natural	Aircraft
Total Time:	0:26:40	0:33:20
NFI Periods/Aircraft Events:	12	11
Mean Time/NFI Period or Aircraft Event:	0:02:13	0:03:02
Min.:	0:00:15	0:00:23
Max.:	0:06:40	0:08:15

Digital Recordings

Advancements are being made in acoustic data analysis. It is crucial to obtain high-quality archival recordings that can be used to compute any conceivable metric for future analysis. It is almost certain that metrics specified today will be inadequate to meet all future needs, thus making high-quality digital recordings is important. Digital recordings also provide an archival record of the biological acoustics of the area.

Slant Range Photos

High-resolution digital photographs of any visible tour aircraft will be taken for later determination of slant range. Slant range data may be used to correlate actual data with computer-predicted data.

Site Information

Characteristics of the site, such as NLCD land cover type, the NatureServe Ecological Domain, Ecological Division, and Ecological System (if defined) will be documented. Most parks have also had vegetation mapping conducted with a regional classification. Noting this vegetation type will be useful as a cross-reference. Noting the dominant plant species and approximating aerial percent coverage of each is also useful documentation. Photographs documenting the site, the equipment setup, and its surroundings will be taken.

Sample site description documentation is provided in Table E-2.4 and Figure E-2.2 below.

Table E-2.4. Site Description in Haleakala National Park (2006)

Site ID	**HALE P01**
Site Name	Namana o ke Akua
# Measurement Days and Dates	29 days - February 27, 2003 to March 27, 2003
ATMP System # and Type	6 (NoiseLogger™)
Latitude / Longitude (decimal degrees)	20.7194 / 156.1813
Approximate Elevation (ft)	7379
Ecological Domain	(400) Humid Neotropical
Ecological Division	(412) Hawaiian Highlands
Land Cover Class	(5) Shrubland
Land Cover Subclass	(51) Shrubland
Management Zone	Natural/Cultural/Historical
Site Category	Backcountry
Site Description	Shrubland located at about the center of the crater
Access Considerations	Helicopter or 12-mile round trip hike on trail
Potential Sound Sources	Aircraft, Hikers, Birds, Horses, Wind

Figure E-2.2. Site Photograph in Haleakala National Park (HALE 2006)

E-2.6 Data Processing, Analysis, and Reporting

Data Processing

Several quality assurance filters and checks, and then several adjustments will be applied to the acoustic data prior to detailed data reduction and analysis to ensure that any questionable data is identified and that only "good" data are reduced and analyzed. Following is the list of filters to be used to identify "bad" or questionable data:

- Data whose associated battery readings were less than the minimum voltage required to properly run the acoustic system (typically 11.0 volts);
- Data whose associated internal temperature readings exceeds the equipment manufacturer's maximum operating temperature limit (e.g., 122 degrees Fahrenheit for the Larson Davis Model 824 sound level meter);
- Data whose associated 1-second average wind speeds indicate an anemometer error (e.g., less than zero m/s,);

- Data whose associated 1-second unweighted sound levels exceeded the manufacturer's instrumentation noise "ceiling level" for the gain setting of the instrument;
- Data, which indicates a problem with the sound-level sample (e.g., data whose associated one-third octave-band data do not deviate by at least one standard deviation (dB) across all 33 bands, typically represented by no variations in sound levels within the bands);
- Data that were contaminated by field personnel (e.g., data potentially contaminated by field personnel handling instrumentation during the calibration process) and/or other activities atypical for that area;
- Data whose associated 1-second average wind speeds were greater than 11 mph (5 m/s), the predetermined, acceptable, wind speed threshold. Available data suggests that there is a high probability of microphone-induced distortion above the wind speed threshold; however, unless such wind conditions occur more than 50 percent of the hour, exceedence metrics (L_{50}, L_{90}, and L_x) will not likely be influenced. Both the FAA and NPS acknowledge that additional research is needed to determine if a more refined approach is necessary to account for data collected during high wind conditions for future ATMP parks;
- Data in any given hour, for which greater than 25 percent of the samples are lost due to the above factors. When calculating hourly metrics from 1-second data, all 3600 seconds of the hour are not required for calculating accurate hourly metrics as long as such loss contributes only negligible error to the hour's measured noise metrics (< 3 dB error). Thus, any hour with ≥ 75 percent "good" data is acceptable for data analysis.

The following is the list of adjustments to be applied to the acoustic data:

- Gain adjustments, if any, to acoustic data;
- Calibration adjustments to account for calibration drift as determined by measuring a calibration signal at the start and end of each data collection period;
- Microphone frequency response adjustments to account for frequency response biases of the microphone as provided by a microphone calibration facility (These adjustments will be documented for each system in detail);
- Windscreen frequency response adjustments To account for frequency response biases of the windscreen (These adjustments will be documented for each system in detail); and
- Noise floor adjustments, as appropriate. These adjustments would provide a more accurate representation of the true ambient sound levels in low-level ambient environment.

Data Analysis

The FAA and NPS have agreed upon two different ambients for use in computer modeling (see Section E-3.3.2) and later impact assessment (see Appendix SS):

- *Natural Ambient Sound Level L_{50}* - The median[3] of all the natural sounds in a given area (i.e., wind, streams, wildlife, etc.), excluding mechanical, electrical, and other human-caused sounds. Natural ambient sound is considered synonymous with the term "natural quiet," although natural ambient sound is more appropriate.
- *Existing Ambient without Air Tours L_{50}* - The median[3] of the composite, all-inclusive sound associated with a given environment, excluding the analysis system's electrical noise and the sound source of interest, in this case, commercial air tour aircraft. Note: In the normal NEPA impact assessment process, the potential impacts of a proposed action are considered before the activity is authorized. However in the case of air tours, the action is ongoing, and, as a result, the action being considered contributes to the ambient sound levels. In order to assess the potential impacts of air tours, the sounds of the air tours must be removed.

Computing ambient sound levels for acoustic conditions in National Park units has not been described thoroughly in the literature. The FAA/Volpe/NPS are developing standards for computing ambient sound levels in National Park units, and these methods are described below.

Acoustic data in park-like settings are rarely normally distributed. In many backcountry areas of parks, sound pressure levels are relatively low (15 dBA to 30 dBA are common), with occasional loud events such as thunder or aircraft. On a graph of decibel level vs. frequency of values, these types of data are generally skewed towards the infrequent but much louder sounds. As a result, the standard arithmetic mean calculation to characterize the central tendency of the data is inappropriate. When calculating central tendencies of hourly data that are not normally distributed, the median is the most appropriate measure, rather than the mean. Likewise, computing central tendencies for data from many hours should also use the median (if, as is usually the case, those values are not normally distributed). When computing summary metrics for such values, calculations should be based on hourly summary data, not individual 1-second data of all the hours. This is necessary to ensure hour-to-hour and day-to-day variation is addressed.

- *Natural Ambient Sound Levels*

[3] The median sound level is the 50-Percentile Exceeded Sound Level (L_{50}) for any specific period of time. Applied to either the Natural Ambient or the Existing Ambient Without Air Tours, 50 percent of the measurements are louder than the L_{50}, and 50 percent are quieter.

Calculating hourly natural ambient sound levels is not straightforward. All national parks have both natural and human-caused sounds; hence calculation of natural ambient sound levels (sound levels without the influence of human-caused sounds) is difficult. Natural and non-natural sounds often overlap in both frequency and amplitude, and currently, there is not a practical method to separate acoustic energy of human-caused sounds from that of natural sounds. There are three basic approaches to calculating natural ambient sound levels that are currently available. The two approaches being utilized by FAA/Volpe/NPS utilize listener judgments about the presence of human-caused sounds to adjust the calculation of ambient background level. With this knowledge, that portion of the sub-sample (either second-by-second decibel data with human-caused sounds, or that percent of the sub-sample with human-caused sounds) can be removed from the sub-sample and natural ambient estimated. However, with either approach, some error is possible. Removing decibel data may over-estimate natural ambient (because some periods of very quiet natural are removed), while removing a percentage may under-estimate the natural ambient (because some loud natural sounds may be removed). The third approach involves using a pre-selected, fixed exceedence (L_x) value and applying that value to all of the data. This approach does not allow for flexibility for different situations, and usually leads to greater errors in calculating natural ambients greater than either method mentioned earlier.

The FAA is currently using the method that removes second-by-second decibel data for times during the sub-sample when human-caused sounds are audible, and applying the resulting L_x to the entire data set to calculate natural ambient. The difficulty with this approach is that occasionally very quiet human-caused sounds can only be heard when natural sounds are also quiet, thus resulting in some quiet natural ambient data being removed from the sub-sample. This could potentially over-estimate the natural ambient. Additionally, this method occasionally results in natural ambient sound levels being greater (generally less than 1 dB) than existing ambient sound levels, which is a logically impossible outcome, because the uncensored data represents the summed contributions of natural and human-caused ambient sounds.

The NPS is currently using the method that removes the loudest percent of the data with audible human-caused sounds. Although this method could eliminate some loud samples of unadulterated loud ambient and thus potentially under-estimate natural ambient, it eliminates the possibility of having an estimated natural ambient level that exceeds the median total ambient level.

Both the FAA and NPS acknowledge that additional research is needed to develop better methodology for these calculations, and will strive to develop such methodology. Pursuant to NEPA and NPATMA, the best-available scientific methodologies are being used.

When possible, natural ambient sound levels will be calculated for each hour of the day. This is important because the occurrence of human-caused sounds vary substantially by hour of day.

- *Existing Ambient Without Air Tours*

  The Existing Ambient Without Air Tours is calculated in a similar manner to Natural Ambient. The presence of air tour aircraft sounds is tabulated for all of the data, and the above methods are applied to estimate the median sound level had the air tour aircraft not been present.

E-2.7 Development of Ambient Maps

An ambient map is essentially a comprehensive grid of ambient sound levels throughout a study area. The measured data provide the base layer for the map and are then combined with the contributing effect of roads and localized noise sources, such as waterfalls, and river rapids, to develop a final, composite, ambient map of the park. As the FAA and NPS have agreed upon two different ambients for use in computer modeling (Natural Ambient and Existing Ambient Without Air Tours), two ambient maps will be developed.

The development of ambient maps is accomplished using Geographic Information System (GIS) in concert with software developed by the Volpe Center. The GIS software program performs the following actions:

- Define the input "objects":
  - Define the park boundary in Universal Transverse Mercator (UTM) coordinates to set the initial grid area boundary;
  - Divide the park into a regular grid of points at a desired spacing (typically 500 ft) using a Digital Elevation Model (DEM), which is a digital representation of a topographic surface typically used in GIS applications. Each point will be assigned an elevation value and UTM coordinates from the DEM;
  - Define the acoustic zone boundaries in UTM coordinates;[4]
  - Define the location of each measurement site. Within a particular acoustic zone, the distance to the nearest measurement site will be calculated and assigned to each grid point within that acoustic zone;
  - Define the location of roadways and other localized noise sources. The distance to each of these sources will be calculated and assigned to each grid point;
- Assign a "measured" ambient sound level (and its associated one-third octave-band, unweighted spectrum) to each grid point within an acoustic zone based on the measurement site nearest to it for each ambient type and metric;

[4] Note: Because NPATMA includes areas ½-mile beyond the boundary of each national park unit, the acoustic zone data must also include the ½-mile buffer.

- Assign an ambient sound level due to each localized source (and its associated one-third octave-band, unweighted spectrum) to each grid point using the drop-off rates determined by TNM; and
- Compute the combined "measured" and all localized source ambients (and spectra), as appropriate, at each grid point.

Example Ambient Maps Developed for Badlands National Park Are Provided Below

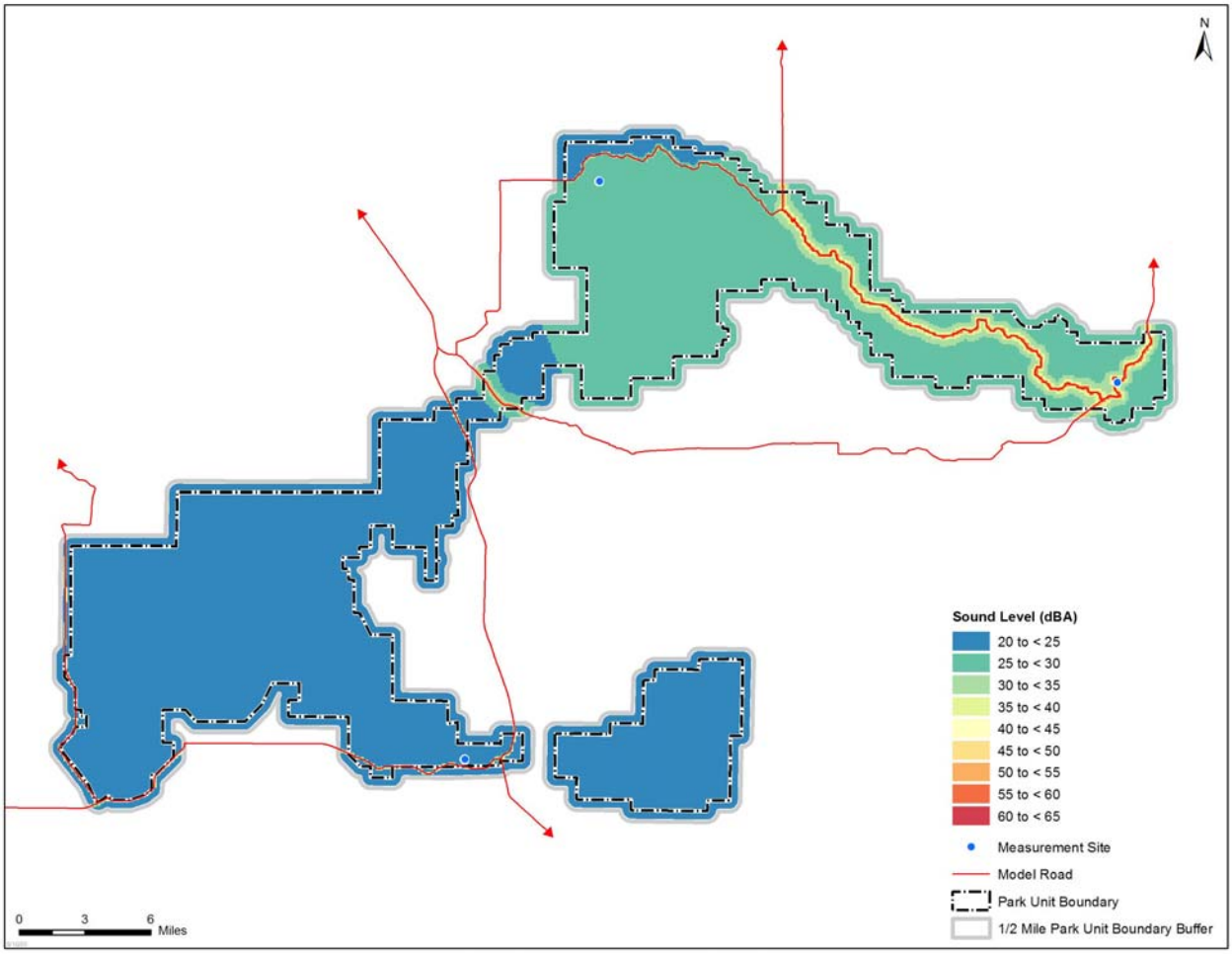

Figure E-2.3. Existing Ambient Without Air Tours Map for Badlands National Park (2006)

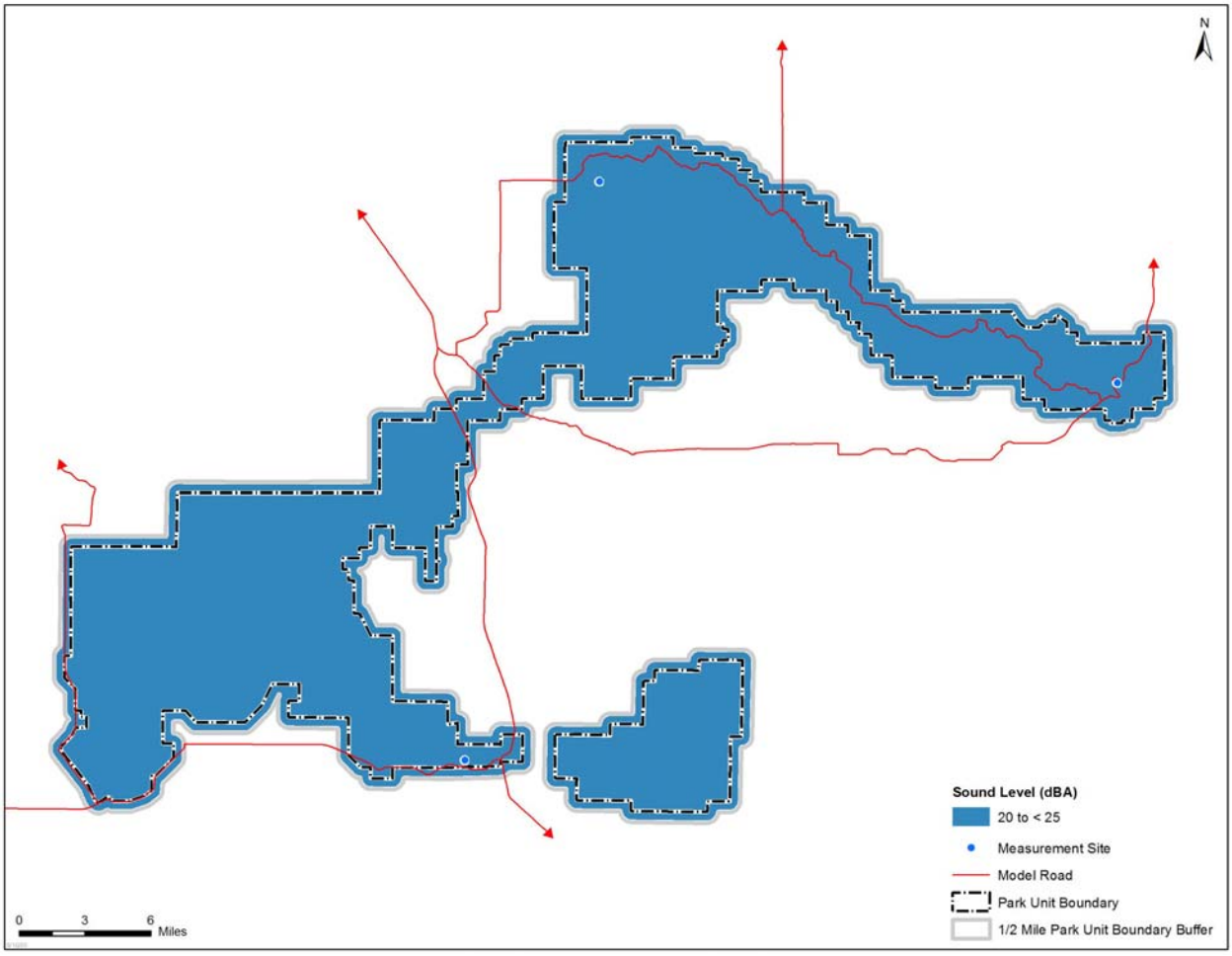

Figure E-2.4. Natural Ambient Map for Badlands National Park (2006)

APPENDIX E-3. ITERATIVE ANALYSIS IN SUPPORT OF PRELIMINARY ALTERNATIVES DEVELOPMENT

This analysis consists of using modeling single air tour aircraft operations on existing air tour routes. Single operation sensitivity runs and resultant contours provide information regarding different air tour aircraft on a typical route(s) and show which aircraft are potentially quieter and how far sounds could potentially be audible. The results of this analysis is a screening spreadsheet that can be used to perform an iterative analysis of the appropriate number of air tour operations given certain operating conditions (routes, altitudes, type of aircraft) relative to park impairment thresholds.

The FAA's standard methodology for aircraft noise assessments INM 6.2a[5] will be used to perform the computer modeling. The three primary input parameters required in the INM modeling effort are: (1) the ambient sound level maps (for Natural Ambient and Existing Ambient Without Air Tours), (2) noise-sensitive locations, and (3) the aircraft source, route, and schedule data. Noise-sensitive locations, representing visitor sites, wildlife habitats, and areas of cultural significance, are provided by local park staff. Sources of air tour aircraft data include direct queries with local Flight Standards District Offices (FSDOs) and air tour operators, as well as radar databases, and observations during site visits.

The Alternatives Development Team (ADT) chooses which aircraft and routes to model. These data are utilized by the INM to compute the amount of time that air tour aircraft sound levels could potentially be audible (Time Audible), including the percentage of the park area within which air tour aircraft are audible. Several example noise contours are shown in the following figures.

[5] Since 1978, the standard methodology for aircraft noise assessments has been the FAA's Integrated Noise Model (INM). INM is a computer program used by over 700 organizations in over 50 countries to assess changes in noise impact. Requirements for INM use are defined in FAA Order 1050.1E, Environmental Impacts: Policies and Procedures and Federal Aviation Regulations (FAR) Part 150, Airport Noise Compatibility Planning.

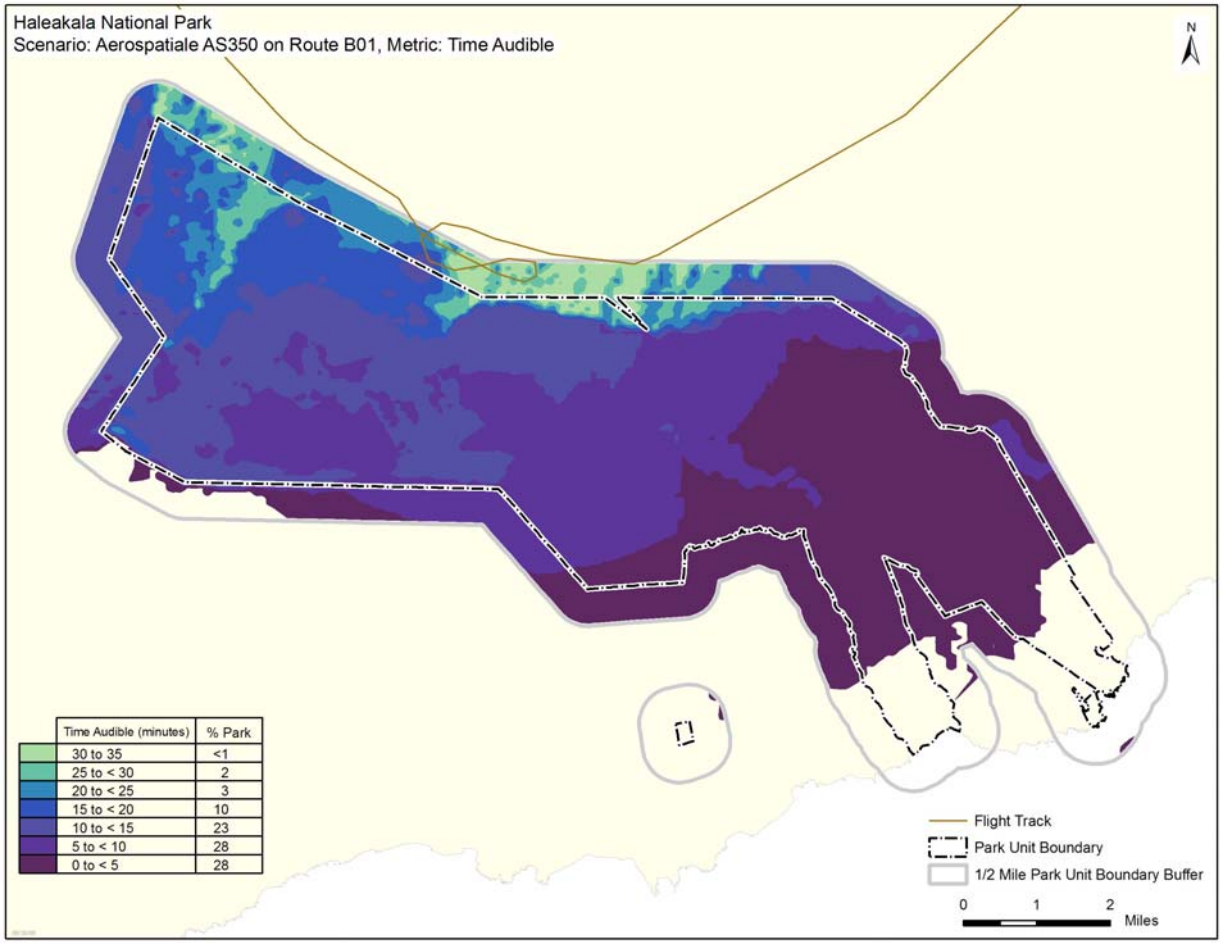

Figure E-3.1 Example Output Time Audible Noise Contour for Haleakala National Park – Single Aerospatiale AS350 Aircraft Operation

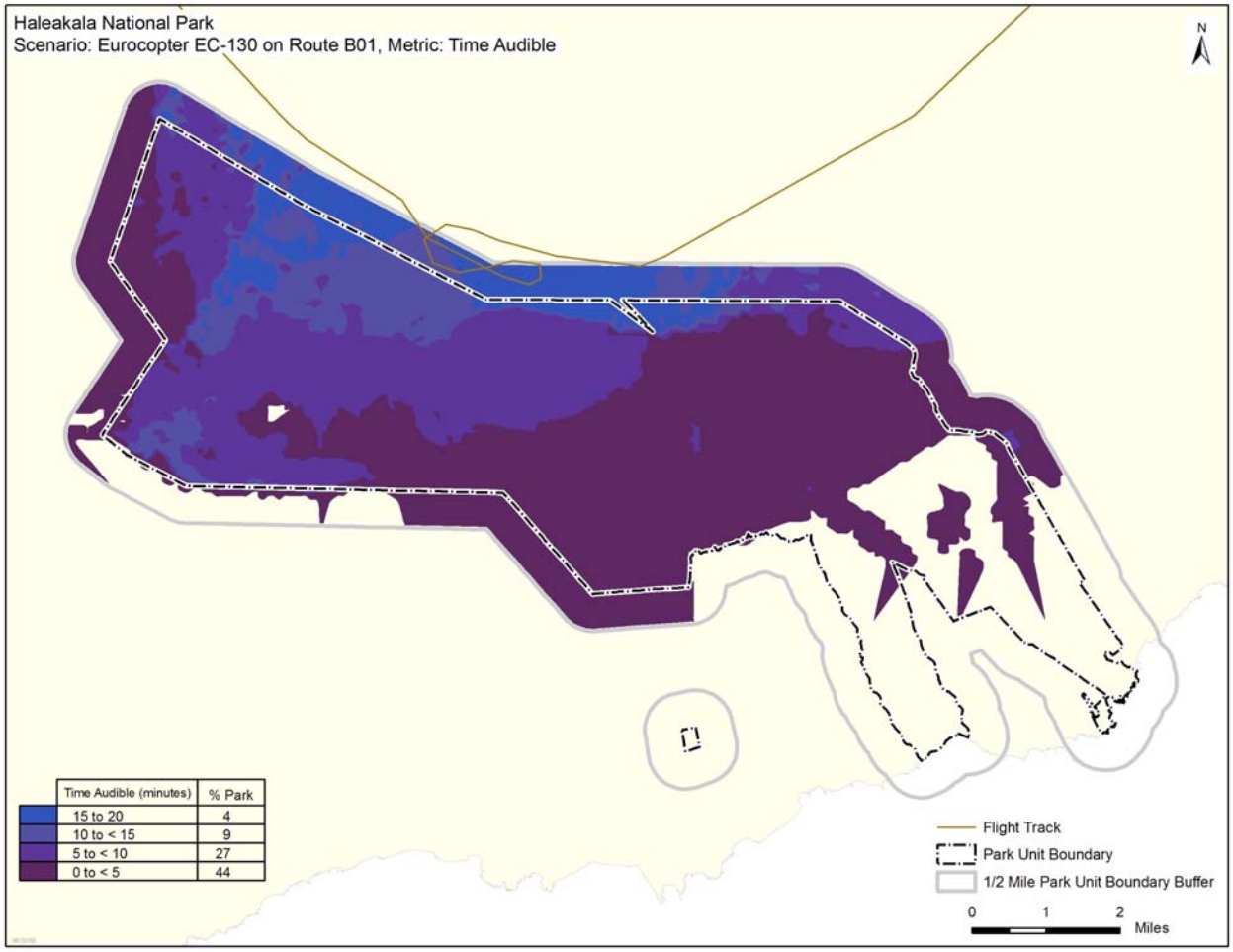

Figure E-3.2. Example Output Time Audible Noise Contour for Haleakala National Park – Single Eurocopter EC-130 Aircraft Operation

From this data, a screening spreadsheet is developed (see table below), which the ADT can use as a tool to demonstrate how various noise metrics would change as different user inputs (e.g., number of air tour operations) are scaled up or down. This tool is intended to aid the ADT to estimate target levels of air tour operations and/or operational caps given NPS soundscape goals for management zones within a particular park. By performing this type of screening/iterative analysis in a spreadsheet, the amount of costly and time-consuming computer modeling can also be reduced.

Table E-3.1. Example Screening Spreadsheet in Support of Iterative Analysis in the Development of Alternatives

Mount Rushmore National Memorial - Screening Spreadsheet for Iterative Analysis										
(Enter Desired Input into Orange Cells)		# Bell 47's on Route BH1	0.7	# EC130's on Route BH2	0.0	# Bell 47's on Buffer Route	0.0	# EC-130's on Wildlife 2 Route	0.0
# Air Tours Annually:	8,141	# Bell 47's on Route BH2	2.8	# EC130's on Route RH1	0.0	# Cessna 172's on Buffer Route	0.0		
# Months in Season:	5	# Bell 47's on Route RH1	42.8	# EC130's on Route RH2	0.0	# Cessna 206's on Buffer Route	0.0		
Average # Air Tours Per Day:	54	# Bell 47's on Route RH2	7.5	# Bell 47's on Outside Buf.	0.0	# EC-130's on Buffer Route	0.0		
# Hours of Operation in a Day:	12	# Cessna 172's on Eagle Route	0.3	# Cessna 172's on	0.0	# Bell 47's on Wildlife 1 Route	0.0		
		# Cessna 206's on Eagle Route	0.1	# Cessna 206's on	0.0	# EC-130's on Wildlife 1 Route	0.0	Note: Eagle routes used f	
		# EC130's on Route BH1	0.0	# EC-130's on Outside	0.0	# Bell 47's on Wildlife 2 Route	0.0	fixed-wing aircraft in Wild and 2.	

		All Routes (per above)			All Routes (per above)		All Routes (per above)	
	Natural Ambient (dBA)	All Aircraft (per above)		Existing Ambient Without Air Tours (dBA)	All Aircraft (per above)		All Aircraft (per above)	
		54 Operations in a 12-Hour Day			54 Operations in a 12-Hour Day		54 Operations in a 12-	
Location		Time Audible for Natural Ambient (With Time Compression)			Time Audible for Existing Ambient Without Air Tours (With Time Compression)		Maximum Sound Level (dBA)	
6. Monster/Climbing Area/Emancipation Pullout/Scenic Vista	30-35	41%	297	50-55	29%	208	65	
11. Amphitheater, Grand View Terrace, High Visitor Use	30-35	44%	315	45-50	40%	288	69	
14. Pullout	30-35	44%	314	60-65	16%	114	70	
15. Concession Housing	30-35	43%	311	45-50	40%	288	68	
17. NPS Housing Area	30-35	43%	313	45-50	41%	294	67	
10. View Terrace, Sculptor's Studio	30-35	43%	310	40-45	41%	294	68	
1. Old Baldy/Climbing Area	30-35	44%	313	35-40	42%	299	65	
3. Undeveloped Park Land/Significant Wildlife Habitat	30-35	43%	309	40-45	42%	303	62	
4. Olton's Shoulder/Climbing Area/ Goat Habitat	30-35	37%	268	45-50	30%	214	62	
5. Middle Marker/ Climbing Area/ Goat Habitat	30-35	34%	247	45-50	28%	200	64	
7. Scenic Vista	30-35	28%	198	40-45	25%	178	64	
8. Cultural Area/Trail/Significant Wildlife Habitat	30-35	23%	169	45-50	9%	68	68	
9. Goat Habitat	30-35	43%	308	40-45	41%	296	65	
12. Undeveloped Park Land/Significant Wildlife Habitat in Old Growth Ponderosa Pine	30-35	39%	280	40-45	29%	208	72	
13. Undeveloped Park Land/Significant Wildlife Habitat	30-35	41%	298	40-45	40%	288	73	
2. Lafferty Gulch Summer Homes	30-35	42%	305	40-45	37%	266	63	
16. Campground	30-35	42%	303	40-45	40%	291	71	

APPENDIX E-4. BENCHMARKING ANALYSIS IN SUPPORT OF PRELIMINARY ALTERNATIVES DEVELOPMENT

This analysis consists of modeling the preliminary bounding alternatives (a "No Air Tours" and a "No Restrictions" scenario), as well as the No Action scenario, i.e., Interim Operating Authority (IOA) conditions:

- *"No Air Tours" Scenario* – This scenario prescribes a complete ban on air tours over the park and within the ½-mile buffer; however, flights outside the buffer zone would not be restricted. As such, there may be an unlimited number of operators and operations conducting air tours outside the jurisdiction of the ATMP. Therefore, the flights for this scenario could either be none (if no air tours are conducted at all) or up to the potential that unlimited flights could occur outside the buffer. The modeled contour results provided for this scenario typically present the latter as a conservative maximum occurrence – all flights circle just outside the park's ½-mile buffer.
- *"No Action" Scenario (IOA Conditions)* – This scenario models the potential alternative that retains the number of operators and number of flights granted under the IOA. The existing flight routes and altitudes would also be retained. the existing number of operations, altitudes, and routes will be maintained, i.e., the No Action scenario.
- *"No Restrictions" Scenario* – This scenario models the potential alternative that no restrictions will be placed upon air tour operations. Any number of air tour operators would have the freedom to fly any number of flights, anywhere over the park and within the ½-mile buffer. However, it is assumed that operators would continue to use their current routes and would not deviate from them in the future. It is not possible to model unknown conditions.

The FAA's standard methodology for aircraft noise assessments INM 6.2a[6] will be used to perform the computer modeling of the above scenarios. The two primary input parameters required in the INM modeling effort are: (1) the ambient sound level maps (for Natural Ambient and Existing Ambient Without Air Tours) and (2) the aircraft source, route, and schedule data. Sources of air tour aircraft data include direct queries with local Flight Standards District Offices (FSDOs) and air tour operators, as well as radar databases, and observations during site visits.

[6] Since 1978, the standard methodology for aircraft noise assessments has been the FAA's Integrated Noise Model (INM). INM is a computer program used by over 700 organizations in over 50 countries to assess changes in noise impact. Requirements for INM use are defined in FAA Order 1050.1E, Environmental Impacts: Policies and Procedures and Federal Aviation Regulations (FAR) Part 150, Airport Noise Compatibility Planning.

These data are utilized by the INM to compute various metrics as listed below. These may be modified as more experience is gained with ATMPs. All descriptors might not be used in all ATMPs.

- *Time Audible (%TA)* – The percentage of time that air tour aircraft sound levels are audible, including the percentage of the park area within which air tour aircraft are audible. Note Because two ambients have been agreed upon for use in computer modeling (Natural Ambient and Existing Ambient Without Air Tours), this metric will be modeled twice, i.e., once for each baseline ambient;
- *Time Above Ambient (%TAA) – (A-weighted)* The percentage of time that air tour aircraft sound levels (in A-weighted decibels) exceed than baseline ambient sound levels in a given area during a given time period. Note: Because two ambients have been agreed upon for use in computer modeling (Natural Ambient and Existing Ambient Without Air Tours), this metric will be modeled twice, i.e., once for each baseline ambient;
- *Equivalent Sound Level (L_{AeqT})* – A logarithmic average (i.e., on an energy basis) of A-weighted air tour aircraft sound levels over a specific time period (T);[7]
- *Change in Exposure (ΔL)* – The algebraic difference (in A-weighted decibels) between air tour aircraft sound levels and baseline ambient sound levels during a given time period. Note Because two ambients have been agreed upon for use in computer modeling (Natural Ambient and Existing Ambient Without Air Tours), this metric will be modeled twice, i.e., once for each baseline ambient; and
- *Maximum Sound Level (L_{max})* – The maximum sound level (in A-weighted decibels) associated with the loudest air tour aircraft event occurring during a modeling assessment. Note: The FAA and NPS have agreed to compute this metric at user-specified "sensitive locations" (e.g., an endangered species habitat).

The Alternatives Development Team (ADT) chooses which metrics and ambient to model. Several example noise contours are shown in the following figures.

[7] In accordance with FAA Order 1050.1E, the Day-Night Average Sound Level (Ldn or DNL) is used as the FAA's primary metric in NEPA analyses. For those parks, which do not have nighttime air tour operations, DNL and L_{Aeq} are equivalent. Thus, the FAA and NPS have agreed to use L_{Aeq} as a reasonable surrogate for DNL in such situations. Additionally, the L_{Aeq} metric computed for a time period less than 24 hours would yield a higher decibel value as opposed to an L_{Aeq} for a 24-hour time period because the sound energy is logarithmically averaged within a smaller time period. Thus the L_{Aeq} for parks with only daytime air tour operations (e.g., 12 hours from 7 am to 7 pm) is a more conservative metric than DNL.

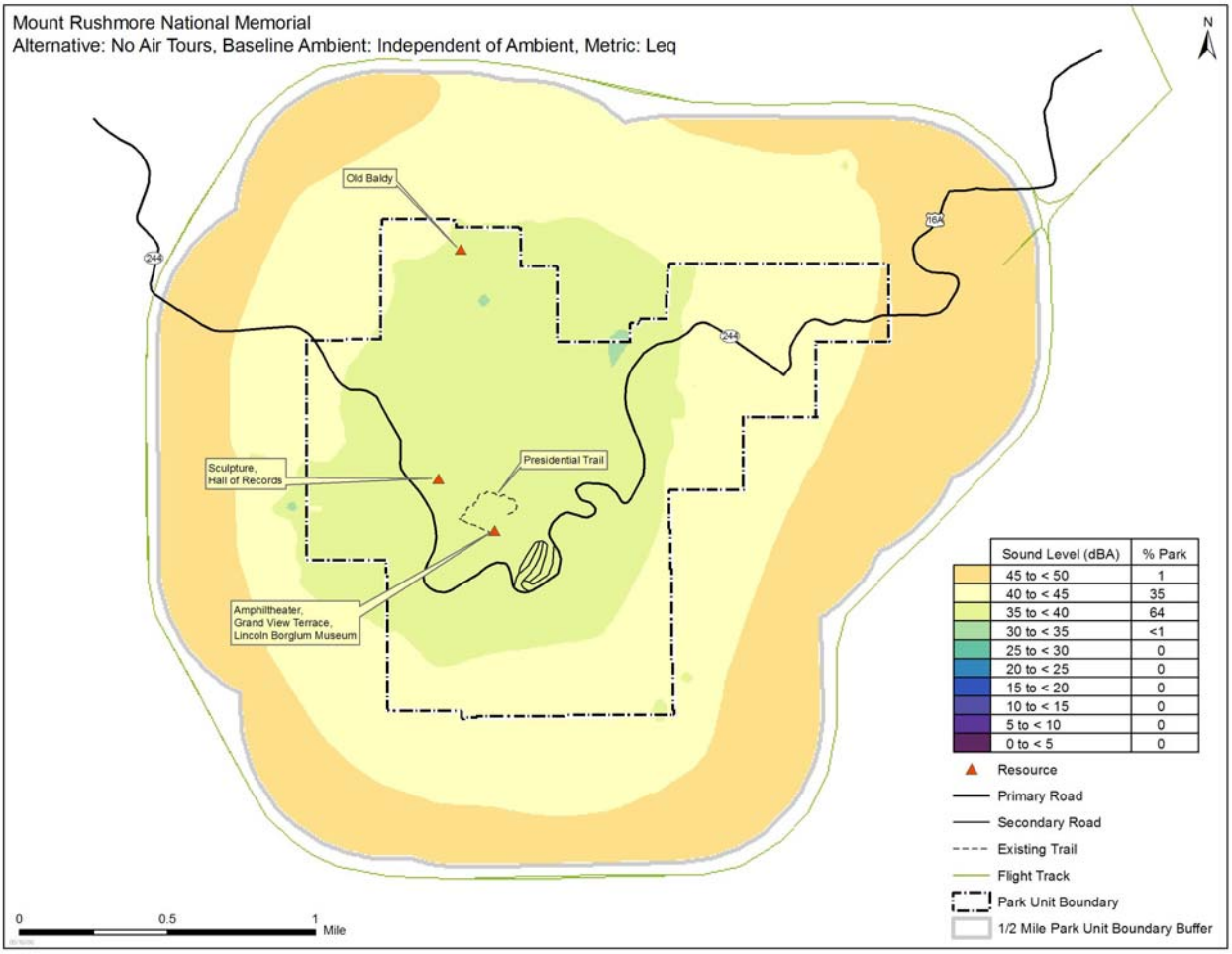

Figure E-4.1. Example Output Noise Contour for Mount Rushmore National Memorial – Equivalent Sound Level for No Action Scenario (2006)[8]

[8] As discussed earlier, the No Air Tours scenario prescribes a complete ban on air tours over the park and within the ½-mile buffer; however, flights outside the buffer zone would not be restricted. As such, there may be an unlimited number of operators and operations conducting air tours outside the jurisdiction of the ATMP. Therefore, the flights for this scenario could either be none (if no air tours are conducted at all) or up to the potential that unlimited flights could occur outside the buffer. The modeled contour results provided for this scenario typically present the latter as a conservative maximum occurrence – all flights circle just outside the park's ½-mile buffer.

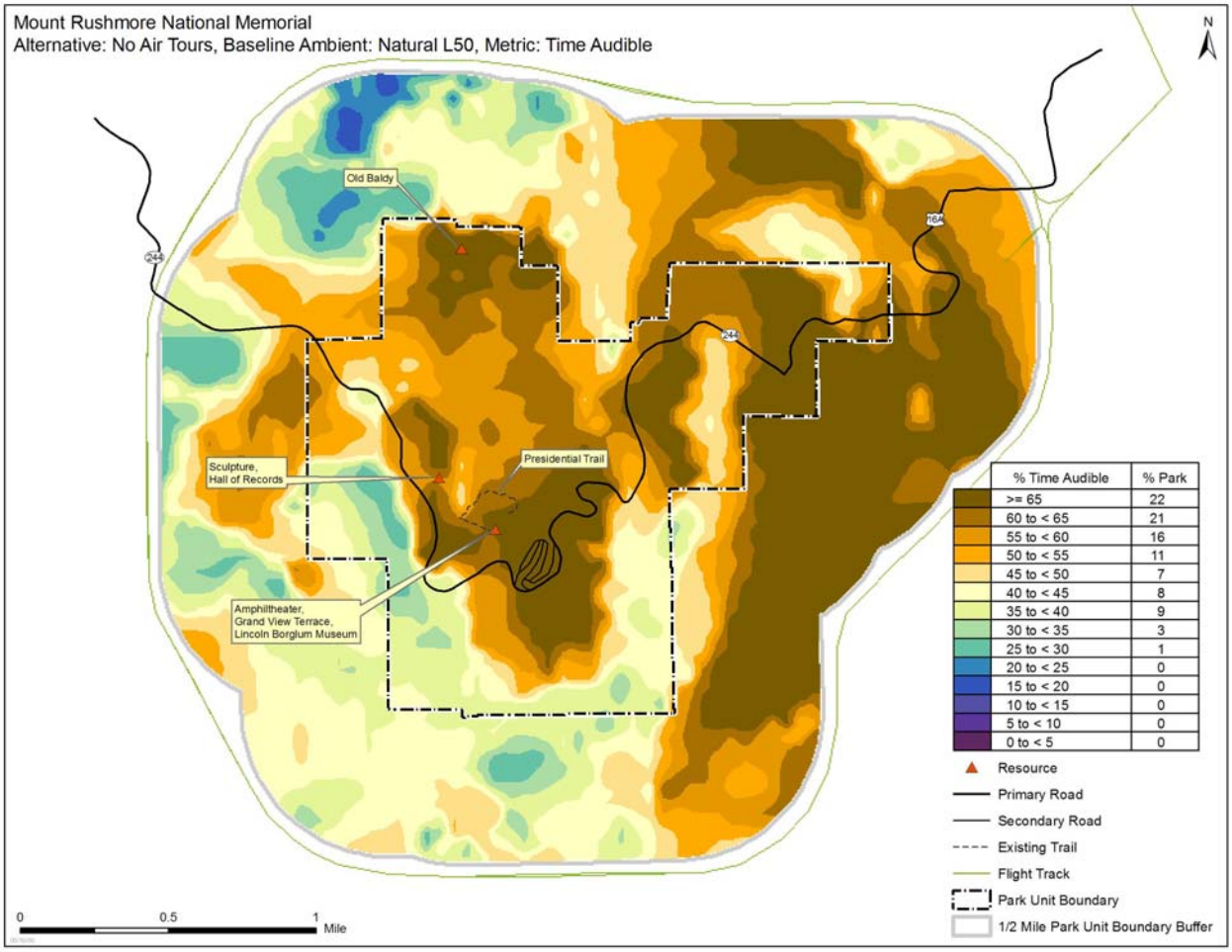

Figure E-4.1. Example Output Noise Contour for Mount Rushmore National Memorial – Time Audible (Natural Ambient) for No Air Tours Scenario (2006)[9]

[9] As discussed earlier, the No Air Tours scenario prescribes a complete ban on air tours over the park and within the ½-mile buffer; however, flights outside the buffer zone would not be restricted. As such, there may be an unlimited number of operators and operations conducting air tours outside the jurisdiction of the ATMP. Therefore, the flights for this scenario could either be none (if no air tours are conducted at all) or up to the potential that unlimited flights could occur outside the buffer. The modeled contour results provided for this scenario typically present the latter as a conservative maximum occurrence – all flights circle just outside the park's ½-mile buffer.

APPENDIX E-5. GUIDANCE FOR ASSESSING AIR QUALITY IMPACTS

Air Quality Plan

Guidance for Assessing Air Quality Impacts from Air Tour Management Plans in National Parks

Prepared for and in cooperation with:
National Parks Service
Federal Aviation Administration

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Version 1.0

September 22, 2005

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1.0 INTRODUCTION

In support of the development of Air Tour Management Plans (ATMPs), the purpose of this document is to provide air quality assessment guidelines for air tour activity in National Parks. The Federal Aviation Administration (FAA) and National Parks Service (NPS) have jointly assembled this guidance to ensure applicability at all National Parks that have an ATMP. This guidance serves as a methodology that will be applied in assessing air quality impacts of ATMPs within National Parks and may be modified in unison by NPS and FAA to reflect improvements in science and policy, as deemed necessary. It is important to note that the NPS and FAA co-created this guidance for the unique application to ATMPs within our National Parks. The conservative assessment methodology described within this document does not represent the typical assessment methodology that FAA uses for compliance with National Environmental Policy Act (NEPA) nor Clean Air Act (CAA) requirements. For these reasons, as well as related technical reasons the methodology described within should not be applied under any other circumstances [8].

This document has been created as a stand-alone guidance. It may be incorporated into a larger guidance document co-written by the NPS and FAA that addresses all environmental concerns when considering changes to ATMPs under NEPA.

2.0 GUIDING LAWS AND REGULATION POLICY

Under the National Environmental Policy Act (NEPA) there is a responsibility to include in the environmental assessment (EA) or environmental impact statement (EIS) sufficient analysis to disclose the potentially significant impact of a project or action on the attainment and maintenance of air quality standards established by law or administrative determination. The guidance set forth in this document is applicable to the development and analysis of ATMP alternatives only and does not itself establish policy or precedence for the assessment of other aviation or park projects. This guidance recognizes the unique cooperative relationship, between the FAA and NPS, established for the development of ATMP within the National Parks Air Tour Management Act of 2000.

The General Conformity rule identifies, in 40 CFR Part 51.853(c)(2), a list of actions that would result in no emissions increase or an increase in emissions that is clearly *de minimis*. The General Conformity requirements are not applicable to projects or actions that do not exceed *de minimis* emissions levels. In the preamble to the rule [1], the Environmental Protection Agency (EPA) states that, in addition to the list in the rule, among other things, air traffic control activities and adopting approach, departure and enroute procedures for air operations are illustrative of a *de minimis* action. This *de minimis* determination may be applicable to an ATMP in so far as it may establish approach, departure or enroute procedures for air operations.

The NPS determines air quality impacts based on the criteria specified in the *Interim Final Guidance on Assessing Impacts and Impairment to Natural Resources* [2], which identifies several impact levels defined by the combination of the amount of emissions created by a source Also, the current air quality will be considered in determining impacts. There are two categories for which impacts are assessed: 1) Impact to Human Health from Airborne Pollutants; and 2) Impact to Air Quality Related Values (AQRV) from Airborne Pollutants.

2.1 Assessing Impact to Human Health from Airborne Pollutants

The NPS has defined different impact level criteria for national parks located in attainment areas versus those that are located in non-attainment or maintenance areas. The current air quality condition in each park will be assessed in determining attainment or non-attainment status. There are four levels of impact: negligible, minor, moderate, and major. Table 2-1 lists the impact level criteria for parks that are in attainment areas. Table 2-2 lists the impact level criteria for parks that are in non-attainment or maintenance areas.

Attainment Areas	
Impact Level	**Proposed action (emissions)**
Negligible	< 50 TPY[1] (each pollutant)
Minor	>50 & <100 TPY (any pollutant)
Moderate	>100 TPY (any pollutant)
Major	>250 TPY (any pollutant)

[1] TPY= tons per year

Table 2-1. Attainment Area Impact Level Criteria

Non-attainment/Maintenance Areas**	
Impact Level	**Proposed action (emissions)**
Negligible	Net decrease in emissions from current levels
Minor	1 to 5 TPY of any non-attainment or maintenance pollutant
Moderate	>5 TPY and < conformity de minimis levels
Major	> or = conformity de minimis levels

** National Parks in Non-attainment are listed in Appendix 2.

Table 2-2. Non-attainment/Maintenance Area Impact Level Criteria

2.2 Defining Impacts to Air Quality Related Values from Airborne Pollutants

The NPS has identified four levels of air quality impact when accessing impacts to AQRVs: negligible, minor, moderate, and major.

Negligible Impacts to Air Quality and AQRVs

Current Condition:

- SUM06 ozone, <8 ppm-hours for the three month summer season
- Deposition of wet N (NO_3-N + NH_4-N) is less than 1 kg/ha/yr. And wet SO_4 is less than 3 kg/ha/yr.
- Annual average visibility conditions (in units of deciview) are better than or equal to estimated natural conditions.

Proposed Action Predicted Condition:

- Predicted emissions increases are less than 50 TPY of any pollutant.
- No perceptible visibility impacts likely (no visible smoke, plume, or haze).

- Predicted (i.e., modeled) visibility*, nitrogen and sulfur are below the thresholds listed in NPS Federal Land Managers AQRV Work Group (FLAG) Deposition Analysis Threshold (DAT) guidance[3].

Minor Impacts to Air Quality and AQRVs

Current Condition:

- SUM06 ozone, 8-15 ppm-hours for the three month summer season
- Deposition of wet N (NO_3-N + NH_4-N) is above 1 kg/ha/yr. or wet SO_4 is above 3 kg/ha/yr and insufficient evidence of deposition sensitive or nutrient sensitive ecosystems exits.
- Annual average visibility conditions (in units of deciview) are more than one but less than or equal to one and one half times estimated natural conditions.

Proposed Action Predicted Condition:

- Predicted emissions increases are between 50 and 100 TPY of any pollutant.
- Predicted (i.e., modeled) visibility*, nitrogen and sulfur are approaching (between 90-100%) of thresholds listed in NPS FLAG and DAT guidance.
- Perceptible visibility impacts occur, but are only visible from a small area of the park, are of short duration (less than one day) and visible to only a few park visitors on the days that they occur.

Moderate Impacts to Air Quality and AQRVs

Current Condition:

- SUM06 ozone, 15-25 ppm-hours for the three month summer season
- Deposition of wet N (NO_3-N + NH_4-N) is above 1 kg/ha/yr. or wet SO_4 is above 3 kg/ha/yr and sensitive ecosystems are present in the park that could likely be impacted in some way (change to physical, chemical or biological processes) from deposition.
- Annual average visibility conditions (in units of deciview) are more than one and a half but less than or equal three times estimated natural conditions.

Proposed Action Predicted Condition:

- Predicted emissions increases are between 100 and 250 TPY of any pollutant.
- Predicted (i.e., modeled) visibility*, nitrogen and sulfur exceed thresholds listed in NPS FLAG and DAT guidance, but NPS does not believe impacts will harm integrity of the resources.
- Perceptible visibility impacts occur and are visible from several areas of the park, occur between one and several days, and many park visitors may observe them on the days that they occur.

Major Impacts to Air Quality and AQRVs

Current Condition:

- SUM06 ozone >25 ppm-hours for the three month summer season
- Deposition impacts to AQRVs have been documented in the park.
- Annual average visibility conditions (in units of deciview) are greater than three times estimated natural conditions.
- Visibility conditions are worsening (trending downward based on GPRA 10-year Trends info) at the park.

Proposed Action Predicted Condition:

- Predicted emissions increases are greater than 250 TPY of any pollutant.

- Predicted (i.e., modeled) visibility*, nitrogen and sulfur exceed thresholds listed in NPS FLAG and DAT guidance, and NPS believes impacts may harm the integrity of resources.

* For haze impact to visibility, the lower of the two thresholds identified in FLAG should be used.

3.0 ASSESSMENT METHODOLOGY

Annual emissions inventories are calculated for the current condition (baseline) and the proposed alternatives at each park. Per the requirements of NEPA, the emissions inventory of the future No Action scenario will be compared with the emissions inventory of the future Project Alternative(s) to yield the net project emissions. In addition, the annual emissions inventories of the future Project Alternative(s) will be explicitly presented. The net project emissions will be used in conjunction with pollutant concentration values from air quality monitors to determine impacts caused by ATMP air tours. If the impact level for a park is found to be *negligible* based on the criteria in Section 2.1 the agencies have agreed that no further analysis will be required.

If the impact level for a park is found to be *minor*, *moderate* or *major,* based on criteria specified in Section 2.1 then dispersion, visibility and deposition analyses will be required. Each step of the air quality assessment methodology is described in greater detail in the following sub-sections and depicted in Figure 3-1.

3.1 Emissions Inventory Methodology

The emissions inventory, or calculation of the total annual mass of emissions emitted, requires accurate information from ATMP air tour operations including flight routes and operational data. Other information required to calculate an emissions inventory is aircraft type, speed, and emission factors. The flight track and speed are used to calculate the total tour time of an air tour operation. The aircraft type is needed to determine the appropriate emissions factor. The total tour time is then multiplied by the emission factor to determine total mass emissions. The emission inventory will be conducted over the region that includes the borders of the parks and within a ½ mile outside of each park as stated in the National Parks Air Tour Management Act of 2000 [4], hereto known as the *Study Area*.

Emission factors used to calculate each park's air tour emissions inventory are from the EPA-approved and FAA-mandated Emissions and Dispersion Modeling System Version 4.3 (EDMS)[5]. An emission factor is the product of an emission index and a fuel flow. EDMS contains a database of emission indices and fuel flows for aircraft engines during four modes of operation: take-off, climb-out, approach, and idle/taxi. These modes correspond to throttle settings of 100, 85, 30, and 7 percent, respectively. There are emission indices for four pollutants in EDMS, nitrogen oxides (NOx), carbon monoxide (CO), hydrocarbons (HC), and sulfur dioxide (SO2). Currently, EDMS contains emission indices for particulate matter ($PM_{2.5}$ and PM_{10}) for only large commercial turbofan engines. To supplement EDMS, the EPA's Procedure for Emission Inventory Preparation, Vol. IV, Mobile Sources contains additional emission indices of PM_{10} for the identified four-modes of operation [6] that correspond to the types of aircraft engines typically involved in ATMPs.

With a few exceptions, air tours are primarily conducted within the Study Area while the aircraft is only within the cruise mode of operation. Unfortunately, EDMS does not contain cruise mode emission indices nor the corresponding fuel flow. Therefore, a cruise mode emission index must be derived from existing data. The first step is to conservatively assume that the climb-out emission index (in units of lb of pollutant per lb of fuel) will be the representative emission index for cruise mode. During cruise mode, an average 70* percent power setting is assumed for all aircraft, which is consistent with ATMP-related noise analysis and is computed using methodologies of Society of Automotive Engineers' (SAE) 1845 guidance [7]. A linear interpolation between the 85 and 30 percent power settings is used to determine the fuel flow at 70 percent to represent the fuel flow at cruise mode. The cruise mode fuel flow is then be multiplied by the climb-out emission index to derive the cruise emission factor.

When an origin or destination airport is included within the Study Area, the emissions associated with aircraft idle, take-off, and approach modes are calculated and included in that park's emissions inventory. A conservative rate of climb is used until the aircraft reaches cruise altitude to determine the total time each aircraft is in climb-out mode. To determine time in approach mode, an aircraft appropriate approach angle from the cruise altitude is used.

Flight tracks, aircraft fleet mix, and the annual air tour operations are provided by the FAA's Flight Standards District Offices (FSDO's) and air tour operators for each park. Within EDMS, engines have already been assigned to aircraft. Each aircraft in the fleet mix is matched up with an aircraft in EDMS. For some aircraft there are multiple engine options. In such cases, the most conservative emission indices from the engine options per pollutant for that aircraft are selected. There will be some instances where an aircraft in the fleet mix does not have an identical match in EDMS. For such instances, an engine with a similar power output as the aircraft engine of the aircraft in the fleet mix will be chosen as a substitute. In addition, every effort is made to select substitute engines from the same engine family.

The total tour time is determined by the aircraft speed and the distance of the flight track that is within the Study Area. Equation 3-1 shows the calculation used to determine tour time.

Equation 3-1. [TT (seconds)] = [FTD (meters)] / [AS (meters/second)]

TT = Total Tour Time
FTD= Flight Track Distance
AS = Aircraft Speed

The tour time is then multiplied by the EDMS emission factor to determine total emissions for a pollutant for the aircraft traveling on the flight track as shown in Equation 3-2.

Equation 3-2. [FTE (grams)] = [TT (seconds)] x [EF (grams/second)]

FTE = Flight track emissions
TT = Total Tour Time
EF = Emission Factor (specific to an aircraft)

* The 70 percent power setting is consistent with ATMP-related noise analysis, and is computed using methodologies of SAE AIR 1845.

The total emissions for are then calculated for each aircraft that uses the flight track as shown in Equation 3-3.

Equation 3-3. [Total Emissions (grams/year)] = [FTE (grams)] x [OPY] x [EA]

FTE = Flight track emissions
OPY = Operations per year for the specific aircraft using the flight track
EA = The number of engines attached to the aircraft

The analysis described above will be done for the existing or baseline case, as well as for agreed upon alternatives. Emission estimates will also be performed based on expected growth in tour aircraft operations. Future alternative scenarios are based on expected growth in tour aircraft prescribed in the appropriate sections of the National Parks ATMP Program Implementation Plan.

The calculated annual total emissions for each pollutant of concern, coupled with the most recent pollutant concentration values from nearby monitoring sites, should be compared to the appropriate impact levels listed in Tables 2-1 or 2-2. If the impact level is determined to be negligible then no further analysis is required, and the air quality will not be adversely impacted by the proposed ATMP action.

3.2 Dispersion Analysis

If the impact level from the results of the emissions inventory is determined to be *minor*, *moderate*, or *major* based on the impact level criteria in Section 2.1 then a dispersion analysis will be conducted. The dispersion analysis includes those emissions released within the Study Area.

For the dispersion analysis, an altitude of 500 ft is assumed for rotary-wing aircraft and an altitude of 1,000 ft for fixed-wing aircraft. Wind speeds are assumed extremely light (1 meter per second); and, in addition, the air is assumed to be very turbulent so that the plume spreads out and reaches the ground more rapidly. Also, a worst-case atmospheric stability class of "A" will be assumed.

Concentrations will then be determined at a receptor directly below the aircraft using the standard Gaussian equation [4]:

Equation 3-5.

$$\chi = \frac{Q}{2\pi\bar{u}\sigma_y\sigma_z}\exp\left(-\frac{y^2}{2\sigma_y^2}\right)\times\left[\exp\left(-\frac{(z-H)^2}{2\sigma_z^2}\right)+\exp\left(-\frac{(z+H)^2}{2\sigma_z^2}\right)\right]$$

where:

Q = emission rate (µg/s);
u = wind speed (m/s);

σ_y, σ_z = standard deviations in the y and z directions, respectively (m);
y = horizontal offset from plume centerline (m);
z = vertical offset from plume centerline (m); and
H = source height (m);

After the above calculation, the concentration will be time-averaged and adjusted to account for aircraft flight time, and for the number of operations that occur in the analysis time period.

The calculated concentrations from the project will then be added to background concentrations to determine the total concentration. It should be noted that for some pollutants, such as nitrogen dioxide and particulate matter, an annual average value is required for comparison to the NAAQS.

To determine the background concentration, local sampling data should be reviewed. The EPA as well as the NPS maintains a network of air quality samplers throughout the country. Data from the closest EPA/NPS monitor to each location should be carefully reviewed to determine an average concentration during the time period of concern and used as the background concentration.

The analysis described above should be completed for the existing condition (also referred to as the baseline case) and for future alternative scenarios. Future alternative scenarios are based on expected growth in tour aircraft prescribed in the appropriate sections of the National Parks ATMP Program Implementation Plan.

3.3 Deposition and Visibility Analysis

If the impact level due to ATMP aircraft activity is determined to be minor, moderate, or major according to the impact level criteria in Section 2.1, then a deposition and visibility analysis will be conducted based on discussions and guidance from NPS/FAA. The results from the deposition and visibility analysis should be used to determine impact level according to the impact level criteria in Section 2.2. If a deposition and visibility analysis is required NPS and FAA will discuss the appropriate model/method that is to be used.

4.0 CUMULATIVE AIR QUALITY ANALYSIS

Pollutants are emitted from aircraft whenever the engines are operating. In the context of emission inventory development, however, the concern is limited to those portions of the flight that occur between ground level and an altitude defined as the mixing height, where a temperature inversion prevents the mixing of air masses above and below the mixing height. Below the mixing height, the air is fairly stable and pollutant emissions released below this altitude potentially have an affect on air quality at ground level [5]. Further studies have demonstrated that aircraft emissions released above 1,500 feet above ground level (AGL) result in negligible pollutant concentrations at ground level [8].

In conducting a cumulative air quality analysis for ATMPs, emissions from the total number of flights occurring below the mixing height within the Study Area should be quantified and reported for NEPA disclosure purposes. A cumulative analysis should be performed for each future year of proposed alternatives.

Cumulative Air Quality Analyses will also be performed including sources not included in this plan, as outlined by NEPA regulations, including NPS Director's Order 12. This will include trends in air quality and any projects and development occurring within a 300 km radius surrounding the park (including but not limited to oil and gas development and power plants.). EPA and or CEQ will be consulted if questions arise regarding what should be included in this analysis.

5.0 REPORTING

Reporting will be specific for each National Park. Detailed reporting will include any assumptions, park specific details, and methodology used for each analysis. Reporting for each park will vary based on the impact level determination.

6.0 REFERENCES

[1] 58 Federal Register 63214, 63229 (November 30, 1993)

[2] National Park Service, *Interim Final Guidance on Assessing Impacts and Impairment to Natural Resources*. NPS Natural Resource Program Center. April, 2003. Updated July, 2003.

[3] National Park Service and U.S. Fish and Wildlife Service. *Guidance on Nitrogen and Sulfur Deposition Analysis Thresholds*. http://www2.nature.nps.gov/air/Permits/flag/NSDATGuidance.htm

[3] Title 14 Code of Federal Regulations Part 136. *National Air Tour Management Act of 2000 Section 803, Statute 191,* 2000.

[4] Federal Aviation Administration (FAA), *Emissions and Dispersion Modeling System Version 4.3*. August, 2005.

[5] Environmental Protection Agency (EPA), EPA's *Procedure for Emission Inventory Preparation, Vol. IV, Mobile Sources*. 1992.

[6] Turner, D.B., *Workbook of Atmospheric Dispersion Estimates*, U.S. Department of Health Education and Welfare, Public Health Service, National Air Pollution Control Administration. Cincinnati, Ohio, 1969.

[7] Society of Automotive Engineers, Committee A-21, Aircraft Noise, *Procedure for the Calculation of Airplane Noise in the Vicinity of Airports*. Aerospace Information Report No.1845, Warrendale, PA: Society of Automotive Engineers, Inc., March, 1986.

[8] Federal Aviation Administration, Office of Environment & Energy, *Consideration of Air Quality Impacts by Airplane Operations at or above 3,000 feet AGL*, September 2000.

Appendix 1. National Ambient Air Quality Standards

Pollutant	Primary Stds.	Averaging Times	Secondary Stds.
Carbon Monoxide	9 ppm (10 mg/m^3)	8-hour[1]	None
	35 ppm (40 mg/m^3)	1-hour[1]	None
Lead	1.5 µg/m^3	Quarterly Average	Same as Primary
Nitrogen Dioxide	0.053 ppm (100 µg/m^3)	Annual (Arithmetic Mean)	Same as Primary
Particulate Matter (PM_{10})	50 µg/m^3	Annual[2] (Arith. Mean)	Same as Primary
	150 ug/m^3	24-hour[1]	
Particulate Matter ($PM_{2.5}$)	15 µg/m^3	Annual[3] (Arith. Mean)	Same as Primary
	65 ug/m^3	24-hour[4]	
Ozone	0.08 ppm	8-hour[5]	Same as Primary
	0.12 ppm	1-hour[6]	Same as Primary
Sulfur Oxides	0.03 ppm	Annual (Arith. Mean)	-------
	0.14 ppm	24-hour[1]	-------
	-------	3-hour[1]	0.5 ppm (1300 ug/m^3)

[1] Not to be exceeded more than once per year.

[2] To attain this standard, the expected annual arithmetic mean PM10 concentration at each monitor within an area must not exceed 50 ug/m^3.

[3] To attain this standard, the 3-year average of the annual arithmetic mean $PM_{2.5}$ concentrations from single or multiple community-oriented monitors must not exceed 15 ug/m^3.

[4] To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 65 ug/m^3.

[5] To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm.

[6] (a) The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is <= 1, as determined by appendix H. (b) The 1-hour standard is applicable to all areas notwithstanding the promulgation of 8-hour ozone standards under Sec. 50.10. On June 2, 2003, (68 FR 32802) EPA proposed several options for when the 1-hour standard would no longer apply to an area.

Appendix 2. List of ATMP Parks Air Tour Operations, Class I Areas, Acreage and Non-attainment Areas

	National Park Name	Maximum Annual Air Tour Operations Currently Authorized (Source IOA)	Park Includes Mandatory Federal Class 1 Areas (40 CFR 81 Subpart D)	Park Acreage (There may be some correlation between park size and air tour route length)	Park in Non-attainment Area or County for 1 or More Criteria Pollutants
1	Lake Mead National Recreation Area	68,814		1,470,327.84	Ozone
2	Statue Of Liberty National Monument	35,837		58.38	Ozone
3	Hawaii Volcanoes National Park	28,441	X	333,000.00	
4	Haleakala National Park	26,325	X	28,968.52	
5	Glen Canyon National Recreation Area	14,114		1,239,953.41	
6	Golden Gate National Recreation Area	11,640		31,067.41	Ozone
7	Rainbow Bridge National Monument	10,225		160.00	
8	Cape Hatteras National Seashore	8,170		30,320.91	
9	Mount Rushmore National Memorial	5,563		1,238.45	
10	Acadia National Park	4,585	X	45,955.70	Ozone
11	Badlands National Park	4,099	X	232,822.24	
12	Bryce Canyon National Park	3,528	X	35,832.58	
13	John Muir National Historic Site	2,940		335.99	Ozone
14	San Francisco Maritime National Historical Park	2,940		28.15	Ozone
15	Devils Postpile National Monument	2,900		798.46	
16	Fort Point National Historic Site	2,900		29.00	Ozone
17	Muir Woods National Monument	2,900		522.98	Ozone
18	Point Reyes National Seashore	2,900	X	65,083.60	Ozone,
19	Redwood National and State Parks	2,900	X	77,726.66	
20	Rosie the Riveter WWII Home Front National Historical Park	2,900		145.00	Ozone
21	Kalaupapa National Historical Park	2,250		22.88	
22	Great Smoky Mountains National Park	1,920	X	521,229.65	Ozone
23	Glacier National Park	1,793	X	1,013,154.64	
24	Big Cypress National Preserve*	1,260		535,717.35	
25	Canyonlands National Park	1,079	X	337,570.43	
26	Zion National Park	782	X	143,073.36	
27	Arches National Park	685	X	76,353.01	
28	Everglades National Park	674	X	1,398,617.13	
29	Lake Chelan National Recreation Area	365		59,341.74	
30	Capitol Reef National Park	359	X	241,234.29	
31	Navajo National Monument	317		360.00	
32	Timpanogos Cave National Monument	254		250.00	
33	Biscayne National Park*	200		170,955.77	
34	Natural Bridges National Monument	200		7,636.49	
35	Montezuma Castle National Monument	195		840.86	
36	Canyon De Chelly National Monument	185		83,840.00	
37	Mount Rainier National Park	173	X	235,625.00	
38	Yellowstone National Park	151	X	2,219,789.13	
39	Chaco Culture National Historical Park	147		32,840.14	
40	Colonial National Historical Park	147		8,609.54	
41	Olympic National Park	139	X	913,628.98	
42	Bandelier National Monument	126	X	32,831.44	
43	Sunset Crater Volcano National Monument	118		3,040.00	
44	Yosemite National Park	115	X	759,530.00	Ozone
45	Death Valley National Park	107		3,323,771.75	
46	Dry Tortugas National Park*	100		61,481.22	
47	Lassen Volcanic National Park	94	X	106,368.14	Ozone
48	Hovenweep National Monument	92		784.93	
49	Aztec Ruins National Monument	88		267.33	
50	Cedar Breaks National Monument	79		6,154.60	
51	Grand Teton National Park	74	X	307,690.67	

52	Mesa Verde National Park	73	X	51,890.65	
53	North Cascades National Park	72	X	504,633.52	
54	Petrified Forest National Park	70	X	93,532.57	
55	Yucca House National Monument	64		33.87	
56	Tuzigoot National Monument	62		57.78	
57	Voyageurs National Park	60	X	133,121.24	
58	Wupatki National Monument	60		35,422.13	
59	Colorado National Monument	57		20,533.93	
60	Walnut Canyon National Monument	54		3,288.62	
61	Petroglyph National Monument	45		35,728.86	
62	El Malpais National Monument	43		109,661.62	
63	El Morro National Monument	43		1,039.92	
64	Fort Union National Monument	32		720.60	
65	Pecos National Historical Park	32		6,341.94	
66	Casa Grande Ruins National Monument	31		427.50	
67	Saguaro National Park	30		87,526.07	
68	Hubbell Trading Post National Historic Site	27		160.09	
69	Gila Cliff Dwellings National Monument	26		533.13	
70	Pipe Spring National Monument	26		40.00	
71	Great Basin National Park	25		77,180.00	
72	Joshua Tree National Park	25	X	768,886.86	PM, Ozone
73	San Juan Island National Historical Park	20		1,725.45	
74	Carlsbad Caverns National Park	19	X	46,427.26	
75	Great Sand Dunes National Monument & Preserve	19	X	40,430.37	
76	Guadalupe Mountains National Park	18	X	86,189.97	
77	Mojave National Preserve	18		1,460,304.06	PM
78	Salinas Pueblo Missions National Monument	18		986.13	
79	Sequoia & Kings Canyon National Parks	15	X	403,875.64	PM, Ozone
80	Capulin Volcano National Monument	13		792.84	
81	Lake Roosevelt National Recreation Area	12		100,390.31	
82	Dinosaur National Monument	11		205,685.54	
83	Golden Spike National Historic Site	11		2,203.20	
84	Coronado National Memorial	10		4,748.22	
85	Black Canyon Of The Gunnison National Park	8	X	30,243.53	
86	Big Bend National Park	5	X	775,279.14	
87	Channel Islands National Park	5		79,018.62	
88	Fort Bowie National Historic Site	5		999.45	
89	Fort Davis National Historic Site	5		473.87	
90	Hohokam Pima National Monument	5		1,690.00	
91	Organ Pipe Cactus National Monument	5		329,365.29	
92	Santa Monica Mountains National Recreation Area	5		22,891.76	PM, Ozone
93	Tumacacori National Historical Park	5		45.64	
94	Tonto National Monument	2		1,120.00	
95	Chiricahua National Monument	1	X	11,982.39	
96	Lava Beds National Monument	1	X	46,559.87	

Glossary

Attainment - Area that is in compliance with the NAAQS

Background Concentrations - concentrations that are contributed from other sources than the project in the local area. The NAAQS are based on the background concentrations and project concentrations.

EA - Environmental Assessment

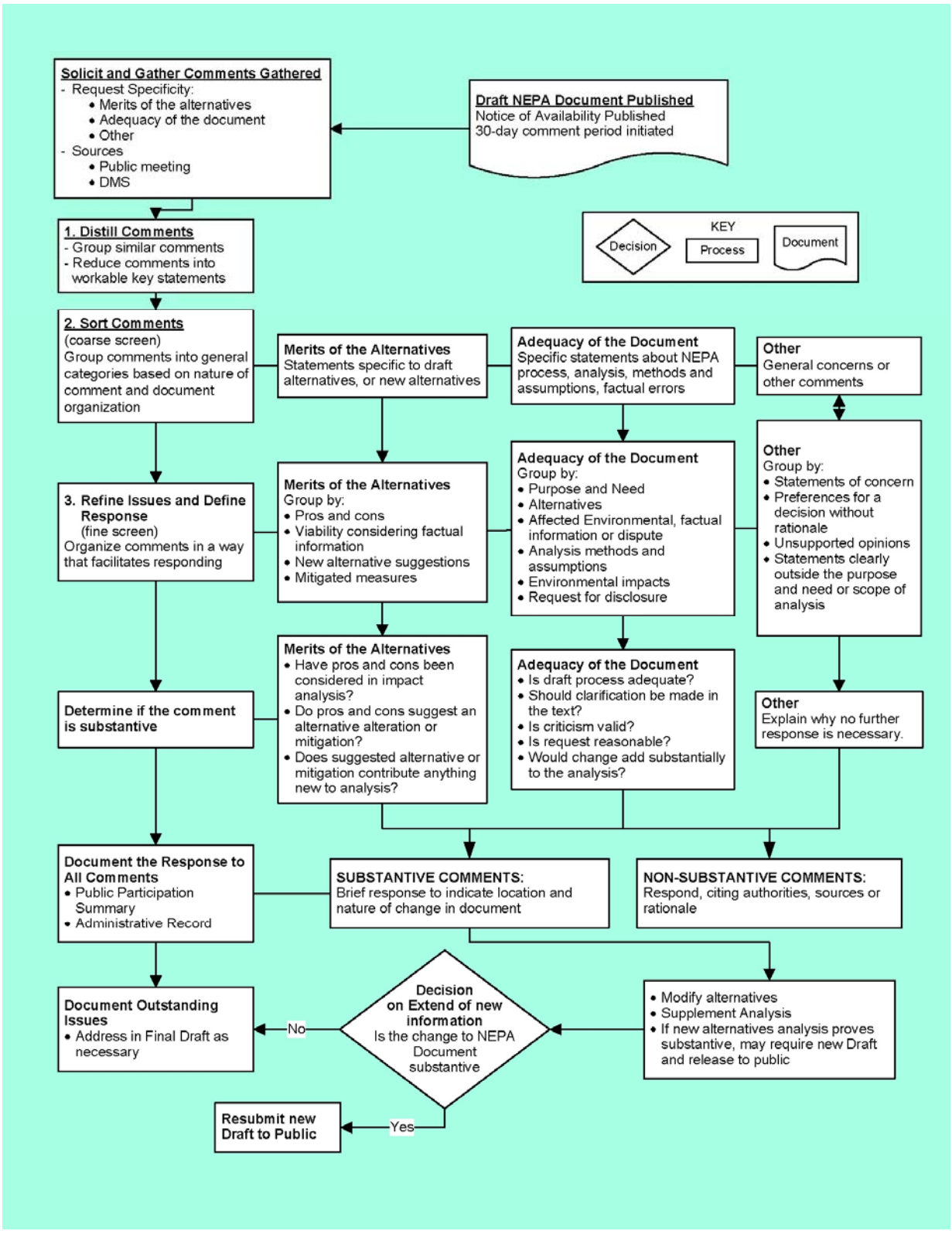
EIS - Environmental Impact Statement

GPRA - Government Performance and Results Act

Non-attainment - Area that is in non-compliance with the NAAQS

Origin or destination airport - an airport that ATMP air tours depart from or arrive to

APPENDIX E-6. DRAFT NEPA COMMENT ANALYSIS MODEL



FAA/NPS Air Tour Management Plan Program, [insert name of national park]

Draft Document Comment Summary

Summary Table of Oral and Written Comments Received by the FAA and/or the NPS

Below table is a generic table. Additional sub-categories may be needed depending on park-specific issues and processes.

Total Written Comments Received = XX	
Total Oral Comments Received (at public meetings) = XX	
COMMENTS ON ALTERNATIVES	
Insufficiency of Alternatives Analyzed	
List each issue out singly, along with number of comments	*Insert key statements that illustrate all relevant comments relating to that issue.*
EXAMPLES:	
Routing Alternatives (14)	
Restrictions (9)	
Sufficiency of Alternatives Analyzed	
List each issue out singly	*Insert key statements that illustrate all relevant comments relating to that issue.*
EXAMPLE:	
Alternative X	
ANALYSIS COMMENTS	
List each process or NEPA document sub-section to which comment applies, along with number of comments	*Insert key statements that illustrate all relevant comments relating to that process.*
EXAMPLE:	
Acoustics	
IMPACTS COMMENTS	
Group issues impact category, and list number of comments.	*Insert key statements that illustrate all relevant comments relating to that issue.*
OTHER COMMENTS	
Group issues by topic, and list number of comments.	*Insert key statements that illustrate all relevant comments relating to that issue.*

*The numbers in parentheses indicates number of comments received regarding that issue or process; some comments were counted more than once as they dealt with more than one issue.

APPENDIX E-7. AIR TOUR GROWTH FORECASTS (HALEAKALA NATIONAL PARK)

Air Tour Growth Forecasts for Haleakala National Park

1.0 INTRODUCTION

As a result of the National Parks Air Tour Management Act of 2000 (the Act), an Air Tour Management Plan (ATMP) is being prepared for Haleakala National Park (Haleakala). The purpose of the ATMP is to mitigate or prevent significant adverse impacts, if any, of commercial air tours upon the park.

As part of the environmental and cultural compliance processes associated with National Environmental Policy Act (NEPA) and implementation of the ATMPs, growth rate forecasts for air tour operations will be needed. This report supports this need by forecasting how air tours might have grown at Haleakala to 2015 (i.e., 10 years into the future) in the absence of the Act.

1.1 Overview of Haleakala National Park

Haleakala is located in the eastern portion of the island of Maui in the State of Hawaii. The park has an area of approximately 31,083 acres of which 24,719 acres is designated as wilderness. Haleakala was initially established as a unit of Hawaii National Park in 1916 "for the benefit and enjoyment of the people of the United States…and [to] provide for the preservation from injury of all timber, birds, mineral deposits, and natural curiosities or wonders within said park, and their retention in their natural condition as nearly as possible." Haleakala was established in 1960 as a separate unit of the National Park System to be administered in accordance with the NPS Organic Act.

Key features of the park span the Summit and Kipahulu areas. The summit of Haleakala Volcano has been subject to erosion and the 3,000-foot deep summit depression known as Haleakala Crater contains numerous geological features including 15 prominent cinder cones and numerous lava flows. The Kipahulu area of Haleakala extends from the headwall of the Kipahulu Valley southeastwards to the Pacific Ocean. The upper Kipahulu Valley is one of the finest examples of an intact Hawaiian rain forest and along with the upper Hana rain forest is a Scientific Research Reserve. It should be noted that fifty federally-listed threatened, endangered, or candidate species of plants and animals are known to exist within Haleakala. The significance of the park can be summarized as follows:

- Containing unique and rare native vegetation, birds and insects, and highly diverse geological and biological habitat ranging from over 10,000 feet to sea level
- Containing areas and sites of religious and cultural importance to Native Hawaiians who have been traditionally using them from ancient times up to the present
- Possessing clean air and water
- Providing scenic qualities, natural quiet and solitude
- Providing varied outdoor recreational, educational and research opportunities
- Having Congressionally-designated wilderness and other internationally and nationally recognized biological reserves and historic sites, structures and districts because of the natural and cultural conditions that make them suitable for these designations.

1.2 Visitation to the Island of Maui[1]

Visitors generally arrive on the Island of Maui by either air or cruise ship. Table 1 presents visitation estimates from the State of Hawaii by mode for all visitors to the Island of Maui. In the table, visitors arriving by air are presented from 1990 through 2003; visitors arriving by cruise ship are presented from 1998 through 2003.

Table 1. Visitation to the Island of Maui, 1990-2003

Year	Number of visitors arriving by air	Number of Visitors arriving by cruise ship
1990	2,235,701	
1991	2,129,020	
1992	2,267,020	
1993	2,212,129	
1994	2,288,809	
1995	2,268,273	
1996	2,260,454	
1997	2,260,921	
1998	2,243,912	33,093
1999	2,278,933	41,840
2000	2,246,253	37,029
2001	2,048,768	41,288
2002	2,073,051	231,541
2003	2,125,421	218,082

Source: Hawaii State Department of Business, Economic Development & Tourism website (http://www3.hawaii.gov/dbedt).
Arrivals by air: Historical Visitor Data (Spreadsheet)
Arrivals by cruise ship: Annual Visitors Research Report

The September 11, 2001, attack on the U.S. hit visitation in the State of Hawaii very hard. It followed on the heels of a downturn caused by recessions in both the U.S. and Japan. The annual growth rate for visitors arriving on the Island of Maui by air was -0.4 percent from 1991 through 2003, while it was 0.0 percent from 1991 through 2000.

Subsequent to the September 11 attack, a major structural change occurred in the Hawaiian cruise ship industry. The primary operator offering local cruises within the Hawaiian Islands failed, and an aggressive and experienced cruise ship operator moved into the niche left vacant by the previous operator's failure. The change in operators resulted in the dramatic increase in the number of visitors arriving on the Island of Maui by cruise ship. Because of the major structural change in the Hawaiian cruise ship industry, between 1999 and 2003, the annual growth rate for visitors arriving on the Island of Maui by cruise ship was 45.8 percent.

1.3 Park Visitation

Haleakala is a predominant tourist attraction on the island of Maui, and the Park offers a wide range of recreational opportunities for the ground-based visitor. The primary visitor experience in the park's

[1] The Island of Maui is part of Maui County, Hawaii. Two other islands, Lanai and Molokai, are also included in Maui County.

Summit area is sightseeing – the drive to the summit and the view into the Haleakala Wilderness Area from the west rim of the volcano is the most popular activity. Most visitors to the Kipahulu area of the park spend most of their time at the lower pools in 'Ohe'o Gulch and at Waimoku Falls.

Haleakala had approximately 1.5 million visitors in 2004 (see Table 2). Visitation at Haleakala does correlate with local tourism numbers documented by Maui County (see Figure 1). Tourism to the area and to the park has steadily increased with two major dips. The first aligns with the recession in the U.S. economy experienced in the early 1990's, and the second aligns with the significant drop in tourism and use of air travel after the terrorist attacks of September 2001.

Table 2. Recreational visitors to Haleakala National Park, 1960-2004

Year	Visits	Year	Visits
1960	62,100	1983	864,289
1961	65,800	1984	1,003,821
1962	71,200	1985	1,194,651
1963	72,100	1986	1,281,219
1964	87,600	1987	1,333,900
1965	90,100	1988	1,314,683
1966	95,500	1989	1,367,761
1967	102,700	1990	1,260,601
1968	132,700	1991	1,228,332
1969	146,800	1992	1,183,124
1970	197,400	1993	1,317,433
1971	222,800	1994	1,527,329
1972	271,326	1995	1,594,596
1973	360,600	1996	1,553,344
1974	433,500	1997	1,673,561
1975	524,900	1998	1,476,842
1976	650,300	1999	1,963,187
1977	626,500	2000	1,620,083
1978	712,751	2001	1,410,974
1979	673,955	2002	1,521,080
1980	560,238	2003	1,444,668
1981	631,684	2004	1,455,477
1982	771,762		

Source: National Park Service, History of Annual Visitation, available at http://www2.nature.nps.gov/npstats/npstats.cfm.

Air Tour Management Plan Program
Haleakala National Park **Air Tour Growth Study**

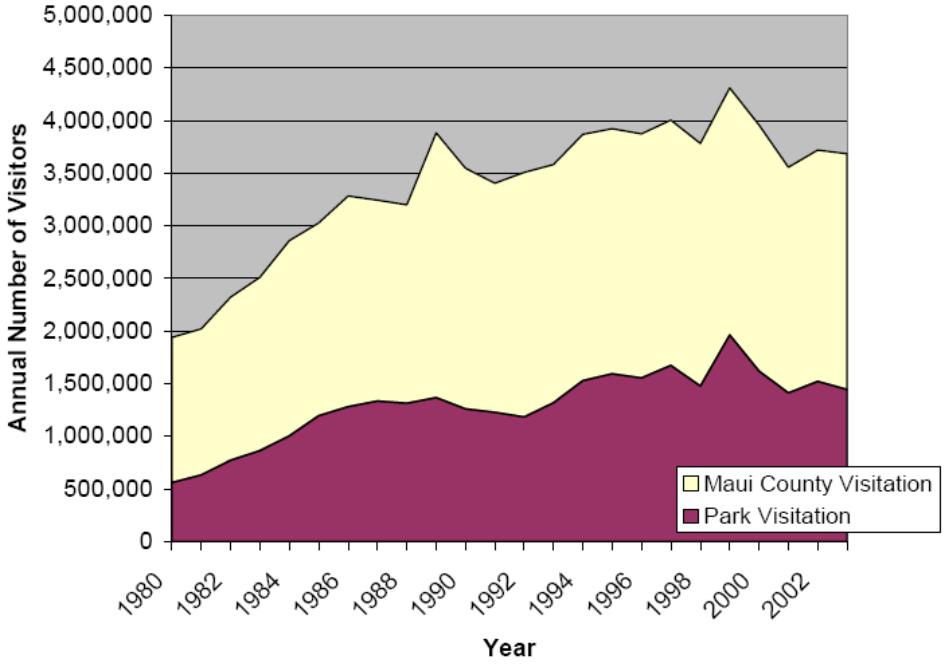


Figure 1. Comparison of Haleakala visitors to Maui County visitors (Correlation Factor = 0.863).

1.4 Air Tour Operations Associated with the Park and Region

Those who experience Haleakala solely by means of a commercial air tour are considered legitimate visitors to the park although their experience of the park resources and values is quite different in most cases from that of the ground based visitor. The air tour visitor experience often varies depending on weather conditions and the desires of the air tour client/visitor. Viewing Haleakala is usually only a portion of the typical air tour around east Maui.

There are approximately ten operators who have been granted Interim Operating Authority (IOA) and who conduct commercial air tour operations over and/or within ½ mile outside of the boundary of Haleakala. These operators are currently authorized a cumulative total of 26,325 air tour operations per year over and within ½ mile of Haleakala. The IOA levels were based on information submitted by commercial air tour operators in their IOA applications. As specified in Section 803 of the NPATMA, IOA were to provide "annual authorization only for the greater of (i) the number of flights used by the operator to provide the commercial air tour operations within the 12-month period prior to [April 5, 2000]; or (ii) the average number of flights per 12-month period used by the operator to provide such operations within the 36-month period prior to [April 5, 2000], and, for seasonal operations, the number of flights so used during the season or seasons covered by that 12-month period."

Most of the commercial air tour operations to Haleakala originate at Kahului Airport, which is located on the north-central part of the Island of Maui. Commercial air tour operations normally approach Haleakala from the west and south as they climb to altitude. This provides the air tour visitor with a view of the

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western and southwestern slopes of the Haleakala volcano. Along the southwestern boundary of the Park, air tour visitors view the geographic features of the inside eastern slope of Haleakala summit and the Haleakala Crater area from a distance through and over a notch in the south crater rim. Aircraft often maneuver in this area to provide the best possible viewing for all on board. Unless required for safety purposes, the NPS/Hawaii Air Tour Association, Maui Plan does not provide for direct overflights of the summit and crater areas. From the south crater rim, commercial air tour operations typically proceed across the Kaupo Gap boundary fence, across Ka'apahu to the Kīpahulu area, where direct overflights of the park are allowed for in the NPS/Hawaii Air Tour Association Plan. The air tour visitor is provided an opportunity for viewing of several waterfalls and dense vegetation in the Kīpahulu area. Alternate routes provide opportunities to view the Kīpahulu coastline. From the Kīpahulu area, commercial air tour operations normally proceed around the eastern part of the Island, remaining outside the Park boundary and outside the Hanawi Natural Area Reserve.[2]

Commercial air tour operations conducted over Haleakala are assessed a fee by the NPS under authority provided in 16 U.S.C. 4601-6a (n)(5)(B). The fee assessed per entry is $25.00 per aircraft with a passenger capacity of 25 persons or less and $50.00 per aircraft with a passenger capacity of more than 25 persons. It is important to note that the fee is only assessed on air tour operations that enter the airspace above the park (within the park boundary). Commercial air tour operations that are conducted in the vicinity of the park but which do not cross the boundary of the Park are not assessed this fee. The FAA is not a party to this fee collection and is not granted any authority by the National Parks Air Tour Management Act to impose, increase, decrease, modify, or otherwise alter or enforce the fees assessed pursuant to 16 U.S.C. 4601-6a (n)(5)(B). Records are maintained by Haleakala concerning gathering of fees associated with overflights of the park. Only data from 2002-2005 is available from the National Park Service; fee data predating the enactment of the National Parks Air Tour Management Act is unavailable. Table 3 shows the number of air tour operations at Haleakala from 2002 through 2005, by operator, for which fees were collected by the NPS.

Table 3. Overflights of Haleakala, 2002-2005, for which fees were collected by the NPS

Year	Total	Blue Hawaiian Helicopters	Sunshine Helicopters	AlexAir	Air Maui	Hawaii Helicopters
2002	10,751	4,000	2,929	2,354	1,468	---
2003	10,691	4,320	3,657	1,631	1,003	80
2004	9,130	3,561	3,455	879	437	798
2005*	1,957	---	---	---	---	---

*Partial year (to March 2005) with some operators not yet paying their fees.
Source: Ron Nagata, NPS, Haleakala.

The NPS believes that the fees collected at Haleakala are consistent with the overflights that are occurring at that park.[3]

[2] Volpe National Transportation Systems Center, U.S. Department of Transportation, *Haleakala National Park Air Tour Management Plan Planning and NEPA Scoping Document*, March 3, 2004, which is available on the Internet at http://www.atmp.faa.gov/HALE%20Scoping%20Document_2004-03-03.pdf.
[3] Teleconference with representatives of Haleakala, Hawaii Volcanoes, and Kalaupapa national park units, as well as National Park Service environmental staff, July 2005.

2.0 DATA SOURCES, ASSUMPTIONS, AND LIMITATIONS

2.1 Data Sources

For this report, documents, reports, articles, and other sources of relevant data and information were sought from the FAA, the NPS, the Internet, and publications. To identify relevant materials in publications, a bibliographic database search was conducted by Volpe's Technical Reference Center. A list of relevant references can be found in section 6 of this report. Additionally, a variety of organizations that might possess information of value for the study were contacted.

Four main types of organizations were contacted for this report: the park, the FAA, local and regional transportation agencies, and air tour operators. It was hoped that the national park, as well as federal agencies (most notably the local FAA office), would be able to supply historic data showing trends in NPS visitation and air tour service, and explain factors that affect air tour demand, from which to extrapolate forecasts for the next decade. Input from the other organizations listed would supplement the data and verify any patterns seen. Table 3 lists the individuals and organizations contacted.

Table 3. Data Sources and Information Contacts

Contact	Area	Organization
Ron Nagata	Haleakala	National Park Service (NPS)
Don Hamilton	Hawaii	FAA/Flight Standards District Office (FSDO)
Diane Tom	Hawaii	Hawaii Control Facility (HCF)
Steve Takashima	Hawaii	Hawaii State Department of Transportation (DOT)
John Callahan	Hawaii	Call Air
Steve Alexander	Haleakala	AlexAir
Steve Egger	Haleakala	Air Maui

The National Park Service was the source for historical visitation data. Additionally, Ron Nagata was able to provide the fee structure and collection information for Haleakala, as well as the overflight records associated with the revenue collected. No forecasts for ground visitation at Haleakala were available. Furthermore, no forecasts for commercial air tours were available from the NPS or from any other organization.

Don Hamilton of the Honolulu FSDO explained air taxi operations, as well as provided contact information for the Hawaii Control Facility (HCF). He also provided commercial air tour operator IOAs, and established that no applications for increases had been received. Diane Tom of the HCF directed queries to Steve Takashima of the Hawaii State DOT.

Steve Takashima was able to provide data and projections by airport on air taxi operations, as well as percentages on helicopters, which are the most likely form of air tours. Air taxi operations are operations of small commercial aircraft having 60 seats or less.[4] He also identified the airports that air tours to

[4] "The State of Hawaii, Airport Activity Statistics, Calendar Year 2003," An Annual Statistical Publication of the State of Hawaii, Department of Transportation, Airports Division, Airports Planning Office, Honolulu, Hawaii, which can be found on the Web at http://www.state.hi.us/dot/airports/publications/cysmallone.pdf.

various parks were likely using. This helped verify the information provided by the park scoping document.

Three air tour operators providing flights to Haleakala were contacted. The three operators contacted were Call Air, AlexAir, and Air Maui. The contacts at the three were (1) John Callahan, President of Call Air, (2) Steve Alexander of AlexAir, and (3) Steve Egger, owner of Air Maui.

Call Air operates out of Honolulu International Airport and conducts circuit tours around the islands that include the Hawaii Volcanoes, Haleakala, and Kalaupapa national park units. John Callahan reported that his company is operating at its IOA ceiling at Haleakala and could be doing 10 times more business than it does today in 10 years in an unconstrained environment. Call Air, it should be noted, accounts for 104 of the 26,325 IOA flights approved for the operator at Haleakala as of April 19, 2005.

AlexAir has IOA only for Haleakala. Steve Alexander reported that his company is operating below its IOA ceiling. AlexAir currently makes approximately 2,100 flights per year over the park, which is below the 2,923 IOA flights approved for the operator at Haleakala as of April 19, 2005. In an unconstrained environment, Mr. Alexander felt that the company's air tour activity would grow in a manner consistent with the local growth in tourism.

Air Maui also has IOA only for Haleakala. Steve Egger reported that his company is operating at its IOA ceiling, which was 3,996 flights at Haleakala as of April 19, 2005. In an unconstrained environment, Mr. Egger believed that an annual increase of over 25 percent could be achieved over the next decade.

In addition to the organizations identified above, attempts were also made to contact the Pacific Asia Travel Association (PATA), but Gloria Keller Henderson of that organization was unavailable.

2.2 Assumptions

The following assumptions underlie the forecast made:

- There will be no prolonged events limiting operations, such as volcanic eruptions, forest fires, long periods of bad weather, or road closures preventing access to air tour operators.
- The economic/business cycle will continue in the future pretty much as it has in the recent past.
- The proposed Hawaii Superferry, scheduled to begin service in 2007,[5] if successful,[6] will not generate significant new traffic to the islands of Hawaii and Maui, but rather will compete with and potentially divert traffic from existing inter-island air carriers.[7] Furthermore, since it is an automobile ferry, it could potentially result in people who might have otherwise taken an air tour driving to the park instead.
- Kahului Airport on the Island of Maui is a key source of air tours over Haleakala.
- The growth of commuter/air taxi operations at Kahului Airport is representative of the growth of air tours over Haleakala from all Hawaiian airports and airfields.[8]

[5] For more information, see the Hawaii Superferry website at http://www.hawaiisuperferry.com/.
[6] For an overview of past ferry failures in Hawaii, see Russ Lynch, "Ferry Tales: Unfazed by past failures, the state plans for commuting by sea," *Honolulu Star Bulletin*, September 15, 2002 (on the Internet at http://starbulletin.com/2002/09/15/business/story1.html).
[7] See Kallie Keith, "Island Voices: Find the middle ground for the Superferry," *The Honolulu Advertiser*, March 2, 2005 (on the Internet at http://the.honoluluadvertiser.com/article/2005/Mar/02/op/op04p.html).
[8] Projections by the Hawaii Department of Transportation for commuter/air taxi operations to 2025 at several airports, including Kahului Airport on Maui, were provided by Steve Takashima, Hawaii Department of Transportation.

- The percentage of commuter/air taxi flights from Kahului Airport that are made by helicopters, 85 percent, will continue through at least 2015.[9]

2.3 Data Limitations

For the purpose of forecasting air tours, the most useful information would have been historic flight data for the air tour operators; unfortunately, however, operators could not be contacted to provide hard data. Regardless, evidence from other national parks shows that many of the operators do not keep detailed historical records of their flights, or if they have kept records they may not be tabulated nor stored electronically, and in some cases are simply inaccessible. Air tour operators are frequently small businesses that seem to function one day at a time, and the factors that influence air tour operations are subtle, inconsistent, and sometimes impossible to predict; weather is the main factor affecting demand levels, but another factor could be something like near-by construction that detours potential customers to a different road.

Without year-to-year data on air tour operations, it is hard to tell how closely other data sets—such as park visitation numbers—might correlate with flight patterns. Nevertheless some of these other data sets must serve as proxies. Potential proxies considered included park visitation, Maui tourist visitation, and air taxi service from airports likely to be serving Haleakala. Reliability may be a factor in using proxies to derive the growth in air tours. For example, an upward trend in park ground visitation does not necessarily mean an upward trend in air tours.

Exposure data (i.e., some useful metric such as total number of flight cycles (a takeoff and landing), total flight hours, total number of flights, or total number of passengers carried) for the air tour industry has been problematic for some time. As early as 1992, it was noted by the National Transportation Safety Board (NTSB) in an air accident investigation of an in-flight collision at Haleakala National Park in Hawaii that air tour counts near the major tourist sights have not been undertaken. Three years later in 1995 in an NTSB special investigation report on the safety of the air tour industry in the United States, the FAA indicated that no database exists for air tour operations. The NTSB recommended to the Department of Transportation that it "establish and maintain a data base of all air tour operators that would provide data for use in determining the scope of air tour operations and accident rates that can be used to assess the safety of the air tour industry (Class II, priority action - A-95-57)." [10]

A study by the Jackson Hole Conservation Alliance on the safety risks and environmental perils of scenic helicopter tours in Teton County, Wyoming, confirms that as of 2001 no comprehensive air tour database existed. Based on research for this report, the state of exposure data for the air tour industry as of 2005 has not improved. This lack of historical exposure data is a major constraint and challenge to developing forecasts. One exception is that the Act of 2000 (Public Law 106-181) and its implementing regulations in Title 14, Part 136, National Parks Air Tour Management, require that existing and new-entrant operators as part of a mandated certification reveal in their application for certification, and as a condition of the FAA granting an initial operating authority (IOA), the greater of the number of commercial air tour operations conducted during the twelve-month period preceding April 5, 2000, or the average number of commercial air tour operations conducted by the operator during the three-year period preceding April 5, 2000. This makes a single 'snapshot' in time available for the level and scope of operations prior to any caps being imposed as a result of the ATMP. Of course, since there is no independent or governmental verification of the flight numbers provided by the air tour operators, their accuracy must be considered an open question.

[9] Communication from Steve Takashima, Hawaii Department of Transportation, June 2005.
[10] NTSB/SIR-95/01, *Special Investigation Report, Safety of the Air Tour Industry in the United States.*

3.0 ESTIMATION APPROACH

In developing a forecast for air tour growth at Haleakala, three approaches were considered. The first approach was to base the forecasts on the growth of ground visitation at the park. The second was to base the forecasts on the number of visitors to the Island of Maui, the location from which the majority of air tours to the park originate. The third approach was to base the forecast on the expected growth of commuter/air taxi operations at the most important airport on the Island of Maui, Kahului.
The appeal of the first approach is that it links the growth of air tours to a metric indicating the interest of the public in the park. The appeal of the second approach is that it links the growth of air tours to the growth of visitation in the area from which air tours originate. The appeal of the third approach is that air tours are one type of commuter/air taxi flights. In fact, in some cases, pilots and aircraft that one day may be used for air tours on the next day may be providing a client with some other form of commuter or air taxi service.

A statistically based exploratory analysis was performed for Haleakala. The analysis looked at the relationships among several variables. Details of the analysis and its findings are presented in an appendix to this report.

Because of the relationship between commuter/air taxi service and air tours, it was concluded that the growth of commuter/air taxi operations would provide the best available proxy for the growth of air tours. The major airport providing air tour service to Haleakala is most likely Kahului Airport on Maui.

The Aviation Division of Planning of the Hawaii Department of Transportation has developed growth forecasts to 2025 for commuter/air taxi operations for all major and some other airports in Hawaii, including Kahului Airport. The base year for those forecasts was 2002. Table 4 presents the actual commuter/air taxi operations for Kahului in 2002 and projected commuter/air taxi operations for 2025. An aircraft flight consists two operations: a takeoff and a landing. Thus, to calculate the number of commuter/air taxi flights at Kahului in 2002 and 2025, it would be necessary to divide the operations figures in Table 4 by two.

Table 4. Commuter/Air Taxi Forecast for 2025, Kahului Airport, Maui

Airport	2002 Air Taxi Operations (actual)	2025 Air Taxi Operations (projected)
Kahului Airport	77,357	103,100

Source: Communication from Steve Takashima, Hawaii State DOT Aviation Division of Planning, June 20, 2005.

A forecast for the growth of air tour flights from Kahului Airport can be easily derived from the figures in Table 4 by calculating the annual growth factor for commuter/air taxi operations.

The recent spurt in the number of visitors arriving by cruise ship (see Table 1) and what it portends for the future might be considered a reason for including a factor for cruise ship growth in the estimate of the growth of air tours over Haleakala. Passengers from visiting cruise ships often have limited time when their ship arrives at a port of call, and it is not unreasonable to believe, a priori, that they might be more likely to take an air tour of Haleakala than a visitor to the island who arrived by air.

Significant growth in the number of visitors arriving by cruise ship has been anticipated for some time. In the July 1999 issue of *Hawaii's Economy*, there is a discussion on building the infrastructure needed for cruise ships. At that time, as many as 400,000 cruise ship passengers were anticipated in Hawaii by 2005, 300,000 in 2006 (because of the expected decommissioning of two existing cruise ships serving Hawaii), and 500,000 by 2020. In response to the expected growth, the State's consultants recommended a number of improvements, including major improvements to the ports at Hilo (on the Island of Hawaii), Kahului (on the Island of Maui), and Port Allen (on the Island of Kauai).[11] Some additional detail on the industry (but no projections) can be found in the *2002 and 2003 Hawaii Cruise Industry Impact Study*.[12]

Because significant growth in cruise line passengers has been anticipated in Hawaii for some time, it does not appear to be necessary to include a factor for cruise ship growth in the forecast for air tours. Hawaii's airport growth rate forecasts for the various types of operations, including commuter/air taxi, should adequately capture any anticipated growth in visitation, including growth in visitors arriving by cruise ship.

4.0 RESULTS

Based on the foregoing, the forecast for the annual growth to 2015 for commercial air tours serving Haleakala is estimated to be 1.2569 percent. This figure, derived from the air taxi operations numbers presented in Table 4, represents the growth that would be expected in the absence of the constraints imposed by the ATMP program on air tour operators.

5.0 CONCLUSIONS

An annual growth rate of approximately 1.3 percent is forecast for air tour flights at Haleakala in the absence of any ATMP program constraints on operations. This growth rate is based on the forecast growth of commuter/air taxi service from Kahului Airport on the Island of Maui.

In making this forecast, it is recognized that there are limitations in available data, especially the existence of a historic air tour flight series. If such a series existed, a more formal statistical approach to forecasting could have been used.

Anecdotal information concerning air tours at Haleakala, which could be used to validate or refute the growth forecast made in this report, is limited. Only three operators serving Haleakala provided information. One of those operators also serves the Kalaupapa and Hawaii Volcanoes national park units on circuit tours. That operator stated that a 10-fold increase in service could be realized in the absence of constraints. It is not clear, however, whether all air tour operators serving Haleakala could achieve this level of increase. The operator providing the information is based in Honolulu, not Maui, and Maui is the source of most air tours over Haleakala. Of course, it is also unknown whether the operator could actually achieve this level of growth in an unconstrained environment. The second operator, serving only Haleakala, indicated that air tour activity would grow in a manner consistent with the local growth in tourism. The third operator, also serving only Haleakala, indicated that an annual increase of over 25 percent could be achieved over the next decade in an unconstrained environment. Again, it is unknown whether the operator could actually achieve this level of growth.

Finally, it should be noted that the forecast annual growth rate to 2015 would only increase from 1.3 percent to no more than 1.9 percent if the airport forecast by the Hawaii Department of Transportation does not adequately capture the demand for air services by cruise ship passengers and if those cruise

[11] Available on the Internet at http://www.Hawaii.gov/dbedt/hecon/he7-99/index.html.
[12] Prepared by the Hawaii Department of Business, Economic development & Tourism. Available on the Internet at http://www3.hawaii.gov/DBEDT/images/User_FilesImages/visitorstats/2003CruiseEconomicImpact_a1400.pdf

ship passengers could be expected to account for one-third of the demand for air tours over Haleakala in 2015. This scenario is not at all likely, however.

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7.0 APPENDIX: GENERAL STATISTICAL AND EQUATION-BASED METHODS

Introduction

Statistical methods, including correlation and regression, were used to understand (1) historical relationships among data-available variables like the number of national park visitors, total visitors arriving by air, and airport operations; (2) growth rates (i.e. trends) in these variables excepting for episodic events like September 11, 1999, and the respective economic recession and downturn and in 1982 and 1992; and (3) future growth in the number of commercial air tours over national parks. The focus throughout was developing understanding specific to each national park, recognizing that only such an approach could lead to the desired accuracy in air tour growth. Additionally, as a goal, statistical methods were considered in the development of data-based flight numbers and growth rates to 2015 for commercial air tour flights over national parks, assuming no restrictions ('uncapped') on the number of flights.

Data Limitations

As mentioned, limitations in data availability exist. Statistical analyses, and specifically equation-based forecasting methods, therefore were restricted. The non-existence of time-series of commercial air tour flights not only for individual national parks, but even on an industry-wide bases, meant the independent variable to a regression equation could not easily be specified. Instead, a synthetic independent variable for the number of commercial air tours was constructed based on the growth of two or more yearly observations.

Tourists to Hawaii's national parks arrive mainly by airplane. Hence, counts of plane arrivals potentially reflect park tourists and commercial air tour passengers. Of all the Hawaiian Parks, data most relevant to Haleakala was relatively the most plentiful. These data were specific to Maui County[13], Haleakala, and Kalaupapa Airport[14]. Because of the relative quality and availability, Haleakala was selected as a case for special analysis – to understand the historical relationships mentioned above.

Projections of Growth Rates

An important purpose of analyzing historic tourist-related information is the understanding of its determinants and growth rates. This understanding leads to better assumptions about projected tourism, a main driver of the number of unconstrained commercial air flights. Analysis of historical data presents challenges:

- *Change in reporting definitions and accuracy*: Data collection may not have been consistent over time. Data definitions and collection accuracies can vary over time.
- *Effects of episodic events*: Recession, economic downturns, events of September 11, 1999, special economic conditions in visitor's markets, supply side disruptions like hotel availability – all affect the level of tourism and the demand for commercial air tours. These episodic events can cloud the estimation of historic growth trends.

[13] Available from "Maui County Data Book 2004." County of Maui, Office of Economic Development. December 2004. Also, information from "2003 Annual Visitor Research Report," Department of Business, Economic Development & Tourism, State of Hawaii.
[14] Available from "The State of Hawaii Airport Activity Statistics Calendar Year 2003," State of Hawaii, Department of Transportation, Airports Division, Airports Planning Office.

- *Historic change in growth rates*: Over time a tourist market may continue to grow, but at a declining rate. Tourism likely has a life cycle similar to other consumer products. Tastes evolve. Competition develops. The rate of purchase changes. Hence, in analyzing a historic cycle, an average rate of growth is not necessarily the most accurate estimation of future growth. More recent growth may be a better indicator. But how recent is relevant to the future? The answer involves judgments and assumptions. Different projections of unconstrained commercial tours may result from these decisions about past relevancy. (This consideration has been conceptualized as the 'end point problem.' Different answer result depending on the segment of a time series selected.)

- *Sensitivity of increases in visitor incomes to tourism*: As visitor income changes over time, the amount expended on travel also may change. Changes in visitor income may be a good predictor of travel, at least in the short run. But in time the percent of income spent on travel – and purchase of commercial air tours – may change. This change is expressed as an income elasticity. One pattern of change: Increasing income results in smaller percentages being spent on travel.

Haleakala National Park Analyses

Two equations of interest were estimated for Haleakala. In the first, the annual number of Haleakala Park recreational visits (dependent variable: *recvishal*) was regressed on the annual number of operations[15] at Kahului Airport in Maui County (independent variable: *kaairops*). There are 28 yearly observations from 1970 to 2001. Analyses were performed with SAS, Version 8, for PC (SAS Institute, Cary, NC). PROC AUTOREG was used as the regression estimating procedure. As shown below, the amount of variation in *recvishal* explained by *kaairops* is high (total R-square of 0.93) and significant (t-statistic: 8.87, p = <0.0001). The estimation was adjusted for serial correlation among residuals.

Regression of *recvishal* on *kaairops*, 1970 to 2001:

SSE	5.14444E11	DFE	30
MSE	1.71481E10	Root MSE	130951
SBC	879.093051	AIC	874.603528
Regress R-Square	0.7240	Total R-Square	0.9325
Durbin-Watson	1.9316		

Variable	DF	Standard Approx Estimate	Error	t Value	Pr > |t|	Variable Label
Intercept	1	-470394	177254	-2.65	0.0126	
kaairops	1	21.6109	2.4363	8.87	<.0001	

where
recvishal = annual recreational visits to Haleakala Park
kaairops = annual operations at Kahului Airport in Mauri, HI (divided by two)

Other functional forms for this relationship between aircraft operations and recreational visits could be tested, e.g., log-linear, first-difference, percentage change.

[15] The number of operations was divided by two in specifying this variable. Such a transformation accounts for airplane operations consisting of landings and takeoffs. Thus, the transformed 'airplane operations' is numerically more similar to the numbers of visitors arriving by air.

In a second regression equation, the annual number of air taxi operations[16] from Kahului Airport in Maui County (dependent variable: *taxiops*) was regressed on the annual number of Haleakala Park recreational visits (independent variable: *recvishal*). There are 30 yearly observations from 1972 to 2003, with 2002 excluded because the 2002 air taxi operations value was not available.

Shown below, the amount of variation in *taxiops* explained by *recvishal* is high (total R-square of 0.95) and significant (t-statistic: 9.20, p = <0.0001). The estimation was adjusted for serial correlation among residuals.

Regression of *taxiops* on *kaairops*, 1972 to 2003 (observations for 2002 missing):

SSE	252233286	DFE	28
MSE	9008332	Root MSE	3001
SBC	592.40651	AIC	588.104549
Regress R-Square	0.7516	Total R-Square	0.9501
Durbin-Watson	1.7472		

Variable	DF	Standard Estimate	Error	Approx t Value	Pr > |t|	Variable Label
Intercept	1	1357	3029	0.45	0.6577	
recvishal	1	0.0230	0.002499	9.20	<.0001	

where
taxiops = air taxi operations from Kahului Airport (divided by two)
recvishal = annual recreational visits to Haleakala Park

Discussion of Regression Results

The two regression equations suggest strong relationships among Haleakala recreational visitations and a proxy (air operations) for tourist to Maui County arriving by air. Also, there is a strong relationship between air taxi operations, assumed a partial proxy for commercial air tour flights, and Haleakala recreational visitations. Such relationships are to be expected, have existed for at least 28 years, and can be quantified. As mentioned, a time series of commercial air tours over Haleakala does not exist.

Conclusions

Further analyses would be needed to determine the extent relationships specific to Haleakala could be extrapolated to other national park experiences. Until such time, the experience of Haleakala should be applied to other parks – if at all – cautiously.

For Haleakala, understanding the historical relationship among national park visitations, aircraft operations, and visitations to Maui County is important. Results confirm the expected. Relationships are close. Implied is that the growth rates among variable representing these concepts should be similar.

[16] Air taxi operations, consisting of landing and take offs, were divided by two to approximate the number of flights.

8.0 APPENDIX: CONTACT LOG

Haleakala National Park

- Called Ron Nagata, 6/9/05. Left message and sent email.
  - He will provide answers to questions Friday or Monday afternoon after verification with fee supervisor.
  - Reported by e-mail that
    - Air tour fees had been collected since 1992
    - The amount collected for overflights is based on the "fee demo" legislation, which requires a payment of $25 for tour aircraft with 1 to 25 passengers and $50 for tour aircraft with over 25 passengers.
    - Air tour flight information based on fees was only available from 2002 to 2005
      - 2002: total 10,751; Blue 4,000; Sunshine 2,929; AlexAir 2,354; Air Maui 1,468.
      - 2003: total 10,691; Blue 4,320; Sunshine 3,657; AlexAir 1,631; Air Maui 1,003; Hawaii Heli 80
      - 2004: total 9,130; Blue 3,561; Sunshine 3,455; AlexAir 879; Air Maui 437; Hawaii 798
      - 2005: thus far is 1,957 as of March with AlexAir not yet paying their fees.

FAA/FSDO

- Don Hamilton, Hawaii FSDO
  - Suggested contacting Diane Tom at Hawaii Control Facility (HCF)
  - Provided definition of air taxi operations
  - Provided IOA for air tour operators and requests by operators for increase in IOA

Hawaii Control Facility

- Diane Tom/HCF – recommended contacting Steve Takashima.

Hawaii State Department of Transportation

- Steve Takashima, Hawaii State DOT, Division of Airport Planning
  - Provided data and projections by airport on commuter/air taxi operations; data on percent helicopter by airport
  - Forecasts for commuter/air taxi operations from year 2002 to 2025. Helicopters are mainly used for air tours (divide by two to get number of flights!)
    - Kahului Airport: 77,357 to 103,100 with helicopters comprising 85% of total ops. (Haleakala)
    - Hilo International Airport: 47,487 to 66,903 with 90% helicopters of total ops. (Hawaii Volcanoes)
    - Kona International Airport: Very few helicopters for air tours
    - Lihue Airport: 56,402 to 83,100 with 95% helicopters of total ops (Wainea Canyon)
    - Kalaupapa Airport: 16,272 to 21,300 (not a lot of tours; employees / patients / supplies)

Air Tour Contact: Call Air

Person making contact: Brian Armstrong, FAA ATMP Program Manager

Date: 6/29/05
Air Tour Operator: Call Air

Contact name: John Callahan, President
Contact telephone no.: 808-834-1400
Contact e-mail:
Subject Parks: Hawaii Volcanoes, Haleakala, and Kalaupapa

Comments by contact:

- *Any general comments about historic and future air tour activity over the parks.*

Call Air operates from Honolulu International and conducts circuit tours around the islands including the National Parks. Any growth in Call Airs air tour activity level is tied to the projected growth in tourism in the Honolulu area, which the contact believes would be generally higher than the outlying islands.

- *What are the major factors – positive and negative – influencing the growth of air tour flights by the operator?*

See response above.

- *Are you currently operating the maximum number of operations allowed for under IOA? How is the current air tour ceiling impacting operations?*

Call Air is currently operating at its maximum IOA level and is turning away customers in order to stay in compliance.

- *Does your business plan call for any major changes in the number of aircraft that will be utilized for commercial air tours over the National Parks? When and how will the addition of any new aircraft effect activity over the National Parks?*

No plans given the uncertainty of growth in air tours over the parks.

- *Given an unconstrained environment, what would growth expectations be over the next decade (for each park unit that the operator serves and for non-park scenic flights)?*

Given no constraints the contact would project a 10-fold increase in 10 years.

Air Tour Contact: Alika/Alex Air

Person making contact: Brian Armstrong, FAA ATMP Program Manager

Date: 6/29/05
Air Tour Operator: Alika / Alex Air
Contact name: Steve Alexander
Contact Telephone: 808-871-0792
Contact e-mail:
Subject Parks: Haleakala NP only

Comments by contact:

- *Any general comments about historic and future air tour activity over the parks.*

The 80s and 90s were very strong years for air tour activities. AlexAir had 5 aircraft at that time. They are now down to 3.

- *What are the major factors – positive and negative – influencing the growth of air tour flights by the operator?*

Tourism is the major factor.

- *Are you currently operating the maximum number of operations allowed for under IOA? How is the current air tour ceiling impacting operations?*

Alex Air is currently operating below the IOA cap. The contact could not provide specifics but indicated that the 2130 per year reported in the previous FAA/ Volpe survey was probably still accurate.

- *Does your business plan call for any major changes in the number of aircraft that will be utilized for commercial air tours over the National Parks? When and how will the addition of any new aircraft effect activity over the National Parks?*

The contact was not aware of any specific plans.

- *Given an unconstrained environment, what would growth expectations be over the next decade (for each park unit that the operator serves and for non-park scenic flights)?*

The contact would not speculate beyond stating that air tour activity would grow consistent with local growth in tourism.

Air Tour Contact: Aris/Air Maui

Person making contact: Brian Armstrong, FAA ATMP Program Manager

Date: 6/29/05
Air Tour Operator: Aris / Air Maui
Contact name: Steve Egger, Owner
Contact telephone no.:
Contact e-mail:
Subject Parks: Haleakala NP only

Comments by contact:

- *Any general comments about historic and future air tour activity over the parks.*

The contact expressed a willingness to not fly over the Haleakala Crater so long as a viable tour of the island could still be provided. According to the contact the altitude and route limitations of SFAR 71 are a greater issue.

- *What are the major factors – positive and negative – influencing the growth of air tour flights by the operator?*

If tourism and development on Maui grows so will air tours. The contact does not expect to see a large growth in air tour activity over the park in the next 10 years. Maui tours are saturated with current number of air tour operators.

- *Are you currently operating the maximum number of operations allowed for under IOA? How is the current air tour ceiling impacting operations?*

The operator is conducting the maximum number of operation allowed under IOA. The contact stated that they are having to turn away customers in order to remain below the IOA cap.

- *Does your business plan call for any major changes in the number of aircraft that will be utilized for commercial air tours over the National Parks? When and how will the addition of any new aircraft effect activity over the National Parks?*

Air Tour Management Plan Program
Haleakala National Park **Air Tour Growth Study**

No specific plans at this time.

- *Given an unconstrained environment, what would growth expectations be over the next decade (for each park unit that the operator serves and for non-park scenic flights)?*

In an unconstrained environment the contact projects growth up to 5,000 national park air tours annually.

APPENDIX F. FAA OPERATIONAL INFORMATION

APPENDIX F-1. AIR TOUR OPERATIONS – SUPPLEMENTAL DATA REQUEST

Air Tour Management Plan Operations Records

1. INTRODUCTION

The Federal Aviation Administration (FAA), in cooperation with the National Park Service (NPS), has initiated development of Air Tour Management Plans for certain National Park units and tribal lands. The objective of the plan is to develop acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon the natural and cultural resources, visitor experiences, and tribal lands. As part the ATMP program, the FAA seeks to collect operational information on air tours in affected Parks and tribal lands. You have received this document because you are a commercial air tour operator who: (1) has applied to increase your Operating Authority (OA) as a commercial air tour operator for a National Park or tribal lands; or (2) has applied for Operating Authority (OA) as a new commercial air tour operator for a National Park or tribal lands, who has not engaged in the business of providing commercial air tour operations over the subject National Park or abutting Tribal Lands in the 12-month period preceding the application. The FAA is requesting that you provide the most complete Air Tour operational information for your proposed operations.

2. PAPERWORK REDUCTION ACT STATEMENT

The information collected will be used, and is required for: (1) the FAA to determine if the increased/proposed commercial air tours would create a safety problem at the Park or on abutting Tribal Lands; and (2) the NPS Director to determine if the increased/proposed commercial air tours would create a noise problem at the Park or abutting Tribal Lands. We estimate that it will take 1 to 3 hours to complete depending on the extent and complexity of the proposed operations. Respondents are given no assurance of confidentiality. Please note that an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control number associated with this collection is 2120-0683.

3. INSTRUCTIONS

The following pages are arranged in a hierarchy. You should complete only the form that corresponds to your best available information. If you have proposed daily information, please use only the "Daily Air Tour Log" form. If you do not have daily information, please use only the "Monthly Air Tour Log" form. If you do not have monthly information, please use the "Annual Air Tour Log Form". Note that the Annual Air Tour Log form has two pages; the form and the Supplemental Information sheet. Keep in mind that the more detailed the information you can provide the better job we can do in assessing potential safety and noise impacts. The use of each form is discussed below. A completed example of each form is also provided.

Note that the log sheets ask for information about the proposed air tours flown. With your response, please provide a map, of the entire National Park and/or tribal land, with the anticipated air tour route depicted. The routes shown on the map should correspond to those identified on the forms and be labeled for easy reference.

If you believe this information request form will not allow you to adequately represent your anticipated air tour operations, please contact the FAA or at the telephone number or email provided below.

a. Daily information

The daily operational data are the best information that can be put in the model; these data are comprised of information on each flight you will be conducting. The data consist of the day and departure time of the flight, the aircraft type, the FAA N-number, the route to be flown, and the anticipated duration of the route. Because this level of detail will produce large amounts of data, you should make as many copies of the original form as you require.

b. Monthly information

The monthly operational data are comprised of information on each month in which you will be conducting operations. Please make 12 copies of the "Monthly Air Tour Log". For each month of the upcoming year, fill in the required information.

The form has two sections for two "aircraft groups". An "aircraft group" is a group of aircraft that you will be using in a similar manner. These groups are usually aircraft with different operational characteristics that you use on different tours. Examples of groups are: fixed wing airplanes, helicopters, and seaplanes. If you will be operating relatively similar aircraft types significantly differently, please break them into separate groups. For example, if you will be operating DHC-6 Twin Otters on tours to one part of the Park and Cessna 206s on tours to a different part of the Park, please place these aircraft in different groups. If you will be operating more than two groups, please provide information on all the different groups by using two (or more) log sheets for each month.

c. Annual information

These annual operational data are the minimum set that still provides useful information. The information requested is similar to that on the monthly log sheet, but the information is consolidated for an entire year. The "aircraft group" concept is similar to that in the Monthly information.

d. Submittal

Please return the completed forms to the Volpe contact listed below within 30 days of receipt.

4. VOLPE CONTACT INFORMATION

If you have any questions regarding these instructions or the use of the attached forms, please contact Volpe at the address and telephone number listed below.

Cynthia Lee
Volpe Center
55 Broadway, DTS-34
Cambridge, MA 02142
(617) 494-6340
Lee@volpe.dot.gov

5. FAA CONTACT INFORMATION

If you have any questions regarding this information collection or the Air Tour Management Plan Program, please contact FAA at the address and telephone number listed below.

Brian Armstrong

Air Tour Management Plan Program Manager
Federal Aviation Administration
P.O. Box 92007
Los Angeles, CA 90009
(310) 725-3818
Brian.Armstrong@faa.gov

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OMB Control No. 2120-0683
Expires 1/31/2006

Company_____

National Park_____

Daily Air Tour Log

From _____to _____

Date	Departure time	Aircraft Type	N-number	Air Tour Route	Duration of Tour (min)

Page ____ of ____

OMB Control No. 2120-0683
Expires 1/31/2006

Company_____

National Park_____

Monthly Air Tour Log

Month/Year: _____

Aircraft group #1

List types of aircraft and the total number of tours to be flown with each type during the month.

Aircraft Type	Tours to be flown
Total tours flown	

List the tour routes to be flown during the month and the percentage of operations on each route.

Air tour route	Duration of tour (min)	Proposed percent of use
		100%

Aircraft group #2

List types of aircraft and the total number of tours to be flown with each type during the month.

Aircraft Type	Tours to be flown
Total tours flown	

List the tour routes to be flown during the month and the percentage of operations on each route.

Air tour route	Duration of tour (min)	Proposed percent of use
		100%

("Aircraft group" is defined in the cover letter)

Page ____ of ____

OMB Control No. 2120-0683
Expires 1/31/2006

Company_____

National Park_____

Monthly Air Tour Log, Supplemental Information

Year: _____

Typical Daily Operations

For a typical day's operation in your *peak* season (your busiest months), please indicate how your air tour operations might vary throughout the day. Please indicate the percentage of your total operations in the time periods below.

Before 6 am	6 to 8 am	8 to 10 am	10 am to noon	Noon to 2 pm	2 to 4 pm	4 pm to 6 pm	After 6 pm	
								=100%

For a typical day's operation in your *off*-season (your least busy months), please indicate how your air tour operations might vary throughout the day. Please indicate the percentage of your total operations in the time periods below.

Before 6 am	6 to 8 am	8 to 10 am	10 am to noon	Noon to 2 pm	2 to 4 pm	4 pm to 6 pm	After 6 pm	
								=100%

Points of Interest Information

1) What will be the points of interest for your Air Tours? Please identify these locations on your route map.

2) If you will be loitering over a particular area (e.g., 5 minutes over a point), what will be those areas for your Air Tours? Please identify these locations on your route map.

3) How long will you typically remain within the loitering areas for your Air Tours?

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OMB Control No. 2120-0683
Expires 1/31/2006

Company_____

National Park_____

Annual Air Tour Log

Year: _____

Aircraft group #1

List types of aircraft and the total number of tours to be flown with each type during the year.

Aircraft Type	Tours to be flown
Total annual tours flown in this aircraft group	

List the tour routes to be flown during the year and the percentage of operations on each route.

Air tour route	Duration of tour (min)	Proposed percent of use
		100%

Aircraft group #2

List types of aircraft and the total number of tours to be flown with each type during the year.

Aircraft Type	Tours to be flown
Total annual tours flown in this aircraft group	

List the tour routes to be flown during the year and the percentage of operations on each route.

Air tour route	Duration of tour (min)	Proposed percent of use
		100%

("Aircraft group" is defined in the cover letter)

Page ____ of ____

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Company_____

National Park_____

Annual Air Tour Log, Supplemental Information

Year: _____

Seasonal Information

1) What will be your busiest month for Air Tours?

2) What will be your busiest three-month period (peak season)?

3) What will be your three non-busiest months (off-season)?

4) What percentage of your Air Tours do you expect to conduct in your busiest three-month period?

5) What percentage of your Air Tours do you expect to conduct in your three non-busiest months?

Typical Daily Operations

For a typical day's operation in your *peak* season, please indicate how your air tour operations might vary throughout the day. Please indicate the percentage of your total operations in the time periods below.

Before 6 am	6 to 8 am	8 to 10 am	10 am to noon	Noon to 2 pm	2 to 4 pm	4 pm to 6 pm	After 6 pm	
								=100%

For a typical day's operation in your *off*-season, please indicate how your air tour operations might vary throughout the day. Please indicate the percentage of your total operations in the time periods below.

Before 6 am	6 to 8 am	8 to 10 am	10 am to noon	Noon to 2 pm	2 to 4 pm	4 pm to 6 pm	After 6 pm	
								=100%

Points of Interest Information

1) What will be the points of interest for your Air Tours? Please identify these locations on your route map.

2) If you will be loitering over a particular area (e.g., 5 minutes over a point), what are those areas for your Air Tours? Please identify these locations on your route map.

3) How long will you typically remain within the loitering areas for your Air Tours?

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Company Acme Air Tours

National Park Gettysburg

Daily Air Tour Log

From Jan 1, 2003 to Jan 1, 2003

Date	Departure time	Aircraft Type	N-number	Air Tour Route	Duration of Tour (min)
1/1/03	8:30 am	C-182	N1234A	2	15 min
"	8:45 am	C-206	N1234B	3	30 min
"	9:30 am	C-182	N1234A	3	30 min
"	9:45 am	C-206	N1234B	3	30 min
"	10:15 am	C-206	N1234B	3	30 min
"	10:45 am	C-206	N1234B	3 to 2	30 min
"	11:15 am	C-206	N1234B	2	15 min
"	11:45 am	Bell 206L III	N1234C	1	5 min
"	12:15 pm	C-206	N1234B	3	30 min
"	12:45 am	C-206	N1234B	3	30 min
"	1:15 am	C-182	N1234A	3	30 min
"	1:45 am	C-206	N1234B	3 to 2	30 min
"	2:15 am	C-206	N1234B	2	15 min
"	3:45 am	Bell 206L III	N1234C	1	5 min
"	5:15 pm	C-206	N1234B	3	30 min

SAMPLE

Page ____ of ____

OMB Control No. 2120-0683
Expires 1/31/2006

Company Acme Air Tours

National Park Gettysburg

Monthly Air Tour Log

Month/Year: Jan 2003

Aircraft group #1

List types of aircraft and the total number of tours to be flown with each type during the month.

Aircraft Type	Tours to be flown
C 182	62
C 206	126
Total tours flown	188

List the tour routes to be flown during the month and the percentage of operations on each route.

Air tour route	Duration of tour (min)	Proposed percent of use
2	15 min	35%
3	30 min	55%
3 to 2	30 min	10%
		100%

SAMPLE

Aircraft group #2

List types of aircraft and the total number of tours to be flown with each type during the month.

Aircraft Type	Tours to be flown
Bell 206L Long Ranger III	72
Total tours flown	72

List the tour routes to be flown during the month and the percentage of operations on each route.

Air tour route	Duration of tour (min)	Proposed percent of use
1	5 min	100%
		100%

("Aircraft group" is defined in the cover letter)

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OMB Control No. 2120-0683
Expires 1/31/2006

Company Acme Air Tours

National Park Gettysburg

Monthly Air Tour Log, Supplemental Information

Month/Year: Jan 2003

Typical Daily Operations

For a typical day's operation in your *peak* season (your busiest months), please indicate how your air tour operations might vary throughout the day. Please indicate the percentage of your total operations in the time periods below.

Before 6 am	6 to 8 am	8 to 10 am	10 am to noon	Noon to 2 pm	2 to 4 pm	4 pm to 6 pm	After 6 pm	
0%	5%	20%	25%	15%	20%	15%	0%	=100%

For a typical day's operation in your *off*-season (your least busy months), please indicate how your air tour operations might vary throughout the day. Please indicate the percentage of your total operations in the time periods below.

Before 6 am	6 to 8 am	8 to 10 am	10 am to noon	Noon to 2 pm	2 to 4 pm	4 pm to 6 pm	After 6 pm	
0%	0%	25%	30%	20%	20%	5%	0%	=100%

SAMPLE

Points of Interest Information

1) What will be the points of interest for your Air Tours? Please identify these locations on your route map.
Pickett's Charge
National Cemetery

2) If you will be loitering over a particular area (e.g., 5 minutes over a point), what are those areas for your Air Tours? Please identify these locations on your route map.
Pickett's Charge

3) How long will you typically remain within the loitering areas for your Air Tours?
5 minutes

Page ____ of ____

OMB Control No. 2120-0683
Expires 1/31/2006

Company Acme Air Tours

National Park Gettysburg

Annual Air Tour Log

Year: 2003

Aircraft group #1

List types of aircraft and the total number of tours to be flown with each type during the year.

Aircraft Type	Tours to be flown
C 182	944
C 206	1812
Total annual tours flown in this aircraft group	2756

List the tour routes to be flown during the year and the percentage of operations on each route.

Air tour route	Duration of tour (min)	Proposed percent of use
2	15 min	35%
3	30 min	55%
3 to 2	30 min	7%
2 to 3		3%
		100%

SAMPLE

Aircraft group #2

List types of aircraft and the total number of tours to be flown with each type during the year.

Aircraft Type	Tours to be flown
Bell 206 Long Ranger III	920
Total annual tours flown in this aircraft group	920

List the tour routes to be flown during the year and the percentage of operations on each route.

Air tour route	Duration of tour (min)	Proposed percent of use
1	5 min	100%
		100%

("Aircraft group" is defined in the cover letter)

Page ____ of ____

OMB Control No. 2120-0683
Expires 1/31/2006

Company Acme Air Tours

National Park Gettysburg

Annual Air Tour Log, Supplemental Information

Year: 2003

Seasonal Information

1) What will be your busiest month for Air Tours?
August

2) What will be your busiest three-month period (peak season)?
July, August, September

3) What will be your three non-busiest months (off-season)?
January, February, March

4) What percentage of your Air Tours do you expect to conduct in your busiest three-month period?
55%

5) What percentage of your Air Tours do you expect to conduct in your three non-busiest months?
10%

SAMPLE

Typical Daily Operations

For a typical day's operation in your *peak* season, please indicate how your air tour operations might vary throughout the day. Please indicate the percentage of your total operations in the time periods below.

Before 6 am	6 to 8 am	8 to 10 am	10 am to noon	Noon to 2 pm	2 to 4 pm	4 pm to 6 pm	After 6 pm	
0%	10%	20%	25%	20%	20%	5%	0%	=100%

For a typical day's operation in your *off*-season, please indicate how your air tour operations might vary throughout the day. Please indicate the percentage of your total operations in the time periods below.

Before 6 am	6 to 8 am	8 to 10 am	10 am to noon	Noon to 2 pm	2 to 4 pm	4 pm to 6 pm	After 6 pm	
0%	0%	20%	30%	25%	20%	5%	0%	=100%

Points of Interest Information

1) What will be the points of interest for your Air Tours? Please identify these locations on your route map.
Pickett's Charge
National Cemetery

2) If you will be loitering over a particular area (e.g., 5 minutes over a point), what are those areas for your Air Tours? Please identify these locations on your route map.
Pickett's Charge

3) How long will you typically remain within the loitering areas for your Air Tours?
5 minutes

APPENDIX F-2. FAA ADVISORY CIRCULAR-QUIET TECHNOLOGY

Advisory Circular

U.S. Department
of Transportation
Federal Aviation
Administration

Subject: **Date:** 6/13/2006 **AC No:** AC-93-2
Initiated by: AEE-100 **Change:**

NOISE LEVELS FOR AIRCRAFT USED FOR COMMERCIAL OPERATIONS IN GRAND CANYON NATIONAL PARK SPECIAL FLIGHT RULES AREA

1. **Purpose.** This circular contains the measured or estimated noise levels for aircraft currently used for commercial sightseeing operations in the Grand Canyon National Park (GCNP) special flight rules area, ranked in alphabetical order for the conditions and assumptions described below. This information is provided both for aircraft that have been noise type certificated under 14 CFR part 36, and for aircraft for which no such requirements existed at the time of type certification. The noise level data presented in the appendices are provided for determining the GCNP quiet aircraft technology designation status for each aircraft subject to 14 CFR part 93.

2. **Cancellation.**

3. **Background.** On March 29, 2005, the Federal Aviation Administration (FAA) published a Final Rule entitled "Noise Limitations for Aircraft Operations in the Vicinity of Grand Canyon National Park". This amendment of 14 CFR part 93 is necessary to establish reasonably achievable requirements for aircraft operating in the GCNP to be considered as employing quiet aircraft technology. The standards for the GCNP quiet aircraft technology proposed in the rule will be used to assist the National Park Service (NPS) achieve its statutory mandate to provide for the substantial restoration of natural quiet and to enhance visitor' experience in the GCNP.

4. **Aircraft Noise Limits for GCNP Quiet Aircraft Technology.** Noise levels of propeller-driven small airplanes and helicopters that operate at GCNP at the time of preparation of this circular are presented in Appendices 1 and 2. The data were obtained by the methodology described in Section 5 of this circular. The sources of the data as they relate to Section 5 of this circular are designated in the "NOTES" column. The GCNP quiet aircraft technology status of each aircraft is provided in the "QUIET TECHNOLOGY" column.

Appendix 1 provides noise levels of propeller driven small airplanes that are subject to Appendix F or G of 14 CFR part 36. Appendix 1 includes maximum takeoff weights, landing weights, engine type, horsepower, propeller type and diameter.

Appendix 2 contains noise levels of helicopters that are subject to Appendix H or J of 14 CFR part 36. This appendix includes maximum takeoff weights, landing weights, engine type, rotor type and diameter.

Aircraft are listed in alphabetical order by make and model in Appendices 1 and 2. The noise levels in the appendices were obtained during the noise certification process as prescribed under 14 CFR part 36. Where no certificated noise level is available, the Administrator may approve an alternative measurement or estimation procedure.

Part 93 classifies aircraft used in commercial sightseeing flight operations over GCNP by the noise they produce. Part 93 establishes the GCNP quiet aircraft technology designation status for propeller-driven small airplanes and helicopters. The status of each aircraft was determined according to its noise nuisance at a common noise sensitive reference point in GCNP. The aircraft noise limits, based on aircraft certification noise levels are shown in Figure 1 through 4 for GCNP quiet aircraft technology.

The noise limits are expressed for propeller-driven small airplanes and helicopters as follows:

(a) For helicopters with a flyover noise level obtained in accordance with the measurement procedures prescribed in Appendix H of part 36, the limit is 80 dB for helicopters having 2 or fewer passenger seats, increasing at 3 decibels per doubling of the number of passenger seats for helicopters having 3 or more passenger seats. The limit for helicopters having 3 or more seats can be calculated using the formula:

EPNL(H) = 80 +10log(# PAX seats/2) dB

(b) For helicopters with a flyover noise level obtained in accordance with the measurement procedures prescribed in Appendix J of part 36, the limit is 77 dB for helicopters having 2 or fewer passenger seats, increasing at 3 decibels per doubling of the number of passenger seats for helicopters having 3 or more passenger seats. The limit for helicopters having 3 or more seats can be calculated using the formula:

SEL(J) = 77 +10log(# PAX seats/2) dB

(c) For propeller-driven airplanes with a measured flyover noise level obtained in accordance with the measurement procedures prescribed in Appendix F of part 36 without the performance correction defined in Sec. F35.201(c), the limit is 69 dB for airplanes having 2 or fewer passenger seats, increasing at 3 decibels per doubling of the number of passenger seats for airplanes having 3 or more passenger seats. The noise limit for propeller-driven airplanes having 3 or more seats can be calculated using the formula:

LAmax(F) = 69 +10log(# PAX seats/2) dB

(d) In the event that a flyover noise level is not available in accordance with Appendix F of 14 CFR part 36, the noise limit for propeller-driven airplanes with a takeoff noise level obtained in accordance with the measurement procedures prescribed in Appendix G is 74 dB or 77 dB depending on 14 CFR part 36 amendment level, for airplanes having two or fewer passenger seats, increasing at 3 dB per doubling of the number of passenger seats for airplanes having three or more passenger seats. The noise limit for propeller driven airplanes having 3 or more seats can be calculated using the formula:

LAmax(G) = 74 +10log(# PAX seats/2) dB
for aircraft certificated to 14 CFR part 36 Amendment 21 or earlier;

LAmax(G) = 77+10log(# PAX seats/2) dB

for aircraft certificated to 14 CFR part 36 Amendment 22 or later.

5. Methodology to Categorize Noise Efficiency. The GCNP noise incentive plan is based on certificated noise levels determined under 14 CFR part 36. These levels may be found in FAA AC 36-1H or in the aircraft flight manual. Some aircraft, depending on the date of type certification, were not subject to the noise certification provisions of 14 CFR part 36, and do not have noise certification levels. For those aircraft, either measured noise levels from tests that are not approved by the FAA as certification quality (e.g., research test data) or estimates by approved methods were used. All estimated noise certification levels provided in this circular are for the sole and specific purpose of determining compliance with GCNP noise efficiency criteria and may not be used to establish compliance under any regulation.

The following hierarchy of noise level data sources was used in establishing noise levels for aircraft listed in Appendices 1 and 2. The same hierarchy will be used for future additions to the appendices.

1. U.S. type certifications using 14 CFR part 36 with noise certification levels obtained from FAA-approved flight manuals or FAA AC 36-1.
   a) For propeller driven small airplanes the hierarchy of regulations is:
      1) 14 CFR part 36 Appendix F
      2) 14 CFR part 36 Appendix G
   b) For helicopters the hierarchy of regulations is:
      3) 14 CFR part 36 Appendix J
      4) 14 CFR part 36 Appendix H
2. Foreign type certifications using ICAO Annex 16, Volume I with noise certification levels obtained from approved flight manuals, data approved by the foreign civil aviation authority, or FAA AC 36-1.
   a) For propeller driven small airplanes the applicable hierarchy of regulations is:
      1) ICAO Annex 16, Volume I Chapter 6
      2) ICAO Annex 16, Volume I Chapter 10
   b) For helicopters the hierarchy of regulations is:
      3) ICAO Annex 16, Volume I Chapter 11
      4) ICAO Annex 16, Volume I Chapter 8
3. Research or other measurement test data obtained under controlled conditions, documented and corrected to the certification conditions of part 36 Appendix F for small propeller driven airplanes and part 36 Appendix J for helicopters. Preference would be placed on those data obtained under certification-like conditions or those data collected under an FAA-sponsored noise research test.
4. FAA approved noise estimation methods that seek to estimate part 36 Appendix F noise levels for small propeller driven airplanes or part 36 Appendix J noise levels for helicopters. Currently the following methods may be suitable for use, but are subject to FAA approval on a case-by-case basis.
   a) For propeller driven small airplanes: Method in Section 2.2 of DOT/FAA/AEE-82-1[1]

[1] DOT/FAA/AEE-82-1: "A Description of Methodologies Used in Estimation of A-Weighted Sound Levels for FAA Advisory Circular AC-36-3B", published by AEE in January 1982

b) For helicopters: SAE/AIR 1989[2]

5. FAA approved noise level estimation method using FAA's Integrated Noise Model (INM) or an FAA-approved equivalent.

As one moves down in the hierarchy, the expected level of substantiation (as the representative noise certification level-estimated) by the operator or owner increases, and the level of FAA scrutiny will increase.

The resulting noise levels will vary depending upon the availability of FAA-approved data and its rank in the hierarchy. In the case of helicopters, the noise levels must be the flyover noise certification level and expressed in the noise metric of Effective Perceived Noise Level (14 CFR part 36, Appendix H) or Sound Exposure Level (14 CFR part 36, Appendix J). In the case of small propeller-driven airplanes the noise levels must be the flyover (14 CFR part 36, Appendix F) or takeoff (14 CFR part 36, Appendix G) noise certification level and expressed in the noise metric of maximum A-weighted sound level.

6. Distribution.

7. Revisions.

Lynne Sparks Pickard

Carl E. Burleson
Director of Environment and Energy

[2] SAE/AIR 1989: "Helicopter External Noise Estimation ", published by Society of Automotive Engineering in December 1992.

LIST OF FIGURES

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Figure 1

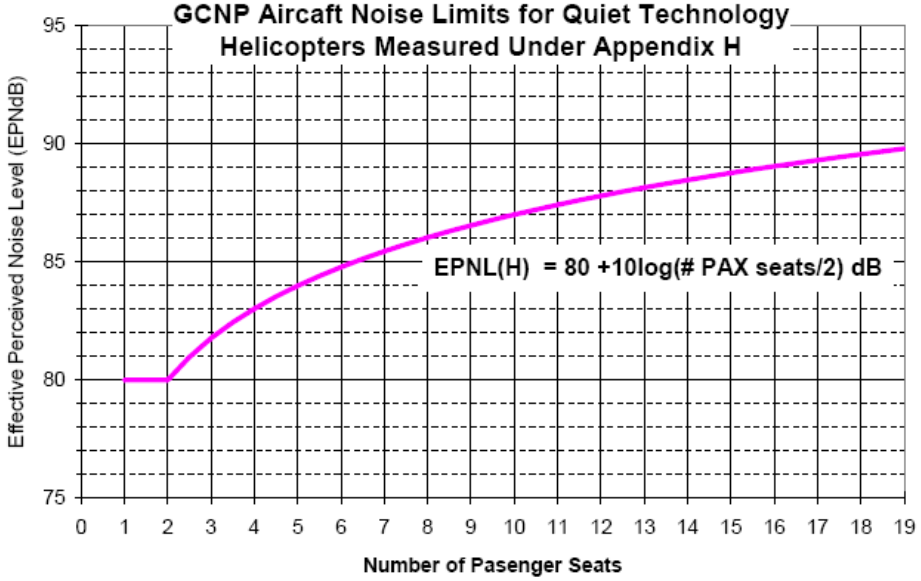

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Figure 2

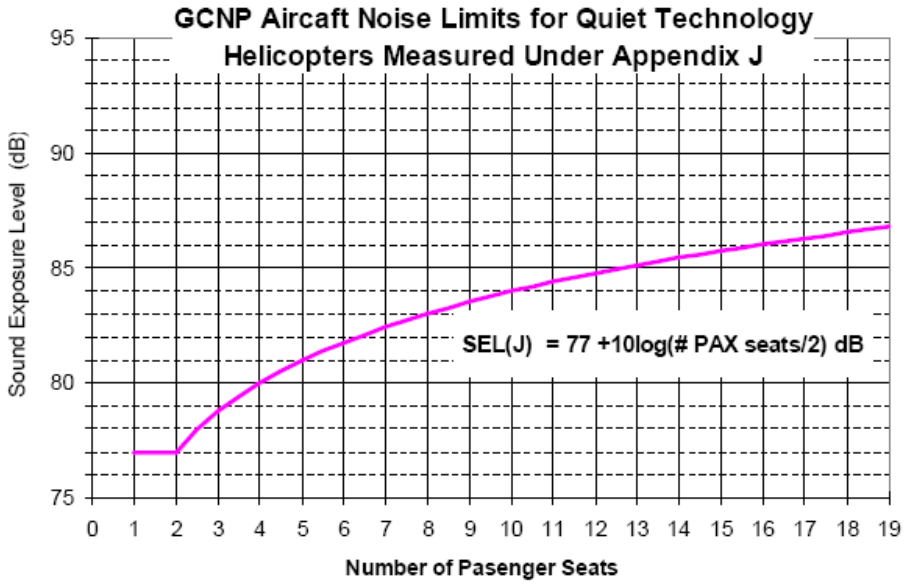

GCNP Aircaft Noise Limits for Quiet Technology
Helicopters Measured Under Appendix J
Sound Exposure Level (dB)
95
90
85
80
75
SEL(J) = 77 +10log(# PAX seats/2) dB
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Number of Pasenger Seats

Figure 3
GCNP Aircaft Noise Limits for Quiet Technology Propeller-Driven Small Airplanes Measured Under Appendix F

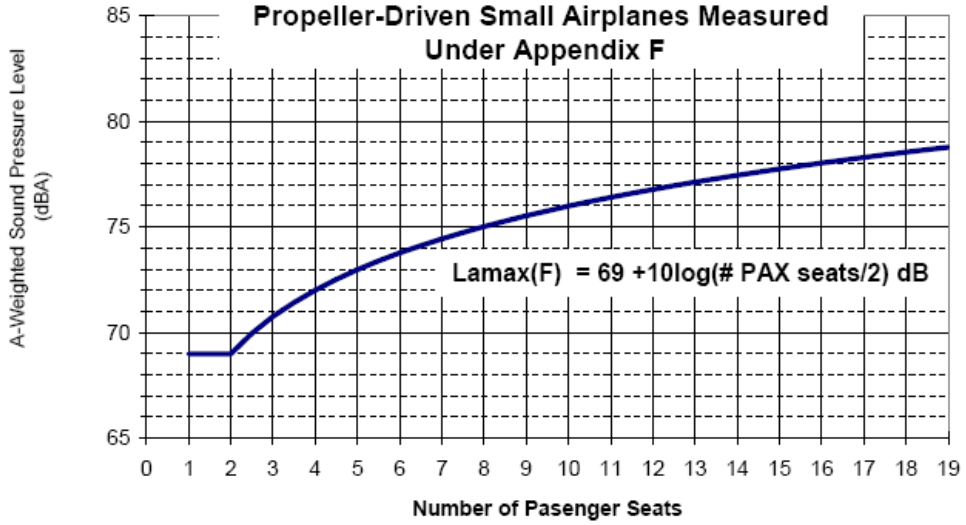
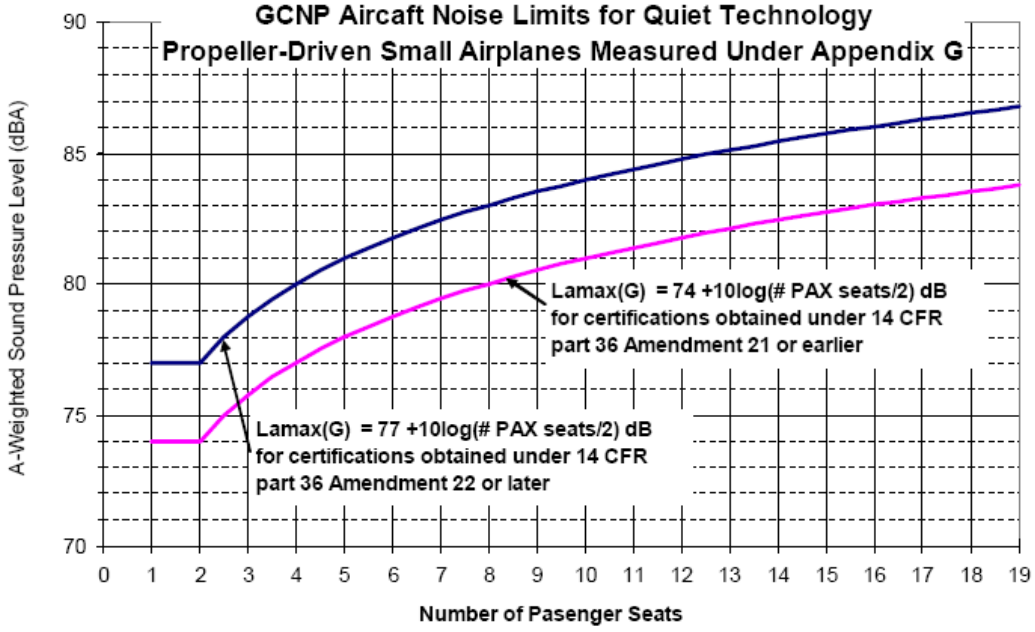


Figure 4


GCNP Aircaft Noise Limits for Quiet Technology
Propeller-Driven Small Airplanes Measured Under Appendix G
A-Weighted Sound Pressure Level (dBA)
90
85
80
75
70
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Number of Pasenger Seats
Lamax(G) = 74 +10log(# PAX seats/2) dB
for certifications obtained under 14 CFR
part 36 Amendment 21 or earlier
Lamax(G) = 77 +10log(# PAX seats/2) dB
for certifications obtained under 14 CFR
part 36 Amendment 22 or later

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APPENDICES

APPENDIX I
GCNP INCENTIVE PLAN NOISE LEVELS
PROPELLER-DRIVEN SMALL AIRPLANES

MAKE MODEL	MTOW MLW	# OF ENGINES MAKE MODEL	ENG. PWR RPM	EXHAUST	# OF PROP BLADES MAKE MODEL	PROP DIA RPM PITCH	NOISE LEVEL APP. F (dBA)	NOISE LEVEL APP. G (dBA)	# OF PAX	NOTES	QUIET TECHNOLOGY
BEECH 36, A36	3.6 3.6	1 TCM IO-520-B(A)	285 2700	S	3 MCCAULEY 3A32C76	80 2700 V	78.8		5	F	NO
BEECH 36, A36	3.6 3.6	1 TCM IO-520-BB	275 2550	S	2 MCCAULEY 2A36C23	84 2550 V	78.0		5	F	NO
BEECH 36, A36	3.65 3.7	1 TCM IO-550-B	300 2700	S	3 MCCAULEY 3A32C406	80 2700 V	78.2		5	F	NO
BEECH 65A90	9.3 8.8	2 P&W PT6A-20	500 2200	S	3 HARTZELL HC-B3TN-2B/M	93 2200 V	78.7		8	F	NO
BEECH 76	3.9 3.9	2 LYC O-360-A1G6D	165 2700	S	2 HARTZELL HC-M2YR-2CEUF	76 2700 V	80.2		5	F	NO
BEECH 76	3.98 3.98	2 LYC O-360-A1G6D	165 2700	S	2 HARTZELL HC-M2YR-2CLUF	76 2700 V	79.5		5	F	NO
BEECH C99	11.3 11.3	2 P&W PT6A-36	715 2200	S	3 HARTZELL HC-B3TN-3B/M	93 2200 V	79.3		15	F	NO
BEECH V35	3.4 3.4	1 TCM IO-520-BA	285 2700	S	3 MCCAULEY 3A32C406	78 2700 V	78.1		4	F	NO
CESSNA 172M	2.3 2.3	1 LYC O-320-E2D	150 2700	S	2 MCCAULEY 1C160/CTM/DTM	75 2700 F	74.3		3	F	NO
CESSNA 172P	2.4 2.4	1 LYC O-320-D2J	150 2700	S	2 MCCAULEY 1C160/DTM	75 2700 F	74.3		3	F	NO
CESSNA 182	2.55 2.55	1 TCM O-470-L	230 2600	S	2 HARTZELL HC-82XF-1	82 2600 V	72.0		3	F	NO
CESSNA 182H	2.8 2.8	1 TCM O-470-R	230 2600	S	2 MCCAULEY 2A34C66	82 2600 V	72.0		3	F	NO
CESSNA 182P	2.95 2.95	1 LYC O-470-R/S	230 2600	S	2 MCCAULEY 2A34C-201/66	82 2600 V	72.0		3	F	NO
CESSNA 182Q	2.95 2.95	1 LYC O-470-U	230 2400	S	2 MCCAULEY C2A34C204	82 2400 V	72.0		3	F	NO
CESSNA 206	3.3 3.3	1 TCM IO-520-A	285 2700	S	2 MCCAULEY D2A34C58	82 2700 V	78.5		5	F	NO
CESSNA 207	3.8 3.8	1 TCM IO-520-F	285 2700	S	3 MCCAULEY D3A32C90	80 2700 V	77.8		6	F	NO
CESSNA 207A	3.8 3.8	1 TCM IO-520-F	285 2700	S	3 MCCAULEY D3A34C404	80 2700 V	79.0		6	F	NO
CESSNA 208 (AMPHIB)	7.6 7.3	1 P&W PT6A-114	600	S	3 HARTZELL HC-B3MN-3	100 1900 V	72.8		9	F	YES

APPENDIX I
GCNP INCENTIVE PLAN NOISE LEVELS
PROPELLER-DRIVEN SMALL AIRPLANES

MAKE MODEL	MTOW MLW	# OF ENGINES MAKE MODEL	ENG. PWR RPM	EXHAUST	# OF PROP BLADES MAKE MODEL	PROP DIA RPM PITCH	NOISE LEVEL APP. F (dBA)	NOISE LEVEL APP. G (dBA)	# OF PAX	NOTES	QUIET TECHNOLOGY
CESSNA 208 (LAND)	8 7.8	1 P&W PT6A-114	600	9	3 HARTZELL HC-B3MN-3	100 1900 V	72.8		9	F	YES
CESSNA 208B	8.75 8.5	1 PRATT+WHITNEY PT6A-114	600	8	3 HARTZELLL HC-B3MN-3	100 1900 V	72.8		13	F	YES
CESSNA 402 / 402B	6.3 6.2	2 TCM TSIO-520-E/B	300 2700	4	3 MCCAULEY 3AF32C504	76.5 2700 V	81.6		8	F	NO
CESSNA 402A	6.3 6.2	2 TCM TSIO-520E	300 2700	4	3 MCCAULEY 3AF32C87NR	76.5 2700 V	81.6		8	F	NO
CESSNA 402C	6.85 6.9	2 TCM TSIO-520-UB	325 2700	4	3 MCCAULEY 3AF32C92N	76 2700 V	80.8		9	F	NO
CESSNA 402C	6.85 6.9	2 TCM TSIO-520-VB	310 2600	4	3 MCCAULEY 3AF32C93	77 2600 V	77.2		9	F	NO
CESSNA 421C	7.2 7.45	2 TCM GTSIO-520-L/N	375 2235	4	3 MCCAULEY 3FF32C501	90 2235 V	80.3		9	F	NO
CESSNA 425	8.2 8.0	2 P&W PT6A-112	500	9	3 HARTZELL HC-B3TN-3D	102 2110 V	75.7		19	F	YES
CESSNA CE-182R	3.10	1 TCM O-470-V	230 2400	8	2 MCCAULEY D2A34C203	82 2400 V	72.0		3	F	NO
CESSNA CE-182-R182	3.10 3.10	1 TCM O-540-J3C5D	235 2400	8	2 MCCAULEY B3D34C214	82 2400 V	72.7		3	F	NO
CESSNA CE-402-B	6.85 6.85	2 TCM TSIO-520-E	150 2700	3	3 MCCAULEY 3AF32C87M	76 2700 V	81.6		9	F	NO
CESSNA T207	3.8 3.8	1 TCM TSIO-520-G	285 2600	4	3 MCCAULEY D3A32C90	80 2600 V	77.9		6	F	NO
CESSNA T207A	3.8 3.8	1 TCM TSIO-520-G-1A	285 2600	4	3 MCCAULEY 3A32C401	80 2600 V	77.9		6	F	NO
CESSNA T210L	3.8 3.8	1 TCM IO-520-L	285 2700	5	3 MCCAULEY D3A34C402-C	80 2700 V	80.2		5	F	NO
CESSNA T210M	3.8 3.8	1 TCM IO-520-L	285 2700	5	3 MCCAULEY D3A32C88	80 2700 V	77.4		5	F	NO
CESSNA T210N	3.8 3.8	1 TCM IO-520-L	285 2700	5	3 MCCAULEY D3A34C404	80 2700 V	77.4		5	F	NO
CESSNA TR182	3.1 3.1	1 LYC O-540-L3C5D	235 2400	5	2 MCCAULEY B2D34C217	82 2400 V	73.8		3	F	NO
CESSNA TR182	3.1 3.1	1 LYC O-540-L3C5D	235 2400	5	3 MCCAULEY B3D32C407	79 2400 V	70.6		3	F	YES
CESSNA TU206C / TU206F	3.6 3.6	1 TCM TSIO-520-C	285 2700	4	3 MCCAULEY D2A34C78	82 2700 V	78.5		5	F	NO
CESSNA TU206G	3.6 3.6	1 TCM TSIO-520-M	285 2600	4	3 MCCAULEY D3A34C402	80 2600 V	78.5		5	F	NO
CESSNA TU206G (AMPHIB)	3.6 3.6	1 TCM TSIO-520-M	285 2600	4	3 MCCAULEY D3A34C402	80 2600 V	78.0		5	F	NO

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APPENDIX I
GCNP INCENTIVE PLAN NOISE LEVELS
PROPELLER-DRIVEN SMALL AIRPLANES

MAKE MODEL	MTOW MLW	# OF ENGINES MAKE MODEL	ENG. PWR RPM	EXHAUST	# OF PROP BLADES MAKE MODEL	PROP DIA RPM PITCH	NOISE LEVEL APP. F (dBA)	NOISE LEVEL APP. G (dBA)	# OF PAX	NOTES	QUIET TECHNOLOGY
CESSNA U206B/D/F	3.6 3.6	1 TCM IO-520-F	285 2700	5	3 MCCAULEY D2A34C58	82 2700 V	77.9		5	F	NO
CESSNA U206B/D/F/G	3.6 3.6	1 TCM IO-520-F	285 2700	5	3 HARTZELL HC-C3YF-IRF	78 2700 V	77.9		5	F	NO
DE HAVILLAND DHC-6-300	12.5 12.3	2 P&W PT6A-27	680	9	3 HARTZELL HC-B3TN-3D	102 2110 V	77.2		19	F	YES
DE HAVILLAND DHC-6-300	12.5 12.3	2 P&W PT6A-27	680	9	4 MCCAULEY C750	102 2110 V	77.2		19	F	YES
DORNIER DO-228-202	13.15	2 ALLIED SIGNAL TPE-331-5-252D	455 3810	1	4 HARTZELL HC-B4TN-5ML	107 V	78.3		19	6	YES
FOKKER F27	45.0 42.0	2 ROLLS ROYCE DART 532-7R	2307	8	27 DOWTY ROTOL R193-4-30-4	138 V	86.0		42	I	YES
PARTENAVIA 68CTC	4.38 4.38	2 LYC TIO/T0-360-C1A6D	210 2575	4	2 HARTZELL HC-C2YK-2CUF	76 2575 V	75.4		6	F	NO
PIPER PA-18-150	17.5 17.5	1 LYC O-320-A2B	150 2700	7	2 SENSENICH M74DM6-0-56	74 2700 F	69.0		3	F	YES
PIPER 28-R200	2.65 2.65	2 TCM TSIO-360-E/EB	200 2700	5	2 HARTZELL HC-C2YK-1( )F	74 2700 V	75.5		3	F	NO
PIPER 32-300	3.4 3.4	1 LYC IO-540-K1A/G5	300 2700	5	2 HARTZELL HC-C2YK-1( )F	80 2700 V	80.5		6	F	NO
PIPER 32RT-300T	3.6 3.6	1 LYC TIO-540-S1AD	270 2575	4	2 HARTZELL HCE2YR-1( )F	80 2575 V	75.7		6	F	NO
PIPER PA-31-350	7.01 7	2 LYC TIO-540-J2BD	315 2400	4	3 HARTZELL HC-E3YR-2ATF	80 2400 V	78.0		9	F	NO
PIPER PA-31-T3	9.0	2 PWC PT6A-11	455 3810	1	3 HARTZELL HC-B3TN-3B/T	93 V	76.6		3	F	NO
PIPER PA-34-200T	4.57 4.34	2 TCM TSIO-360-E/EB	200 2575	4	2 HARTZELL BHC-C2YF-2( )F/UF	76 2575 V	75.7		5	F	NO
PIPER PA-34-200T	4.57 4.34	1 LYC IO-360-C1C/6	200 2575	5	3 MCCAULEY 3AF34C502/3	76 2575 V	78.6		5	F	NO
PIPER PA-42-720	11.2 10.23	2 PRATT+WHITNEY PT6A-41	720	8	3 HARTZELLL HC-B3TN-3B/T10173AB-6Q	95 2000 V	80.3		8	F	NO

APPENDIX I
GCNP INCENTIVE PLAN NOISE LEVELS
PROPELLER-DRIVEN SMALL AIRPLANES

MAKE MODEL	MTOW MLW	# OF ENGINES MAKE MODEL	ENG. PWR RPM	EXHAUST	# OF PROP BLADES MAKE MODEL	PROP DIA RPM PITCH	NOISE LEVEL		# OF PAX	NOTES	QUIET TECHNOLOGY
							APP. F (dBA)	APP. G (dBA)			

NOTES COLUMN INDICATE THE HIERARCHY USED IN OBTAINING THE NOISE LEVEL
FOR THE EXPLANATION OF THE HIERARCHY SEE SECTION 5.

EXHAUST CONFIGI STUB PIPES
1 = SMALL COLLECTOR, SHORT EXHAUST PIPE
2 = BAFFLES IN COLLECTOR AND/OR CONES IN EXHAUST PIPE
3 = TURBOCHARGER
4 = HEAT MUFF
5 = COLLECTOR WRAPAROUND MANIFOLD STRAIGHT PIPE
6 = MANIFOLD MUFFLER
7 = RESONATOR MUFFLER
8 = TURBINE

NOTES COLUMN INDICATE THE HIERARCHY USED IN OBTAINING THE NOISE LEVEL
FOR THE EXPLANATION OF THE HIERARCHY SEE SECTION 6.
F = 14 CFR part 36 Appendix F
G = 14 CFR part 36 Appendix G
6 = ICAO Annex 16, Volume I Chapter 6
10 = ICAO Annex 16, Volume I Chapter 10
R = Research or other measurement test data
E = FAA approved noise estimation method defined by fourth hierarcy in Section 5
I = FAA approved noise estimation using the Integrated Noise Model

FOR DEFINITION OF CATEGORIES SEE SECTION 4 AND FIGURE 1.

NOMENCLATURE	#	Number
	APP. F (dBA)	Measured/Estimated APP. F level in dBA by the method described in column labeled NOTES
	APP. G (dBA)	Measured/Estimated APP. G level in dBA by the method described in column labeled NOTES
	ENG, POWER, RPM	Engine power in HP, operational RPM
	MAKE, MODEL	Manufacturer and model designation
	MTOW, MLW	Maximum Takeoff Weight, Maximum Landing Weight
	PAX	Passenger seats
	PROP DIAM, RPM, PITCH	Propeller diameter in inches, operational RPM AND PITCH (V: Variable, F: Fix)

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APPENDIX II
GCNP INCENTIVE PLAN NOISE LEVELS
HELICOPTERS

HELICOPTER MAKE MODEL	MGW MLW	# OF ENGINES MAKE MODEL	MAIN ROTOR #OF BLADES MAKE MODEL	MAIN ROTOR DIA.	TAIL ROTOR #OF BLADES MAKE MODEL	TAIL ROTOR DIA	NOISE LEVEL APP. H (EPNdB)	NOISE LEVEL APP. J (SEL)	# OF PAX	NOTES	QUIET TECHNOLOGY
AEROSPATIALE AS-350-B ASTAR	4.63	1 Turbomeca Arriel 1B	3 AEROSPATIALE/ EUROCOPTER	35'	2 AERO/EURO	6'10"	86.8		6	H	NO
AEROSPATIALE AS-350-BA	4.63	1 Turbomeca Arriel 1B	3 AEROSPATIALE/ EUROCOPTER	35'	2 AERO/EURO	6'10"	86.8		6	H	NO
AEROSPATIALE AS-350-B2 Ecureuil	4.96	1 Turbomeca Arriel 1D1	3 AEROSPATIALE/ EUROCOPTER	35'	2 AERO/EURO	6'10"	87.1		6	H	NO
AEROSPATIALE AS-350-B3 Ecureuil	4.96	1 Turbomeca Arriel 2B	3 AEROSPATIALE/ EUROCOPTER	35'	2 AERO/EURO	6'10"	87.3		6	H/8	NO
AEROSPATIALE AS-350-B3 Ecureuil	5.071	1 Turbomeca Arriel 2B	3 AEROSPATIALE/ EUROCOPTER	35'	2 AERO/EURO	6'10"		84.7	6	J/11	NO
BELL Jet Ranger BHT-206-B/BII	3.2	1 Allison 250-C20	2 BHT-206	33' 4"	2 BHT-206	5' 5"	84.6		4	8	NO
BELL - Long Ranger BHT-206-L/ L1	4.05	1 Allison 250-C28B	2 BHT-206	37'	2 BHT-206	5' 6"	85.8		6	8	NO
BELL - Long Ranger III BHT-206-L3	4.15	1 Allison 250-C30P	2 BHT-206	37'	2 BHT-206	5' 6"	87.8		6	8	NO
BELL - Long Ranger IV BHT-206-L4	4.45	1 Allison 250-C30P	2 BHT-206	37'	2 BHT-206	5' 6"	85.2		6	H	NO
BELL - Long Ranger BHT-206-L4	4.55	1 Allison 250-C20R	2 BHT-206	37'	2 BHT-206	5' 6"		85.2	6	J	YES
BELL BHT-407	5	1 Allison 250-C47	4 BHT-407	35'	2 BHT-407	5' 5"		85.1	6	J	YES
EUROCOPTER EC-130-B4	5.291	1 Turbomeca Arriel 2 B 1	3 EUROCOPTER	35'	10 EUROCOPTER	3'3"	84.0		7	H/8	YES
EUROCOPTER EC-130-B4	5.351	1 Turbomeca Arriel 2 B 1	3 EUROCOPTER	35'	10 EUROCOPTER	3'3"	84.0		7	H/8	YES
MDHI MD-900 Explorer	6.25	1 PW206A 1C	5 MDHI	33.83'	NOTAR System	-	83.0		8	H	YES
Whisper Jet S-55QT (Sikorsky S-55 modified)	7.7	1 Allied Signal TSE 331-10-591 SW	5 S-55	53'	2 S-55	8' 9"	80.0		9	H	YES

NOTES COLUMN INDICATE THE HIERARCHY USED IN OBTAINING THE NOISE LEVEL
FOR THE EXPLANATION OF THE HIERARCHY SEE SECTION 5.

H = 14 CFR part 36 Appendix H
J = 14 CFR part 36 Appendix J
8 = ICAO Annex 16, Volume I Chapter 8
11 = ICAO Annex 16, Volume I Chapter 11
R = Research or other measurement test data
E = FAA approved noise estimation method as defined in the fourth hierarchy in Section 5
I = FAA approved noise estimation using the Integrated Noise Model

FOR DEFINITION OF CATEGORIES SEE SECTION 4 AND FIGURE 1-4.

NOMENCLATURE

#	Number
APP. H NOISE LEVEL	Measured/Estimated App. H level in EPNdB by method described in column labeled NOTES
APP. J NOISE LEVEL	Measured/Estimated App. J level in SEL by method described in column labeled NOTES
DIA	Diameter in feet
MAKE, MODEL	Manufacturer and model designation
MTOW, MLW (1000 LBS)	Maximum Takeoff Weight, Maximum Landing Weight
PAX	Passenger seats

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APPENDIX F-3. FAA NOTICE 8000.342

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
National Policy

NOTICE N 8000.342

Effective Date:
12/15/06
Cancellation Date:
12/15/07

SUBJ: National Parks Air Tour Management Plans

1. PURPOSE. This Notice provides aviation safety inspectors (ASI) information, direction, and guidance for the development and facilitation of air tour management plans (ATMP).

2. DISTRIBUTION. We will distribute this notice to the division level in the Flight Standards Service in Washington headquarters, including the Regulatory Standards Division at the Mike Monroney Aeronautical Center; to the branch level in the regional Flight Standards divisions; and to all Flight Standards District Offices. Inspectors can access this notice through the Flight Standards Information Management System (FSIMS) at http://fsims.avr.faa.gov. Operators may find this information on the Federal Aviation Administration's (FAA) Web site at: http://www.faa.gov/library/manuals/examiners_inspectors/8000/.

3. BACKGROUND. ATMPs are developed by the FAA and the National Park Service (NPS) in accordance with the National Parks Air Tour Management Act of 2000 (NPATMA) and Title 14 of the Code of Federal Regulations (14 CFR) part 136, National Parks Air Tour Management regulation.

4. GUIDANCE. Appendix 1 of this notice provides new handbook guidance regarding ATMPs.

5. ACTION. ASIs and FSDO managers should review the guidance in Appendix 1.

6. DISPOSITION. We will permanently incorporate the information in this notice in FSIMS before this notice expires. Any questions regarding this notice should be directed to the Aviation Safety Environmental Policy Office, AQS-100, at 202-493-5563.

ORIGINAL SIGNED (by)

James J. Ballough
Director, Flight Standards Service

Distribution: A-W(FS)-2; A-X(FS)-3; A-FFS-7 (LTD); AMA-200 (12 cys) **Initiated By:** AQS-100
(Electronically: A-W(FS)-2; A-X(FS)-2; A-FFS-7)

APPENDIX 1. ORDER 8400.10, VOLUME 1, CHAPTER 7, AIR TOUR MANAGEMENT PLANS

VOLUME 1. GENERAL CONCEPTS, DIRECTION, GUIDANCE, AND DEFINITIONS

CHAPTER 7. AIR TOUR MANAGEMENT PLANS

SECTION 1. BACKGROUND AND GENERAL INFORMATION

601. APPLICABILITY. This chapter contains information, direction, and guidance for aviation safety inspectors (ASI) that pertain to the development and facilitation of air tour management plans (ATMP) in accordance with the National Parks Air Tour Management Act of 2000 (NPATMA) and Title 14 of the Code of Federal Regulations (14 CFR) part 136, National Parks Air Tour Management regulation.

603. BACKGROUND.

A. The National Parks Air Tour Management Act of 2000 (NPATMA). This act was signed into law on April 5, 2000. The Federal Aviation Administration (FAA) codified the provisions of Title VIII of the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (Air-21) as part 136 of the regulations on October 25, 2002. NPATMA and part 136 establish a process for the development of an ATMP for any "commercial air tour operation" that occurs over a unit of the national park system or tribal lands.

B. Air Tour Management Plan (ATMP). The objective of an ATMP is to develop acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon the natural and cultural resources, visitor experiences, and tribal lands. NPATMA requires the Administrator, in cooperation with the National Park Service (NPS) Director, to develop a specific plan to govern commercial air tour operations at national parks. The FAA and NPS are tasked with developing ATMPs through a public process. A final ATMP will be developed with particular consideration given to the uniqueness of each park. This final ATMP may contain any number of specific restrictions or no restrictions at all. Some examples of the types of restrictions that could be included in an ATMP are:

- Limits on the number and frequency of commercial air tour operations over a park
- Establishment of routes over a park
- Exclusion of specific areas within a park for air tour operations.

C. Agency Responsibilities.

(1) AIR-21 was signed into public law (P.L. 106-181) on April 5, 2000. Title VIII of AIR-21, called the National Parks Air Tour Management Act of 2000, regulates commercial air tour operations over units of the National Park System through ATMPs. NPATMA requires that the Administrator of the FAA establish ATMPs in cooperation with the Director of the National

Parks Service (NPS). For purposes of complying with the National Environmental Policy Act of 1969 (NEPA) and agency planning regulations in the development of ATMPs; NPATMA identifies the FAA as the lead agency and the NPS as a cooperating agency. Furthermore, the FAA and NPS will solicit the participation of Indian tribes whose tribal lands are, or may be, overflown by commercial air tour operations over the park or tribal lands as a cooperating agency.

(a) In establishing an ATMP, the FAA Administrator and the NPS Director will sign an environmental decision document as required by Section 102 of NEPA (Title 42 of the United States Code (42 U.S.C.) § 4332). This environmental document may:

- Include a finding of no significant impact (FONSI); or
- State the need for an environmental assessment (EA); or
- State the need for an environmental impact statement (EIS), and the record of decision for the ATMP.

(b) The FAA placed the responsibility of executing this national ATMP Program with the Western-Pacific Regional Administrator (AWP-1). In response, AWP created the Air Tour Management Plan Program Office (ATMP PO) under the direction of AWP's Executive Resource Staff (AWP-4).

(2) The FAA has sole authority to control airspace over the United States. NPATMA further authorizes the FAA to preserve, protect, and enhance the environment by minimizing, mitigating, or preventing any significant adverse effects of aircraft overflights of national parks and abutting tribal lands. The NPS has the responsibility of conserving the scenery and natural and historic objects and wildlife in national parks and providing for the enjoyment of the national parks in ways that leave the parks unimpaired for future generations.

(3) The National Parks Overflights Act of 1987 (P.L. 100-91), herein referred to as the Grand Canyon Act, requires actions by the Department of the Interior (DOI)/NPS and the FAA to provide for substantial restoration of the natural quiet and experience of Grand Canyon National Park (GNCP) and for protection of public health and safety from adverse effects associated with aircraft overflights. Actions have been taken over the years to improve aviation safety and reduce noise, but a final overflights plan—including routes or corridors for quiet technology aircraft—is still to be completed. A Presidential memorandum, dated April 22, 1996, directs that a plan shall ensure that the restoration of natural quiet required by the Grand Canyon Act is completed no later than April 22, 2008. The NPS and FAA are providing joint Federal leadership to complete this task with the participation of stakeholders and tribal governments. The ATMP PO is the FAA's lead for implementing NEPA associated with GNCP overflights.

(4) The Associate Administrator for Aviation Safety (AVS) Environmental Policy Office (EPO), AQS-100, encompasses responsibilities for developing AVS National environmental policy, procedures, guidance for compliance with:

(a) NEPA,

(b) The AVS Environmental Management System (EMS),

(c) All applicable orders, regulations and policies for all AVS organizations, and

(d) All environmental responsibilities for Flight Standards, including air tours over National Parks in compliance with the Grand Canyon Act and NPATMA.

(5) Once an ATMP has been established for a specific park, AQS-100 through the Flight Standards Service (AFS) is responsible for monitoring and enforcing each ATMP (see Order 8400.10, Air Transportation Operations Inspector's Handbook, volume 1, chapter 7, section 5 for oversight/surveillance guidance).

605. INTERIM OPERATING AUTHORITY (IOA) FOR EXISTING COMMERCIAL AIR TOUR OPERATORS. Prior to January 23, 2003, any existing 14 CFR part 121 or 135 air tour operator, or part 91 operator pursuing certification, must have applied for and received IOA from the FAA in order to conduct air tour operations over units of the National Park System and abutting tribal lands. Applications from certificated operators must have been filed with their certificate holding district office (CHDO), while all other applications must have been made with the flight standards district office (FSDO) that has geographic surveillance responsibility over a particular unit of the National Park System and abutting tribal lands. Upon application for operating authority, the FAA is responsible for issuing IOA in accordance with part 136, § 136.11(c). Submission of an application may trigger the FAA and the NPS to initiate development of an ATMP for the requested national park unit and abutting tribal land(s).

NOTE: All requests for IOA after January 23, 2003 are new entrant requests and must be approved by the FAA and NPS at the national level. See New Entrants in section 3.

A. Number of Flights. The IOA is subject to a limit on the annual number of commercial air tour operations that may be conducted on an interim basis pending issuance of the ATMP for a specific park. Determination on the number of commercial air tour operations that may be conducted is based upon the greater of the following criteria:

- The number of flights used by the operator to provide the commercial air tour operations within the 12-month period before April 5, 2000; or
- The average number of flights per 12-month period used by the operator to provide such operations within the 36-month period before April 5, 2000; or
- For seasonal operations, the number of commercial air tour operations that occurred during the season or seasons covered by the 12-month period before April 5, 2000.

B. Requirements and Limitations. The issuance of an IOA is subject to the following:

- May not provide for an increase in the number of commercial air tours conducted during any time period by the commercial air tour operator above the number the

air tour operator was originally granted, unless such an increase was agreed to by the FAA and the NPS

- Will be published in the Federal Register to provide notice and opportunity for comment (Published on 06-23-05 at 70 FR 36456)
- May be revoked by the FAA for cause
- Will terminate 180 days after the date on which an ATMP is established for a specific park or abutting tribal land
- Will promote protection of national park resources, visitor experiences, and tribal lands
- Will promote safe commercial air tour operations
- Will promote the adoption and use of quiet technology, as appropriate
- Will allow for modifications based on experience if the modification improves protection of national park resources and values and of tribal lands

C. *FAA Approval Process.*

(1) All requests for IOA/Letter of Agreement (LOA) and/or a change in existing IOA/LOA must be coordinated with and approved by AQS-100 for coordination with the NPS.

(a) Operators are issued IOA in Operations Specification (OpSpec) B057, National Parks Air Tour Management Operations—Under 14 CFR part 136.

(b) Part 91 operators that have applied for air carrier certification under part 119 prior to January 23, 2003 were issued a LOA also located in template B057 of the operations specification safety system.

(c) Part 91 operators that wish to remain under part 91 and operate under exemption 40128 (a)(3) are issued a letter of agreement and must first secure a letter of agreement from the national park superintendent for each unit of the National Park System where air tours are requested. The LOA must describe the conditions under which the operations will be conducted. Principal operations inspectors (POI) must obtain a copy of the operator's LOA from the park superintendent, annotate receipt of that document, and attach that letter to LOA B057 prior to issuing LOA.

(d) Only National Parks and National Monuments listed as units of the National Park System are eligible to receive IOA; if the park is not on the list, it is not part of the National Park System. POIs must select the park name in B057 template exactly as their names appear in the National Park Unit list.

(2) Tribal Lands.

(a) Tribal lands that are within or abutting a unit of the National Park System require IOA ONLY if commercial air tour operation flights also fly over, or within one-half mile of a national park unit.

(b) NPATMA is not intended to apply the requirements of an ATMP to tribal lands that are not within or abutting a national park.

(c) NPATMA's requirement to establish an ATMP is triggered by an application for authority to conduct a commercial air tour operation "over the park." NPATMA specifically sets out the contents that may be included in an ATMP for a "national park." No such provision exists for tribal lands.

(d) The term "tribal land" is specifically defined to only include "Indian country" (as defined in 18 U.S.C. § 1151) that is within or abutting a national park.

(e) The1/2-mile boundary was implemented so that air tours could not be conducted just outside the park boundary without operating authority. Thus if tribal lands are within or abutting a unit of the National Park System and an application for operating authority for the park unit is received, then operating authority over those tribal lands is required.

607. DEFINITIONS.

A. AVS ATMP Development Representative. A person appointed by the AQS-100 manager, responsible for Flight Standards participation in the development of a particular ATMP and for performing any technical analysis and/or safety analysis needed.

B. AVS Grand Canyon National Park Working Group Representative. A person appointed by the AQS-100 manager, responsible for Flight Standards participation in the Grand Canyon Working Group and for performing any technical analysis and/or safety analysis needed.

C. Air Tour Management Plan (ATMP). May prohibit commercial air tour operations in whole or in part and, establishes conditions for the conduct of commercial air tour operations within one-half mile outside the boundary of a national park, including but not limited to:

- Commercial air tour routes;
- Maximum number of flights per unit of time;
- Maximum and minimum altitudes;
- Time of day restrictions;
- Restrictions for particular events;
- Intrusions of privacy on tribal lands; or
- Mitigation of noise, visual, or other impacts.

D. ATMP Working Group. An ATMP working group consists of: an AWP-4 representative, an AQS-100 representative, an Office of Environment and Energy (AEE) representative, the Chief Counsel's Office representatives, and the NPS Regional Director and/or designated staff. Air Traffic and Airports Division Specialists may be used as needed. This group/and or its delegates will prepare the ATMPs and applicable NEPA compliance documents.

E. Certificate Holding District Office (CHDO). The CHDO is the FSDO responsible for managing an air carrier or commercial operator's certificate. These offices are also responsible for issuing, monitoring, compliance, and enforcement of IOA and LOAs regarding ATMPs for national park units within their geographical office boundaries.

F. Commercial Air Tour Operator. Any PERSON who conducts a commercial air tour operation.

G. Commercial Air Tour Operation.

(1) Any flight, conducted for compensation or hire in a powered aircraft where a purpose of the flight is sightseeing within one-half mile outside the boundary of any national park or over abutting tribal lands, during which the aircraft flies:

(a) Below 5,000 feet above ground level (AGL) (except solely for the purposes of takeoff or landing, or necessary for safe operation of an aircraft as determined under the rules and regulations of the FAA requiring the pilot-in-command to take action to ensure the safe operation of the aircraft), or

(b) Less than 1 mile laterally from any geographic feature within the park (unless more than one-half mile outside the boundary).

(2) In making a determination of whether a flight is a commercial air tour operation for purposes of this section, the Administrator may consider:

(a) Whether there was a holding out to the public of willingness to conduct a sightseeing flight for compensation or hire,

(b) Whether a narrative that referring to areas or points of interest on the surface below the route of the flight was provided by the person offering the flight,

(c) The area of operation,

(d) The frequency of flights conducted by the person offering the flight,

(e) The route of the flight,

(f) The inclusion of sightseeing flights as part of any travel arrangement package offered by the person offering the flight,

(g) Whether the flight would have been canceled based on poor visibility of the surface below the route of the flight, and

(h) Any other factors that the Administrator and the Director consider appropriate.

H. Director. The Director of the NPS.

I. Existing Commercial Air Tour Operator. A commercial air tour operator that was actively engaged in the business of providing commercial air tour operations over a national park at any time during the 12-month period ending on the date of enactment of the NPATMA (i.e., April 5, 2000).

J. Operating Authority. Permission to conduct commercial air tour operations over a national park, or tribal lands, in compliance with an established ATMP.

K. Geographic Flight Standards District Office (GEO FSDO). The FSDO whose district boundaries contain a specific unit or units of the National Park System and/or tribal lands.

L. Interim Operating Authority (IOA). A temporary operating authority issued to existing Commercial Air Tour operators who applied for operating authority before the effective date of the final rule implementing NPATMA. IOA remains in effect for 180 days after an ATMP is established. An IOA also may be issued to a New Entrant Commercial Air Tour Operator by the Administrator in cooperation with the NPS Director, if the Administrator determines the authority is necessary to ensure competition in the provision of commercial air tour operations over the park or tribal lands.

M. Letter of Agreement (LOA). Letters describing the conditions under which commercial air tour operations will be conducted. One is secured from the National Park Superintendent and one from the Administrator (B057) for each relevant national park unit, issued to a part 91 commercial air tour operator permitting commercial air tour operations over a national park. The total number of such operations over each park is limited to five flights during any 30-day period for part 91 operators (that did not apply for air carrier certification prior to January 23, 2003) operating under a LOA for a given park.

N. National Park. Any unit of the National Park System, including national monuments. This list is available in the B057 template.

O. National Park Overflights Advisory Group (NPOAG). An advisory group created by NPATMA that is composed of a balanced group of representatives from general aviation, commercial air tour operators, environmental concerns, Indian Tribes, the FAA, and the NPS, which provides continuing advice and counsel with respect to commercial air tour operations over and near national parks.

P. National Parks Air Tour Management Act of 2000 (NPATMA). NPATMA is a part of Public Law 106-181 signed into law on April 5, 2000. NPATMA establishes provisions governing overflights of national parks. Portions of NPATMA include a public process for the development of ATMPs in cooperation with the NPS, procedures for granting IOA, requirements for existing and new entrant commercial air tour operations and conditions and limitations for conducting commercial air tour operations over or near any unit of the National Park System or tribal lands.

Q. New Entrant Commercial Air Tour Operator. A commercial air tour operator that:

- Applies for operating authority as a commercial air tour operator for a national park or tribal lands
- Is an existing commercial air tour operator and applies for new operating authority for national park (s) not previously conducted.
- Is an existing commercial air tour operator and applies for an increase of operating authority numbers of air tours for currently approved national parks.

R. Part 91 Commercial Air Tour Operator. A part 91 operator with LOA conducting commercial air tour operations over a national park or tribal lands under 14 CFR § 119 (e) (2). See Order 8400.10, volume 1, chapter 7, section 4.

S. Part 91 Operator (applied for air carrier certification). A part 91 existing commercial air tour operator granted IOA while pursuing certification as an air carrier under 14 CFR, part 119.

*T. Person. A*n individual, firm, partnership, corporation, company, association, joint-stock association, or governmental entity. It includes a trustee, receiver, assignee, or similar representative of any of the aforementioned parties.

U. Superintendent. The duly appointed representative of the NPS for a particular unit of the National Park System.

V. Tribal Lands. Indian Country (as defined in 18 U.S.C. § 1151) that is within or abutting a national park.

608.–618. RESERVED.

VOLUME 1. GENERAL CONCEPTS, DIRECTION, GUIDANCE, AND DEFINITIONS

CHAPTER 7. AIR TOUR MANAGEMENT PLANS

SECTION 2. FLIGHT OPERATIONS SUBJECT TO INTERIM OPERATING AUTHORITY AND AIR TOUR MANAGEMENT PLANS

619. APPLICABILITY. This section prescribes the conditions a flight operation must include to be a commercial air tour operation subject to interim operating authority (IOA) and air tour management plans (ATMP). This section will assist Federal Aviation Administration (FAA) inspectors in determining whether an operation qualifies as a commercial air tour operation (as defined in the National Parks Air Tour Management Act of 2000 (NPATMA)).

A. Conditions of Flight. All of the following conditions must be met for the operation to be considered a commercial air tour:

(1) Compensation or Hire. The flight is conducted for compensation or hire.

(2) Aircraft. The aircraft used is a powered aircraft.

(3) Locale. The flight is conducted below 5,000 feet (ft) above ground level (AGL) in any of the following places (Exception, see paragraph 1.21):

- Over a unit of the national park system,
- Within one-half nautical mile outside the boundary of a national park unit,
- Over tribal lands, or
- Less than one nautical mile laterally from any geographic feature within the park (unless more than one-half nautical mile outside the boundary).

(4) Purpose. A purpose of the flight is sightseeing.

B. Determining if a purpose of the flight is sightseeing.

(1) The determination of whether sightseeing comprises a purpose of a particular operation is dependent upon several variables. In cases where situations are not expressly covered here, inspectors should consult with the Associate Administrator for Aviation Safety (AVS) Environmental Policy Office (EPO), AQS-100, who will have the latest policy guidance and ensure its uniform application.

(2) NPATMA provides that ANY of the following factors MAY be considered:

- Holding Out. Is there a holding out to the public of a willingness to conduct a sightseeing flight for compensation or hire? This can be shown by pamphlets, Web sites, or other advertising.

- Narrative Referring to Points of Interest. Did the flight include a narrative that referred to areas or points of interest on the surface below the route of flight?
- Area of Operation. Is the area of operation near a unit of the National Park System?
- Frequency. Does the operator conduct these types of flights on a frequent basis?
- Route of Flight. Is the flight(s) planned route for the purpose of sightseeing over a unit of the National Park System?
- Travel Arrangement. Is the inclusion of sightseeing flights a part of a travel arrangement package offered by the person offering the flight?
- Poor Visibility. Would the flight have been cancelled because of poor visibility of the surface below the route of flight?
- Other. Any other factors that the Administrator and the Director of the NPS consider appropriate.

621. EXCEPTIONS. The following flight operations are NOT regulated by NPATMA:

A. Takeoff or Landing. A flight that operates below 5,000 ft. AGL over a unit of the national park system or over tribal lands or within one-half nautical mile outside the boundary of a national park, solely for the purpose of takeoff or landing.

B. "Safe Operation of the Aircraft." This phrase encompasses the discretionary action of a pilot who descends below 5,000 ft AGL over or within one-half nautical mile outside the boundary of a national park, where the descent is necessary for the safe operation of the aircraft. This is determined by FAA regulations requiring the pilot in command to take whatever action necessary to ensure the safe operation of the aircraft.

C. Grand Canyon National Park. Commercial air tour operations over Grand Canyon National Park (GCNP) (see SFAR 50-2 and Part 93).

D. Tribal Lands Within or Abutting GCNP. A Commercial air tour operation over that portion of tribal lands within or abutting the GCNP.

E. Alaska. A commercial air tour operation over lands or waters located in the State of Alaska.

F. Lake Mead. Any air tour operator while flying over or near the Lake Mead National Recreational Area (LMNRA), solely as a transportation route, to conduct an air tour over the GCNP. An air tour operator flying over the Hoover Dam in the LMNRA en route to the GCNP is deemed to be flying solely as a transportation route.

(1) A large portion of the commercial air tours to GCNP originate in Las Vegas, Nevada, and as such, transit over LMNRA en route to/from the Grand Canyon. It was never the

intent of NPATMA to capture these operations, since they are already regulated through SFAR 50-2 and part 93, unless they also are commercial air tour operations of LMNRA.

(2) All commercial air tour operators flying over or near LMNRA, solely as a transportation route, to conduct a commercial air tour over GCNP are EXEMPT from the provisions of the NPATMA, and from the IOA requirements of part 136.

(3) Principal operations inspectors (POI) having oversight responsibilities relating to commercial air tour operators are required to review (with the operator) all flight operations which transit LMNRA. If it is determined that all of the operator's flights for which IOA was issued are solely transiting LMNRA en route to/from GCNP for the purpose of conducting a commercial air tour of GCNP, then that operator does not require the issuance of Operations Specification (OpSpec) B057, National Park Air Tour Management Operations-Under 14 CFR part 136. If the operator is conducting a commercial air tour of the LMNRA for some or all of the flights, then the operator will need OpSpec B057 for those flights.

(4) If it is determined that the number of operations in OpSpec B057 is incorrect, or that the entire OpSpec B057 was issued in error, the POI should amend or rescind OpSpec B057 authority, as appropriate, and send a letter to the operator stating why the OpSpec authority is being amended or why the authorization is being rescinded. If the operator requests at a later date to conduct air tours of Lake Mead then the operator must apply as a new entrant.

623. PROHIBITED FLIGHTS. A commercial air tour operation in the airspace over the Rocky Mountain National Park is prohibited.

624.–634. RESERVED.

VOLUME 1. GENERAL CONCEPTS, DIRECTION, GUIDANCE, AND DEFINITIONS

CHAPTER 7. AIR TOUR MANAGEMENT PLANS

SECTION 3. INTERIM OPERATING AUTHORITY FOR NEW ENTRANT COMMERCIAL AIR TOUR OPERATORS

635. GENERAL. The Administrator, in cooperation with the National Park Service (NPS) Director, may grant interim operating authority (IOA) to an air tour operator for a national park or tribal lands for which that operator is a new entrant air tour operator if ALL of the following conditions are met:

- The Federal Aviation Administration (FAA) determines that the authority is necessary to ensure competition in the provision of commercial air tour operations over the park or abutting tribal lands
- The FAA determines that a safety problem would not be created at the park or abutting tribal lands
- The NPS Director has made a determination that it would not create a noise problem at the park or abutting tribal lands
- An air tour management plan (ATMP) has not been developed for the park or abutting tribal lands prior to April 5, 2002

NOTE: The Certificate Holding District Office (CHDO) must notify the Associate Administrator for Aviation Safety (AVS) Environmental Policy Office (EPO), AQS-100 when an operator's application for IOA is received so that coordination can be initiated with the Western-Pacific Regional Administrator, AWP-1 and the NPS for an ATMP for that National Park unit and abutting tribal land. Coordination and approval at the FAA and NPS National Level is required prior to issuing IOA.

637. Application for IOA for new entrant operations.

A. Application Contents.

(1) Operators making applications are required to submit the following information in the order listed as part of their application package:

- Name, mailing address, and phone numbers of the company
- Address of principal base where operations will be conducted

- The operator's certificate number (if the applicant is a certificated Title 14 of the Code of Federal Regulations (14 CFR) part 135 single pilot, basic, full, or commuter operator status; or part 121 operator)
- 14 CFR part 91, NPS Letter of Authorization from each park unit superintendent for each national park requested
- The national park(s) and/or abutting tribal land(s) over which tours are requested and the number of flights per park that is requested
- Type and number of aircraft to be used for the commercial air tour operations
- Type of engines and whether the aircraft are quiet technology aircraft
- The proposed startup date
- Management personnel names, titles, and telephone numbers
- Maps/Charts of proposed or actual routes and altitudes
- Frequency and proposed time of flights, if known
- The safety history of the operator
- An original and two copies of the IOA application
- Any additional information that might provide the FAA with a better understanding of the proposed operation

(2) New entrants are encouraged to provide the following information in their IOA application as it may aid in the ATMP development process.

(a) The economic benefits of the operator's commercial air tour operations to the park and community.

(b) Impact of any potential restrictions on an operator's commercial air tour operations.

(c) The advantages of the operator's air tours for its customers and the national parks and/or tribal lands they visit.

(d) The number of air tour visitors the operator intends to serve on an annual or seasonal basis.

(e) Any other data that supports commercial air tour operations over the national park and/or tribal lands.

B. Application Filing Locations. Operators will be directed to file their applications as follows:

(1) Certificated 121 or 135 Operators. Their respective CHDOs.

(2) Part 91 Operators. The Geographic Flight Standards District Office (GEO FSDO) whose district boundaries contain the specific unit or units of the National Park System

C. Initial Review of Application. Upon receiving the application, the FAA will make an initial review for completeness. If the application is found to be incomplete, the FAA will reject the entire application and return it to the applicant with a letter stating the reasons for the rejection and encouraging the applicant to reapply. The CHDO or FSDO should retain a copy for future reference if the operator reapplies.

D. Application Processing. The CHDO or FSDO will retain the original and forward a copy to AQS-100. AQS-100 will consult with the Western-Pacific Region Executive Resource Staff, AWP-4 and coordinate the request with the NPS. In addition, when approved, the AQS-100 will coordinate with the CHDO or FSDO for OpSpec/LOA B057 issuance.

NOTE: See Order 8400.10, Air Transportation Operations Inspector's Handbook, volume 3, chapter 1, section 4 for guidance on the issuance of OpSpec B057.

638.–648. RESERVED.

VOLUME 1. GENERAL CONCEPTS, DIRECTION, GUIDANCE, AND DEFINITIONS

CHAPTER 7. AIR TOUR MANAGEMENT PLANS

SECTION 4. PART 91 COMMERCIAL AIR TOUR OPERATORS

649. APPLICABILITY. The National Parks Air Tour Management Act of 2000 (NPATMA) provides for Title 14 of the Code of Federal Regulations (14 CFR) part 91 commercial air tour operators to conduct limited air tour operations over national parks notwithstanding the air tour management plan (ATMP) process. Part 91 commercial air tour operators are allowed to conduct very limited commercial air tour operations over a given park unit or abutting tribal land. For each National Park unit, the operator must first secure a Letter of Agreement (LOA) from the National Park Service (NPS) Park Superintendent and the Federal Aviation Administration (FAA) to conduct such operations under the conditions specified in the LOA.

651. LIMITATIONS.

A. Regulatory Compliance. An LOA may only be issued for commercial air tour operations conducted in accordance with 14 CFR part 119, § 119.1(e)(2) and part 135, § 135.1(a)(5).

B. Limitations on Operations. In accordance with part 136, § 136.7(g)(3), part 91 commercial air tour operators may conduct commercial air tour operations over a park unit limited to not more than five flights by all part 91 commercial air tour operators in any 30-day period.

653. APPLICATION FOR LOA.

A. For an LOA to be granted, a part 91 commercial air tour operator must submit a written LOA application letter to the Flight Standards District Office (FSDO) whose boundaries include the requested park unit(s). The application letter must include the following:

- Company name, mailing address, responsible party, and phone numbers
- Address of the principal base where operations will be conducted
- Proposed startup date
- Number of flights proposed each 30-day period per park unit(s)
- Number and type of aircraft to be used
- National park, tribal land, or geographic area of intended operations

B. The FSDO will consult with the Associate Administrator for Aviation Safety (AVS) Environmental Policy Office (EPO), AQS-100 regarding any safety evaluations that may be needed prior to issuing the LOA.

655. LETTER OF AGREEMENT. After coordinating with the Park Superintendent, obtaining a copy of the NPS LOA from the applicant for each National Park Unit requested, coordinating with AQS-100, and completing any safety review, the FSDO may issue a LOA template B057 to the operator from the Automated Operation Safety System.

NOTE: In coordinating a LOA with the NPS for each park unit requested, an LOA must be secured from each Park Superintendent stating any conditions applicable to the proposed air tour operations. This letter will then be attached to each operator's FAA LOA and constitute the NPS's signature authorization. The FSDO must retain copies of each NPS LOA in the operators' permanent file and send copies of all LOAs to AQS-100.

A. Contents. The LOA will contain the following items, as applicable:

- Name and operating address of the operator
- Number of commercial air tour operations authorized for that operator in any 30-day period
- Any limitations or conditions needed for safety
- Any limitations or conditions required by the Park Superintendent (must be an attached letter)
- Notice that the LOA is not a property interest, but rather an operating privilege that can be modified or revoked by the FAA

B. Issuance and Distribution. LOAs may be issued when all requirements and coordination approvals have been met and amended as needed. A copy of each LOA will be sent to AQS-100 and the Western-Pacific Executive Resource Staff, AWP-4.

656.–666. RESERVED.

VOLUME 1. GENERAL CONCEPTS, DIRECTION, GUIDANCE, AND DEFINITIONS

CHAPTER 7. AIR TOUR MANAGEMENT PLANS

SECTION 5. OPERATING AUTHORITY AND FEDERAL AVIATION ADMINISTRATION OVERSIGHT/SURVEILLANCE

667. OPERATING AUTHORITY.

A. Issuance. Operating authority is granted to commercial air tour operators as the result of an established air tour management plan (ATMP) that prescribes a limited number of commercial air tours over a park unit or abutting tribal land. When issued for any given park unit, operating authority will become effective 180 days after completion of the ATMP. Operating authority is granted by issuing template B057, part (b) as described in Order 8400.10, Air Transportation Operations Inspector's Handbook, volume 3, chapter 1, section 4.

B. Amendments. It may be necessary to amend the operating authority of a particular commercial air tour operator in order to accommodate internal or operational changes. Operators should submit requests for amendments to their operating authority to their respective Certificate Holding District Office (CHDO). It is in the operator's interest to present full justification with the request, including representations as to the possible impact on safety. All requests for operating authority amendments must be coordinated through the Associate Administrator for Aviation Safety (AVS) Environmental Policy Office (EPO), AQS-100.

669. OPERATOR REQUEST FOR AN INCREASE IN COMMERCIAL AIR TOURS.

A. Operators that have been granted operating authority on their template B057 may request an increase in commercial air tour operations. Inspectors must coordinate the request with AQS-100.

B. AQS-100 will coordinate the request with the Western-Pacific Region Executive Resource Staff, AWP-4 and the National Park Service (NPS). If approved, AQS-100 will coordinate with the CHDO for OpSpec B057, part (b) reissuance.

673. MERGERS, ACQUISITIONS, AND BANKRUPTCIES.

A. Mergers and Acquisitions. If air tour operators merge operations, acquire operational assets of another air tour operator, or change ownership, commercial air tour operating authority may be reallocated by the Federal Aviation Administration (FAA) on a case-by-case basis, subject to all of the following conditions:

- Operating authority is not effective until the CHDO re-issues the OpSpec/LOA reflecting the authorization
- An air tour operator must notify its respective CHDO in writing with a request to reallocate operating authority with justification explaining the similarities

Draft information, some information still requires FAA/NPS concurrence; do not cite or distribute. For official use only.

between the previous and current operations (for example: personnel, aircraft, park units, routes)

- The notification must identify both the names of the parties and the number of operating authorities per unit of national park involved

- Prior coordination with and approval of the AQS-100 is required

NOTE: See Order 8400.10, volume 2, chapter 5, section 1, Mergers and Acquisition of Air Carrier Operational Assets, for additional guidance.

B. Bankruptcies. If an operator surrenders its operating certificate or goes out of business, air tour operating authorities are NOT transferable to another operator without approval from AQS-100. These air tour operating authorities will revert back to the FAA.

675. ATMP AMENDMENTS. Under certain circumstances it may be necessary to amend an ATMP. For example, updates of the park general management plan that propose significant changes in park use may require concurrent reevaluation of the ATMP. Any interested party may request amendments to an existing ATMP. The National Parks Air Tour Management Act of 2000 (NPATMA) and Title 14 of the Code of Federal Regulations (14 CFR) part 136 allow for such amendments through the rulemaking process. Inquiries regarding amendments to ATMPs should be directed to AQS-100.

677. FAA OVERSIGHT AND SURVEILLANCE. FAA Flight Standards Service is responsible for oversight and surveillance of all commercial air tour operators. Each office with part 136 surveillance responsibilities must develop a safety and surveillance plan. (See Figure 1.6.5.2 for a sample air tour safety plan.)

A. A minimum of one planned item per air tour operator should be included in all principal operations inspectors' work plans that have responsibility for commercial air tour operators.

B. Flight Standards District Office (FSDO) management personnel should also contact each National Park Unit Superintendent within their area of jurisdiction at least once a year to discuss mutual air tour issues.

679. ENFORCEMENTS.

A. Responsibility. The local CHDO or FSDO is responsible for enforcing the applicable sections of 14 CFR as they apply to commercial air tour operations and the specific provisions contained in all types of operating authority, including Letters of Agreement and ATMPs.

B. Investigations. All investigations will be conducted according to the procedures set forth in FAA Order 2150.3A, Compliance and Enforcement Program.

C. Coordination. Investigations into possible violations of the provisions of NPATMA, a specific ATMP, or other part 136 requirements require notification and coordination with AQS-100.

D. Safety Issues. Investigations of possible violations of safety regulations require no coordination, but it is recommended that AQS-100 be advised of any such occurrences.

680.–690. RESERVED.

FIGURE 1.7.5.1

SAMPLE AIR TOUR SAFETY PLAN

FEDERAL AVIATION ADMINISTRATION

AIR TOUR OPERATION PLAN

XXXX
Flight Standards District Office

Address

Phone

N 8000.342 12/15/06
Appendix 1

AIR TOUR OPERATIONS PLAN

XXXX

Flight Standards District Office

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AIR TOUR OPERATIONS PLAN

XXXX

Flight Standards District Office

RECORD OF REVISIONS

Number	Date	By	Comments
Original			

N 8000.342 12/15/06
Appendix 1

AIR TOUR OPERATIONS PLAN

XXXX

FLIGHT STANDARDS DISTRICT OFFICE

1. INTRODUCTION. The purpose of this operations plan is to provide a guide and procedures for pilots to enhance safety while operating aircraft on air tours. The plan will include, as a minimum, the location of airports/heliports, standard routes and altitudes and common radio frequencies to be used by the participants. In addition, safety procedures for high altitude operations and rescue may also be included for operator use, if applicable.

2. PARTICIPATION AND RESPONSIBILITIES.

A. Participation in the safety plan is required by all operators and their employees. Pilots are ultimately responsible for the safety of the aircraft and passengers at all times during operation. Ground personnel should be responsible for safety during ground operations including loading and unloading passengers and escorting people to and from the aircraft. All of the above personnel should be trained in precautions to take during refueling operations.

B. Each participating agency should designate one primary and one alternate representative to the council. These personnel should be the point of contact for coordinating safety and operations procedures adopted for this plan. These personnel should be given the authority to establish and enforce safety procedures within each entity commensurate with this plan.

3. FLIGHT ACTIVITIES. This plan addresses air tour flight activities conducted under Visual Flight Rules (VFR) addressed in 14 CFR Part 91. The following regulations are included for reference:

A. Operating Near Other Aircraft (part 91, section 91.111).

- No person may operate an aircraft so close to another aircraft as to create a collision hazard.
- No person may operate an aircraft in formation flight except by arrangement with the pilot in command of each aircraft in the formation.
- No person may operate an aircraft carrying passengers for hire in formation flight.

B. Right-of-Way Rules (part 91, section 91.113).

- General. When weather conditions permit, regardless of whether an operation is conducted under instrument flight rules (IFR) or VFR rules, vigilance shall be maintained by each person operating an aircraft so as to see and avoid other aircraft. When a rule of this section gives another aircraft right-of-way, the pilot shall give way to that aircraft and may not pass over, under, or ahead of it unless well clear.

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- In distress. An aircraft in distress has the right-of-way over all other aircraft.

- Converging. When aircraft of the same category are converging at approximately the same altitude (except head on, or nearly so), the aircraft to the other's right has the right-of-way.

- Approaching head-on. When aircraft are approaching each other head-on, or nearly so, each pilot of each aircraft shall alter course to the right.

- Overtaking. Each aircraft that is being overtaken has the right-of-way and each pilot of an overtaking aircraft shall alter course to the right and pass well clear.

- Landing. Aircraft, while on final approach to land or while landing, have the right-of-way over other aircraft in flight or operating on the surface, except that they shall not take advantage of this rule to force an aircraft off the runway surface which has already landed and is attempting to make way for an aircraft on final approach. When two or more aircraft are approaching to land, the aircraft at the lower altitude has the right-of-way, but it shall not take advantage of this rule to cut in front of another aircraft which is on final approach to land or to overtake that aircraft.

C. Minimum Safe Altitudes (part 91, section 91.119). Except when necessary for takeoff or landing, no person may operate an aircraft below the following altitudes:

- *Anywhere.* An altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property on the surface

- *Over congested areas.* Over any congested area of a city, town, settlement, or over any open air assembly of persons, an altitude of 1,000 feet above the highest obstacle with a horizontal radius of 2,000 feet from the aircraft

- *Over other than congested areas.* An altitude of 500 feet above the surface, except over open water or sparsely populated areas. In those cases, the aircraft may not be operated closer than 500 feet to any person, vessel, or structure

- *Helicopters.* Helicopters may be operated at less than the minimums prescribed in paragraph *B* or *C* of this section if the operation is conducted without hazard to persons or property on the surface. In addition, each person operating a helicopter shall comply with any routes or altitudes specifically prescribed for helicopters by the administrator

D. Flight Routes and Check Points. Standard flight routes are established in such a manner that aircraft traversing the route generally fly in the same direction and avoid potential head-on situations. Aerial checkpoints, identified by ground reference points, are established at each location where two or more aircraft might enter a route.

NOTE: Noise sensitive areas within the area of influence have specific requirements regarding distance from geographic points. The minimum distance to be flown near these attractions is indicated on the attached maps.

E. Radio Frequencies.

(1) Each air tour pilot should monitor frequency xxx.x in the xxxx area, and announce intentions on this frequency prior to entering a route. A secondary frequency should be available in the event the primary frequency becomes inoperable. In this case, the operator with the defective frequency should call the other operators and alert them to change to the secondary frequency. When the primary frequency is again operable, a call should be made to switch back to the primary frequency.

(2) Each operator should use a separate discrete frequency to communicate with his or her base heliport/airport during takeoff and landing. It is recommended that each heliport/airport use a separate frequency to avoid confusion during takeoff and landing and switch to frequency xxx.x when airborne.

F. Area(s) of Operation.

- List Park Units and Tribal Lands in FSDO's area of jurisdiction
- Air tour routes are shown by operator on the enclosed maps and include: xxx, xxx, and xxx Parks and Tribal Lands

G. Air Traffic Control (ATC) Services Available.

- XXX Radar Approach Control (RAPCON) is the primary ATC facility providing IFR and Basic VFR services to the surrounding area to include the area of influence described in this Operations Plan.
- When in communication with VFR sightseeing aircraft, XXX approach suggests an altitude of xxxx ft. mean sea level (m.s.l.) vertically and xxxx ft. laterally from the monument. XXX Approach advises said aircraft of the availability of frequency xxx.x to advise other tour operators of their location and intentions.
- Tour operators are encouraged to contact xxx Approach on frequency xxx.x for traffic advisories when operating outside the area of operations or at high altitudes.

H. In-Flight or Ground Emergencies.

- In an emergency situation, immediate transmit type of aircraft, call sign (tail number), location, nature of emergency and pilot's desires. This radio transmission may be relayed over frequency XXX.X, the operator's base station frequency, or ATC emergency frequency 121.5 for relay and coordination of emergency response.

- The following agencies are available in the event of an in-flight or ground emergency requiring the need of emergency response agencies or vehicles:
- XXXX Hospital's Rescue Helicopter: (XXX) XXX-XXXX.
- XXX Fire Department: 911 (XXX) XXX-XXXX
- XXX Ambulance Service: 911 or (XXX) XXX-XXXX
- XXX Police Department: 911 or (XXX) XXX-XXXX
- XXX County Sheriff's office: 911 or (XXX) XXX-XXXX

4. ATTACHMENTS.

- Operator Safety Plans
- Map (s) of National Parks & tribal lands depicting routes for each operator

Operator, Inc.

Address

Phone

Air Tour Safety Plan

Each Safety Plan should include at minimum the following items. Operator and/or Park specific topics may be added to further tailor the air tour safety plan to each unique operation.

Fire protection procedures

Overdue aircraft procedures

Loader/Escort duties and passenger briefing

Refueling procedures

Protection of passengers embarking and debarking the aircraft

Any conditions the Park Superintendent requests

Minimum Altitudes over specified areas

Noise abatement procedures, if applicable

Specified Routes

Time of day restrictions, if any

Reference to applicable when completed

Copy of each operators B057 authorization/LOA as applicable

I certify that I have read, understand, and agree to comply with this safety program.

Name	Title	Date

AERIAL TOUR CONTACT LIST.

NAME
COMPANY 1
ADDRESS
PHONE

NAME
COMPANY 2
ADDRESS
PHONE

NAME
COMPANY 3
ADDRESS
PHONE