

**FINAL AIR TOUR
MANAGEMENT PLAN
ARCHES NATIONAL PARK**

SUMMARY

This Air Tour Management Plan (ATMP) provides the terms and conditions for commercial air tours conducted over Arches National Park (Park) pursuant to the National Parks Air Tour Management Act (Act) of 2000.

1.0 INTRODUCTION

The Act requires that commercial air tour operators conducting or intending to conduct commercial air tours over a unit of the National Park System apply to the Federal Aviation Administration (FAA) for authority before engaging in that activity. The Act further requires that the FAA in cooperation with the National Park Service (NPS) establish an ATMP for each National Park System unit for which one or more applications has been submitted, unless that unit is exempt from this requirement.¹

The objective of this ATMP is to develop acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tours on natural and cultural resources, visitor experiences and tribal lands.

2.0 APPLICABILITY

This ATMP applies to all commercial air tours over the Park and commercial air tours within ½ mile outside the boundary of the Park, as depicted in Figure 1 below. A commercial air tour subject to this ATMP is any flight, conducted for compensation or hire in a powered aircraft where a purpose of the flight is sightseeing over the Park, or within ½ mile of its boundary, during which the aircraft flies:

- (1) Below 5,000 feet above ground level (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
- (2) Less than one mile laterally from any geographic feature within the Park (unless more than ½-mile outside the Park boundary).

See 14 CFR § 136.33(d).

¹ The Act provides an exemption to the ATMP requirement for parks with 50 or fewer commercial air tour operations each year unless the exemption is withdrawn by the Director of the NPS. *See* 49 U.S.C. § 40128(a)(5). As an alternative to an ATMP, the agencies also have the option to execute voluntary agreements with all operators operating at any of the parks.

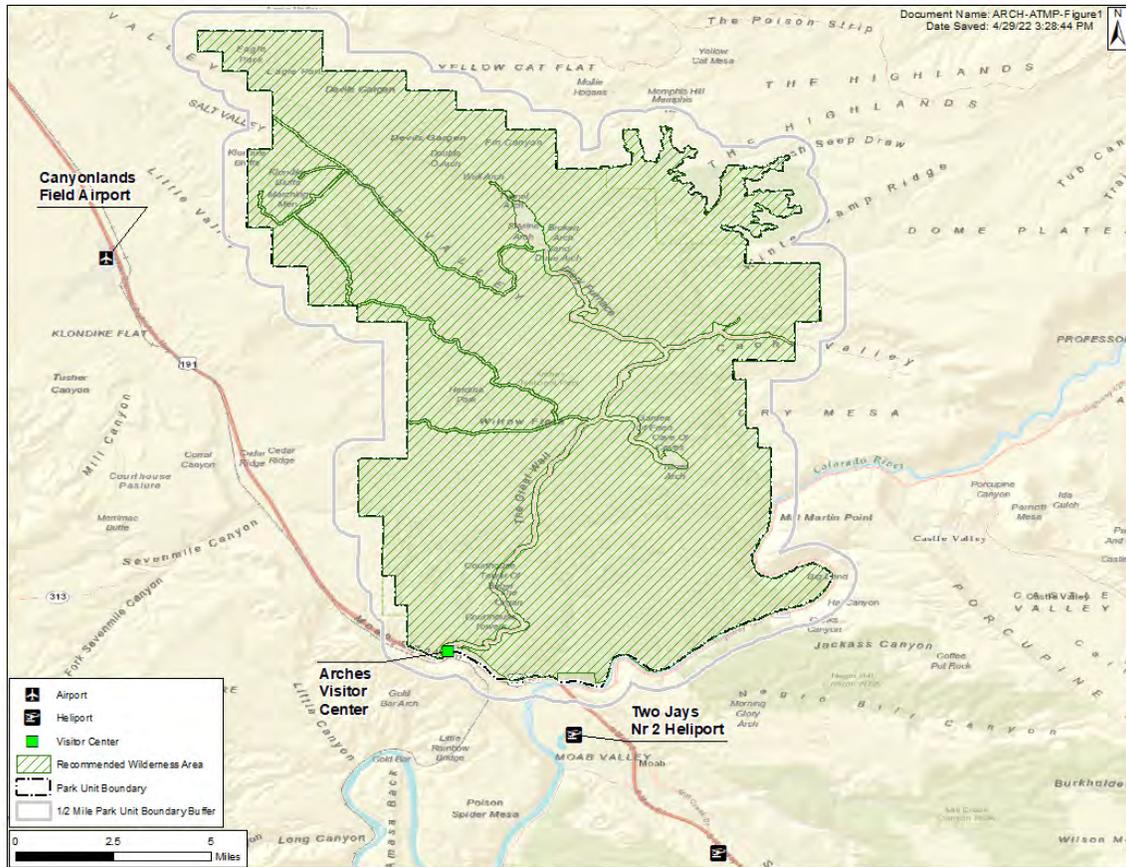


Figure 1. Map of area subject to the ATMP for Arches National Park

2.1 Park Overview

The Park is comprised of a landscape of contrasting colors, land forms, and textures unlike any other in the world, with over 2,000 natural stone arches and hundreds of soaring pinnacles, massive rock fins, and giant balanced rocks. The Park consists of 76,679 acres of high desert on the Colorado Plateau in southeastern Utah. The Park's distinctive landscapes are products of multiple geologic processes operating over hundreds of millions of years. Approximately 96% of the Park is recommended wilderness which is managed as designated wilderness by the NPS, pursuant to the 2006 NPS Management Policies.

Elevations in the Park range from 4,085 to 5,653 feet above sea level and contain vegetation such as pinyon pine, juniper, and many species of grasses, cacti, and shrubs. Moisture-dependent plants like cottonwoods, willows, and cattails are found along the rare perennial streams, in washes, or in alcoves with dripping springs. Notable wildlife includes mule deer, coyotes, desert bighorn sheep, bobcats, mountain lions. Raptors such as golden eagles and peregrine falcons, as well as the federally listed southwestern willow flycatcher, and the western yellow-billed cuckoo can also be found at the Park.

Cultural resources in the Park span at least 12,000 years of human occupation and activity. There are Paleoindian, Archaic, Fremont, ancestral Pueblo, Paiute and Ute

archeological sites in the Park, including masonry and earthen structures, lithic scatters, middens, pictographs, and petroglyphs. Historic-era resources include those left by explorers, miners, ranchers, and the Civilian Conservation Corps. Within the Park, many cultural resources are listed on the National Register of Historic Places including, but not limited to, petroglyphs and pictographs, remains of past ranching activity, and a segment of the Old Spanish National Historic Trail. The natural arches are among the many physical and ethnographic features considered sacred to Native American Tribes with current and ancestral connections to the Park, although there are no tribal lands as defined by the Act within or abutting the Park.

Designated hiking trails and routes provide access to arches, other features and to the backcountry for the more than 1.6 million annual visitors. The Park offers a variety of recreational experiences including sightseeing, viewpoints and photo stops, hiking, interpretation, picnicking, special tours to the Fiery Furnace, backcountry and developed camping, rock climbing, canyoneering, bicycling, and nature study.

The purposes of the Park include protecting extraordinary examples of geologic features including arches, natural bridges, windows, spires, balanced rocks, as well as other features of geologic, prehistoric and historic, and scientific interest, and providing opportunities to experience these resources and their associated values in their majestic natural settings.

The following Park management objectives relate to the development of this ATMP:

- Protect individuals and populations of wildlife species known to be sensitive to the effects of aircraft overflights, including several species of diurnal raptors (such as the golden eagle and peregrine falcon) and the federally listed southwestern willow flycatcher, and the western yellow-billed cuckoo, as well as desert bighorn sheep, mule deer, mountain lion, black bear.
- Protect cultural resources, cultural landscapes and ethnographic resources important to Native American Tribes with current or ancestral connections to the Park.
- Protect primitive remote experiences for visitors and opportunities to experience quiet and solitude in a remote natural setting.

3.0 CONDITIONS FOR THE MANAGEMENT OF COMMERCIAL AIR TOUR OPERATIONS

3.1 Commercial Air Tours Authorized

Under this ATMP, 309 commercial air tours are authorized per year. Appendix A identifies the operators authorized to conduct commercial air tours and annual flight allocations.

3.2 Commercial Air Tour Routes and Altitudes

Commercial air tours authorized under this ATMP shall be conducted on the designated air tour routes and altitudes specific to each operator in Figure 2.² Altitude expressed in units above ground level (AGL) is a measurement of the distance between the ground surface and the aircraft, whereas altitude expressed in mean sea level (MSL) refers to the altitude of an aircraft above sea level, regardless of the terrain below it. Aircraft flying at a constant MSL altitude would simultaneously fly at varying AGL altitudes, and vice versa, assuming uneven terrain is present below the aircraft. The MSL altitudes depicted in Figure 2 mean that commercial air tours will not fly lower than 2,600 feet (ft.) AGL referencing the topographic high point within ½ mile of the flight path for the entirety of all air tour routes authorized by this ATMP. Except in an emergency or to avoid unsafe conditions, or unless otherwise authorized for a specified purpose, operators may not deviate from these designated routes and altitudes.

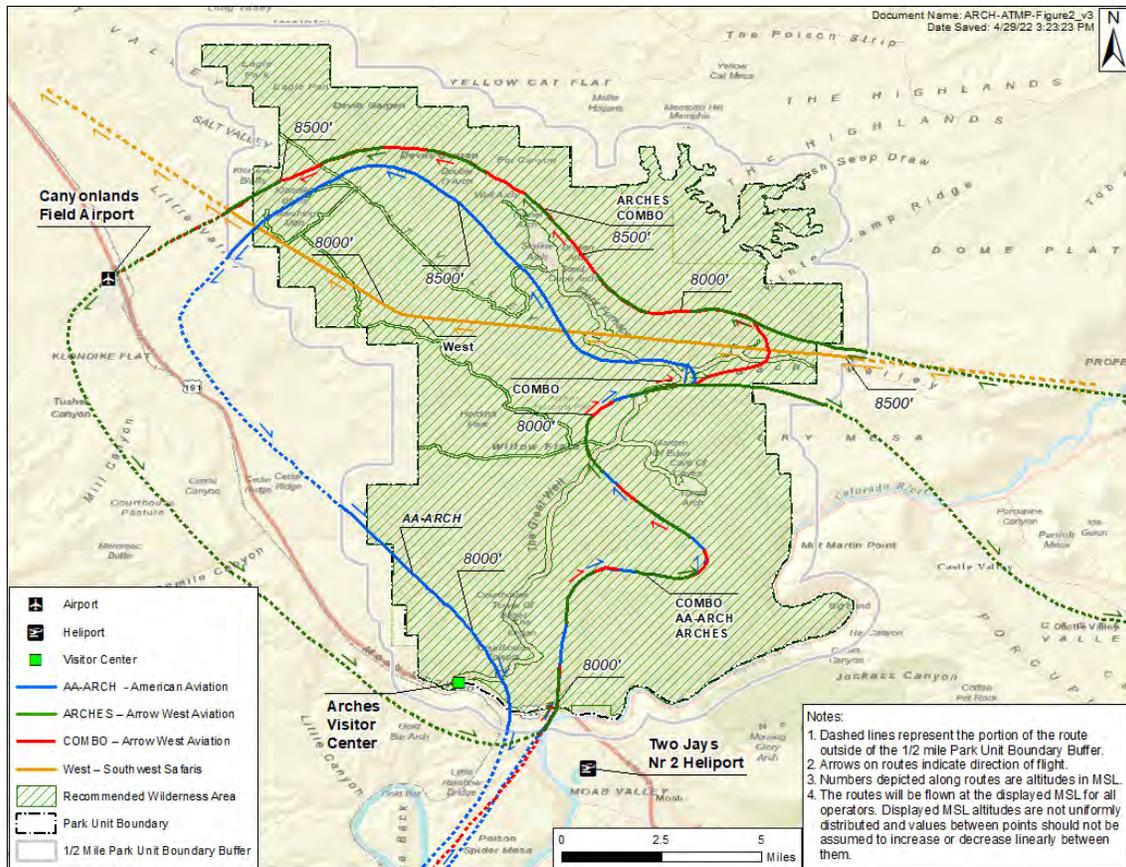


Figure 2. Commercial air tour routes over Arches National Park

² Appendix B contains an enlarged Figure 2.

3.3 Aircraft Type

The aircraft types authorized to be used for commercial air tours are identified in Appendix A. Any new or replacement aircraft must not exceed the noise level produced by the aircraft being replaced. In addition to any other applicable notification requirements, operators will notify the FAA and the NPS in writing of any prospective new or replacement aircraft and obtain concurrence before initiating air tours with the new or replacement aircraft.

3.4 Day/Time

Except as provided in Section 3.8 “Quiet Technology Incentives,” air tours may operate one hour after sunrise until three hours before sunset, as defined by the National Oceanic and Atmospheric Administration (NOAA).³ Air tours may operate any day of the year, except under circumstances provided in Section 3.5 “Restrictions for Particular Events.”

3.5 Restrictions for Particular Events

The NPS can establish temporary no-fly periods that apply to air tours for special events or planned Park management. Absent exigent circumstances or emergency operations, the NPS will provide a minimum of 15 days written notice to operators for any restrictions that temporarily restrict certain areas or certain times of day, or 60 days written notice to operators for any full-day restrictions in advance of the no-fly period. Events may include tribal ceremonies or other similar events.

3.6 Required Reporting

Operators will submit to the FAA and the NPS semi-annual reports regarding the number of commercial air tours over the Park or within ½ mile of its boundary that are conducted by the operator. These reports will also include the flight monitoring data required under Section 4.1 of this ATMP and such other information as the FAA and the NPS may request. Reports are due to both the FAA and the NPS no later than 30 days after the close of each reporting period. Reporting periods are January 1 through June 30 and July 1 through December 31. Operators shall adhere to the requirements of any reporting template provided by the agencies.

3.7 Additional Requirements

3.7A Operator Training and Education: When made available by Park staff, operators/pilots will take at least one training course per year conducted by the NPS. The training will include Park information that operators can use to further their own understanding of Park priorities and management objectives as well as enhance the interpretive narrative for air tour clients and increase understanding of parks by air tour clients.

³ Sunrise and sunset data are available from the NOAA Solar Calculator, <https://www.esrl.noaa.gov/gmd/grad/solcalc/>

3.7B Annual Meeting: At the request of either of the agencies, the Park staff, the local FAA Flight Standards District Office (FSDO), and all operators will meet once per year to discuss the implementation of this ATMP and any amendments or other changes to the ATMP. This annual meeting could be conducted in conjunction with any required annual training.

3.7C In-Flight Communication: For situational awareness when conducting tours of the Park, the operators will utilize frequency 122.9 and report when they enter and depart a route. The pilot should identify their company, aircraft, and route to make any other aircraft in the vicinity aware of their position.

3.7D Wildlife Avoidance: California condors have not been found to be present in the Park and their presence is thus not a current resource condition requiring active mitigation. However, California condor habitat does exist in the Park, and protective measures are necessary should a condor be identified in the Park. This ATMP includes the following protective measures for California condors:

- Air tour operators are required to report visual identification of California condors to the NPS, with an optional notification to U.S. Fish and Wildlife Service (USFWS), within 24 hours of initial sighting.
- Once the NPS becomes aware of the presence of California condor nests, notification and coordination will be conducted between the Park staff, the NPS Intermountain Region Wildlife Biologist and Threatened and Endangered Species Coordinator, the local USFWS field office, the air tour operators, and the FSDO, as necessary, to determine the best avoidance measures for operators to take. Generally, operators will be required to avoid identified nesting areas, feeding areas, or other known areas of congregation by 1 mile vertically or laterally as long as the NPS determines that other natural or cultural resources are not impacted or affected and such avoidance measures would not result in operating conditions deemed unsafe by the FAA.
- The agencies may temporarily restrict use of air tour routes over nesting areas, feeding areas, or other known areas of congregation while: 1) working with operators to modify air tour routes (i.e., 1 mile shifts away from sensitive condor areas); and 2) assessing the natural, cultural, and safety impacts of any changes.
- Avoidance measures will remain in effect until the NPS determines that condors are no longer present and the NPS notifies the operators in writing that avoidance measures are no longer necessary.

3.7E Non-transferability of Allocations: Annual operations under this ATMP are non-transferable. An allocation of annual operations may be assumed by a successor purchaser that acquires an entity holding allocations under this ATMP in its entirety. In such case, the prospective purchaser shall notify the FAA and NPS of its intention to purchase the operator at the earliest possible opportunity to

avoid any potential interruption in the authority to conduct commercial air tours under this ATMP. This notification must include a certification that the prospective purchaser has read and will comply with the terms and conditions in the ATMP. The FAA will consult with the NPS before issuing new or modified operations specifications (OpSpecs) or taking other formal steps to memorialize the change in ownership.

3.8 Quiet Technology Incentives

This ATMP incentivizes the use of quiet technology aircraft by commercial air tour operators. Operators that have converted to quiet technology aircraft, or are considering converting to quiet technology aircraft, may request to be allowed to extend air tours an additional two hours (i.e., up to one hour before sunset) on all days that flights are authorized. Because aviation technology continues to evolve and advance and the FAA updates its noise certification standards periodically, the aircraft eligible for this incentive will be analyzed on a case-by-case basis at the time of the operator's request to be considered for this incentive. The NPS will periodically monitor Park conditions and coordinate with the FAA to assess the effectiveness of this incentive. If implementation of this incentive results in unanticipated effects on Park resources, tribal use, or visitor experience, further agency action may be required to ensure the protection of Park resources, tribal use, and visitor experience.

4.0 COMPLIANCE

On the effective date of this ATMP, all commercial air tours over the Park or within ½ mile of the Park boundary must comply with the terms of this ATMP in all respects, except as provided in Section 4.1 below. The NPS and the FAA are both responsible for the monitoring and oversight of the ATMP. If the NPS identifies instances of non-compliance, the NPS will report such findings to the FAA's FSDO with geographic oversight of the Park. The public may also report allegations of non-compliance with this ATMP to the FSDO. The FSDO will investigate and respond to all written reports consistent with applicable FAA guidance.

Investigative determination of non-compliance may result in partial or total loss of authorization to conduct commercial air tours authorized by this ATMP. Any violation of OpSpecs shall be treated in accordance with FAA Order 2150.3, *FAA Compliance and Enforcement Program*.

4.1 Aircraft Monitoring Technology

Operators are required to equip all aircraft used for air tours with flight monitoring technology, to use flight monitoring technology during all air tours under this ATMP, and to report flight monitoring data as an attachment to the operator's semi-annual reports. The required flight monitoring data shall be provided in a file format approved by the agencies, such as a .csv or .xlsx format. Data must include the following information for each row of data (i.e., each ping):

- Unique flight identifier
- Latitude

- Longitude
- Geometric altitude
- Tail number
- Date
- Time stamp
- Operator and Doing Business As (DBA), if different
- Aircraft type
- Aircraft model

The ping rate should be set to a maximum of 15 seconds. Operators already using aircraft equipped with flight monitoring technology shall ensure it meets the performance standards listed above or acquire and install acceptable flight monitoring technology within 180 days of the effective date of this ATMP. For aircraft not already equipped with flight monitoring technology, within 180 days of the effective date of this ATMP, operators shall equip those aircraft with suitable flight monitoring technology.

5.0 JUSTIFICATION FOR MEASURES TAKEN

The provisions and conditions in this ATMP are designed to protect Park resources and visitor experience from the effects of commercial air tours, and to support NPS management objectives for the Park.

Under the Act, the FAA was required to grant Interim Operating Authority (IOA) for commercial air tours over the Park or within ½ mile of the Park’s boundary. IOA does not provide any operating conditions (e.g., routes, altitudes, time of day, etc.) for air tours other than an annual limit.

The total number of air tours authorized under this ATMP is consistent with the existing air tours reported over the Park. The annual flight limits in this ATMP are intended to protect visitor experience, wildlife, tribal use, and cultural resources and related cultural landscapes and ethnographic resources throughout the Park by limiting the number of potential disturbances caused by commercial air tours.

The condition that commercial air tours adhere to the designated routes and altitudes depicted in Figure 2 would result in flights no lower than 2,600 ft. AGL, referencing the topographic high-point within ½ mile laterally on either side of the flight path. These altitudes maintain a ½-mile spatial buffer in accordance with guidance for raptor protection including threatened, endangered and migratory birds, as described in Section 2.1.⁴ Because raptor habitat exists throughout the Park and nests may change over time, the designated altitudes provide an appropriate spatial buffer directly under the route from species of concern. It will further avoid or minimize potential effects on other avian species and wildlife by reducing the noise intensity of air tour events in the areas nearest the routes. Additionally, this provision improves visitor experiences and tribal use on the

⁴ L.A. Romin & J.A. Muck (2002). Utah Field Office Guidelines for Raptor from Human and Land Use Disturbances, U.S. Fish and Wildlife Service, Utah Field Office, Salt Lake City, January 2002 update.

ground, including opportunities for solitude and remoteness from sights and sounds in recommended wilderness, as well as conditions at cultural properties and landscapes by reducing the intensity of air tour noise at ground level. Given the minimum altitudes identified above for raptor protection, the required routes and altitudes are also safety measures necessary to de-conflict the airspace.

Sunrise and sunset are important times of the day for wildlife and visitor use and experience. Biologically important behaviors for many species occur during this time, such as the dawn chorus for songbirds. Wildlife viewing is often conducted during this time of day as well. The time restrictions have been included in this ATMP to protect these Park resources. The hours of operation provide quiet periods of the day during which visitors can enjoy natural sounds and preserve opportunities for solitude in backcountry areas.

Restrictions for particular events are intended to prevent noise interruptions of Park events or tribal practices.

Operator training and education will provide opportunities to enhance the interpretive narrative for air tour clients and increase understanding of parks by air tour companies and their clients. The annual meeting will facilitate effective implementation of the ATMP because it will be used to review and discuss implementation of this ATMP between Park staff, local FAA FSDO, and all operators. It will thus serve to ensure that air tour operators remain informed regarding the terms and conditions of this ATMP, including any adaptive management measures or amendments, and are made aware of new or reoccurring concerns regarding Park resources.

The requirements to equip aircraft with flight monitoring technology, use flight monitoring technology during all air tours under this ATMP, and to report flight monitoring data as an attachment to the operator's semi-annual reports are necessary to enable the agencies to appropriately monitor operations and ensure compliance with this ATMP.

6.0 NEW ENTRANTS

For the purposes of this ATMP, a "new entrant" is a commercial air tour operator that has not been granted any operations under this ATMP or that no longer holds operations under this ATMP at the time of the application. New entrants must apply for and be granted operating authority before conducting commercial air tours over the lands and waters covered by this ATMP.

The FAA and the NPS will publish additional information for interested parties about the form and required content of a new entrant application. The FAA and the NPS will jointly consider new entrant applications and determine whether to approve such applications. Review of applications submitted prior to the effective date of this ATMP will commence within six months of the effective date. Applications submitted after that time will be considered no less frequently than every three years from the effective date of this ATMP.

If any new entrant is granted operating authority under this ATMP, the FAA will issue OpSpecs (and, if necessary, will revise OpSpecs of operators whose allocation of operating authority changes due to accommodation of a new entrant) within 90 days of the publication of an amended ATMP or of the effective date of ATMP changes implemented through the adaptive management process.

7.0 COMPETITIVE BIDDING

When appropriate, the FAA and the NPS will conduct a competitive bidding process pursuant to the criteria set forth in 49 U.S.C. § 40128(a)(2)(B) and other criteria developed by the agencies. Competitive bidding may be appropriate to address: a new entrant application; a request by an existing operator for additional operating authority; consideration by the agencies of Park-specific resources, impacts, or safety concerns; or for other reasons.

The agencies will request information necessary for them to undertake the competitive bidding process from operators. Operators who do not provide information in a timely manner may be disqualified from further consideration in the competitive bidding process.

Competitive bidding may necessitate an amendment to this ATMP, additional environmental review, and/or the issuance of new or revised OpSpecs. If updated OpSpecs are required, they will be issued within 90 days.

8.0 ADAPTIVE MANAGEMENT

Adaptive management allows for minor modifications to this ATMP without a formal ATMP amendment if the impacts of such changes are within the impacts already analyzed by the agencies under the National Environmental Policy Act, the National Historic Preservation Act, and the Endangered Species Act. Adjustments to the number of commercial air tours allocated to individual operators as a result of the competitive bidding process and minor changes to routes, altitudes, or other operating parameters are examples of adaptive management measures that may not require a formal ATMP Amendment. Such modifications may be made if: 1) the NPS determines that they are necessary to avoid adverse impacts to Park resources, values, or visitor experiences; 2) the FAA determines the need for such changes due to safety concerns; or 3) the agencies determine that appropriate, minor changes to this ATMP are necessary to address new information (including information received through tribal input and/or consultation) or changed circumstances.

9.0 AMENDMENT

This ATMP may be amended at any time: if the NPS, by notification to the FAA and the operators, determines that the ATMP is not adequately protecting Park resources and/or visitor enjoyment; if the FAA, by notification to the NPS and the operators, determines that the ATMP is adversely affecting aviation safety and/or the national aviation system; or, if the agencies determine that appropriate changes to this ATMP are necessary to

address new information or changed circumstances that cannot be addressed through adaptive management.

The FAA and the NPS will jointly consider requests to amend this ATMP from interested parties. Requests must be made in writing and submitted to both the FAA and the NPS. Requests must also include justification that includes information regarding how the requested amendment: is consistent with the objectives of this ATMP with respect to protecting Park resources, or visitor use and enjoyment; and would not adversely affect aviation safety or the national aviation system. The FAA and the NPS will publish additional information for interested parties about the form and manner for submitting a request.

Increases to the total number of air tours authorized per year under this ATMP resulting from accommodation of a new entrant application or a request by an existing operator will require an amendment to this ATMP and additional environmental review.

Notice of all amendments to this ATMP will be published in the Federal Register for notice and comment.

10.0 CONFORMANCE OF OPERATIONS SPECIFICATIONS

New OpSpecs that incorporate the operating parameters set forth in this ATMP will be issued within 90 days of the date of signature on this ATMP.

11.0 EFFECTIVE DATE

This ATMP is effective on the date new OpSpecs incorporating its operating parameters are issued.

Patricia S. Trap Superintendent Southeast Utah Group: Arches & Canyonlands National Parks, and Hovenweep & Natural Bridges National Monuments National Park Service	Date	Grady Stone Regional Administrator Northwest Mountain Region Federal Aviation Administration	Date
Kate Hammond Acting Regional Director Interior Regions 6, 7, & 8 National Park Service	Date	Kevin Welsh Executive Director Office of Environment & Energy Federal Aviation Administration	Date
Raymond M. Sauvajot Associate Director Natural Resource Stewardship and Science Directorate National Park Service	Date		

APPENDIX A

1.0 COMMERCIAL AIR TOUR ALLOCATIONS

Table 1 provides allocations of the operations authorized per year along with authorized aircraft type by operator. IOA previously issued for the Park terminates on the effective date of this ATMP.

Table 1. Air Tour Operations and Aircraft Type by Operator

Air Tour Operator	Annual Operations	Daily Operations	Aircraft Type
Arrow West Aviation, Inc. / Slickrock Air Guides, Inc. (Redtail Aviation)	303	No set limit	GIPPS-GA-8, CE-172-N, CE-207-207, CE-207-T207A, Kodiak-100-100
Adams, Bruce M. (Southwest Safaris)	5	No set limit	CE-182-R, CE-207-T207A
American Aviation, Inc. (Frog Air, American Air Charter)	1	1	CE-172-N, CE-207-207, CE-207-T207A

2.0 DAY/TIME RESTRICTIONS

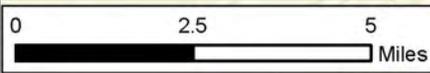
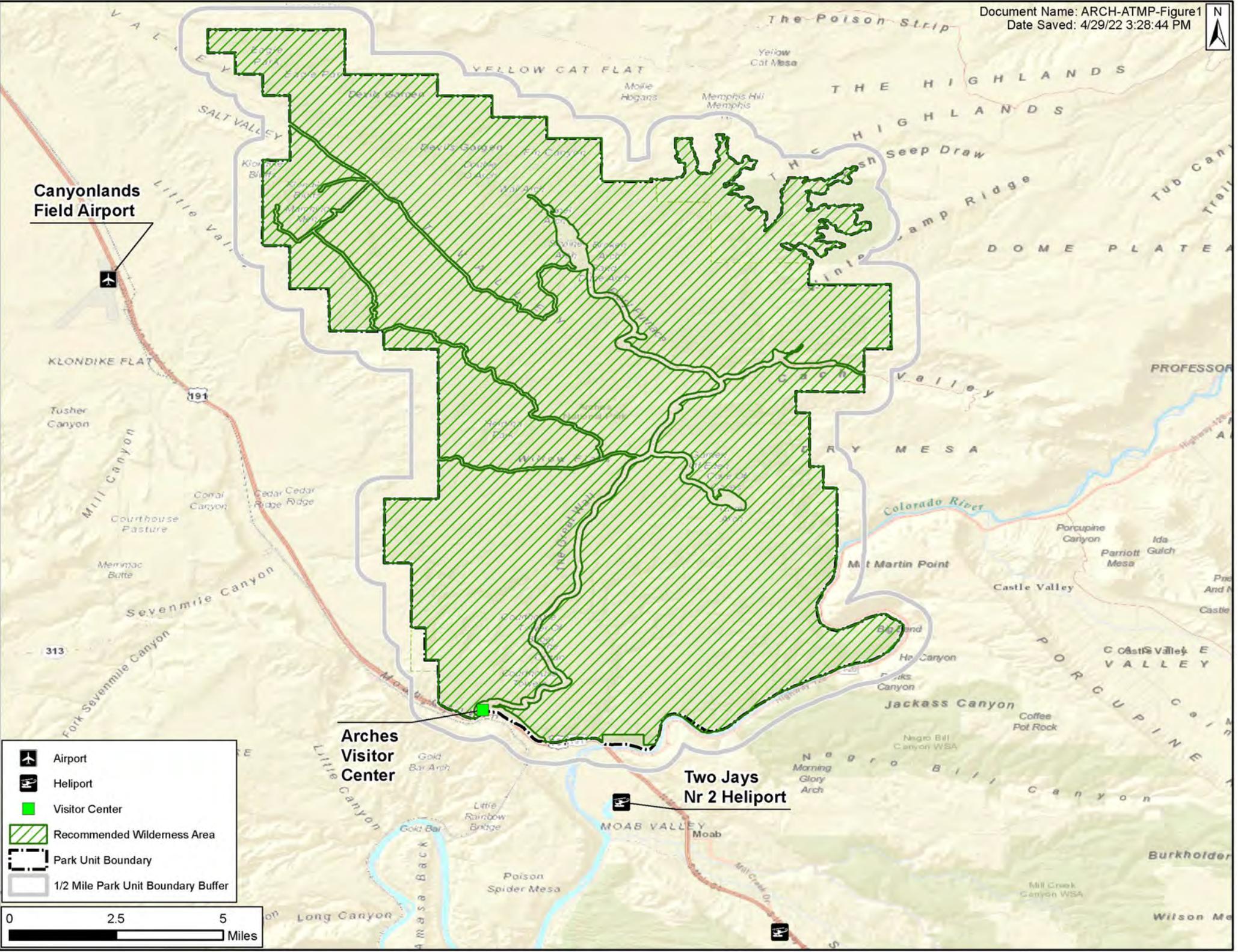
Table 2 lists the time-of-day and day-of-week when air tours may occur.

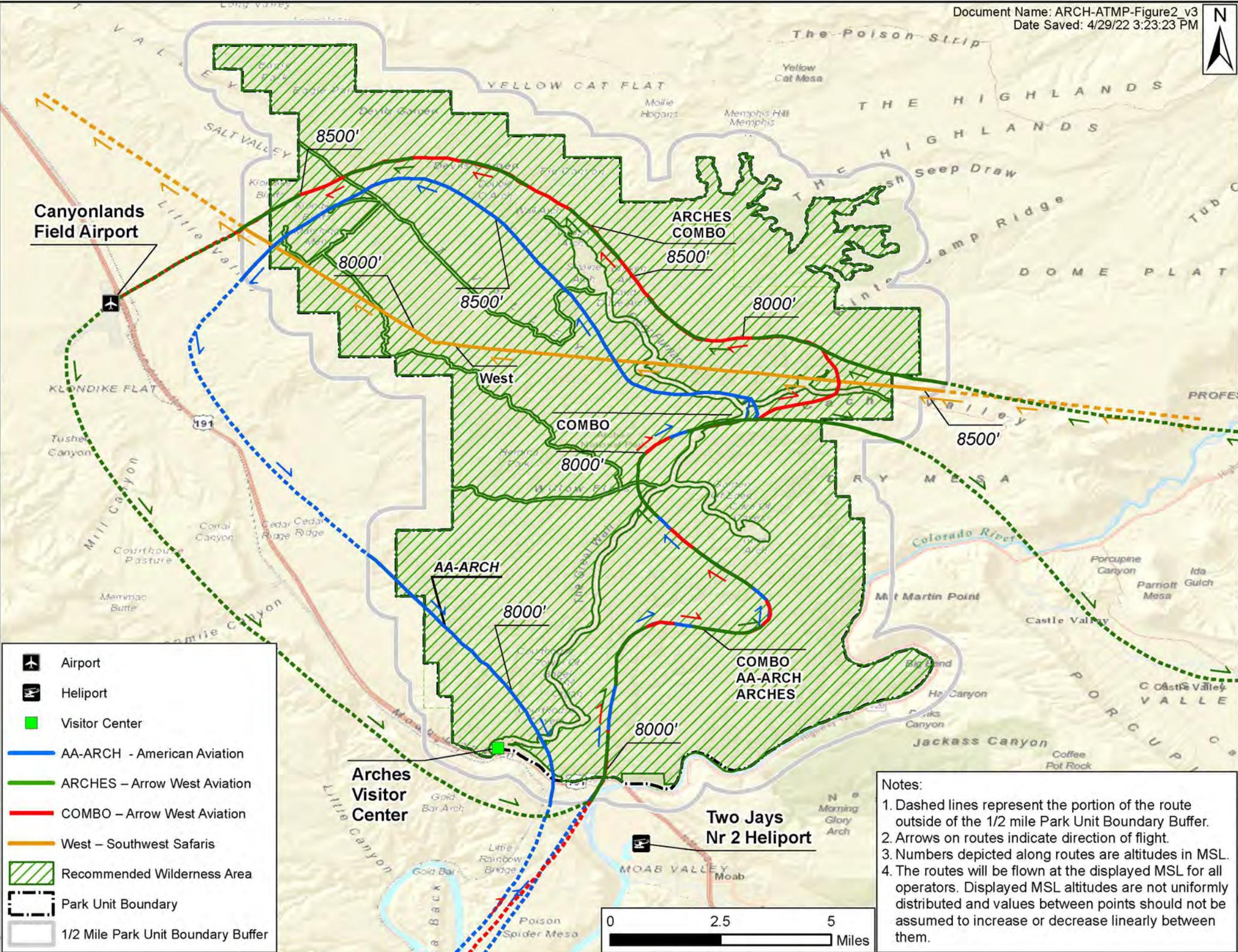
Table 2. Air Tour Authorizations by Time-of-Day and Day-of-Week

Air Tour Operator	Time-of-Day	Day-of-Week
Arrow West Aviation, Inc. / Slickrock Air Guides, Inc. (Redtail Aviation)	One hour after sunrise until three hours before sunset	The NPS can establish temporary no-fly periods that apply to air tours for special events or planned Park management.
Adams, Bruce M. (Southwest Safaris)	One hour after sunrise until three hours before sunset	The NPS can establish temporary no-fly periods that apply to air tours for special events or planned Park management.
American Aviation, Inc. (Frog Air, American Air Charter)	One hour after sunrise until three hours before sunset	The NPS can establish temporary no-fly periods that apply to air tours for special events or planned Park management.

APPENDIX B

Enlarged Figures 1 and 2





Canyonlands Field Airport

ARCHES COMBO

West

COMBO

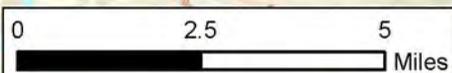
AA-ARCH

COMBO
AA-ARCH
ARCHES

Arches Visitor Center

Two Jays Nr 2 Heliport

-  Airport
-  Heliport
-  Visitor Center
-  AA-ARCH - American Aviation
-  ARCHES - Arrow West Aviation
-  COMBO - Arrow West Aviation
-  West - Southwest Safaris
-  Recommended Wilderness Area
-  Park Unit Boundary
-  1/2 Mile Park Unit Boundary Buffer



- Notes:
1. Dashed lines represent the portion of the route outside of the 1/2 mile Park Unit Boundary Buffer.
 2. Arrows on routes indicate direction of flight.
 3. Numbers depicted along routes are altitudes in MSL.
 4. The routes will be flown at the displayed MSL for all operators. Displayed MSL altitudes are not uniformly distributed and values between points should not be assumed to increase or decrease linearly between them.