

DRAFT COMMERCIAL AIR TOUR
VOLUNTARY AGREEMENT
FOR
LAKE MEAD NATIONAL
RECREATION AREA

Name of Operator



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COMMERCIAL AIR TOUR VOLUNTARY AGREEMENT

SUMMARY

This Air Tour Voluntary Agreement (Agreement) provides the terms and conditions for commercial air tours conducted by NAME OF OPERATOR over Lake Mead National Recreation Area (Park), which includes portions of Grand Canyon-Parashant National Monument and Avi Kwa Ame National Monument, as an alternative to an Air Tour Management Plan (ATMP), pursuant to the National Parks Air Tour Management Act (Act) of 2000. As used in this Agreement the term "the Park" refers to all NPS-managed lands within the Congressionally designated boundary of Lake Mead National Recreation Area shown in Figure 1. The parties to this Agreement are the National Park Service (NPS), the Federal Aviation Administration (FAA), and NAME OF OPERATOR (collectively, the Parties).

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 FAA for operating authority before engaging in that activity. The Act further requires the NPS and the FAA to 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

As an alternative to an ATMP, the NPS and the FAA may enter into a voluntary agreement with a commercial air tour operator who has applied to conduct commercial air tour operations over a National Park System unit including an operator that has Interim Operating Authority (IOA) for the park or a new entrant commercial air tour operator.²

Voluntary agreements must address the management issues necessary to protect the resources and visitor use of the park without compromising aviation safety or the air traffic control system.³ A voluntary agreement may also include conditions for the conduct of air tour operations and provisions to ensure the stability of, and compliance with, the voluntary agreement. Each voluntary agreement reflects the provisions and conditions appropriate for the particular national park to which the agreement applies.

Due to the complex nature of the Las Vegas Class B airspace around the Park, including the connectivity with air tour operations to Grand Canyon National Park, coupled with specific language in the Act regarding transportation routes for air tours from Clark County, Nevada to Grand Canyon National Park, the Parties developed this Agreement to

¹ The Act provides an exemption to the ATMP and voluntary agreement requirement for parks with 50 or fewer commercial air tour operations each year unless the exemption is withdrawn by the NPS. *See* 49 U.S.C. § 40128(a)(5).

² *Id.* § 40128(b)(7)(A).

³ *Id.* § 40128(b)(7)(B).

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address these unique challenges while improving the condition of the resources of the Park and ensuring safe air tour operations.

2.0 APPLICABILITY

This Agreement applies only to commercial air tour operations conducted by NAME OF OPERATOR in the area depicted in Figure 1 below, referred to as the voluntary agreement boundary. This Agreement does not apply to the Grand Canyon National Park or tribal lands within ½-mile of the Park boundary that abut the Grand Canyon National Park.⁴ This Agreement does not make any adjustments to commercial air tours currently conducted within the Grand Canyon National Park Special Flight Rules Area.⁵ A commercial air tour subject to this Agreement 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 the boundary of the Park, 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 boundary of the Park).⁶

⁴ See 49 U.S.C. § 40128(e).

⁵ See 14 CFR § 93 Subpart U—Special Flight Rules in the Vicinity of Grand Canyon National Park, AZ.

⁶ See 14 CFR § 136.33(d).

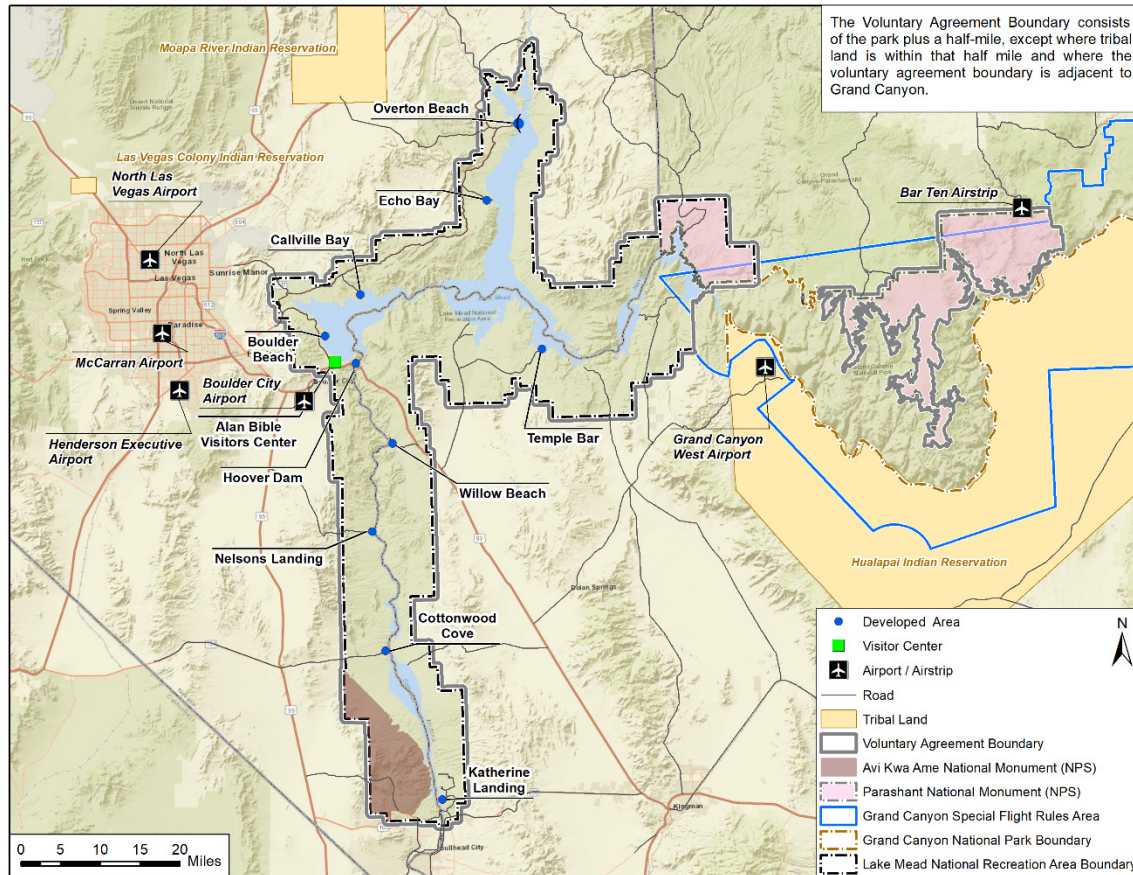


Figure 1. Map of area subject to this Agreement for Lake Mead National Recreation Area.

3.0 OVERVIEW OF THE PARK

Lake Mead National Recreation Area was established when the enabling legislation adopted by Congress was signed into law on October 8, 1964. The Park is located in southeast Nevada and northwest Arizona and covers 1.5 million acres, which includes more than 185,000 acres of designated Wilderness and more than 373,000 additional acres of eligible Wilderness. The Park also includes portions of Grand Canyon-Parashant National Monument and Avi Kwa Ame National Monument, each set aside by Presidential Proclamation (Figure 1).

The geologic diversity and convergence of desert ecosystems provide habitat for a rich diversity of plants and animals. Currently, 822 native plant species and 387 native animal species have been officially documented in the Park, with 10 of these listed as threatened, endangered, or candidate species, and 140 considered rare species. In addition, the Park contains globally significant herds of desert bighorn sheep, with some of the highest population numbers in the world.

The inflow areas of Lake Mead, including the inflows of the Virgin and Muddy Rivers on the north end of Overton Arm and the Colorado River inflow at Pearce Ferry, are of particular importance. These areas contain riparian and stream communities, with

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74 vegetation such as willows, cottonwood, sedges, and rushes. These areas provide
75 excellent habitat to a variety of bird species, including the southwestern willow flycatcher
76 and several species of shorebirds, herons, and egrets.

77 Also included in the Park's diverse natural resources are spectacular vistas including deep
78 canyons, sheer cliffs, layers of sharp and colorful mountain ridges and rock formations
79 and sweeping bajadas.

80 Evidence of 10,000 years of Native American civilization is found in the vicinity of the
81 Park. Fur trappers, Mormon settlers, prospectors, ranchers, and developers of riverboat
82 and railroad supply networks arrived later in attempts to survive and prosper in the
83 rugged desert environment. Architectural wonders such as the Hoover Dam, built in the
84 1930s, and the Mike O'Callaghan-Pat Tillman Memorial Bridge that opened in 2010, add
85 to the rich human history.

86 Today, the Park is an attraction to millions of people from large metropolitan
87 communities in the region as well as visitors from all over the world. Popular
88 destinations include Black Canyon, located between Hoover Dam and Willow Beach on
89 the northern end of Lake Mohave. The water temperature, narrow canyon environment,
90 river current, and extremely shallow waters at the upper reaches make it a unique place
91 within the Park. There are several hot springs located in Black Canyon, including
92 Arizona Hot Springs, the primary camping area in the canyon. These characteristics
93 attract nonmotorized boaters to Black Canyon, the only area of the Park where
94 nonmotorized boat use occurs in significant numbers.

95 The purpose of the Park, as stated in its Foundation Document, is to provide diverse
96 public recreation, benefit, and use on Lake Mead and Lake Mohave and surrounding
97 lands in a manner that preserves the ecological, geological, cultural, historical, scenic,
98 scientific, and Wilderness resources of the Park.

99 **Grand Canyon-Parashant National Monument** was designated by Presidential
100 Proclamation 7265 on January 11, 2000, under the authority of the Antiquities Act of
101 1906. NPS-managed lands within this Monument are included in Lake Mead's
102 Congressionally designated boundary. Monument headquarters are in St. George, Utah.
103 This Monument is jointly managed under a Service First agreement by both the NPS and
104 the Bureau of Land Management (BLM), although the voluntary agreement boundary
105 only includes NPS-managed lands plus the ½ -mile buffer. This Monument's purpose is
106 to cooperatively protect undeveloped, wild, and remote northwestern Arizona landscapes
107 and their resources, while providing opportunities for solitude, primitive recreation,
108 scientific research, and historic and traditional uses.

109 This Monument is in Mohave County, Arizona, immediately north of Grand Canyon
110 National Park and the Colorado River and east of the state of Nevada. Altogether, it
111 encompasses 1,048,321 acres: 208,449 acres administered by the NPS; 812,581 acres
112 administered by the BLM; 23,206 acres administered by the Arizona State Trust; and
113 4,085 acres of private land.

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These lands include the ponderosa pine forested areas of Mount Trumbull, Mount Logan, and Mount Dellenbaugh; the Mojave Desert in the Grand Wash and Pakoon areas; Kelly and Twin Points overlooking the Grand Canyon; and the Shivwits and Uinkaret Plateaus. Nearly 300,000 acres of the Monument are managed as Wilderness. Approximately 791,017 acres are allotted and/or leased for livestock grazing, and more than 14,000 head of cattle roam monument lands. A number of main visitor destinations in the Monument include Pakoon Springs, Tassi Ranch, Grand Gulch Mine, Mount Trumbull/Mount Logan, Twin Point Overlook, Kelly Point Overlook, Whitmore Canyon Overlook, Hells Hole, and Nampawcap.

With the Grand Canyon plunging thousands of feet deep along the south perimeter and only rough, unpaved roads providing entry from the north, west, and northeast, Grand Canyon- Parashant National Monument is one of the most remote areas within the 48 contiguous states. No towns or communities lie within its boundaries. The nearest towns (Littlefield, Beaver Dam, Scenic, Fredonia, Colorado City, and Centennial, Arizona; Mesquite and Bunkerville, Nevada; and St. George, Utah) are all more than an hour's drive from Monument boundaries. Traveling anywhere in this Monument, except its outermost edges, requires slow driving over rough terrain, often in a high-clearance, four-wheel-drive or off-highway vehicle.

The Grand Canyon Special Flights Rule Area (SFRA) establishes policy and procedures for operations in and around Grand Canyon National Park. The SFRA covers a large portion of Grand Canyon-Parashant National Monument (Figure 1).⁷

Avi Kwa Ame National Monument was designated by Presidential Proclamation 10533 on March 21, 2023 under the authority of the Antiquities Act of 1906. NPS-managed lands within this Monument are included in Lake Mead's Congressionally designated boundary and within the voluntary agreement boundary. This Monument contains a variety of cultural resources, including traditional cultural areas and sacred sites such as the Spirit Mountain traditional cultural property, located in the Newberry Mountains, which is listed on the National Register of Historic Places. This Monument's importance to Yuman-speaking and other Tribal Nations transcends generations. Spiritual and cultural significance is found in the landscape, mountains, water, sky, plants, and animals. Traditional knowledge of resources and significant sites is passed through each generation through song and oral histories among Tribal members. Songs and traditional knowledge allow for deep connections with Avi Kwa Ame and its surrounding landscape which provide healing, visual, and spiritual connections for Tribal Nations now and forevermore.

⁷ The Grand Canyon National Park Special Flight Rules Area (Grand Canyon SFRA) Manual is available here: https://www.faa.gov/about/office_org/field_offices/fsdo/las

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3.1 Management Issues Addressed by this Agreement

The Park offers dramatic scenery and a diverse array of land- and water-based recreation opportunities in close proximity to several large urban centers. With approximately seven million visitors each year, the Park supports some of the nation's highest levels of water recreation and backcountry use. The part of the Park that includes Grand Canyon-Parashant National Monument is one of the most rugged and remote landscapes remaining in the southwestern United States. This Monument provides iconic western viewsheds in a setting known for its solitude, natural soundscapes, internationally recognized night skies, and Wilderness values. Conditions for the management of commercial air tour operations, contained in Section 4.0, are intended to reduce effects of noise to the natural acoustic environment from commercial air tours that include impacts to Wilderness, wildlife, cultural resources, and visitor experience.

Acoustic Environment

- The Park preserves the natural soundscape and has collected data from over 20 acoustic monitoring sites to characterize existing sound levels and understand the impacts of noise on the acoustic environment. While many areas of the Park have an incredible natural soundscape unique to quiet desert environments, all of the acoustic monitoring locations had audible aircraft. Throughout the Park's terrestrial environment aircraft is the most common source of noise. Air tours occur frequently over the Park and noise from helicopters are a common source of daytime noise.^{8,9}
- On a year-round basis, the loudest and most frequent noise in several of the Wilderness areas, specifically Pinto Valley, Black Canyon, and Muddy Mountains Wilderness, is from air tours. Many of these aircraft fly from Clark County, NV to Grand Canyon National Park.¹⁰

Wilderness

- Over 56% of the Park is managed as Wilderness. These vast backcountry and Wilderness lands, including nine congressionally designated Wilderness areas, serve to preserve ecological resources and processes and provide exemplary opportunities for primitive recreation and desert solitude as described in the Foundation Document.

⁸ Gurung, B., Peterson, B.A., Beeco, J.A., Anderson, S.J., & Joyce, D. (2023). Exploring spatial patterns of overflights at Lake Mead National Recreation Area. Natural Resource Report NPS/LAKE/NRR—2023/2489. National Park Service, Fort Collins, Colorado.

⁹ Rinella, J. (2013). Acoustic monitoring 2007-2012: Lake Mead National Recreation Area. Natural Resource Technical Report NPS/NRSS/NRTR—2013/785. National Park Service, Fort Collins, Colorado

¹⁰ Lake Mead National Recreation Area Final Jumbilnan, Pinto Valley, Black Canyon, Eldorado, Iretaba Peaks, Nellis Wash, Spirit Mountain and Bridge Canyon Wilderness Areas, Wilderness Management Plan Environmental Impact Statement
<https://parkplanning.nps.gov/document.cfm?parkID=317&projectID=16820&documentID=64482>

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- The ability to experience solitude is an integral component of Wilderness character in these iconic western viewsheds and natural soundscapes. In preserving this Wilderness quality, the NPS places importance on considering the value of maintaining these places where present and future generations have the opportunity to feel free, at peace, and observe landscapes without modern human effects.

Wildlife

- Noise from commercial air tours has been documented to impact wildlife in a number of ways, including altered vocal behavior, breeding relocation, changes in vigilance and foraging behavior, and impacts on individual fitness and the structure of ecological communities.^{11,12,13,14} Protections for wildlife include consideration of all wildlife generally but many of the recommendations in this Agreement are based off protections for desert bighorn sheep and their lambing areas, bald eagle wintering habitat, and California condors specifically.

Cultural Resources

- The NPS-managed portion of Avi Kwa Ame National Monument includes Spirit Mountain. This area is one of several traditional cultural properties in the Park listed on the National Register of Historic Places and is also designated Wilderness. Spirit Mountain, referred to as Avi Kwa Ame by Yuman Tribes, is considered a cultural and spiritual birthplace and is sacred ground. Avi Kwa Ame is in continuous use by tribes.

Visitor Experience

- In the Lake Mead National Recreation Area Foundation Document, a Park purpose is to provide diverse public recreation, benefit, and use on Lake Mead and Lake Mohave and surrounding lands. The Park's Foundation Document describes fundamental resources and values which are those features, systems,

¹¹ Shannon, G., McKenna, M.F., Angeloni, L.M., Crooks, K.R., Fristrup, K.M., Brown, E., Warner, K.A., Nelson, M.D., White, C., Briggs, G., McFarland, S., & Wittemyer, G. (2016). A synthesis of two decades of research documenting the effects of noise on wildlife. *Biological Reviews* 91(4), 982-1005. <https://doi.org/10.1111/brv.12207>

¹² Kunc, H.P., McLaughlin, K.E., & Schmidt, R. (2016). Aquatic noise pollution: Implications for individuals, populations, and ecosystems. *Proceedings of the Royal Society B: Biological Sciences* 283(1836). <https://pubmed.ncbi.nlm.nih.gov/27534952/>

¹³ Kunc, H.P., and Schmidt, R. (2019). The effects of anthropogenic noise on animals: A meta-analysis. *Biology Letters* 15(11), 20190649. <https://doi.org/10.1098/rsbl.2019.0649>

¹⁴ Dolbeer, R.A., Begier, M.J., Miller, P.R., Weller, J.R. & Anderson, A.L. (2021). Wildlife strikes to civil aircraft in the United States, 1990–2019 (No. DOT/FAA/TC-21/19). United States. Department of Transportation. Federal Aviation Administration. William J. Hughes Technical Center.

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processes, experiences, stories, scenes, sounds, smells, or other attributes determined to warrant primary consideration during planning and management processes because they are essential to achieving the purpose of the Park and maintaining its significance. Fundamental resources and values are closely related to a Park’s legislative purpose. The Foundation Document also describes “other important resources and values” that are not fundamental to the purpose of the Park and may be unrelated to its significance, but are important to consider in planning processes. These other important resources and values identified for the Park include “Experiential Opportunities,” which means that the Park provides opportunities for Park visitors to experience the natural world and cultural context through important visual connections, dark night skies, natural sounds, and natural smells. The NPS considers balancing the diverse ground-based experiential opportunities with air tour customers important to the planning process.

- The Lake Mead National Recreation Area Lake Management Plan designates the portion of Lake Mohave adjacent to the Black Canyon Wilderness south of the Hoover Dam and north of Willow Beach as a primitive water recreation area with temporal zoning in order to provide for a range of recreational settings. This portion of Black Canyon is managed for a primitive setting two days per week (Sunday and Monday) on a year-round basis to allow for natural sounds to be the primary sounds during those periods and to benefit nonmotorized recreationists as well as wildlife species in the canyon. Only nonmotorized watercraft and electric trolling motor use is allowed in the canyon during these times to preserve the area’s tranquil qualities and to provide opportunities for solitude and quiet exploration.
- Grand Canyon-Parashant National Monument’s purpose is to cooperatively protect undeveloped, wild, and remote northwestern Arizona landscapes and their resources, while providing opportunities for solitude, primitive recreation, scientific research, and historic and traditional uses. This Monument is one of the most rugged and remote landscapes remaining in the southwestern United States. This Monument provides iconic western viewsheds in a setting known for its solitude, natural soundscapes, internationally recognized night skies, and Wilderness values. This Monument provides the opportunity to continue historic and traditional uses of the landscape, including ranching and hunting and American Indian practices. This Monument also provides exemplary opportunities for diverse primitive recreation, including horseback riding, camping, internationally renowned mule deer trophy hunting, and more than 1,386 miles of off-highway vehicle routes.

3.2 Transportation Routes

The Act exempts transportation routes over or near Lake Mead National Recreation Area, stating that the Act:

“...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

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250 tour over the Grand Canyon National Park. For purposes of this subsection, an air
251 tour operator flying over the Hoover Dam in the Lake Mead National Recreation
252 Area en route to the Grand Canyon National Park shall be deemed to be flying
253 solely as a transportation route.”

254 Transportation flights as described in Section 6.0 are exempt from Annual
255 Authorizations, however they can still have impacts on Park resources and visitor
256 enjoyment. This Agreement provides clarification on the Act’s definition of
257 transportation routes as they apply to the Park.

258 To provide an accurate and fair assessment of air tour activity over the Park, the agencies
259 will use a three-year period, from 2025-2027, to capture operator-reported air tour
260 numbers based on definitions and reporting requirements in this Agreement (Section 6.0).
261 The three-year reporting period process will provide data for Final Authorizations and is
262 discussed in Section 4.6. As used in this Agreement the three-year reporting period is
263 defined as the monitoring period between 2025-2027.

264 Except as necessary for safety, the initial number of annual air tours authorized for
265 NAME OF OPERATOR under the Agreement will not be reduced during the three-year
266 reporting period while the agencies gather data. Because transportation routes impact
267 Park resources, and even though the Act does not require mitigation related to
268 transportation routes, mitigation of impacts from all air tour activity including both
269 transportation routes and Park air tours are included in this Agreement to protect sensitive
270 resources of the Park.

271 Sections 4.1-4.5 detail mitigations put into place by this Agreement to improve protection
272 of Park resources. Over the entire Park, with the exceptions noted in Section 4.7, a
273 minimum of 1,000 feet (ft.) above ground level (AGL) will be maintained by helicopter
274 air tours and a minimum of 1,500 ft. AGL will be maintained by fixed-wing air tours to
275 reduce noise and visual intrusions from low flying air tours.¹⁵

276 **4.0 CONDITIONS FOR THE MANAGEMENT OF COMMERCIAL AIR TOUR** 277 **OPERATIONS WITHIN THE VOLUNTARY AGREEMENT BOUNDARY**

278 This Agreement includes the following provisions and conditions. The attached
279 appendices, incorporated by reference to this Agreement, include additional provisions
280 and conditions.

281 4.1 Whitmore Canyon (Bar Ten Airstrip)

282 While operating within the voluntary agreement boundary over Grand Canyon-Parashant
283 National Monument the fixed-wing operators will preferentially not use the Grand
284 Canyon SFRA Blue Direct North Route when flying into the Bar Ten Airstrip to reduce
285 impacts to Whitmore Canyon, an area managed as Wilderness with California condor

¹⁵ National Park Service Management Policies § 4.9.

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habitat. This area also includes Kelly Point and the Waring Ranch which is a traditional cultural property.

- Helicopter air tours are prohibited within the eastern NPS-managed portion of Grand Canyon-Parashant National Monument outside of the Grand Canyon SFRA boundary.
- Fixed-wing air tours shall be conducted at a minimum altitude of 1,500 ft. AGL except for takeoff and landing from the Bar Ten Airstrip, depicted in Figure 2.
- After takeoff from the Bar Ten Ranch or Bar Ten Airstrip, local loop tours not entering the Grand Canyon SFRA will fly outside of the voluntary agreement boundary to the north.
- Fixed-wing operators will preferentially avoid flying the Blue Direct North route within the Grand Canyon SFRA in order to avoid Kelly Point. Instead, fixed-wing operators will fly north of the Blue Direct North route, adjacent to the Grand Canyon SFRA boundary.
- See Figure 2 for a depiction of this area.

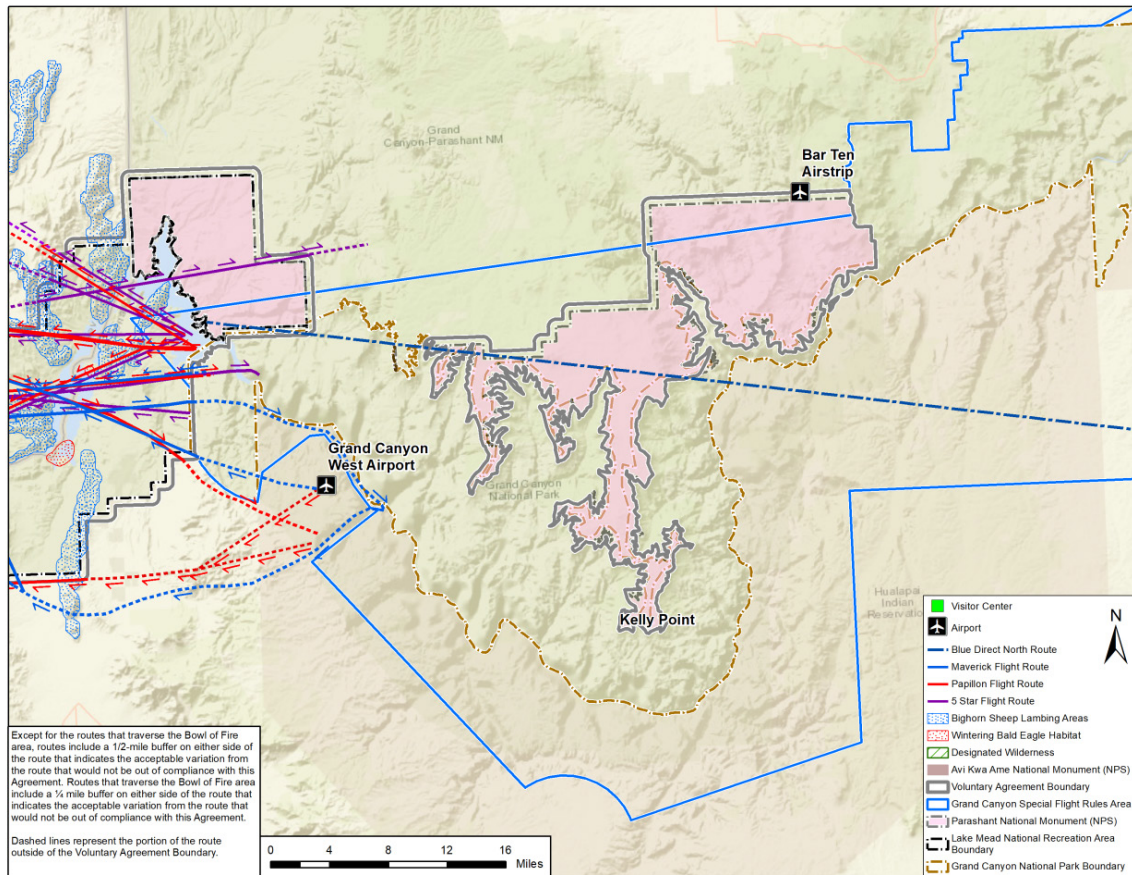


Figure 2. Whitmore Canyon (Bar Ten Airstrip) commercial air tour operating area.

4.2 Overton Arm

At Overton Arm the altitude AGL for aircraft is increased by 500 ft. to 1,500 ft. to additionally reduce noise and visual intrusions to bighorn sheep and wintering bald eagles.

- Air tours shall be conducted at a minimum altitude of 1,500 ft. AGL for helicopters and a minimum altitude of 2,000 ft. AGL for fixed-wing aircraft which exceeds U.S. Fish and Wildlife Service guidance for bald eagles¹⁶ and supports recommendations for bighorn sheep.¹⁷
- See Figure 3 for a depiction of this area.

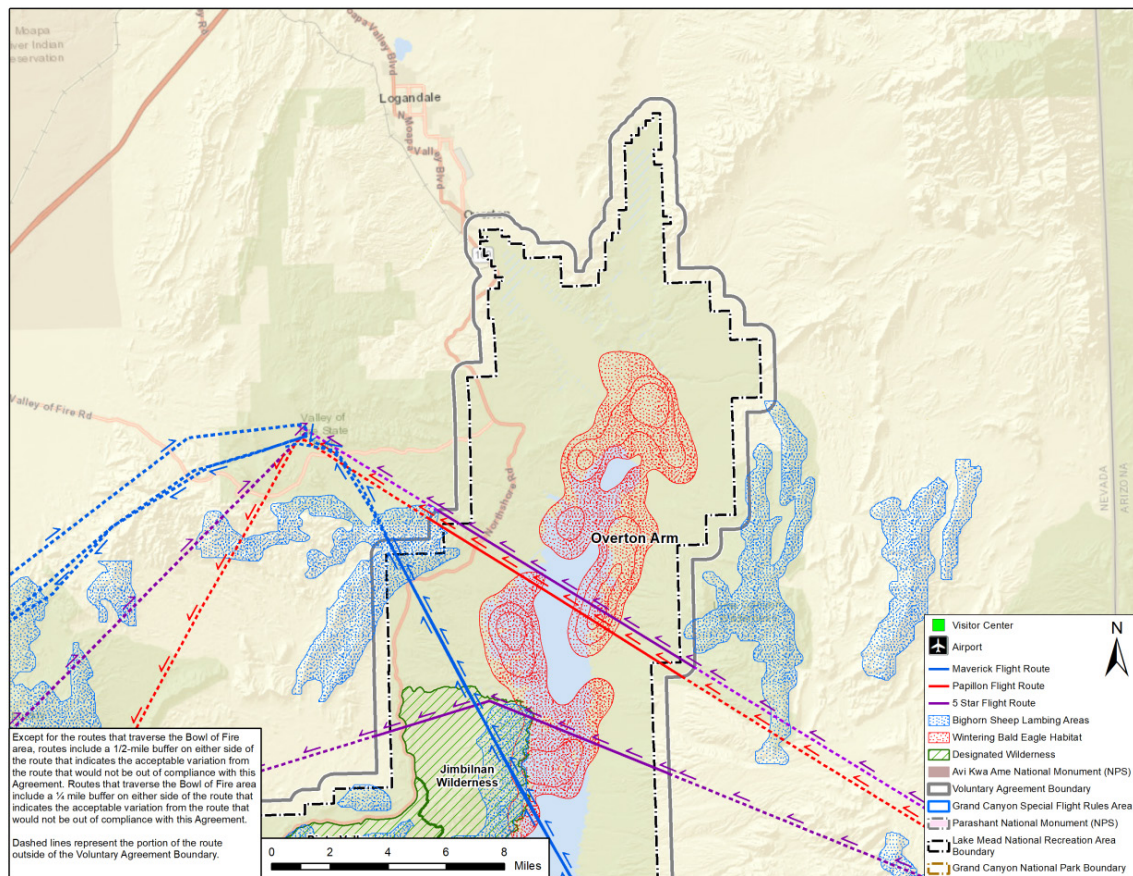


Figure 3. Overton Arm commercial air tour operating area.

4.3 Bowl of Fire

At Bowl of Fire aircraft will increase altitudes by 500 ft. to maintain 1,000 ft. AGL, which will reduce noise impacts by 4 dBA (sound exposure level) near high visitation

¹⁶ U.S. Fish and Wildlife Service. (2007). National Bald Eagle Management Guidelines.

¹⁷ Stockwell, C.A., and Bateman, G.C. (1991). Conflicts in national parks: A case study of helicopters and bighorn sheep time budgets at the Grand Canyon. *Biological Conservation* 56 pp. 317-328.

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trails. This mitigation was added to reduce noise and visual impacts to the Muddy Mountains and Pinto Valley Wilderness areas and to reduce disturbance to bighorn sheep.

- Helicopter air tours will increase their elevation from at minimum 3,000 ft. mean sea level (MSL) to 3,500 ft. MSL to maintain 1,000 ft. AGL or higher over the Muddy Mountains Wilderness.
- Helicopter tours will minimize the area impacted by noise over the Pinto Valley Wilderness by concentrating their routes into corridors and flying between 3,500 ft. and 4,000 ft. MSL to maintain a minimum of 1,000 ft. AGL.
- Fixed-wing air tours will maintain a minimum of 1,500 ft. AGL over Bowl of Fire.
- See Figure 4 for a depiction of this area.

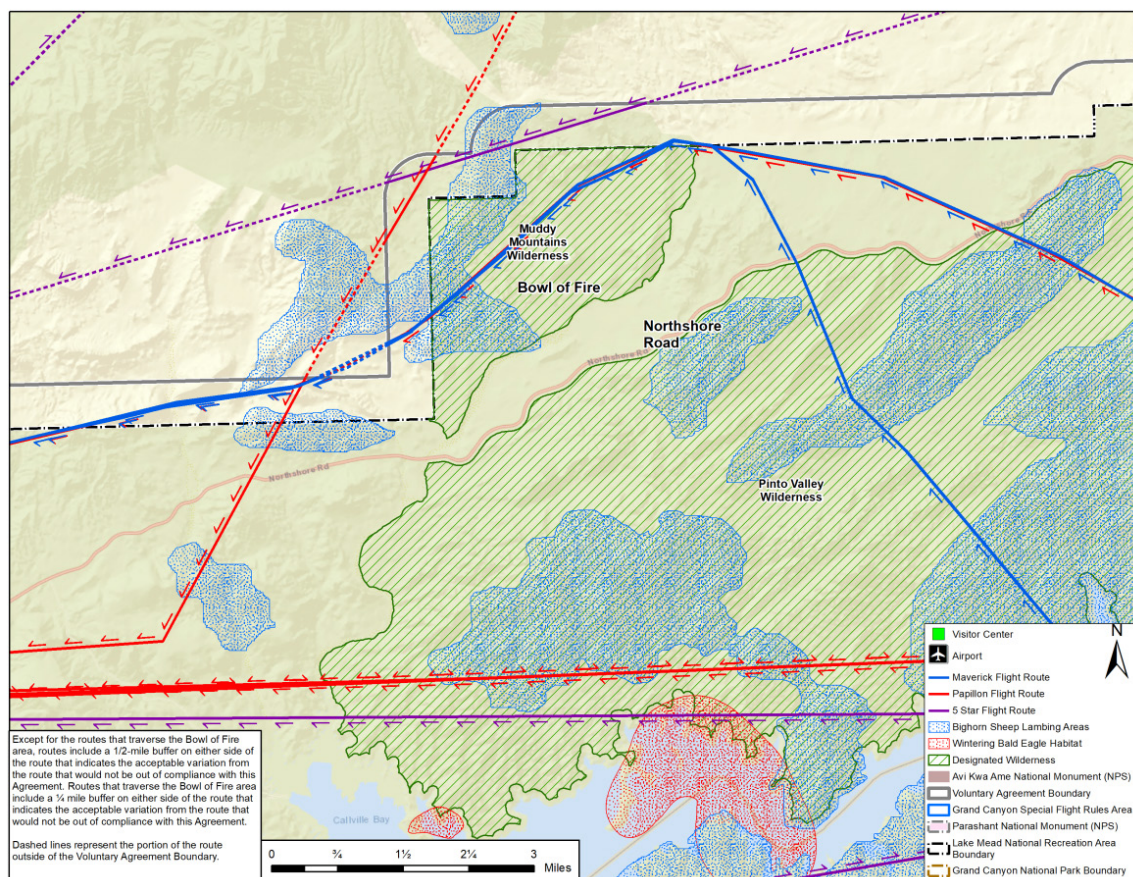


Figure 4. Bowl of Fire commercial air tour operating area.

4.4 Black Canyon

At Black Canyon the tours are being concentrated north of Emerald Cove and south of Arizona Hot Springs to reduce impacts to visitors in these heavily used locations as well as reduce the impacts otherwise scattered throughout the Black Canyon Wilderness. While no short loop tours of Black Canyon are currently active, if these routes become active they will not occur on Sunday and Monday in line with the Lake Mead National

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Recreation Area Lake Management Plan and activation of these routes will require advance notice described in Appendix D.

- Air tours shall be conducted at a minimum altitude of 1,000 ft. AGL for helicopters and a minimum altitude of 1,500 ft. AGL for fixed-wing aircraft.
- Helicopter air tours traversing Black Canyon will fly 2.5 miles north of Willow Beach and a half-mile south of Arizona Hot Springs.
- See Figure 5 for a depiction of this area.

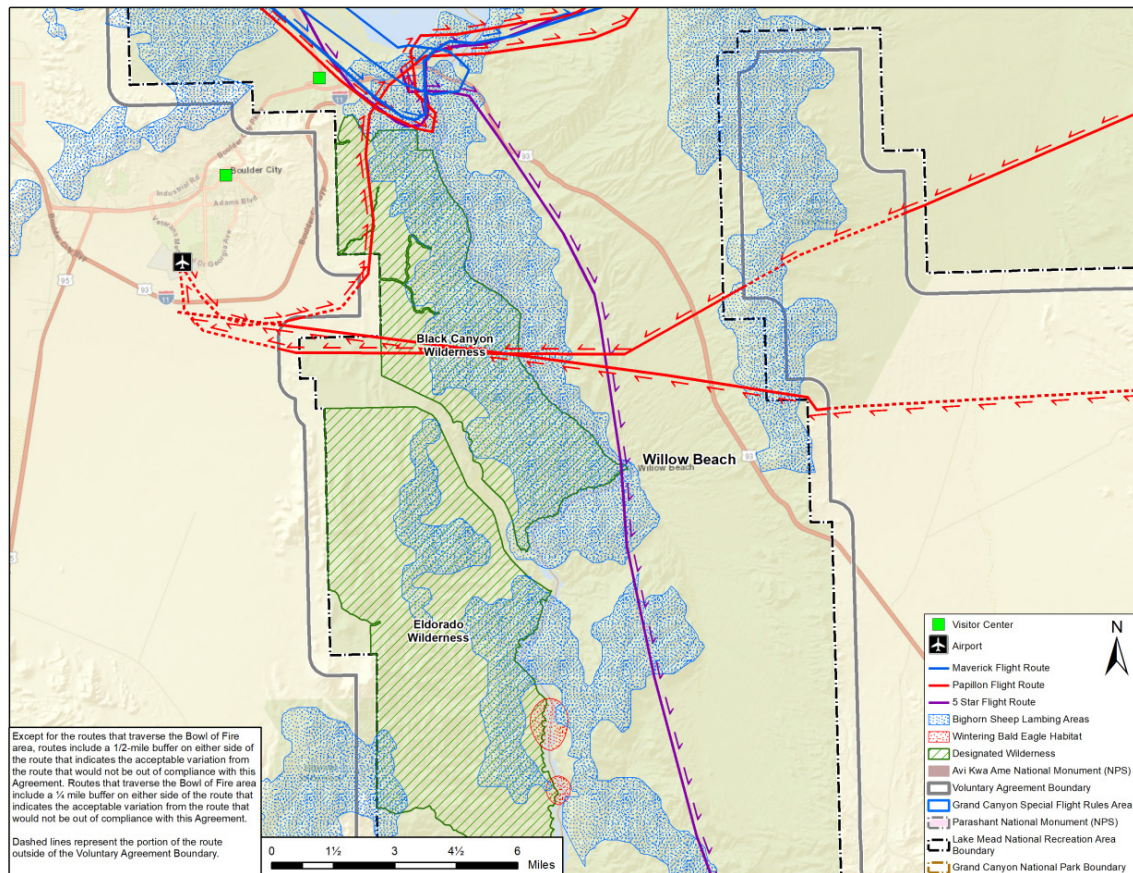


Figure 5. Black Canyon commercial air tour operating area.

4.5 Avi Kwa Ame

No air tours will fly over the portion of Avi Kwa Ame National Monument within the voluntary agreement boundary to reduce impacts to the sacredness of the site, which is a traditional cultural property. This also serves to reduce impacts to Spirit Mountain Wilderness, Nellis Wash Wilderness, and Bridge Canyon Wilderness areas.

- Air tours flying parallel with Lake Mohave including those to Laughlin Airport will fly on the east side of Lake Mohave and shall be conducted at a minimum altitude of 1,000 ft. AGL for helicopters and a minimum altitude of 1,500 ft. AGL for fixed-wing aircraft for entirety of the route.

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- Air tours shall avoid Spirit Mountain and Avi Kwa Ame National Monument by flying on the east side of Lake Mohave.
- See Figure 6 for a depiction of this area.

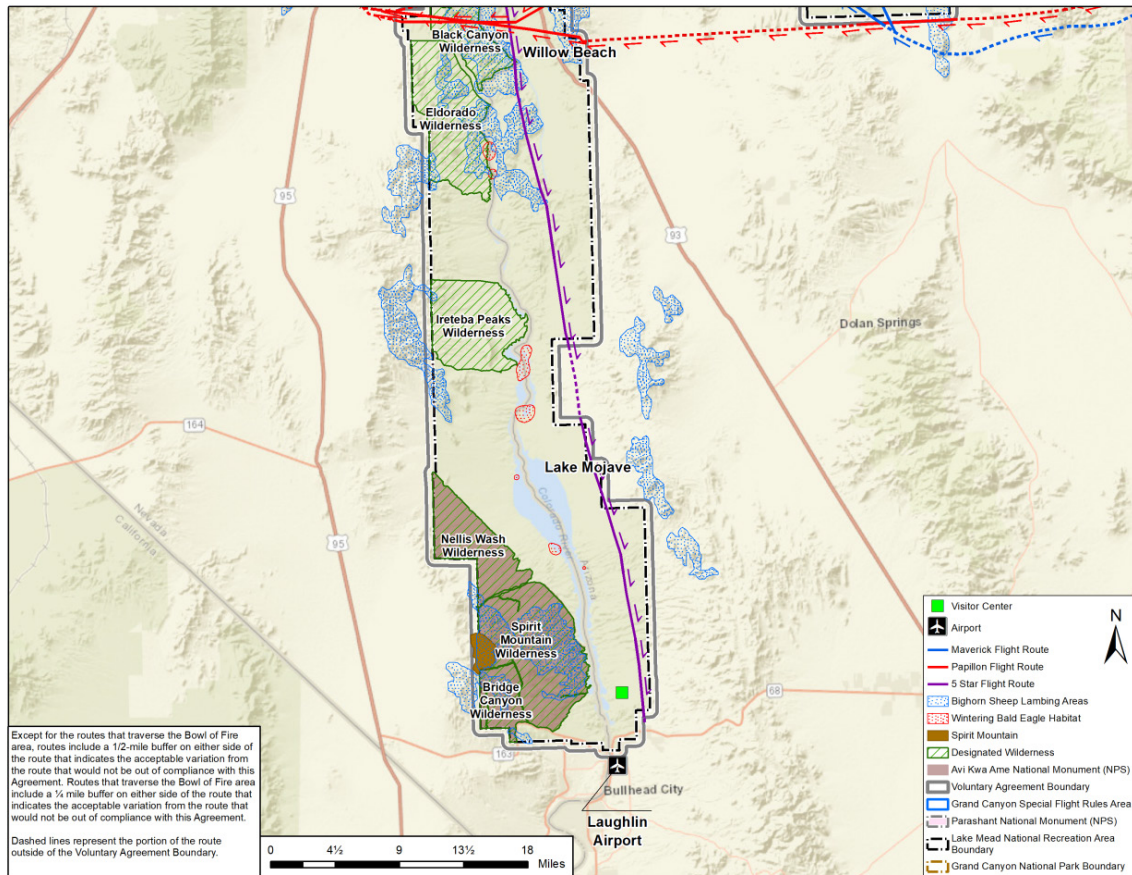


Figure 6. Avi Kwa Ame commercial air tour operating area.

4.6 Commercial Air Tours Authorized

The terms “Authorization” or “Lake Mead Authorization” as used in this Agreement refers to the commercial air tours of the Park that NAME OF OPERATOR is authorized to conduct under this Agreement.

The number of commercial air tours initially authorized under this Agreement (Initial Authorization) is the number of air tours authorized under IOA for all existing operators with IOA before 2024. While the annual number of air tour Authorizations conducted within the voluntary agreement boundary will not be reduced by this Agreement, the way those air tours are reported will, by necessity, change because this Agreement clarifies which routes are transportation routes to Grand Canyon National Park under the Act.

The final number of annual air tours authorized under this Agreement (Final Authorization) will be determined after the agencies analyze three years of resource monitoring data, aircraft tracking data, and annual reports submitted by operators under the reporting format identified by the agencies in Section 6.0 of the Agreement. The

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three-year reporting period will begin in January 2025 and continue through December 2027. After December 2027 the agencies will analyze the information and update Initial Authorizations identified in Appendix B, to Final Authorizations. After the three-year reporting period IOA shall also be updated to ensure the stability of the Agreement. After December 2027 NAME OF OPERATOR will continue to report air tours as outlined in this Agreement until the Agreement is amended.

5 Star Grand Canyon Helicopter Tours, LLC (5 Star) applied for operating authority in 2012. Pursuant to the provisions in the Act regarding the inclusion of new entrants in a voluntary agreement,¹⁸ 5 Star is included in this Agreement as a new entrant.

Within 180 days after the end of the three-year period, the agencies will analyze NPS resource monitoring data, aircraft tracking data and reporting data to determine Final Authorizations, identify any additional adjustments, if any, necessary to meet the objectives of the Agreement, and amend the Agreement to include Final Authorizations for the operators. Operators will continue to report commercial air tours the same as during the three-year period until the Agreement is updated to include Final Authorizations or other guidance is provided by the agencies in compliance with all applicable data collection laws and regulations. The Final Authorization under this Agreement will not exceed the Initial Authorization. Refer to Appendix B for the Initial Authorization of air tours.

4.7 Commercial Air Tour Route and Altitudes

Commercial air tours authorized in this Agreement by helicopter operators shall be conducted on the active designated air tour routes and altitudes shown in Figures 9 through 11. See Appendix C for additional descriptions of the active routes. See Appendix D for maps of inactive routes, terms and conditions for inactive routes, and the process for activating an inactive route. Designated routes are not required for fixed-wing commercial air tours conducted above 1,500 ft. AGL with the exception of flights in the vicinity of the Hoover Dam shown in Figure 7.

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. The altitudes in Figures 9 through 11 below are expressed in MSL. Fixed-wing aircraft will fly a minimum of 500 ft. higher than helicopters. These MSL altitudes ensure commercial air tours conducted by helicopters will fly no lower than 1,000 ft. AGL, and commercial air tours conducted by fixed-wing aircraft will fly no lower than 1,500 ft. AGL throughout the voluntary agreement boundary with two exceptions:

- The first exception encompasses the outbound route towards Grand Canyon National Park and the S-turn associated with the Hoover Dam, as displayed in

¹⁸ See 49 U.S.C. § 40128(b)(7)(A).

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410 Figure 7. Under the S-Turn, 1,000 ft. cannot be achieved because of the
411 congestion of aircraft in this area that is under the Class B airspace. All helicopter
412 operators that are signatories to this Agreement fly the same route shown in
413 Figure 8, while fixed-wing operators fly approximately 500 ft. above them. In
414 this area, fixed-wing operators may also not achieve the 1,500 ft. AGL required
415 over the rest of the voluntary agreement boundary.

416 • Figure 8 depicts the second exception where 1,000 ft. AGL cannot be achieved by
417 Maverick Helicopters, Inc. (Maverick) as they leave their fuel farm; this
418 exception is made for safety. As Maverick leave their fuel farm and enter the
419 voluntary agreement boundary, they climb under eastbound traffic returning from
420 Grand Canyon National Park and traffic from the Temple Bar Airport, because of
421 this traffic an exception is made for achieving 1,000 ft. AGL before entering the
422 voluntary agreement boundary.

423 Except for the routes that fly over the Bowl of Fire area (Figure 4), routes include a ½-
424 mile buffer on either side of the route that indicates the acceptable variation from the
425 route that would not be out of compliance with this Agreement. Routes that fly over the
426 Bowl of Fire area include a ¼-mile buffer on either side of the route that indicates the
427 acceptable variation from the route that would not be out of compliance with this
428 Agreement. Operators may not deviate from the designated route and altitudes except as
429 necessary for safe operation of an aircraft as determined under Federal Aviation
430 Regulations requiring the pilot-in-command to take action to ensure the safe operation of
431 the aircraft. The pilot-in-command should return to the designated route and altitude as
432 soon as safely possible after the hazard has passed.

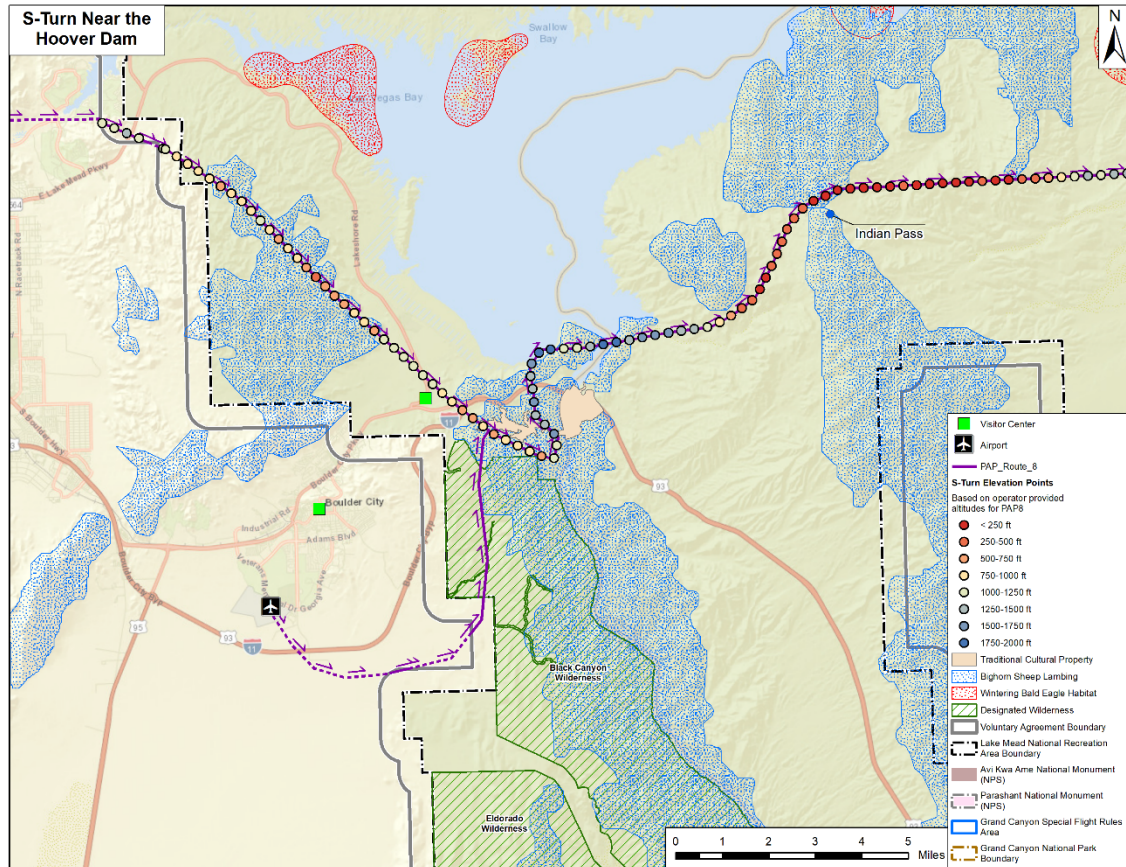


Figure 7. The S-Turn around the Hoover Dam, includes part of Indian Pass where 1,000 ft. AGL is not achieved by helicopter operators and 1,500 ft. AGL is not achieved by fixed-wing operators per the terms of this Agreement.

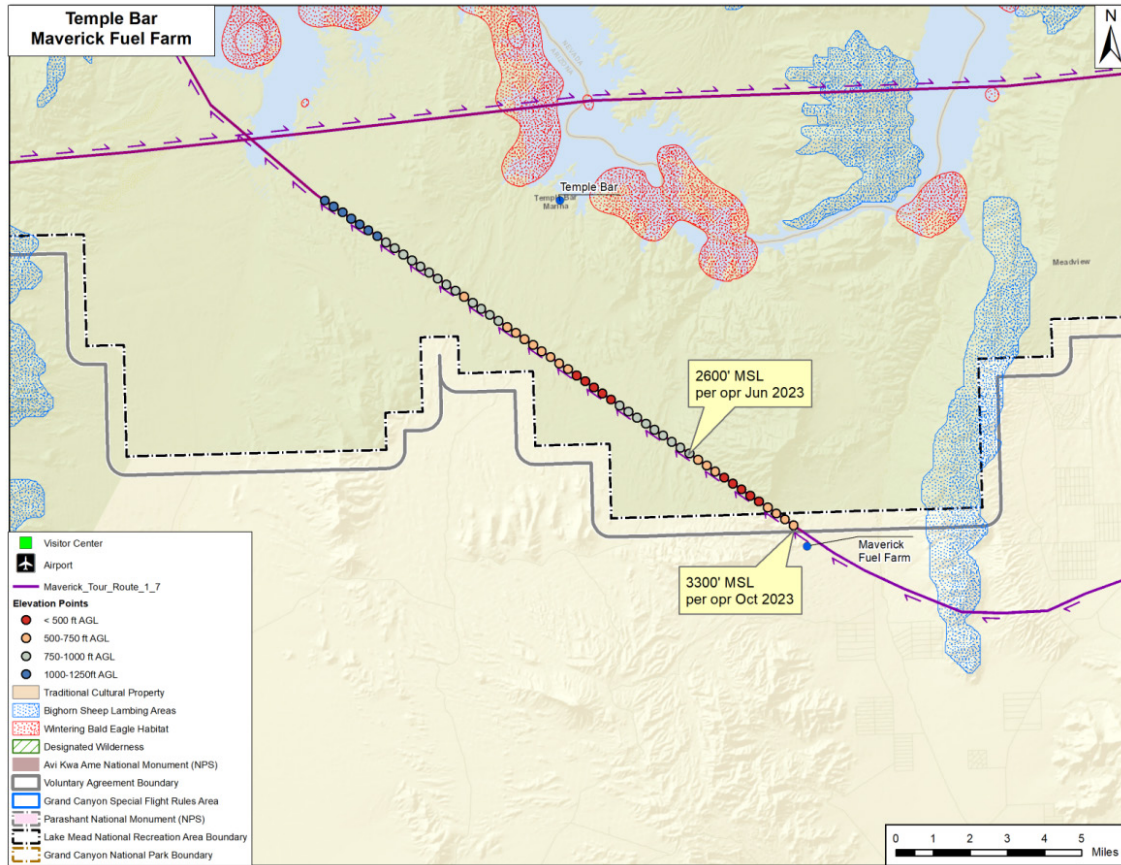


Figure 8. Maverick as they leave their fuel farm where 1,000 ft. AGL is not achieved per the terms of this Agreement.

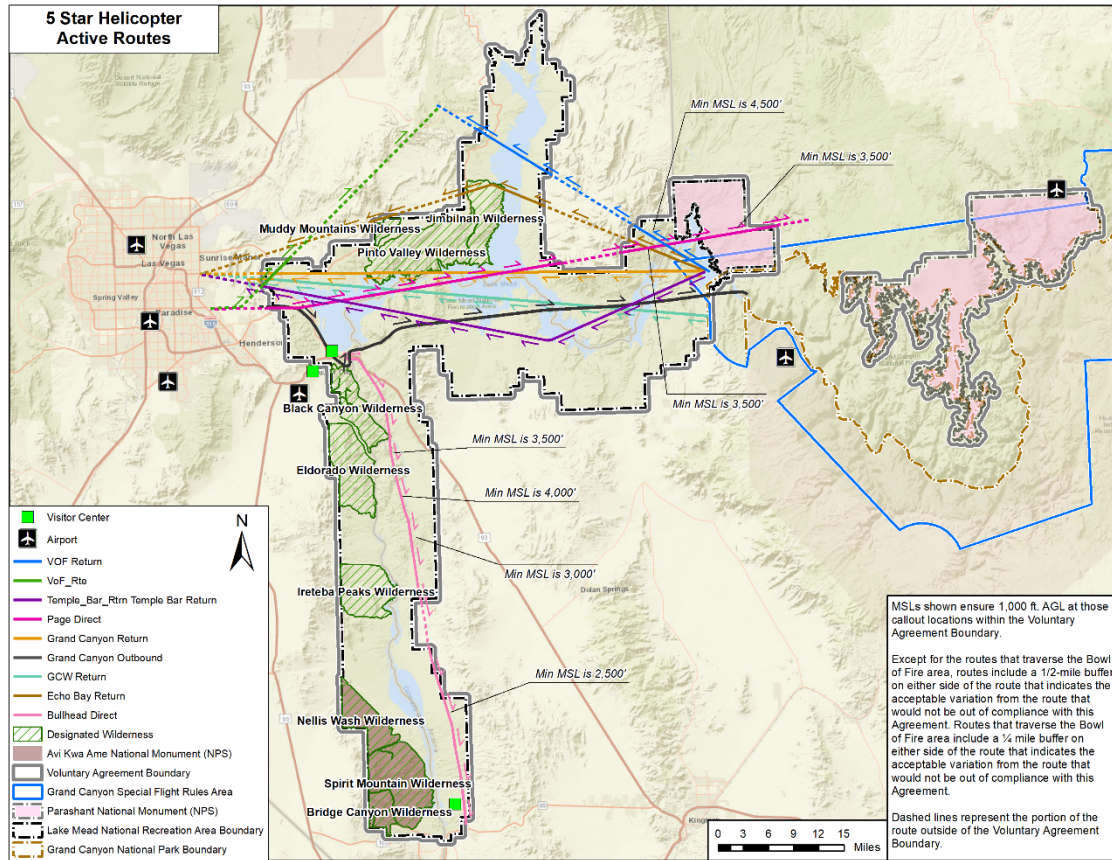


Figure 9. Commercial air tour routes conducted by 5 Star in the voluntary agreement boundary. See Appendix A for an enlarged map.

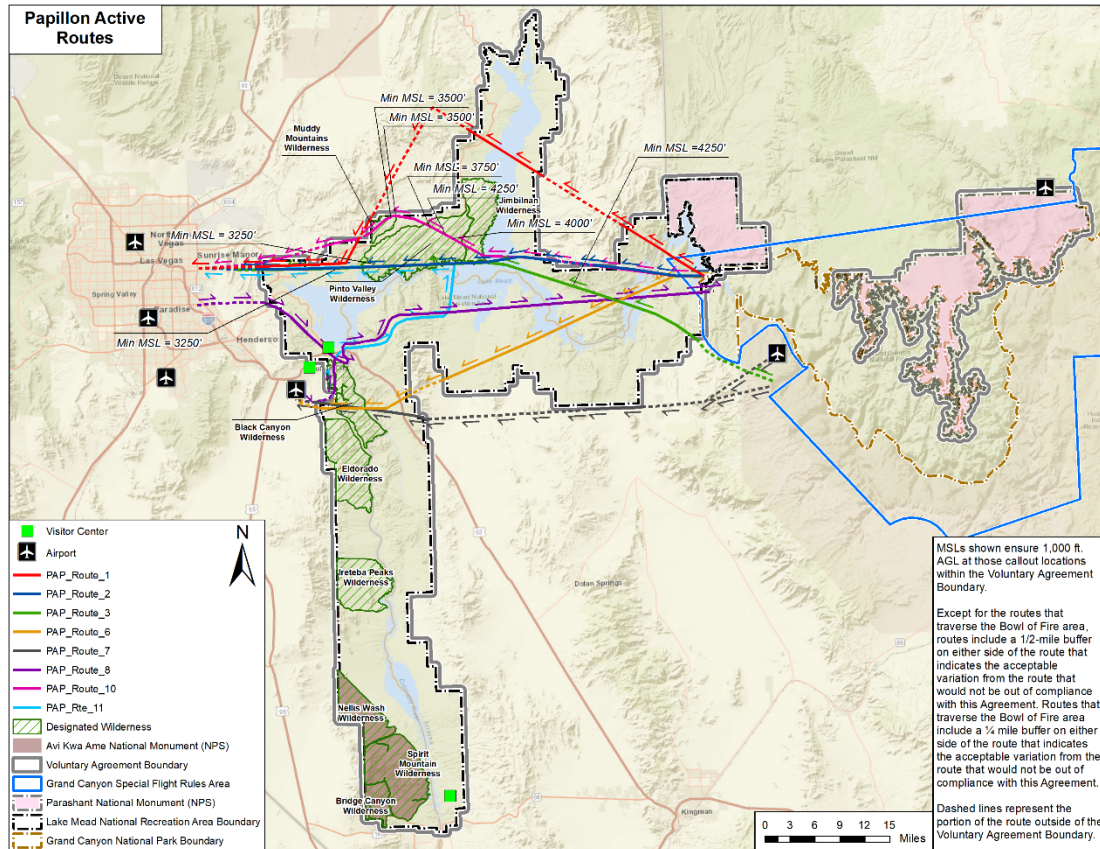


Figure 10. Commercial air tour routes conducted by Papillon Airways, Inc. (Papillon) in the voluntary agreement boundary. See Appendix A for an enlarged map.

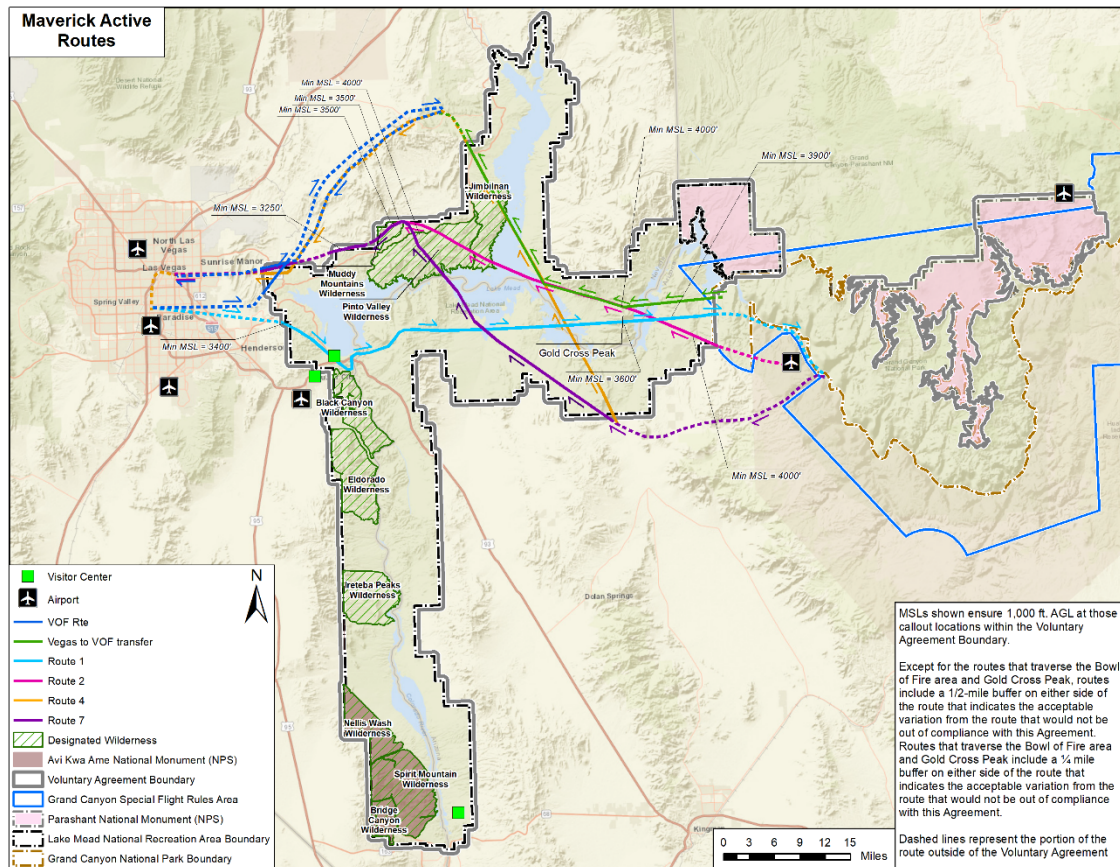


Figure 11. Commercial air tour routes conducted by Maverick in the voluntary agreement boundary. See Appendix A for an enlarged map.

4.8 Aircraft Type

The aircraft types authorized to be used for commercial air tours are identified in Appendix B. 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 agencies in writing of any prospective new or replacement aircraft and obtain joint agency concurrence before initiating air tours with the new or replacement aircraft.

4.9 Restrictions for Particular Events

The NPS can establish additional temporary route modifications or temporary no-fly periods that apply to commercial air tours for special events, such as tribal ceremonies or planned Park management. A temporary no-fly period would result in no air tours being flown in the voluntary agreement boundary. Absent exigent circumstances or emergency operations, the NPS will provide a minimum of two months' notice to the operators (operator contact in Attachment B) in writing in advance of the no-fly period. NPS may require temporary route modifications and will provide no less than two-weeks written notice for planned events or ceremonies and no less than 48 hours in the event of an unforeseen or unplanned circumstances.

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4.10 In-Flight Communication

For situational awareness when conducting flights within the voluntary agreement boundary, the operators will utilize the frequency and position reporting outlined in the Las Vegas Helicopter Tour Operators Route Standardization Agreement (RSA).¹⁹

4.11 Hovering/Circling

Hovering and/or circling of aircraft is prohibited except when needed for safety of the flight or when necessary to obtain clearance into Las Vegas Class B airspace.

4.12 Emergency and Precautionary Landings

While uncommon, the Parties acknowledge that there may be a need for emergency or precautionary landings inside the Park.

In the event of an emergency landing:

- Once the aircraft has safely landed and any medical or other emergency issues have been addressed, the operator shall immediately notify the NPS through Park Dispatch at (702) 293-8998 of the nature and location of the ongoing emergency and what actions are being taken.
- When necessary to land additional aircraft to address a continuing emergency situation, pre-approval will not be required.
- When necessary to land additional aircraft once the emergency situation no longer exists (e.g., to remove passengers that are not injured or in any harm) notice and prior approval from Park managers is required and can be granted by contacting Park Dispatch and/or Park contacts in Attachment B.
- Plans for removing any downed aircraft that cannot be flown out will require approval by Park management (contact information in Attachment B) prior to removal for the safety of Park visitors and protection of Park resources.²⁰

Precautionary Landings

- Advance notice of a precautionary landing will be made to the agencies by contacting Park Dispatch where practical.
- When advance notice is not practical, the landing will be reported to FAA and NPS via Park Dispatch as soon as practical and safe.

¹⁹ The Route Standardization Agreement (RSA) is written and maintained by the operators of this Agreement to address safety concerns related to Las Vegas Class B airspace and the Grand Canyon SFRA. It will continue to be updated to incorporate routes described in this Agreement and may include information not relevant to this Agreement to ensure safe operations. The RSA is not an agreement with the agencies nor does it meet the statutory requirements for a voluntary agreement under the Act. Therefore, if any terms, conditions, or requirements of the RSA conflict with the Agreement, the Agreement will be predominate. The operators will notify the signatories of any changes.

²⁰ See 36 CFR 2.17.

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- For all events, irregularity reports will be provided to the FAA and the applicable Park Superintendent or their designee within 10 days of the incident.

In the event of emergency landings within lands managed as Wilderness, a minimum requirements analysis of any proposed recovery operations plan is required per NPS policy prior to NPS approval of any removal or recovery operations within the Park, after any emergencies are addressed.

5.0 PROVISIONS TO ENSURE STABILITY AND EFFECTIVENESS OF THIS AGREEMENT

The Act specifically provides that voluntary agreements may include provisions to ensure the stability of, and compliance with, the Agreement.²¹ The measures included in this Agreement are described below.

Compliance with this Agreement will be ensured through ongoing communications among the Parties, reporting of air tour operations by NAME OF OPERATOR as required under the Act and described in Section 6.0, and enforcement measures as appropriate. The Parties agree to work together to address any possible compliance issues.

NAME OF OPERATOR will comply with the terms and conditions of this Agreement. The NPS and the FAA are both responsible for oversight and enforcement of the Agreement within their respective agency jurisdictions. Any party, stakeholder, or member of the public can identify instances of alleged non-compliance with this Agreement, including through the use of Automatic Dependent Surveillance–Broadcast (ADS-B) or other flight tracking data. Allegations of non-compliance with this Agreement will be reported to the appropriate FAA Flight Standards District Office (FSDO). The FSDO will investigate and respond to all written reports consistent with applicable FAA guidance.

Investigative determination of non-compliance with this Agreement may result in loss of Authorization to conduct commercial air tours authorized by this Agreement and termination of this Agreement. Any violation of operations specifications (OpSpecs) shall be treated in accordance with FAA Order 2150.3, *FAA Compliance and Enforcement Program*.

5.1 Automatic Dependent Surveillance–Broadcast

All operators are ADS-B equipped.²² At all times within the voluntary agreement boundary, operators will have ADS-B Out turned on. New and replacement aircraft must

²¹ See 49 U.S.C. § 40128(b)(7)(B)(ii).

²² ADS–B is a performance–based surveillance technology that is more precise than radar and consists of two different services: ADS–B Out and ADS–B In. ADS-B Out broadcasts information about an aircraft's GPS location, altitude, ground speed and other data to ground stations and other aircraft, once per second.

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maintain these requirements. Barometric altimeter settings will be adjusted in compliance with the RSA and the Grand Canyon SFRA Manual.

5.2 Meetings

At the request of either of the agencies, the Park staff, the local FAA FSDO, and all operators will meet once per year to discuss the implementation of this Agreement and any amendments or other changes to the Agreement. This annual meeting could be conducted in conjunction with any required annual training and will provide a virtual attendance option. The Parties may meet more frequently, or as necessary, to discuss compliance and ways to improve the protection of Park's resources. Topics to be discussed may include: a review of emergency and precautionary landings in the Park, a review of post-Agreement adaptive management resource/visitor experience monitoring, changes in resource conditions or visitor patterns in the Park, proposed amendments, changes to agency and operator contact information (Attachment B), and other measures that might influence the stability or effectiveness of the Agreement. Other stakeholders with subject matter expertise may be invited.

When training is made available by NPS, operators/pilots will complete training within one year of it being made available. 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 the Park by air tour clients. Meetings will also include a review of any updates in the documentation for the Las Vegas Class B Airspace Helicopter Operators Letter of Agreement, the Las Vegas RSA, the Grand Canyon SFRA Manual, other relevant content, and the information in Attachments A and B.

5.3 Adaptive Management

Adaptive management allows for minor adjustments to routes, altitudes, or other operating parameters without a formal amendment if the impacts of such changes are within the scope of impacts considered by the Parties.

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 Parties determine that appropriate, minor changes are necessary to address new information or changed circumstances, including consideration of a new entrant or competitive bidding.

Examples of adaptive management may also include: A) measures to ensure the Agreement continues to address the management issues necessary to protect the resources and visitor use of the Park without compromising aviation safety or the air traffic control

ADS-B Out airspace and equipment requirements are contained in 14 CFR § 91.225 and the equipment performance requirements are contained in §91.227.

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system; and B) measures necessary to activate a currently inactive route that are outlined in Appendix D.

The NPS may conduct monitoring of Park conditions to ensure the continued effectiveness of the Agreement in addressing Park management objectives consistent with the requirements of the Act as well as NPS-management authorities.

5.4 Staff Training

Operators will ensure that the Agreement will be included as part of their regular initial and recurring pilot training process. Similarly, the agencies will ensure that any new agency staff with responsibilities related to carrying out the terms and conditions of this Agreement will be made aware of its existence and the specific agency obligations included.

5.5 Interim Operating Authority

The Act required the FAA to grant Interim Operating Authority (IOA) to existing operators authorizing them to conduct commercial air tours within the voluntary agreement boundary as a temporary measure. The Act provides that if this Agreement is terminated, NAME OF OPERATOR shall conform to the requirements for IOA until an ATMP for the Park is put in effect, as is further described in Section 12.0. The Parties agree that IOA as of 2023 will be reduced by two thirds as reflected in Appendix B, Opspecs will be amended to reflect this per Section 11.0 under Initial Authorization. For new entrants that do not hold IOA they will be granted one air tour annually under IOA.

5.6 Notifications

NPS, FAA, and all operators agree to provide each other timely notification (not to exceed 30 days) of any changes or proposed changes to any relevant laws, regulations, rules, guidance, agreements, practice, or conditions that have the potential to effect implementation or effectiveness of this Agreement. Examples include but are not limited to: changes to the RSA, any relevant letters of agreement, the Grand Canyon SFRA rules, changes to NPS Management Policies or Director's Orders, or other obligations that would affect noise management, changes to Park management priorities as reflected in NPS planning and management documents or compendium, changes to operator training manual sections relevant to air tours, or changes in key staff or contacts, etc.

6.0 REPORTING

Given the dynamic nature of natural resources and systems the NPS is responsible for managing, coupled with the dynamic nature of the human influences upon them, NPS is required under its enabling legislation and Management Policies to monitor resource conditions to better understand trends and conditions over time and manage accordingly.

Further, the Act states that voluntary agreements must address the management issues necessary to protect the resources and visitor use of the Park without compromising aviation safety or the air traffic control system.

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Starting in January 2025 operators will report air tour activity including both commercial air tours under the Act and Grand Canyon transportation routes as specified below. This reporting format will allow reported data to more accurately distinguish commercial air tour operations and Grand Canyon transportation routes from other types of aviation activity over the Park in order to correlate NPS resource condition assessments with air tour activity.

- NAME OF OPERATOR will submit to the NPS and the FAA semi-annual reports regarding the number of commercial air tours conducted within the voluntary agreement boundary that are authorized by this Agreement and the number of flights on transportation and/or tour routes.
- Reports are due to both the NPS and the FAA 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.
- NAME OF OPERATOR shall adhere to the requirements of any reporting template provided by the agencies.

The Parties acknowledge that although transportation flights are exempt from the Act as well as from reporting annual Authorizations, in order to adequately monitor resource conditions and ensure the effectiveness of this Agreement in addressing the management issues necessary for protecting Park resources and visitor use, reporting both Grand Canyon transportation routes and commercial air tours within the voluntary agreement boundary will be necessary to provide a clearer understanding of resource conditions at the Park and the environmental impact from the commercial air tour operations on Park resources. Lake Mead Authorizations as described below are listed in Appendix B.

Operators shall report tours using the descriptions below. Attachment A provides instructions on how to fill out the current Commercial Air Tour Operator Reports information collection using the descriptions below:

- Clark County-Grand Canyon Direct.** An air tour that flies within the voluntary agreement boundary in a direct path, that may or may not give a tour of Hoover Dam either on the way to the Grand Canyon SFRA or the way back, and enters the Grand Canyon SFRA on one of the designated routes, will be reported as Lake Mead National Recreation Area exempt (and must also be reported to Grand Canyon National Park) using current air tour reporting requirements for each park. This includes (but is not limited to) air tours that join the Green 4 and Blue 2, defined in the current Grand Canyon SFRA Manual. These flights will not use a Lake Mead Authorization.
- Clark County-Grand Canyon with Diversion.** An air tour that flies within the voluntary agreement boundary in a non-direct path in order to provide an air tour of a feature of interest outside of the voluntary agreement boundary (such as Valley of Fire), that may or may not give a tour of Hoover Dam either on the way to the Grand Canyon SFRA or the way back, and enters the Grand Canyon SFRA on one of the designated routes, will be reported as voluntary agreement exempt

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and must be reported to Grand Canyon National Park using current air tour reporting requirements for each park. This includes (but is not limited to) air tours that join the Green 4 and Blue 2 defined in the current Grand Canyon SFRA Manual. These flights will not use a Lake Mead Authorization.

- C. **Lake Mead and other Features of Interest outside the SFRA.** An air tour that flies within the voluntary agreement boundary to fly to any other scenic feature and does not enter the Grand Canyon SFRA will be reported to Lake Mead National Recreation Area even if the air tour within the voluntary agreement boundary is only a portion of the air tour and will use a Lake Mead Authorization. Similarly, a deviation from a route used solely for transportation, as described in the Act, to view a feature of interest in the voluntary agreement boundary, is a commercial air tour under the Agreement and will use a Lake Mead Authorization.
- D. **Lake Mead and Grand Canyon.** An air tour that flies within the voluntary agreement boundary in a non-direct path in order to provide an air tour of a feature of interest inside of the voluntary agreement boundary that is not the Hoover Dam, and enters the Grand Canyon SFRA on one of the designated routes, must be reported to Lake Mead National Recreation Area and must be reported to Grand Canyon National Park because it gives an air tour of both parks. This will use a Lake Mead Authorization.
- E. **Lake Mead.** An air tour that flies within the voluntary agreement boundary and never enters the Grand Canyon SFRA on a designated route and stays within the voluntary agreement boundary. These flights must be reported to Lake Mead National Recreation Area and will use a Lake Mead Authorization.

7.0 TRIBAL CONSULTATION

In addition to other authorities, the Act also requires the NPS and the FAA to consult with any Indian tribe whose tribal lands are, or may be, flown over by a commercial air tour operator under a voluntary agreement.²³ Out of respect to all Tribes with ancestral ties to the Park, consultation was initiated with all 18 affiliated Tribal Nations. A letter dated October 30, 2023, initiated Government to Government consultation for the Agreement with each Tribe. In December 2023, Tribal Nations were invited to two virtual Tribal engagement meetings in early February, with an offer to hold private virtual meetings upon request. NPS and FAA staff presented the Agreement during each virtual engagement meeting. Representatives from the Hualapai Indian Tribe and the Kaibab Band of Paiute Indians participated in the meeting held February 6, 2024, and representatives from the Navajo Tribe participated in the meeting held February 7, 2024. A private virtual meeting was held on February 9, 2024, as requested by the Paiute Indian Tribe of Utah. Tribal consultation is continuous throughout the life of this Agreement. If

²³ 49 U.S.C. § 40128(b)(7)(C).

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new information or resources are discovered that may be impacted by this Agreement, the Park will consult with Tribes.

Tribal input considered in the development of this Agreement include concerns about:

- Impacts to all wildlife impacted by air tours in the Agreement.
- The potential for vibrational impacts to sensitive cultural resources.
- Identification of new resources or culturally significant sites currently unknown that may require future mitigation.
- The notice required for no-fly periods if an unexpected event occurs that could result in a request for air tours to avoid certain areas where ceremonies may be held.

8.0 PUBLIC REVIEW

The Act requires the NPS and the FAA to provide an opportunity for public review of a proposed voluntary agreement.

The final agreement will include an additional paragraph(s) describing the public review opportunity.

9.0 AMENDMENT

The NPS, the FAA, or NAME OF OPERATOR may request an amendment to this Agreement. Written notice to amend the Agreement must be sent to the other two parties to the Agreement. Within 30 days after receipt of request, the agencies will provide acknowledgement of receipt of the request. Revisions to the Agreement can only be approved if all three Parties sign the amendment to the Agreement, following the opportunity for public review and tribal consultation, as necessary. Amendments must meet the objectives of the Agreement.

Due to necessary compliance with Las Vegas Class B airspace requirements,²⁴ any changes to Class B airspace might result in changes to or amendment of this Agreement.

10.0 TRANSFER OF VOLUNTARY AGREEMENT

Authorizations under this Agreement are non-transferable. An Authorization of annual operations may be assumed by a successor purchaser that acquires an entity holding Authorizations under this Agreement in its entirety. In such case, the prospective purchaser shall notify the FAA and the 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 Agreement. This notification must include a certification that the prospective purchaser has read and will comply with the terms and

²⁴ Letter of Agreement for Helicopter Operations in Las Vegas Class B Airspace, as maintained by the Las Vegas Air Traffic Operations.

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conditions in the Agreement. The FAA will consult with the NPS before issuing new or amended OpSpecs or taking other formal steps to memorialize the change in ownership.

11.0 CONFORMANCE OF OPERATIONS SPECIFICATIONS

FAA will issue OpSpecs to reflect the terms and conditions of this Agreement. OpSpecs will be issued as follows:

- Initial Authorization: FAA will issue amended OpSpecs that include the Initial Authorizations and amended IOA per Table 1 in Appendix B within 180 days from the effective date of this Agreement.
- Final Authorization: FAA will issue amended OpSpecs with the Final Authorizations and IOA as described in an updated Table 1 in Appendix B within 180 days from the effective date of the updated Agreement based on the three-year reporting period and resource monitoring from 2025-2027.

Amended OpSpecs will remain in effect until the Agreement is amended or terminated.

12.0 TERMINATION

12.1 Initiation of Termination

This Agreement may be terminated by any of the Parties at any time. The Act provides for agency termination as follows:

(1) by the NPS if the Director determines that the Agreement is not adequately protecting the Park's resources and/or visitor experiences;

(2) by the FAA, if the Administrator determines that the Agreement is adversely affecting aviation safety and/or the national aviation system or after an investigative determination of non-compliance with the Agreement.

The Parties agree to continue dialogue to ensure the stability of the Agreement to the greatest extent practicable identified within their respective jurisdiction and subject to relevant legal and regulatory requirements.

Notification of intent to terminate will be made in writing to the other signatories of this Agreement. Such notification shall stipulate the reasons for termination.

Prior to termination by either NPS or FAA, the agencies will make good faith efforts to work with the other Parties to mitigate any documented impacts.

12.2 Conditions upon Termination

Upon termination, NAME OF OPERATOR shall continue to conduct operations consistent with this Agreement for 30 days following such termination, after which time they shall conform to the requirements for IOA as described in NAME OF OPERATOR'S OpSpecs until an ATMP for the Park is in effect.

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In the event an operator terminates this Agreement and voluntarily surrenders their IOA for the Park, agreements with other operators remain in effect. If the operator does not voluntarily surrender their IOA they shall continue to conduct operations consistent with this Agreement for 30 days following such termination, after which time they shall conform to the requirements for IOA as described in NAME OF OPERATOR'S OpSpecs. Agreements with other operators remain in effect until an ATMP for the Park is established.

12.3 Effective Date of Termination

The effective date of termination of this Agreement shall be 30 days following a termination notice by any of the Parties to the Agreement.

13.0 AGREEMENT AND EFFECTIVE DATE

The Parties to this Agreement agree to abide by the terms set forth in this Agreement. This Agreement is effective on the date of signature by all Parties.

Name	Date
Title	
Company	

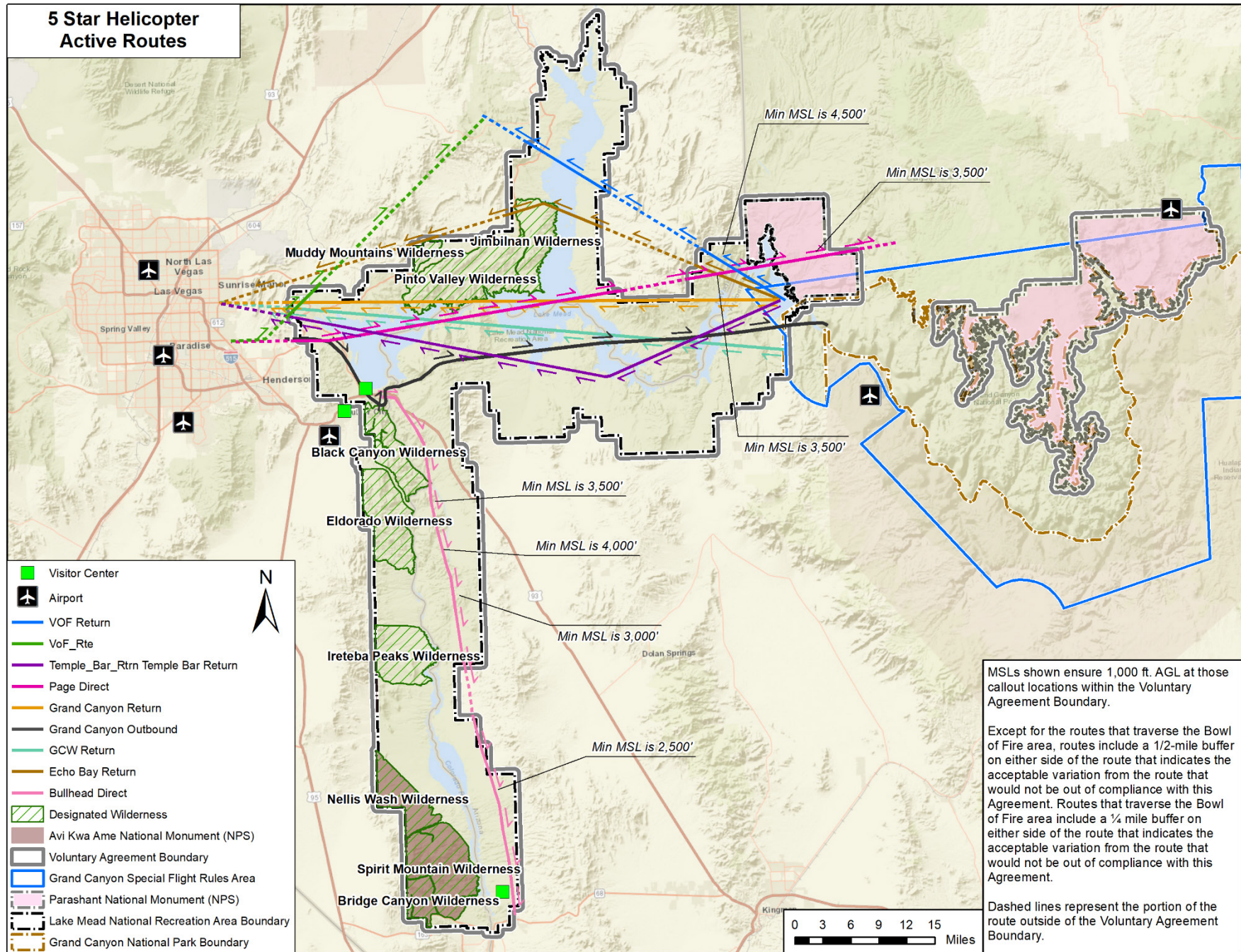
Mike Gauthier	Date
Superintendent	
Lake Mead National Recreation Area	
National Park Service	

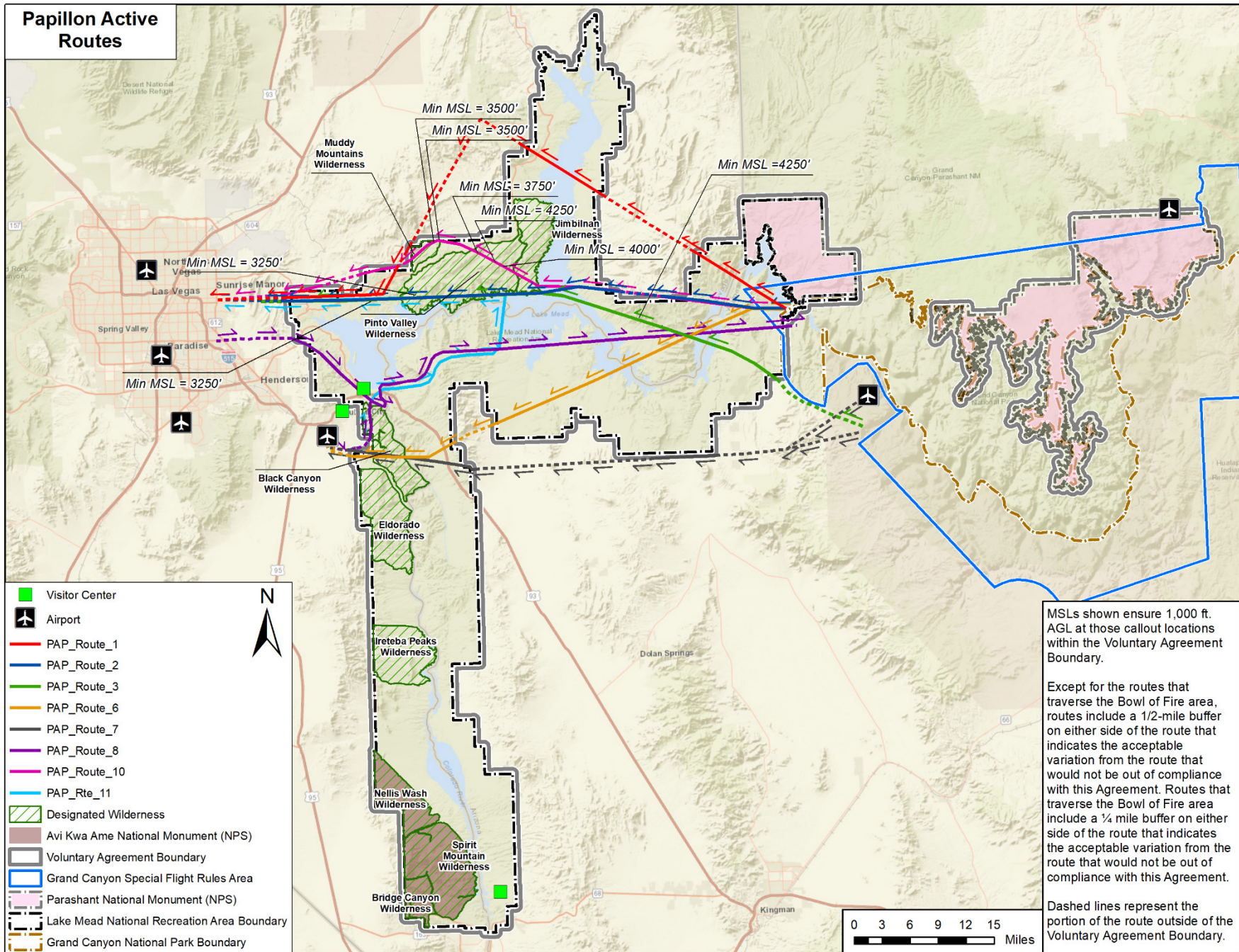
Raymond M. Sauvajot	Date
Associate Director	
Natural Resource Stewardship and Science Directorate	
National Park Service	

Julie Marks	Date
Executive Director (A)	
Office of Environment & Energy	
Federal Aviation Administration	

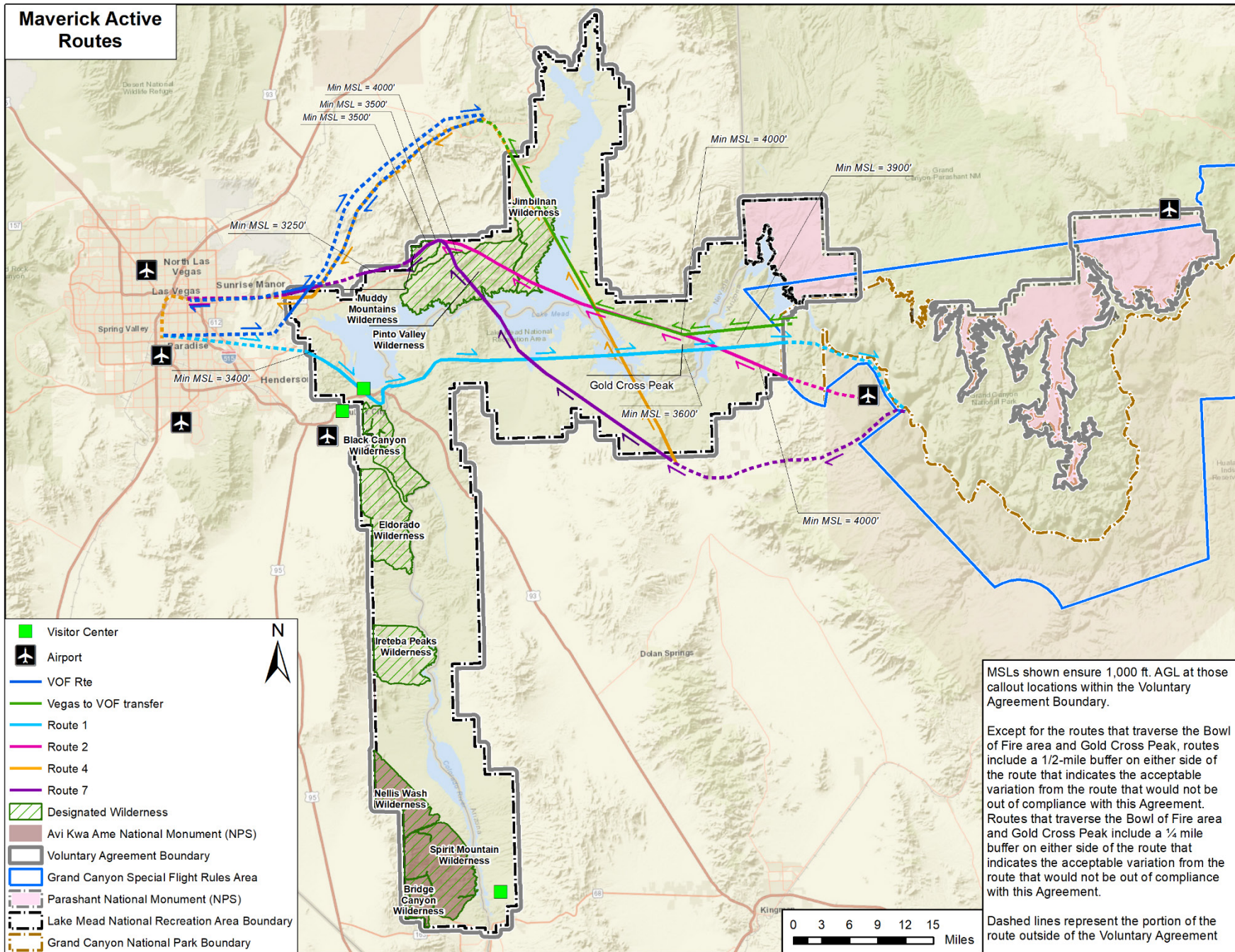
772 **APPENDIX A: Enlarged Maps**

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APPENDIX B: Initial Annual Authorizations and Aircraft Types

Table 1: This table shows the Lake Mead Initial Annual Authorizations, Aircraft Type, Route Descriptions, Minimum Altitudes, and the Amended IOA. This table will be updated again after the 2025-2027 reporting period process with Final Authorizations.

Operator	Lake Mead Initial Annual Authorization	Aircraft Type	Routes	Min. Alt. (ft. AGL)	Amended Interim Operating Authority
Papillon	11,322	Heli: AS350B3e AS350B2 EC130B4 EC130T2 Bell 206-L-3	Figure 10 Map	1,000	3,736
Maverick Helicopters	9,603	Heli: EC130B4 EC130T2	Figure 11 Map	1,000	3,168
5 Star	288 ^a	Heli: AS350B2	Figure 9 Map	1,000	1
American Aviation	3	FW: CE-172-N Cessna C172 CE-206 CE-207-207 Cessna 207A CE-207-T207A	These routes are limited by Section 4. Fixed-wing aircraft routes are not defined.	1,500	1
Grand Canyon Airlines	14,964	FW: Cessna 208B DHC-6-300	These routes are limited by Section 4. Fixed-wing aircraft routes are not defined.	1,500	4,838
Southwest Safaris	15	FW: CE182 CE207	These routes are limited by Section 4. Fixed-wing aircraft routes are not defined.	1,500	5
Air Grand Canyon	24	FW: Cessna 182M	These routes are limited by Section 4. Fixed-wing aircraft routes are not defined.	1,500	8

^{a)} As a new entrant, 5 Star did not hold authorizations prior to this Agreement. This Agreement grants 5 Star 288 initial air tour authorizations annually for the Park and Interim Operating Authority for one air tour annually. These authorizations are equal to 33% of the Interim Operating Authority of Sundance Helicopters who no longer conduct commercial air tours and therefore do not hold authorizations for the Park.

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APPENDIX C: Descriptions of Active Routes

Commercial air tours conducted by 5 Star shall be conducted on the designated air tour routes and altitudes in Figure 9. Additional route details are described below:

- VOF Return: Grand Canyon, Valley of Fire to LAS Westbound
- VoF Rte: LAS to VOF
- Temple Bar Rtn Temple Bar Return: Grand Canyon to Temple Bar to LAS
- Page Direct: LAS to Page
- Grand Canyon Return: Grand Canyon to LAS Westbound
- Grand Canyon Outbound: Hoover Dam, Grand Canyon Eastbound
- GCW Return: Grand Canyon Helipad to LAS Westbound
- Echo Bay Return: Grand Canyon to Echo Bay to LAS
- Bullhead Direct: Hoover Dam to Laughlin

Commercial air tours conducted by Papillon shall be conducted on the designated air tour routes and altitudes in Figure 10. Additional route details are described below:

- PAP Route 1: Grand Canyon, Valley of Fire to LAS Westbound
- PAP Route 2: Grand Canyon to LAS Westbound
- PAP Route 3: GCW to LAS Westbound
- PAP Route 6: Grand Canyon to BVU Westbound
- PAP Route 7: GCW to BVU Westbound
- PAP Route 8: Hoover Dam, Grand Canyon Eastbound
- PAP Route 10: Grand Canyon, Bowl of Fire to LAS Westbound
- PAP Route 11: Lake Mead Hoover Dam Loop

Commercial air tours conducted by Maverick shall be conducted on the designated air tour routes and altitudes in Figure 11. Additional route details are described below:

- MAV VOF Route: LAS to Valley of Fire and Back
- MAV Vegas to VOF transfer: GCW to Valley of Fire
- MAV Route 1: LAS to GCW eastbound
- MAV Route 2: GCW to Bowl of Fire to LAS westbound
- MAV Route 7: GCW to Maverick fuel farm to Bowl of Fire to LAS westbound
- MAV Route 4: GCW to Maverick fuel farm to Valley of Fire to LAS westbound

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APPENDIX D: Inactive Route Maps, Terms and Conditions, and Process for Activation of Inactive Routes

Before activating an inactive route, the operators will provide agencies with a 30-day notice. Any activated route will maintain 1,000 ft. AGL to reduce noise and visual intrusions from low flying air tours.²⁵ The one exception for 1,000 ft. AGL is if the routes follow the same path over the Hoover Dam shown in Figure 7 in this Agreement. An amendment will be required for any new routes.

5 Star has identified the following inactive routes which are listed below and displayed in Figure 12.

- Boulder City Return

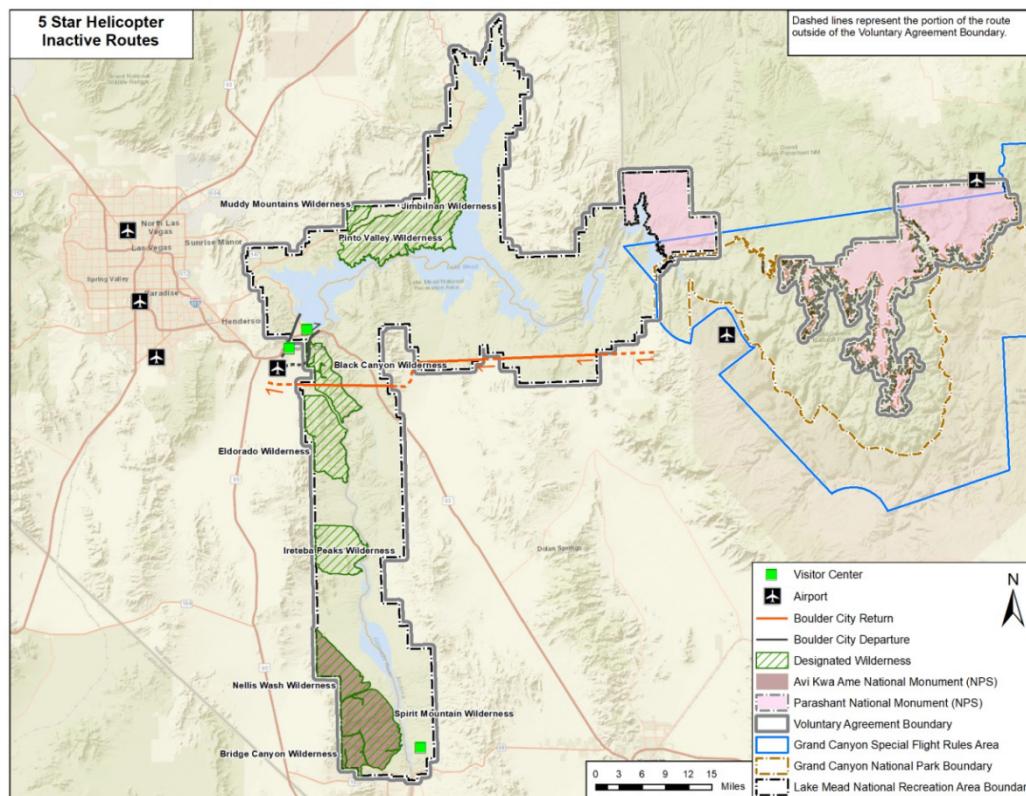


Figure 12. Inactive routes for 5 Star.

Papillon has identified the following inactive routes which are listed below and displayed in Figure 13.

- PAP Route 4
- PAP Route 5
- PAP HD_Short_Rte
- PAP_HD_Lake

²⁵ National Park Service Management Policies § 4.9.

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- 837 • PAP_HD_DamBC
- 838 • PAP_HD_DamLoop
- 839 • PAP_Davis_Dam_Rte
- 840 • PAP_BC_to_Davis_Dam

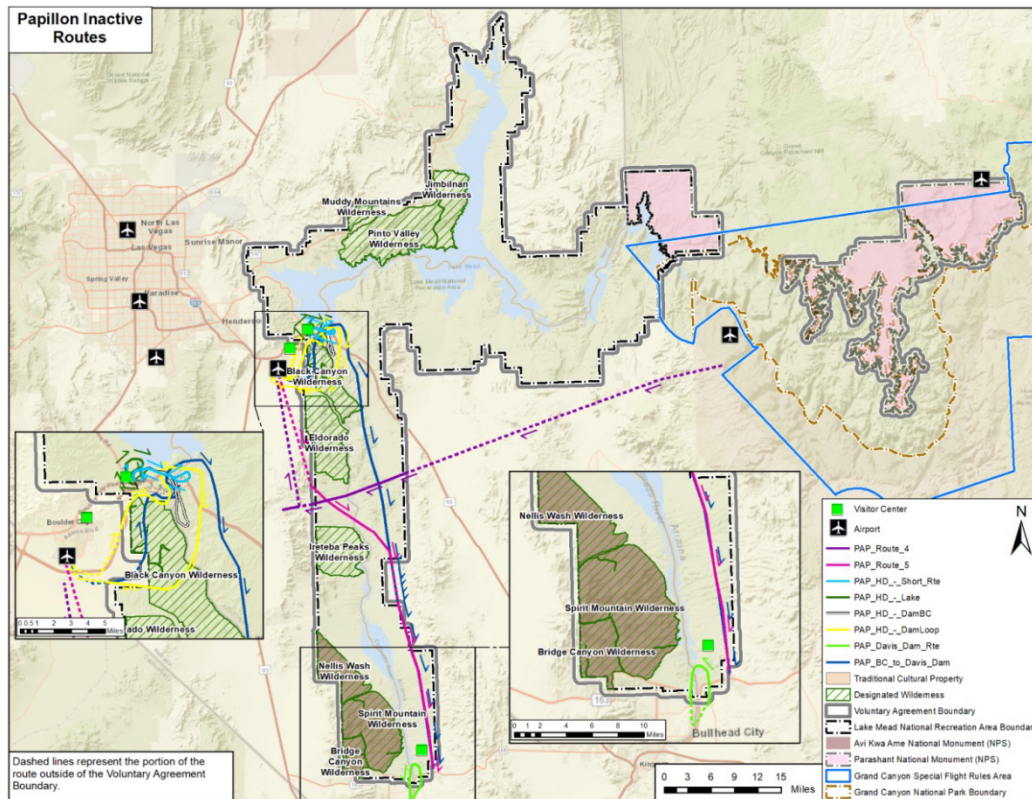


Figure 13. Inactive routes for Papillon.

Maverick has identified the following inactive routes which are listed below and displayed in Figure 14.

- MAV Hoover Dam Rte
- MAV Tour Route 8
- MAV Tour Route 11
- MAV Tour Route 12

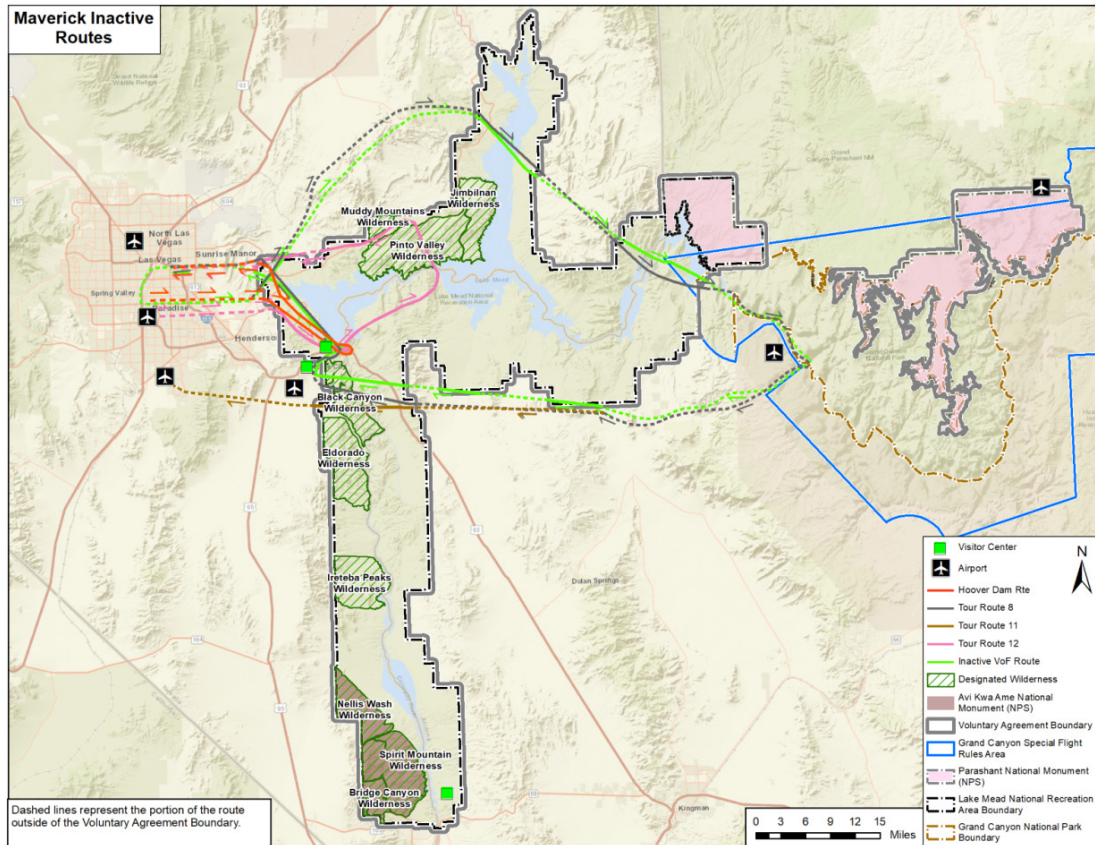


Figure 14. Inactive routes for Maverick.

Hoover Dam Lodge Routes of Black Canyon

- Currently there are no air tours departing the helipad located at Hoover Dam Lodge (36.010628, -114.781929). If air tours resume they will include terms consistent with the primitive zone established in the Lake Mead National Recreation Area Lake Management Plan.
 - No tours of Black Canyon on Sunday and Monday.
 - Tuesday through Saturday, operating hours for Black Canyon air tours are from 10:00 AM to 6:00 PM Pacific Time; no air tours will occur in the Black Canyon outside of these operating hours.

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ATTACHMENT A: Reporting Process and Instructions

The reporting template below will be used for reporting flights in accordance with the Act. The directions in this attachment may change without an amendment to the Agreement. This section is instructional in nature and clarifies the reporting requirement pursuant to the Office of Management and Budget (OMB) approved Commercial Air Tour Operator Reports information collection (OMB 2120-0750).

Under the **Route Code** column in the template below, all active routes in this Agreement will be listed and under **Route Name** they will be described as they are in Appendix C. The information in the red box in each figure displays how those routes are categorized as described in Section 6 of this Agreement. Operators are not required to fill in the information in the red box but can choose to do so.

Location Information			Route Information	
National Park Service Unit Name(s):	Alpha-Code(s):	Departure Airports/Helipads:	Route Code:	Route Name:
Lake Mead National Recreation Area	LAKE	LAS	Pap 1	Grand Canyon, Valley of Fire to LAS Westbound
Lake Mead National Recreation Area	LAKE	GCN	Pap 2	Grand Canyon to LAS Westbound
Lake Mead National Recreation Area	LAKE	BVU	Pap 3	Hualapai (no Grand Canyon) to LAS Westbound
Lake Mead National Recreation Area	LAKE	1G4	Pap 6	Grand Canyon to BVU Westbound
Park Name (pick from list)			Pap 7	Hualapai (no Grand Canyon) to BVU Westbound
Park Name (pick from list)			Pap 8	Hoover Dam, Grand Canyon Eastbound
Park Name (pick from list)			Pap 10	Grand Canyon, Bowl of Fire to LAS Westbound
Park Name (pick from list)			Pap 11	Lake Mead Hoover Dam Loop
Park Name (pick from list)				
Park Name (pick from list)				
Air Tour Data Submission				
Date of Tour	Hour of Tour	Aircraft Make/Model	Park-Route Code	
1/1/2025	8	EC130B4	LAKE- Pap 11	Example Type E
1/2/2025	8	EC130B4	LAKE- Pap 8, Pap 1	Example Type B
1/3/2025	7	EC130B4	LAKE- Pap 8, Pap 10	Example Type D
1/4/2025	9	EC130B4	LAKE- Pap 8, Pap 2	Example Type A

Figure 15. Example reporting template for Papillon with all of their active routes listed in Appendix C.

Location Information			Route Information	
National Park Service Unit Name(s):	Alpha-Code(s):	Departure Airports/Helipads:	Route Code:	Route Name:
Lake Mead National Recreation Area	LAKE	LAS	VOF RTE	LAS to Valley of Fire and Back
Lake Mead National Recreation Area	LAKE	GCN	Vegas to VOF Transfer	GCW to Valley of Fire
Lake Mead National Recreation Area	LAKE	BVU	Route 1	LAS to Hoover Dam to GCW eastbound
Lake Mead National Recreation Area	LAKE	1G4	Route 2	GCW to Bowl of Fire to LAS westbound
Park Name (pick from list)			Route 7	GCW to Maverick fuel farm to Bowl of Fire to LAS westbound
Park Name (pick from list)			Route 4	GCW to Maverick fuel farm to Valley of Fire to LAS westbound
Park Name (pick from list)				
Park Name (pick from list)				
Park Name (pick from list)				
Air Tour Data Submission				
Date of Tour	Hour of Tour	Aircraft Make/Model	Park-Route Code	
1/1/2025	8	EC130B4	LAKE-Route 1, Route 7	Example Type D
1/2/2025	8	EC130B5	LAKE- Route 1, Route 4	Example Type B

Figure 16. Example reporting template for Maverick with all of their active routes listed in Appendix C.

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Location Information			Route Information	
National Park Service Unit Name(s):	Alpha-Code(s):	Departure Airports/Helipads:	Route Code:	Route Name:
Lake Mead National Recreation Area	LAKE	LAS	VOF Return	Grand Canyon, Valley of Fire to LAS Westbound
Lake Mead National Recreation Area	LAKE	GCN	VOF Rte	LAS to VOF
Lake Mead National Recreation Area	LAKE	BVU	Temple Bar Rtn	Grand Canyon to Temple Bar to LAS
Lake Mead National Recreation Area	LAKE	1G4	Page Direct	LAS to Page
Park Name (pick from list)			Grand Canyon Rtn	Grand Canyon to LAS Westbound
Park Name (pick from list)			Grand Canyon OB	LAS to Hoover Dam, Grand Canyon Eastbound
Park Name (pick from list)			GCW Return	Grand Canyon Helipad to LAS Westbound
Park Name (pick from list)			Echo Bay Return	Grand Canyon to Echo Bay to LAS
Park Name (pick from list)			Bullhead Direct	Hoover Dam to Laughlin
Park Name (pick from list)				
Air Tour Data Submission				
Date of Tour	Hour of Tour	Aircraft Make/Model	Park-Route Code	
1/1/2018	8	EC130B4	LAKE- Page Direct	Example Type E
1/1/2018	8	EC130B5	LAKE-Grand Canyon OB, VOF Return	Example Type B
1/1/2018	7	EC130B6	LAKE- Grand Canyon OB, Echo Bay Return	Example Type D
1/1/2018	9	EC130B7	LAKE- Grand Canyon OB, Grand Canyon Return	Example Type A

Figure 17. Example reporting template for 5 Star with all of their active routes listed in Appendix C.

Location Information			Route Information	
National Park Service Unit Name(s):	Alpha-Code(s):	Departure Airports/Helipads:	Route Code:	Route Name:
Lake Mead National Recreation Area	LAKE	LAS	Type A	Clark County-Grand Canyon Direct
Lake Mead National Recreation Area	LAKE	GCN	Type B	Clark County-Grand Canyon with diversion
Lake Mead National Recreation Area	LAKE	BVU	Type C	Lake Mead and other Features of Interest outside SFRA
Lake Mead National Recreation Area	LAKE	1G4	Type D	Lake Mead and Grand Canyon
Park Name (pick from list)			Type E	Lake Mead
Park Name (pick from list)				
Park Name (pick from list)				
Park Name (pick from list)				
Park Name (pick from list)				
Park Name (pick from list)				
Air Tour Data Submission				
Date of Tour	Hour of Tour	Aircraft Make/Model	Park-Route Code	
1/1/2018	8	Cessna 182M	LAKE- A	
1/1/2018	8	Cessna 182M	LAKE- B	
1/1/2018	7	Cessna 182M	LAKE- C	
1/1/2018	9	Cessna 182M	LAKE- D	
1/2/2018	10	Cessna 182M	LAKE- E	

Figure 18. Example reporting template for fixed-wing operators; they will report routes based on the type of routes listed in Section 6 of the Agreement.

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888 ATTACHMENT B: Agency and Operator Points of Contact

889 This contact information is withheld for public review and may change. Any changes to
890 this attachment do not require an amendment to the Agreement.

891 Updated: mm/dd/yyyy

<u>Name</u>	<u>Title</u>	<u>Contact Information</u>	<u>Other</u>
Lake Mead National Recreation Area Dispatch			
	Lake Mead National Recreation Area Superintendent		
	Lake Mead National Recreation Area Chief Ranger		
	Parashant National Monument Superintendent		
	Parashant National Monument Chief Ranger		
	NPS Overflights Outdoor Recreation Planner		
	FAA Senior Policy Advisor for the Office of Energy and Environment		
	5 Star Grand Canyon Helicopter Tours, LLC		
	Air Grand Canyon, Inc.		
	Grand Canyon Airlines, Inc.		

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	IKG Air, Inc. (American Aviation)		
	Maverick Helicopters, Inc.		
	Papillon Airways, Inc.		
	Southwest Safaris		

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