

**FINAL AIR TOUR
MANAGEMENT PLAN
GOLDEN GATE NATIONAL RECREATION AREA
MUIR WOODS NATIONAL MONUMENT
SAN FRANCISCO MARITIME NATIONAL HISTORICAL PARK
POINT REYES NATIONAL SEASHORE**

SUMMARY

This Air Tour Management Plan (ATMP) provides the terms and conditions for commercial air tours conducted over Golden Gate National Recreation Area, Muir Woods National Monument, San Francisco Maritime National Historical Park, and Point Reyes National Seashore (Parks) 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 On March 4, 2021, the NPS notified the FAA that an air tour management plan was necessary to protect Muir Woods National Monument's resources and values and withdrew the exemption for that park.

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 Parks and commercial air tours within ½ mile outside the boundary of the Parks, 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 Parks, or within ½ mile of the boundary of the Parks, 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

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to the ATMP requirement for parks with 50 or fewer commercial air tour operations each year unless the exemption is withdrawn by the Director of NPS.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.

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 Parks (unless more than ½-mile outside the boundary of the Parks).

See 14 CFR § 136.33(d). The area subject to the ATMP is also referred to as the area within the ATMP boundary.

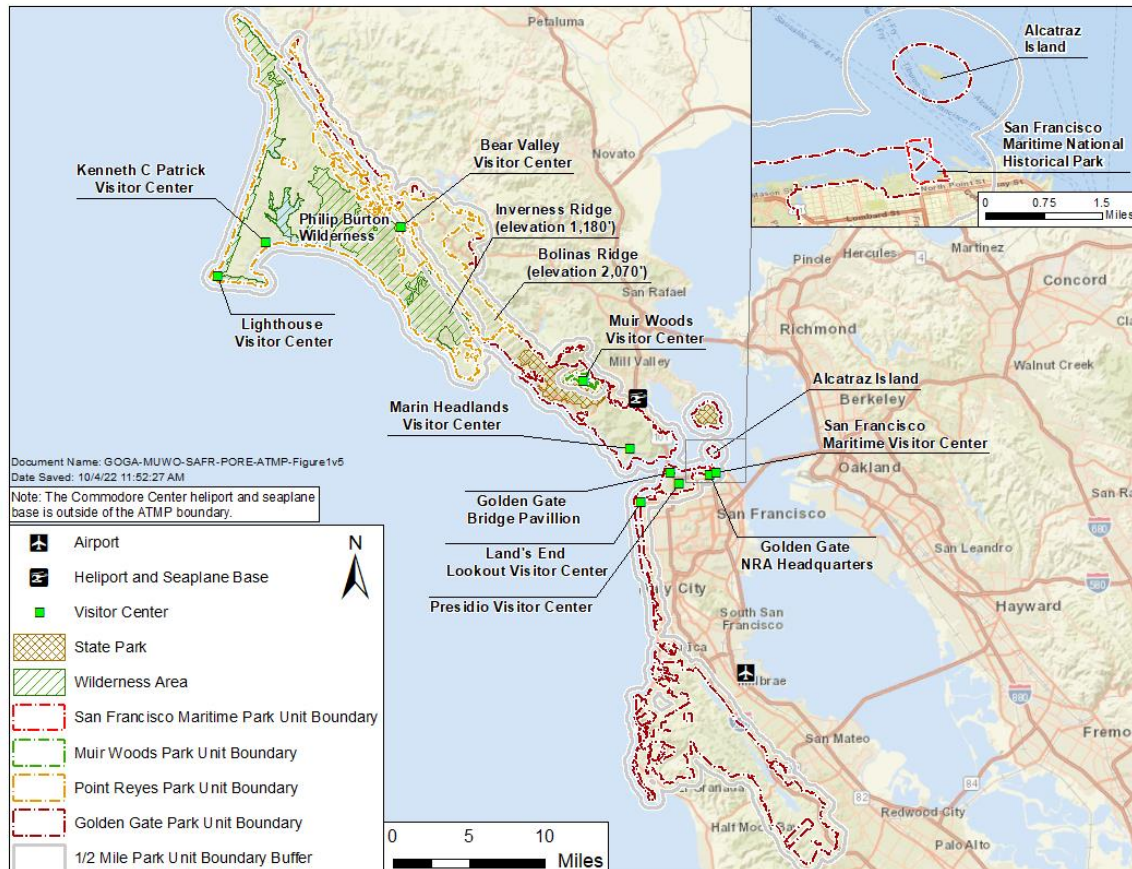


Figure 1. Map of area subject to the ATMP. Appendix B includes an enlarged version of this map.

2.1 Overview of the Parks

Golden Gate National Recreation Area is composed of more than 80,000 acres of land spread across numerous park sites, many of which are in urban San Francisco and includes tidal and submerged lands to 0.25 miles offshore in portions of Marin and San Francisco Counties. The park shares a marine boundary with the Greater Farallones National Marine Sanctuary. The park contains a variety of cultural and natural features for visitors to enjoy, including Alcatraz Island and Crissy Field. Its historic and cultural assets chronicle centuries of overlapping history, with themes such as California Indian culture, the frontier of the Spanish empire, the California Gold Rush, the evolution of American coastal fortifications, World War II, Buffalo Soldiers, and the growth of modern-day San Francisco.

The park protects 19 separate ecosystems and numerous watersheds. It is also home to more than 1,250 plant and animal species, including 37 threatened and endangered species such as the threatened northern spotted owl (*Strix occidentalis caurina*). It provides sanctuary for nesting seabirds such as Brandt's cormorants (*Phalacrocorax penicillatus*) and common murrelets (*Uria aalge*), as well as peregrine falcons (*Falco peregrinus*) which are gradually recovering in the San Francisco Bay Area. It also provides protection for marine mammals under the Marine Mammal Protection Act.

The purpose of Golden Gate National Recreation Area is to offer national park experiences to a large and diverse urban population while preserving and interpreting the outstanding natural, historic, scenic, and recreational values of the park lands.

Muir Woods National Monument is in Marin County, California, just a few miles north of San Francisco. The 558-acre monument preserves one of the last remaining ancient redwood forests in the Bay Area. Some of the redwoods are nearly 1,000 years old and reach heights of more than 250 feet. Today, Muir Woods National Monument is home to more than 380 different plants and animals. Redwood Creek, the principal stream in the monument, runs clean and clear beneath the towering trees. Its waters are home to federally endangered coho salmon and threatened steelhead trout—keystone species in many Pacific ecosystems. More than 1 million visitors per year come to enjoy the monument and marvel at the redwood forest and its wildlife. Its natural soundscape is a highly valued part of the visitor experience.

The purpose of Muir Woods National Monument is to preserve the primeval character and ecological integrity of the old-growth redwood forest for scientific values and inspiration.

San Francisco Maritime National Historical Park was established to preserve and interpret the history and achievements of seafaring Americans and the nation's maritime heritage, especially on the Pacific coast. The 50-acre park maintains the largest and most diverse collection of national historic landmark ships in the United States, representing a pivotal period of maritime commerce on the West Coast as the industry shifted from sail to mechanical power. Through preservation and interpretation of historic ships, extensive museum collections, traditional maritime skills, and its San Francisco Bay setting, San Francisco Maritime National Historical Park promotes the understanding and enjoyment of the nation's West Coast maritime heritage. The park's ships and small craft provide visitors a rare opportunity to experience the sights, sounds, smells, and feel of the maritime environment, both at the pier and on the bay. People can hear the sounds of water, wildlife and maritime activities.

At Hyde Street Pier, which features a number of historic vessels, maritime structures, and exhibits, visitors can enjoy the national historic landmark ships and watch maritime skills in action in the Shipwright and Boat Shops. The pathways of the Aquatic Park National Historic Landmark District lead to the Maritime Museum, a striking, Streamline Moderne building filled with 1930s Works Progress Administration artwork. Outside the bathhouse, the Aquatic Park cove and beach are protected by the curved Municipal Recreational Pier. The park's extensive collection of artifacts, books, oral histories,

photographs, vessel plans, documents, and other archival materials are located at the Maritime Research Center.

Point Reyes National Seashore encompasses more than 71,000 acres of beaches, coastal cliffs and headlands, marine terraces, coastal uplands, and forests and includes all tide and submerged lands to 0.25 miles offshore. An additional 15,000 acres of the North District of Golden Gate National Recreation Area, including all NPS lands north of Bolinas-Fairfax Road, are managed by park staff under a regional management directive. Two no-take state marine reserves, three special closure areas, and three state marine conservation areas are also located within the park's legislated boundary. The park shares a marine boundary with the Greater Farallones National Marine Sanctuary and the Cordell Bank National Marine Sanctuary is located further offshore.

Twenty-eight threatened and endangered species are present within the park's boundary, including the threatened northern spotted owl. The park provides sanctuary for marine mammals such as the harbor seal, supports more than 900 plant species, about 17% of the California flora, and more than 490 species of birds have been recorded in the park, representing 52% of the species of avian fauna of North America.

The human history of the Point Reyes peninsula extends to more than 5,000 years ago and includes the long history of the Coast Miwok people, a relationship which continues to this day. More than 120 archeological sites representing Coast Miwok history and culture have been identified within the park and have yielded some of the most significant information on California Indian history in the San Francisco Bay region. The park has about 400 historic structures including the historic Point Reyes Lighthouse built in 1870 and two national historic landmarks—the Point Reyes Lifeboat Station and the Drakes Bay Historic and Archaeological District.

Approximately 18,000 acres of Point Reyes National Seashore is currently under agricultural production within the pastoral zone. In the North District of Golden Gate National Recreation Area an additional 10,000 acres is currently used for grazing. The park also includes two ranching historic districts, listed in the National Register – the Olema Valley Dairy Ranches Historic District and the Point Reyes Peninsula Dairy Ranches Historic District.

The almost 33,000-acre Phillip Burton Wilderness offers an extraordinary opportunity for solitude and unconfined recreation in untrammelled terrestrial and marine environments and includes one of only two marine wilderness areas in the national park system.

Point Reyes National Seashore was established for public benefit and inspiration, and protects a rugged and wild coastal peninsula and surrounding waters, connecting native ecosystems, enduring human history and recreational, scientific, and educational opportunities.

Management objectives. The following management objectives for the Parks relate to the development of this ATMP:

- Golden Gate National Recreation Area, San Francisco Maritime National Historical Park, and Muir Woods National Monument: Protect wildlife and

wildlife habitat, including known nesting areas and marine mammal haul outs and protect soundscapes.

- Point Reyes National Seashore: Protect wilderness character; protect wildlife and wildlife habitat, including known nesting areas and marine mammal haul outs.

3.0 CONDITIONS FOR THE MANAGEMENT OF COMMERCIAL AIR TOUR OPERATIONS

3.1 Commercial Air Tours Authorized

Under this ATMP 2,548 commercial air tours per year are authorized. Of these, up to 143 commercial air tours per year may fly over Point Reyes National Seashore. No commercial air tours over Point Reyes National Seashore may be flown using helicopters. No commercial air tours are authorized over Muir Woods National Monument.

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 routes and altitudes in Figures 2 through 5 below for each operator and aircraft type (Appendix C contains enlarged Figures 2 through 5). Altitude expressed in units above ground level (AGL) is a measurement of the distance between the ground surface and the aircraft. Due to the location and proximity of Golden Gate National Recreation Area and San Francisco Maritime National Historical Park (the two parks share a boundary), all air tour routes authorized by this ATMP fly over both parks. The only authorized air tour route that flies over Point Reyes National Seashore also flies over Golden Gate National Recreation Area and San Francisco Maritime National Historical Park.

All commercial air tours must maintain a 1,000 ft. lateral avoidance of nesting waterbird colonies, peregrine falcon nests and marine mammal haul outs. The routes described below and depicted in Figures 2, 3, 4, and 5 maintain these avoidance distances of currently known nesting waterbird colonies, peregrine falcon nests and marine mammal haul outs. All commercial air tours must also maintain a lateral avoidance of at least 1,000 ft. from Alcatraz Island and a minimum altitude of 1,500 ft AGL within the ATMP boundary around Alcatraz Island.

Air tours conducted with fixed-wing aircraft will fly no lower than 1,000 to 2,500 feet (ft.) AGL, depending on location as depicted in Figures 2, 4, and 5, but will fly no lower than 2,000 ft. AGL over land-based wilderness in Point Reyes National Seashore (Figures 2 and 5). Air tours conducted via fixed-wing aircraft are restricted to three routes.

- **Blue Route**: Air tours conducted via the Blue Route will enter the ATMP boundary at the location shown by flight procedure callout #1 in Figures 2, 4, and 5, at a minimum altitude 2,500 ft. AGL. Aircraft must maintain this altitude until they reach the location identified by flight procedure callout #2 in Figures 2, 4 and 5, at which time they may begin descent to 1,500 ft. AGL. Aircraft will maintain 1,500 ft. AGL when flying over the area within the ATMP boundary for

the remainder of the air tour, except that they may fly at 1,000 ft. AGL over the area within the ATMP boundary around Angel Island State Park. Aircraft must maintain a lateral avoidance of at least 1,000 ft. from Alcatraz Island.

- Red Route: Air tours conducted via the Red Route will enter the ATMP boundary at the location shown by flight procedure callout #3 in Figures 2, 4, and 5, at a minimum altitude of 2,500 ft. AGL at the entrance to the ATMP boundary. Aircraft must maintain 2,500 ft. AGL over Bolinas Ridge and Inverness Ridge, depicted as flight procedure callout #4 in Figures 2 and 5. Air tours begin descent to 1,500 ft. AGL at the location identified by flight procedure callout #5 in Figures 2 and 5. Air tours then exit the ATMP boundary as depicted in Figures 2 and 5 and reenter the ATMP boundary at the location shown by flight procedure callout #6, and must maintain a minimum altitude of 1,500 ft. AGL. Air tours must laterally avoid Ranch Core Area B by flying 1,000 ft. to the north of this area as depicted in Figures 2 and 5. Air tours exit the ATMP boundary at the location identified by flight procedure callout #7 in Figures 2 and 5 at a minimum altitude of 1,500 ft. AGL. Air tours on the Red Route must remain outside the ATMP boundary until they reach the location identified by flight procedure callout #9 in Figures 2 and 5. Aircraft will maintain 1,500 ft. AGL when flying over the area within the ATMP boundary for the remainder of the air tour, except that they may fly at 1,000 ft. AGL over the area within the ATMP boundary around Angel Island State Park. Aircraft must maintain a lateral avoidance of at least $\frac{3}{4}$ mile offshore from Double Point, a lateral avoidance of $\frac{1}{2}$ mile offshore from Duxbury Reef, and a lateral avoidance of at least 1,000 ft. from Alcatraz Island.
- Green Route: Air tours conducted via the Green Route will maintain a minimum altitude of 1,500 ft. AGL within the ATMP boundary, except that they may fly at 1,000 ft. AGL within the ATMP boundary around Angel Island State Park. Aircraft must maintain a lateral avoidance of at least 1,000 ft. from Alcatraz Island

Eight routes are authorized for helicopter tours over Golden Gate National Recreation Area and San Francisco Maritime National Historical Park as depicted in Figure 3 below. Air tours conducted with helicopters will fly no lower than 1,000 to 1,500 ft. AGL, depending on location, as depicted in Figure 3. Commercial air tours on these routes must maintain a minimum altitude of 1,000 ft. AGL, except that a minimum altitude of 1,500 ft. AGL is required when flying over the area within the ATMP boundary around Alcatraz Island and while flying over lands within the boundary of Golden Gate National Recreation Area in Marin County. Commercial air tours must also maintain a lateral avoidance at least 1,000 ft. from Alcatraz Island.

Except when necessary for takeoff or landing, or 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.

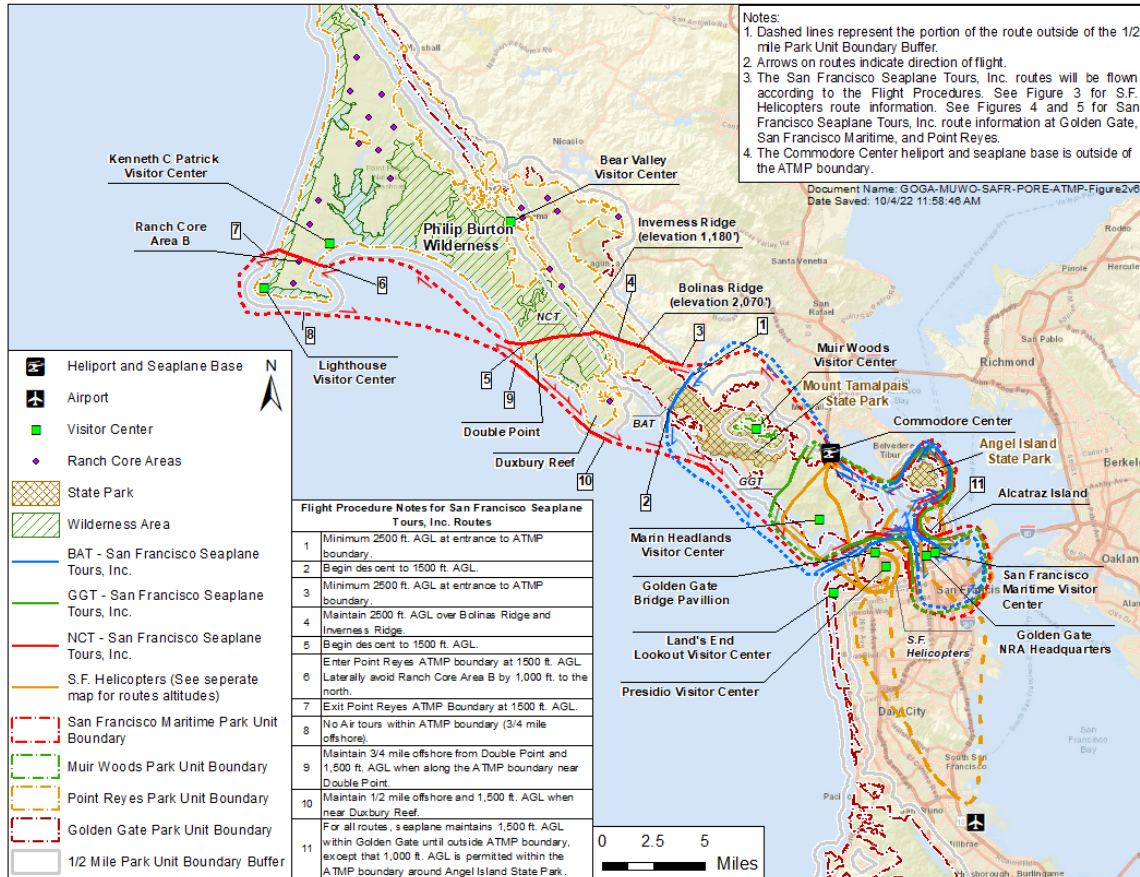


Figure 2. All commercial air tour routes over Golden Gate National Recreation Area, San Francisco Maritime National Historical Park, and Point Reyes National Seashore

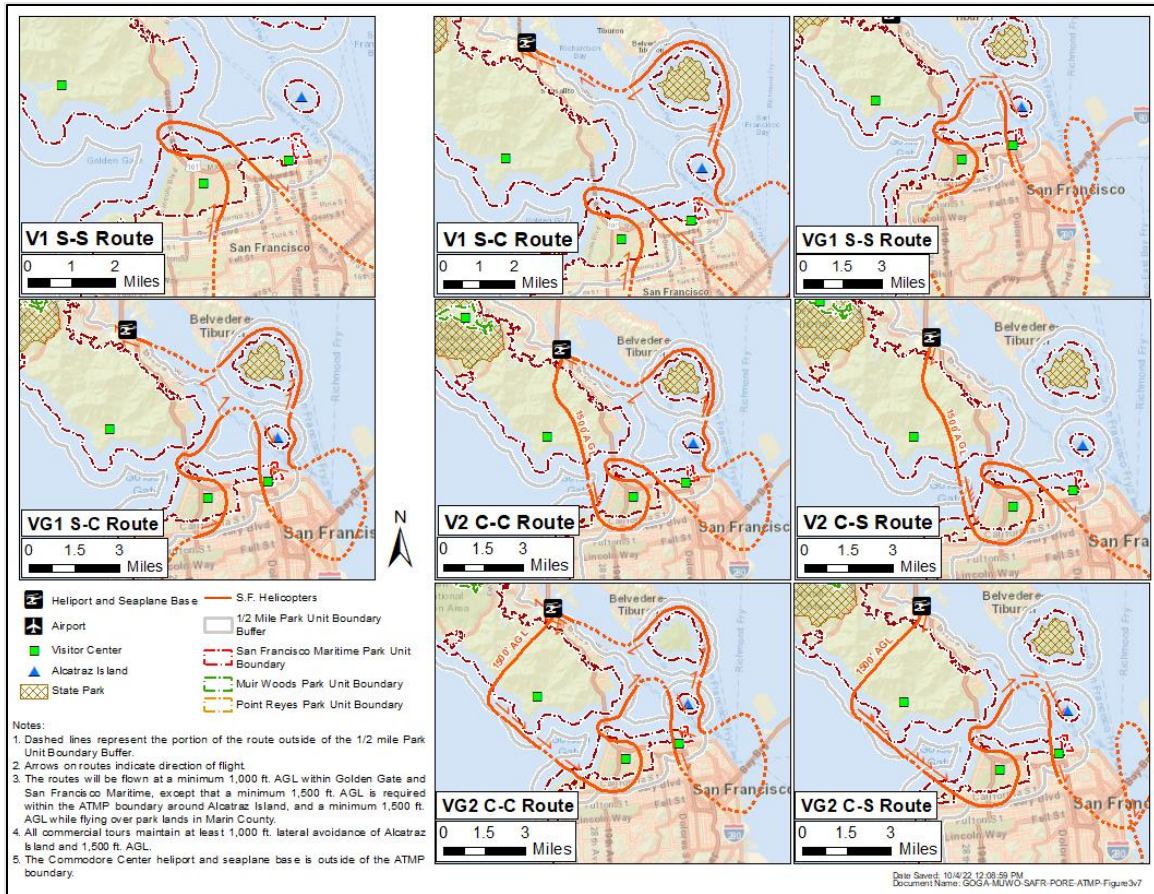


Figure 3. Commercial air tour routes for helicopters over Golden Gate National Recreation Area and San Francisco Maritime National Historical Park

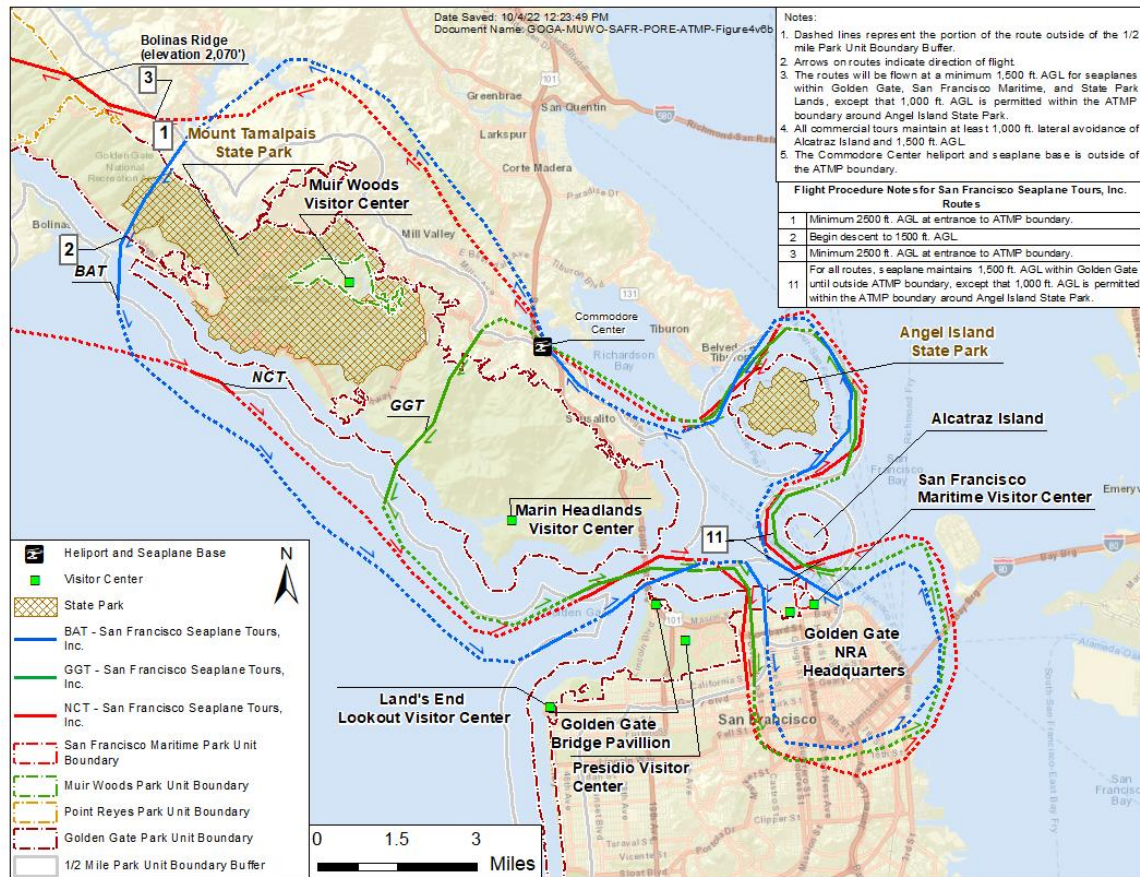


Figure 4. Commercial air tour routes for fixed-wing aircraft over Golden Gate National Recreation Area and San Francisco Maritime National Historical Park

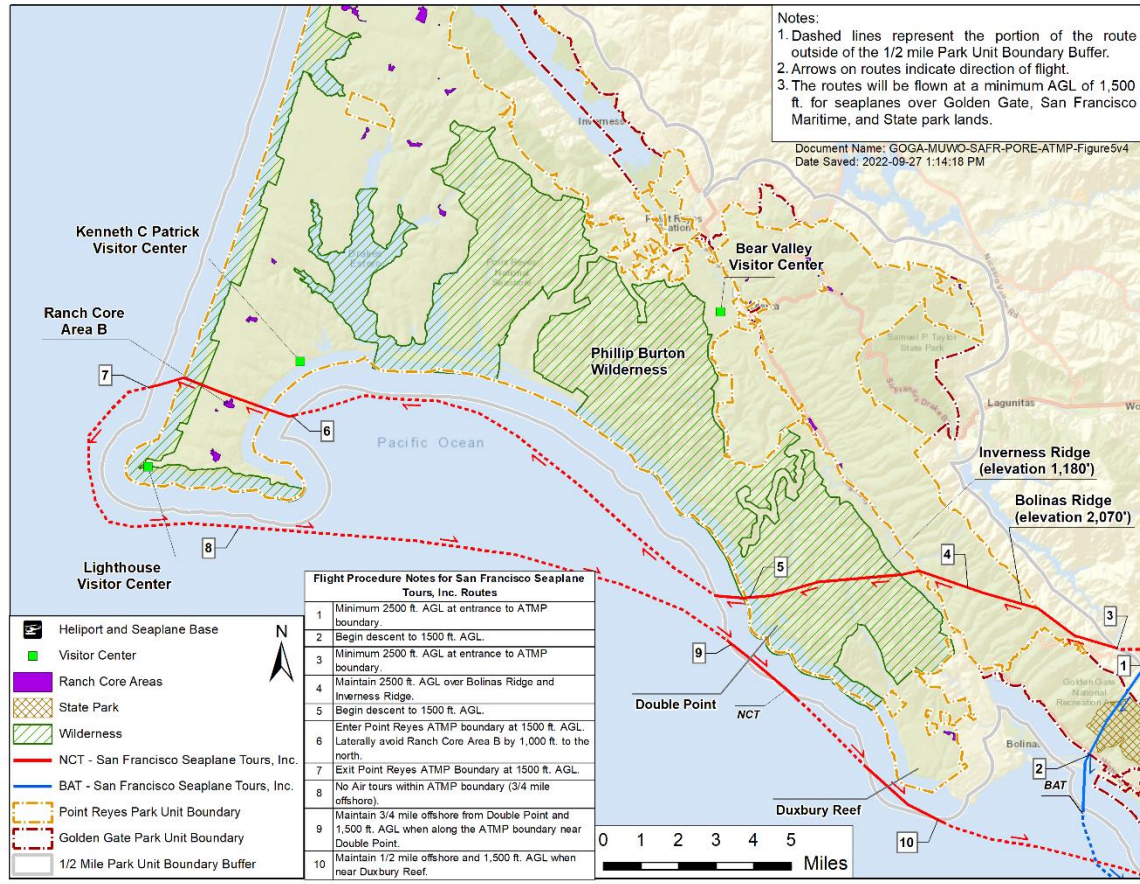


Figure 5. Commercial air tour route over Point Reyes National Seashore

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 of Golden Gate National Recreation Area and San Francisco Maritime National Historical Park may operate from 9:00 AM until 30 minutes after sunset, as defined by the National Oceanic and Atmospheric Administration (NOAA).² Air tours of Point Reyes National Seashore may operate from 12:00 PM to 5:00 PM. Air tours may operate any day of the year, except under circumstances provided in Section 3.5 “Restrictions for Particular Events.”

² Sunrise and sunset data are available from the NOAA Solar Calculator, <https://www.esrl.noaa.gov/gmd/grad/solcalc/>

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 the operator for any restrictions that temporarily restrict certain areas or certain times of day, or 60 days written notice to the operator for any full day restrictions. Events may include tribal ceremonies or other similar events.

3.6 Required Reporting

3.6A Air Tour Reporting: Operators will submit to the FAA and the NPS semi-annual reports regarding the number of commercial air tours within the ATMP boundary that are conducted by the operators. 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.

3.6B Bird Aircraft Strike Reporting: Operators will report all bird strikes that occur during commercial air tours within the ATMP boundary per FAA Advisory Circular 150/5200-32B, Reporting Wildlife Aircraft Strikes, using OMB approved form No. 2120-0045, and include these reports in the semi-annual reports required by section 3.6A.

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 the 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. For example, trainings may include natural resources, cultural resources, or visitor use specific topics.

3.7B Annual Meeting: For the first five years after the signing of the ATMP, park staff, the local FAA Flight Standards District Office (FSDO), and the operators will meet once per year to discuss the implementation of this ATMP and any amendments or other changes to the ATMP. Thereafter, this annual meeting will occur if requested by either of the agencies. 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 Parks, the operators will utilize frequency 124.3 Common Traffic Advisory Frequency and report when they enter and depart a route. The pilots should identify their company, aircraft, and route to make any other aircraft in the vicinity aware of their position.

3.7D Daily Air Tour Allocations: This ATMP includes restrictions on the number of air tours that may be conducted each day on the route authorized over Point Reyes National Seashore (Red Route). On Standard Days, one commercial air tour may be conducted per day. Up to five Flex Days are permitted per year on which two commercial air tours may be conducted per day. These restrictions are also identified in the Table 1 included in Appendix A.

3.7E Hovering: Aircraft hovering in place is prohibited.

3.7F 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 conduct air tours of Golden Gate National Recreation Area and San Francisco Maritime National Historical Park beginning one hour after sunrise, as defined by NOAA, on all days that flights are authorized,³ and the operator with allocations for Point Reyes National Seashore may request to conduct tours of Point Reyes National Seashore beginning at 11:00 AM 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 conditions of the Parks and coordinate with the FAA to assess the effectiveness of this incentive. If implementation of this incentive results in unanticipated effects on the Parks' resources or visitor experience, further agency action may be required to ensure the protection of the Parks' resources and visitor experience.

4.0 COMPLIANCE

On the effective date of this ATMP, all commercial air tours within the ATMP 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

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

such findings to the FAA's FSDO with geographic oversight of the Parks. 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 the Parks' resources and visitor experience from the effects of commercial air tours, and support NPS management objectives for the Parks.

Under the Act, the FAA was required to grant Interim Operating Authority (IOA) for commercial air tours over the Parks or outside the Parks but within ½ mile of their boundaries. 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 Parks. It is based on the 3-year average of the total air tours reported in 2017, 2018 and 2019. The annual flight limits in this ATMP are intended to protect visitor experience and wildlife throughout the Parks, tribal use of the Parks, and Phillip Burton Wilderness in Point Reyes National Seashore by limiting the number of potential disturbances caused by commercial air tours. The ATMP does not authorize any air tours over Muir Woods National Monument which maintains the current level of air tour activity (zero tours per year) based on operator reporting, and preserves the park's natural soundscapes.

The condition that commercial air tours fly at least 1,000 ft. laterally and 1,500 ft vertically from Alcatraz Island and 1,000 ft. vertically and laterally of other areas within Golden Gate National Recreation Area and San Francisco Maritime National Historical Park is intended to protect nesting seabird colonies, peregrine falcon nests, or marine mammal haul outs. Brandt's cormorants (*Phalacrocorax penicillatus*) and common murres (*Uria aalge*) are colonial nesting seabirds that are known to be sensitive to visual and noise disturbance and are protected under the Migratory Bird Treaty Act. Disturbance from overflights can cause agitation or flushing, and even lead to nest failures. Studies of aircraft disturbance to both Brandt's cormorants and common murres support a 1,000 ft. AGL buffer to prevent flushing, with greater distance to prevent all forms of disturbance.^{4,5,6,7}

Furthermore, Alcatraz Island is a regionally significant site for an estimated 10,000 nesting seabirds and waterbirds, as well as a pair of peregrine falcons. Because of its standing as one of the most sensitive wildlife locations in the Golden Gate National Recreation Area, the agencies established a minimum altitude of 1,500 ft. AGL around Alcatraz to further minimize disturbance to the sensitive waterbird nesting colonies. Minimizing the potential for aircraft disturbances by maintaining 1,500 ft. AGL over Alcatraz and a 1,000 ft. lateral avoidance of the island will increase the likelihood of successful breeding and retention of these waterbird colonies for future conservation.

Harbor seals (*Phoca vitulina*) have a significant haul out and pupping area in Bonita Cove, just adjacent to Point Bonita. Harbor seals are sensitive to visual and noise disturbance and are protected under the Marine Mammal Protection Act. Disturbance at

⁴ Fuller, A. R., McChesney, G.J. & R.T. Golightly. (2007). Aircraft Disturbance to Common Murres (*Uria aalge*) at a Breeding Colony in Central California, USA. *Waterbirds*, 41(3):257-267.

⁵ Capitolo, P.J., McChesney, G.J., Carter, H.R., Parker, M.W., Eigner, L.E. & Golightly, R.T. (2014). Changes in breeding population sizes of Brandt's Cormorants *Phalacrocorax penicillatus* in the Gulf of the Farallones, California, 1979–2006. *Marine Ornithology* 42: 35–48.

⁶ Rojek, N.A., Parker, M.W., Carter, H.R. & McChesney, G.J. (2007). Aircraft and vessel disturbances to Common Murres *Uria aalge* at breeding colonies in central California, 1997–1999. *Marine Ornithology* 35: 67–75.

⁷ Fuller, A. R., G.J. McChesney, and R.T. Golightly. (2018). Aircraft disturbance to Common Murres (*Uria aalge*) at a breeding colony in central California, USA. *Waterbirds* 41:257-267.

haul out sites causes seals to flush into the water, expending extra energy. NOAA set a minimum altitude of 1,000 ft. AGL by regulation for aircraft flying over haul out sites in the Greater Farallones National Marine Sanctuary in order to prevent disturbances to harbor seals.⁸ Though the ATMP does not depict the location of marine mammal haul outs, due to the sensitivity of these resources, the designated routes and minimum altitudes in ATMP require operators to maintain minimum altitude of 1,500 ft. AGL when commercial air tours fly over or near these areas. This minimum altitude was set because it will provide greater protection for this sensitive species.

The condition that in certain locations the commercial air tours fly no lower than 1,500 ft. AGL over Point Reyes National Seashore and those areas of Golden Gate National Recreation Area that contain northern spotted owl habitat is consistent with avoidance recommendations for northern spotted owls. Noise from a fixed-wing aircraft at 1,500 ft. AGL (DHC- 2 Beaver floatplane, 70 decibels (dB) L_{max}) is below the sound-only injury threshold of 92 dB for northern spotted owls.⁹

Minimum altitudes required over land-based wilderness in Point Reyes National Seashore will improve preservation of wilderness character and visitor experiences on the ground by reducing the intensity of air tour noise to visitors on the ground. Additionally, these minimum altitudes are also more consistent with the guidance provided by FAA Advisory Circular 91-36D, Visual Flight Rules (VFR) Flight Near Noise-Sensitive Areas.

The vertical and lateral avoidance of the Core Ranch Area B and other Core Ranch Areas at Point Reyes National Seashore are intended to limit sound impacts and minimize disturbances to permitted dairy ranch operations and associated residential uses in the Point Reyes Peninsula Dairy Ranches Historic District.

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, foraging, and communication. Wildlife viewing is often conducted during this time of day as well. Day/time restrictions have been included in this ATMP to create quiet periods of the day during which noise from commercial air tours would not impede these critical wildlife behaviors. These restrictions also allow for opportunities for visitors to enjoy natural sounds at all of these parks and align with park management objectives for wilderness areas in Point Reyes National Seashore. Restrictions for particular events are intended to prevent noise interruptions of NPS events or tribal practices.

The condition that operators report bird strikes is included since the Parks protect a high diversity of migratory birds along the Pacific Flyway, including both native resident and migratory species. While the agencies are not aware of migratory bird strike issues associated with air tours over the Parks, if reporting indicates that air tour bird strikes are

⁸ 15 CFR § 922.82(a)(11).

⁹ Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California, Arcata Fish and Wildlife Office, Arcata, CA, July 26, 2006, and Revised Northern Spotted Owl and Marbled Murrelet Disturbance Disruption Tables, August 9, 2012.

an issue, the agencies will work to remedy this problem with the operators through measures that could involve adjusting air tour routes and hours of operation, temporary no fly periods, or utilizing new technologies.

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 the Parks' resources.

The condition that commercial air tours may not hover in place is intended to minimize disturbances to noise sensitive wildlife and visitor experience.

The requirements to equip aircraft 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 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, the Coastal Zone Management 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.

Craig Kenkel Acting General Superintendent Golden Gate National Recreation Area and Muir Woods National Monument National Park Service	Date	Erik Amend Regional Administrator (Acting) Western-Pacific Region Federal Aviation Administration	Date
Paul DePrey Superintendent San Francisco Maritime National Historical Park National Park Service	Date	Kevin Welsh Executive Director Office of Environment & Energy Federal Aviation Administration	Date
Anne Altman Acting Superintendent Point Reyes National Seashore National Park Service	Date		
Frank W. Lands Regional Director Interior Regions 8, 9, 10 & 12 National Park Service	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 annual operations along with authorized aircraft type by operator. IOA previously issued for the Parks 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
San Francisco Helicopters, LLC	For routes that fly over Golden Gate National Recreation Area and San Francisco Maritime National Historical Park: 1,280	No set limit	BHT-407-407, BHT-427-427
San Francisco Seaplane Tours, Inc.	For routes that fly over Golden Gate National Recreation Area and San Francisco Maritime National Historical Park: 1,125 For the route that flies over Golden Gate National Recreation Area, San Francisco Maritime National Historical Park, and Point Reyes National Seashore: 143	Golden Gate National Recreation Area and San Francisco Maritime National Historical Park: No set limit Point Reyes National Seashore: 1 tour per day on Standard Days, with 5 Flex Days per year on which 2 tours per day may be conducted.	DHC-2-MKI

2.0 DAY/TIME RESTRICTIONS

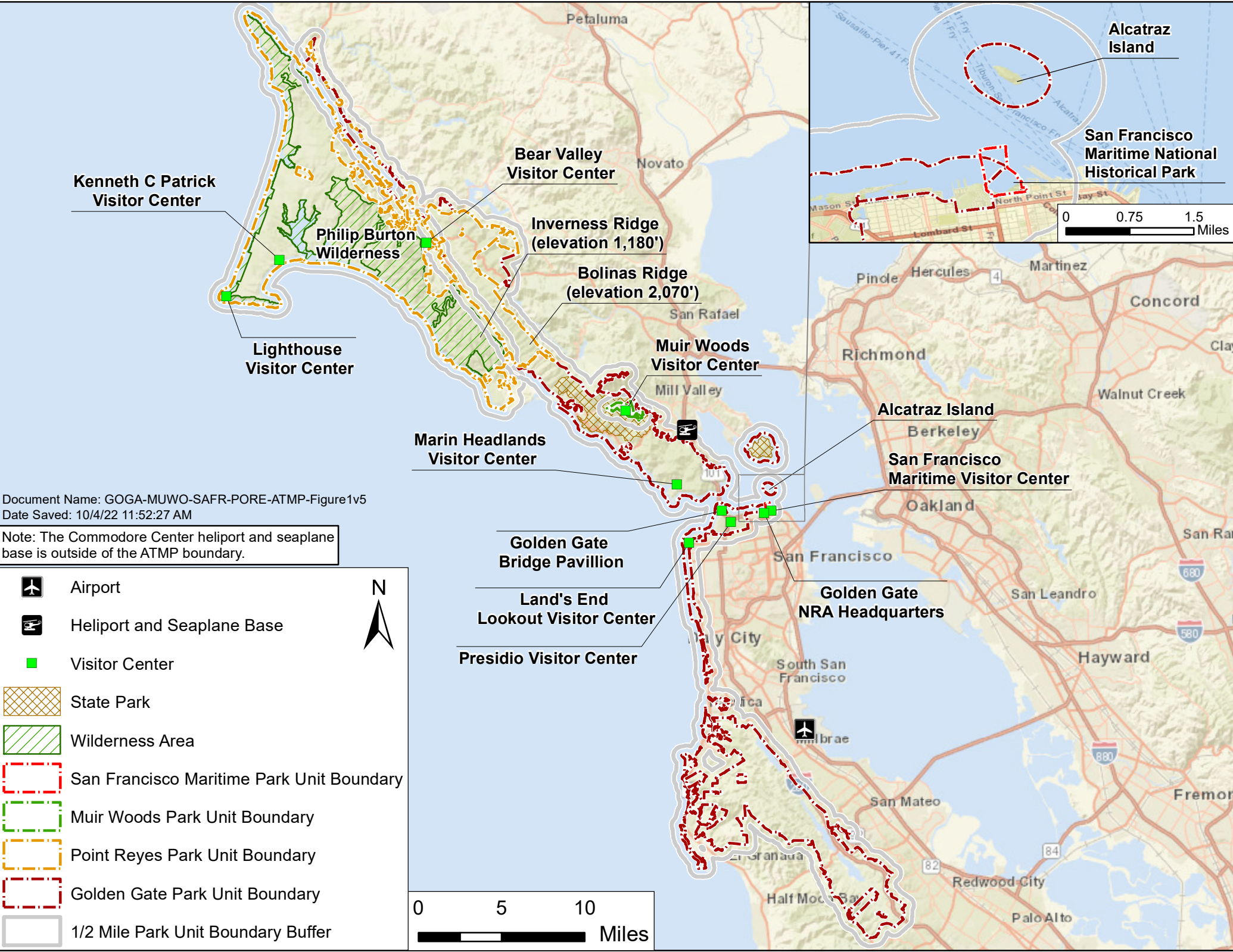
Table 2 lists the time-of-day and day-of-week operating parameters.

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

Air Tour Operator	Time-of-Day	Day-of-Week
San Francisco Helicopters, LLC	Golden Gate National Recreation Area and San Francisco Maritime National Historical Park: Tours may operate from 9:00 AM until 30 minutes after sunset.	The NPS can establish temporary no-fly periods that applies to air tours for special events or planned park management.
San Francisco Seaplane Tours, Inc.	Golden Gate National Recreation Area and San Francisco Maritime National Historical Park: Tours may operate from 9:00 AM until 30 minutes after sunset. Point Reyes National Seashore: 12:00 PM to 5:00 PM	The NPS can establish temporary no-fly periods that applies to air tours for special events or planned park management.

APPENDIX B

Enlarged Figure 1



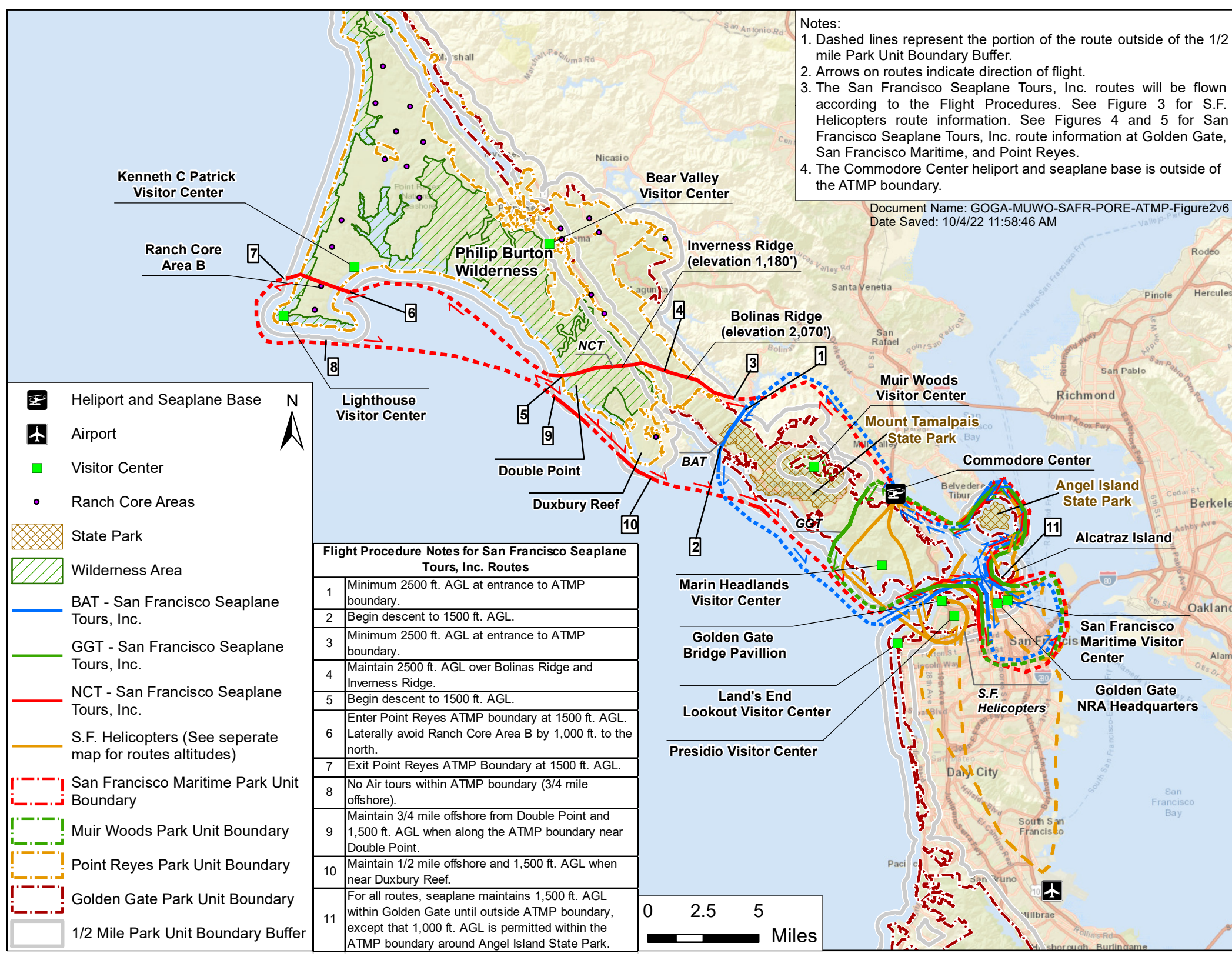
APPENDIX C

Enlarged Figures 2-5

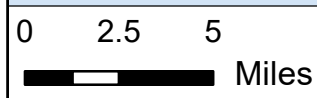
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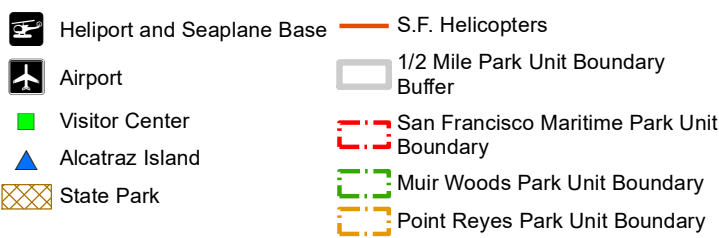
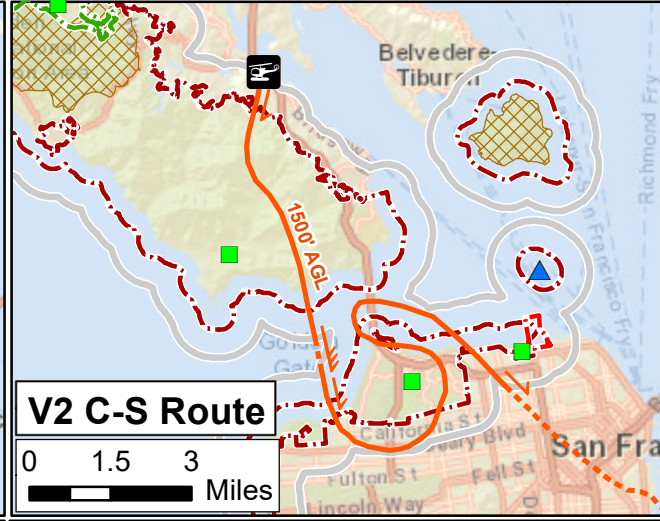
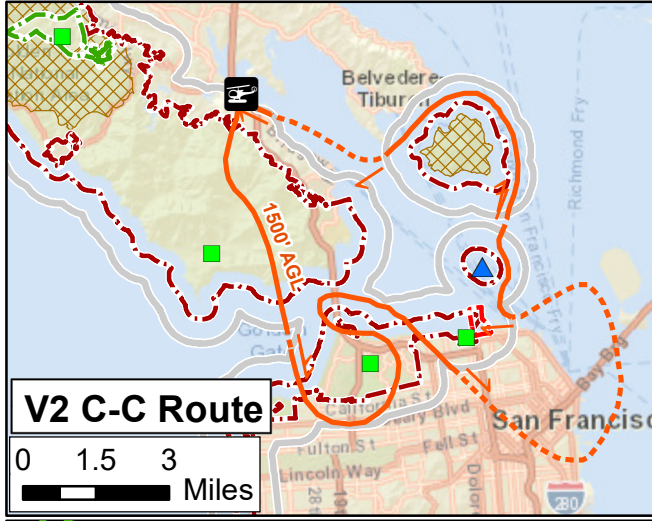
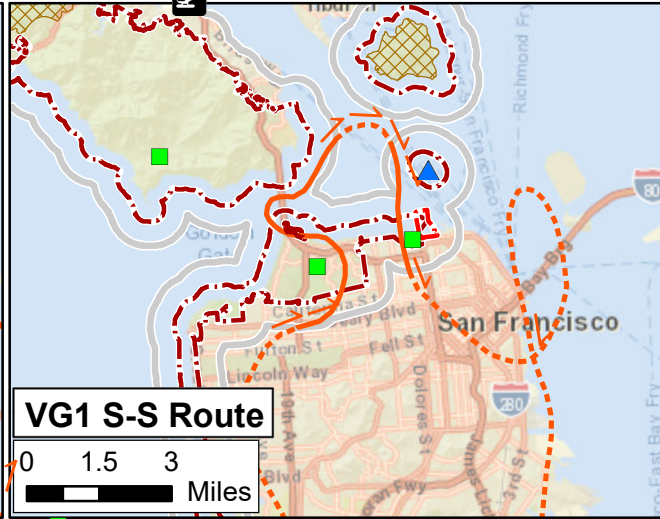
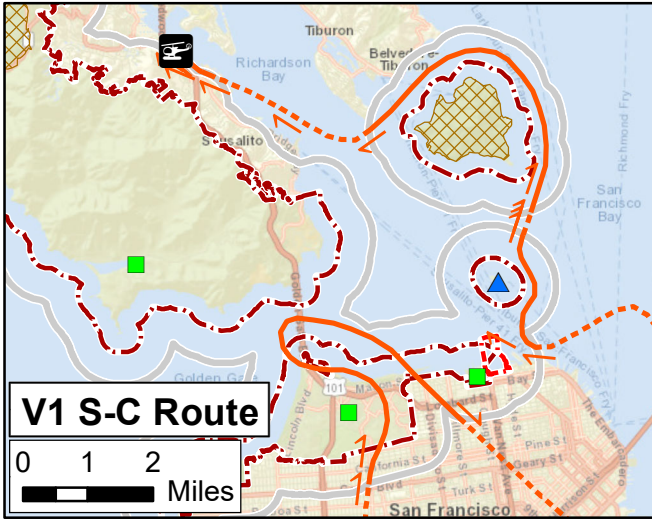
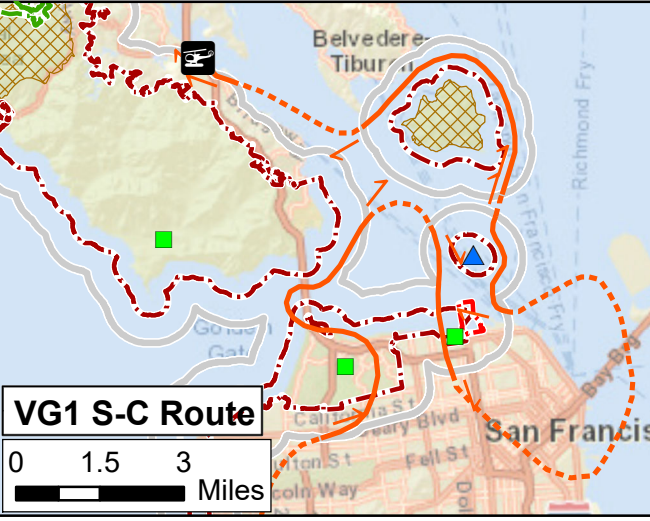
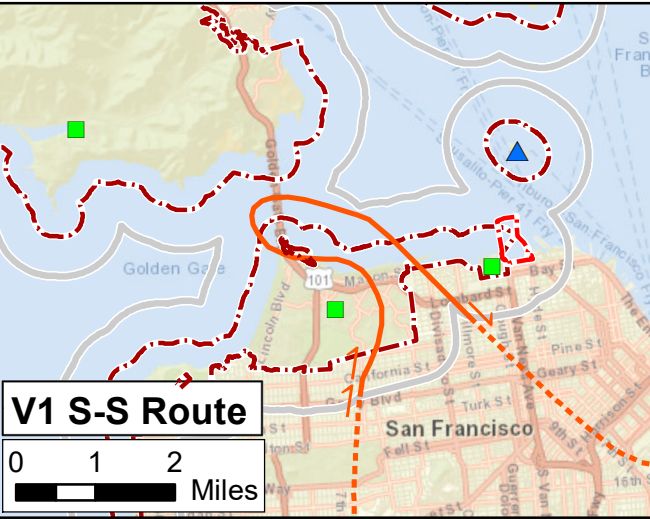
1. Dashed lines represent the portion of the route outside of the 1/2 mile Park Unit Boundary Buffer.
2. Arrows on routes indicate direction of flight.
3. The San Francisco Seaplane Tours, Inc. routes will be flown according to the Flight Procedures. See Figure 3 for S.F. Helicopters route information. See Figures 4 and 5 for San Francisco Seaplane Tours, Inc. route information at Golden Gate, San Francisco Maritime, and Point Reyes.
4. The Commodore Center heliport and seaplane base is outside of the ATMP boundary.

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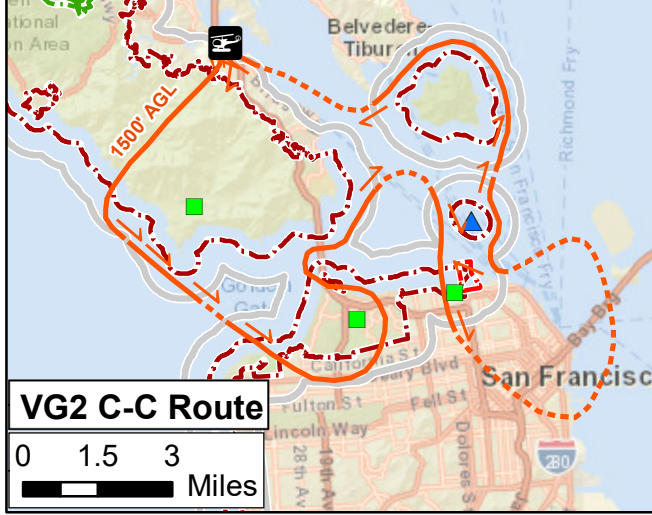
Flight Procedure Notes for San Francisco Seaplane Tours, Inc. Routes	
1	Minimum 2500 ft. AGL at entrance to ATMP boundary.
2	Begin descent to 1500 ft. AGL.
3	Minimum 2500 ft. AGL at entrance to ATMP boundary.
4	Maintain 2500 ft. AGL over Bolinas Ridge and Inverness Ridge.
5	Begin descent to 1500 ft. AGL.
6	Enter Point Reyes ATMP boundary at 1500 ft. AGL. Laterally avoid Ranch Core Area B by 1,000 ft. to the north.
7	Exit Point Reyes ATMP Boundary at 1500 ft. AGL.
8	No Air tours within ATMP boundary (3/4 mile offshore).
9	Maintain 3/4 mile offshore from Double Point and 1,500 ft. AGL when along the ATMP boundary near Double Point.
10	Maintain 1/2 mile offshore and 1,500 ft. AGL when near Duxbury Reef.
11	For all routes, seaplane maintains 1,500 ft. AGL within Golden Gate until outside ATMP boundary, except that 1,000 ft. AGL is permitted within the ATMP boundary around Angel Island State Park.





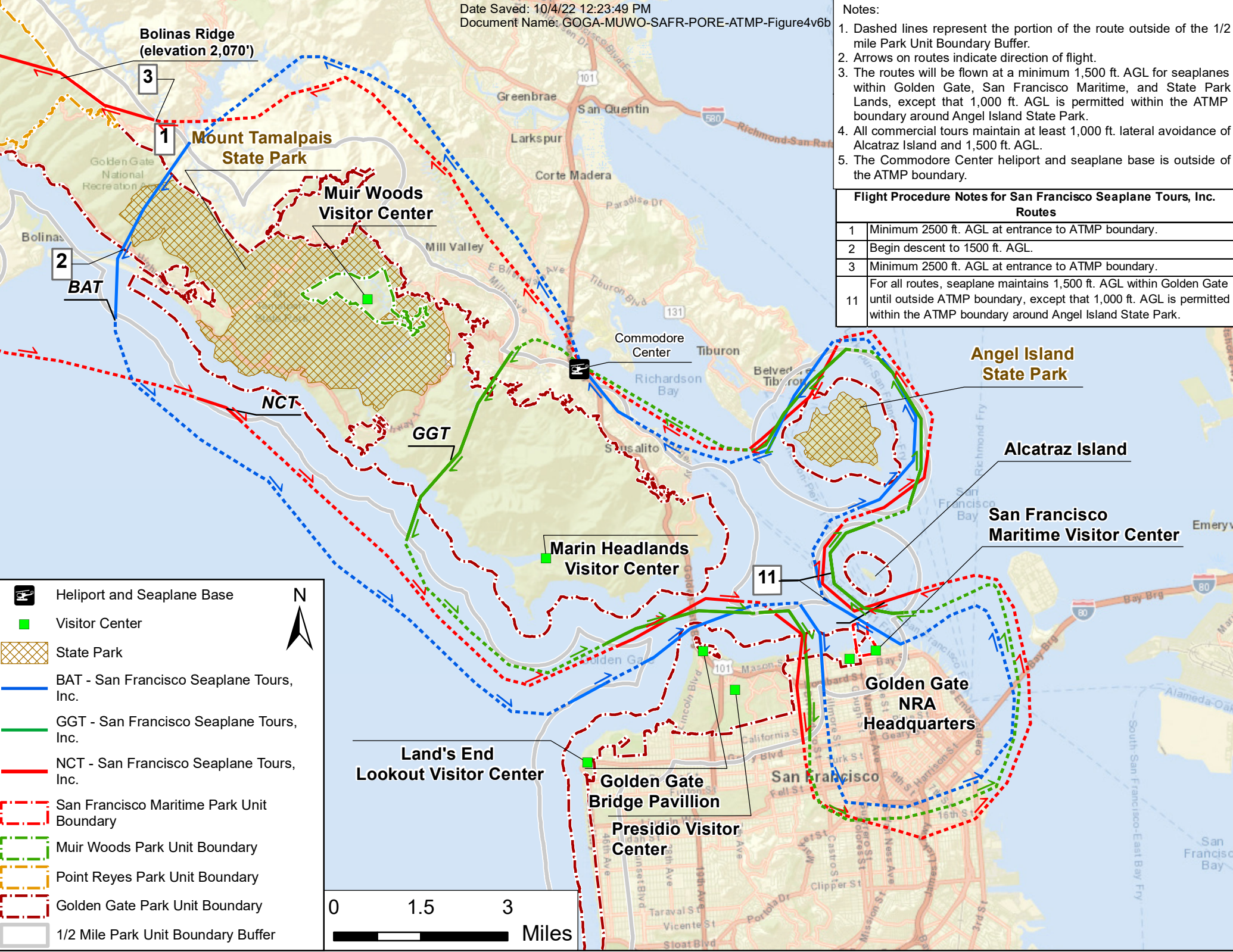
Notes:

- Dashed lines represent the portion of the route outside of the 1/2 mile Park Unit Boundary Buffer.
- Arrows on routes indicate direction of flight.
- The routes will be flown at a minimum 1,000 ft. AGL within Golden Gate and San Francisco Maritime, except that a minimum 1,500 ft. AGL is required within the ATMP boundary around Alcatraz Island, and a minimum 1,500 ft. AGL while flying over park lands in Marin County.
- All commercial tours maintain at least 1,000 ft. lateral avoidance of Alcatraz Island and 1,500 ft. AGL.
- The Commodore Center heliport and seaplane base is outside of the ATMP boundary.



- 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. The routes will be flown at a minimum 1,500 ft. AGL for seaplanes within Golden Gate, San Francisco Maritime, and State Park Lands, except that 1,000 ft. AGL is permitted within the ATMP boundary around Angel Island State Park.
 4. All commercial tours maintain at least 1,000 ft. lateral avoidance of Alcatraz Island and 1,500 ft. AGL.
 5. The Commodore Center heliport and seaplane base is outside of the ATMP boundary.

Flight Procedure Notes for San Francisco Seaplane Tours, Inc. Routes	
1	Minimum 2500 ft. AGL at entrance to ATMP boundary.
2	Begin descent to 1500 ft. AGL.
3	Minimum 2500 ft. AGL at entrance to ATMP boundary.
11	For all routes, seaplane maintains 1,500 ft. AGL within Golden Gate until outside ATMP boundary, except that 1,000 ft. AGL is permitted within the ATMP boundary around Angel Island State Park.



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. The routes will be flown at a minimum AGL of 1,500 ft. for seaplanes over Golden Gate, San Francisco Maritime, and State park lands.

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Kenneth C Patrick
Visitor Center

Ranch Core
Area B

Bear Valley
Visitor Center

Phillip Burton
Wilderness

Pacific Ocean

Inverness Ridge
(elevation 1,180')

Bolinas Ridge
(elevation 2,070')

Lighthouse
Visitor Center

Flight Procedure Notes for San Francisco Seaplane Tours, Inc. Routes

1	Minimum 2500 ft. AGL at entrance to ATMP boundary.
2	Begin descent to 1500 ft. AGL.
3	Minimum 2500 ft. AGL at entrance to ATMP boundary.
4	Maintain 2500 ft. AGL over Bolinas Ridge and Inverness Ridge.
5	Begin descent to 1500 ft. AGL.
6	Enter Point Reyes ATMP boundary at 1500 ft. AGL. Laterally avoid Ranch Core Area B by 1,000 ft. to the north.
7	Exit Point Reyes ATMP Boundary at 1500 ft. AGL.
8	No Air tours within ATMP boundary (3/4 mile offshore).
9	Maintain 3/4 mile offshore from Double Point and 1,500 ft. AGL when along the ATMP boundary near Double Point.
10	Maintain 1/2 mile offshore and 1,500 ft. AGL when near Duxbury Reef.



Heliport and Seaplane Base



Visitor Center



Ranch Core Areas



State Park



Wilderness

NCT - San Francisco Seaplane Tours, Inc.

BAT - San Francisco Seaplane Tours, Inc.

Point Reyes Park Unit Boundary

Golden Gate Park Unit Boundary

1/2 Mile Park Unit Boundary Buffer

Double Point

NCT

Duxbury Reef

0 1 2 3 4 5
Miles

10

2

BAT

1

4

5

6

7

8

Wo

Lagunitas

Samuel P. Taylor
State Park

Nicasio Valley Rd

Point Reyes
Station

Inverness

Golden Gate
National
Recreation Area

Bolinas