

Program Organization, Roles, and Responsibilities

2.1 Overview

The Airport Director has the primary authority over the wildlife management program at SFO. All Airport divisions and associated agencies have responsibilities outlined in the WHMP, and they must incorporate these responsibilities into their programs. Clear communication among SFO staff and divisions is essential for the WHMP to succeed. Airport staff should provide resource needs, recommendations, and progress to Planning and Environmental Affairs (PEA). The wildlife coordinator and Airfield Operations staff will lead daily management of the SFO's wildlife management program. The following section details relevant Airport divisions and their roles in this Airport-wide wildlife management program. A list is provided at the end of this section of the individuals having authority and responsibility for direct implementation of the plan and therefore requiring initial and annual training under §139.337(f)(1).

2.2 Program Organization

2.2.1 Airport Director

The Airport Director should ensure that the WHMP and amendments adhere to federal, state, and local laws and regulations and ensure that it is approved by the FAA.

2.2.2 Planning and Environmental Affairs

1. Plan and support the WHMP program, including strategic guidance and operational direction of the WHMP, and management decisions at the program level. Elevate issues to the Airport Director, as appropriate.
2. Coordinate with federal, state, regional, and local jurisdictions and agencies on land use decisions that could attract wildlife to properties around the Airport, and to ensure consideration of airport safety when developing land use policies.
3. Brief the Airport Director on the WHMP progress and management activities.

2.2.3 Airport Wildlife Biologist

The Airport Wildlife Biologist shall meet the credentials of a “qualified wildlife biologist, or the Airport shall contract with a qualified wildlife biologist who meets the required credentials of a “qualified Airport Wildlife Biologist,” as detailed in FAA Advisory Circular (AC) 150/5200-36.

1. Support SFO Airfield Operations staff pertaining to wildlife management activities.
2. Conduct regular, protocolled continuous monitoring of wildlife presence, abundance, and activities at the Airport.

3. Provide technical support to the Wildlife Hazard Working Group (WHWG) and Wildlife Hazard Committee (WHC).
4. Train Airport staff on wildlife management techniques, regulatory and permit obligations.
5. Monitor facilities and tenants for wildlife problems.
6. In coordination with Airfield Operations staff, inspect aircraft movement areas for wildlife activity and strikes and haze wildlife from areas, when appropriate.
7. Provide wildlife/habitat assessments following bird strike incidences at the Airport.
8. Identify and monitor areas on the airfield with temporary standing water to correct for drainage issues, especially during the rainy seasons.
9. Review construction and maintenance projects for potential impacts on the WHMP, as requested. Evaluate architectural designs and landscaping plans for wildlife attractants and recommend range of options to Airport staff.
10. Conduct field trials with Airfield Operations staff, and develop protocols for testing new equipment and wildlife and habitat management techniques, as requested.
11. Obtain the appropriate (depredation) permits for wildlife control.
12. Produce annual reports of the continuous monitoring, wildlife strike, and other relevant data.
13. Update the WHA, WHMP, and lead review of the WHMP as requested by the FAA, required by a triggering event, or as needed due to program changes.

2.2.4 Operations Services—Airfield Operations and Wildlife Coordinator

Airfield Operations staff and the wildlife coordinator, a designated staff within the Airfield Operations division, will conduct daily activities pertaining to implementation of the WHMP and wildlife management at the Airport.

1. Ensure that the WHMP complies with the SFO *Airport Certification Manual* per 14 CFR Part 139 and other regulations applicable for maintaining FAA certification.
2. Coordinate wildlife control activities with the Airport Wildlife Biologist and other airport staff to monitor progress.
3. Purchase, stock, and maintain the necessary supplies to conduct wildlife control.
4. Coordinate with the Airport Wildlife Biologist to prepare a wildlife/habitat assessment following bird strike incidents.
5. Provide copies of wildlife strike forms FAA Form 5200-7 for Airfield Operations staff, FAA ATCT, and pilots. See **Appendix E** for a copy of the FAA Form 5200-7.
6. Properly train and badge contract wildlife biologist, if necessary, and Airport staff members engaged in wildlife control in accordance with the FAA regulations. Airport Wildlife Biologist
7. Provide runway incursion training to Airport staff involved with wildlife control activities.
8. Inspect runways for wildlife activity and strikes.
9. Haze wildlife from airfield areas when appropriate.

10. Provide pyrotechnics and firearms training to Airfield Operations staff.
11. Record wildlife activity or dead animals found on the daily wildlife activity reports.
12. Report bird/wildlife strikes on FAA Form 5200-7.
13. Maintain accurate and current wildlife activity reports and bird strike data on the Airport Inspecting Reporting System (AIRS) database, notify the FAA of strike activities, and notify the Airport Wildlife Biologist of such activity reports and bird strike occurrences/data.
14. Coordinate activities between airport staff members involved with wildlife control and the communications switchboard.
15. Update FAA ATCT personnel to keep them aware of wildlife control activities on the airfield.
16. Submit unidentified remains to the Smithsonian Institution, National Museum of Natural History, Division of Birds laboratory for identification.
17. Conduct field trials with the Airport Wildlife Biologist and develop protocols for testing new equipment and methods of wildlife and habitat management.
18. Handle and transport wildlife removed from the airfield to the appropriate relocation or disposal sites.

2.2.5 Operations Services – Aviation Security

Provide assistance to the WHMP by acting as the central contact point with other police agencies having jurisdiction for when pyrotechnics and live rounds are used.

2.2.6 Facilities—Integrated Pest Management

1. Maintain, inspect, and check traps for pigeons and flocking birds daily.
2. Maintain, inspect, and check traps for problem mammals (e.g. skunks, raccoons) as necessary.
3. Address problem birds in and around structures with harassment or exclusion. Contact airfield operations for implementation of lethal control measures when necessary.
4. Install, evaluate, and maintain exclusion devices in and around structures under IPM jurisdiction including nettings, spikes, deterrent substances, Mylar strips, and plastic strips.
5. Report monthly to the Wildlife Hazard Committee on current issues and improvement plans.
6. Distribute report as necessary to the following departments: custodial, landscape, duty managers, aviation management, airfield operations, IPM, and paving and grounds.

2.2.7 Facilities—Custodial Services

1. Inform the wildlife coordinator of rodents and other wildlife found in and around buildings to ensure that the Airport Wildlife Biologist is involved with any control/abatement efforts.
2. Work with Integrated Pest Management and other Airport staff to rodent- and bird-proof dumpsters and other refuse containers.
3. Pick up refuse around eating areas quickly.

4. Drain or mop up temporary pools formed by drinking fountains, faucets, or air conditioners to limit water available for rodents and other wildlife.

2.2.8 Facilities—Pavement and Grounds

1. Under the guidance of Operations Services and/or the Airport Wildlife Biologist, assist with habitat modifications addressed in the WHMP, such as streamside vegetation maintenance and brush and tree pruning and removal.
2. Remove abandoned structures and equipment that serve as shelter for wildlife.
3. Mow grass at the heights recommended by the Airport Wildlife Biologist and under guidance of Operations Services.
4. Assist the Airport Wildlife Biologist with the installation and maintenance of wire grids or bird balls over the detention ponds and other water areas.
5. Ensure that refuse does not accumulate in the fields or ditches on Airport property.
6. Maintain ditches to ensure that water flows to avoid pooling.
7. Minimize pooling formed from rain or sprinkler systems, and dissipate ponded water with sweepers.
8. Coordinate landscaping changes with the Airport Wildlife Biologist to ensure that wildlife habitat is minimized.
9. Assist with wildlife control activities involving field rodents, rabbits, and birds.
10. Coordinate with the Airport Wildlife Biologist and Airfield Operations staff to identify potential wildlife attractants and habitat, such as areas on the airfield prone to ponding, and correct as appropriate.

2.2.9 Facilities—Landscaping

1. Coordinate with the Airport Wildlife Biologist to ensure that all vegetation species used for landscaping are on the list of accepted plants for SFO that minimize wildlife attractants.
2. Coordinate with the Airport Wildlife Biologist to ensure that landscaping methods do not attract wildlife.
3. Prune trees to minimize their attractiveness as bird roosts, as appropriate.
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2.2.10 Communications and Marketing

Provide public relations support for the airport-wide wildlife management program and related activities, as necessary.

2.2.11 FAA—Airport Traffic Control Tower

Although not required under 14 CFR Part 139, the Air Traffic Control Tower (ATCT) will perform the tasks listed below.

1. Warn pilots of bird hazards.

2. Delay takeoffs and landings, if necessary, to avoid areas of hazardous wildlife activity.
3. Continue to communicate all incidences of wildlife strikes to Airfield Operations staff.

2.2.12 Wildlife Hazard Committee

The Wildlife Hazard Committee (WHC) meets on a monthly basis to discuss current wildlife issues and improvement plans. The WHC consists of representatives from:

1. Operations Services—Airfield Operations and Wildlife Coordinator
2. Planning and Environmental Affairs and Airport Wildlife Biologist
3. Maintenance—Integrated Pest Management

2.2.13 Wildlife Hazard Working Group

Airfield Operations staff formed the WHWG in January 2009. The WHWG meets annually to discuss wildlife hazards and habitat management issues, to review the WHMP, and to keep abreast of their divisional duties. The WHWG will also meet in the event that a wildlife strike triggers a review of the WHMP. The WHWG is represented by:

1. Operations Services—Airfield Operations (Chair of WHWG) and Wildlife Coordinator
2. Planning and Environmental Affairs and Airport Wildlife Biologist
3. Facilities—Integrated Pest Management
4. Facilities—Pavement and Grounds
5. Facilities—Landscaping
6. Design & Construction—Infrastructure Information Management
7. Facilities—Custodial Services
8. Facilities—Utility Engineering
9. Air Traffic Control
10. Airline Affairs Representative
11. Tenant Representative
12. Concessions Management

Invitations will be extended to other SFO staff, as appropriate, airlines, tenants, FAA ATCT, and other airports in the region to regularly attend and participate in the WHWG. Planners from local jurisdictions surrounding SFO may also be invited for educational and outreach purposes.

The WHWG should report activities, status, and recommendations to the Airport Wildlife Biologist and PEA, who should in turn submit this information to the Airport Director for review and approval as necessary. Any changes to the WHMP required by the WHWG will be submitted to the FAA for approval. Records of the proceedings of WHWG meetings as well as the WHMP review process will be maintained.

2.2.14 List of Entities Responsible for Direct Implementation

The following individuals or departments with the authority and responsibility for direct implementation of the WHMP shall complete initial and annual training as defined in AC 150/5200-36A to satisfy the requirements of 14 CFR Part 139.337. Department representatives may complete the training and then use a “train the trainer” approach to train other relevant personnel within their departments. Records of completion of the training will be maintained by Airfield Operations.

1. Operations Services
 - a. Wildlife Coordinator
 - b. Airfield Safety Officers
2. Airport Wildlife Biologist
3. Facilities—Integrated Pest Management

Chapter 3

Applicable Laws, Regulations, and Policies

3.1 Overview

Federal, state, and local governments administer laws and regulations that protect wildlife and their habitat. Most wildlife management agencies issue permits to allow the harassment or take of certain wildlife species when required by extenuating circumstances. Permits that are required to implement the management program should continue to be obtained on a routine basis by the SFO Airfield Operations staff. Applicable regulations and the coordination process are discussed below. This section will be updated as new regulations come into effect.

3.2 Federal Aviation Administration (FAA) Regulations

The FAA publishes guidelines for regulating air transportation in Advisory Circulars (ACs) and CertAlerts. Recipients of FAA airport grant assurances in support of airport improvement projects are required to comply with FAA ACs and CertAlerts. Applicable regulations are described below.

3.2.1 14 CFR Part 139.337: Wildlife Hazard Management

14 CFR Part 139.337(b) and (c) require certificate holders (i.e., airport sponsors) that service regularly scheduled commercial aircraft (carrying 10 or more passengers) to complete a Wildlife Hazard Assessment when one of the following events occurs on or near the airport:

- An air carrier aircraft experiences multiple wildlife strikes or engine ingestion.
- An air carrier aircraft experiences substantial damage from striking wildlife.
- Wildlife of a size, or in numbers, capable of causing one of the above events is observed to have access to any airport flight pattern or aircraft movement area.

Information collected during the Wildlife Hazard Assessment—including analysis of the events that prompted the assessment; identification of observed species, their movements, numbers, and locations; and wildlife attractants and recommended actions for reducing wildlife hazards to air carrier operations—is then, at the FAA’s request, incorporated into a WHMP as required under 14 CFR Part 139.337(d) and (e). The WHMP, which must be submitted to and approved by the FAA before implementation, provides measures to reduce or eliminate wildlife hazards to air carrier operations by identifying necessary habitat modifications and wildlife control measures, as well as the parties responsible for implementing the identified actions.

3.2.2 14 CFR Part 139.5: Standards and Procedures for Compliance with the Certification and Operations Requirements of this Part

14 CFR Part 139.5 is a federal regulation that references the FAA ACs. The regulation requires airport operators to identify standards and procedures that are “acceptable to the Administrator [FAA]” (14 CFR Part 139.5) and points to the FAA ACs as the place to find these standards. Therefore, the ACs that are referenced in 14 CFR Part 139.337 provide the standards and procedures that are acceptable to the FAA administrator.

3.2.3 FAA AC 150/5200-33B: Hazardous Wildlife Attractants On or Near Airports

FAA AC 150/5200-33B (or current edition) provides FAA guidance to airport operators on the recommended locations of certain land uses that have the potential to attract hazardous wildlife relative to the location of the airport. See **Appendix A** for a copy of FAA AC 150/5200-33B. It also provides guidance on airport development projects, including construction, expansion, and renovation projects, affecting aircraft movements near hazardous wildlife attractants.

For an airport serving turbine-powered aircraft such as SFO, FAA AC 150/5200-33B recommends that “hazardous wildlife attractants” be separated from the airport’s AOA by a distance of 10,000 feet. It also recommends that the approach, departure, and circling airspace be separated from hazardous wildlife attractants by 5 statute miles if the attractant could cause hazardous wildlife movement into or across the approach or departure airspace.

FAA AC 150/5200-33B defines wildlife attractants as:

Any human-made structure, land use practice, or human-made or natural geographic feature that can attract or sustain hazardous wildlife within the landing or departure airspace of the airport’s AOA. These attractants can include architectural features, landscaping, waste disposal sites, wastewater treatment facilities, agricultural or aquaculture activities, surface mining, and wetlands.

It discusses land use practices that have the potential to attract hazardous wildlife and provides guidance on whether these practices are compatible with safe airport operations if located within specified separation distances from the airport. The guidance also provides recommendations on alternatives for incompatible land uses, and suggestions on managing or correcting incompatible land uses to discourage the attraction of hazardous wildlife to airport facilities.

3.2.4 FAA AC 70/7460-2K: Proposed Construction or Alteration of Objects That May Affect the Navigable Airspace

FAA AC 70/7460-2K (or current edition) provides guidance for persons proposing to erect or alter objects that may affect navigable airspace on or in the vicinity of a public use airport. In particular, the FAA must be notified if a proposed construction or alteration activity would result in any of the following cases:

- The activity would be more than 200 feet in height.
- The activity would be near a public use or military airport, heliport, or seaplane base, given specific circumstances.

- The activity would result in the construction of a highway or railroad that exceeds certain specified heights.
- The activity would be otherwise required for review by the FAA.

3.2.5 FAA AC 150/5200-32A: Reporting Wildlife Aircraft Strikes

FAA AC 150/5200-32A (or current edition) provides guidance on reporting wildlife strikes to the FAA, accessing the FAA National Wildlife Aircraft Strike Database, and making use of the FAA's Feather Identification Program. Wildlife strikes may be reported to the FAA by using FAA Form 5200-7, Bird/Other Wildlife Strike Report (see **Appendix C**) or submitting electronically via the Airport Wildlife Hazard Mitigation Home Page.⁴ The FAA's National Wildlife Aircraft Strike Database can be accessed through the same website. FAA AC 150/5200-32A emphasizes the importance of accurate species identification of animals involved in a strike, and it details procedures for sending samples to the Feather Identification Lab at the Smithsonian Institution, when necessary, for species identification.

3.2.6 FAA AC 150/5200-36A: Qualifications for Wildlife Biologist Conducting Wildlife Hazard Assessments and Training Curriculums for Airport Personnel Involved in Controlling Wildlife Hazards on Airports

FAA AC 150/5200-36A describes the qualifications for wildlife biologists who conduct Wildlife Hazard Assessments (WHA) for airports certificated under Title 14, Code of Federal Regulations, Part 139 (14 CFR Part 139), and at non-certificated airports funded by a Federal Aviation Administration (FAA) Airport Improvement Program (AIP) or Passenger Facility Charge (PFC) Program. We recommend that airports, at a minimum, consult with a qualified airport wildlife biologist when developing a Wildlife Hazard Management Plan (WHMP). This AC also addresses the minimum wildlife hazard management curriculum for the initial and recurrent training of airport personnel who implement an FAA-approved WHMP.

3.2.7 CertAlerts

The FAA periodically issues CertAlerts for internal distribution and to provide recommendations on specific issues for inspectors and airport personnel. CertAlert 98-05, Grasses Attractive to Hazardous Wildlife, issued on September 21, 1998, discusses revegetation with seed mixtures that are not attractive to wildlife and elimination of existing attractive grasses in disturbed areas at airports. CertAlert 06-07, Requests by State Wildlife Agencies to Facilitate and Encourage Habitat for State-Listed Threatened and Endangered Species and Species of Special Concern on Airports, issued on November 21, 2006, recommends that airport sponsors follow prescribed landscaping and habitat management practices to discourage the presence of wildlife species, including state-listed species, and to disallow state-listed species to remain on the airport if doing so would require managing the airport environment in a manner contrary to FAA recommendations. CertAlert 06-07 also provides that wetland mitigation for state-listed species habitat should be located at an off-airport site.

⁴ Visit http://wildlife-mitigation.tc.faa.gov/public_html/index.html.

3.2.8 Memorandum of Agreement on Aircraft—Wildlife Strikes

In July 2003, the FAA, U.S. Air Force, U.S. Army, U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (USFWS), and U.S. Department of Agriculture (USDA) entered into a memorandum of agreement (MOA) to more effectively address existing and future environmental conditions contributing to aircraft-wildlife strikes. A copy of the MOA is provided in **Appendix A**. The signatory agencies agreed to strongly encourage their respective regional and local offices to develop interagency coordination to implement the MOA. The signatory agencies also agreed that whenever a significant aircraft-wildlife strike occurs or potential for one is identified, any signatory agency may begin action with other appropriate signatory agencies to reduce the identified strike probability. The MOA directs the agencies to work cooperatively, preferably at the local level, to determine the causes of the strike and actions that can and should be taken at the airport or in its vicinity to reduce potential strikes. It specifically recognizes mitigation for wildlife habitat as a hazardous wildlife attractant, along with agriculture and golf courses, and states that these activities should occur outside the 10,000-foot zone.

3.3 Other Federal Regulations

The federal government has passed several acts for the protection of wildlife, including the National Environmental Policy Act (NEPA), Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), Bald and Golden Eagle Protection Act (BGEPA), Clean Water Act, and Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). These acts are the basis of most wildlife regulations that have been issued in the CFR. Several agencies are responsible for implementing these regulations, and many affect wildlife control at airports. Federal wildlife laws are primarily administered and enforced by the USFWS and include migratory birds and threatened and endangered species of flora and fauna.

3.3.1 National Environmental Policy Act

Under NEPA and implementing regulations issued by the Council on Environmental quality (40 CFR Parts 1500-1508), federal agencies must analyze and disclose the environmental effects of their proposed actions and a reasonable range of alternatives in the appropriate level of assessment. There are three levels of assessment under NEPA (in ascending order of the level of environmental review): categorical exclusion (CE), environmental assessment (EA), and environmental impact statement (EIS). Specifically, NEPA is triggered when an action requires a permit, entitlement, or funding from a federal agency; when an action is undertaken jointly with a federal agency; or when an action is proposed on federal land.

Typically, federal agencies adopt guidance specific to actions that they undertake requiring NEPA compliance. Paragraph 209 in FAA Order 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions, and Section 308(e) in FAA Order 1050.1E, Environmental Impacts: Policies and Procedures identify the authorization of a WHMP as an action that would normally be categorically excluded from additional NEPA assessment.

3.3.2 Endangered Species Act

Section 7 of the Endangered Species Act (ESA) (16 United States Code [USC] 1531–1543) requires all federal agencies, in consultation with the USFWS and National Marine Fisheries Service (NMFS), to

ensure that their actions do not jeopardize the continued existence of species listed as endangered or threatened, or result in the destruction or adverse modification of the critical habitat of these species. Section 7 provides that if a federal action “may affect” a listed species, the federal agency must consult with the USFWS or NMFS to determine whether the action is likely to adversely affect the species. If the action is likely to have an adverse effect, the agency must formally consult on the action to obtain a biological opinion issued by the USFWS or NMFS that authorizes take. ESA Section 9 defines *take* as harassing, harming, pursuing, hunting, wounding, killing, or capturing, or attempting such activity.

Endangered or threatened species known to exist on the Airport property include the San Francisco Garter Snake, a federally and state listed endangered species and the California Red Legged Frog, a threatened species. Both species are known to occur on the West-of-Bayshore property located west of the Airport across US-101. The 180-acre Airport property is managed separately under the San Francisco Garter Snake Recovery Action Plan.⁵ Other threatened and endangered species with potential to occur at SFO are discussed in Section 4.4. Regardless, if proposed wildlife management activities may affect a listed species, the federal lead agency involved with the proposed action (e.g., the FAA, U.S. Army Corps of Engineers [USACE]) will consult with the USFWS or NMFS.

3.3.3 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the “take” of any migratory bird and any parts, nests, or eggs of any such bird. *Take*, under the MBTA, is defined as the action of or an attempt to pursue, hunt, shoot, capture, collect, or kill. Pursuant to the MBTA, if an action may take a migratory bird or affect its breeding habitat, consultation with the USFWS is needed. If it is determined there are no feasible alternatives to taking the migratory bird or its nest, USFWS must issue a permit for the taking. The permit will likely require mitigation.

The USFWS and the NOAA Fisheries have been delegated responsibility for administration and issuance of permits for take under the federal endangered species act. The USFWS have authority over terrestrial wildlife, freshwater fish and some marine species.

Migratory birds listed under the ESA are managed by the agency staff that handles compliance with Sections 7 and 10 of the ESA; management of all other migratory (non-listed) birds is overseen by the USFWS Division of Migratory Bird Management.

Compliance with Section 7 of the ESA (also known as federal consultation) is required when any federal agency proposes to authorize, fund or carry out a discretionary action that may affect a listed species or critical habitat. That federal agency must consult with USFWS.

Alternatively, Section 10 of the ESA provides for the consultation by non-federal agencies (e.g. individual corporations, state or local agencies) with the USFWS for the issuance of an “incidental take” permit for impacts to any listed species. Incidental take refers to the taking of any protected species “that is incidental to, but not the purpose of, otherwise lawful activities” (50 C.F.R. 17.22).

Numerous migratory birds use habitats on and around SFO. Because wildlife management activities could affect any of these birds, SFO has consulted with and obtained a migratory bird permit from the USFWS, which includes an airport depredation permit for direct lethal control if required in the

⁵ LSA Associates, Inc. 2008.

interest of public aviation safety. This annual permit is maintained on file at the SFO Airfield Operations office. See **Appendix D** for a copy of the permit issued by the USFWS under the MBTA.

3.3.4 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) provides for the protection of bald and golden eagles by prohibiting the taking, possession, or commerce of such birds. The act allows take, possession, and transportation of bald and golden eagles under specified conditions, including scientific, educational, and Native American religious purposes, or in circumstances when take may be necessary to ensure the protection of wildlife, agriculture, or other interests particular to a specific locality. The BGEPA also allows for take of golden eagle nests that interfere with resource development or recovery operations (e.g., mining). Before taking, possessing, or transporting any bald or golden eagle, or golden eagle nest, a permit must be obtained from the USFWS.

If wildlife hazard management practices at SFO require interactions with bald or golden eagles or their nests, SFO will consult with USFWS staff and obtain an eagle permit, as appropriate. Although bald eagles may be occasional visitors to the area, the California Natural Diversity Database does not list occurrences within the Primary or Secondary Zone (CNDDDB 2010).

3.3.5 Clean Water Act

Pursuant to Section 404 of the Clean Water Act (CWA), the USACE regulates discharge of dredge or fill material into waters of the United States, which include the following:

- Navigable waters, interstate waters, and all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce.
- Tributaries to any of these waters.
- Wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries.

Fill is defined as any material that replaces any portion of a water of the United States with dry land or changes the bottom elevation of any portion of a water of the United States. Any activity resulting in the placement of dredge or fill material in waters of the United States requires a permit from the USACE. Pursuant to Section 401 of the CWA, projects that require a USACE permit for discharge of dredge or fill material must also obtain a certificate from the appropriate state agency stating that the intended dredge or fill activity is consistent with the state's water quality standards and criteria. In California, the authority to grant water quality certification is delegated by the State Water Resources Control Board (SWRCB) to the Regional Water Quality Control Boards (RWQCBs).

SFO coordinates directly with the San Francisco Bay Area Regional Water Quality Control Board for water quality certification. Airport staff would continue to ensure discharge meets the permit conditions as issued by the SF Bay Area RWQCB.

3.3.6 Federal Insecticide, Fungicide, and Rodenticide Act

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) gives the EPA regulatory authority over the distribution, sale, and use of pesticides. Manufacturers must provide a label for and register a pesticide with the EPA before they can manufacture pesticides for commercial use, and facilities that use pesticides on their premises must comply with the requirements outlined by the

EPA on each pesticide container label. In addition, restricted-use pesticides must be applied by or under the direct supervision of an applicator certified by the EPA.

As part of SFO's ongoing Integrated Pest Management Program, Airport staff would ensure that pesticides are applied in accordance with federal, state, and local regulations and manufacturer instructions.

3.4 State of California Laws and Regulations

The State of California has passed several environmental laws and regulations, including the California Environmental Quality Act, California Endangered Species Act, California Fish and Game Code—Fully Protected Species, California Fish and Game Code Section 1602—Streambed Alterations, Porter-Cologne Water Quality Control Act, and laws regarding herbicide and pesticide use. The following sections provide brief descriptions of these laws and regulations and how it may pertain to wildlife management at SFO.

3.4.1 California Environmental Quality Act

The California Environmental Quality Act (CEQA) applies to projects proposed to be undertaken or requiring approval by state and local government agencies. *Projects* are actions with the potential to have either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment and that meets any of the following:

1. An activity directly undertaken by any public agency,
2. An activity that is supported by contracts, grants, subsidies, loans or other assistance from public agencies,
3. An activity that involves issuance of a permit, license or entitlement from public agencies.

The public agency with the principal responsibility for conducting or approving the project is the "lead agency". The lead agency must decide whether a project under CEQA is exempt. If it is not exempt, before approving the project, the lead agency must determine the potential for significant environmental effects, the appropriate level of analysis and documentation required and the need for and specific mitigations required to lessen potential impacts to a level of insignificance.

Habitat management activities could potentially have direct or indirect changes in the environment and would therefore be subject to a determination as to the significance of that effect pursuant to CEQA.

Further, compliance with federal and California ESAs and the MBTA would require CEQA documentation as a part of agency coordination and permitting.

3.4.2 California Endangered Species Act

Pursuant to the California Endangered Species Act (CESA) and Section 2081 of the California Fish and Game Code (FGC), a permit from the California Department of Fish and Game (CDFW) is required for projects that could result in the take of a state-listed threatened and endangered species. Under the CESA, the definition of *take* applies to an activity that would directly or indirectly

kill an individual of a species. The definition does not include “harm” or “harass,” as does the federal ESA. If a project is likely to affect species protected under the CESA and ESA, California legislation encourages cooperative and simultaneous consultation between the USFWS and CDFW to coordinate the ESA Section 7 process so that consistent and compatible findings result.

Management activities at SFO that would be subject to CESA would occur if a species listed as endangered or threatened required removal because it was identified as a potential hazard to public safety. Additionally, mechanisms for direct impacts on wildlife include the following:

- direct mortality;
- harassment; and
- removal of important habitat (e.g. for nesting, denning, foraging, movement, hibernating, aestivating, cover).

Indirect impacts reduce survival or reproduction and happen later in time. Examples of mechanisms for indirect impacts on wildlife and that may result from SFO management include:

- noise;
- lighting;
- human activities;
- degradation of habitat;
- poisoning; and
- population isolation.

State listed wildlife species that potentially exist at SFO are discussed in section 4.4.

3.4.3 California Fish and Game Code—Fully Protected Species

Four sections of the FGC (Sections 3511, 4700, 5050, and 5515) list 37 fully protected species. These statutes prohibit take or possession at any time of fully protected species. The CDFW is unable to authorize incidental take of fully protected species when activities are proposed in areas inhabited by those species except for scientific purposes. No permits may be issued to take any fully protected species. The CDFW has informed non-federal agencies and private parties that they must avoid take of any fully protected species in carrying out projects (unless such activity is for recovery or scientific research). The presence of any fully protected species at SFO would require additional coordination with the CDFW beyond compliance with the California ESA. This would likely include identifying measures to ensure that no take of fully protected species results from the proposed project, even if the federal wildlife agencies would otherwise permit an incidental take under the federal ESA. Measures to avoid take may include monitoring construction in habitat of fully protected species, keeping all construction activities out of the habitat, and avoiding construction activities during certain times. While this coordination does not result in the issuance of a formal authorization or permit from the CDFW, the measures are binding because take of fully protected species cannot be authorized.

Management activities at SFO that may be subject to the FGC sections for the prohibition of take of Fully Protected Species could occur if a fully protected species required removal because it was a potential hazard to public safety. Fully protected wildlife species that potentially exist at SFO and that might therefore be subject to take are California Ridgway’s rail (*Rallus obsoletus obsoletus*), American peregrine falcon (*Falco peregrines anatum*), brown pelican (*Pelecanus occidentalis*), white-tailed kite (*Elanus leucurus*), and San Francisco garter snake (*Thamnophis sirtalis tetrataenia*).

3.4.4 California Fish and Game Code Section 1602—Streambed Alterations

Diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by the CDFW, pursuant to Section 1602 of the FGC. Section 1602 states that, without first notifying the CDFW of the activity, it is unlawful for any person; federal, state, or local agency; or public utility to:

- substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake; or
- deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

The regulatory definition of a *stream* is a body of water that flows at least periodically or intermittently through a bed or channel that has banks and supports wildlife, fish, or other aquatic life. This includes watercourses that have a surface or subsurface flow that supports or has supported riparian vegetation. The CDFW's jurisdiction in altered or artificial waterways is based on the value of those waterways to fish and wildlife. These regulations would come into effect if SFO opted to alter a streambed near the airport to manage a potential wildlife hazard. Potential habitat management measures that might occur within the jurisdictional areas defined above would first require concurrence with CDFW.

3.4.5 Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), *waters of the state* are under the jurisdiction of the RWQCBs, which must prepare and periodically update water quality control plans (also called *basin plans*). Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control sources of pollution to achieve and maintain these standards. Projects that affect wetlands or waters must meet waste discharge requirements (WDRs) of the RWQCB, which may be issued in addition to a water quality certification under Section 401 of the CWA.

3.4.6 Herbicide and Pesticide Use

The California Department of Pesticide Regulation (DPR) and the county agricultural commissioners (CACs) regulate the sale and use of pesticides in California. As with federal pesticide statutes, California pesticide regulations also cover the use of herbicides. As part of the pesticide registration process, the EPA and DPR evaluate data submitted by registrants to ensure that a product used according to label instructions will cause no adverse impacts to non-target organisms that cannot be mitigated with protective measures or use restrictions. Registrants are required to submit data on the effects of pesticides on target pests and data on non-target effects. Data on non-target effects include impacts on endangered species, effects on the environment, environmental fate, breakdown products, leachability, and persistence. Requirements specific to use in California are included in many pesticide labels approved by the EPA. Applicators of a pesticide designated a restricted material must either be licensed by the DPR or must work under the supervision of someone who is licensed. For aquatic pesticides, the applicator must hold a qualified applicator certificate with the category "aquatic." Use must be reported to the CAC where required by law or by agreement with the DPR.

San Francisco's Reduced-Risk Pesticide List (RRPL) presents a list of pesticide products approved for use under San Francisco's Integrated Pest Management Ordinance (Adopted 10/96, Chapter 3, San Francisco Environmental Code) when less toxic alternatives are deemed not feasible. No other pesticide products may be used on properties belonging to SF, including the International Airport, without an exemption from San Francisco's Department of Environment (SFE).

Products are designated as Allowed, Limited Use, and Limited Use of Special Concern. Specific circumstances under which Limited Use products may be used are designated. These restrictions are in addition to product label restrictions, which are required by federal law. Limited Use of Special Concern products carry an additional requirement. Uses of these products must be justified at a public hearing by a representative of the relevant City department.

Due to SFO's proximity to the San Francisco Bay, Airport staff should ensure the pesticide is approved by the City and County of San Francisco and the Bay Conservation and Development Commission (BCDC). Departmental approval is therefore also required as appropriate to the use of pesticides identified by the City as Limited Use of Special Concern.

3.5 Local Regulations

SFO adheres to City and County of San Francisco regulations. There are no specific regulations pertaining to wildlife management and the WHMP. See Section 3.4.6 for discussion on herbicide and pesticide use regulations.

3.6 Wildlife Management Permitting

Specific environmental approvals and permits are necessary for SFO to proceed with implementation of this WHMP. **Table 3-1** provides a list of permits that SFO staff has obtained, or may be required to obtain, to conduct necessary wildlife hazard management activities at the Airport. **Table 3-2** identifies federal and state permits necessary for lethal control, by wildlife category. 50 CFR, 14 California Code of Regulations (CCR), and the FGC define the categories of wildlife and regulations for each. Feral and free-roaming dogs, cats, and other domestic animals are regulated under different municipal laws related to animal control. Wildlife categories include migratory and resident, game and non-game, and threatened and endangered species.

Table 3-1. Federal and State Permits Required for Wildlife Hazard Management Activities at SFO

Applicable Law	Issuing Agency	Action Requiring Permit	Type of Permit	Permit Obtained?	
				Yes	No
Endangered Species Act	USFWS	Direct or indirect take of federally listed threatened and endangered species	Biological opinion/incidental take statement		X
Migratory Bird Treaty Act	USFWS	Take of migratory birds	Migratory bird depredation permit	X	
Clean Water Act, Section 404	USACE	Discharge of dredge or fill material into waters of the United States	CWA Section 404 permit		X
California Endangered Species Act	CDFW	Take of state-listed threatened and endangered species	Consistency determination or take permit		X
California Fish and Game Code Section 1602	CDFW	Diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports wildlife resources	Streambed alteration agreement		X
Bald and Golden Eagle Protection Act	USFWS	Take, possession, or transport of a bald or golden eagle	Take permit		X

Note: Any required permit not currently held will be obtained as needed.

Table 3-2. Permit Requirements and Current Permit Status for Lethal Control Methods at SFO

Category	Representative Species at SFO	Permit Required? /Obtained?	
		State	Federal
Migratory birds	All birds except non-native birds, depredating birds, resident game birds, and listed wildlife	No ¹	Yes/Yes
Resident game birds	California quail	Yes/No	
Game and fur-bearing mammals	Rabbits, raccoons, foxes, and coyotes	Yes/No	No
Non-game mammals	All species of mammals, except game, domestic mammals, and listed wildlife	Yes/Yes	No
Domestic mammals	Dogs and cats	No ²	No
Reptiles and amphibians	All reptiles and amphibians except those listed as threatened or endangered	Yes/No	No
Listed wildlife	Threatened and endangered species	Yes ³	Yes/No

Notes:

¹No need to obtain a State permit due to Memorandum of Understanding between State and Federal agencies.

²Notify local animal control.

³Non-lethal control may also require permits if take of a state-listed species is required

3.6.1 Birds

Take of migratory birds is regulated under the federal Migratory Bird Treaty Act, which is administered by the USFWS. Federal regulations allow for the hazing of migratory birds when they are damaging property without a permit; however, a permit is required for lethal take of migratory birds. SFO has a current federal USFWS-issued permit to take migratory birds that is renewed on a regular basis; see **Appendix D** for a copy of the permit. This permit does not allow the killing of eagles or federally listed threatened and endangered species. The CDFW defers migratory bird management to USFWS. A federal permit is not required to control migratory birds identified as depredating birds in 50 CFR Part 21.41 when they are concentrated in such a manner as to constitute a health hazard or other nuisance, provided that the killing of such birds is not contrary to any state laws. Depredating birds covered by 50 CFR Part 21.41 include blackbirds, cowbirds, crows, and magpies. Only persons named on the permit are authorized to conduct depredation activities. Migratory birds killed pursuant to this permit will be turned over to be disposed of according to permit conditions. Concealment or devices may not be used to lure birds within gun range (e.g., blinds, duck calls). The Airfield Operations staff, in coordination with the Airport Wildlife biologist, is responsible for the annual renewal of the depredation permit, and for submitting a report to the USFWS within ten (10) days of the expiration date detailing the species and number of animals taken under the permit.

3.6.2 Mammals

Mammals present at SFO include marine, game, non-game, fur-bearing, and domestic mammals. Permit requirements for take of each of these types of mammals are described below:

- Jackrabbits and cottontail rabbits are game mammals that may be found at SFO. Jackrabbits may be taken when causing damage to property under FGC 4152. A state permit is required to take cottontail rabbits. Deer may be present in areas adjacent to SFO, but are generally excluded from the AOA by the perimeter fence. A state permit is required to take deer.
- Non-game mammals that may be found at SFO include ground squirrels, gophers, and moles. Coyotes are not likely to be found at SFO. No permit is required to take these non-game species.
- Foxes and raccoons are fur-bearing mammals that may be found at SFO. Fur-bearing mammals found to be damaging property may be taken at any time and in any manner in accordance with FGC 4180. The use of poison to take fur-bearing mammals requires a permit from the CDFW.
- Domestic animals that can occur in the AOA at SFO include feral cats, and stray dogs and cats. Dogs and cats are typically trapped, and the Peninsula Humane Society is contacted to retrieve them. If a domestic animal poses an immediate threat to aircraft safety and cannot be removed from the AOA, staff can use lethal control methods.
- Marine mammals, such as seals, have been observed at SFO. A permit from the National Marine Fisheries Service is required to harass or take marine mammals.

3.6.3 Reptiles and Amphibians

Lethal control of reptiles and amphibians is not likely to be required, because they are not likely to occur in numbers that would create a safety hazard. SFO could request a memorandum of understanding (MOU) from the CDFW to ensure that any lethal control of reptiles or amphibians is in accordance with pertinent state regulations. If direct or indirect take could occur from habitat management, state and federal permits would be required.

3.6.4 Federal and State-Listed Wildlife

Species listed as threatened or endangered by the state or federal agencies cannot be taken or harassed without a take permit. If Airport staff identifies an imminent threat to aircraft safety with listed species, the USFWS or CDFW, depending on the species involved, should be contacted for assistance.

3.7 Regulatory Agency Coordination Process

Certain actions associated with the WHMP at SFO may require coordination with regulatory agencies. For instance, any project which may impact threatened or endangered species may require consultation with the USFWS and/or CDFW. Projects that may impact wetlands and other waters of the U.S. may be regulated by the Army Corps of Engineers. For ongoing management activities, SFO procures the relevant permits as listed in **Tables 3-1** and **3-2** and discussed pertaining to each law or regulation above. For defined actions (e.g. dredging tidal mudflats) additional coordination with local, state, or federal agencies may be required. SFO's Planning and Environmental Affairs handles Section 7 of the Endangered Species Act and Section 404/401 of the Clean Water Act permitting for all projects conducted at SFO. For any project that may have an environmental impact as defined in any local, state, or federal regulation, SFO will complete the appropriate surveys, consultations, or other requirements to obtain the appropriate permits.