



**NASA Ames Research Center
Ames Environmental Procedural Requirements**

Chapter 21 - Endangered and Threatened Species

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21.1 Applicability

This instruction applies to all civil servants, contractors employees, and tenant personnel at NASA Ames Research Center (Ames), Moffett Federal Airfield (MFA), and Crows Landing Flight Facility.

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21.2 Purpose

Because of its proximity to San Francisco Bay, the availability of undeveloped wetlands, and large areas of grassland, Moffett Field supports three distinct habitats: urban lands, grasslands, and wetlands. These habitats support a diverse population of plant and animal species, of which 30 are endangered, threatened, or rare. Moffett Field supports 50 burrowing owls, the largest population of the species in Santa Clara County. Congress has recognized that species have aesthetic, ecological, educational, and scientific value to the nation and its people. It is the policy of Congress that all Federal agencies seek to conserve various species of fish or wildlife and plants that face extinction. Federal agencies are responsible to ensure that any action authorized, funded, or carried out is not likely to jeopardize the continued existence of any endangered or threatened species, or result in the destruction or adverse modification of a critical habitat.

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21.3 Policy

It is the policy of the Ames Research Center to ensure that any action authorized, funded, or carried out is not likely to jeopardize the continued existence of any endangered or threatened species, or result in the destruction or adverse modification of a critical habitat. Ames will comply with all applicable regulations pertaining to endangered and threatened species.

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21.4 Authority

1. Endangered Species Act (ESA) of 1973, as amended.
2. 50 CFR 17.
3. Migratory Bird Treaty Act of 1918, as amended.

4. California Fish and Game Code 2050-98.
5. California Native Plant Protection Act of 1977, as amended.
6. California Endangered Species Act of 1984, as amended.
7. Executive Order 13112, Invasive Species
8. Executive Order 13186, Responsibilities of Federal Agencies To Protect Migratory Birds

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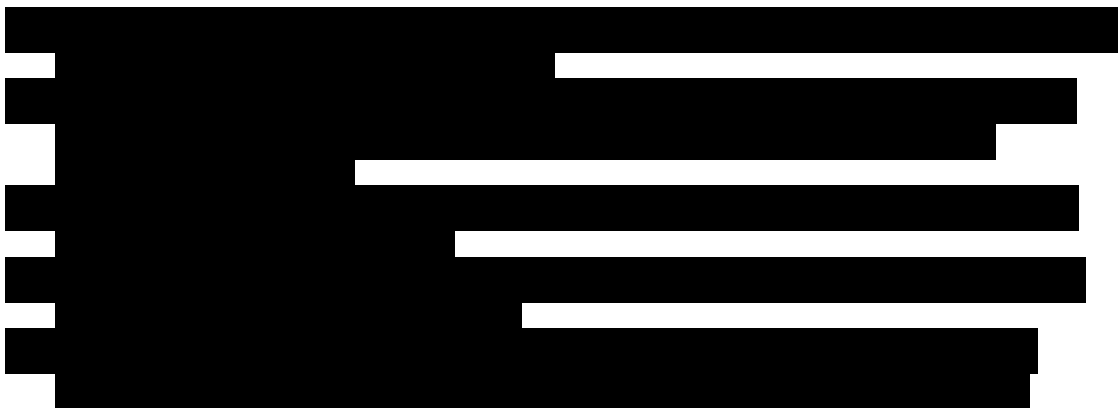
21.5 Responsibilities

21.5.1 Environmental Services Office, Code QE (Environmental Office)

1. Maintain and review the Federal and state of California endangered or threatened species list to determine if such species occur at Ames. Make appropriate conservation and protection arrangements for habitat protection, as required.
2. Ensure that periodic surveys are conducted onsite to determine the presence of such listed species.
3. Ensure that burrowing owl monitoring activities are conducted on an ongoing basis and provide guidance to line management.
4. Assist in the relocation efforts for burrowing owls.
5. Maintain an accurate inventory of all Ames habitat areas that may be affected by ongoing and planned operations.
6. Validate the need and prepare permit applications.
7. Review all construction and maintenance projects to ensure compliance with the Endangered Species Act (ESA) and related laws and regulations.
8. Oversee technical biologic studies on an as-needed, ongoing basis.
9. Act as a technical point of contact for all regulatory agency interface and correspondence.
10. Mark radius around burrows that shall not be disturbed.

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21.5.2 Facilities Maintenance, Code JFP



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21.5.3 Facilities Engineering, Code FEF, and Facilities Planning, Code JFF



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21.6 Definitions

21.6.1 California Species of Special Concern

State species that are threatened and may warrant placement on the State Endangered Species list.

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21.6.2 Conserve

To use all necessary methods and procedures to bring any endangered or threatened species to the point at which the measures under the Endangered Species Act are no longer necessary (16 USC 1531-1544).

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21.6.3 Critical Habitats

Critical habitats in accordance with the ESA are areas that include physical (i.e., cover or vegetation for nesting or protection) or biological (i.e., food sources) features that are essential to the conservation of the species and that may require special management considerations or protection.

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21.6.4 Endangered Species

Any species that is in danger of extinction throughout all or a significant portion of its range.

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21.6.5 Endangered Species Act (ESA)

Provides protection to species listed on the Federal Endangered Species List. Directs Federal agencies to consult with the U.S. Fish and Wildlife Service for activities potentially affecting endangered species.

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21.6.6 Fish and Wildlife

Any species classified within the animal kingdom.

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21.6.7 Extinct

No longer in existence.

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21.6.7 Migratory Bird Treaty Act of 1918

Makes it unlawful to disturb any migratory bird or its habitat, especially during the nesting season (February through September). It contains specific provisions against capturing, harassing, or in any way harming migratory birds.

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21.6.8 Plant

Any member of the plant kingdom.

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21.6.9 Section 7 of the ESA

Section 7 of the Endangered Species Act establishes a review and mitigation process that a Federal Agency must undertake prior to implementing an action that may result in a "take" of a listed species.

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21.6.10 Species

Any subspecies of fish, wildlife, or plants, and any distinct population segment of any species of vertebrate fish or wildlife that interbreeds when mature.

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21.6.11 Take

To harass, harm, shoot, wound, trap, collect, hunt, pursue, catch, capture, or kill a species.

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21.6.12 Threatened Species

A threatened species is one that is likely to become an endangered species within the foreseeable future because of a decline in its numbers throughout all or a significant portion of its range or habitat.

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21.6.13 Wetlands

Wetlands are areas subject to hydrologic inundation and are characterized by hydric soils and hydrophytic vegetation, as defined by the U.S. Army Corps of Engineers. These areas may be subject to seasonal inundation only. Wetlands generally include marshes, sloughs, potholes, river overflows, meadows, and natural ponds.

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21.7 Species Lists

Three separate lists address sensitive plant species in California: a Federal (USFWS) list, a state (California Department of Fish and Game) list, and a California Native Plant Society (CNPS) list. Sensitive animal species in California are addressed by a Federal and a state list. Listing determinations are based on the best scientific and commercial data available.

Federally listed endangered and threatened species are given in 50 CFR 17.11 (animals) and 50 CFR 17.12 (plants). State-listed species are given in the California Code of Regulations, Title 14. The CNPS listing is published in the CNPS Inventory of Rare and Endangered Vascular Plants of California. The State of California assigns "species of special concern" (CSC) status to rare species that may warrant designation as endangered or threatened. CSC species are afforded special protective status under the California Environmental Quality

Act (CEQA).

Among the CNPS designations for rare plant species are "1A" (presumed extinct in California), "1B" (rare, threatened, or endangered in California and elsewhere), and "2" (rare, threatened, or endangered in California but more common elsewhere). All three designations meet the definitions of Section 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (California Endangered Species Act (CESA)) of the California Department of Fish and Game Code and, therefore, are granted special protective status under CEQA.

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21.7.1 Endangered, Threatened, and Rare Plants near Moffett Field

No endangered, threatened, or rare plant species are known to occur at Moffett Field. However, Moffett Field does contain a potentially suitable habitat for 12 sensitive species (see table).

Plant species		Status		
Common name	Scientific name	Federal*	State*	CNPS*
Robust spineflower	<i>Chorizanthe robusta robusta</i>	Endangered	--	1B
California seablight	<i>Suaeda californica</i>	Endangered	--	1B
Hickman's cinquefoil	<i>Potentilla hickmanii</i>	Proposed endangered	Endangered	1B
Point Reyes meadowfoam	<i>Limnanthes douglasii sulphurea</i>	--	Endangered	1B
Mason's lilaopsis	<i>Lilaeopsis masonii</i>	--	Rare	1B
Congdon's tarplant	<i>Hemizonia parryi congdonii</i>	--	--	1B
Delta tule pea	<i>Lathyrus jepsonii jepsonii</i>	--	--	1B
Ferris's milk-vetch	<i>Astragalus tener ferrisiae</i>	--	--	1B

Hairy gumweed	<i>Grindelia hirsutula hirsutula</i>	--	--	1B
Maple-leaved checkerbloom	<i>Sidalcea malachroides</i>	--	--	1B
Point Reyes bird's beak	<i>Cordylanthus maritimus palustris</i>	--	--	1B
Slender-leaved pondweed	<i>Potamogeton filiformis</i>	--	--	2

*The Federal, state, and CNPS lists are updated on a regular basis.

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21.7.2 Endangered, Threatened, and Rare Animal Species at Moffett Field

The following 18 animal species are known to occur at Moffett Field:

Animal species		Status	
Common name	Scientific name	Federal*	State*
Salt marsh harvest mouse	<i>Reithrodontomys raviventris</i>	Endangered	Endangered
California least tern	<i>Sterna antillarum browni</i>	Endangered	Endangered
California clapper rail	<i>Laterallus longirostris obsoletus</i>	Endangered	Endangered
California brown pelican	<i>Pelecanus occidentalis californicus</i>	Endangered	Endangered
American peregrine falcon	<i>Falco peregrinus anatum</i>	Endangered	Endangered
Western snowy plover	<i>Charadrius alexandrinus nivosus</i>	Threatened	--

Bank swallow	<i>Riparia riparia</i>	--	Threatened
American white pelican	<i>Pelecanus erythrorhynchos</i>	--	CSC*
Black skimmer	<i>Rhyncops niger</i>	--	CSC
California gull	<i>Larus californicus</i>	--	CSC
California horned lark	<i>Eremophila alpestris actia</i>	--	CSC
Double-crested cormorant	<i>Phalacrocorax auritus</i>	--	CSC
Golden eagle	<i>Aquila chrysaetos</i>	--	CSC
Loggerhead shrike	<i>Lanius ludovicianus</i>	--	CSC
Northern harrier	<i>Circus cyaneus</i>	--	CSC
White-tailed Kite	<i>Elanus leucurus</i>	--	Fully Protected
Saltmarsh common yellowthroat	<i>Geothlypis trichas sinuosa</i>	--	CSC
Western burrowing owl	<i>Athene cunicularia hypugaea</i>	--	CSC

*The Federal, state, and CNPS lists are updated on a regular basis.

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21.8 Other Related Programs

The following programs discussed in this Environmental Handbook, or otherwise implemented at Ames, are applicable to endangered and threatened species:

1. Chapter 20 - Flood Plains and Wetlands Management
2. Chapter 22 - NEPA Management

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21.9 Metrics

% Compliance with federal, state, endangered species act/ regulations.

