



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

IN REPLY REFER TO
1-1-01-I-3255

April 9, 2002

Ms. Sandra M. Olliges
Chief, Environmental Services Office
National Aeronautics and Space Administration
Ames Research Center
Moffett Field, California 94035-1000

Subject: Informal Consultation on the Proposed Development of Ames Research Center into a Shared-use Research and Development Campus

Dear Ms. Olliges:

This is in response to your letter dated August 29, 2001, requesting review of your Biological Assessment (BA) for the National Aeronautics and Space Administration (NASA) Ames Development Plan. We received your request on September 5, 2001. Your request was pursuant to Section 7 of the Endangered Species Act of 1973, as amended (Act). Species which occur in this region include, but are not limited to, the endangered California clapper rail (*Rallus longirostris obsoletus*) (clapper rail), endangered California least tern (*Sterna antillarum browni*) (least tern), endangered brown pelican (*Pelecanus occidentalis*) (brown pelican), endangered western snowy plover (*Charadrius alexandrinus nivosus*) (snowy plover) and the endangered salt marsh harvest mouse (*Reithrodontomys raviventris raviventris*) (harvest mouse). These comments will provide recommendations to assist you in meeting the standards of the Act through thoughtful project design, construction, and operation. These comments will not take the place of any formal comments that may be required under the provisions of the Act, as amended.

The NASA Ames Research Center (ARC) is located at the southern tip of San Francisco Bay. NASA is proposing to redevelop its lands to create a shared-use educational and research and development campus. NASA is proposing to develop four geographic areas of ARC; NASA Research Park, Eastside/Airfield, Bay View and Ames Campus. Northern portions of the Eastside/Airfield and Bay View locales interface with sensitive marsh/wetland habitats. Trapping surveys positively identified harvest mouse inhabiting the salt marsh directly north of the Bay View area. The Bay View portion of ARC is immediately north of the original ARC campus. This land is predominantly undeveloped upland grassland containing a few research

facilities such as the Outdoor Aerodynamic Research Facility. The Eastside/Airfield portion of ARC is a 952 acre site comprised of the airfield and the lands to the east of it. Current uses include the golf course, Hangars Two and Three, airfield operations, and the fueling and munitions storage facilities of the California Air National Guard (CANG). CANG activities are not addressed in the NADP or this document. Development in this area is governed by the CANG Master Plan for Short-Range Projects and associated environmental assessment. The Biological Assessment (BA) for the NASA Ames Development Plan (NADP) identifies alternative 5 as the preferred alternative for development under the National Environmental Policy Act (NEPA).

Direct impacts to ecologically sensitive areas will be avoided by situating Bay View area development in an upland area with fencing between development and wetland areas. It is expected that indirect impacts to endangered species will occur as a result of housing construction in the Bay View area. The mechanism of these impacts to listed species include, but are not limited to effects of additional lighting, increased predator populations, and an increased potential for harassment of listed species due to personnel being housed in the Bay View area, which is near areas known to contain listed species.

Any increase in lighting of salt marsh habitats could result in the take of harvest mice and clapper rails. It is well known to mammalogists that small nocturnal mammals respond to increased light levels, such as a full moon, by limiting movements and exhibiting a heightened degree of caution. This change in behavior is temporary in nature when caused by a full moon. Artificial increases in lighting would chronically affect movements and alter normal social aspects of harvest mouse behavior, such as locating mates and building nests. In addition, tidal amplitudes are much greater in the South Bay than in San Pablo or Suisun bays. Consequently, many tidal marshes are completely submerged during high tides and lack sufficient escape habitat, likely resulting in nesting failures and high rates of predation on clapper rails. High tides could force harvest mice and clapper rails to abandon the relative security of salt marsh habitats and seek upland areas. Increased lighting would make these displaced harvest mice and clapper rail susceptible to predation from feral cats, owls and other nocturnal predators. Directional lighting with baffles, non-reflective tinting on windows, and other mechanisms could possibly eliminate light amplification to nearby sensitive areas. The Service would suggest a lighting study in which the goal should be that there be no net increase in lighting north or west of the Bay View area.

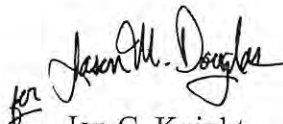
Because of the predictable increase in the predator population that comes from human development and the concurrent increase in predation affecting listed species surrounding such development, we recommend that a perpetual predator management program be required. The Service can assist ARC in the design of this program. Outdoor pets and the feeding of pets outdoors should not be allowed. All outdoor pets should be on leashes at all times. A waste disposal program should be initiated that would eliminate scavenging behavior and/or attraction of predacious wildlife such as rats, opossums, skunks, coyotes, fox, and raccoons. Garbage should be removed on a regular basis to prevent overflow. Public areas should be monitored

regularly and be kept free of garbage to prevent wildlife from scavenging. These rules should be strictly enforced. This restriction should be part of any lease/rental/use agreement for tenants of the development. Trapping and removal of predators should also be a component of the predator abatement program adopted by the applicant. Trapping should focus on the removal of red fox, skunks, raccoons, rats, feral cats and dogs, but should not be limited to these species. The north and east fences bordering the Bay View area housing and community support components of the project should be designed to eliminate movement of potential predators from the housing area to sensitive wildlife areas. The Service would recommend that the bottom portion of this fence be buried at least 18 inches below ground level to eliminate predators burrowing under the fencing. Fencing should at a minimum, be of a small enough grid size so as not to provide for movement of rats. Periodic inspections of fencing and repair of breeches allowing predator movements should be a component of the predator abatement plan for ARC. Roll wire should be in place along the top of this fence to eliminate predators climbing over the fence and also deter avian predators from perching. The Service recommends that the applicant further compensate for increases in predation by eliminating avian predator perches along and within the boundaries of the western diked marsh, eastern diked marsh, and storm water retention pond. This recommendation would also include the placement of anti-perch devices on and surrounding the CANG facilities at the northwest corner of ARC property. Anti-perch devices would include roll wire placed atop all fencing surrounding the eastern and western diked marsh and the storm water retention pond. All landscape features within these areas providing perches for avian predators should be removed if feasible. Project landscaping should be of a type that limit opportunities for avian predators to impact listed species. The Service has a list of tree species approved for use in areas attempting to decrease avian predators impacts. -v 4-23-02

Housing construction in the Bay View area will require the use of fill material. This fill will result in a slope or levee between housing and the western and eastern diked marsh. Because rip-rap increases denning opportunities for rats, foxes and cats, we recommend that alternatives to the use of rip rap be investigated. If possible, create a more gradual slope (4-5H:1V) and plant native vegetation on newly graded area to provide transitional habitat and high tide refugia for listed species. If rip rap is necessary, it should consist of small diameter materials that will not create habitat for rodents. Rip rap should not be placed on existing marsh vegetation.

If you have any questions or concerns about this informal section 7 consultation or the consultation process in general, please contact David Wooten or Dan Buford of my staff at (916) 414-6625

Sincerely,



Jan C. Knight
Chief, Endangered Species Division

cc:

U.S. Army Corps of Engineers, San Francisco, CA

EPA, Region IX, San Francisco, CA

Clyde Morris, SFBNWR, Newark, CA

CDFG, Yountville, CA

BCDC, San Francisco, CA



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Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

IN REPLY REFER TO:

1-1-02-I-2113

October 15, 2002

Ms. Sandra M. Olliges
Chief, Environmental Services Office
National Aeronautics and Space Administration
Ames Research Center
Moffett Field, California 94035-1000

Subject: Informal Consultation on the Proposed Development of Ames Research Center into a Shared-use Research and Development Campus

Dear Ms. Olliges:

This is in response to your letter dated May 29, 2002, requesting concurrence that the NASA Ames Development Plan is not likely to adversely effect any listed threatened or endangered species. We received your request on May 31, 2002. Your request was pursuant to section 7 of the Endangered Species Act of 1973, as amended (Act). Species which occur in this region include, but are not limited to, the endangered California clapper rail (*Rallus longirostris obsoletus*) (clapper rail), endangered California least tern (*Sterna antillarum browni*) (least tern), endangered brown pelican (*Pelecanus occidentalis*) (brown pelican), endangered western snowy plover (*Charadrius alexandrinus nivosus*) (snowy plover) and the endangered salt marsh harvest mouse (*Reithrodontomys raviventris raviventris*) (harvest mouse).

The National Aeronautics and Space Administration (NASA) Ames Research Center (ARC) is located at the southern tip of San Francisco Bay. NASA is proposing to redevelop its lands to create a shared-use educational and research and development campus. NASA is proposing to develop four geographic areas of ARC; NASA Research Park, Eastside/Airfield, Bay View and Ames Campus. Northern portions of the Eastside/Airfield and Bay View locales interface with sensitive marsh/wetland habitats. Trapping surveys positively identified harvest mouse inhabiting the salt marsh directly north of the Bay View area. The Bay View portion of ARC is immediately north of the original Ames Research Center campus. This land is predominantly undeveloped upland grassland containing a few research facilities such as the Outdoor Aerodynamic Research Facility. The Eastside/Airfield portion of ARC is a 952 acre site comprised of the airfield and the lands to the east of it. Current uses include the golf course,

Hangars Two and Three, airfield operations, and the fueling and munitions storage facilities of the California Air National Guard (CANG). CANG activities are not addressed in the NADP or this document. Development in this area is governed by the CANG Master Plan for Short-Range Projects and associated environmental assessment. The Biological Assessment (BA) for the NASA Ames Development Plan (NADP) identifies alternative 5 as the preferred alternative for development under the National Environmental Policies Act (NEPA).

Direct effects to ecologically sensitive areas will be avoided by situating Bay View area development in an upland area with fencing between development and wetland areas. It was determined that indirect effects to endangered species could have occurred as a result of housing construction in the Bay View area. The mechanism of these potential effects to listed species included, but were not limited to effects of additional lighting, increased predator populations, and an increased potential for harassment of listed species due to personnel being housed in the Bay View area, which is near areas known to contain listed species.

Your initial consultation request, dated August 29, 2001, was received by the Fish and Wildlife Service (Service) on September 1, 2001. In a letter dated April 5, 2002, the Fish and Wildlife Service (Service) provided recommendations for implementation of minimization and avoidance measures. On May 31, 2002, the Service received your letter dated May 29, 2002, indicating the NADP had been revised to incorporate the measures recommended by the Service for avoiding adverse effects to listed species.

Provided the project is implemented as described, the Service determines that this project is not likely to adversely affect the harvest mouse, clapper rail, least tern, brown pelican, or snowy plover. Therefore, unless new information reveals effects of the proposed action that may affect listed species in a manner or to an extent not considered, or a new species or critical habitat is designated that may be affected by the proposed action, no further action pursuant to the Act is necessary.

If you have any questions or concerns about this consultation or the consultation process in general, please contact David Wooten or Dan Buford of the endangered species staff at (916) 414-6625

Sincerely,



Jan C. Knight
Chief, Endangered Species Division

cc:

COE, San Francisco District

EPA, Region IX, San Francisco

SFBNWR, Newark, CA (Attn.: Clyde Morris)

CRWQCB, San Francisco

CDFG, Yountville, CA

BCDC, San Francisco, CA