



United States Department of the Interior

FISH AND WILDLIFE SERVICE

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November 14, 1996

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Federal Highway Administration
U.S. Department of Transportation
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Subject: Biological and Conference Opinion for the Federal Aid Project at Scott Creek Beach, Santa Cruz County, California (FHWA# P6920) (1-8-96-F/C-59)

Dear Mr. Densmore:

This biological and conference opinion responds to your request for formal consultation with the Fish and Wildlife Service (Service), pursuant to section 7 of the Endangered Species Act of 1973, as amended (Act). Your request was dated July 18, 1996 and received by the Service on August 12, 1996. At issue are the effects that the Federal Highway Administration's (FHWA) partial funding of beach access enhancement and dune restoration at Scott Creek Beach, Santa Cruz County, California, may have on the federally threatened western snowy plover (*Charadrius alexandrinus nivosus*) and on its proposed critical habitat.

This biological and conference opinion was prepared using information from the following sources: the request for consultation; the biological assessment for the snowy plover at Scott Creek Beach, dated March, 1996; the Scott Creek Beach draft site specific management plan, dated July, 1994; informal consultation between our staffs; and our files.

Biological Opinion

It is the biological and conference opinion of the Service that the proposed action is not likely to jeopardize the continued existence of the western snowy plover or result in the adverse modification of its proposed critical habitat.

Consultation History

During September 1993, the County of Santa Cruz Department of Parks, Open Space and Cultural Services (County) requested that the Service review beach enhancement projects at Laguna and Scott Creek beaches with regard to their potential effect on the western snowy plover. After a

field visit to these sites during the fall of 1993, the Service recommended, in a letter dated December 28, 1993, that the County apply for a permit, pursuant to section 10 (a)(1)(B) of the Act. The Service envisioned the County preparing a habitat conservation plan that would evaluate and mitigate all the proposed activities at both Scott Creek and Laguna Beaches.

The Service received a draft habitat conservation plan (HCP) for the western snowy plover at Scott Creek Beach on December 5, 1994. Laguna Creek Beach was not included in this draft HCP because the improvements proposed there consisted solely of preserving and protecting sensitive habitat. The Service provided comments on the draft HCP to the County on January 10, 1995. A final draft HCP, in response to the Service's comments, was received on April 4, 1995 and again on July 26, 1995.

Upon further review of this proposal in January 1996, the Service concluded that an incidental take permit pursuant to section 7 of the Act may be more appropriate for this project because a majority of the funding for the project was being provided by the FHWA. The Service, County, and the California Department of Transportation (Caltrans) (acting as the agent for FHWA) discussed this conclusion through a conference call on January 29, 1996.

A meeting was held at the proposed project site on February 7, 1996 to obtain additional information on the project and the proposed mitigation measures. That meeting was attended by staff from the Service, the County, and the Point Reyes Bird Observatory. Based on information presented at the meeting, the Service recommended that the County make a few minor modifications to its HCP and upon approval by FHWA and Caltrans, the original HCP would be submitted to the Service as a biological assessment to initiate formal consultation in accordance with section 7 of the Act.

Description of the Proposed Action

The County, through the Scott Creek Beach Enhancement Plan, proposes to facilitate public access with a boardwalk, signs, fencing, waste management, and bus stop improvements. The County also proposes to restore and protect over three acres of coastal strand and dune habitat. Where use necessitates, pedestrians would cross sensitive dune areas on a boardwalk and designated paths. Improvements such as information signs, waste receptacles, bike racks, and fencing would be placed to aid management of public visitation. A vault toilet is proposed to eliminate the need for visitors to hike across sensitive areas to look for privacy.

To stabilize the sand dune and reduce blowing sand on the highway, approximately 1.5 acres of native dune restoration is proposed in clearly delineated areas marked by interpretive signs and post and cable barriers. Other areas of the beach, approximately two acres above the mean high tide line (approximately between elevations four and six feet), will be set aside as areas of limited disturbance for the western snowy plover. One area proposed for limited disturbance starts at about elevation 13 to 14 feet and includes an area up to elevation 20 feet at the base of the sand dune. This area will encompass approximately one acre and the fence delineation will be designed to be flexible, thereby allowing staff to adjust the layout of the fence with the seasonal variation of the beach. A second area of limited disturbance would be located on a level plateau at

the crest of the sand dune. This second area is approximately one acre in size and is buffered on all sides by dune vegetation. Several open corridors will be established and maintained to aid western snowy plovers in their transition to and from the water's edge. A three-year dune monitoring and management program will be initiated with construction completion, as well as the continuation of the existing predator management program, whereby exclosures are employed to protect western snowy plover nests consistent with established protocols.

To recreate a self-sustaining dune system, native plant seeds collected from within a 20-mile radius of the site will be used to restore dune vegetation at Scott Creek Beach. The intent of the dune restoration plan is to create a mosaic of vegetated islands that will contain a variety of species specific to the micro-ecology of the dune area. Pioneering species such as *Elymus mollis* and *Camissonia cheiranthifolia* will be planted in the fore dune areas and where dune sand is unstable. Species that require more stable soil, such as *Eschscholzia californica* var. *maritimus* and *Ericameria ericoides*, will be planted in an island located at the rear of the dune. To maximize areas suitable for western snowy plover nesting, a large level plateau will be left devoid of vegetation. Prostrate pioneering dune plants such as *Abronia latifolia* will be planted in islands adjacent to the areas left bare for nesting. The prostrate dune vegetation should allow nesting western snowy plovers the necessary site visibility while providing some sand stabilization. All of the islands will be carefully laid out to maximize nesting habitat and minimize the potential for sand "blow-outs" where wind-carried sand buries the vegetation. In dune areas that have a strong potential for human disturbance such as the edges of delineated access paths, *Ambrosia chamissonis* (beach bur) will be planted to deter human foot traffic.

The County has proposed specific measures to minimize negative impacts to the western snowy plover at Scott Creek Beach. The specific measures proposed by the County are:

1. The County will set aside two acres of coastal strand and dune habitat at Scott Creek Beach as an area of limited disturbance intended and managed as a western snowy plover refuge. Western snowy plovers would be able to nest and retreat to this area during times of intensive public use of the beach.
2. The County will manage public access by maintaining appropriate access facilities such as fencing, boardwalks, restrooms, and signs.
3. The County will post and maintain western snowy plover interpretive information/signs at County-managed beaches.
4. The County will continue its western snowy plover predator exclosure program under permit number PRT-702631, effective through January 31, 1998, at both Scott Creek Beach and Laguna Creek Beach. This program costs the County approximately \$5,000 per year to administer and will be an on-going program on County-managed beaches.
5. The County will continue to educate special interest/user groups to the concerns of the western snowy plover.

Effects of the Proposed Action on the Listed Species**Species Account**

The Pacific coast population of the western snowy plover was federally listed as threatened on March 5, 1993; a recovery plan has not been prepared. The final rule listing the western snowy plover as threatened describes the biology and reasons for the decline of the western snowy plover (58 Federal Register 12864). On March 2, 1995, the Service published a proposed designation of critical habitat for the western snowy plover (60 Federal Register 11768). This proposal describes physical and biological attributes that are essential to the conservation of the species, activities that could adversely affect proposed critical habitat areas, and the specific areas proposed to be designated as critical habitat. Unit 2 of the area identified in this proposed rule as CA-6 is Scott Creek Beach.

For all areas of critical habitat proposed for the western snowy plover, these physical and biological features and primary constituent elements are provided or will be provided by intertidal beaches (between mean low water and mean high tide), associated dune systems, and river estuaries. Important components of the beach/dune/estuarine ecosystem include surf-cast kelp, sparsely vegetated foredunes, interdunal flats, spits, washover areas, blowouts, intertidal flats, salt flats, and flat rocky outcrops. Several of these components (sparse vegetation, salt flats) are mimicked in artificial habitat types used less commonly by western snowy plovers (i.e., dredge spoil sites and salt ponds and adjoining levees). Functional suitability of areas containing the features listed above is also contingent upon isolation from human disturbance and predation. These attributes are considered essential to the conservation of the coastal population of the western snowy plover (60 Federal Register 11768).

The western snowy plover is a small shorebird that forages on invertebrates in areas such as intertidal zones, the wrack line, dry sandy areas above the high tide line, salt pans, and the edges of salt marshes. The Pacific coast population nests near tidal waters along the mainland coast and on offshore islands from southern Washington to southern Baja California, Mexico. Most nesting occurs on unvegetated, or moderately vegetated, dune backed beaches, and on sand spits. Other less common nesting habitats include salt pans, dredge spoils, and salt pond levees. Nest site fidelity is common. Nesting and chick rearing activity generally occurs between March 1 and September 30. During the non-breeding season western snowy plovers may remain at breeding sites or may migrate to other locations. Most winter south of Bodega Bay, California, and many birds from the interior population winter on the central and southern coast of California.

The Pacific coast population of the western snowy plover has suffered widespread loss of nesting habitat and has experienced reduced reproductive success at many nesting locations. Factors resulting in loss of nesting habitat include urban development and the encroachment of European beachgrass (*Ammophila arenaria*). Reduced reproductive success is most frequently tied to disturbance from human activities. Activities such as walking, jogging, running pets, horseback riding, and off-road vehicle use frequently crush and destroy the western snowy plover's cryptic nests and chicks. These activities also flush adults off nests and away from chicks, and thus interfere with essential incubation and chick rearing behaviors.

Scott Creek Beach has historically supported nesting western snowy plovers as evidenced by egg sets in museum collections obtained from Scott Creek Beach during the years 1878-1946 (Page and Stenzel 1981). Western snowy plover breeding success at Scott Creek Beach has been monitored since 1993. The breeding population from 1993 to 1996 has ranged from a low of three pairs in 1994 to a high of six pairs in 1995 and 1996 (George 1996). In addition to monitoring, the County has protected some of the nests with exclosures since 1993. Factors observed to affect the nesting success of western snowy plovers on Scott Creek Beach include weather, unleashed dogs, and disturbance and nest destruction as a result of human activities. These factors are also presumed to affect fledging success at Scott Creek Beach. Scott Creek Beach is also an important wintering site for western snowy plovers with a wintering flock often in excess of 100 birds.

Analysis of Effects

Western snowy plovers that have nested in the area immediately adjacent to Highway 1 may be displaced as a result of dune habitat restoration and project construction and forced to find other suitable nesting habitat in the vicinity. If these individuals cannot find suitable nesting habitat in the vicinity, they may be forced to seek out suitable habitat at another beach. The construction activities are scheduled for late fall and early winter to avoid affecting nesting. The establishment of additional nesting habitat and the protection of existing nesting habitat at Scott Creek Beach could reduce the likelihood of western snowy plovers needing to search elsewhere for suitable nesting habitat.

The nesting habitat that the proposed project would alter is within an area proposed as critical habitat for the western snowy plover. Currently, this area is highly disturbed and devoid of native vegetation. Dune restoration within this area will change the character of the existing habitat by vegetating barren areas that western snowy plovers have used for nesting in recent years. The establishment of additional nesting habitat and the protection of existing nesting habitat at Scott Creek Beach could reduce the effects of the alteration of proposed critical habitat.

During the non-breeding season, from October through the end of February, migrating and wintering western snowy plovers on Scott Creek Beach may be adversely affected by disturbance associated with project construction activities. Construction activities could flush loafing and roosting western snowy plovers and could disrupt foraging activities. These kinds of disturbances could interfere with the metabolism and thermoregulation of migrating and wintering western snowy plovers and result in starvation or impairing of egg production during the subsequent nesting season. However, available information regarding the energetics of western snowy plovers is inadequate to assess the likelihood that such harm would result.

The proposed access improvements may lead to an increase in human use at Scott Creek Beach. This improved access could result in a number of indirect effects to western snowy plovers as a result of the FHWA project. These potential effects include the crushing of nests and chicks by recreational beach users, nest loss resulting from repeated disturbance of incubating adult western snowy plovers, increased mortality of western snowy plover chicks as a result of disturbance to

brooding and foraging western snowy plovers and their chicks, and an increase in use of the beach by scavenging species that also prey on nesting western snowy plovers and their eggs.

The County's efforts to maximize compliance with the beach access restrictions, such as public education, enforcement, and improved designation of access ways, could reduce the adverse effects that may occur as a result of increased human use at Scott Creek Beach. Existing beach access restrictions at Scott Creek Beach include prohibitions on overnight camping, pets, littering, open fires, and off-road vehicles of any type.

The Service believes that the impacts described above are not likely to jeopardize the continued existence of the western snowy plover or adversely modify its proposed critical habitat. We present this conclusion for the following reasons:

1. The proposed action would not result in a net loss of western snowy plover habitat at Scott Creek Beach.
2. Recreational access to Scott Creek Beach is being modified with the intent of minimizing loss of nests and reducing the mortality and harassment of nesting western snowy plovers.
3. Two acres of coastal strand and dune habitat at Scott Creek Beach will be managed as an area of limited disturbance to conserve western snowy plovers.
4. Work will be conducted outside of the nesting season of the western snowy plover.

Cumulative Effects

Cumulative effects are those impacts of future State and private actions that are reasonably certain to occur in the action area considered in this biological and conference opinion. Future Federal actions will be subject to the consultation requirements established in section 7 of the Act and, therefore, are not considered cumulative to the proposed project. No other State or private actions that would affect western snowy plovers or proposed critical habitat in the project area are known at this time.

Incidental Take

Section 9 of the Act prohibits the take of listed species without special exemption. Taking is defined as harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, collecting, or attempting to engage in any such conduct. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Under the terms of sections 7(b)(4) and 7(o)(2) of the Act, taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with this incidental take statement. The measures described below as reasonable and prudent measures and terms and conditions to reduce take are non-discretionary, and must be undertaken by the agency or made a binding condition of any grant or permit, as appropriate.

The Service anticipates the following forms of take:

1. Two (2) western snowy plover adults in the form of direct mortality through crushing as a result of construction activities associated with dune restoration and beach access enhancement.
2. All western snowy plover adults in the form of harassment by flushing out of suitable habitat or by interfering with foraging or other essential behaviors. The Service cannot estimate the number of individuals that would be harassed.

This biological opinion does not authorize any form of take that is not incidental to construction activities associated with dune restoration and beach access enhancement conducted in accordance with the project description provided by the FHWA.

If the incidental take authorized by this biological opinion is met, FHWA shall immediately notify the Service in writing. If the incidental take authorized by this biological opinion is exceeded, FHWA shall immediately notify the County to cease the activity resulting in take and shall reinitiate formal consultation with the Service.

Reasonable and Prudent Measures

The Service believes that the following reasonable and prudent measure is necessary and appropriate to minimize incidental take:

The take of western snowy plovers through direct mortality or harassment shall be minimized through managing beach access within western snowy plover nesting habitat on Scott Creek Beach. The effectiveness of the protection measures implemented on Scott Creek Beach shall be evaluated and, if warranted, improved protection measures shall be developed and implemented in future years.

Terms Conditions

To be exempt from the prohibitions of section 9 of the Act, the FHWA is responsible for ensuring that the County complies with the following terms and conditions which implement the reasonable and prudent measure described above. The following terms and conditions assume that the mitigation measures contained in the biological assessment and described previously in this biological opinion would be fully implemented. Several of the proposed measures are modified and made more specific herein by the Service.

1. To implement the reasonable and prudent measure, the following terms and conditions are established:
 - a. Signs prohibiting access into the western snowy plover refuge shall be placed along the entire length of the fence at approximately 100 to 200 yard intervals.

- b. The County shall maintain appropriate access facilities at Scott Creek Beach that include the following elements:
 - i. Access paths from the parking area to the lower beach shall be clearly marked at each access point to Scott Creek Beach. The County shall use boardwalks, fencing, cables strung from posts, signs, and other appropriate measures to restrict traffic to the designated access routes.
 - ii. A sign, or signs, informing beach users of the sensitivity of the western snowy plover and its nesting habitat, describing applicable recreational access restrictions, and clearly stating beach use rules shall be placed at the parking area and at designated access points for Scott Creek Beach. Beach rules to be posted shall include the following:
 - Overnight camping is prohibited.
 - Pets are prohibited.
 - Littering is prohibited.
 - Open fires are prohibited.
 - Off-road vehicles of any type are prohibited.
 - iii. All signs and trail demarcation required above shall be in place prior to March 1, 1997. All signs and trail markers shall be in place year-round and maintained and replaced as needed.

Reporting Requirements

The FHWA shall provide a report to the Service of the results of activities conducted under this consultation. The report shall include a brief discussion of project activities completed; approximate acreage of western snowy plover habitat affected; occurrences of incidental take, if any, including known harassment; problems encountered in implementing mitigation measures; results of biological surveys and sighting records; and any other pertinent information. The report shall be submitted to the Ventura Field Office no later than three months after the project is completed.

Disposition of Injured or Dead Specimens

Upon locating a dead or injured western snowy plover, initial notification must be made to the Service's Division of Law Enforcement in Burlingame, California by facsimile at (415) 876-9701 and the Ventura Field Office via phone (805) 644-1766 immediately, and in writing within three (3) working days. Notification must include the date, time, and location of the discovery of the animal, and any other pertinent information. Care must be taken in handling injured animals to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible state for later analysis of cause of death. The finder has the responsibility to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed, unless to remove it from the path of further harm or destruction. Injured animals should be

transported to a qualified veterinarian. Arrangements regarding proper disposition of potential museum specimens shall be made with the institution by the FHWA or the County prior to implementation of the action. Should any treated western snowy plovers survive, the Service should be contacted regarding the final disposition of the animals.

Conservation Recommendations

Section 7(a)(1) of the Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat or regarding the development of information. To further the purposes of the Act, the Service offers the following recommendations:

1. The County should develop and implement a plan for enforcing recreational access restrictions and beach use rules. This plan should include patrolling Scott Creek and Laguna beaches a minimum of 5 hours per week throughout the western snowy plover nesting season to ensure that beach users comply with beach access restrictions.
2. The County should develop a monitoring and evaluation effort to: assess impacts to western snowy plovers nesting on Scott Creek Beach; evaluate the effectiveness of the protection to nesting western snowy plovers that the snowy plover refuge is intended to provide; and develop alternative or additional protection measures, if warranted, and implement these measures in subsequent years.

The Service requests notification of the implementation of any conservation recommendations to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats.

Conclusion

This concludes formal consultation and conference on FHWA's partial funding of beach access enhancement and dune restoration at Scott Creek Beach, Santa Cruz County, California. You may ask the Service to confirm the conference opinion as a biological opinion issued through formal consultation if critical habitat for the western snowy plover is designated. The request must be in writing. If the Service reviews the proposed action and finds that no significant changes have occurred in the action as planned or in the information used during the conference, the Service will confirm the conference opinion as the biological opinion on the project and no further section 7 consultation will be necessary.

Reinitiation of formal consultation is required if: 1) the amount or extent of incidental take is exceeded; 2) new information reveals effects of the agency action that may adversely affect listed species or critical habitat in a manner or to an extent not considered in this biological opinion; 3) the agency action is subsequently modified in a manner that causes an effect to a listed species or critical habitat that was not considered in this biological opinion; or 4) a new species is listed or

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critical habitat designated that may be affected by this action (50 CFR 402.16).

Any question or comments should be directed to David Pereksta of my staff at (805) 644-1766.

Sincerely,

Diane K. Noda
Field Supervisor

References Cited

- George, D.E. 1996. Nesting success of snowy plovers at Wilder Creek, Laguna Creek and Scott Creek Beaches, Santa Cruz County, California in 1996. Point Reyes Bird Observatory, Stinson Beach, California.
- Page, G.W., and L.E. Stenzel. 1981. The breeding status of the snowy plover in California. *Western Birds* 12:1-40.