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HABITAT PROTECTION PLAN
MONTEREY BAY SHORES
ECO-RESORT

Sand City, California

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October 2008

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A LAND USE PLANNING & DESIGN FIRM

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MONTEREY BAY SHORES ECO-RESORT

Habitat Protection Plan

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1.0

INTRODUCTION

1.1 PROJECT AND SITE CONDITIONS OVERVIEW

This Habitat Protection Plan (HPP) for the proposed Monterey Bay Shores eco-resort has been prepared as an update to a 1997 version prepared by Zander Associates.

The existing dune habitats on the Monterey Bay Shores project site presently remain highly disturbed as a result of 60 years of sand mining, but represent remnants of the Monterey sand dune complex that extends from the Salinas River south to the Municipal Wharf.

The HPP evaluates and seeks to avoid or minimize take and mitigate potential impacts to the actual and potential presence of special status biological resources including the federally endangered Smith's blue butterfly (*Euphilotes enoptes smithi*), the federally threatened western snowy plover (*Charadrius alexandrinus*) and the federally threatened Monterey spineflower (*Chorizanthe pungens* var. *pungens*).

The following documents were reviewed during the preparation of this revised HPP:

- Draft Addendum to the Final Environmental Impact Report, Monterey Bay Shores Resort (City of Sand City 2008)
- Final Environmental Impact Report, Monterey Bay Shores Resort (City of Sand City 1998)
- Final Environmental Impact Report for The Sands of Monterey (EIP 1990)
- Biotic Assessment, Monterey Bay Shores EIR Addendum, Sand City, California (Zander Associates 2008)
- Annual Western Snowy Plover Surveys and Reports, PRBO/Zander Associates 1994-2008

1.0 INTRODUCTION

- Peer Review, Review of Mitigation Measures for Potential Impacts to the Western Snowy Plover; Proposed Monterey Bay Shores Eco-resort, Sand City, California (Wildlife Science International 2008)
- Peer Review, Monterey Bay Shores EIR Addendum, Sand City, CA (URS 2008)
- Monterey Bay Shores Botanical Survey Update Results (EMC Planning Group, Inc. 2008)
- Landscape Plan for Monterey Bay Shores (Rana Creek 2008)
- Vesting Tentative Map, Monterey Bay Shores (Bestor Engineers 2008)
- Access, Signage, and Lighting Plan (EMC Planning Group, Inc. 2008)

This HPP provides an assessment of the current conditions on the site relative to the species listed above, evaluates the effects of the proposed eco-resort development on those species, and presents a set of management prescriptions for enhancement of the dune complex and preservation of sensitive species habitat on the site in the context of the proposed project.

As explained in the 2008 Addendum to the Monterey Bay Shores Environmental Impact Report (EIR), since certification of the original EIR in 1998 there have been substantial changes in the project design, building layout and size; changes in the distribution of biological resources; and changes in the regulatory environment overseeing the protection of the special status species at issue.

1.1.1 Revisions to the 1998 Project Design

With respect to the project design, building layout and size, the revised project will be set back a substantially greater distance (as discussed in the EIR Addendum) from the ocean than the original layout of the project. Thus, there will be a greater buffer between many of the construction activities and the lower beach, where migratory birds and snowy plovers are most likely to be located. The elimination of these significant construction and operational activities will help reduce the temporary and long-term impacts to any potential plover habitat or breeding activity. The redesign of the project and landscape will also specifically take into account the re-creation of types of habitat on or near the beach and strand that are more likely to attract plover nesting and activity. This will be an improvement over existing conditions, where there is no active landscape management to attract plover nesting. In addition, the revised project has been designed specifically to avoid any take of any seacliff buckwheat plants on the project site, thus preserving habitat for the Smith's blue butterfly.

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1.1.2 Biological Surveys and Updates

Since 1998, there have been numerous additional biological surveys conducted on the project site to update the data on existing conditions. For example, in 2006 and again in 2008, EMC Planning Group, Inc. undertook revised vegetation mapping and directed surveys for Monterey spineflower and seacliff and coast buckwheat – host plants for the Smith's blue butterfly. The changes in the vegetation on site have been taken into account in preparing this HPP.

In addition, beginning in 2005, the City of Sand City has sponsored annual systematic breeding season surveys of the Sand City coastline for the western snowy plover. These surveys were (and are) being conducted by *PRBO Conservation Science*, the consulting branch of the Point Reyes Bird Observatory (PRBO), under contract to Zander Associates. Only one nest, in the northeast corner lower beach area of the site (and outside of the development envelope), has been sighted during that time. Biologists specializing in the habits of western snowy plover have documented that, since the mid-1990s, plover in the area have shifted and focused nesting preferences to the Moss Landing area, which is located about 16 miles to the north. Annual reports by PRBO have indicated a steady decline in nesting western snowy plovers in the north Monterey and Sand City shoreline area, including the project site. For the overall area, PRBO reported a total of 13 plover nests in 1995, 7 nests in 1996, 4 nests in 1997, 4 nests in 1998, and 2 nests in 1999. In 2000, only one nest was reported, but the nesting attempt was unsuccessful (on the Fort Ord Dunes State Park property line). Nesting in the area dropped to zero from 2001 to 2007. In 2008 two nests were identified along the Sand City shoreline, one of which was on the lower beach of the northwestern corner of the project site, and one of which was located south of the project site. Thus, plover nesting has declined markedly during the past 13 years. By contrast plover nesting activity has increased at the Moss Landing Salt Ponds managed by PRBO in recent years. According to PRBO, "the former salt pods at the Moss Landing Wildlife Area have emerged as the most productive habitat for snowy plovers in the Monterey Region." (Page, 1999). Plover nesting also has been observed with higher frequency along the northerly shoreline boundary of former Fort Ord and the City of Marina.

1.1.3 Regulatory Setting

There have been several regulatory changes regarding the sensitive species previously identified on the project site. First, in September 2005, the U.S. Fish and Wildlife Service removed the site's beach, and all of the Sand City coastline within the Monterey critical habitat unit, from the critical habitat designation for the western snowy plover. Second, in December 2007, the U.S. Fish and Wildlife Service determined that the site should not be included in the final revised critical habitat designation for the Monterey spineflower. Third, in January 2008, the California Court of Appeal held that the Sand City Local Coastal Program Land Use Plan (LCP) does not

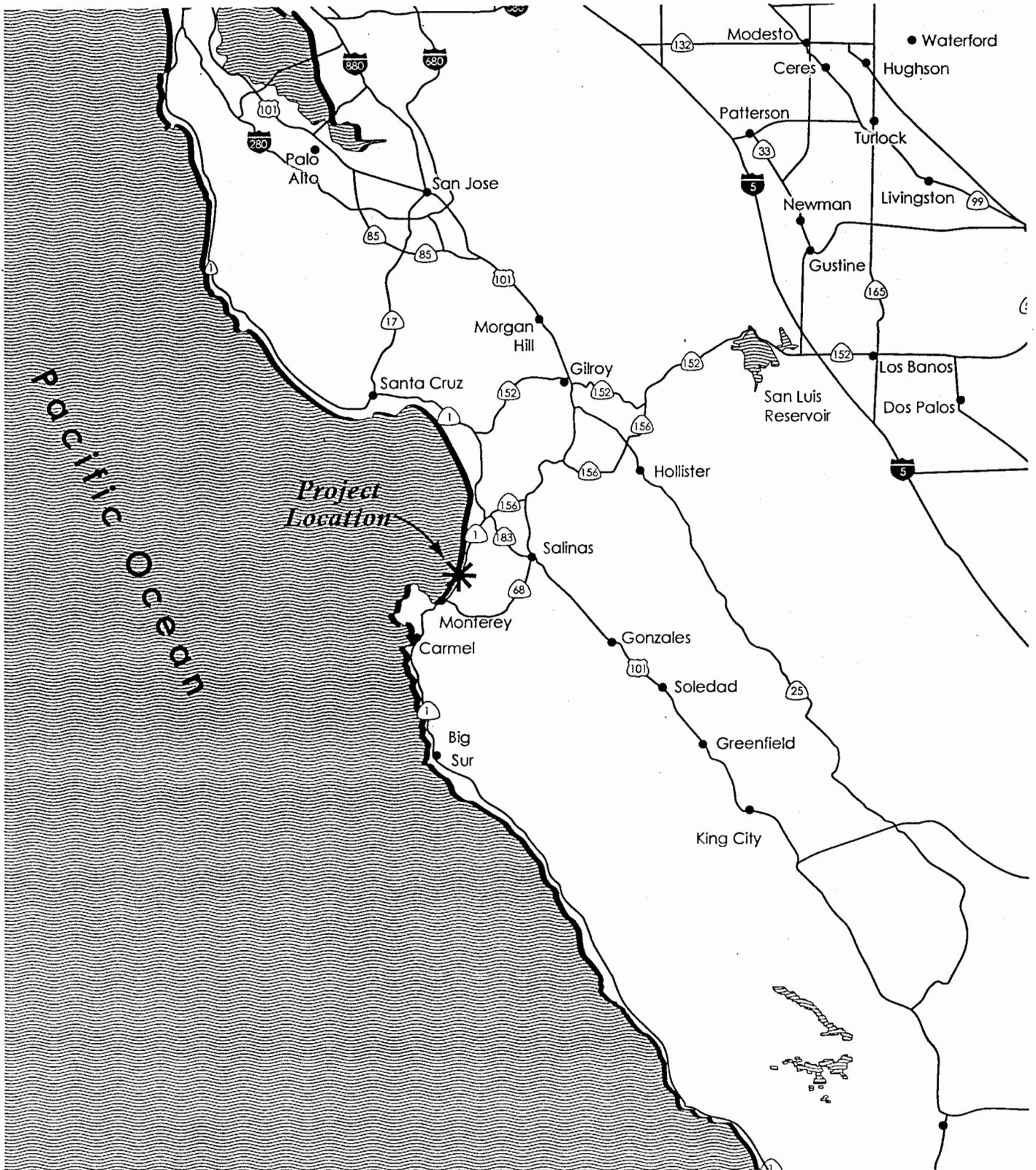
deem the site to be environmentally sensitive habitat area (ESHA) and that the Coastal Commission had exceeded its jurisdiction by declaring the site to be ESHA. (*Security National Guaranty, Inc. v. California Coastal Com.*, 159 Cal.App.4th 402.) The Court further held that in reviewing and approving a development project, a local government is not required to demonstrate that "the conclusions in the LCP still 'relate to current conditions.'" The Court explained that requiring "a reexamination of basic land-use policy with every permit application would impose an unnecessary and wasteful burden on local governments." Finally, the Court remanded the coastal development permit application to the Commission for rehearing, based solely on the standards in the existing LCP, i.e., with no ESHA on site. Therefore, in accordance with the existing, certified Sand City LCP, and the Court of Appeal decision, this HPP assumes that no ESHA exists on site.

The LCP targets areas along the eastern boundary of the property site near Highway 1 as dune stabilization/restoration areas (shown on Figure 7 in the LCP) and encourages the creation of a dune management program concurrent with any development proposal for the property. This HPP is designed to facilitate that planning objective and to restore and protect habitat for special status species on the project site.

1.2 PROJECT AREA DESCRIPTION

The Monterey Bay Shores property (APN 011-501-14) is located along the southern Monterey Bay coastline at the northern city limit line of Sand City, approximately one mile north of Monterey and about 28 miles south of Santa Cruz (Figure 1, Project Vicinity). Lands of the former Fort Ord military base and the City of Marina are to the north, lands owned by park entities, the U.S. Naval Postgraduate School and shoreline portions of the cities of Sand City, Seaside, and Monterey occur to the south, and commercial and residential development exist across Highway 1 to the east.

The beaches and dunes extending from the Salinas River to the mouth of the Monterey Harbor once formed an extensive complex that has been heavily affected by industrial use and development for decades. Sand mining, military use, and all have affected the continuity and integrity of this shoreline dune complex. In recent years, however, there has been a trend toward restoration and preservation of substantial portions of the remaining dune habitats and the sensitive species they support from the National Wildlife Refuge at the mouth of the Salinas River eight miles north of the site to Marina State Beach and the former Fort Ord. Sand City's redevelopment plan seeks to encourage restoration of the dunes as part of coastal development.



Not to Scale

Source: EMC Planning Group Inc. 2008



Figure 1
CCC Exhibit Project Location
 Monterey Bay Shores Habitat Protection Plan
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1.3 PROJECT DESCRIPTION

The proposed revised project includes the construction of a 340-unit mixed-use "eco-resort" with a residential component designed to integrate development within the existing dune complex. The project site was previously used for approximately 60 years for sand mining by Lonestar Industries. No or minimal reclamation activities have occurred since the mine closure. The site encompasses a gross area of 39.04 acres, of which approximately 32 acres lie above the mean high tide line. The eco-resort will include the following uses:

- A 161-room hotel;
- 46 visitor-serving condominium units (rental pool) located south of the reception area;
- 42 visitor-serving condominium units (rental pool) located north of the reception area;
- 92 residential condominium units;
- Auxiliary facilities including a restaurant, conference facilities and rooms, a wellness spa; and
- Open space, public access and parking, trails, vista point, and habitat and dune restoration areas.

1.3.1 Grading and Site Preparation

The proposed revised project will require substantial grading to recontour the site and stabilize and restore the dunes and will require the removal of 385,000 cubic yards. This represents a reduction of 56.8% compared with the sand removal requirements of the 1998 City-approved project. The excess sand has resulted from moving the project back to the 75 year setback line (exceeding the requirements of the LCP) and the placement of the garages under the structures, in conformance with LCP policy encouraging underground parking. Off-site disposal of excess sand would be accomplished in one of three ways: (i) it would be sold to contractors for construction projects; (ii) provide or sell the sand for projects identified in the *Coastal Regional Sediment Management Plan for Southern Monterey Bay* (PWA 2008) prepared for the Association of Monterey Bay Area Governments and expected to be adopted in a November 2008 Board of Directors meeting; or (iii) to truck the sand off-site to dispose of it in landfills.

Of the site's 32 acres above the mean high tide line, 28.3 acres will be modified by grading, excavation, and recontouring, including rehabilitation, restoration and stabilization of the sand dunes impacted by historical sand mining. The beach area below 20 feet mean sea level (MSL) and the area along the northern property line set aside for buckwheat protection will not be subject to any grading, which will help avoid potential special-status species habitat in those areas.

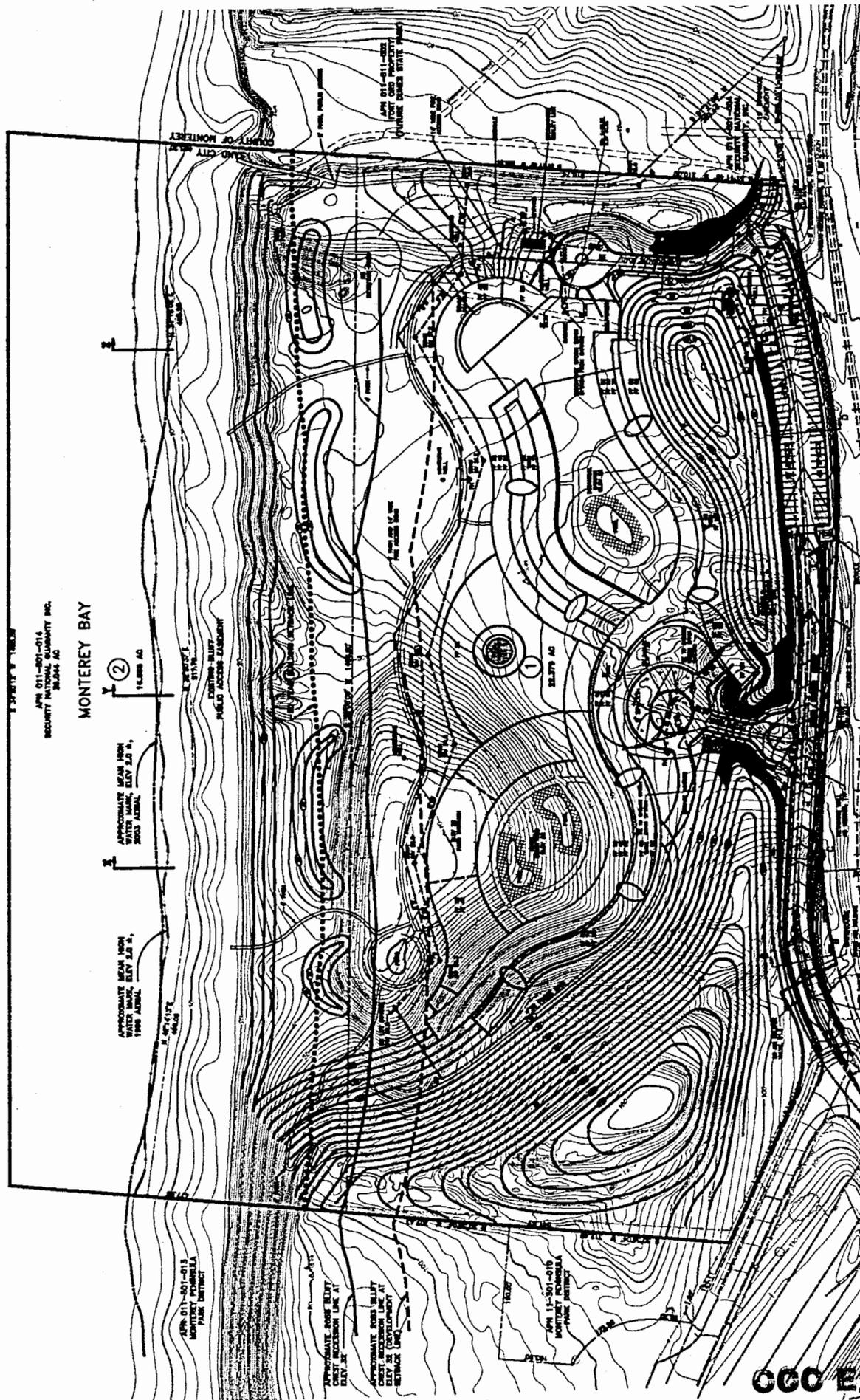
The remainder of the site will be recontoured for construction of the proposed buildings and infrastructure, the restored and stabilized sand dunes, and the restored coastal habitat, as shown in Figure 2, Site Plans. At project completion, the maximum elevation on the site will be 145 feet above MSL at the southeast corner of the site, which will be recontoured for dune stabilization. The highest sand dune on the site currently is 161 feet MSL. Another sand dune will reach 105 feet MSL on the northeast portion of the project site, replacing an existing sand dune which is approximately 126 feet above MSL. Dunes at the northeast corner of the site will be slightly modified to conform to the elevation of dunes north of the site, on the State Parks' property, in order to re-establish a contiguous system of dunes in this area.

1.3.2 Project Design Objectives

The design objective of the Monterey Bay Shores eco-resort is to utilize an ecologically innovative approach to the built environment and to coastal development, which integrates an understanding of the site conditions and site capacity into an ecological design that sets high standards in sustainability. Dune topography, plant assemblages and ecological functions will be restored on the site to counteract decades of degradation due to mining operations. The proposed development will be located centrally on the project site (subject to an expanded setback from the mean high tide line) and oriented toward Monterey Bay. Physical conditions that influenced the layout of the project include the desire to meet or exceed the required shoreline setback requirements and goals, topography of the site, dune stabilization, restoration requirements and goals, and the locations of sensitive dune habitat. In addition, the site design took into account the land use regulations and policies set forth in the LCP, which require the provision of public access to the shoreline and public recreation opportunities, open space, establishment of dune stabilization and habitat restoration areas, limitations on the height of the structures, and protection of specific views of Monterey Bay.

The revised project emphasizes visitor-serving uses, as those are a priority in the LCP. The eco-resort is also consistent with the LCP policies which encourage facilities that provide services to address a range of visitor needs and in a way that is consistent with preserving and enhancing the natural coastal resources.

The proposed development will be built "into the dunes" in order to mimic the dune environment, reduce the project's impacts to views of the site and of the Monterey Bay, and reduce noise impacts to the project, all of which are consistent with the policies of the LCP. Architectural forms are intended to conform to the topography, shore orientation, and scale of natural dune formations. The proposed hotel, resort, and condominium units all will be integrated into what appears as one building. The proposed buildings on the site will be constructed in a stepped fashion to fit the dune topography (Figure 3, Proposed Building Cluster Design). The elevation of the main entry and reception area will be at 62 feet above MSL,



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Source: EMC Planning Group Inc. 2008, Bestor Engineers 2008

Figure 2
 Site Plans

Monterey Bay Shores Habitat Protection Plan

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Source: EMC Planning Group Inc. 2008, BSA Architects 2008

Figure 3

Proposed Building Design

Monterey Bay Shores Habitat Protection Plan

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providing access both to the residential portion on the north and hotel/resort portion on the south of the building. The highest building elevation, a living roof, will not exceed 112 feet above MSL. The residential units and visitor-serving residential units will be located on the northern end of the proposed buildings and the hotel/resort units will be located in the central and southern portions of the proposed buildings.

Building and Facility Layout

Each of the buildings located at an elevation of 62 feet above MSL provide for vertical circulation, daylighting and ventilation towers. A small biofiltration pond is located on the east side of the parking garages. A retention pond will be located between the residential complex and the public trail to the beach.

Site Access and Parking

Vehicular access to the project site will be provided via an extension of Sand Dunes Drive. The main entrance to the proposed building will be located approximately 436 feet from the current terminus of California Avenue. The main entrance will provide access to the building lobby and two underground parking garages, one located to the south and one to the north. A second parking garage access, as well as delivery truck access, will be provided on the north end of the site.

The proposed underground parking garage on the southeast portion of the site will be located behind and below the hotel and visitor-serving condominium units. This parking garage will provide approximately 220 parking spaces for the proposed development. The second, larger parking garage will be located on the northeastern portion of the site. This 473-space parking garage will be two levels and located below the residential and visitor-serving condominiums. Nine additional parking spaces will be located along the roundabout at the main entry to the building. An additional 70 public parking spaces will be located along the private driveway on the northeast side of the project site. The revised project was designed to be consistent with the LCP, with roads and pathways that conform to the natural contours of the site. The revised project also provides maximum covered and underground parking, which fulfills the LCP policy of encouraging a layout that buffers parking from Monterey Bay.

Public Access

A public access easement is proposed over the private driveway and parking areas on the east portion of the site. A public access pathway, with a vista point, will be provided from the parking areas to the beach. Access ways are designed away from the large dune areas that are proposed for stabilization and/or restoration. Pathways will be created to avoid and protect restored vegetation. A public easement will cover the entire beach area below 20 feet MSL to ensure

1.0 INTRODUCTION

lateral access along the coast on dry sand. Vertical access to the shore has been provided at three locations on the site to prevent crowding and overuse of coastal resources. Public access will be coordinated and controlled based on recommendations of an on-site biologist to avoid or minimize impacts to biological resources. A bike path is also proposed along the eastern property boundary of the site adjacent to the Sand Dunes Drive extension, which would connect to the regional bike path. The project proposes a 5.69-acre public access easement on the site that would connect the public parking area at the northeast corner of the site with the beach and vista point through a trail located along the northern property line. A 13.85-acre conservation easement will surround the proposed buildings on the site. Visitors will be allowed within some areas of the conservation easement associated with public access, subject to restrictions needed to protect biological resources, as described herein.

Utilities and Infrastructure

The proposed project will obtain utility services from the Seaside County Sanitation District, California American (Cal-Am) Water Company utilizing SNG's water rights and allocation, Pacific Gas & Electric and other service providers. An eight-inch sanitary sewer line will be located along the ocean side of the proposed project and will connect with a sewage lift station in the southwest portion of the project site. The lift station will connect with a four-inch sanitary sewer force main through the project site out to the Sand Dunes Drive extension. The sanitary sewer line will be extended in California Avenue to an existing six-inch main sewer line at the Edgewater Shopping Center. Once the project site is annexed into the Cal-Am service area, water lines will be extended from the Edgewater Shopping Center to the project site.

The revised project will use cutting-edge energy demand-reducing technologies as well as incorporate on-site alternative energy sources in order to reduce overall energy use, decrease fossil fuel use, and decrease the project's carbon footprint. The project proposes to generate electricity on the site using solar photovoltaic panels and high efficiency ground-mounted horizontal-axis wind turbines as well as geothermal energy. The low profile, horizontal mounted, wind turbines will rest on the living green roofs in selected areas. The turbines are noise and vibration free, and are designed to be safe for birds through the use of protective enclosures around the slow-moving blades.

The revised project proposes to capture stormwater for on-site use and allow infiltration on the site. The revised project includes cisterns and two retention ponds, one located on the northwest portion of the site and one located on the east portion of the site adjacent to Sand Dunes Drive. A bioswale will be located adjacent to the retention pond on the northwest portion of the site. Storm drainage lines ranging from 12 inches to 24 inches will be located throughout the site. Since the project is designed to avoid stormwater runoff, the project will not connect with off-site storm drainage lines and will not discharge stormwater from the site. These storm drainage lines instead will be directed to the on-site retention ponds and cisterns.

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2.0 EXISTING CONDITIONS AND EXPECTED IMPACTS

2.1 EXISTING CONDITIONS

The biological resources on the project site have been well documented in several studies conducted for the City of Sand City and for previous project applications. Habitat assessments for the Smith's blue butterfly have been conducted on the site and throughout Sand City by LSA Associates (1988), Dr. Richard Arnold (1987, 1991, 2006), and Zander Associates (1995, 1997). The Sand City Draft Habitat Conservation Plan (1990), included the Monterey Bay Shores property and proposed city-wide conservation strategies for Smith's blue butterfly, black legless lizard (*Anniella pulchra nigra*), sand gilia (*Gilia tenuiflora* ssp, *arenaria*), sandmat manzanita (*Arctostaphylos pumila*), Monterey ceanothus (*Ceanothus rigidus*), Monterey spineflower, and Eastwood's golden fleece (*Ericameria fasciculata*).

The Point Reyes Bird Observatory (PRBO) has monitored the breeding success of snowy plovers on Monterey Bay since 1984, with specific surveys for the City of Sand City (including the project site) since 2005 under contract to Zander Associates.

Surveys for the black legless lizard were conducted on the site by Theodore Papenfuss, Ph.D. and Robert Macy in 1987 and by EIP Associates in 1988.

Thomas Reid Associates, EIP Associates, and EMC Planning Group, Inc. completed focused surveys for sensitive plant species in 1987, 1988, and 2008, respectively, and vegetation mapping was conducted in 1997 by Zander Associates and in 2006 by EMC Planning Group, Inc.

An EIR was prepared for a previous project application on the Monterey Bay Shores property by David Powers Associates and approved and certified by the lead agency, the City of Sand City (Sand City/David Powers 1998). A draft addendum was completed in August 2008 to update

this EIR based on a revised design and smaller project (Sand City/David Powers 2008). To update the biological resources section of the EIR, Zander Associates prepared a biotic assessment to compare the findings for the previous project with the impacts of the revised project and to identify any substantial changes in impacts or requirements for new mitigation measures. Additionally, two independent peer reviews of the proposed plover mitigation strategy were conducted (URS 2008, Wildlife Science International 2008).

All of the previous studies characterized the habitat on the Monterey Bay Shores property as highly disturbed, consisting of areas of bare sand or non-native iceplant, and generally devoid of any native plant communities Figure 4, Aerial Photograph. Notwithstanding the site's degraded condition, portions of the site have served as actual or potential habitat for the Smith's blue butterfly, western snowy plover and Monterey spineflower. Surveys for the California black legless lizard, Monterey ceanothus and sandmat manzanita yielded negative results. The vegetation types described in the following sections are based in part on past work but have been updated as a result of more recent surveys conducted by Zander Associates in February 1995 and March and May 1997, and by EMC Planning Group Inc. in 2006 and 2008.

2.1.1 Vegetation Types

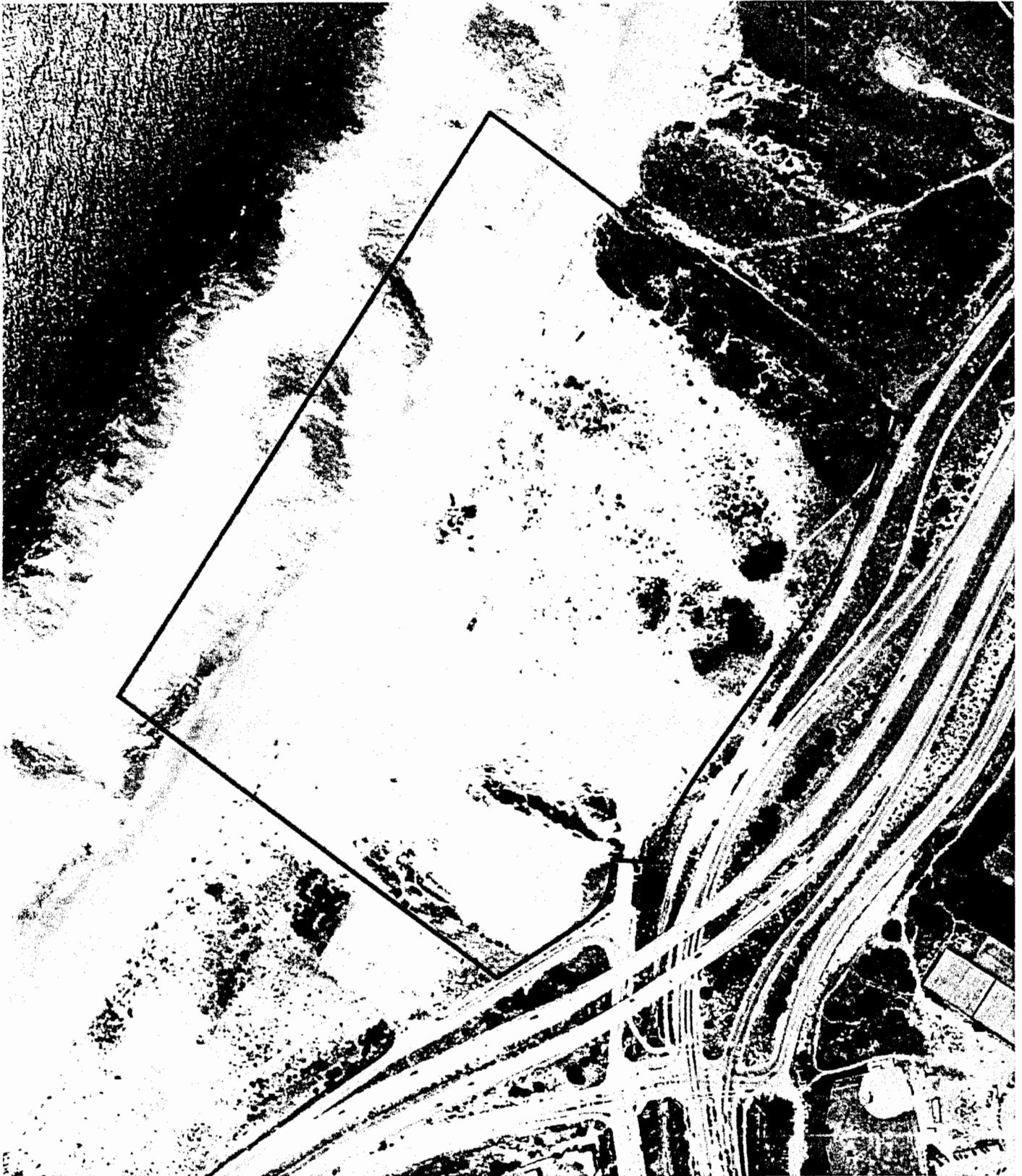
Although the nature and extent of the vegetation has changed only slightly from the time of the 1998 EIR, those changes have mostly resulted in the degradation of habitat due to the increased invasion of non-native iceplant throughout the site. Iceplant has encroached into areas formerly identified as pioneer dune and bare sand and has caused a reduction in the extent of coastal scrub species.

The following vegetation types and wildlife habitats are found on the Monterey Bay Shores site: 1) coastal strand/submerged land; 2) pioneer dune vegetation; 3) coastal scrub/iceplant mix; 4) iceplant dominated; 5) ruderal/disturbed; and 6) bare sand. These vegetation and habitat types are discussed below. The distribution of each of these types on the site is mapped on Figure 5, Vegetation Map, which was prepared in 2006 to update the extent of vegetation present. This map was created based on an aerial photograph taken in 2003 and verified in the field.

Coastal Strand/Submerged Land

The Monterey Bay Shores property includes approximately 11 acres of area west from the coastal bluffs. While about 4.2 acres of this area is beach and coastal strand, the majority of the area (6.8 acres) is located in the Pacific Ocean, below the mean high water mark elevation. The beach and coastal strand area consists primarily of bare sand with scattered pockets of sea rocket (*Cakile maritima*), beach bur (*Ambrosia chamissonis*), and other pioneer species that are typical of the first stage of plant succession in the bare sand.

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0 300 feet

Source: EMC Planning Group Inc. 2008, Digital Globe 2007

Figure 4



Aerial Photograph

Monterey Bay Shores Habitat Protection Plan
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LEGEND

Pioneer Dune Vegetation
with Ice Plant Mix

Coastal Scrub/Ice Plant Mix

Ice Plant Dominated

Ruderal/Disturbed

Coastal Strand

Monterey Spineflower
(Low Density, ~0-1 plts. per sq. m)

Monterey Spineflower
(Medium Density, ~2-4 plts. per
sq. m)

Monterey Spineflower
(High Density, ~5+ plts. per sq. m)

Seacliff Buckwheat



Source: EMC Planning Group Inc. 2006, 2008

Figure 5

Vegetation Map

Monterey Bay Shores Habitat Protection Plan

The coastal strand along the western boundary of the property provides habitat for feeding and nesting of marine and shore birds. The bay waters provide foraging habitat for Pacific loons (*Gavia arctica*), willets, sanderlings and caspian terns (*Sterna caspia*), and flocks of gulls rest and preen on the beach.

Pioneer Dune Vegetation

The area on the property identified as pioneer dune vegetation includes approximately 8.2 acres north of the abandoned sandpit. The area contains asphalt roadway remnants and bare sand that has been highly compacted as a result of past sand mine operations. The area of pioneer dune vegetation mapped on Figure 5, Vegetation Map contains scattered clusters of native pioneer species that occur on approximately 50% of the area. The plants identified in these clusters include: pink sand verbena (*Abronia umbellata*), beach bur, sea rocket, beach evening primrose (*Camissonia cheiranthifolia*), and silver bush lupine (*Lupinus chamissonis*). Since 1997, however, non-native hottentot fig (*Carpobrotus edulis*) and sea fig (*Carpobrotus chilensis*) have begun to spread beyond the extent of the native vegetation (visible in the aerial photograph in Figure 5, Vegetation Map and in Appendix A, Site Photographs). Various other non-native plant species such as New Zealand spinach (*Tetragonia tetragonioides*), riggut brome (*Bromus diandrus*), and common sow thistle (*Sonchus oleraceus*) also occur in patches throughout this Pioneer dune areas can provide habitat for a variety of insects and reptiles adapted to exposed dune areas with relatively sparse vegetative cover. The insect fauna of the sand dunes is well developed and includes numerous species of bees, wasps, flies, butterflies, and moths (LSA 1988). Reptiles found in this habitat type include the western fence lizard (*Sceloporus occidentalis*) and northern alligator lizard (*Gerrhonotus coeruleus*). Birds expected to occur in this habitat include killdeer (*Charadrius vociferus*), California gulls (*Larus californicus*) and western gulls (*L. occidentalis*). EIP (1990) also reported the occurrence of several mammals on the site, including black tailed jackrabbit (*Lepus californicus*) and deer mouse (*Peromyscus maniculatus*).

Coastal Scrub/Ice Plant Mix

This habitat type is present in two distinct stands in the northern and southeastern portions of the site. The northern stand comprises approximately 0.2 acres and the southeastern stand is about 0.9 acre. Vegetation in these areas consists of plant species typical of the coastal scrub community that are gradually being out competed by ice plant. Native scrub species identified in these areas include mock heather (*Ericameria ericoides*), California coffeeberry (*Rhamnus californicus*), seacliff buckwheat (*Eriogonum parvifolium*), coast buckwheat (*Eriogonum latifolium*), poison oak (*Toxicodendron diversilobum*), and sandmat (*Cardionema ramosissimum*).

2.0 EXISTING CONDITIONS AND EXPECTED IMPACTS

The coastal scrub component of the coastal scrub/ice plant mix community provides foraging or nesting habitat for small birds such as the white crowned sparrow (*Zonotrichia leucophrys*) and wrentit (*Chamaea fasciata*). Common reptiles such as the western fence lizard, and small mammals such as the deer mouse, are also found in this habitat. Because the coastal scrub vegetation is relatively sparse in most areas on the site and is intermixed with ice plant, this community provides only marginal habitat value for wildlife.

Ice Plant Dominated

Several areas of dense ice plant mats occur throughout the site, but the most contiguous areas of dense mats are found mainly in the southern and eastern portions of the site, on and around the dunes near the sand pit and along the northern boundary. In 1997, only 2.1 acres of this vegetation type was present, however by 2006 these areas of dense ice plant comprise approximately 7.8 acres of the property, an increase of approximately 370 percent (Figure 5, Vegetation Map). Although ice plant mats usually exclude establishment of other vegetation, occasionally there are plants that can coexist within the matted areas. Other plants observed within the ice plant dominated areas on the site include Bermuda buttercup (*Oxalis pes-caprae*), ripgut brome, and wild radish (*Raphanus sativa*).

Ice plant dominated areas are highly degraded biotic communities that provide relatively low habitat value for wildlife. Ice plant provides little forage value, however, signs of burrowing rodents such as the California ground squirrel (*Spermophilus beecheyi*), valley pocket gopher (*Thomomys bottae*), Norway rat (*Rattus norvegicus*) and/or house mouse (*Mus musculus*) were observed within the dense growth of ice plant.

Ruderal/Disturbed

The ruderal/disturbed areas occur along the eastern property boundary and covers approximately 0.6 acres of the site. These areas are characterized separately from bare sand or ice plant mats in that they contain portions of an old paved access road and railroad spur associated with previous mining activities, and are dominated by ruderal plant species but include few ice plant mats. The ruderal species common in this vegetation type include ripgut brome, red-stemmed filaree (*Erodium cicutarium*), wild radish, common groundsel (*Senecio vulgaris*), bur clover (*Medicago polymorpha*), and stock (*Matthiola* sp.). Several individual Monterey cypress trees (*Cupressus macrocarpa*), probably planted as windbreaks or landscaping for the former sand mining operation on the site, also occur in this area. The northernmost area of ruderal/disturbed vegetation contains sporadic, low-density occurrences of Monterey spineflower, a known colonizer of disturbed areas.

The ruderal/disturbed areas on the property support wildlife species tolerant of human disturbance. Characteristic species include the Brewer's blackbird (*Euphagus cyanocephalus*) California ground squirrel, deer mouse, and the non-native red fox (*Vulpes vulpes*). Feral cats (*Felix domesticus*) also occur in these areas.

Bare Sand

This habitat type covers approximately 6.1 acres of the project site and is considered distinct from the coastal strand in that it contains areas of bare sand on the property that are inland of the coastal bluffs, including the area of the abandoned sand mining pit and other areas on the property that are generally devoid of vegetation. Some of the bare sand areas may contain occasional small patches of ice plant and native and non-native dune plants, however because of the highly unstable shifting dune sand these areas are not conducive to the establishment of vegetation.

Bare sand dunes away from the shoreline provide little foraging value for wildlife, although some ground nesting shorebirds may use these areas for nesting. However, bare sand areas along the shoreline provide foraging habitat for certain shorebirds, which feed on the abundant invertebrates in the intertidal zone. Characteristic species found in this habitat include the California gull, western gull and sanderling (*Calidris alba*).

2.1.2 Wildlife

Wildlife occurring on the project site are characterized as species uniquely adapted to sand dune and ruderal plant communities. Burrowing rodents such as the California ground squirrel (*Spermophilus beecheyi*), pocket gopher (*Thomomys umbrinus*), Norway rat (*Rattus norvegicus*) and the house mouse (*Mus musculus*) live in the dense growth of ice plant. In more open regions reptiles such as the western fence lizard (*Sceloporus occidentalis*) and northern alligator lizard (*Gerrhonotus coeruleus*) can be found. Songbirds such as Brewer's blackbird (*Euphagus cyanocephalus*), white crowned sparrow (*Zonotrichia leucophrys*), and killdeer (*Charadrius vociferus*) would also be expected. EIP (1990) also reports several mammals on site including the black tailed jackrabbit (*Lepus californicus*), deer mouse (*Peromyscus maniculatus*), and feral cat (*Felix domesticus*).

2.1.3 Special Status Species

When conducted, surveys have documented the occurrence of the Smith's blue butterfly, western snowy plover, and Monterey spineflower on the Monterey Bay Shores property at times during the past 18 years. As described herein, occurrences of snowy plover have not been frequent or

2.0 EXISTING CONDITIONS AND EXPECTED IMPACTS

consistent in the past 8 years. Focused surveys for the California black legless lizard, Monterey ceanothus, sandmat manzanita, and coast wallflower have also been conducted on the site but none of these species were found to occur (Zander 1997). During an October 2000 site visit by Zander Associates, a burrowing owl (*Athene cunicularia*), a California species of special concern was observed using burrows on the Edgewater Shopping Center property and in adjacent areas on former Fort Ord. Since that sighting eight years ago, additional observations have not been recorded, although protocol surveys for this species have not been conducted.

The species considered in this HPP include: federal- or state-listed, proposed, and candidate species that are known to occur on the project site; listed, proposed and candidate species or other special status species that may have occurred on the project site, or be introduced to the site as a result of proposed restoration efforts. The target species considered in this HPP include:

- Smith's blue butterfly (*Euphilotes enoptes smithi*)
- Western snowy plover (*Charadrius alexandrinus*)
- Monterey spineflower (*Chorizanthe pungens* var. *pungens*)
- California black legless lizard (*Anniella pulchra nigra*)¹
- California burrowing owl (*Athene cunicularia*)
- Sand gilia (*Gila tenuiflora* ssp. *arenaria*)
- Sandmat manzanita (*Arctostaphylos pumila*)
- Monterey ceanothus (*Ceanothus rigidus*)

Previous studies have documented the occurrence of the western snowy plover, and Monterey spineflower, and a few examples of Smith's blue butterfly on the Monterey Bay Shores property. Additional special status species listed above have not been observed on the Monterey Bay Shores property but are known to occur in the vicinity and are therefore included in this HPP. Through dune stabilization and restoration activities, it is anticipated that habitat for all of these

¹ In 1998, the U.S. Fish and Wildlife Service (Service) withdrew its proposed rule to list the black legless lizard (*Anniella pulchra nigra*) as an endangered species under the Endangered Species Act of 1973. The Service concluded that the black legless lizard is known to occur in a much wider variety of habitat than previously thought, and the threats to its survival have decreased. The Installation-Wide Multispecies Habitat Management Plan (HMP) for former Fort Ord, now provides preservation and habitat management on 1,366 acres of coastal and interior dune sheets occupied by the black legless lizard. Elsewhere, a large proportion of the remaining habitat of the black legless lizard is already protected from urbanization and commercial development on public lands.

species will be created. The biological data, description of presence on the project site and discussion of project effects for each of the target species follows.

2.2 EXPECTED IMPACTS

The revised eco-resort project will modify approximately 28 acres above the mean high tide line through grading, excavation, and recontouring. As noted in the 1998 FEIR and above, much of this area is degraded and non-native iceplant has continued to encroach into more native habitats.

Most of the existing vegetation will be removed during construction except in the northern portion of the site where avoidance of seacliff buckwheat plants is a priority. The revised grading envelope will ensure that the existing buckwheat plants are avoided entirely in order to preserve their potential to support Smith's blue butterfly.

Habitat restoration is a major component of the revised project. Approximately 23.2 acres will be restored to foredune, secondary dune, back dune, wetland and coastal bluff habitat. This includes approximately 4.3 acres of living "green roof" (dune coastal plant community) that will emulate coastal bluff habitat by having shallow soils and plants that are adapted to wind and salt spray. Of the 23.2 acres to be restored to native habitat, approximately 14 acres around the periphery of the development will be placed in a conservation easement and protected in perpetuity. A public access easement will be designated on approximately six (6) acres of the site, primarily to provide public access to the vista point, beach, and coastal strand areas. Three trails, one public and two associated with the eco-resort, will direct access out to the beach in a similar configuration as proposed by the previously approved plan.

The revised project will include on-site alternative energy generation facilities. These facilities will be incorporated into the structural and design elements of the buildings and geothermal units will be underground. Roof-mounted, low profile, horizontal wind turbines will be installed in protective enclosures to reduce potential impacts to birds and other wildlife.

Approximately 1.4 acres of coastal dune scrub habitat (including the area where seacliff buckwheat plants will be avoided during construction) to provide suitable opportunities for use by Smith's blue butterfly. Iceplant that is currently encroaching on the existing buckwheat plants will be eradicated and approximately 400 buckwheat plants, propagated from seed collected on site or nearby, will be established. Monterey spineflower will also be reestablished over approximately 3.4 acres of the restoration areas. Prior to grading and construction, seed will be collected from plants to be removed in the development area and reseeded into appropriate restoration areas on completion of grading.

2.0 EXISTING CONDITIONS AND EXPECTED IMPACTS

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3.0

BIOLOGICAL DATA AND EXPECTED IMPACTS ON SPECIAL STATUS SPECIES

3.1 SPECIAL STATUS SPECIES KNOWN TO OCCUR ON THE SITE

The federally-listed endangered and threatened species addressed in this HPP include:

- Smith's blue butterfly (*Euphilotes enoptes smithi*), endangered;
- Western snowy plover (*Charadrius alexandrinus nivosus*), threatened; and
- Monterey spineflower (*Chorizanthe pungens* var. *pungens*), threatened.

The biological data, history of recorded occurrences on the site, and discussion of the effects of the project on each of the covered species follows.

3.1.1 Smith's Blue Butterfly

Biological Data

The Smith's blue butterfly is a small lycaenid butterfly, which, as an adult has a one-inch wingspan. Larvae are slug-shaped and vary from cream to pale yellow or rose in color, changing with the color of the flower heads on which they are feeding (USFWS 1984).

This subspecies is found along the coastal dunes just south of the Salinas River in the north (Monterey County) to San Carpoforo Creek (San Luis Obispo County) in the south. Inland populations are found in Camel Valley. The larvae (caterpillar form) feed on two species of buckwheat: the seacliff buckwheat, generally found in the southern portion of their range, and

3.0 BIOLOGICAL DATA AND EXPECTED IMPACTS ON SPECIAL STATUS SPECIES

the coast buckwheat, generally found in the northern portion of their range. Populations of Smith's blue butterfly within Sand City utilize both species of buckwheat.

Female Smith's blue butterflies lay their eggs singly on flower heads of the host plants. The larvae hatch in about a week and begin eating the flowering heads of the buckwheat. As larvae grow they molt, passing through five instars (developmental stages). Following the fifth instar the larvae pupate sometime between August and November, and then overwinter in the leaf litter at the base of the plants. As with any other lycaenids, Smith's blue butterfly larvae may have a mutualistic interaction with ants during later instars (Arnold 1983). Arnold also observed predation by spiders and occasionally heavy parasitism by wasps. The role of other species in Smith's blue population dynamics is unknown.

The Smith's blue butterfly is a weakly flying species; therefore, long distance dispersal is believed to occur only rarely. Arnold reported common dispersal of distances of up to a few hundred yards at Fort Ord and at the Marina State Beach (1983 and 1986). Flight usually occurs within one or two meters above the ground. Observations of extended flight, more than a few minutes for an individual butterfly, are rare.

Since the Smith's blue butterfly spends the majority of its time in short flights within patches of buckwheat, any area of non-habitat, such as active mining areas, bare areas, large blow-outs on sand dunes, or extensive dense patches of vegetation which do not contain buckwheat (such as ice plant), act as barriers to dispersal. Where visual continuity of habitat, as with areas of urban development or planting of shrubs or trees, does not exist, the barrier is likely to be significant. Some dispersal may be passive, by the wind, but the typical response of adults under high wind conditions is to avoid flight altogether. Adult Smith's blue butterflies can find basic requirements (mating, nectaring, egg-laying) within a very small area (less than three acres). In locations where host plants are abundant, the local densities of Smith's blue butterflies may vary from year to year, and may shift spatially over a period of years, at least partially in response to declining buckwheat quality (Arnold 1980, 1986).

The populations of Smith's blue butterfly at former Fort Ord, Marina State Beach, Salinas River National Wildlife Refuge and the Naval Postgraduate School are considered important to the recovery of the species (USFWS 1984). Densities of the buckwheat host plants in the Sand City area are substantially lower than at these higher quality habitats for the butterfly (Arnold 1991). Improvement to the habitat quality for the butterfly in Sand City has been demonstrated at the restored Sand Dollar habitat reserve on the east side of Highway 1, approximately 0.5 miles south of the Monterey Bay Shores site.

Due to declines in the population and threats to its habitat, the U.S. Fish and Wildlife Service (Service) listed the Smith's blue butterfly as endangered in June 1976. Critical habitat has not been designated.

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Presence on the Monterey Bay Shores Property

In his *Biological Assessment Report for the Sands of Monterey Project Site in Sand City, California* (Arnold 1987), Dr. Richard Arnold observed approximately 40 individual seacliff buckwheat plants on the project site. This type of buckwheat is one of two food plants for the Smith's blue butterfly that can be found on the Monterey Bay Shores property. It is "patchily distributed" on the northeast edge of the property. The timing of his survey (January 7, 1987) did not allow for observations of larvae or adult butterflies; however, Arnold concluded that the buckwheat plants he observed were of suitable quality for use by both the larval and adult life stages of the Smith's blue butterfly based on the abundance of dried flowers remaining from the 1986 growing season. Arnold revisited the site in July, August and September, 1987 and reported finding four adults and two larvae of the Smith's blue butterfly along the northern border and near the northeastern corner of the property. Because he found such a small number of adults, and only found them on two of his six visits to the site, Arnold assumed the site was not heavily used by the Smith's blue butterfly and concluded that it probably provided habitat for transients that were dispersing from larger established populations to the north.

During July-August, 1988, biologists for LSA Associates, a biological consulting firm, observed a total of about 12 individuals on six separate occasions scattered in the vicinity of the northeastern property boundary. In July 1989, Arnold revisited the site to recount the number of buckwheat plants within the property boundaries. During that site visit, he observed four adult butterflies in the gully along the northern property boundary.

During February 1995 surveys, Zander Associates counted the number of host plants and mapped the locations of these plants on the site. Approximately 58 host plants were observed on the Monterey Bay Shores project site near the north east property line and additional plants were identified immediately adjacent to the southeastern and eastern development site boundary. Reconnaissance surveys in 1997 and again in 2000 and 2005 confirmed that the extent and distribution of buckwheat plants on the Monterey Bay Shores property remains essentially the same as recorded in 1995, although the expansion of invasive iceplant continues to threaten them.

On July 7, 2006, Dr. Richard Arnold surveyed the project site to update previous survey results and the extent of habitat for the Smith's blue butterfly. Approximately 10% of the buckwheat plants were in bloom at the time of the survey and one butterfly was identified on the project site. Additional habitat immediately north of the project site on the Fort Ord Dunes State Park property hosted approximately 40-50 butterflies at the time of the survey. Although not on the project property itself, the close proximity of good quality habitat make the presence of the butterfly likely to continue inside the northeastern boundary of the Monterey Bay Shores project site.

Effect of the Proposed Project on Smith's Blue Butterfly

The proposed project proposes to completely avoid the area where buckwheat plants occur and thus no take of potential host plants will occur. In addition, the project proposes to restore native vegetation and increase the amount of habitat available for Smith's blue butterfly without disturbing the existing buckwheat plants. Restoration of approximately 1.4 acres of coastal dune scrub habitat suitable for use by Smith's blue butterfly is proposed through the collection of seed, propagation, and planting an additional 400 seacliff buckwheat plants.

3.3.2 Western Snowy Plover

Biological Data

The western snowy plover is a small, pale colored shorebird with dark patches on either side of the upper breast. It is typically found along the beach above the high tide limit but is also known to use shores of salt ponds and alkali or brackish inland lakes. The western snowy plover typically nests on flat, barren to sparsely vegetated sandy substrate and nests are frequently located near objects such as grass clumps or pieces of driftwood. The breeding season occurs from mid-March through mid-September and most eggs are laid by mid-July. Males incubate three-egg clutches about 10% of the time during the day and most of the night (Warriner et al. 1986). Females normally desert hatched young within six days and the males attend the young for 29 to 47 days. Females often re-nest with new mates during the same breeding season. The last chicks of the season fledge during the first or second week of September.

The Service listed the western snowy plover as threatened in March 1993.

Critical Habitat and Regulatory Actions

In its designation of critical habitat for the western snowy plover (64 Fed. Reg. 68507 [Dec. 7, 1999]), the Service designated the beaches from former Fort Ord south to Monterey (including a small portion amounting to about ½ acre on the Monterey Bay Shores project site) as critical habitat for the western snowy plover. In response to a legal challenge to the final critical habitat rule filed by Coos County, Oregon and joined by Sand City, California, in U.S. District Court in Oregon, the Service initiated a voluntary remand of the rule to reconsider the designation. The court accepted the voluntary remand and ordered the Service to promulgate a revised final critical habitat rule by September 20, 2005. Pursuant to this order, the Service proposed a revised designation of critical habitat. (69 Fed. Reg. 75607 [Dec. 17, 2004] [Subunit CA-12C]). The Service issued a final rule designating critical habitat on September 29, 2005 (70 Fed. Reg. 56970). In the final rule, the Service excluded all of the Monterey unit, including the Monterey

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Bay Shores beach, from the plover critical habitat on the basis of the Secretary of Interior's authority under section 4(b)(2) of the ESA.

The Service conducted a review of the status of the Pacific Coast population of the western snowy plover during 2005 and 2006. The study is known as a "12-month status review" and examined whether the population of western snowy plovers that breeds in coastal areas in California, Oregon and Washington should retain its current status as a threatened species. The Service made a "not warranted" finding on the petition to de-list the species on April 21, 2006 (71 Fed. Reg. 20607). The species therefore retains its current federal "threatened" status.

Overall Population and Presence in the Monterey Bay Area

The Monterey Bay population of western snowy plovers consists both of year-round resident and migratory (winter resident) birds. A winter flock of 60-70 birds has been documented assembling and roosting annually on the beaches south of the southerly Sand City limits, approximately 1.2 miles from the project site. In-migration of winter residents can begin as early as July. Courting and pre-nesting behavior occurs at the end of the roosting season, typically in early February, followed by residents' establishment of nesting sites for the new year.

Nest activity on the Fort Ord beaches immediately north of the site has been documented as relatively low for the region. Virtually all of the plover nest activity on former Fort Ord occurs north of former Stilwell Hall. For instance, in 2002 snowy plovers fledged more than 210 chicks in the Monterey Bay region (at locations approximately 6 miles or more to the north of the project site). In 2002, the southernmost nesting attempt documented was north of Reservation Road in Marina. Prospecting pairs were observed at Marina State Beach and at Sand City, to the south of the project site, but nesting was not confirmed at these locations (PRBO 2002).

Annual reports by PRBO indicate a steady decline in nesting western snowy plovers in the Monterey North (Sand City shoreline) area, including the Monterey Bay Shores project site. For the Monterey North area, PRBO reported a total of 13 plover nests in 1995, seven nests in 1996, four nests in 1997 and four nests in 1998. Only two plover nest sites (which were not on the Monterey Bay Shores site) were reported from the entire Monterey North area in 1999. The chick-fledging success of snowy plovers in the Sand City area in 1999 was the lowest recorded since monitoring began (Page et. al., 1999). In 2000, only one nest was reported (the nesting attempt was unsuccessful), and by 2005, surveys found no nesting activity along the Sand City shoreline and only one sighting of a snowy plover occurred during the entire survey period (a single juvenile was seen approximately 200 meters south of the Fort Ord boundary). Two nests were identified in Sand City in 2008.

During the past decade and continuing in recent years, plover nesting activity has increased at other Monterey Bay area locations, most notably at the Moss Landing Salt Ponds managed by

PRBO approximately 12 miles north of the project site. "The former salt ponds of the Moss Landing Wildlife Area have emerged as the most productive habitat for snowy plovers in the Monterey Bay region." (Page et. al., 1999). Plover nesting has also been observed with higher frequency along the northerly shoreline boundary of former Fort Ord and the City of Marina. "Appropriate management including access and use restrictions in certain areas, symbolic fencing, educational signage and active stewardship could encourage the re-establishment of plover nests along the Sand City shoreline, especially considering the close proximity of the winter nesting population of plovers on the shoreline just south of Sand City." (Zander 2005)

Presence on the Monterey Bay Shores Property

The Monterey Bay Shores site lies at the northern end of a distinct segment of plover breeding habitat referred to as Monterey North (Monterey Harbor to Stilwell Hall on former Fort Ord) by researchers from the PRBO. The PRBO has actively monitored the Monterey North segment since 1989. For the six year period from 1989 through 1994, 15 snowy plover nests were recorded on the Monterey Bay Shores project site. The majority of plover nesting activity in Monterey North has occurred south of the project site, with the highest number of nests (18) observed on land approximately one mile south of the Monterey Bay Shores property (south of Tioga Avenue).

As noted, plover breeding activity along the Sand City shoreline in general, including the project site, showed a continuous decline from 1998 through 2007. Only one (unsuccessful) nest was observed near the northerly property line of the project site in 2000. In 2005, the Service removed the Sand City shoreline from the designation of critical habitat for the western snowy plover. Since 2000, snowy plover nesting activity was not observed in the area until recently in 2008 when one nest was observed on the northern edge of the project site (on the lower beach). While plover nesting has declined in the Sand City shoreline area since the mid-1990s, the area continues to provide open sandy sites above the high tide line with direct access to the bay and remains a viable outlier for potential plover breeding.

Effect of the Proposed Project on Western Snowy Plover

Project grading will modify some areas of bare sand that provided nesting habitat for the species during the 1990s. Because of the decline in nesting activities during the past 13 years on site, the direct loss of a western snowy plover is not expected. In order to try to attract plovers to the site once construction is completed, the proposed project will incorporate management of the beach, strand, and foredune on the property during the nesting/breeding season to protect nesting snowy plovers, and it will dedicate a conservation easement over the restored habitat outside of the developed area. The revised project proposes a plover mitigation program consisting of the following elements which are described in greater detail in the next section:

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- Pre-Construction Surveys and Construction Monitoring
- Pre-Construction Conference with Equipment Operators and Field Supervisors
- Preservation and Establishment of a Managed 2-Acre Nesting Protection Zone
- Nesting Protection Zone Expansion Per Biologist Recommendation
- Adaptive Management and Access Plan
- Establishment of Conservation Easements
- Annual Review of Resort Operations on Biological Conditions
- Mandatory Employee Biological Resource Education
- Predator Management Plan
- Coordination with Sand City and State Parks on Plover Management
- Ten Percent Allocation of Environmental Trust Funds to Plover Protection

These mitigation measures are discussed in more detail in Section 4.0.

3.1.3 Monterey Spineflower

Biological Data

Monterey spineflower is a small, prostrate annual of the buckwheat family. Monterey spineflower occurs scattered on sandy soils within coastal dune, coastal scrub grassland, maritime chaparral, and oak woodland communities along and adjacent to the coast of southern Santa Cruz and northern Monterey Counties and inland to the coastal plain of Salinas Valley. Former Fort Ord supports the largest populations of Monterey spineflower known and these populations will be protected, managed and enhanced through implementation of the Installation-Wide Habitat Management Plan for former Fort Ord.

The species tends to occur on bare sandy patches devoid of vegetative cover. The species often colonizes recently disturbed sandy soils. Within grassland communities, the plant occurs along roadsides, in firebreaks, and other disturbed sites. In oak woodland, chaparral, and scrub communities, the plants occur in sandy openings between shrubs. In dense chaparral or scrub vegetation, Monterey spineflower typically is restricted to roadsides and firebreaks through these communities.

The Service listed Monterey spineflower as threatened in February 1994. In 2002, the Service designated 18,830 acres as critical habitat for the Monterey spineflower in Santa Cruz and

Monterey counties, and the Monterey Bay Shores project site was previously within this critical habitat. (67 Fed. Reg. 37,498 [May 29, 2002].) On January 9, 2008, the Service issued a final rule revising spineflower critical habitat. That revised critical habitat designation did not include the project site. Therefore, the project site is not considered critical habitat for the Monterey spineflower. (73 Fed. Reg. 1525 [Jan. 9, 2008].)

Presence on the Monterey Bay Shores Property

The Monterey spineflower is a colonizer of the bare sand habitats on the Monterey Bay Shores property. The area occupied by spineflower plants on the project site is relatively small. Patches of Monterey spineflower were delineated based on approximate density where high density was defined as approximately five plants or more per square meter, medium density as approximately two to four plants per square meter, and low density as approximately one plant per square meter. In 2008 approximately 3.39 acres of the project area contained Monterey spineflower, including approximately 0.33 acres of high density, 0.16 acres of medium density, and approximately 2.9 acres of low density Monterey spineflower (EMC Planning Group Inc. 2008).

Effect of the Proposed Project on Monterey spineflower

Project grading will modify areas of that provide habitat for the species. The proposed revised project will reestablish Monterey spineflower at a minimum 1:1 ratio. Monterey spineflower will be reestablished in approximately 3.4 acres of the restoration areas by collecting and propagating seed from plants to be removed in the development area.

3.2 SPECIES WITH POTENTIAL TO OCCUR ON THE SITE

3.2.1 *Black Legless Lizard*

Biological Data

In general, black legless lizards live in a number of habitats in dunes and sandy areas from immediately above high tide, the crest of sand dunes, and the edge of the hind dunes to inland sandy areas associated with oak woodlands, grasslands, maritime chaparral and other habitats (TRA 1987, Hunt and Zander 1997). They are fossorial animals that burrow in sand and leaf litter beneath plants growing in these habitats and feed on insects and other invertebrates. Some plant cover needs to be present as food for insects that, in turn, serve as food for the black legless lizards.

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Black legless lizards are most abundant in dune habitats where native vegetation is present (Stebbins 1985). Although legless lizards have also been found along the edges of ice plant mats within dune ecosystems, ice plant mats are not considered suitable habitat for legless lizards (Papenfuss and Harris 1990). The dense root structure of African ice plant and lack of leaf litter and duff produced by the species appear to provide poor burrowing conditions for legless lizards. Adults feed on small insects, larvae of insects, spiders, and other small food items. They are livebearing and 1-4 young (usually 2) are born in the fall between September and November (Miller 1944). Young and adults spend most of the time underground, but may rest just under the surface of the sand or leaf litter layer.

The activity of legless lizards is controlled by temperature. The optimum temperature is from 15 degrees Celsius to 25 degrees Celsius. Below 13 degrees Celsius the lizards are inactive, although they can stand a temperature as low as 4 degrees Celsius. The lizards bask in the warm sand during the day. They are active and feed in the afternoon and evening.

Potential Presence on the Monterey Bay Shores Property

No individuals have been found on the project site.

3.2.2 California Burrowing Owl

Biological Data

The California burrowing owl is a medium-sized owl with sandy-colored, spotted plumage and long legs. Burrowing owls inhabit open grasslands, deserts, and arid scrublands with low-growing vegetation but have also been observed in back-dune habitats within the City of Sand City (Zander 1997). The availability of rodent burrows or other similar shelters for roosting and nesting is an essential component of this species' habitat. Burrowing owls feed mostly on insects, but may also eat small mammals, reptiles, birds, and carrion.

Potential Presence on the Monterey Bay Shores Property

One burrowing owl has been observed residing in the coastal dune scrub restoration area of the Edgewater Shopping Center on the east side of Highway 1 in Sand City (Zander 1997). Additional surveys for this species have not been conducted.

Burrowing owls typically nest in abandoned ground squirrel burrows and forage in grasslands. Zander Associates observed a limited amount of rodent activity on the project site and few areas for the burrowing owl to nest. No owls have been observed on site. There is a potential for the

species to move onto the site should conditions improve (i.e. increased ground squirrel activity), but the species is not currently present.

3.2.3 Sand Gilia

Biological Data

Sand gilia is a state listed threatened species and a federally listed endangered species. It was listed because of its small number of known populations, limited distribution, and potential harm to its populations from development. The gilia is a small, erect annual plant of the Phlox family. At present the gilia is found in scattered populations in coastal dune scrub and maritime chaparral communities from Moss Landing to the Monterey Peninsula. There is a large population of sand gilia on the Fort Ord property (U.S. Army Corps of Engineers, 1992). Recreational uses, such as off-road vehicles, hiking, and horse back riding, as well as the introduction of African ice plant and European beach grass for dune stabilization, threaten sand gilia populations and potential habitat.

Sand gilia prefer sandy soils in open, yet wind-sheltered areas (Dorrell-Canepa 1994). The low average rainfall (10- 15 inches) and foggy conditions around the Monterey Bay area provide sufficient moisture for gilia to survive. Gilia are most often found in level areas or on shallow slopes (up to 45 degrees), but may also occur on the cut banks of sandy drainages. In steep areas, gilia seed often washes to the bottom of the slope and germinates there. On sand dunes, gilia seem to prefer northern, western, and eastern slopes to southern slopes, which are the hottest and driest in the dunes. Gilia often thrive in slight depressions. These depressions may have higher soil moisture and dead vegetative matter, providing a slight increase in nutrients in otherwise nutrient poor soils. Found in the mid to hind dunes (coastal scrub) and in open pockets of maritime chaparral, gilia can tolerate a small amount of sand burial (probably < 1 cm). Gilia prefer stabilized sands and do not thrive in excessively windy areas. Previous physical disturbance to the sand seems to encourage germination in some areas, and healthy gilia populations may be found along old paths, in old vehicle tracks, or in areas where trenching has occurred. Gilia prefer areas with little plant competition. Associated native species include spineflower (*Chorizanthe* spp.), popcorn flower (*Cryptantha leiocarpa*) beach primrose (*Camissonia cheiranthifolia*), coast and dune buckwheat (*Eriogonum latifolium* and *E. parvifolium*), pink sand verbena (*Abronia umbellata*), sea lettuce (*Dudleya caespitosa*), beach aster (*Lessingia filangifolia*), mock heather (*Ericameria ericoides*), silver beach lupine (*Lupinus chamissonis*) and California poppy (*Eschscholzia californica* var. *maritima*). Associated plant density rarely exceeds 30% cover in dune areas surrounding the gilia populations. In maritime chaparral, gilia survives in open pockets between taller species such as mock heather (*Ericameria ericoides*) and chamise (*Adenostoma fasciculatum*).

Gilia is a self-pollinating species, but insect pollination by the bee fly has been observed in the related (non-endangered) subspecies, *Gilia tenuiflora* ssp. *tenuiflora* (Dorrell-Canepa 1994). Insect pollination of *Gilia tenuiflora* ssp. *arenaria* was never observed despite long hours in the field during the flowering stage.

Presence on Monterey Bay Shores Property

No individuals of sand *Gilia* have been found on the project site.

3.2.4 Sandmat Manzanita

Biological Data

Sandmat manzanita is a federal species of concern. Sandmat manzanita grows on pre-Flandrian dunes in the central maritime chaparral only around Monterey Bay (Griffin 1978). Sandmat manzanita is a mat- to mound-like evergreen shrub, generally less than 5 ft. tall, in the heath family. It blooms from February to May. Sandmat manzanita is well adapted to shifting sand habitat forming large circular mats and mounds. It appears to be an early to middle successional species in maritime chaparral following burn events or ground disturbance, eventually yielding to taller chamise and shaggy-barked manzanita in older stands. It is typically associated with cropleaf ceanothus (*Ceanothus dentatus*), Monterey ceanothus, deer weed (*Lotus scoparius*), heliotrope (*Heliotropium curassavicum*), and beach mock heather (Zoger and Pavlik 1987a).

Sandmat manzanita prefers windy open areas close to the ocean's sandy soils. Reproduction occurs by seed and layering. The greatest threat to sandmat manzanita, other than development, is crowding out by noxious weeds and taller species within the maritime chaparral community.

Presence on the Monterey Bay Shores Property

During previous environmental studies of the property, sandmat manzanita was not found on the project site. Plants were identified growing immediately southeast of the project site (EIP Associates 1990). In March and May 1997, Zander Associates also observed individuals of sandmat manzanita outside the project site boundary.

Effect of the Proposed Project on Sandmat Manzanita

The project is not expected to remove any individual plants of Sandmat manzanita. Proposed restoration activities will include plantings of sandmat manzanita at the base of the leeward slopes on the stabilized dunes.

3.2.5 Monterey Ceanothus

Biological Data

Monterey ceanothus is a federal Species of Concern. Monterey ceanothus is also found on pre-Flandrian dunes and flats within central maritime chaparral (Griffin 1978). This species only occurs in the vicinity of Monterey Bay with the largest population known from Fort Ord (U. S. Army Corps of Engineers 1992). Monterey ceanothus is a medium-sized evergreen shrub with pale to bright blue flowers and is a member of the Buckthorn family. It occurs in maritime chaparral and closed-cone coniferous forests in the southern Monterey Bay region. Plant species associated with Monterey ceanothus are sandmat manzanita, beach sagewort, riggut brome, cropleaf ceanothus, beach mock heather, and deer weed (Zoger and Pavlik 1987a). Removal of central maritime chaparral habitat for development is the primary threat to this species.

Presence on the Monterey Bay Shores Property

No individuals of Monterey ceanothus have been observed on the project site. Some plants have been observed outside of the eastern property boundary, in the railroad right-of-way area along with sandmat manzanita.

Effect of Proposed Project on Species

The project is not expected to remove any individual plants of Monterey ceanothus. Proposed restoration activities will include plantings of sandmat manzanita at the base of the leeward slopes on the stabilized dunes.

3.2.6 Migratory Birds

The federal Migratory Bird Treaty Act (16 U.S.C. §§ 703-712) prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, bird nests, and eggs.

Presence on the Monterey Bay Shores Property

Migratory birds have been observed at the site, or in the vicinity, that nest in the coastal strand area include western snowy plover, killdeer, arctic loon, surf scooter, and western gull.

Effect of Proposed Project on Species

Project construction in the coastal strand could result in the loss of nests of migratory birds, including those specifically protected by the Migratory Bird Treaty Act. The proposed revised project includes the implementation of a pre-construction survey to determine if migratory birds occur on the project site or in the vicinity and determine appropriate setback or avoidance measures if needed. The revised project will be set back a significantly greater distance from the mean high tide line than the previously proposed project. This will result in a greater buffer between the resort buildings and the beach, thus reducing the potential impact to migratory birds including plovers.

3.0 BIOLOGICAL DATA AND EXPECTED IMPACTS ON SPECIAL STATUS SPECIES

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4.0

MEASURES TO MINIMIZE AND MITIGATE IMPACTS TO SPECIAL STATUS SPECIES

Habitat restoration is a major component of the revised project. The HPP management program includes approximately 23.2 acres restored to foredune, secondary dune, back dune, wetland and coastal bluff habitat. This includes about 4.3 acres of living roof that will emulate coastal bluff habitat by having shallow soils and plants that are adapted to wind and salt spray. Of the 23.2 acres to be restored to native habitat, about 14 acres around the periphery of the development will be placed in conservation easements and protected in perpetuity. A public access easement will be designated on approximately six acres of the site, primarily to provide access to the beach and coastal strand areas.

Restoration efforts are intended to minimize the possible take of the Smith's blue butterfly and to minimize and mitigate potential local and cumulative impacts on the western snowy plover and Monterey spineflower. Other coastal dune species are expected to be introduced through restoration of habitat and planting or relocation of individuals of selected species into restored habitat areas.

The following provides a description of restoration goals and techniques and how they will be specifically applied to the Monterey Bay Shores eco-resort. Goals and techniques specific to the retained biologist are called out in Appendix B, Duties of the Retained Biologist.

4.1 BIOLOGICAL GOALS

To establish an effective program to minimize and mitigate impacts to the covered species, objectives and performance standards are presented in Section 5.3. The biological goals of this HPP are as follows:

- Avoid take of Smith's blue butterfly and western snowy plover.

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4.0 MEASURES TO MINIMIZE AND MITIGATE IMPACTS TO SPECIAL STATUS SPECIES

- Avoid or minimize potential adverse impacts of the project on Smith's blue butterfly, western snowy plover and Monterey spineflower survival and recovery.
- Provide and manage nesting, brooding and foraging habitat for the western snowy plover in the coastal strand areas of the project site.
- Contribute to regional recovery efforts for the western snowy plover in the Monterey Bay area.
- Preserve and maintain existing buckwheat plants for use by Smith's blue butterfly.
- Provide and maintain newly-created, high quality, habitat for Smith's blue butterfly in the restored dune areas on the project site, as indicated in the *Landscape Plan*.
- Regulate construction activities to maintain Smith's blue butterfly so that it may expand on to newly created habitat once is available.
- Restore degraded (and create new) plant communities to improve native species composition and increase occurrences of Monterey spineflower and other locally native species on site.

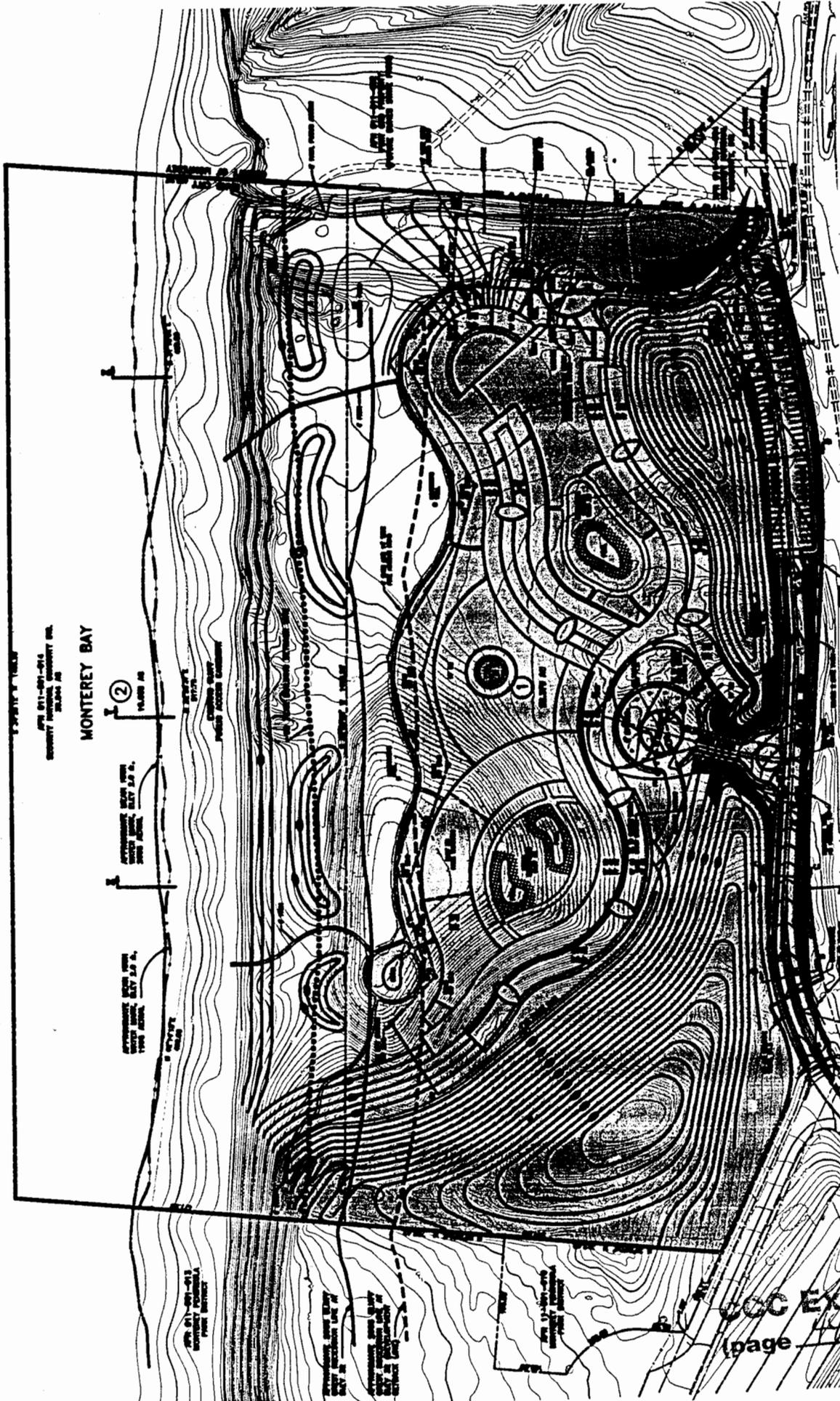
4.2 DELINEATION AND DESCRIPTION OF MANAGEMENT AREAS

Specific management areas have been designated for the project site based on the development plan and the restoration and management goals for specific areas of the site. Management areas have been identified by combining the features identified in the *Landscape Plan, Monterey Bay Shores Ecoresort, Wellness Spa, and Residences* ("Landscape Plan," Appendix C, Rana Creek 2008). Four management areas have been designated (Figure 6, Habitat Management Areas). Management Areas 1, 2 and 3 are the focus of proposed restoration activities and Management Area 4 comprises the developed area. A brief description of each management area follows.

4.2.1 Management Area 1 *Beach and Strand (3.9 acres)*

This management area includes the beach and strand habitat from the mean high tide line inland to approximately the existing 20-foot elevation contour and is shown on the *Landscape Plan* as "beach." The area currently supports beach and strand vegetation and is accessible through posted lateral beach access. Principally during the 1990s, some snowy plover nesting occurred in

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Source: EMC Planning Group Inc. 2006, Bestor Engineers 2006, SNG 2006, Rana Creek 2008

- LEGEND:
- Management Area 1: Beach and Strand
 - Management Area 2: Foredune / Secondary Dune
 - Management Area 3: Back Dune
 - Management Area 4: Developed

Figure 6
Habitat Management Areas
 Monterey Bay Shores Habitat Protection Plan



this area. An additional unsuccessful additional nest was observed in 2000. Since that time, the number of nesting plovers has steadily declined in this area. No nesting activity was observed in the area in the past 8 years until the spring of 2008 when one nest was observed within this management area on the northwest corner of the project site.

4.2.2 Management Area 2

Foredune / Secondary Dune Area (7.9 acres)

The westerly edge of Management Area 2 is currently comprised of a relatively steep bluff that rises about 20- to 30-feet above the beach and strand toward the bay. At the top of the bluff, the topography transitions to a more level plateau. A portion of the eastern boundary of Management Area 2 contains slopes of the abandoned sand pit, which steeply drops from about the 40-foot elevation contour to the 10-foot elevation contour at near a 1:1 slope. The vegetation types found in this management area include bare sand and iceplant- dominated areas with some pioneer dune vegetation along the level plateau. Management Area 2 will include the following communities identified on the *Landscape Plan*: foredune, secondary dune, and wetland (the wetland community does not currently exist. This community will be established as part of a percolation basin).

Several topographic features existing in Management Area 2 will be modified for the revised project. The topography will be modified by lowering the grade of the level plateau area, filling in the sand pit and creating a more gradual slope rise from the beach and strand to the development area. This modification will result in the inland extension of the beach and strand habitat. Small sand mounds and topographic undulations (no greater than 4 feet) will be incorporated into the gradual slope with the intent of creating planting areas for strand vegetation and providing some newly created refuge for snowy plovers that may use the area for nesting.

This management area also includes three vertical beach accessways, a public vista, and a storm water percolation area.

4.2.3 Management Area 3

Back Dune Area (9.0 acres)

Management Area 3 follows the southern and eastern property boundaries and includes the large dune in the southeast corner of the site as well as additional areas also previously disturbed through sand mining activities. Although the existing habitats in this area are primarily ruderal/disturbed, bare sand and iceplant mats, there are also Monterey cypress trees, remnant coastal scrub species and patches of Monterey spineflower. Several smaller dune formations,

4.0 MEASURES TO MINIMIZE AND MITIGATE IMPACTS TO SPECIAL STATUS SPECIES

impacted by previous mining, also exist. This Management Area is identified on the *Landscape Plan* as "Back Dune."

4.2.4 Management Area 4 Developed Area (8.2 acres)

Management Area 4, the proposed development area, includes most of the sand pit and the plateau north of the pit. Most of the pioneer dune vegetation identified on the site is included in this management area along with bare sand, ruderal/disturbed and iceplant dominated areas. A contiguous strip of coastal scrub/iceplant mix occurs at the northern edge of the property and is included in this management area. The eco-resort project has been created with the intent of minimizing impervious areas and incorporating as much vegetation as feasible. Management Area 4 can be broken down into two parts: 1) planted/landscaped areas, which encompass approximately 6.3 acres and include landscaping, living roof, etc., and 2) impervious areas, which encompass approximately 1.9 acres and include courtyards, a parking area, and the access roads. The topography in Management Area 4 will be modified through a combination of excavation and fill. Management Area 4 includes the following communities identified on the *Landscape Plan*: coastal bluff living roof, hotel and residential landscapes, and living pool.

4.3 BIOLOGICAL OBJECTIVES FOR SPECIFIC MANAGEMENT AREAS

The biological goals of the HPP include restoration of approximately 23.2 acres of area on the Monterey Bay Shores project site, preservation and expansion of habitat and potential habitat for the Smith's blue butterfly and other species associated with coastal scrub habitat, and protect and restore existing and potential nesting/breeding habitat designed to try to attract western snowy plover to the site. The biological objectives for meeting these goals in each management area have been set out in this HPP (and the *Landscape Plan*) and are defined as follows:

4.3.1 Management Area 1

- Initially remove all exotic vegetation within this management area and control exotic plant species so that exotics represent no more than 1 percent of the vegetative cover.
- Replant, restore and establish coastal strand vegetation in accordance with the *Landscape Plan* by collecting native seeds from the project site and within the project vicinity prior to

grading. To encourage establishment, the seedlings will be planted after the first rain event in the fall, and they will be fertilized and watered by hand immediately after planting.

- Following the planting of coastal strand plants in this management area, establishing permanent monitoring transects designed to cover a minimum of 5 % of the revegetated area. To monitor vegetation establishment success, data will be collected annually by the retained biologist using the line intercept method.
- Require the retained biologist to conduct surveys within this management area for snowy plover prior to, and throughout, the breeding season (mid-March through mid-September), prior to, during, and after construction and annually thereafter so long as the Pacific Coast distinct population segment of the western snowy plover remains listed under the federal Endangered Species Act.
- If plover nests are found in this management area during surveys, the retained biologist, in coordination with the construction supervisor, resort manager or property owner, is authorized to restrict access to nesting snowy plover areas through implementation of an adaptive management plan, and through the erection of exclosures and signage to protect such nests during the breeding season.
- In accordance with the *Landscape Plan*, arrange vegetation and 1 to 4 foot high microtopographic contouring designed to attract snowy plovers to potentially use, nest and breed within this management area.

4.3.2 Management Area 2

- Initially remove all exotic vegetation within this management area and control exotic plant species so that exotics represent no more than a 1 percent of the vegetative cover.
- Replant, restore and establish coastal strand vegetation in this management area in accordance with the *Landscape Plan* by collecting native seeds from the project site and within the project vicinity prior to grading.
- Provide irrigation during the vegetation establishment period (estimated to be up to three years).
- Pursue the goal of 20% revegetation cover of this management area, in accordance with the *Landscape Plan*.
- Following the installation of coastal strand plants in this management area, establish permanent monitoring transects designed to cover a minimum of 5% of the revegetated

4.0 MEASURES TO MINIMIZE AND MITIGATE IMPACTS TO SPECIAL STATUS SPECIES

area. To monitor vegetation establishment success, data will be collected annually by the retained biologist using the line intercept method.

- Require the retained biologist to conduct surveys within this management area for snowy plover prior to, and throughout, the breeding season (mid-March through mid-September), prior to, during, and after construction and annually thereafter so long as the Pacific Coast distinct population segment of the western snowy plover remains listed under the federal Endangered Species Act.

4.3.3 Management Area 3

- Initially remove all exotic vegetation within this management area and control exotic plant species so that exotics represent no more than 1 percent of the vegetative cover.
- Maintain the slopes of the restored, rehabilitated or newly created dunes by applying vertical straw mulch to the leeward slopes and applying hydroseed and erosion control mats on windward slopes prior to planting.
- Conduct surveys within this management area for Smith's blue butterfly every two weeks from mid-May through mid-August prior to, during, and after construction and annually.
- Conduct surveys for and document the extent of Monterey spineflower within this management area prior to, during, and after construction and annually.
- Maintain existing buckwheat plants as potential habitat for Smith's blue butterfly.
- Establish coastal dune vegetation to provide new habitat for Smith's blue butterfly and Monterey spineflower in this management area by collecting native seeds within the project vicinity prior to grading, broadcasting seeds and planting seedlings following the installation of straw mulch after the first rain event in the fall, and fertilizing and watering by hand immediately after planting.
- Provide irrigation through the vegetation establishment period (estimated to be up to three years).
- Following the installation of coastal strand plants in this management area, establish permanent monitoring transects designed to cover a minimum of 5% of the revegetated area. The goal for revegetation of this management area is 80% cover. To monitor vegetation establishment success, data will be collected annually by the retained biologist using the line intercept method.

4.3.4 Management Area 4

- Construct eco-resort/residential development, public parking, and access/bike path.
- Encourage use of native dune and coastal scrub species in the development landscape in accordance with the *Landscape Plan*.
- Authorize the biologist to monitor and, in coordination with the construction manager, resort operator or property owner, regulate activities that may significantly and adversely affect the snowy plover during the breeding season (e.g., redirect lighting away from plover nesting).

4.4 MANAGEMENT ELEMENTS AND TECHNIQUES

The following provides descriptions of management techniques that will be used to meet the goals for each management area consistent with the *Landscape Plan*. Techniques applied may be modified or replaced in order to better meet the restoration goals set in this HPP. This adaptive management approach is intended to allow for the identification and correction of problems as they arise. The following management techniques, and the specific prescriptions for each management area are intended to be guidelines and may be modified as monitoring suggests is needed to achieve the management goals and to harmonize those goals with legal obligations and with operation of the resort.

4.4.1 Avoidance of Sensitive Habitat and Potential Habitat

While balancing public access obligations as required by the Coastal Act, the Monterey Bay Shores eco-resort has been planned and designed to minimize direct removal of the most viable potential nesting/breeding habitat for the western snowy plover and for all Smith's blue butterfly habitat. Additional management elements and techniques will be incorporated into project construction activities to avoid disturbance of nesting/breeding plovers, if they are present on or immediately adjacent to the site. Discussions of these management elements and techniques are provided in this HPP.

4.4.2 Dune Creation/Stabilization

In accordance with the LCP, dune creation/stabilization will be achieved through a combination of grading and recontouring, installing erosion control blankets, temporary snow fencing, retaining walls and other physical controls where required, straw plugging or crimping and revegetating. Finished slopes of newly created or recontoured dunes will be designed in

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collaboration with the project geotechnical engineer to ensure that the slopes are in a stable configuration prior to any revegetation work. Steepness of slope, wind direction and soil substrate must all be considered in the design of new dunes and recontouring of existing dunes. Permanent retaining walls may be utilized at the base of some of the newly created dunes to retain desired slope and aspect. Once the dunes are constructed and/or contoured in conformance with the project geotechnical engineer's recommendations, there are several methods that will be considered to stabilize the barren sand depending, in large part, on finished slope and exposure. Initial treatments will follow predetermined guidelines that will be different for the leeward and windward slopes (see Section 4.5). However, to achieve maximum success, the retained biologist will be authorized to implement adaptive management based on monitoring results to allow modifications to the guidelines as the effectiveness of specific stabilization treatments in specific situations can be determined on the ground.

4.4.3 Control of Exotic Species

Iceplant is the predominant exotic plant species on the Monterey Bay Shores site. In order to limit its spread in graded areas and enhance habitat values in proposed restoration areas, iceplant will be treated and eliminated prior to site grading. Several methods are available for removal of iceplant. The most efficient method is to spray with a glyphosate-based herbicide (e.g. Roundup©) and allow the iceplant to die on-site. Dead iceplant mats will be removed in all areas proposed for grading. In restoration areas where no grading will occur (e.g. east-facing slope of large dune), dead iceplant may be left in place to dry, providing mulch for revegetation efforts and a temporary erosion control method to hold soil in place.

Herbicides will be applied by a certified applicator at a rate consistent with label directions. Selective, low-drift spray equipment will be used to decrease the possibility that the herbicide will drift inappropriately. Special care is required in restoration areas not proposed for grading where iceplant and native plants (such as buckwheat) are growing together. The applicator will be informed of the need to protect native plants in such areas, and native plants will be flagged for avoidance. It is necessary to remove iceplant by hand within a one- to two-foot diameter around seacliff buckwheat, coast buckwheat, and Monterey spineflower plants in these areas. Effectiveness of the herbicide will be monitored and, if required, additional applications will be made, but not earlier than six weeks after the previous application. Multiple applications may be necessary to completely eliminate the iceplant.

European beachgrass is not currently present on the Monterey Bay Shores site. However, should it become established, it will also require control and removal to protect native dune vegetation. Removal of European beachgrass will occur as soon as it is observed and will be done by hand. If a stand of European beachgrass cannot be controlled by hand, then spraying may be required.

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Spraying will be done as described for iceplant but will not occur in the beach and strand zones during the nesting/breeding season of the snowy plover.

4.4.4 Revegetation and Habitat Enhancement

To ensure that proposed revegetation efforts will be successful, physical characteristics of the restoration areas must be compatible with the plant species considered for revegetation in the *Landscape Plan* and consider the habitat requirements of the covered wildlife species. These characteristics include topography, soil conditions, hydrology, and microclimatic features. For example, Smith's blue butterfly typically uses buckwheat plants that are located in sheltered locations and are not exposed to the full force of the prevailing winds, therefore, planting of buckwheat on exposed ridgetops or on the windward slopes of dunes will not likely yield as substantial an increase in habitat value for the butterfly as would planting in sheltered depressions. Planting of buckwheat, or other species, may also present difficulties if soil conditions are not suitable for plant survival. Site preparation techniques to improve soil conditions at the project site may include: removal of exotic vegetation, application of fertilizer, raking, and irrigation.

The steps that will be followed in preparation for habitat restoration at the project site include the following:

Seed Collection

Seed will be collected from specified native plants either on site or in nearby areas at least one year prior to being needed for revegetation. Plants considered for seed collection include seacliff buckwheat, coast buckwheat, Monterey spineflower, sand gilia, Monterey ceanothus, sandmat manzanita and a full palette of other coastal strand and dune scrub species. Seed collection techniques for target species will be as follows.

- Buckwheat - Seed will be collected from the seacliff buckwheat and coast buckwheat plants within the project vicinity. Seed collection for this species is typically conducted in late summer.
- Monterey spineflower - Collection of Monterey spineflower seed is typically conducted in June through August. The entire inflorescence is collected when it appears brown and dried. It is not necessary to separate the seeds from the inflorescence.
- Sand gilia - Collection and propagation of sand gilia will follow methods described by Dorrell-Canepa (1994). The seed will be collected when capsules are just starting to dehisce, late April through early June. Bi-weekly visits to the site will ensure proper timing of seed collection. Seed can be collected by inverting the ripe capsules and gently tapping

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contents into an envelope. The seed can be stored without refrigeration for up to four years.

- Monterey ceanothus - Seed collection will be conducted March through May. Cuttings may also be collected in fall or winter but are difficult to propagate and therefore not always a reliable means of providing material for revegetation.
- Sandmat manzanita - Cuttings and seeds of this species can be collected for propagation. Seeds will be collected March through May and cuttings can be taken in fall or winter.

Seeding

Seeding will primarily be applied as hydroseed on to re-contoured dune slopes and crimped in with straw or covered with erosion control blankets. However, as part of the adaptive management concept mentioned above, hand-broadcast seeding may occur in certain areas. Specific seed mixes will be prepared based on the goals of the *Landscape Plan*.

Propagation

Propagation of seed collected for all species will be achieved through germination in stubby supercell containers. Cuttings will be rooted in a suitable medium and transferred to supercell containers as appropriate. Propagation will be the responsibility of an experienced nurseryman or restoration specialist under contract to the property owner or resort operator.

Planting of Seedlings and Cuttings

Planting of seedlings and rooted cuttings will occur in the fall after the first rains and before the onset of heavy winter precipitation. Planting specifications for each management area are provided in a subsequent section of this plan. Each seedling or cutting will be planted by hand, fertilizer will be added to the planting holes, and small wells will be formed around each planting hole to help retain water for individual plants.

4.4.5 Transplant and Salvage of Plants

Prior to land disturbance on the site, seeds, cuttings and/or salvaged plants of native dune species will be collected and properly stored, or immediately transplanted into restoration areas on the site (or other appropriate receiver sites) not affected by construction activities. Seeds will be collected as described previously. Cuttings from specific species will be collected and propagated for later installation into the restoration areas. Some of the salvaged plants may be transplanted into containers and maintained in a nursery until the created/recontoured dunes on

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the site are prepared for planting. Other plants may be directly transplanted into portions of the restoration areas unaffected by project construction.

4.4.6 Pre-construction Surveys in Developed Areas

Prior to initiation of construction, surveys will be conducted within the areas proposed for disturbance to avoid take of Smith's blue butterfly and the western snowy plover, if present.

Smith's Blue Butterfly

Surveys will be conducted prior to construction to identify and flag each plant of seaciff or coast buckwheat within the areas proposed for development. Known buckwheat plants and any other buckwheat plants located near the proposed construction area will also be flagged.

Western Snowy Plover

Pre-Construction Surveys and Construction Monitoring. Prior to the issuance of a building or grading permit by Sand City for the revised project, the applicant shall enter into an agreement with a qualified biologist approved by the City and the USFWS to provide on-site surveys monitoring for any western snowy plover nests during the nesting season. The retained biologist shall conduct surveys along the sandy beach and strand habitat prior to construction if the construction is expected to begin or continue during prime plover nesting season. If any plover nesting is observed on site, the biologist will immediately establish exclosures around the nesting area during fledging, along with appropriate signage and protective measures to avoid take of the plover. The biologist and construction manager will be responsible for directing construction activities away from beach and strand areas if active nests are found.

Pre-Construction Conference. The retained biologist will hold a pre-construction conference with all construction equipment operators and field supervisors to educate them on western snowy plover and sensitive species sightings, known locations and avoidance. All construction equipment operators and field supervisors will be required to sign an acknowledgement that they have been informed and advised of sensitive species on site and how to address them.

4.4.7 Habitat Protection During Construction

A biologist will be retained to manage special status species and snowy plover habitat or potential habitat. The biologist will be retained prior to initiation of any construction activities on the site and will monitor site preparation and grading activities. When grading is actively in progress, full-time monitoring will occur. The biologist will be present to assist in avoiding any take of special status species and will have the authority, in consultation with the site

4.0 MEASURES TO MINIMIZE AND MITIGATE IMPACTS TO SPECIAL STATUS SPECIES

superintendent, construction manager, and property owner to limit or stop construction activities in the area, if necessary. The biologist will be trained in plover management and protection techniques and empowered to manage access to the beach, impound unrestrained pets and otherwise ensure the HPP is followed. The biologist will use his or her best efforts to work with other land managers or their designees in the Sand City area, if available, to assist in pursuing regional plover management and protection goals.

The biologist will also coordinate and oversee implementation of the following protection measures:

A temporary fence and signage will be erected no more than 10 feet beyond the limit of grading in order to assure that construction activities do not encroach into habitat areas. The biologist will coordinate with the site superintendent, construction manager and/or property owner concerning the placement of these fences and signs. Signs will be placed on the fence at appropriate intervals alerting equipment operators of the presence of sensitive species. Signs will include the following language:

“NOTICE: SENSITIVE HABITAT AREA. GRADING PROHIBITED.”

The biologist will monitor activities of the snowy plover, if any, throughout construction of the project. Work in the beach and strand zone will be restricted in accordance with direction given by the biologist based on observations of plover use of the site, if any, and in the vicinity, in coordination with the site superintendent, construction manager and/or property owner.

4.4.8 Post-Construction Beach and Strand Activity Management Elements, Techniques and Restrictions

The following management elements and techniques will be used protect potential snowy plover habitat in Management Areas 1 and 2, as indicated. The restrictions will be monitored and enforced by the biologist and any noncompliance will be reported to and discussed with the property owner and/or manager to avoid take and minimize or eliminate adverse impacts.

Preservation and Establishment of Dynamic 2-Acre Nesting Protection Zone

Based on consultations with the retained biologist, the applicant will establish (upon opening of the resort) an initial 2-acre “nesting protection zone” on the sandy beach and/or strand in a way designed to attract snowy plovers to nest during the annual nesting season. The area will preserve potential snowy plover nesting habitat. The 2-acre area will be “free-floating” or dynamic, meaning that its location would or could change each nesting season based on recommendations of the retained biologist, balancing public access. The biologist may consider

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past nesting, weather events, predation threats, and on-the-ground biological and habitat conditions and factors in defining the initial area and in deciding whether to divide the 2-acres into different locations and area sizes on the sandy beach and strand.

Dynamic Nesting Protection Zone Expansion Mechanism

If the biologist identifies numerous plover nests, the 2-acre nesting protection zone will be relocated or expanded, if necessary, for the protection of the plover nest(s), balancing public access with the plover protection. In such an event, if necessary, additional expansion area of up to five acres will be provided within the area bounded by the 10 MSL contour line on the sandy beach, the 2058 bluff crest recession line, and the two resort beach trails on the north and south (with a 25 foot buffer), respectively.

Adaptive Management and Access Plan

Based on consultations with the retained biologist and the City of Sand City, the applicant will prepare an adaptive management and access plan for the nesting season, designed to respond to biological conditions as they change on the site from year-to-year, and as the dynamic nesting protection zone shifts and/or expands from year-to-year. The access plan will include strategically-placed educational and directional signage, pet restrictions, provisions for fencing, as necessary, and the creation and establishment, and in-season adjustment of enhanced coastal strand habitat area designed to re-attract plover nesting. Lighting at the resort is being designed to minimize impacts to wildlife, including the plover. Beach-raking will be prohibited and a litter control plan will be implemented. The plan will also include measures to control iceplant or European beachgrass which can interfere with or diminish plover habitat.

Annual Resort Operations Review

The retained biologist will review the resort operations affecting the biological conditions prior to the annual plover nesting season to recommend adjustments, where feasible, in resort operations to promote plover nesting.

Mandatory Employee Biological Education

Upon hiring, each employee will be required to complete an educational seminar on the site's biological resources including the snowy plover and plover protection measures.

Predator Management Plan

Recognizing more recent studies indicating that predators represent a greater threat to plovers than previously thought (and often a greater threat than human activities), the applicant will, in coordination with a biologist, and prior to the opening of the resort, prepare a predator management plan to help ensure that plovers nesting on the site are protected from predation to the extent feasible.

Coordination with Sand City and State Parks on Plover Protection and Management

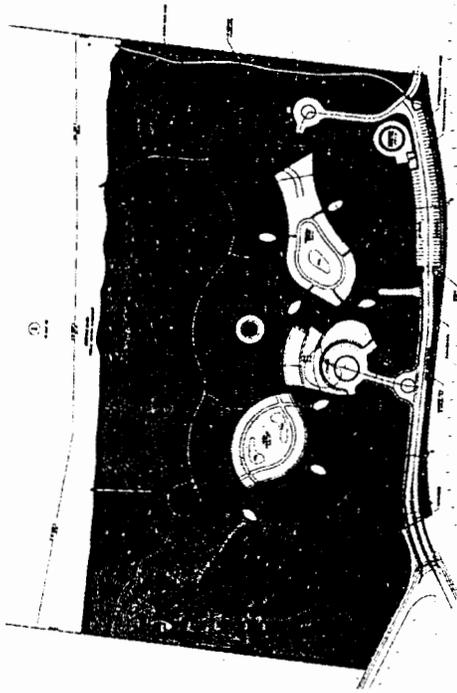
The applicant proposes a coordination program with the City and State Parks for plover protection along the Sand City coastline. Thus, the retained biologist would work with Sand City and State Parks officials to ensure that protection efforts are mutually re-enforcing. Part of the required coordination would include evaluation of obtaining conservation easements or other habitat protection agreements with neighboring landowners designed to enhance the existing plover protection. As noted below, 15 percent of the Monterey Bay Shores Environmental Trust funds would be available to assist the City in covering costs of the coordination effort, including the purchase of additional conservation easements if the City decided after study that such a purchase would be beneficial and feasible.

4.4.9 Permanent Protection of Restored Habitat Areas

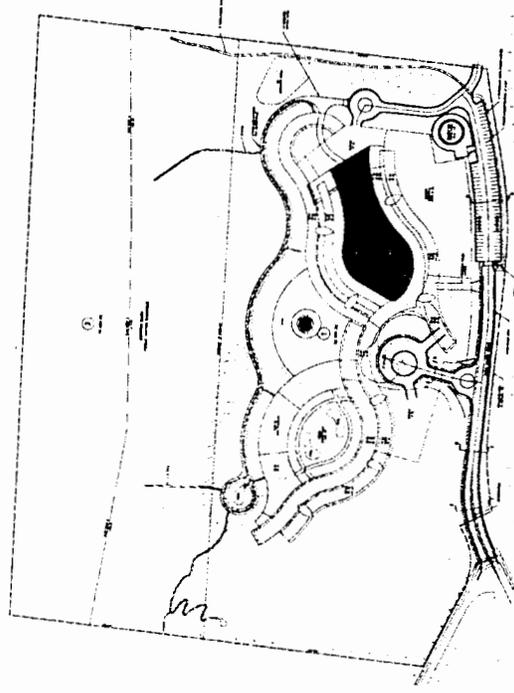
In order to provide for the long-term protection of restored sensitive habitat areas on the project site, the property owner will record conservation easements in perpetuity for dune habitat restoration areas. These areas are shown on Figure 7, Land Use Easements. These conservation easements will permit the use of the areas only for purposes of habitat restoration, enhancement, protection, and activities consistent therewith, and will prohibit further development of those areas. Deed restrictions will be recorded with the County.

Monitoring and Maintenance

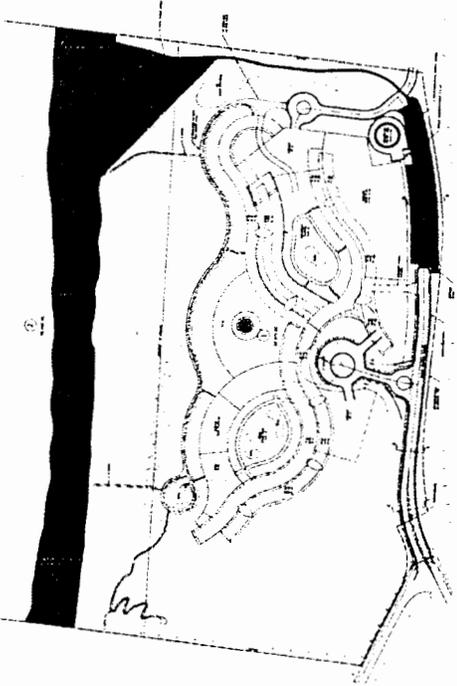
After construction is complete and the project is operational, the Monterey Bay Shores Environmental Trust, its successors and/or assigns will continue to provide funding for the retained biologist for a minimum period of five years to monitor the success of the restoration efforts relative to the snowy plover and perform other functions identified herein. The biologist may participate in the annual monitoring work on the plover conducted by the Point Reyes Bird



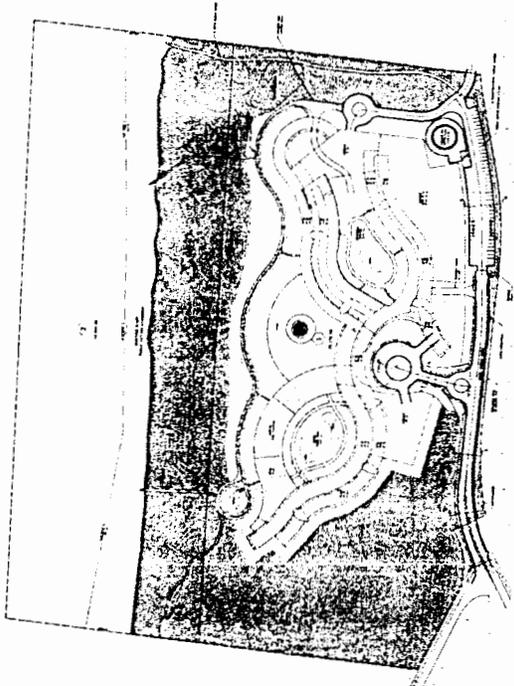
Habitat Restoration 23.22 Acres



Botanic Garden 0.92 Acres



Public Access Easement 5.69 Acres



Conservation Easement 13.85 Acres

Source: EMC Planning Group Inc. 2008, J.D. Powers and Associates 2008, Bestor Engineers 2008

Figure 7

Land Use Easements

Monterey Bay Shores Habitat Protection Plan



Observatory and may also participate in larger patrol/resource management efforts focused on plover recovery in Sand City and the Monterey region. The biologist may coordinate with adjacent parks to provide similar signage and access directions. The biologist will also track the success of dune restoration efforts and monitor use of the site by Smith's blue butterfly. The goal of placing a biologist on the site is to ensure a quick response to problems that may arise in resource protection.

The biologist will prepare an annual report. Annual reports will be forwarded to the Sand City Planning Department and the Service outlining progress of the restoration efforts, issues or problems encountered, and suggested remedies. Annual reports will include:

1. A brief summary or list of project activities accomplished during the reporting year;
2. A brief description of new project impacts, if any;
3. A brief description of any conservation strategy implemented;
4. A discussion of monitoring results (compliance, effects and effectiveness monitoring) and survey information;
5. A description of circumstances that made adaptive management necessary and what new management approaches have been implemented;
6. A description of any changed or unforeseen circumstances that occurred and how they have been dealt with;
7. A discussion of funding expenditures, balance, and accrual; and
8. A description of any minor or major amendments.

In order to quantify changes in the vegetation cover over time, several permanent line transects will be established in the restoration areas. Data gathered from these transects will provide adequate assessments of the relative success of the restoration activities. Vegetation cover will be assessed using standard line-intercept methods (Canfield 1941). Data collected will include species types, relative cover, species abundance, species diversity, and relative vigor of individual plants. Transect data will be collected prior to any management action to provide a baseline from which to compare future conditions. Data on seacliff and coast buckwheat plants will be gathered by monitoring individual plants, and will include height, relative cover, and health. Data will be collected once a year. Data will be assessed based on the performance criteria set forth in Table 1, Vegetation Performance Criteria:

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Table 1 Vegetation Performance Criteria

Time After Revegetation	Percent Cover*	Survival Rate of Planted Species
Year 1	30%	95%
Year 5	50%	55%
Year 10	70%	50%
Year 25	80%	40%
Year 30	90%	30%

Note: * Percent Cover Expected is a function of the percent cover goal for each Management Area. For example, the goal for Management Area 1 is only 15% vegetative cover due to the additional habitat goals for western snowy plover, therefore successful revegetation during Year 1 would only be 4.5 %.

Vertical color infrared aerial photographs will be obtained of the project site in the fifth year of the project. These aerials will provide documentation of vegetation cover over the entire site. In addition to aerial photography, six permanent photo points will be established and both color prints and slides of the revegetation areas will be obtained each year for the first five years. Copies of the photographs will be included in the annual progress reports to the Sand City Planning Department.

Surveys to assess use by Smith's blue butterfly of revegetated and enhanced habitat areas will be conducted between May and July each year. Data to be collected will include number of adults observed flying, location of butterfly use, plant species of use (if known), date, time, and weather conditions. Because a goal of this HPP is to increase the habitat use and possible population numbers of Smith's blue butterfly on the site, these surveys will document observable changes in these parameters.

Maintenance activities for Management Areas 1, 2, and 3 will be conducted throughout the monitoring period, as applicable. A maintenance program providing recommended activities for maintaining the habitat areas in perpetuity will be prepared and included in the five-year assessment report referenced above. The property owner(s) shall ensure that long-term maintenance of the habitat is achieved. The types and schedule of maintenance activities for the Management Areas during the five-year establishment period are described in the following section.

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4.5 SPECIFIC MANAGEMENT TECHNIQUES FOR EACH MANAGEMENT AREA

This section provides specific prescriptions for each management area and includes guidelines for applying the various management techniques described previously. In accordance with the adaptive management approach to restoration that will be used for this project, these management area prescriptions are guidelines and may be modified as restoration activities proceed.

4.5.1 Management Area 1: Beach and Strand

Avoidance of Take and Sensitive Habitat

The retained biologist to conduct surveys within this management area for snowy plover prior to, and throughout, the breeding season (mid-March through mid-September), prior to, during, and after construction and annually thereafter so long as the Pacific Coast distinct population segment of the western snowy plover remains listed under the federal Endangered Species Act.

If plover nests are found in this management area during surveys, the retained biologist, in coordination with the construction supervisor, resort manager or property owner, to restrict access to nesting snowy plover areas through implementation of an adaptive management plan, and through the erection of exclosures and signage to protect such nests during the breeding season.

In accordance with the Landscape Plan, vegetation will be arranged and 1 to 4 foot high microtopographic contouring will be built in order to attract snowy plovers to potentially use, nest and breed within this management area.

Control of Exotic Species

Iceplant and/or European beachgrass will be prevented from establishing in this management area through an active eradication program. Plants of iceplant or European beachgrass will be removed by hand or, if necessary, through careful application of herbicide.

Habitat Protection During Construction

The retained biologist to conduct surveys within this management area for snowy plover prior to, and throughout, the breeding season (mid-March through mid-September), prior to, during, and after construction and annually thereafter so long as the Pacific Coast distinct population segment of the western snowy plover remains listed under the federal Endangered Species Act.

If plover nests are found in this management area during surveys, the retained biologist, in coordination with the construction supervisor, resort manager or property owner, will be authorized to restrict access to nesting snowy plover areas through implementation of an adaptive management plan, and through the erection of exclosures and signage to protect such nests during the breeding season.

Beach and Strand Activity Restrictions

- Post signs at points of vertical access requiring pets to be leashed and requiring users to pack out what they pack in to the beach.
- Limit vertical access points, as determined by the biologist in coordination with the construction manager or resort/property manager, during snowy plover nesting season if necessary to protect nesting and breeding by the plovers.
- Place refuse containers with lids that tightly close at all beach access points and regularly clean refuse areas.

Monitoring and Maintenance

The retained biologist will monitor the success of the restoration efforts relative to the snowy plover annually. The biologist will have the ability to direct use of sensitive beach and strand areas accordingly. The purpose of the retained biologist is to facilitate implementation of an adaptive management program and to ensure a quick response to problems. Annual reports will be prepared by the biologist as described in Section 4.4.9 above.

Success Criteria

Success criteria are used to set a minimum standard at which habitat restoration or revegetation activities are able to be self-sustaining or have met a specific goal. For instance, documented use of the restored habitat areas by one successful nesting western snowy plover pair within ten (10) years following completion of construction would meet the specific goal of attracting nesting plovers back to the project site. However, the return of a special status species to an area should

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not be the sole criteria used to judge the success of habitat restoration activities because many special status species, including birds, are highly mobile and may not return to a site for many years regardless of its habitat restoration efforts. Therefore, a second criterion, such as the success of revegetation efforts, can be used to judge the success of habitat restoration activities. For the purposes of this HPP, if snowy plover are not observed utilizing the restored habitat areas within ten (10) years after construction, success will be defined by documenting that the proposed native coastal strand vegetation goals for Management Areas 1 and 2 have been established. If plover does not return to the site, the need for adaptive management may be required.

Permanent Protection

A public access easement with access limitations for resource protection consistent with provisions of the Sand City LCP and the Coastal Act public access provisions will be recorded on the public records for this management area.

4.5.2 Management Area 2: Foredune / Secondary Dune

Avoidance of Take and Sensitive Habitat

The retained biologist to conduct surveys within this management area for snowy plover prior to, and throughout, the breeding season (mid-March through mid-September), prior to, during, and after construction and annually thereafter so long as the Pacific Coast distinct population segment of the western snowy plover remains listed under the federal Endangered Species Act.

If plover nests are found in this management area during surveys, the retained biologist, in coordination with the construction supervisor, resort manager or property owner, to restrict access to nesting snowy plover areas through implementation of an adaptive management plan, and through the erection of exclosures and signage to protect such nests during the breeding season.

In accordance with the Landscape Plan, vegetation will be arranged and 1 to 4 foot high microtopographic contouring will be built in order to attract snowy plovers to potentially use, nest and breed within this management area.

Recontouring of Existing Topography

The existing bluff and coastal plateau in this management area will be graded to create a more gradual slope from the beach to the development areas. Although a percolation pond is also

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planned for this management area, the design of the pond can be contoured to meet the appropriate habitat restoration goals. Actual use of the percolation pond will only occur during a 100+ year storm event and percolation rates through the sand in this area are very high. Pondered water is not expected to occur unless a 100+ year storm event occurs. Low dunes will be incorporated as micro topography and will range in height from 1-4 feet. The low dunes will be sparsely planted with native coastal dune vegetation as shown in the *Landscape Plan*.

Control of Exotic Species

Iceplant and/or European beachgrass will be prevented from establishing in this management area through an active eradication program. Plants of iceplant or European beachgrass will be removed by hand or, if necessary, through careful application of herbicide.

Habitat Protection During Construction

Construction activities in this management area will be monitored and limited at the discretion of the biologist, in coordination with the construction manager or property owner, if necessary to protect western snowy plover nesting activities.

Revegetation and Habitat Enhancement

The low dunes created in this area and the slopes of the percolation pond will be planted with native coastal strand vegetation per the following specifications.

Site Preparation

Just prior to planting, the low dunes will be sprayed with water to assist in temporarily stabilizing the sand for planting.

Planting Specifications

Install seedlings just after the first rains in the fall and following spraying of the low dunes with water. Seed mixes and installation recommendations shall follow those listed in the *Landscape Plan, Monterey Bay Shores Ecoresort, Wellness Spa, and Residences* (Appendix C, Rana Creek 2008).

Monitoring and Maintenance

A biologist will monitor the success of the restoration efforts relative to the snowy plover for a minimum period of five years. The biologist will have the ability to direct use of sensitive beach and strand areas accordingly, in coordination with the resort/property owner.

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Success Criteria

Documented use of the restored habitat areas by one successful nesting snowy plover pair between the date of the end of construction and ten (10) years following completion of construction would meet the specific goal of attracting nesting plovers back to the project site.

Permanent Protection

A conservation easement will be recorded for this management area. The easement language will allow for maintenance and repairs of the percolation pond, as required.

4.5.3 Management Area 3: Back Dune

Pre-construction Surveys

Prior to initiation of construction, surveys for the Smith's blue butterfly will be conducted during the blooming period of the buckwheat host plants (May through August).

Transplant and Salvage

Prior to construction-related land disturbance in this area, the following activities will be conducted.

- Seed will be collected from Monterey spineflower plants that are within areas proposed for disturbance in June through August one year prior to planting of the restoration areas to allow for propagation.

Recontouring

The windward face of the large dune in the southeast portion of this management area will be recontoured along additional dunes as shown on the project plans.

Slope Stabilization

The leeward slopes of the large dune in southern portion of this management area and the newly contoured leeward slopes of the dunes in the remainder of this management area will be stabilized using vertical straw mulch per the specifications described below under revegetation and habitat enhancement. The windward slopes of these same dune areas will be stabilized using a combination of hydroseeding, erosion control blankets and temporary overhead irrigation per the specifications described below under revegetation and enhancement.

Control of Exotic Species

Any iceplant mats remaining after completion of grading and recontouring activities will be removed by hand and/or through controlled application of herbicide. Dead iceplant may be left in place as mulch. Ongoing control of exotic species is included as a maintenance task.

Habitat Protection During Construction

Habitat protection will be conducted as described in Section 4.4.7.

Revegetation and Habitat Enhancement

Planting will occur on the leeward slopes of the dunes in this management area to establish native coastal dune scrub vegetation, re-establish habitat for the Smith's blue butterfly, increase numbers of Monterey spineflower, and introduce native plant species such as sand gilia, sandmat manzanita and Monterey ceanothus to the project site. Coastal dune scrub elements, including seacliff and coast buckwheat will be planted throughout the area. Monterey spineflower will be planted in stabilized bare sand areas on slopes with north or east aspect. Sandmat manzanita and Monterey ceanothus will be planted at the base of the leeward slopes of the dunes.

Seed mixes and installation recommendations shall follow those listed in the *Landscape Plan, Monterey Bay Shores Ecoresort, Wellness Spa, and Residences* (Appendix C, Rana Creek 2008).

- Seacliff and Coast buckwheat: 400 plants
- Monterey spineflower: spread seed and plant minimum of 1,000 propagules in several areas of bare sand that total 3.4 acres.
- Sand gilia: plant minimum of 800 propagules in same areas as Monterey spineflower.
- Sandmat manzanita: plant 500 propagules near base of leeward slopes
Monterey ceanothus: plant 500 propagules near base of leeward slopes
- Monitoring and Maintenance.

Retained Biologist

The biologist will monitor the success of the restoration efforts for a minimum period of five years. The biologist will monitor the success of the slope stabilization and habitat restoration to determine:

1. If additional stabilization techniques are necessary,

2. If maintenance is required to remove exotic vegetation or improve the success of the plantings or
3. If additional plantings are needed to meet the restoration goals set forth in the Biological Objectives.

Monitoring Transects

Following installation of planting, permanent monitoring transects will be established and the end points of each transect will be marked using rebar. The number and placement of transects will be determined to ensure that a minimum of 5% of the total planted area will be covered by the transect(s) and that the data collected along the transect will provide sufficient information for determining if the success criteria are met. Data will be collected using the line intercept method.

Photo Documentation

Two permanent photo points that capture an aerial view of the management area will be established and photos will be taken annually (in the spring) for comparison. Vertical color aerial photos will be obtained after year five to assess the success of revegetation efforts.

Smith's Blue Butterfly

Use of the habitat by Smith's blue butterfly will be monitored by conducting reconnaissance surveys of the planted buckwheat plants every two weeks from May through July. Numbers of individuals and extent of areas of used will be estimated.

Maintenance

Periodic irrigation through the establishment period (typically up to three years) as required. Control exotic vegetation as needed.

4.0 MEASURES TO MINIMIZE AND MITIGATE IMPACTS TO SPECIAL STATUS SPECIES

Success criteria

Leeward slopes

- 5% cover of native coastal dune scrub species in the planted areas designated on the as-built planting plans
- 50% diversity of species planted minimum 3.4 acres of Monterey spineflower
- Survival of at least 80% of the planted buckwheat plants

Windward slopes

- Slope stability sufficient to support vegetation
- 50% cover of native coastal dune scrub species in the planted areas designated on the as-built planting plans

4.5.4 Management Area 4: Developed

Pre-construction Surveys

Prior to initiation of construction, surveys for the buckwheat host plants for Smith's blue butterfly will be conducted as described in Section 4.4.6.

Landscape Restrictions

Transition planting zones will be established between development areas and the habitat restoration areas. The transition zones will include native species but will contain no sensitive plants. Native plant species will be selected to sustain and recover from periodic disturbance when maintenance or emergency access is required. Development areas will contain a mix of native species compatible with the dune landscape. Species will be drought resistant, conforming to applicable local water conservation policies.

Lighting Restrictions

Lighting at the resort will be designed to minimize impacts to wildlife, including the plover. Possible seasonal limitations may be implemented, to be determined by the biologist in coordination with the resort operator. In general, the project design calls for lighting to be directed away from the beach and foredune.

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4.6 SPECIES-SPECIFIC MITIGATION MEASURES

This section summarizes the various measures that will be used to minimize and/or mitigate impacts on the target species. The methods for implementing these measures are described in the previous sections.

4.6.1 *Smith's Blue Butterfly*

Minimization of impacts

Designation, protection and maintenance of habitat for Smith's blue butterfly during the construction period.

Mitigation for impacts

- Protection of existing buckwheat plants
- Collection of seed, propagation, and installation of 400 seacliff and coast buckwheat plants.
- Monitoring and maintenance of habitat by on-site biologist.

4.6.2 *Western Snowy Plover*

Minimization of Impacts

- Pre-construction surveys for active breeding/nesting on the project site to avoid disturbance of nesting western snowy plover prior to and during the plover nesting season (mid-March through mid-September), if present.
- Establishment of a retained biologist position to monitor western snowy plover activity and construction activities.

Mitigation for impacts

- Expansion of beach and strand habitat in vicinity of project.
- Monitor beach access during breeding/nesting season.
- Lighting restrictions for project facilities within and adjacent to western snowy plover habitat.

4.0 MEASURES TO MINIMIZE AND MITIGATE IMPACTS TO SPECIAL STATUS SPECIES

- Creation of minor dune topography in beach expansion area.
- Establishment of coastal strand vegetation.
- Establishment of a retained biologist position specifically to monitor western snowy plover activity on the site and in the region.

4.6.3 Monterey Spineflower

Mitigation for Impacts

- Revegetation and enhancement of coastal dune scrub habitat.
- Collection and propagation of seed from Monterey spineflower plants in the proposed development areas.
- Re-establishment of approximately 3.4 acres of Monterey spineflower on the project site.

4.7 OTHER MITIGATION MEASURES

Use of Fifteen Percent of Monterey Bay Shores Environmental Trust Fund for Plover Protection

The applicant has committed a portion of the net revenues from the resort to be set aside in a trust administered by local environmental groups and the City of Sand City. The trust funds will be committed to restoring and enhancing the environment of the Monterey Peninsula. The City of Sand City (subject to final City Council approval) has agreed to contribute to the trust an amount equal to ½ percent from the transient occupancy tax to be collected by the City from the resort annually. Fifteen percent of the annual trust funds expended would be restricted to on-site western snowy plover recovery efforts (for as long as the plover remained a species listed under the Endangered Species Act).

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(page 75 **of** 70 **pages)**

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5.0 REFERENCES

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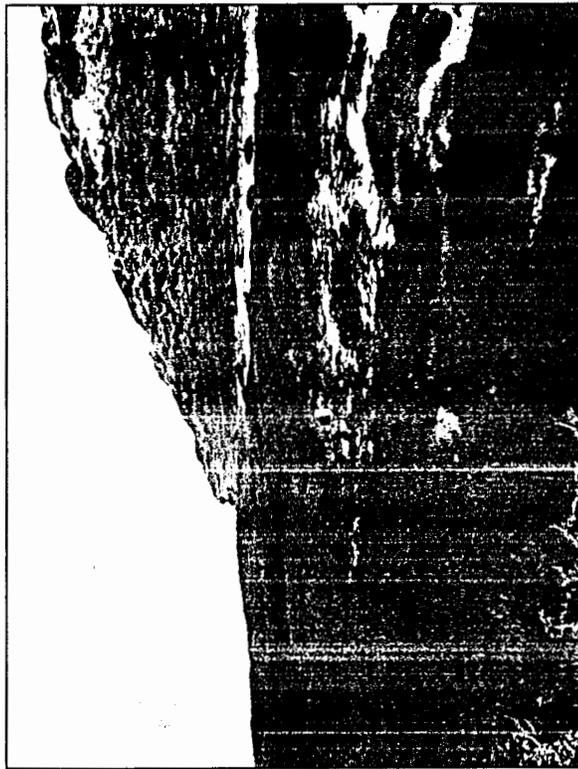
CCC Exhibit 28
(page 77 of 96 pages)

APPENDIX A

SITE PHOTOGRAPHS



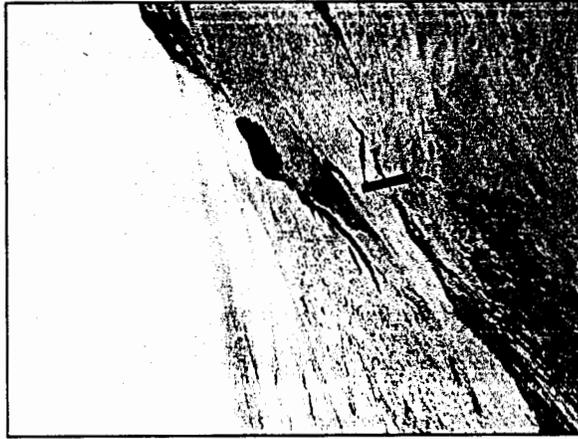
View of Pioneer Dune Vegetation with Ice Plant Mix within the northern half of the subject property



Ice plant dominated community at the northern boundary of the project site. Note the former Fort Ord in the background.



View of sand pit north of main dune area. Note OHV tracks.



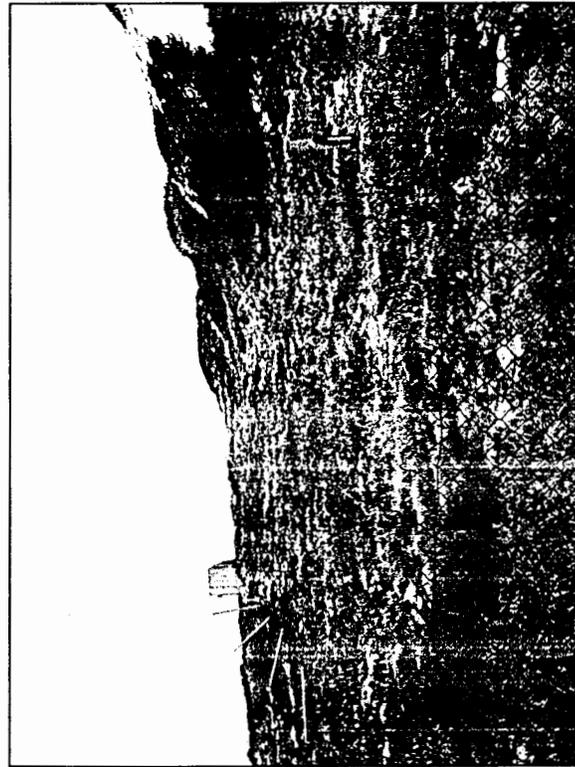
Coastal bluff and coastal strand

Source: EMC Planning Group Inc 2006

Site Photos



Disturbed vegetation along paved/gravel access road



Low density Monterey spineflower habitat at southeastern corner of project site



Coastal scrub with Seaciff buckwheat mix along northern edge of project site



Monterey spineflower

Source: EMC Planning Group Inc 2006

APPENDIX B

DUTIES OF THE RETAINED BIOLOGIST

APPENDIX B

DUTIES OF THE RETAINED BIOLOGIST

Selection

The property owner shall select a biologist who knowledgeable with habitats and special-status species that occur in coastal Monterey County, including the western snowy plover, Smith's blue butterfly (including host plants), and Monterey spineflower. The biologist shall be subject to the approval of the USFWS and will be retained prior to initiation of any construction activities on the site and will be responsible for monitoring and reporting activities, as described herein.¹ The biologist will be available to assist in minimizing effects on covered species and will have the authority to regulate, limit or stop construction activities in the area and manage access, in coordination and consultation with the property owner or construction manager. The biologist will use his or her best efforts to work with other biologists in the Sand City area, if available, to meet the objectives of regional and state goals; however, the biologist's focus will be on the Monterey Bay Shores site. The biologist may call upon other biologists to assist or provide data as necessary.

¹ To the extent there are conflicts between this Appendix, the Landscape Plan and the HPP regarding planting and seeding of plant species, the Landscape Plan shall take precedence, followed by the HPP.

Pre-Construction and Construction Activities

1. Prior to construction, a biologist shall collect seed from Monterey spineflower within areas proposed for disturbance during June through August prior to planting of the restoration areas to allow for propagation. If this biologist is not the biologist ultimately retained for the project, the seed collecting biologist shall transfer the seeds to the retained biologist.
2. Prior to construction, the biologist will conduct a preconstruction conference with all construction equipment operators and field supervisors. The purpose of the conference will be to educate workers of the potential presence of special status species on and adjacent to the project site, conduct a site visit to show participants where grading can and cannot occur, and inform operators of appropriate protocol should they encounter a covered species during grading or construction.
3. Prior to construction, the biologist will coordinate and oversee implementation of the following protection measures:
 - A temporary fence will be erected no more than 10 feet beyond the limit of grading in order to assure that construction activities do not encroach into habitat areas being preserved. The biologist will coordinate with the construction manager or site superintendent on placement of these fences. Signs will be placed on the fence at appropriate intervals informing construction workers and equipment operators of the presence of sensitive species.
 - "No trespass" signs will be posted at each vertical beach access and at the property line during construction.
4. During construction when grading is actively in progress, full-time monitoring will occur.
5. If found on site, the biologist will monitor activities of the western snowy plover prior to and throughout construction of the project. Work in the beach and strand zone will be restricted in accordance with direction given by the biologist, in coordination with the property owner and/or construction manager, based on observations of plover use of the site, if any, and in the immediate vicinity.

The biologist will survey and monitor the site for snowy plover during the prime snowy plover nesting season (mid-March through mid-September) immediately prior to any construction-related activities on the site. If snowy plovers are observed in any area likely to be affected by the project construction, construction in that area will be postponed until all snowy plover chicks have fledged, unless otherwise approved by the biologist, in coordination with the USFWS.

6. Use of on-site habitat by Smith's blue butterfly will be monitored by conducting reconnaissance surveys every two weeks from mid-May through mid-August.

Monitoring

1. Iceplant and/or European beachgrass will be eradicated and prevented from re-establishing in management areas through an active eradication program. If deemed necessary, the biologist shall remove iceplant or European beachgrass plants by hand or through the controlled application of herbicide.
2. The biologist will monitor the success of restoration efforts. The biologist will monitor the success of the slope stabilization and habitat restoration to determine:
 - a. If additional stabilization techniques are necessary,
 - b. If maintenance is required to remove exotic vegetation or improve the success of the plantings, or
 - c. If additional plantings are needed to meet the restoration goals. The intent of having a biologist on site is to facilitate the implementation of an adaptive management program and the timely resolution of problems.
3. Following planting, permanent monitoring transects will be established and the end points of each transect will be marked using rebar. The number and placement of transects will be determined to ensure that a minimum of 5% of the total planted area will be covered by the transect(s) and that the data collected along the transect will provide sufficient information for determining if the success criteria are met. Data will be collected using the line intercept method and will provide adequate assessments of the relative success of the restoration activities (Table 1, Success Criteria, of the HPP).
4. The biologist shall establish permanent photo points that capture an aerial view of the management area and photos will be taken annually (in the spring) for comparison. Copies of the photographs will be included in the annual progress reports to the Sand City Planning Department.
5. Vertical color infrared aerial photographs will be obtained of the project site in the fifth year of the project. The biologist shall assess these aerials in respect to changes of vegetative cover over the entire site. Copies of the photographs will be included in the annual progress reports to the Sand City Planning Department.

6. Surveys to assess use by Smith's blue butterfly of on site revegetated and enhanced habitat areas will be conducted each year (May through July). Data to be collected will include number of adults observed flying, location of butterfly use, plant species of use (if known), date, time, and weather conditions.
7. The biologist will monitor on site activities of the western snowy plover. Annual western snowy plover surveys shall be completed prior to and during the prime snowy plover nesting season (mid-March through mid-September). Access to the beach and strand zone will be restricted in accordance with direction given by the biologist based on observations of plover use of the site, if any, and in the vicinity, and based on coordination with the property owner or manager. If deemed essential, temporary off-limit areas shall be established by the use of signs, exclusion areas, and temporary post and cable fencing to attract plover use.
8. The biologist may participate as a team member in annual snowy plover monitoring work in the region.

Reporting

The biologist shall prepare notes on a monthly basis, as well as an annual report. Annual reports will be forwarded to the Sand City Planning Department and the USFWS and shall include the following:

1. A brief summary or list of project activities accomplished during the reporting year;
2. A brief description of new project impacts, if any;
3. A brief description of any conservation strategy implemented;
4. A discussion of monitoring results (compliance, effects and effectiveness monitoring) and survey information;
5. A description of circumstances that made adaptive management necessary and what new management approaches have been implemented;
6. A description of any changed or unforeseen circumstances that occurred and how they have been addressed;
7. A discussion of funding expenditures, balance, and accrual; and
8. A description of any minor or major amendments.

A comprehensive assessment of the efficacy of the habitat restoration program, especially as it relates to efforts to protect and enhance nesting habitat for the western snowy plover, will be completed five years following completion of construction. Maintenance activities for Management Areas 1, 2, 3, and 4 will be conducted throughout the monitoring period, as applicable. A maintenance program providing recommended activities for maintaining the habitat areas in perpetuity will be prepared and included in the five-year assessment report.

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APPENDIX C

LANDSCAPE PLAN



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003



IN REPLY REFER TO:
81440-2009-B-0044

November 12, 2008

Ed Ghandour
Security National Guaranty
505 Montgomery Street, Suite 1150
San Francisco, California 94111

Subject: Monterey Bay Shores Eco-Resort, Sand City, Monterey County, California

Dear Mr. Ghandour:

In recent months, you have provided us with information on revisions to the subject project (which was previously proposed in 1998). On July 16, 2008, you visited our office to present an overview of the design changes you have made to your project. On August 18, 2008, we received a copy of a draft addendum to the final environmental impact report. On October 16, 2008, and October 27, 2008, we received draft and final copies of a "habitat protection plan (HPP)." The proposed project consists of construction of a 161 room hotel, 180 condominium units, conference facilities, a restaurant, a spa, public access, and parking. These facilities would be constructed on a 39-acre ocean-front parcel in Sand City, California.

We appreciate your efforts to keep us informed regarding your planning for the subject project. While we have not been able to review the documents thoroughly, we note that the number of visitor serving units has been reduced, the setback from the high tide line has been increased, and water and power use have been reduced relative to the previous version of the project.

The project site includes known occupied habitat for the federally endangered Smith's blue butterfly (*Euphilotes enoptes smithi*) and the federally threatened western snowy plover (*Charadrius alexandrinus nivosus*) and Monterey spineflower (*Chorizanthe pungens* var. *pungens*). All of these species have been documented in recent surveys, including nesting western snowy plovers during the 2008 breeding season.

The HPP describes a program to avoid, minimize, and mitigate potential impacts to federally listed and other special status species. The HPP outlines biological goals that would avoid and minimize impacts to listed species; regulate construction activities; and provide, preserve, restore, manage, and maintain habitat. The project is expected to avoid the buckwheat host plants for the Smith's blue butterfly; regardless, host plants would be included in revegetation efforts. The HPP also describes provisions in the design to re-establish Monterey spineflower in areas where it would be removed by grading. In addition, a program for providing, protecting, and managing habitat for western snowy plovers is outlined including provisions for adaptive management to adjust to nesting plovers when they may occur on the property.

Ed Ghandour

2

A commitment to fund and implement the actions described in the HPP would help ensure that potential impacts from the proposed project are avoided or minimized. The changes to the project design and proposed management actions may offer benefits to listed species on the project site. We are available to discuss this project further as you continue to seek the necessary regulatory approvals. If you have any questions, please contact me at (805) 644-1766, extension 320.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Pereksta', with a long horizontal line extending to the right.

David M. Pereksta
Assistant Field Supervisor



**WESTERN SNOWY PLOVERS AT SAND CITY, APRIL-
JULY 2008**

Prepared by:
Kris Neuman and Gary Page
USFWS Permit TE807078-10

PRBO Conservation Science
3820 Cypress Drive #11
Petaluma, CA 94954

For:
Zander Associates
150 Ford Way, Suite 101
Novato, CA 94945

November 2008

WESTERN SNOWY PLOVERS AT SAND CITY, APRIL-JULY 2008

OBJECTIVE

The primary objective of this study was to document the presence or absence of western snowy plovers (*Charadrius alexandrinus nivosus*) on sandy beaches within Sand City, Monterey County, California, during the 2008 breeding season. A secondary objective was to document potential sources of recreational disturbance and predators that might negatively affect snowy plovers. This is the fourth year that PRBO Conservation Science has conducted surveys at Sand City under contract with Zander Associates (Page and Neuman 2005, Neuman and Page 2006, Henkel and Page 2007).

METHODS

The sandy beach and dune habitats from the Sand City-Seaside boundary north to the Fort Ord boundary (Figure 1) were surveyed for western snowy plovers (hereafter "plovers") from 14 March to 18 July 2008. Surveys were conducted by Kriss Neuman and Jennifer Erbes using binoculars of at least 8x42 magnification following the protocol described in Elliot-Smith and Haig (2005). Surveys varied from one to two hours and were usually conducted between 0700 and 1400. Additional visits to the area were made by California Department of Parks and Recreation staff to protect nests with symbolic (post and cable) fencing and assist PRBO with chick banding. Nests were monitored until hatching. Chicks were individually color-banded and monitored until fledging (~28 days old). In addition to surveying for plovers, the number and type of potential recreational disturbances and potential predators were recorded.

RESULTS and DISCUSSION

Snowy Plover Productivity

During the study period, 18 weekly surveys were completed. Four plover nests and an additional brood were found within the study area (Figure 1). Three nests were located in the north end of the area (NC01, NC02, NC03), just south of the Fort Ord boundary and one nest (DM01) was located at the south end of the study area, just north of the Monterey Beach Hotel (Figure 1). The brood of one chick, for which no nest was found (NC04), was located 100m south of NC01; we assume the nest probably occurred in the vicinity. Of the four nests found in the egg stage, three hatched and one failed (Table 1). Of the three broods that hatched, only the chicks from nest NC01 survived to fledging age.

Table 1. Snowy Plover productivity at Sand City in 2008.

Nest Number	Found as	Number of eggs	Number of hatched chicks	Number of fledglings	Cause of nest loss
NC01	Eggs	3	3	2	unknown
NC02	Eggs	3	0	0	
NC03	Eggs	3	3	0	
NC04	Brood	1-3	1-3	0	
DM01	Eggs	3	3	0	

Potential Recreational Disturbances and Potential Predators
 Potential recreational disturbances included pedestrians, surf fishers, joggers, hang-gliders, surfers and dogs (Table 2). Potential predators observed were primarily limited to American crows (*Corvus brachyrhynchos*). Other potential predators were red-tailed hawks (*Buteo jamaicensis*) seen on 29 April and 9 July, and a peregrine falcon (*Falco peregrinus*) on 5 May.

Killdeer (*Charadrius vociferans*) were observed on every survey. As in previous years killdeer apparently nested in several locations in the study area, including south of Bay Avenue and near the Fort Ord boundary.

Table 2. Numbers of people, dogs, and American Crows on 18 surveys of Sand City Beaches in 2008.

Date	Surf fishers	Pedestrians	Joggers	Surfers	Hang-gliders	Dogs off Leash	Dogs on Leash	American Crows
14 Mar		2	1				1	2
19 Mar								
25 Mar	2	1						1
2 Apr	1							
9 Apr		8				1		1
18 Apr	1	3						25
22 Apr	1	7		2		1	1	3
29 Apr	1	2						2
5 May								
12 May	1							1
29 May		13	3			3		2
3 June	3	1						2
11 June								
19 June		2		4	3			
25 June		4				2		
2 Jul		2				3		
9 Jul								
18 Jul								
Total	10	45	4	6	3	10	2	39

This is the first year since 2000 that plovers have nested at the north end of the study area and the first year since 1998 that they have nested at the south end of the study area (PRBO unpubl. data). In addition, the pair of plovers that lost nest NCC03 re-nested on an adjacent beach just north of the southern Fort Ord boundary (FO11, see Figure 1).

The 75% hatch rate for the study area was very high when compared to other areas within Monterey Bay in 2008 and to documented hatch rates for the species (Page et al. 1995). It was lower than the 100% hatch rate observed at the adjacent Fort Ord beach in 2008 (PRBO unpubl. data). The fledge rate (min 16% -max 20%) was low when compared with the adjacent Fort Ord beach (30%) in 2008 (PRBO unpubl. data) and when compared to documented fledge rates for the species (Page et al. 1995). The low fledge rate in Sand City when compared to the adjacent beach may be related to higher levels of human use at Sand City or to other unknown factors. Human use levels on Monterey Bay beaches are typically lower in the earlier part of the nesting season and the success of the NCO1 brood may be related to this.

Habitat management techniques that have enhanced plover nesting success at other sites in Monterey Bay include increased use of symbolic fencing in fore dunes, limiting access to dune areas above nesting areas, and prohibiting dogs on beaches. Because the Sand City area is adjacent to another occupied nesting area the potential exists for managing the beach as a contiguous nesting area.

LITERATURE CITED

Elliot-Smith, E. and S. Haig. 2005. Western Snowy Plover breeding window survey protocol. Unpublished report, USGS Forest and Rangeland Ecosystem Science Center, Corvallis, OR.

Neuman, K. and G.W. Page. 2006. Western Snowy Plovers at Sand City, April-July 2006. Unpublished report, PRBO Conservation Science, Petaluma, CA.

Page, G.W. and K. Neuman. 2005. Western Snowy Plovers at Sand City, May-July 2005. Unpublished report, PRBO Conservation Science, Petaluma, CA.

Page, G.W., J.S. Warriner, J.C. Warriner, and P.W.C. Patton. 1995. Snowy Plover (*Charadrius alexandrinus*). In *The Birds of North America*, No. 154 (A. Poole and F. Gill, eds.) The Birds of North America, Inc., Philadelphia, PA.

Henkel, L. and G.W. Page. 2007. Western Snowy Plovers at Sand City, April-July 2007. Unpublished Report. PRBO Conservation Science, Petaluma, CA.



Figure 1. Show my House near at Sand Chen 2008. An additional proof (RQ04) was found in the vicinity of RQ01, 02 and 03 and the nest is assumed to have been in this same area. RQ01 is the nest just north of the southern Port 3rd boundary. Heat map prepared by Amy Palacios, California Department of Parks and Recreation.

EX 31

CITY OF SAND CITY

RESOLUTION SC 09-06, 2009RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SAND CITY
CONCERNING AN ADDENDUM TO THE FINAL ENVIRONMENTAL IMPACT
REPORT FOR THE MONTEREY BAY SHORES ECO-RESORT

WHEREAS, Security National Guaranty, Inc., a California corporation ("Applicant") previously made application to Sand City (the "City") for a Coastal Development Permit to allow development of certain property in the City, designated as APN 011-501-014, located in the coastal zone west of Highway One in the City;

WHEREAS, Applicant's project was previously known as the Monterey Bay Shores Resort (the "Original Project");

WHEREAS, in 1998, the City certified the Final Environmental Impact Report (the "EIR") for the Original Project in accordance with the California Environmental Quality Act ("CEQA");

WHEREAS, following certification of the EIR and public hearings conducted in the manner required by law, the City acted to conditionally approve a Coastal Development Permit for the Original Project on December 1, 1998;

WHEREAS, the City's conditional approval of a Coastal Development Permit for the Original Project was appealed to the California Coastal Commission;

WHEREAS, the California Coastal Commission conducted a *de novo* review of the Original Project and acted to deny approval of a Coastal Development Permit for the Original Project;

WHEREAS, acting in accordance with the decision in *Security National Guaranty, Inc., v. California Coastal Commission* (2008) 159 Cal.App.4th 402, the Superior Court ordered a preemptory writ to issue on May 27, 2008 commanding the Coastal Commission to vacate its denial of the Applicant's application for a coastal development permit and reconsider the application for a coastal development permit;

WHEREAS, prior to such reconsideration, in order to address concerns previously expressed by the Commission and its staff, the Applicant has redesigned and reduced the size of the Original Project (hereinafter referred to as the "Revised Project");

WHEREAS, an Addendum and Errata of the Addendum to the EIR have been prepared (copies of which are attached hereto as Exhibits "A" and "B" respectively and by this reference incorporated herein), for the Revised Project which shows:

A. The changes to the Original Project will not cause new significant environmental effects or a substantial increase in the severity of significant effects identified in the EIR;

B. The circumstances under which the Revised Project is proposed to be undertaken will not result in new significant environmental effects or a substantial increase in the severity of previously identified significant environmental effects;

C. No new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the EIR was certified as complete shows any of the following:

(i) that the Revised Project will have any significant effect which was not discussed in the EIR;

(ii) that significant effects examined in the EIR will be substantially more severe than shown in the EIR;

(iii) that mitigation measures or alternatives previously found not to be feasible would now in fact be feasible and would substantially reduce one or more significant effects of the Revised Project;

(iv) that there are no mitigation measures or alternatives which are considerably different from those analyzed in the EIR which would substantially reduce one or more significant effects of the Revised Project on the environment;

WHEREAS, although circulation of an Addendum is not required by CEQA, a draft Addendum was issued in August 1998 and thereafter distributed to certain agencies including the California Coastal Commission, U.S. Fish and Wildlife Service, the California Department of Fish and Game; and the Monterey Peninsula Water Management District;

WHEREAS, the Addendum in its present form was redistributed to the above listed agencies in November of 2008;

WHEREAS, if the Coastal Commission acts to approve a coastal development permit for the Revised Project, the Applicant must obtain additional permits (or revisions to prior approvals) from the City prior to developing the Revised Project;

WHEREAS, prior to seeking additional permissions from the City, the Applicant may need to obtain permissions from one or more responsible agencies.

NOW THEREFORE, IT IS HEREBY RESOLVED BY THE SAND CITY COUNCIL AS FOLLOWS:

- 1. No major revisions to the EIR are required for the Revised Project.
- 2. No subsequent EIR is required for the Revised Project.
- 3. Following approval of a coastal development permit for the Revised Project, the City will review the project as permitted by the Coastal Commission and consider revisions to local approvals which are then necessary prior to commencement of development of the project as approved by the Coastal Commission, including but not limited to revisions to the vesting tentative subdivision map for the project, planned unit development permit for the project and site plan for the project.
- 4. The City will make a final determination under CEQA with respect to the project as permitted by the Coastal Commission at the time the City takes action on the local approvals referred to in paragraph 3.

PASSED AND ADOPTED by the Sand City Council this 20th day of January 2009, by the following vote:

AYES:

NOES:

ABSTAINED:

ABSENT:

ATTEST:

APPROVED:

City Clerk

David K. Pendergrass, Mayor

EXHIBIT B

MONTEREY BAY SHORES RESORT EIR ADDENDUM
Errata Sheet dated January 20, 2009

The following revisions to the subject EIR addendum are hereby approved by the City of Sand City, and incorporated into the Addendum by this reference.

1. Under Introduction and Purpose, page 5, third paragraph, revise as follows: "The City of Sand City is the Lead Agency under CEQA. This Addendum has been prepared for the City to address the environmental impacts of the proposed revised project."
2. Under Air Quality Management Plan, page 36, second paragraph, revise as follows: "As noted, since the certification of the 1998 MBS FEIR, the MBUAPCD has developed new air quality management plans, most recently in June 2008. The revised, smaller proposed project includes 249 hotel and visitor-serving condominium units (rental pool)."
3. Under Biological Resources Setting, page 42, first paragraph, top of page, revise as follows: "Therefore, for the purposes of this analysis, the site is not considered ESHA under the LCP and the development constraints applied to ESHA do not apply to the site. Finally, the project site is not otherwise located within an adopted or planned habitat conservation plan or other approved or planned regional or state habitat conservation plan or natural community conservation planning (NCCP) effort."
4. Under Special-Status Plant and Animal Species, page 44, first paragraph, revise as follows: "The revised ecoresort project will modify approximately 28 acres above the mean high tide line through grading, excavation, and re-contouring, compared with approximately 31 acres for the previously approved project (a net reduction of approximately three acres). As noted in the 1998 MBS FEIR and above, much of the area is degraded and invasive ice plant has continued to expand. In addition, there is no longer a proposal to distribute additional sand excavated from the property in the coastal strand habitat for beach replenishment."
5. Under Conformance with Land Use Plans, page 75, third paragraph, add the following sentences: "There are no buildings or other structures planned within the CZ-PR (coastal zone public recreation) zoning district. However there is a limited area of bioswale (detention basin) designed to eliminate any storm water runoff from directly entering the bay waters. This land use is considered to be consistent with the CZ-PR zoning district regulations because it is a support facility intended to protect the beach, interpretative areas and public access areas from erosion."
6. Under Existing Noise Conditions, page 78, last paragraph, fourth sentence, change the word "site" to "sight".

130

MONTEREY DUNES COALITION

PO Box 8613
Monterey, California 93943
Email: thornton@nps.edu

February 28, 2009

Mike Watson, California Coastal Commission, mwatson@coastal.ca.gov

SUBJECT: Scientific/technical review of multiple environmental documents for Monterey Bay Shores Ecoresort, Sand City, California, regarding building site set-backs.

I am submitting the following technical review of the Monterey Bay Shores Ecoresort (Ghandour/SNG project, Sand City, State Clearinghouse # 97091005) Revised Draft Addendum for the 1998 Final Environmental Impact Report, and supporting environmental documents, on behalf of the Monterey Dunes Coalition.

Set-back of Monterey Bay Shores Eco-resort

The set-back lines for the Monterey Bay Shores Ecoresort building site (either 50 or 75 year) are considerably underestimated. The erosion rates that are presented in the recent Regional Sediment Management Plan for southern Monterey Bay range 2.7 feet/year for the period 1984-2004 (Thornton, et al., 2006) to 3.9- 6.4 feet/year for the period 1970-2002 (Hapke et al., 2006). This suggests that the value of 2.4 feet/year adopted by developer for this development based on estimates by Haro et al., 2003 underestimates the erosion rate and, hence, the set-back. Applying the reported range of erosion rates by Thornton, et al. (2006) and Hapke et al. (2006) says that 50 year set-back should be increased by 15 to 200 feet and the 75 year set-back should be increase by 23 to 300 feet. This suggests the proposed building site is in a hazard zone.

A new study on the impacts of sea level rise and projected set-backs for the coast of California, which encompasses Sand City and the Monterey Bay Shores Ecoresort site, will be available soon. The set-back accounts for historical and projected future erosion rates, run-up based on wave climatology and LIDAR measured morphology, and increased sea-level rise due to climate change. The report is written by Phillips-Williams Associates (PWA) and was funded by the Ocean Protection Council for the State of California and has been peer reviewed. Results for Sand City were presented at the 2008 Headwaters to Oceans (H2O) Conference in October and show that the present building site is well within the hazard zone for the 50 year economic-life set-back. Therefore, it is requested that hearing on this project be delayed until this report has been made public and is available for use to assess this project.

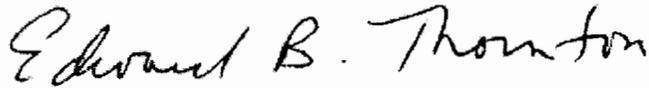
Economic Life

The proposed development uses a 50 year economic life as required by the Sand City LCP. The Sand City LCP was written in 1978 and was one of the first LCP's adopted in the State of California. The LCP's are required to be updated every 5 years, which has

CCC Exhibit 32
(page 1 **of** 33 **pages)**
A-3-SNC-98-114

not occurred. Using a 50 year economic life is outdated and unrealistic either in terms of the economics of the project and the actual planning for such a project. The project should more properly use a 100 year economic life for project planning and this should be required.

Very truly yours,



Edward B. Thornton, President, Monterey Bay Dunes Coalition
A coalition of members of the Sierra Club, Audubon Society and California Native Plants

References:

Hapke, C.J., Reid, D., Richmond, B.M., Ruggiero, P. and List, J., 2006. National Assessment of Shoreline Change Part 3: Historical Shoreline Change and Associated Coastal Land Loss Along Sandy Shorelines of the California Coast. *U.S. Geological Survey Open-File Report 2006-1219*, 72p.

Haro, Kasunich and Associates, Inc, 2003, Coastal Recession Evaluation for Coastline of Sand City, California, Report Prepared for the City of Sand City, California, pp 17.

Phillip Williams and Associates, 2008, Coastal Regional Sediment Management Plan for Southern Monterey Bay, 278 pp.

Thornton, E.B., Sallenger, A., Conforto Sesto, J., Egley, L., McGee, T. and Parsons, R., 2006. Sand mining impacts on long-term dune erosion in southern Monterey Bay. *Marine Geology*, 229, 45-58.

222 East 3rd St #1E.
NEW YORK, NY 10009

REPRESENTATIVE FORM
LETTER RECEIVED FROM 30
SEPARATE INDIVIDUALS

January 7, 2009

RECEIVED

Ms. Bonnie Neely
Chair & Commissioners
California Coastal Commission
Central Coast District Office
725 Front Street, Suite 300
Santa Cruz, CA 95060-4508

FEB 06 2009

CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA

**RE: YES to Monterey Bay Shores Ecoresort!
Monterey Peninsula Residents Support it.**

Dear Madam Chair and Commissioners:

It's rare to come across a coastal project on the Monterey Peninsula that I can support. But the Monterey Bay Shores Ecoresort demonstrates that by having a visionary and sustainable approach to coastal design, it can be done with *minimal* environmental impacts, and protection of coastal resources. I welcome that kind of approach and new thinking to the Monterey Peninsula. This project has many green, sustainable and ecological features and *benefits* that are simply amazing. For the Monterey Peninsula to be the *first in the country* to embrace and implement these green strategies in a visitor serving facility, would be monumental. Three benefits that capture my even greater support are:

- This site was a sand mining site for 60 years. It is degraded. I welcome the restoration, both dune and habitat, and the protection of viewshed corridor along Highway 1 and across the Bay from Monterey and Pacific Grove.
- The public on the Monterey Peninsula does not have beach access on the stretch from the Monterey Beach Hotel, Monterey, to Reservation Road in Marina, a stretch of about 8 miles. We have over 65,000 people living east of that stretch that for the first time will have public access to the beach on that stretch, paid for by the project.
- This project will generate up to 500 construction and permanent Green jobs, a much needed boost to the local economy.

This project was envisioned by respecting the coastal resources, by restoring it and by renewing it. That is the mission of the Coastal Act. **We need this project.** Please **APPROVE** the Coastal Development Permit for the Ecoresort as proposed coming up for review in your Coastal Commission hearing. I support it.

Respectfully yours,
Tomas E. Gomez

Finance
tomas.gomez@earthlink.net

cc. Dr. Charles Lester & Dan Carl, Central Coast District Office

CCC Exhibit 32
(page 3 **of** 23 **pages)**

PO Box 2031
Rohnert Park, CA 94927

REPRESENTATIVE FORM
LETTER RECEIVED FROM 49
SEPARATE INDIVIDUALS

January 7, 2009

Ms. Bonnie Neely,
Chair & Commissioners
California Coastal Commission
Central Coast District Office
725 Front Street, Suite 300
Santa Cruz, CA 95060-4508

RECEIVED

FEB 18 2009

CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA

REF: Support the Monterey Bay Shores Ecoresort

Dear Madam Chair and Commissioners:

I am writing to express my support for the Monterey Bay Shores Ecoresort as proposed. I reviewed with great interest their proposal and welcome the great many benefits that such a project brings to the coast and the community. It's a cutting edge environmental sensitive coastal resort that I am proud to support. The proposed project provides much needed public access to the beach, public parking and recreational opportunities as well as much needed coastal visitor serving facilities on the north side of the Monterey Peninsula. That's great! But the Ecoresort also supports habitat and dune restoration, conservation of land, renewable sources of energy and carbon footprint reduction by over 50%, water conservation and graywater reuse; it has created a new standard for coastal and green developments.

The Monterey Bay Shores Ecoresort brings refreshing new ideas and changes that are important in how we remake and reshape our built environment, country and the planet. I consider the Monterey Bay Shores Ecoresort to be an important step forward, the promise in moving us forward. I would strongly encourage you to embrace this approach to coastal development as I have, and approve the Coastal Development Permit.

Sincerely yours,
Anna Nelson

housewife
huskyanna@yahoo.com

cc. Dr. Charles Lester & Dan Carl, Central Coast District Office

CCC Exhibit 32
(page 7 of 33 pages)

REPRESENTATIVE FORM
LETTER RECEIVED FROM 39
SEPARATE INDIVIDUALS

Name:

E-mail: Cbessermin@yahoo.com

February 9, 2009

Ms. Bonnie Neely,
Chair & Commissioners
California Coastal Commission
Central Coast District Office
725 Front Street, Suite 300
Santa Cruz, CA 95060-4508

RECEIVED

FEB 25 2009

CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA

RE: Approve the Monterey Bay Shores Ecoresort: Making a Difference

Dear Madam Chair and Commissioners:

It is my pleasure to write a letter of support for the Monterey Bay Shores Ecoresort planned on the coast of the Monterey Peninsula. This proposal demonstrates how one can *make a difference* by utilizing visionary and sustainable design approach and applying it to a development. The ecological and sustainable features of the Ecoresort are very impressive, as are the minimal environmental impacts and protection of coastal resources. Look at the habitat and dune restoration features, the creation of new habitat for the western snowy plover. Or, the water conservation features which are cutting edge. At a time of scarce water resources, that is a very welcome change. I am particularly impressed with the design that "*fits*" into the dunes and protects viewshed from Highway 1 and across the Monterey Bay in Monterey and Pacific Grove. Most importantly, we need beach and public access for the public as well as more visitor serving accommodations. That is great!

The *Stewardship* that the development team has demonstrated exceeds the standards of the Coastal Act and is a welcome change to the traditional type of design. By incorporating the precious "five elements" of planet earth, *earth, water, air, sun and energy*, this proposal rises above all others, it sets a threshold, and makes a difference. It also provides up to 500 Green Jobs that President elect Obama is encouraging us to create. Let's join his efforts. This is our future!

The Monterey Bay Shores Ecoresort deserves an expedient **approval**, as proposed, of the Coastal Development Permit.

Thank you,



cc. Dr. Charles Lester & Dan Carl, Central Coast District Office

CCC Exhibit 32
(page 5 of 23 pages)

RECEIVED

April 11, 2009

APR 14 2009

California Coastal Commission
45 Fremont Street
Suite 2000
San Francisco, CA 94105-2219

CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA

RECEIVED

APR 13 2009

CALIFORNIA
COASTAL COMMISSION

Re: Monterey Bay Shores Ecoresort

Dear Coastal Commission

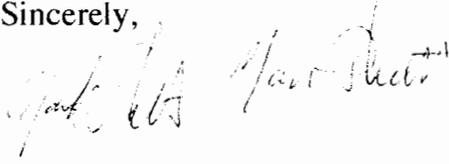
We are opposed to the construction of the Monterey Bay Shores Ecoresort for a variety of reasons:

- Lack of available water
- Impact to the marine environment
- Transportation access/egress limitations
- Elimination of public access to the coast

We urge you to vote no on this development. As you are aware the proposed 341 room hotel sounds like a great tax revenue resource to Sand City and Monterey County and the State of California. However the un-mitigated impacts, primarily water availability, will affect all of us. We recently received a significant rate increase from our water provider, the Marina Coast Water District, because of limited available water resources. They have the authority to raise the price of the water while limiting the access to this vital resource. It was also interesting to note that based on the significant rate increase, we are forced to pay a higher rate than the new/proposed/approved Marina Dunes housing project proposed for Old Fort Ord Property. In essence we are forced to subsidize new development's use of limited water resources. We take this cost increase very seriously because it is the future of available water and the subsidies that we must pay to development of and for future developments like the Monterey Bay Shores Ecoresort. The Coastal Commission knows very well that we have limited potable water within the Seaside aquifer and for that matter the entire Monterey Peninsula. The lack of available water will be even more catastrophic when, if ever, new un-mitigated development such as the Monterey Bay Shores Ecoresort is permitted. The lack of available water resources becomes even more significant when you read articles, such as the National Geographic's April 2009 Changing Rains, which is about the forecasted limited water resources due to global warming. While we can rant and rave about all of the other opposed reasons, we feel the development of the Monterey Bay Shores Ecoresort should be permanently shelved and wealthy Ed Ghandour should consider donating the land to the State for a permanent park. It, the Monterey Bay Shores Ecoresort, was a bad vision, and remains a bad vision by a very very wealthy man seeking to capitalize on his investment and his ability to manipulate public opinion. We are aware of the Marriot Resort proposed to be built on the former Fort Ord Property. This giant resort will be competing with the Monterey Bay Shores

Ecoresort for limited water resources. We urge you to vote no on this proposed development.

Sincerely,

Handwritten signature in cursive script, appearing to read "Mark & Nan Pheatt".

Mark & Nan Pheatt
5025 Peninsula Point Drive
Seaside, CA 93955

458 Gloria Circle
Marina, CA 93933

February, 16, 2009

Ms. Bonnie Neely, Chair & Commissioners
California Coastal Commission
Central Coast District Office
725 Front Street, Suite 300
Santa Cruz, CA 95060-4508

RECEIVED

FEB 19 2009

CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA

Subject: Oppose the Monterey Bay Shores Ecoresort

Dear Madam Chair and Commissioners:

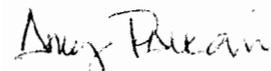
I am writing to express my concern about the Monterey Bay Shores Ecoresort project. I reviewed the developer's proposal and the information on their website, and I have many reservations about this project. The two primary problems that I am aware of are adverse impacts to the western snowy plover and coastal erosion.

The developers claim that their project will benefit sensitive species and habitats including the western snowy plover. Not only would this project introduce an intensive new human disturbance regime (around the clock), which would degrade or eliminate western snowy plover breeding habitat, it would also introduce landscaping including trees and other human factors that will attract commensal species (corvids, skunks, etc.) which are predators to the western snowy plover. Restricting the western snowy plover to fewer breeding sites, as we have been doing along the Pacific coast, makes them more susceptible to predator pressures as well as other environmental pressures. The residential portion of this development will bring with it pets, which are an additional adverse impact to western snowy plovers. Domestic cats prey upon them and dogs are a constant source of harassment to birds on the beach. Additionally, too many coastal access points negatively impact breeding western snowy plovers, as these locations become centers of high human activity. We already have more than enough coastal access for humans along the entire Monterey Bay.

The developers claim that a seawall will not be needed for their project and that they will simply move buildings if or when they are threatened by coastal erosion. I do not believe that is a feasible option. For the portion of this development that will be residences, I would expect that each of the residents who have a stake in the property would do whatever is necessary to protect their property from coastal erosion. I think this project will necessitate a seawall at some point in the future, and it will forever alter the dynamic beach and dune system in and around the project area.

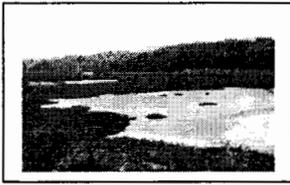
A truly 'green' and environmentally sensitive project would not be sited on the immediate coastline in sensitive species habitat. A better place for this project would be on the inland side of the highway. I strongly encourage you **not** to approve the Coastal Development Permit for the Monterey Bay Shores Ecoresort.

Sincerely,



Amy Palkovic

CCC Exhibit 32
(page 8 of 33 pages)



(415) 310-5109

Peter R. Baye, Ph.D.
Botanist, Coastal Ecologist
P.O. Box 65
Annapolis, California 95412



baye@earthlink.net

MEMORANDUM

TO: Mike Watson, California Coastal Commission, mwatson@coastal.ca.gov

SUBJECT: Scientific/technical peer review of multiple environmental documents for Monterey Bay Shores Ecoresort, Sand City, California

DATE: 24 February 2009
Via e-mail

1. Purpose: I am submitting the following technical review of the Monterey Bay Shores Ecoresort (Ghandour/SNG project, Sand City, State Clearinghouse # 97091005) Revised Draft Addendum for the 1998 Final Environmental Impact Report, and supporting environmental documents, on behalf of the Ventana Chapter of the Sierra Club (contact: Rita Dalessio, puffin@mbay.net). The scope of my review focuses on critical review of the assumptions and conclusions of environmental impact assessments related to dune and dune habitats, ecological and geomorphic processes, vegetation, and special-status species, and the technical feasibility and suitability of proposed beach/dune restoration and management plans. The opinions and technical arguments in my comments reflect my independent professional views only.

2. Qualifications: My qualifications for expert comments on environmental planning, regulation, and assessment of coastal dunes are as follows. My Ph.D. dissertation concerned coastal dune vegetation and its response to sand deposition, and I have studied coastal dunes in the Atlantic and Pacific North American coasts since 1974. My principal professional experience in California has been with conservation planning for coastal habitats and ecosystems, and recovery planning for endangered coastal species. I was a contributing author for sections of the Recovery Plan for Seven Coastal Plants and Myrtle's Silverspot Butterfly (1998) prepared by the U.S. Fish and Wildlife Service, Sacramento Fish and Wildlife Office. My contributions included technical background information on California coastal dune systems, and specific recovery recommendations for federally listed Central Coast dune plants, including Monterey spineflower (*Chorizanthe pungens* ssp. *pungens*). I was the lead author for the Service's Recovery Plan for Coastal Plants of the Northern San Francisco Peninsula (2002), which featured coastal dune species. I have conducted independent field investigations of coastal dune and wetland systems in central and northern California, including geomorphologic, hydrologic, and ecological conditions throughout the 1990s to the present. I serve on the scientific review panel (with Andrea Pickart and Pete Connors) for the planning of the Bodega Dunes Restoration Project, managed jointly California State Parks/University of California Bodega Marine Laboratory (currently the largest coastal dune restoration project in California). I am also a technical advisor/subconsultant for multiple federal dune restoration projects managed by the National Parks Service, Presidio Trust,

Peter R. Baye Ph.D.
Botanist, Coastal Ecologist
baye@earthlink.net
(415) 310-5109

and Point Reyes National Seashore in the San Francisco Bay area (Muir Beach, Presidio, Abbott's Lagoon). I was co-author of a recent habitat management plan for Laguna Creek Lagoon's barrier beach and wetland complex (California State Parks) in Santa Cruz, which supports a wintering population of western snowy plovers. I have been an active member of the Dunes/Coastal Habitat Guild of the California chapter of the Society of Ecological Restoration (SERCAL) since it formed in the early 1990s, and have led field trips and presentations for the Guild. I also served as senior scientific and regulatory staff of the U.S. Army Corps of Engineers, San Francisco District, where I managed Environmental Impact Statements/Reports, and conducted endangered species consultations (including western snowy plovers). My resume is available on request.

3. Scope of review: I have reviewed the following documents from the California Coastal Commission files, obtained through the Ventana Chapter of the Sierra Club:

City of Sand City 2008. Monterey Bay Shores Resort, Revised Draft Addendum to the Final Environmental Impact Report, October 2008.

EMC Planning Group, Inc. 2008. Habitat protection plan, Monterey Bay Shores Eco-Resort, Sand City, California. Prepared for Security National Guaranty (SNG). October 2008.

EMC Planning Group, Inc. 2008. Monterey Bay Shores Botanical Survey Update Results. Letter report, May 12, 2008.

Ghandour, E. 2008. Monterey Bay Shores Ecoresort, Wellness Spa, and Residences, Supplemental Documents (Volume 1). Oversize SNG and subconsultant design documents; Coastal Commission, Central Coast Area file, August 13, 2008.

Haro, Kasinich & Associates, Inc. 2003. Coastal Recession Evaluation for Coastline of Sand City, California. Prepared for City of Sand City, California. Project No. M8211.

Haro, Kasinich & Associates, Inc. 2009. Coastal and Geotechnical Hazards, Monterey Bay shores resort, Sand City, Monterey County, California. Memorandum, February 3, 2009.

Moffett and Nichol, Engineers. 1989. City of Sand City Shore Erosion Study - Final. December 1989. Prepared for the City of Sand City and the Task Force Advisory Committee. Project No. 2622.

Ilse, J. 2008. Review of potential impacts to Offsite Biological Resources of Monterey Bay shores Eco-Resort, Sand City, California. Memorandum, October 16, 2008.

Neuman, K. and G. Page. 2008. Western Snowy Plovers at Sand City, April-July 2006. Report, PRBO Conservation Science, Petaluma, CA.

Page, G. J.C. Warriner, J.S. Warriner, C. Eyster, K. Neumann, J. Erbes, D. Dixon, and A. Palkovic. 2007. Nesting of the snowy plover at Monterey Bay and on beaches of Northern Santa Cruz County, California, in 2007. PRBO Publication # 1950, November 2007.

Zander Associates. 2007. Western snowy plovers, Sand City shoreline. Letter report to Steve Matarazzo, City of Sand City, September 12, 2007.

Zander Associates. 2008. Biotic Assessment, Monterey Bay Shores EIR Addendum, Sand City. Letter report, June 18, 2008

4. Summary of findings and conclusions:

4.1 Monterey spineflower: The proposed mitigation to compensate for destruction of existing 3.4 acres of occupied habitat of federally listed Monterey spineflower is wholly infeasible because (a) the only explicit location of the landscape unit proposed to support this species is “restored fore dune bluff” (*sic*), as shown on p. 22 of the sheet titled “Monterey Bay Shores: Elements and Experiences” (Ghandour 2008), an inherently unstable erosional/depositional habitat type (due to its backshore position) that does not support persistent populations of this stable backdune gap-colonizing annual species; (b) the Habitat Protection Plan (HPP) provides for no long-term (>5 hr) sustained feasible management methods for prevalent invasive species that threaten this species; (c) the HPP fails to specify any ecologically meaningful, objective restoration criteria for soil conditions, population ranges, dominant vegetation, vegetation dynamic processes, long-term vegetation trends, or acreages essential to Monterey spineflower management.

The Addendum conclusion that mitigation will reestablish Monterey spineflower at a 1:1 ratio is unsupported by any reasonable scientific interpretation of technical details in the HPP proposal or design documents.

4.2 Western snowy plover impacts and mitigation: The Addendum and HPP fail to address threats and biologically significant indirect and cumulative impacts to the western snowy plover that are clearly identified or emphasized in the U.S. Fish and Wildlife Service’s final (2007) recovery plans for this species, which provides the primary federal ESA conservation guidance for this federally listed species. The HPP fails to address indirect impacts due to increased predator attraction and food resources (especially for corvids, gulls, red fox). The proposed 2-acre plover protection area fails to address indirect or direct impacts to nesting or foraging plovers due to increased resort-based visitor disturbance in the vicinity of the proposed resort and adjacent Fort Ord beaches. The addendum addresses only critical habitat designation (which is related to Section 7 consultation and “take” provisions of ESA, not recovery), which is not relevant to assessment of threats, impacts, and recovery. The Addendum discussion appears to confuse ESA “take” with the totality of direct, indirect, and cumulative biological impacts and mitigation required for assessment under CEQA. The Addendum ignores the recovery plan’s goal of increasing breeding success of this species in each part of its range, including all of Monterey Bay, and understates the significance of the project’s impacts on recovery. The Addendum erroneously interprets older monitoring data as evidence that “the plover has consistently migrated its nesting activity 16 miles north to Moss Landing since the mid-1990s”, and contradicts recent (2007) and current (2008) PRBO monitoring data. The Addendum uses these fallacies to support an unsound argument that project impacts to the plover are not biologically significant. The HPP fails to provide the federal scientific oversight, scientific peer-review, and enforceability mechanisms of an HCP, but the Addendum erroneously argues that the “revised [HPP] strategy is equivalent to the previous [HCP] strategy”. The creation of a dependent non-profit (tax-exempt?) environmental trust by the owners of the for-profit resort to manage and enforce the HPP is highly questionable because of potential conflicts of interest and financial self-dealing.

In view of the 2007 recovery plan, and the 2008 breeding survey results reported by Neuman and Page (PRBO), which revealed four western snowy plover nests and one additional brood in the Sand City study area (most clustered in the vicinity of the project site, the location of

future resort-based visitor disturbance), the Addendum's conclusions about less-than-significant western snowy plover impacts are not supported by reasonable scientific interpretation of evidence and authoritative federal conservation guidance.

4.3 Other special-status species impacts: Neither the Addendum nor HPP provides any current or recent, relevant survey information or biological impact assessment for the following special-status (concern) rare wildlife species identified in the USFWS recovery plan for seven coastal plants and Myrtle's Silverspot butterfly (1998), each of which may potentially occur in coastal foredune/beach/mobile dune habitats in Monterey Bay: Monterey dunes scorpion (*Pauroctonus maritimus*), Globose dune beetle (*Coelus globosus*), and sandy beach dune beetle (*Cicendela hirtocollis gravida*). The omission of these species from evaluation is unexplained. Furthermore, neither the Addendum nor HPP contain any site-specific survey information for the black legless lizard (*Anniella pulchra nigra*) after 1987 (a significant 22 year survey data gap), despite the likely presence of source populations in adjacent Fort Ord dune scrub within feasible dispersal distance of the site, and the presence of potentially suitable habitat on site. These omissions indicate the possibility of unmitigated significant impacts to special-status wildlife species.

4.4 Feasibility of HPP dune restoration: The project fails to analyze the long-term loss in coastal dune habitat caused by the combination of the development infrastructure footprint, and marine transgression (long-term shoreline retreat; "coastal squeeze"). The project footprint, notwithstanding the largely ornamental rooftop gardens with native vegetation, displaces most of the transgressive platform for regeneration of coastal dunes as the coastal bluffs retreat in response to accelerated sea level rise. The HPP fails to include dune restoration and management techniques, methods, and specifications at even a conceptual level: there are no substrate texture specifications, estimated rates of sand transport (erosion/accretion), species-specific planting densities, offsite or on-site transplant stock specifications, planting sequence or phasing, growth or survivorship criteria, long-term invasive species management, reference sites or conceptual models for vegetation objectives, quantitative or semi-quantitative vegetation or species objectives, or long-term vegetation goals. The HPP lacks any indication of due diligence in consulting standard published scientific references on coastal dune restoration, or regional California expertise. The HPP exhibits the scientific rigor of a landscape architect's planting plan. It provides no basis for expecting effective long-term restoration or rehabilitation of native coastal dune communities, or adequate mitigation in a CEQA or Coastal Act context.

4.5 Coastal recession and dune stabilization. The discussion and analysis of "coastal recession" (shoreline retreat) as an incompatible hazard for resort development appears to have omitted analysis of potential significant impacts to and by dune sand transport linked to episodic marine (storm wave) erosion of the coastal bluff scarp, and associated blowout and eolian sand transport processes. Dune blowout formation and deposition of tongue dunes and small parabolic dunes are well-documented historic and modern geomorphic processes and landforms associated with the southern Monterey Bay coastal bluff and dune sheet. The 1989 erosion study expressly indicated bluff erosion processes independent of waves and shoreline position (p. A-7), and estimated potential net onshore eolian sand transport rates ranging from approximately 3,000 to 25,000 cubic yards per year in Sand City (p. B-17). Paradoxically, all discussion of "set-back" distances since the 1989 erosion report are linked to position of the bluff or high water line, rather than the zone of active blowout erosion and eolian sand

deposition that occurs well landward of it. The environmental consequences of perpetual blowout stabilization and sand removal have not been addressed in the Addendum or geotechnical reports. There is no native vegetation type that can fully stabilize a foredune faced with strong net onshore transport of sand from dry fetch across either an erosional bluff scarp or wide beach backshore, or both. The layout of the “eco-resort” infrastructure and graywater/stormwater detention ponds appears to conflict with the likely zone of dune transgression associated with the existing bluff crest or “restored foredune” grade. Contours of the “restored” foredune appear to increase topographic steering and flow acceleration of onshore winds, intensifying potential local wind scour and sand deposition behind the bluff crest. As the beach recovers from sand mining, the risk of increased foredune mobility should be expected to increase over time.

5. Discussion

5.1 Monterey spineflower impacts and mitigation

Monterey spineflower (*Chorizanthe pungens* ssp. *pungens*) is a prostrate annual forb that inhabits vegetation gaps, inactive blowouts and deflation sand surfaces with sparse vegetation, and sparse ground layer vegetation within dune scrub assemblages of stabilized Holocene and older Pleistocene dunes (paleodunes) of Monterey Bay. *C. pungens* is not a pioneer foredune plant that completes its life-cycle within active depositional beach and foredune environments, in contrast with typical strand species (e.g., *Atriplex leucophylla*, *Cakile maritima*). It may occur only incidentally in coastal bluffs or foredunes where scarp erosion (slumping, gravitational slope processes) transport of seed from older, stable dune scrub causes local dispersal into bluff slopes or foredunes. *C. pungens* seedlings and mature plants are relatively intolerant of sand accretion, and have no specialized morphological adaptations (such as rapid shoot elongation responses) to cope with typical rates of sand accretion that occur in foredunes.

The Addendum concedes that the extent of *C. pungens* at the project site has increased since the FEIR was completed, but it argues that the original mitigation measures still apply and still reduce project impacts to a less-than-significant level. This argument is repeated in the “Biotic Assessment” letter of Zander Associates (2008) and the Ilse “Review of Potential Impacts” memorandum to SNG (2008). This conclusion must depend on the feasibility of re-establishing an equivalent or superior replacement population of *C. pungens* in suitable, sustainable long-term conditions – i.e., feasible and successful restoration of *C. pungens* population and habitat. The limited amount of planning information *C. pungens* reintroduction/restoration in the Habitat Protection Plan and project design drawings that represent the location of *C. pungens* habitat, however, indicate a very high risk of restoration and post-transplant population failure.

The most significant constraint on *C. pungens* reintroduction/restoration feasibility is the designated location of habitat, shown on p. 22 of the sheet titled “Monterey Bay Shores: Elements and Experiences” (Ghandour 2008). The HPP itself appears to contain no conceptual or other restoration design figures indicating the specific location (boundary or zone) and extent of seeded future *C. pungens* population. The HPP merely states (p. 4-26) that a “minimum 1,000 propagules” in “several areas of bare sand that totals 3.4 acres” will be harvested and sown, followed by 5 years minimum monitoring. Identification of the the location of the full 3.4 acres of *C. pungens* is apparently undocumented, but the 2008 SNG Supplemental Documents (p. 22,

“Monterey Bay Shores: Elements and Experiences” specifically accounts for “Monterey Spineflower (1.4 acres)” within a landscape unit labeled “Restored Fore Dune Bluff” (sic), immediately seaward of “Restored Low Barchan Dunes”. This appears to indicate that 41% of the required 1:1 mitigation for endangered Monterey spineflower would be located in an unstable coastal bluff scarp (strand habitat), exposed to sand accretion rates and wave erosion rates typical for coastal bluffs in southern Monterey Bay. This is not suitable or feasible habitat for a persistent restored population of *C. pungens*. *C. pungens* occurs in stable scrub dune assemblages with sparse ground layer vegetation and litter deposits, and negligible rates of sand accretion. It is likely to be excluded by significant rates of sand accretion (pulsed episodes exceeding 5-10 cm/deposition event) in foredunes and bluff slopes.

C. pungens is likely to be excluded also by significant accretion of plant litter beneath dense dune scrub canopies in artificially stabilized dune scrub assemblages. The HPP refers to revegetation techniques including retention of dead iceplant “mulch” (p. 4-10), artificial irrigation up to 3 years (p. 4-7, 4-8), and fertilizer application (p. 4-7). These techniques, problematic and largely misapplied to coastal dune restoration projects where potential mixed substrate types occur, are likely to facilitate excessive size and canopy density of planted dune scrub, and facilitate excessive invasion by non-native weeds (Pickart and Sawyer 1998). The overall effect of fertilized, irrigated, organically-enriched soil in a dune environment would be to support an ephemeral (single growing season) “flush” of robust annuals (including *C. pungens*) and planted shrubs/perennials, followed by a trend of woody/perennial canopy suppression of ground-layer native annuals. Neither the HPP nor any other supporting environmental documents cites any applied scientific literature on coastal California dune restoration, or any expert consultation, to support its methodology or design for achieving *C. pungens* and dune scrub restoration objectives. The approach described is, in my professional opinion, superficial and deeply defective in both research and formulation. Dune revegetation actions described within the project area are likely to result in vegetation types that support few or no substantial, persistent populations of *C. pungens*.

The proposed sowing density of “minimum 1000 propagules” of *C. pungens* distributed over 3.4 acres (p. 4-26 HPP) is an incredibly low 0.0067 (dry fruits/seeds) per square foot. Successful seeding of native dune annuals, particularly where weed competition or erosion/accretion rates may constrain emergence success, requires very high sowing rates. The HPP does not account for reasonable methods harvest, storage, sowing, seasonal timing, or post-sowing stabilization of *C. pungens* seed. The HPP does not provide for review or approval of restoration/reintroduction methods by either State or Federal resource agencies responsible for this endangered species, nor qualified scientific experts in coastal dune plant ecology and restoration.

The HPP coverage of *C. pungens* reintroduction/restoration measures fails to include basic and essential planning feasibility information and criteria for restoration of any dune annual, such as suitable substrate (“soil”) analysis, existing and forecast sand accretion rates in relation to topographic position, objective targets for population size (range) or trends, local vegetation succession (native plant competition) predictions, vegetation gap dynamics and patterns, long-term invasive non-native plant trends and management, boundaries of managed areas, or acreages essential to Monterey spineflower management.

The overall long-term feasibility of establishing a viable population of *C. pungens* in the so-called restored” dunes of the project site (seaward of the developed resort footprint) in the current

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project plan appears to be very low. Bluff retreat and associated bluff-top dune blowout and active dune transgression will replace stable dune scrub habitats with bluff-top dune zone that would become too geomorphically dynamic to sustain a natural population of *C. pungens* through the 21st century. The current (2008) proposed *C. pungens* mitigation measures are not adequate to offset impacts to existing endangered plants on the site, and indeed indicate a likelihood of population failure over time. This represents a significant change in the conditions evaluated by the FEIR.

5.2 Western snowy plover impacts and mitigation

The Addendum and HPP fail to address threats and biologically significant indirect and cumulative impacts to the western snowy plover that are clearly identified or emphasized in the U.S. Fish and Wildlife Service's final (2007) recovery plans for this species, which provides the primary federal ESA conservation guidance for this federally listed species. The Addendum stresses (and misinterprets) the findings of the 2005 critical habitat listing for the western snowy plover (plover), yet ignores the explicit scientific findings and guidance of the final recovery plan. "Critical habitat" designations are not rankings of recovery priority. "Critical habitat" is a legal determination that extends Section 7 ESA (interagency consultation) "may affect" triggers for formal consultation, and Section 9 "take" prohibitions for wildlife, to geographic areas that may or may not be occupied by a listed species at the time of a potential impact. In contrast, recovery plans (Section 4 ESA) establish the "master plan" for federal conservation priorities of a listed species, and also provide the primary federal scientific guidance for assessment of threats, impacts, and conservation measures. The Addendum appears make unjustified interpretations about the meaning of the plover's critical habitat designation, while arbitrarily ignoring the explicit guidance of the recovery plan (available to Addendum preparers in 2007) where it is pertinent to revised assessment of project impacts and mitigation. Moreover, the Addendum appears to disregard or trivialize recent and current (2007-2008) plover data from Sand City and Monterey Bay (also fully available to Addendum preparers) when it conflicts with its tenuous interpretations about the biological significance of project impacts. I am concerned that the Addendum's treatment of plover impact "significance" reflects substantial bias or ignorance. The same selective omission of the recovery plan appears in the HPP.

The Addendum discussion appears to confuse ESA "take" with the totality of direct, indirect, and cumulative biological impacts and mitigation required for assessment under CEQA. Significant CEQA biological impacts to plovers are not limited to the federal legal threshold of "take". The USFWS recovery plan (2007) comprehensively explains the scope of threats and modes of direct, indirect, and cumulative biological impacts to plover, but this guidance is not addressed in the Addendum or HPP. The Addendum ignores the recovery plan's goal of increasing breeding success of this species in each part of its range, including all of Monterey Bay, and understates the significance of the project's impacts on recovery. The Addendum erroneously argues, by selective citation of regional plover breeding data, that

...because the site is not designated plover critical habitat, because the on-site nesting activity has diminished since 1998, and because the plover has consistently migrated its nesting activity 16 miles north to Moss Landing since the mid-1990s, the ecoresort construction or operation is not expected to result in "take" of the plover (Addendum p. 52)

The errors in this argument and its premises are as follows:

- a. The designation of critical habitat is not an indication of recovery priority, but a legal determination of where Section 7 obligations and Section 9 prohibitions will apply even when the area is unoccupied by the listed species. The final recovery plan is the primary authority on biological importance of geographic range and site location factors to species recovery. The site falls within mapped snowy plover areas of Monterey Bay that apply to recovery recommendations.
- b. Contrary to the assertions of the Addendum, the most recent PRBO data (2008) report 4 plover nests and one additional brood in the Sand Study area, most of which are clustered around the vicinity (or actual location) of the project site (Figure 1, Neuman and Page 2008). The survey authors report high hatch rates but low fledge rates (initial breeding success, poor juvenile survivorship) in the study area, citing avian predation, human disturbance, dogs as likely causes of low nest success, rather than inherent site suitability factors. The results were reported directly to Sand City. PRBO evaluated the 2008 Sand City plover breeding survey results as “encouraging signs for plover recovery in the area”, with a caveat about crows (predators) and levels of humans disturbance (“substantially higher in Sand City than those reported for other Monterey Bay beaches”) as likely limiting factors for fledging (juvenile survival).
- c. The Monterey Bay regional plover nesting report (Page et al. 2007) does not assert or support the “migration of nesting activity” to Moss Landing since the mid-1990s. The report concludes that hatch rates are similar in Moss Landing salt ponds and Monterey Bay beaches in 2007, and of fledging chicks, 203 were on Monterey Beaches versus only 27 in the salt ponds in 2007. The report indicates a continuing decline in breeding success, not a “migration of nesting activity northward”. The report did not cover the 2008 Sand City breeding survey results, but the 4 Sand City nests (in unmanaged habitat) represent 15% of the nesting rate of the CDFG salt ponds that are actively and intensively managed for plover breeding.
- d. As indicated above, federal legal “take” is not the applicable threshold for significant impacts to plovers in a CEQA context. All plover foraging, nesting, fledging, predator refuge/cover, predation risk factors, and escape habitat functions are applicable in a CEQA context.

In contrast with the Addendum’s conclusion that the critical habitat designation suggests the site is unimportant for breeding, the recovery plan expressly states:

A key component of recovering western snowy plovers is to ensure that population increases are distributed throughout the species’ Pacific coast range. In order to achieve this, management goals (Appendix B) and needed management actions (Appendix C) have been determined for 155 sites distributed along the coasts of southern Washington, Oregon, and California.

Sand City beaches lie within mapped snowy plover areas of the recovery plan.

The projects' most significant potential impacts on breeding plovers in the "effects area" of the project are likely to be indirect, mediated by influences on predators (predator attraction, predator cues, predator activity), and visitor disturbances of breeding plovers. The recovery plan (pp. 149-150) states that coastal development that destroys or modifies habitat (listing factor A) also results in increased disturbance from recreational activities (listing factor E) and in increased predator populations (listing factor C). The recovery plan lists threats that apply to the current project (p. 152), noting those that were originally identified in listing with an asterisk (*): increased populations of native predators due to human influences; predator attractants*; disturbance by pedestrians*, dogs*; increased coastal access to beaches; litter, garbage & debris.

The "plover mitigation program" cited in the Addendum is a sketchy bullet list of 11 conservation items aimed at the plover (p. 3-7), followed by sketchy description and no technical implementation (other than deferred professional discretion or consultations of the "retained biologist") on pp. 4-14 to 4-16).

The HPP fails to address indirect impacts due to increased predator attraction and food resources (especially for corvids, gulls, red fox). The "predator management plan" (p. 4-16 HPP) is proposed for future development, and does not appear to expressly include in its scope prevention of predator attraction by food and garbage management within the resort. The scope of the plan appears to focus only on protection of "plovers nesting *on the site*" from predation "to the extent feasible" (p. 4-16), and fails to address indirect impacts of resort-based increased predator activity on adjacent areas (Fort Ord beaches). The plover recovery plan (p. 54) discusses the following indirect and landscape-level cumulative impacts on predation:

Predation, while predominantly a natural phenomenon, is exacerbated through the introduction of nonnative predators and unintentional human encouragement of larger populations of native predators. Elevated predation pressures result from landscape-level alterations in coastal dune habitats which, in turn, now support increased predator populations within the immediate vicinity of nesting habitat for western snowy plovers.

In addition the 2007 recovery plan identifies the following impacts that are directly relevant to the analysis of project impacts, but were not analyzed in the Addendum or HPP:

p. 58 [nest selection, roost site selection] Concentrations of people may deter western snowy plovers and other shorebirds from using otherwise suitable habitats.

p. 59 [foraging impacts] Recreational activities that occur in the wet sand area (e.g., sand sailing) can adversely affect western snowy plovers when they disturb plover adults or broods, which feed at the edge of the surf along the wrack line.

p. 61 [flushing] The disturbance types that caused incubating western snowy plovers to flush from their nests most frequently were joggers and walkers, followed by joggers or walkers with dogs off leash, and stationary visitors

p. 63 [dogs] Dogs on beaches can pose a serious threat to western snowy plovers during both the breeding and nonbreeding seasons. Unleashed pets, primarily dogs, sometimes chase western snowy plovers and destroy nests. Repeated disturbances by dogs can interrupt brooding, incubating, and foraging behavior of adult western snowy plovers and cause chicks to become separated from their parents.

p. 65 [energetics and disturbance] When shorebirds are flushed, they must spend more energy on vigilance and avoidance behaviors at the expense of foraging and resting activity.

p. 72 [coastal access] Expanding public access to the coast (e.g., State Coastal Trails) for recreation (e.g., walking, hiking, biking) may adversely affect western snowy plovers and their breeding or wintering habitat. Expanded coastal access brings significantly greater numbers of people to the beach and other coastal habitats, exacerbating potential conflicts between human recreational activities and western snowy plover habitat needs (see Pedestrian section).

p. 76 [litter, garbage, and debris] Placement of litter, garbage, and debris in the coastal ecosystem can result in direct harm to western snowy plovers and degradation of their habitats. Litter and garbage feed predators and encourage their habitation at higher levels than would otherwise occur along the coast, making predators a greater threat to western snowy plovers.

The proposed 2-acre plover protection area fails to address these indirect or direct impacts to nesting or foraging plovers due to increased resort-based visitor disturbance in the vicinity of the proposed resort and adjacent Fort Ord beaches. In a CEQA context, the HPP impermissibly defers preparation of an enforceable mitigation plan to protect western snowy plovers from direct, indirect, and cumulative impacts of the proposed resort, including plovers on adjacent Fort Ord beaches affected by potentially elevated predation pressures emanating from the resort.

The Addendum, following the the HPP, argues (p. 53) that the substitution of the HPP for an HCP “is unlikely to result in an increase impact to the plover” and the revised strategy is equivalent to the previous strategy. This argument is not credible for the following reasons. First, the HPP provisions for snowy plovers do not correspond to management guidance from the recovery plan. Second, the HPP lacks substantive, enforceable technical specifications, and impermissibly defers essential planning actions to future discretion of an unspecified biologist, or future planning. Third, the HPP provides no criteria or standards for unspecified plan elements to meet. Fourth, and perhaps most importantly, the HPP fails to provide the federal scientific oversight, scientific peer-review, and enforceability mechanisms of an HCP. The proposed funding mechanism (apparently unprecedented) for the HPP implementation exacerbates questions of scientific integrity and enforceability of the plover mitigation: The creation of a dependent non-profit (tax-exempt?) environmental trust by the owners of the for-profit resort to manage and enforce the HPP is highly questionable because of potential conflicts of interest and financial self-dealing. The failure of the HPP to include rigorous independent scientific review by recognized regional western snowy plover experts and resource agencies with jurisdiction and expertise (USFWS, CDFG and plover recovery team members) is a grievous deficiency in its acceptability as mitigation.

In view of the 2007 recovery plan, and the 2008 breeding survey results reported by Neuman and Page (PRBO), which revealed four western snowy plover nests and one additional brood in the Sand City study area (most clustered in the vicinity of the project site, the location of future resort-based visitor disturbance), the Addendum’s conclusions about less-than-significant western snowy plover impacts are not supported by reasonable scientific interpretation of evidence and authoritative federal conservation guidance.

5.3 Omissions or deficiencies in assessment and mitigation of other special-status species impacts

The original FEIR Addendum fails to assess three species that may occur in Monterey Bay dunes, and were identified as species of concern by the U.S. Fish and Wildlife Service (1998), even though the recovery plan and its draft were already published by 1998. Neither the Addendum, HPP, nor other supporting documents such as the Zander “biotic assessment” address the following invertebrates native to central coast dunes in the project vicinity:

Monterey dunes scorpion (*Pauroctonus maritimus*)
Globose dune beetle (*Coelus globosus*)
Sandy beach dune beetle (*Cicendela hirtocollis gravida*)

Black legless lizard (*Anniella pulchra nigra*) surveys were cited for the project site no more recently than 1987, more than 20 years ago. This special-status species of concern is likely to occur in dune scrub habitats of adjacent Fort Ord dunes, within reasonable, feasible dispersal distance of the project site. No federal or state resource agencies with jurisdiction over wildlife, in my professional experience and opinion, would accept 20+ year old survey data as adequate to conclude “non-presence” of a sensitive species if potentially suitable habitat existed on a site, and occurred next to likely source populations and dispersal vectors. In the last 20 years, many years of above-average rainfall occurred and likely contributed to increased production of leaf litter and invertebrate prey bases of this species, increasing its likelihood of occurrence in vegetated dunes on the project site.

The Addendum lacks any reasonable, objective basis for concluding that the project would not have potential significant impacts to these species in the absence of valid, current survey data and habitat assessments.

5.4 Feasibility of Habitat Protection Plan and project design of dune habitat restoration

The Addendum and project documents fail to analyze the long-term loss in coastal dune habitat caused by the (cumulative project effect) the interaction of the development infrastructure footprint, and marine transgression (long-term shoreline retreat; “coastal squeeze”). The project footprint (notwithstanding the largely ornamental rooftop gardens with native vegetation) displaces most of the transgressive platform for potential regeneration of coastal dunes as the coastal bluffs retreat in response to accelerated sea level rise. As the bluff crest position retreats, the physical space available for coastal dunes to develop will be eliminated. This is likely to occur in a matter of decades based on forecast “average” rates of bluff retreat according to the HKA erosion reports, but even the HKA 2003 report indicated that because of “extreme susceptibility of the soils to erosion, a single severe ocean storm has the potential to cause 50 feet of bluff recession anywhere on this section of coastline” (HKA 2003, p. 7). Most coastal erosion occurs in El Nino Southern Oscillation storm pulses rather than incremental recession, and the intensity and frequency of extreme storm wave processes on the U.S. west coast is increasing over decades, independently of eustatic sea level rise (Allan and Komar 2006). This indicates the need for a probabilistic assessment of storm-driven bluff retreat positions that could effectively eliminate the space available for restored or regenerated dune habitats seaward of the developed resort footprint.

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The HPP fails to include standard dune restoration and management techniques, methods, and specifications (Pickart and Sawyer 1998) at even a conceptual level. Neither the HPP nor any other supporting environmental documents cite any applied scientific literature on coastal California dune restoration, or any expert consultation, to support its methodology or design for achieving dune scrub restoration objectives. The HPP dune restoration plans fail to cite substrate texture specifications, estimated rates of sand transport (erosion/accretion), species-specific planting densities, offsite or on-site transplant stock specifications, planting sequence or phasing, growth or survivorship criteria, long-term invasive species management, quality control criteria, reference sites or conceptual models for vegetation objectives, quantitative or semi-quantitative vegetation or species objectives, or long-term vegetation goals. The HPP lacks any indication of due diligence in consulting standard published scientific references on coastal dune restoration, or regional California expertise. The HPP exhibits the scientific rigor of a landscape architect's planting plan. It provides no basis for expecting effective long-term restoration or rehabilitation of native coastal dune communities, or adequate mitigation in a CEQA or Coastal Act context.

5.5 Coastal recession and dune stabilization

The discussion and analysis of "coastal recession" (shoreline retreat) as an incompatible hazard for resort development appears to have omitted analysis of potential significant impacts to and by dune sand transport linked to episodic marine (storm wave) erosion of the coastal bluff scarp, and associated blowout and eolian sand transport processes. Dune blowout formation and deposition of tongue dunes and small parabolic dunes are well-documented historic and modern geomorphic processes and landforms associated with the original southern Monterey Bay coastal bluff (marine scarp erosion) and perched dune sheet (Cooper 1967). The influence of this coastal ecological/geomorphic process may precede or eclipse marine erosion processes studied in the shoreline recession analysis.

The dune restoration and endangered plant mitigation measures of the project appear not to address the formation of naturally mobile dune features derived deflation of wave-cut bluff scarps and dune heads, processes that are controlled by rates of sand transport upwind of bluff crest/foredune vegetation. Active dunes fed by active, rapid deflation of marine scarps cannot readily be stabilized by planting native California dune species downwind. This results in the natural characteristic condition of frequent blowouts, mobile tongue dunes, and incipient parabolic dunes in various stages of vegetation succession in southern Monterey Bay (Cooper 1967). Cooper (1967) reported comparable rates of migration of active unvegetated coastal dunes in San Mateo County (derived from smaller sand sources) during the dry season up to 5.6 cm/day, or over 6 m in 4 months. Cooper described the landward encroachment of mobile blowout-derived dunes at the bluff crest as "the most conspicuous contemporary activity in the Flandrian [Holocene] dune belt" (p. 63). It is remarkable, therefore, that the rate, pattern and magnitude of this process were not accounted for in dune restoration plans for the project, or impact assessments in the Addendum.

The "wetlands" described without explicit spatial reference in the HPP appear to be shown on Bestor Engineering sheet TM-2, "retention pond" (pp. 22 and 40, SNG supplemental documents 2008). They are located landward of a "barchanoid" (misnomer; barchan dunes are intrinsically unvegetated) dune, and downwind (SE of dominant NW winds) of troughs or gap in the foredune/bluff crest topography established by constructed "dunes" and antecedent topography.

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Gaps in foredune crests cause topographic steering of onshore and alongshore winds, as well as flow acceleration that concentrates dune sand transport pathways (Walker et al. 2006). Contours of the “restored” foredune appear to increase topographic steering and flow acceleration of onshore winds, intensifying potential local wind scour and sand deposition behind the bluff crest. The layout of the “eco-resort” infrastructure and graywater/stormwater detention ponds appears to conflict with the likely zone of dune transgression associated with the existing bluff crest or “restored foredune” grade. In other words, the constructed “restored” dune topography in back of the “set-back” bluff appears to aim dune transgression directly at constructed wetlands/detention ponds, monitoring wells, lift stations, fire access roads, and infrastructure shown in sheet TM-2. As the beach recovers from sand mining, the risk of increased foredune mobility should be expected to increase over time.

The contradiction implicit in design and the morphology, pattern, rate, and scale of natural sand transport and the landscape design on sheet TM-2 is evident on p. 7 of the supplemental document package, as shown in the photograph captioned, “Example of relatively intact dune system north of the proposed site”, which shows mobile dune tongues extending landward from the bluff crest by a distance exceeding the width of the dry high tide backshore beach zone. It is notable that the “natural Monterey Bay Dune Formation” shown on this sheet erroneously represents purely unvegetated dune forms (barchans, barchanoid ridges, transverse dunes) that do not occur in the historic Monterey Bay dune field, which is dominated by parabolic dunes (Cooper 1967). In short, long before “bluff crest recession” directly affects the proposed development, the bluff-tied blowout dune processes would indirectly influence a wide zone of constructed features. The significant environmental consequences of perpetual blowout stabilization and sand removal in the proposed developed landscape have not been addressed in the Addendum or geotechnical reports.

The omission of analysis of bluff-linked dune activity is difficult to understand because the 1989 erosion study expressly indicated bluff erosion processes independent of waves and shoreline position (p. A-7), and estimated potential net onshore eolian sand transport rates ranging from approximately 3,000 to 25,000 cubic yards per year in Sand City (p. B-17). Paradoxically, all discussion of “set-back” distances since the 1989 erosion report are linked to position of the bluff or high water line, rather than the zone of active blowout erosion and eolian sand deposition that occurs well landward of it. There is no native vegetation type that can fully stabilize a foredune faced with strong net onshore transport of sand from dry fetch across either a bluff scarp, a wide beach backshore, or both.

The failure to design the project compatibly with foreseeable natural mobile dune processes linked to bluff retreat is ironic for a self-promoted ecologically designed project, but it is a more significant issue for CEQA and the Coastal Act where it leads to significant impacts due to conflicts with endangered species mitigation, wetland management, water quality and stormwater management, and potential adverse engineered fills for coastal stabilization.

6. Conclusions.

The Addendum fails to identify feasible, enforceable mitigation for impacts to endangered Monterey spineflower, relying on the flawed mitigation planning of the project. The Addendum fails to account for recent and current site-specific data that indicates more nesting by western

snowy plovers on or near the project site, and underestimates potential indirect impacts of the project on this species. The Addendum accepts incomplete and deficient mitigation for impacts to the plover. The Addendum fails to identify potentially significant impacts to several special-status wildlife species, and relies on outdated survey data for one special-status species that was previously considered in the FEIR. The project design and Addendum assessments fail to identify the environmental consequences of dune activity and transgression linked to the inevitable natural recession of the coastal bluff.

Thank you for considering my review. Please contact me if you have any questions.

Respectfully submitted,



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**FORM FOR DISCLOSURE
OF EX PARTE
COMMUNICATION**

RECEIVED
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CALIFORNIA
COASTAL COMMISSION

Date and time of communication:

Monday, March 02, 2009

(For messages sent to a Commissioner by mail or facsimile or received as a telephone or other message, date time of receipt should be indicated.)

Location of communication:

Phone Conference

(For communications sent by mail or facsimile, or received as a telephone or other message, indicate the means of transmission.)

Person(s) initiating communication:

Ed Ghandour, SNG and Paul Kephart, Rana Creek

Person(s) receiving communication:

Bonnie Neely

Name or description of project:

Agenda Item F7a. Monterey Bay Shores Ecoresort

Detailed substantive description of content of communication:

(If communication included written material, attach a copy of the complete text of the written material.)

Applicants gave overview of the project and identified revisions made to original project design, including reducing size of footprint, including visitor serving uses, creating public access opportunities for residents of Seaside and Del Rey Oaks, Plover recovery plan, trails, and parking.

Applicants indicated they support staff's recommendation to reschedule matter for the June Commission meeting after the water distribution permit is issued.

Date: March 2nd, 2009


Signature of Commissioner

If the communication was provided at the same time to staff as it was provided to a Commissioner, the communication is not ex parte and this form does not need to be filled out.

If communication occurred seven or more days in advance of the Commission hearing on the item that was the subject of the communication, complete this form and transmit it to the Executive Director within seven days of the communication. If it is reasonable to believe that the completed form will not arrive by U.S. mail at the Commission's main office prior to the commencement of the meeting, other means of delivery should be used, such as facsimile, overnight mail, or personal delivery by the Commissioner to the Executive Director at the meeting prior to the time that the hearing on the matter commences.

If communication occurred within seven days of the hearing, complete this form, provide the information orally on the record of the proceedings and provide the Executive Director with a copy of any written material that was part of the communication.

Coastal Commission Fax: 415 904-5400

CCC Exhibit 33
(page 1 **of** 1 **pages)**
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