

# **Western Snowy Plover Management Plan for East Balboa Peninsula Beaches**

*Prepared for:*

## **City of Newport Beach**

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## 1 OVERVIEW

This Western Snowy Plover Habitat Management Plan (“Plan”) has been developed to address management of the western snowy plover (*Charadrius alexandrinus nivosus*) (“WSP”) within the eastern portion of the Balboa Peninsula that includes U.S. Fish and Wildlife Service (USFWS) designated Critical Habitat Unit 48<sup>1</sup>, for the federally listed threatened WSP as well as areas to the east of Critical Habitat Unit. Although the focus of the Plan is conservation of the WSP, conservation measures will also benefit other shorebirds. Measures for the restoration and health of the beach dune habitat, which may be used by the WSP are also included. An earlier version of this Plan was prepared by Dudek, dated June 2018<sup>2</sup>, which was distributed to the public for review and comment and a variety of comments were received. This updated version of the Plan has been prepared to be responsive to the comments received, including the comments submitted by the public in response to a public meeting on May 20, 2019, as well as to further document ongoing actions by various City of Newport Beach (“City”) departments to protect the WSP on City beaches. This Plan also responds to letters submitted to the City by the California Coastal Commission<sup>3,4</sup> (“CCC”) addressing protection of the WSP and letters from USFWS that provide suggested measures to enhance WSP protection and conservation<sup>5,6</sup>. As discussed below in various sections of this Plan, many of the measures proposed by CCC and USFWS were previously incorporated into the Plan for the geographic areas of the City addressed in this plan. This Plan has also been prepared to ensure compliance with the Natural Resources Elements of the City’s General Plan and the City’s Local Coastal Program and includes an “Adaptive Management” component, wherein modifications to the Plan would be incorporated where monitoring demonstrates that measures included in the Plan require modification to ensure adequate protection for the WSP within the Critical Habitat area and areas to the east of the Critical Habitat area. Following review of the July 2019 GLA Plan, the California Coastal Commission provided additional recommendations and the City met with USFWS and received comments from USFWS following the meeting. This updated version of the Plan responds to and incorporates recommendations of Coastal Commission and USFWS, while retaining features of the July 2019 Plan such as the adaptive management approach, which is a key component of the Plan. Finally,

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<sup>1</sup> U.S. Fish and Wildlife Service. 2012. “Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Pacific Coast Population of the Western Snowy Plover; Final Rule.” *Federal Register* Volume 77 Number 118; 50 CFR Part 17. June 2012

<sup>2</sup> Dudek, 2018. Western Snowy Plover Management Plan for East Balboa Peninsula Beaches, Newport Beach, California

<sup>3</sup> California Coastal Commission. June 26, 2017. Notice of Incomplete Application. Letter addressed to Brenda Wisneski, Deputy Community Development Director.

<sup>4</sup> California Coastal Commission. September 11, 2017. Subject: Protection of Snowy Plover and dune habitat in City of Newport Beach. Letter to Dave Kiff, City Manager.

<sup>5</sup> USFWS. February 16, 2017. Subject: Protective Measures for Western Snowy Plovers on Beaches in Newport Beach, Orange County, California. Letter to Dave Kiff, City Manager.

<sup>6</sup> USFWS. April 10, 2018. Subject: Western Snowy Plover Management in Newport Beach, California. Letter to Dave Kiff, City Manager.

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this Plan provides the detailed measures, that once approved and adopted, can be used as the framework for other areas in the City where site specific protective measures for WSP require formal establishment and implementation. As discussed throughout this Plan, various departments within the City of Newport Beach already incorporate actions during day-to-day operations aimed at WSP protection; however, additional measures based on site specific conditions may be warranted. This Plan provides an important milestone in achieving protection for WSP and dune habitat throughout the City, through implementation of an adaptive management approach.

## 1.1 Site Description

Newport Beach is a community of 86,738 people covering 25.4 square miles, including 2.5 square miles of bay and harbor waters [Exhibit 1]. Over 63-percent of the City is in the coastal zone. The bay and beaches continue to play an important role in the community's character and economy. There are over 8 miles of sandy beaches that provide opportunities for sunbathing, volleyball, swimming, surfing, windsurfing and other recreational activities. Beach attendance averages 9.4 million people annually and the beach continues to be a major visitor destination. An oceanfront boardwalk runs along the beach for approximately 3 miles from 36th Street in West Newport to F Street on the Balboa Peninsula and is popular with pedestrians, bicyclists, and skaters.

Balboa Peninsula stretches 3 miles long and is a popular summer destination in Newport Beach. At the center of the Balboa Peninsula is Balboa Village, a historic center for recreational and social activities on the Peninsula. It has a strong marine heritage and attracts anglers, recreational boaters, summer residents, and beachgoers. Attractions include the Balboa Fun Zone, Balboa Pier, historic facilities, live entertainment, restaurants and hotels. The "Wedge" located at the extreme east end of Balboa Peninsula is also a popular surfing spot and attracts wave riders and spectators during large summer swells. In addition to recreation and social activities, the beaches in Newport Beach also support areas of sensitive natural resources.

Portions of Newport Beach's coastline support areas of coastal dune habitat. The coastal dune ecosystem is one of the most sensitive and declining habitat types on the West Coast and has historically been impacted by development, with continuing impacts from invasive, non-native species. Coastal sand dunes are a dynamic landform that can be affected by wave action, tides, wind, and trampling and are formed where there is a substantial amount of blown, dry sand. Plant life generally consists of low-growing species, which often exhibit succulent leaves, creeping stems and long fleshy taproots. These adaptations aid the plants in tolerating coastal conditions in southern California including summer drought, salt stress and periods of intense sunlight. The coastline also supports unvegetated upper beach habitat above the high tide line, and below the dunes, that supports numerous invertebrate species, including beach hoppers

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(Telitrids), beetles (Coleoptera) and flies (Diptera). These areas provide prey resources as well as resting habitat for shorebirds, including the WSP.

As discussed throughout this plan, Newport Beach includes area that USFWS has designated as “Critical Habitat” for the WSP (Critical Habitat Unit 48) [Exhibit 2] that requires special consideration. WSP also use other City beaches that lie beyond the boundaries of the designated Critical Habitat, including frequently used beach habitat to the east of Critical Habitat Unit 48, near the Wedge. In recognition of the importance of frequently used City beach habitat to the WSP, habitat to the east of CH Unit 48 was recommended for designation as an Avian Conservation Area (“ACA”)<sup>7</sup> by the USFWS. The Project Area for this plan, Critical Habitat Unit 48 and the beach and dune area to the east of Critical Habitat Unit 48, is used primarily by wintering WSP. This plan does not address other City beach areas that may be used by WSP, however, the City recognizes the need for protection of the WSP on all beaches within the City. As discussed below, each area within the City is different, in terms of use intensity, recreational activity and natural resource value, and requires site-specific measures. Thus, following approval of this Plan, the City plans to address the other City beach areas with site-specific measures that reflect their unique characteristics in terms of use intensity, recreational value, and natural resource values. Site Specific measures would follow the general framework set forth in this Plan.

## 1.1.1 Critical Habitat Area

Balboa Peninsula is one of seven primary wintering sites for snowy plovers in Orange County, which historically supported nesting; although due to existing human uses, the current potential for nesting is low. The Balboa Peninsula also contains three of the four recommended ACAs identified by USFWS in the City, including Critical Habitat Unit 48. The Project Area includes the beaches and dunes used by WSP along the eastern segment of the Balboa Peninsula east of B Street. This stretch of beach is approximately 1.1 mile or about 23-percent of the linear extent of Newport Beach. It includes Critical Habitat Unit 48, described below, as well as recently occupied habitat to the east, near the Wedge.

The Pacific Coast population of the WSP was listed as “threatened” pursuant to the federal Endangered Species Act (“FESA”) by the U.S. Fish and Wildlife Service (USFWS) on March 5, 1993. Final critical habitat for WSP was designated by the USFWS in 2012 [Exhibit 3 depicts areas of Critical Habitat in southern California]. Critical habitat for the species is designated for the following areas within Newport Beach: Southeast of Balboa Pier, from B Street to G Street (0.4 miles), approximately 25.04 acres of beach (between the boardwalk and the mean tide line).

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<sup>7</sup> Ibid., page 3.

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Site views are provided on Exhibit 2. As noted, USFWS identifies this area as Critical Habitat Unit 48.

Critical habitat is a designation in the FESA that identifies geographic areas containing features essential for the conservation of a threatened or endangered species that may require special management considerations or protection. As defined in the FESA, critical habitat may also include areas that are not currently occupied by the species but have been determined essential for the recovery of the species for which critical habitat is designated.

The USFWS initial designation of critical habitat for the WSP was December 7, 1999, with updates in 2012. Currently, there are 55 critical habitat units (approximately 24,527 acres) in Washington, Oregon, and California including Unit 48: “Balboa Beach” Peninsula site. When designating critical habitat biologists consider physical or biological features necessary for life-history processes essential to the conservation of the species. These include, but are not limited to:

- Space for individual and population growth and for normal behavior
- Food, water, air, light, minerals, or other nutritional or physiological requirements
- Cover or shelter
- Sites for nesting and rearing offspring
- Habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species

The USFWS designated Critical Habitat Unit 48: “Balboa Beach” on June 9, 2012 as depicted on Exhibit 2 along with three of the four ACAs in the City. Designation of critical habitat or ACA does not affect land ownership or establish a wildlife refuge, wilderness area, habitat reserve or preserve, or other designated conservation area. The critical habitat designation does not affect accessibility by the public and in this regard would be the same as other stretches of beach on Balboa Peninsula. The oceanfront boardwalk extends along the critical habitat area from just east of B Street and ends approximately 200 feet southeast of F Street. Six street end entrances are located from A Street to G Street. In addition, C, D, E, and F Streets each have an asphalt concrete pathway that extend various lengths from the intersection of the street entrance and boardwalk, toward the ocean within the designated Critical Habitat. It is important to note that, except for the concrete path that extends from E Street, which was constructed in 2014, each of the concrete walkways pre-date the Coastal Act and do not need authorization from the Coastal Commission. The City is seeking after-the-fact authorization for the E Street Walkway.

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## 1.1.2 Other Balboa Peninsula Habitat

WSP use of Balboa Peninsula beaches is not limited to habitat designated as Critical Habitat. WSP have been documented using the upper beaches and dunes to the east and west of Critical Habitat Unit 48 but have been most regularly detected near Critical Habitat Unit 48 and to the east of Critical Habitat Unit 48 between B Street and the Wedge. WSP surveys provided information regarding WSP use of the Project Area include monthly surveys (Griswold XXX, Weinik 2013, 2014 and 2015) and one-day window surveys, which are conducted range wide during a one-week window in the breeding and non-breeding seasons (available on USFWS website; <https://www.fws.gov/arcata/es/birds/wsp/plover.html>).

As already stated, the City recognizes the importance of incorporating conservation measures that will maximize the protection for wintering WSP at each of the wintering sites across the City's beaches. Successful implementation of this Plan could also increase the potential for resumption of nesting activities on the Balboa peninsula. While successful nesting has not occurred since 2009, with a failed nesting attempt in 2013, it is a goal of this plan to manage the habitat for the overall benefit of the WSP and dune habitat. This Plan provides the detailed measures that once approved and adopted can be used as the framework for other areas in the City where site specific protective measures for WSP require formal establishment and implementation. As discussed throughout this Plan, various departments within the City of Newport Beach already incorporate actions during day-to-day operations aimed at WSP protection; however, additional measures, based on site specific conditions may be warranted. This Plan provides an important milestone in achieving protection for WSP and dune habitat throughout the City, through implementation of an adaptive management approach.

## 1.2 Regulations and Policy

As noted above, the WSP is listed as "threatened" under the FESA and Critical Habitat under the FESA was revised and updated in 2012. The State of California includes the WSP as a "Species of Special Concern". This Plan has been developed in a manner that is intended to address a number of State and Federal regulatory programs, addressed below. Under the regulatory programs discussed below, protective measures for species and habitat vary by location and by the ecology of the species in the context of site-specific conditions. USFWS coordinates with land managers on measures to protect listed species and issues permits, where necessary, under section 10 and section 7 of the FESA to address potential impacts and recovery actions that may affect the species. Protective measures for specific species such as WSP are subject to ongoing review by managers and biologists to ensure they meet the conservation needs of the species while being the least intrusive as possible for recreation and other uses. The following regulations and policies

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have been considered in establishing best management practices, protective measures and conservation efforts within the City of Newport Beach for this Plan.

### 1.2.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) is a federal law, enacted in 1973, to provide a program for the conservation of threatened and endangered plants and animals, as well as their habitats. It is administered by the USFWS and the Commerce Department's National Marine Fisheries Service (NMFS). The USFWS's primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife.

Under the FESA, species may be listed as either endangered or threatened. "Endangered" means a species is in danger of extinction throughout all or a significant portion of its population range. "Threatened" means a species is likely to become listed as endangered within the foreseeable future. All species of plants and animals, except pest insects, are eligible for listing as endangered or threatened. Approximately 2,300 species are currently listed as endangered or threatened under the FESA, including the threatened WSP.

Section 4 of the FESA requires that listing determinations be based solely on the best scientific and commercial information available; economic impacts are not considered in making species listing determinations and are prohibited under the FESA. All endangered or threatened species, including the WSP, may be listed due to any of the following 5 factors:

1. Present or threatened destruction, modification, or curtailment of its habitat or range;
2. Over-utilization of the species for commercial, recreational, scientific, or educational purposes;
3. Disease or predation;
4. Inadequacy of existing regulatory mechanisms; and
5. Other natural or manmade factors affecting its continued existence.

Pursuant to Section 9, the FESA protects endangered and threatened animal species and their habitats by prohibiting the "take" or "harm" of listed animals. Take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." The term "harm" is defined as "an act which actually kills or injures wildlife". Harm may also include significant modification or degradation of habitat resulting in killing, injuring or impairing essential behavioral patterns like nesting, feeding, or sheltering. The goal of this Plan is to reduce or eliminate any potential for take of the WSP on the City's beaches.

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In addition to preventing further loss of a species, the FESA also requires the Federal Government to pursue actions to recover species to the point where they are delisted and no longer require protections (USFWS 2013). To this end, USFWS develops “Recovery Plans” for listed species.

### 1.2.2 US Fish & Wildlife Service: Western Snowy Plover Recovery Plan

The Western Snowy Plover Recovery Plan (WSPRP) is a guiding document prepared by the USFWS that identifies priority areas for conservation planning and recovery objectives, criteria and strategies necessary to achieve recovery for interested parties (USFWS 2007). Parties may include Federal, State and local agencies, private landowners and the public. A recovery plan is not a regulatory document and does not obligate cooperating or other parties to undertake specific tasks or expend funds.

The WSPRP was published in 2007 and includes recommendations and management measures that aim to protect, recover and delist the species from its threatened status under FESA (USFWS 2007). The WSPRP seeks cooperative management and monitoring, mixed with education and public participation, to restore the WSP to sustainable numbers. In the WSPRP, the U.S. Range of the WSP is divided into 6 Recovery Units, each with a numerical WSP population target (Table 1). Newport Beach lies within Recovery Unit 6 and is identified in Appendix B of the WSPRP as location CA-109. as depicted on Exhibit 4. The WSP population goal for Recovery Unit 6 is an average 500 breeding adults for 10 years, and the overall recovery goal is to maintain an average of 3,000 breeding adults for 10 years across the six recovery units (Table 1) and annual productivity of at least one fledged chick per male in each recovery unit for the last five years prior to delisting. In addition to population criteria, the WSPRP identifies management criteria necessary for recovery of the WSP, including incorporation of management activities into management plans to ameliorate or eliminate threats, completion of research necessary to modify management and monitoring actions, development of a post-delisting monitoring plan and development and implementation of mechanisms to assure long-term protection and management of breeding, wintering, and migration areas to maintain the subpopulation sizes and average productivity. If the WSPRP is successful, the species could be delisted by 2047.

<b>Western Snowy Plover Recovery Units</b>	<b>Goal: Number of Breeding Adults</b>
1. Washington & Oregon	250
2. CA—Del Norte--Mendocino counties	150
3. CA—San Francisco Bay	500
4. CA—Coast: Sonoma--Monterey counties	400
5. CA—Coast: San Luis Obispo--Ventura counties	1,200
6. CA—Coast: Los Angeles—San Diego counties	500

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## 1.2.3 California Coastal Act

The California Coastal Act of 1976 (Coastal Act) establishes specific policies (see Division 20 of the Public Resources Code) that address issues such as shoreline public access and recreation, lower cost visitor accommodations, terrestrial and marine habitat protection, visual resources, landform alteration, agricultural lands, commercial fisheries, industrial uses, water quality, offshore oil and gas development, transportation, development design, power plants, ports, and public works. The Coastal Act also established the California Coastal Commission (Coastal Commission). In partnership with coastal cities and counties, the Commission plans, reviews and regulates the use (“Development”) of land and water in the coastal zone. Development activities, which are broadly defined by the Coastal Act to include (among others) construction of buildings, divisions of land, and activities that change the intensity of land use or public access to coastal waters, generally require a coastal development permit (CDP) from either the Coastal Commission or the local government through a Local Coastal Program.

Implementation of Coastal Act policies is accomplished primarily through the preparation of a Local Coastal Program (LCP), prepared by a local government and reviewed and approved by the Coastal Commission. An LCP typically consists of a land use plan and an implementation plan. The City of Newport Beach (City) LCP was certified by the Coastal Commission on January 13, 2017. Within the City’s coastal zone, the certified LCP is standard by which both the City and the Coastal Commission determines a project’s consistency with the Coastal Act. This Plan has been prepared in a manner that is fully consistent with the provisions of the City’s LCP.

## 1.2.4 City of Newport Beach: General Plan

The City’s General Plan (“GP”), adopted in 2006 includes 10 elements. Among these elements is the Natural Resources Element, which contains goals and polices (Appendix A) related to the protection of biological resources, air quality and visual resources among other.

Specially related to the WSP, Goal NR12 calls for the protection of coastal dune habitats and includes three policies that address the restoration of native vegetation and removal of exotics, dune habitat protection and beach sand removal. This plan has been designed to be consistent with the applicable goals and policies set forth in the Natural Resources Element of the GP. As addressed in more detail below, this Plan identifies areas within Critical Habitat Unit 48 where non-native invasive species will be removed and re-planted with native dune vegetation as part of dune restoration as well as areas between G Street and the Wedge where dune habitat would be enhanced through removal of non-native fig marigold (*Carpobrotus edulis*).

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## **1.2.5 City of Newport Beach: Coastal Land Use Plan**

The City's certified LCP consists of Coastal Land Use Plan (CLUP) and an Implementation Plan (IP). The CLUP sets forth goals, objectives, and policies that govern the use of land and water. The IP contains the land use and property development regulations that implement CLUP policies.

The CLUP includes policies for the protection of environmentally sensitive habitat areas (ESHA). ESHAs are areas in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments. Because the area covered by the critical habitat designation supports roosting habitat for a threatened species, the federally designated critical habitat area meets the definition of ESHA in the City's CLUP. Regulations and procedures for the protection of ESHA (Appendix B) are contained in IP Chapter 21.30B (Habitat Protection). Other applicable IP sections include 21.30.100 (Scenic and Visual Quality Protection), Chapter 21.30A (Public Access and Recreation) and Section 21.48.055 (Public Beaches). This Plan has been prepared in a manner that is fully consistent with the provisions of the City's CLUP.

## **1.2.6 City of Newport Beach: Municipal Codes**

Appendix C provides a comprehensive list of municipal codes within City of Newport Beach that are relevant to City beaches and relate to the protection measures of sensitive habitat areas and the WSP. Municipal codes may be enforced by the Newport Beach Police Department or other appointed officers with enforcement authority.

These municipal codes include, but are not restricted to, requirements that dogs are securely restrained by a leash or chain on beaches and that animals are prohibited on public beaches between the hours of 10 a.m. and 4:30 p.m. year-round (Chapter 7.04). Chapter 11 addresses areas that may be relevant to WSP's including obstructions on public beaches, (Chapter 11.08.010) prohibited hours (11.08.30) and skimboarding (11.16).

## **2 WESTERN SNOWY PLOVER OVERVIEW**

### **2.1 WSP Life History**

The WSP is a small shorebird distinguished from other plovers by its small size, pale brown back, dark patches on either side of the upper breast, and dark gray legs. As a small shorebird, their weight ranges from 34–58 grams (1.2–2 ounces) and length from 15–17 cm (5.9–6.6 inches). Their lifespan averages three years; however, a banded WSP was discovered to have lived 15 years. Young WSP fledge between 28–33 days, when they can fly, and begin breeding as adults at one year or older.

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The interior population is a California Species of Special Concern that breeds in the San Joaquin Valley, northeastern California, the Owens Valley, the southeastern deserts, and around Lake Elsinore in western Riverside County (Shuford et al. 2008). The Pacific population is federally listed as threatened and is also a California Species of Special Concern and breeds along the coast from Washington State south through California. According to Ryan et al., (2017), in Orange County, the Pacific population of WSP have historically been documented nesting from Anaheim Landing to Balboa:

*In Orange County, plovers nested at Anaheim Landing, Sunset Beach Bay Fill, Sunset Beach, Bolsa Chica Beach, Bolsa Chica Salt Flats, Newport Beach, and Balboa Beach prior to 1940 (Page and Stenzel 1981). During their 1979-78 survey, Page and Stenzel (1981) found that OC supported 2% of the pairs on the mainland coast, all at the Bolsa Chica Oil Fields (previously Bolsa Chica Salt Flats). As in LAC, they concluded that the only other likely nesting location was at the Sunset Aquatic Park and that the lack of nesting plovers elsewhere was due to beach raking and heavy human use (Page and Stenzel 1981).*

The WSP feeds on invertebrates such as crustaceans and mollusks, marine worms, and insects. They forage on invertebrates in the wet sand and amongst surf-cast kelp within the inter-tidal zone, in dry, sandy areas above the high tide, on salt pans, on spoil sites, and along the edges of salt marshes, salt ponds and lagoons. They sometimes probe for prey in the sand and pick insects from low-growing plants (Defenders of Wildlife 2017). Their foraging behavior is to pause, look, run, and then seize prey from the surface of the beach or tidal flat.

The adult WSP predators are typically avian species such as hawks and falcons (Page et al. 2009). Snowy plover nest predators include American crow (*Corvus brachyrhynchos*), common raven (*C. corax*), red fox (*Vulpes vulpes*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), black rat (*Rattus rattus*), and feral cat (*Felix catus*). Other suspected predators include coyotes (*Canis latrans*), mink (*Mustela vison*), short and long-tailed weasel (*Mustela* spp.), Virginia opossum (*Didelphis virginiana*), gray fox (*Urocyon cinereoargenteus*), Norway rats (*Rattus norvegicus*), spotted skunk (*Spilogale putorius*), and gulls (*Laris* spp.) (USFWS 2008).

### 2.2 WSP Nesting and Wintering

The WSP nesting season is from March 1 through September 30, predominately in May. Nesting occurs on coastal sandspits, dune-backed beaches, beaches at creek mouths and lagoons, and salt pans at lagoons and estuaries. WSPs lay eggs on barren to sparsely vegetated sand beaches and often place nests near a conspicuous feature in the landscape, such as kelp, driftwood or low growing plants (Page et al. 2009). The male WSP protects the eggs and rears the young for the first brood. The female may mate again and may help with the last brood of the season. The chicks can walk within 3 hours of hatching. During this period, chicks are flightless, remain on the beach,

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and are extremely vulnerable. They learn to feed by following their parent, usually the father, to wrack (dead seaweed debris that has washed-up on shore). Both adults and juveniles will use wrack and other natural beach debris as a place to hide from predators and weather.

The non-breeding season is also termed the “wintering” period. This period occurs from September through February, although non-breeding individuals can sometimes return to their “wintering” locations earlier- at some sites non-breeding individuals can arrive by late July or August. Overwintering habitat is very important for WSP and other migratory shorebirds. The habitat provides connectivity for dispersal between nesting sites and provides resources that allow birds to build fat reserves necessary for spring migration and the upcoming nesting season. WSP exhibit strong fidelity to overwintering sites, often returning to the same beaches every year after nesting elsewhere.

### 2.3 WSP Population status on Balboa Peninsula

Prior to 1940, WSP nested in Orange County at Anaheim Landing, Sunset Beach Bay Fill, Sunset Beach, Bolsa Chica Beach, Bolsa Chica Salt Flats, Newport Beach, and Balboa Beach (Page and Stenzel 1981). Balboa Peninsula is currently a primary wintering habitat for the WSP. Between 2003 and 2010, Balboa Peninsula supported an average wintering flock of 35 WSP (77 FR 36728-36869). Larger winter roosts have been documented southeast of Balboa Pier to the rock jetty at the Wedge, with a maximum of 149 individuals. Since 2009, additional year-round surveys have also been conducted (Weinik during 2013, 2014 and 2015, R. Griswold XXX).<sup>8</sup> WSP are primarily observed during the wintering season, and Balboa Beach supports the largest roost in the county. Ryan et al. (2014) observed between 12–125 plovers generally between October and February each year; this represents 42-percent of observations. The Balboa Peninsula beach appears suitable for WSP nesting, however WSP generally depart from the Project Area near the beginning of the breeding season (mid-March), and return by mid-July. WSP nested unsuccessfully in the Project Area as recently as 2013 (cite), and successfully nested within the Project Area in 2009. WSP counts are generally low or absent between mid-March to mid-July as shown in the results of the window surveys and roosting surveys [Exhibit 5] (USFWS Western Snowy Plover window survey links on the website: <https://www.fws.gov/arcata/es/birds/wsp/plover.html>).

### 2.4 Wintering WSP on Balboa Peninsula

Wintering WSP in Critical Habitat Unit 48 use the upper beach and dune areas; however, the primary use area occurs on the upper beach areas between the dunes and the high-water line. Exhibit 6 depicts areas mapped by Ryan et al., in 2015-2016 and 2016-2017 and by GLA in 2019 which shows use of both the dune areas and the areas between the dunes and surf. Photos from

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<sup>8</sup> Josh Weinik. PowerPoint Presentation provided to Tony Bomkamp June, 2019.

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various surveyors posted on eBird show the primary use areas also between the dunes and the surf, which is consistent with GLA's observation on March 5, 2019, wherein GLA Biologists Tony Bomkamp and Jeff Ahrens detected 54 WSP in one survey between the dunes and the surf. Similarly, the WSP use areas depicted by Ryan et al., (2017) depicts the use areas from 2014-2015, 2015-2016 and 2016-2017 using areas between the dune areas and surf. eBird photographs and GLA's observations show WSP using tire tracks and footprint depressions to provide protection when not foraging. Thus, while the coastal dune areas are important, the areas of open beach - upper beach between the dune and the mean high tide line for roosting, and intertidal areas for foraging - appear to exhibit substantial use by the WSP. In addition to these data, observations during 2013, 2014 and 2015, provide information regarding the dynamic use of the different sites on the Balboa Peninsula as depicted on Exhibit 7. Wintering WSPs on the peninsula shift from one location to another during the wintering season as provided on Exhibit 8. As discussed below, future surveys will seek to confirm the patterns and refine and management measures to address habitat use within the Project Area.

In early November 2019, Georggia Zhang, a student in the California State University Fullerton ("CSUF") Graduate Environmental Studies Program began weekly monitoring of the WSP in Critical Habitat Unit 48 to record WSP-human interactions, recording all potential stressors within the Critical Habitat area (discussed in more detail below) to begin accumulating data for the Adaptive Management components of the plan. Of note, is the patterns of use by WSP within the Critical Habitat Area. On November 2, 2019, accompanied by Tony Bomkamp, no WSP were detected in the Critical Habitat Area. On November 10, Ms. Zhang counted over 60 WSP between D Street and E Street, on November 14, a total of 70, on December 1, 50 WSP, on December 5, five WPS. On December 9, Tony Bomkamp found five WSP at the same location and 37 in the ACA. Monitoring was suspended in March 2020 due to Covid-19-related restrictions and have not been reinitiated.

GLA has also noted strong tendency by WSPs to use depressions while roosting as this presumably provides additional protection and shelter. The depressions consist of two types, footprints left by beachgoers as well as tire ruts left by vehicles. This is particularly noteworthy within the Critical Habitat Area due to the regular travel by lifeguard vehicles through this area. As discussed under the Adaptive Management approaches below and proposals for temporary fencing, the use of such depressions may be important in development of protections for WSP within Critical Habitat Unit 48 as well as the ACA between G Street and the Wedge. Specifically, the dynamic character of the WSP within these roosting sites may prove to be an important factor in identifying practical measures for WSP protection and the types of fencing employed.

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### 3 EXISTING CONDITIONS ON BALBOA PENINSULA

The USFWS Recovery Plan (USFWS 2007) for WSP states that habitat loss and degradation attributed to human disturbance, urban development, introduced beachgrass (*Ammophila* spp.), and expanding predator populations is the main cause for the species' decline; however, Ryan et al. (2017b) have identified other specific threats. Observations in 2019 and 2020 confirm point 1 below. As discussed in more detail below, the early results of the monitoring confirm points 1 and 4 below, while the City has already implemented (or committed to implementing) policies and practices relative to points 2, 3, 5, 6 and 7. Each of these are addressed in various section of the Plan below. Points 1 and 4, are the primary focus of the adaptive management components subject to substantial detail below.

These include:

1. A lack of public awareness of the presence of WSP roosts and a lack of information about how to avoid disturbing the plovers while enjoying the beach;
2. Lack of training and information on locations of WSP roosts among some staff that drive and operate equipment on the beaches;
3. Regular disturbance, removal of foraging resources, and occasional mortality resulting from beach grooming, operation of heavy equipment, and regular vehicular traffic;
4. Regular disturbance and occasional mortality from off-leash dogs;
5. Beach management practices that remove kelp and associated arthropods;
6. Recreational activities and occasional large events that flush WSP from roosts and leave large amounts of refuse near roosts; and
7. Native and non-native predators drawn in unusually large concentrations to human refuse on and near the beach and pet food placed outside at nearby residences.

USFWS recommends establishment of Avian Conservation Areas (“ACAs”), to reduce the potential for unauthorized take of WSP and would include delineation of sensitive areas requiring protection, measures for vehicle operation within sensitive areas, measures for beach cleanup and maintenance, and measures relative to recreation within sensitive areas.<sup>9</sup> Many of these measures are currently practiced by the City departments that have responsibilities within the Critical Habitat area as well as areas to the east where WSP roosts in winter. As noted, the measures that implement the recommendations by USFWS are addressed in the Sections throughout the rest of this Plan.

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<sup>9</sup> USFWS. February 16, 2017. Subject: Protective Measures for Western Snowy Plovers on Beaches in Newport Beach, Orange County, California. Letter to Dave Kiff, City Manager.

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The following section provides an overview of the existing habitat conditions within the critical habitat area. In addition to habitat conditions, this section also identifies existing conditions and ongoing activities that may pose as threats to the WSP.

### 3.1 Habitat

The Project Area includes open stretches of sandy beach and areas of low coastal dune habitat that exhibits sparse vegetation. Within Critical Habitat Unit 48, vegetated dune habitat begins approximately 200 feet east of B Street (extended) and extends to the F Street pathway. The dune areas extend from near the boardwalk toward the water, leaving an unvegetated strip of beach that ranges from approximately 175- to 250-feet wide between the edge of the dunes and the surf. The vegetated areas of dunes are separated by paths and walkways that are intended to provide for directed or controlled beach access that limits potential impacts to the dunes. Ornamental vegetation occurs in patches adjacent to some residences on the ocean side of the boardwalk extending at a maximum just over 50 feet from the oceanfront homes into the Critical Habitat. Other than the areas of ornamental vegetation along the boardwalk and areas of fig marigold (ice plant) mats, the dunes within the Critical Habitat are in remarkably good condition and almost entirely free of non-native invasive vegetation, which is restricted to two small patches of fig marigold immediately west of F Street and one other small patch between F and G Streets.

In habitat east of Critical Habitat Unit 48 (proposed Avian Conservation Area), using portions of beach from G Street to the Wedge. The portion of the Project Area east of Critical Habitat Unit 48 (east of the F Street pathway); provides suitable conditions for WSP for winter roosting and foraging and is seasonally occupied by WSP. Thus, where applicable, the management actions set forth in this Plan will be implemented in this segment of beach to ensure protection of WSP.

The City recognizes that the WSP has been observed on the Balboa Peninsula east of Critical Habitat Unit 48 (proposed Avian Conservation Area), using portions of beach from G Street to the Wedge. This area is not designated as Critical Habitat by USFWS; nevertheless, it does provide suitable conditions for WSP for winter roosting and foraging and thus, where applicable, the management actions set forth in this Plan will be implemented in this segment of beach to ensure protection of WSP. As noted above, USFWS recommends that this area be designated as an ACA.

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## 3.1.1 Native Plants

Coastal dunes support a suite of native plants which are adapted to the unique conditions of coastal dunes. Efforts to restore native dune species within the area between B Street and F Street has been extensive but slow. The following native dune species have been detected in the coastal dune habitat within the Balboa Beach Critical Habitat Unit 48:

- Coast Woolly Heads (*Nemacaulis denudata* var. *denudata*)
- Beach Morning Glory (*Calystegia soldanella*)
- Pink Sand Verbena (*Abronia umbellata*)<sup>10</sup>
- Beach Evening Primrose (*Camissoniopsis cheiranthifolia*)
- Beach Bur (*Ambrosia chamissonis*)
- Coast Cryptantha (*Cryptantha leiocarpa*)

## 3.1.2 Non-native Plants

Within Critical Habitat Unit 48, non-native species are common and locally dominant in some areas that also support native, dune species; however, as noted above, the dunes support a predominance of the native dune species noted above. Non-native species include crystalline ice plant (*Mesembryanthemum crystallinum*), sea rocket (*Cakile maritima*), fig marigold (*Carpobrotus edulis*), and buttercup oxalis (*Oxalis pes-caprae*), the vast majority of which occur between the dunes and the boardwalk as depicted in Exhibit 9. Over the last five years, City staff and volunteers have made efforts to remove some of the non-native plants, primarily focusing on the habitat area between D Street and F Street, inside of the erosion fencing. Between C and G Streets along the boardwalk, degradation of the dunes is associated with planting of non-native, ornamental species in areas which have also been subject to soil amendment just south of the boardwalk.

## 3.1.3 Delineation – Existing Fence

Within the 25-acre Critical Habitat Unit 48, two areas of coastal dune habitat are delineated by 4-foot-high barrier consisting of metal T-bar posts with either strands of paracord. In June 2011, the City installed approximately 1,300 linear feet of fencing around approximately 2.1 acres of habitat between the walkway fingers of D and E Streets. In January 2017, approximately 1,400 linear feet

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<sup>10</sup> In their letter dated July 6, 2018, the Orange County Chapter of the California Native Plant Society stated that red sand verbena (*Abronia maritima*) has been observed in the Balboa Dunes. This is not supported by Josh Weinik who reported only *A. umbellata* from the Balboa Dunes, which is consistent with the observations of Tony Bomkamp in March of 2019; however, Mr. Bomkamp did not perform a comprehensive survey of all the dunes within the Critical Habitat area.

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of additional fencing was installed around approximately 2.4 acres of coastal dune habitat between the walkway fingers E and F Street. The fencing installed in 2011 was replaced in 2018 with the T-bar and paracord strands. This delineates approximately 4.5 acres of coastal dune habitat within the critical habitat area (25.04 acres). The current T-bar posts with paracord are staggered and not fully enclosed to provide limited public access while discouraging beach activities, foot traffic and dogs in the coastal dunes. A-frame signage is also present indicating the presence of sensitive ecological habitat within the fenced area.

### 3.2 Predation

As noted below, corvids (crows and ravens) are the most problematic predator of WSP eggs and chicks. Predators on adults include both mammalian and avian species. Mammalian predators include coyotes (*Canis latrans*), foxes (*Urocyon cinereoargenteus* and *Vulpes Vulpes*), raccoons (*Procyon lotor*), skunks (*Mephitis* spp.), weasels (*Mustela* spp.) and feral cats (*Felis domesticus*). Avian predators include peregrine falcons (*Falco peregrinus*), northern harriers (*Circus cyaneus*), merlins (*Falco columbarius*), great horned owls (*Bubo virginianus*), burrowing owls (*Speotyto cunicularia*), and great blue herons (*Ardea herodias*). Suitable cover for many of the mammalian species such as dune grass, does not occur on the Balboa Peninsula; therefore, species such as foxes, skunks, weasels are not expected to pose a threat. Certain avian species, such as the burrowing owl, great horned owl, and merlins are uncommon at best, with northern harrier, peregrine falcon and great blue herons more likely. However, as part of the data collection for the Adaptive Management Program, observations of predators will be recorded.

Corvids (crows) have documented as the most likely predator on the WSP relative to chicks and eggs. Corvids benefit from human activities, especially increased access to food. Highly adaptable, these predators seek out locations with available trash (litter, exposed trash cans, etc.). Corvids prey on WSP chicks and eggs but generally are not a major predator on adults (Page et al. 2009). Based on studies conducted by the USFWS, the dominant source of predation on WSP resulting in nesting failure is from corvids, although other sources of nest failure include abandonment and unidentified predation. Because Balboa Peninsula is currently a wintering site, with no documented nesting attempts since 2011, the corvid predator impact on the local WSP population is minimal. Thus, the major predation threat is associated with unleashed dogs discussed below.

### 3.3 Recreational Activity

#### 3.3.1 Human Activity

Human activity on the Balboa Peninsula is year-round, with a majority of beach activity occurring between Memorial Day and Labor Day. The highest concentrations of beachgoers is likely to be found adjacent to Balboa Pier where parking and beach amenities (fire pits, restrooms, etc.) are

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more available. A parking lot lies approximately 10 feet north of Critical Habitat Unit 48; however, the parking area is located over 600 feet from the areas most commonly used by wintering WSP.

Walking, biking and rollerblading are popular recreational activities occurring along the boardwalk. While the boardwalk extends to F Street (adjacent to the critical habitat), more boardwalk activity is generally observed closer to Balboa businesses and restaurants. Higher concentrations of human activity occur at the Wedge, predominantly during large, summer swells.

WSP are easily disturbed when approached by humans and typically do not significantly acclimate to high levels of disturbance. Wintering WSP at beach areas near the Devereux Slough in Santa Barbara County have been documented to be sensitive to disturbance from recreational activities, including walking and jogging (Lafferty 2001). This may result in negative impacts to survivorship or cause plovers to abandon a wintering site (Lafferty 2001). GLA has noted during surveys that the somewhat cryptic coloring of the WSP make them difficult to see under certain lighting conditions (e.g., in early morning when walkers or joggers are moving in an eastward direction toward the rising sun) and thus, reducing potential for avoidance. The need for temporary fencing of some configuration to ensure avoidance is necessary to protect roosting sites that also remains functional as WSP shift roosting areas.

It is likely that WSP within the Project Area are periodically exposed to foot traffic from recreation. WSP are likely to run or fly in response to approaching pedestrians. They typically do not significantly acclimate to high levels of disturbance (Lafferty 2001). Repeated disturbance may result in negative impacts to survivorship or cause WSP to abandon a wintering site (Lafferty 2001). Conversely, WSP appear to respond to localized protection from foot and vehicle traffic if the protected area is of adequate size (Sandoval 2009, and Ryan 2017 and have been re-established on some beaches in California.

Limited, on street parking for beach access minimizes recreation activities in the Critical Habitat area. Nevertheless, walking and jogging on the sand, between Balboa Pier and the Wedge, through the Critical Habitat area is a commonly observed activity and as noted above, exhibits potential for disturbing roost sites, depending on location. Passive beach activities, like sunbathing and swimming, still occur and are most common. One public volleyball court is located within the critical habitat area near G Street (and as discussed below, will be removed).

### **3.3.2 Dogs on Beach**

Dogs are natural predators and can also have an impact on the WSP. Dogs can directly prey upon, disturb, causing flushing behaviors, or in some cases kill WSP. Within the Project Area, dogs are allowed on the beach if maintained on a leash between the hours of 7:00 a.m. to 10:30 a.m. and

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after 4:00 p.m. Referring to the Critical Habitat Area, Ryan (2017) noted: “Off-leash dogs we reported here from every survey, including dogs flushing the plovers.” Even dogs on leash passing in proximity to WSP can cause flushing behaviors. Dog walkers on the Balboa Peninsula have been observed walking dogs on the beach, along the water’s edge and on the boardwalk, where WSP can be often found roosting and wintering. The Newport Beach Municipal Code does not allow dogs on the beach or beachfront sidewalk between the hours of 10:00 a.m. and 4:30 p.m. Outside of these times, dogs are permitted on the beach but it is required that dogs are under the control of owners on leashes (or chains) not exceeding six feet in length at all times (Appendix C). Based on monitoring conducted by Ms. Zhang, the majority of dogs are on leashes; however, dogs have been observed off-leash on occasion. Preliminary data indicates that approximately 10- to 20-percent of the dogs observed are off-leash and in some instances, leashed dogs are un-leashed for periods of time to allow them to run. GLA has interviewed dog owners with unleashed dogs and responses vary. While most are aware of the City code requiring leashes on the beach, many are not aware of the presence of the WSP. Thus, additional efforts to increase public awareness are necessary, and as discussed below represent a significant opportunity to substantially reduce stressors on the wintering WSP. As discussed in more detail below, this ensuring public awareness of the winter roost for WSP will be the initial focus of the adaptive management efforts.

Signage stipulating allowable beach uses and dog-related codes are posted along the boardwalk and at street access points; however, the current signage has not resulted in an adequate public awareness and/or response. Signage to further increase awareness of the WSP and sensitive coastal dune habitat will be strategically placed within the Critical Habitat area. The current T-bar with paracord does not prevent access to unleashed dogs. Enforcement of permissible hours and leash laws by Animal Control Division is necessary to limit violations and provide protection for the WSP and sensitive coastal dune habitat. Nevertheless, violations of the permitted times and particularly of the leash laws are not uncommon, in the absence of adequate enforcement. The City is committed to enforcing the restrictions regarding dogs on the beach and intends to increase enforcement and Animal Control presence as well as issuance of citations for violations. The City is also exploring the possibility of increasing the fines associated with violations for the areas of Critical Habitat and the ACA between the Critical Habitat and the Wedge.

Based on early data collection, observations, and interviews with dog walkers, with concurrence of USFWS, the City proposes to install temporary seasonal fencing to provide protection of roosting sites from beachgoers and dogs (leashed and/or unleashed) within the Critical Habitat area as well as the ACA between G Street and the Wedge. The proposed fencing would be installed at the beginning of the first full wintering season following approval of this Plan with the beginning of the wintering season defined for purposes of this plan as October 1. As discussed below, because of the dynamic character of the roosts, alternative approaches for the temporary seasonal fencing have been considered and are discussed below. Selected alternatives (concepts) for the

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temporary seasonal fencing would be subject to the adaptive management components of the Plan. USFWS has expressed support for the concept proposed below as an initial starting point within the adaptive management framework.

### **3.4 Beach Operations**

The City of Newport Beach is a full-service City and provides its residents with a variety of public services. Year-round service and operations at the City's beaches can impact the WSP and sensitive coastal dune habitat. The following are City departments and associated activities that operate within or adjacent to the Critical Habitat area.

#### **3.4.1 Marine Operations Division**

The Marine Operations Division operates under the Newport Beach Fire Department. Ocean lifeguards ensure safety and provide service to the visitors on the beach, boardwalk, piers, and in the ocean/surf year-round. Lifeguard vehicles traverse the beach for routine patrol and emergency response. GLA met with Lifeguard staff and discussed vehicle use on the beaches by City lifeguards and it is the practice to maintain very low speed levels when WSP are present. GLA biologists have observed lifeguard vehicles on the beach, traversing areas occupied by wintering WSP. While the vehicles move slowly, GLA observed a reduction in speed as the flock of WSP was approached by a lifeguard vehicle. WSP in the path of the vehicle moved to avoid collision; however, the movement was very "casual" and did not result in major "flushing" of the flock; rather, only the WSP in the path of the vehicle moved and the movement was only a few feet, necessary to avoid collision. The observed movements suggest some level of habituation to the lifeguard vehicle movements. By comparison, leashed dogs, within 10 feet of the WSP resulted in evident flushing behavior of the flock, though not abandonment of the specific roosting area.

#### **3.4.2 Municipal Operations Department**

The Public Works, Municipal Operations Division (MOD) provides clean, safe, and responsive utility and infrastructure maintenance services to the community of Newport Beach through a combination of in-house staff and contractors. These services include beach maintenance along Newport Beach's shorelines and boardwalks. Year-round trash pickup and beach grooming occur on a weekly basis. Sand berm construction may occur during high tides and large surf to mitigate flooding but occurs outside of the Critical Habitat area. GLA has met staff from the MOD and discussed specific activities by the MOD that could affect WSP winter roosting in the Critical Habitat area as addressed below.

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### **3.4.3 Animal Control Division**

The Animal Control Division operates under the Newport Beach Police Department and routinely patrols beaches, parks and neighborhoods to enforce local, state and federal laws. This includes the City's leash regulations and permissible hours for dogs on the beach. As discussed below, this is an important area of focus of the measures proposed to protect WSP winter roosting within the Critical Habitat area.

### **3.4.4 Recreation and Senior Services Department**

The Recreation and Senior Services (RSS) Department provides a wide range of educational, recreational, cultural and social programs for all ages and has implemented the existing educational and protection efforts for Critical Habitat Unit 48 and the wintering WSP. Because the RSS Department also oversees the use of the City's 79 parks, beaches, marine habitats and recreational facilities it is responsible for review and authorization of activities and special events proposed for the City's beaches, including the Critical Habitat area.

### **3.4.5 Public Works Department**

The Public Works Department provides design and construction management services to enhance the City of Newport Beach's infrastructure. This includes implementation of the City's Capital Improvement Program (CIP), which serves as a plan for the provision of public improvements, special projects, on-going maintenance programs and implementation of the City's master plan. Public Works Department coordinates with other State and Federal Agencies for sand management and replenishment efforts for Balboa Peninsula, which may occasionally extend near and within the boundaries of Critical Habitat Unit 48. GLA has met with representatives of the Public Works Department to discuss activities that could affect WSP winter roosting within the Critical Habitat area.

## **4 OBJECTIVES OF THE PLAN**

This Plan has been prepared to ensure compliance for the Critical Habitat Unit 48 area and proposed ACA east to the Wedge, with the Natural Resources Element of the GP and with the provisions of the City's CLUP. Although the primary focus of this plan is conservation, management and education related directly to the designated Critical Habitat, this plan documents ongoing conservation measures and operational practices already incorporated by various City departments for the areas east of the designated Critical Habitat that extend to the Wedge in order to protect potential WSP at winter roost locations to the east of B Street. This Plan also ensures compliance with the FESA and as such incorporates guidance from USFWS (2007) and letters cited above, as well as Ryan et al. (2017b). In addressing Critical Habitat Unit 48 and the area east of the Critical Habitat on the Balboa Peninsula used by the wintering population of the WSP

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this Plan provides a template for future site-specific plans for other WSP wintering sites in the City. It is important to note that conditions vary among the various areas used by wintering WSP and that a generic “one-size-fits-all” plan is not appropriate for all WSP wintering areas in the City. The goal of this Plan is to provide management actions that will ensure the ongoing protection of existing biological resources within Critical Habitat Unit 48 (and areas to the east), while also setting forth the management and operational activities to be implemented for other areas within the City used by wintering WSP. As appropriate, this Plan incorporates comments and suggestions by public interest groups (e.g., Orange County Chapter of the California Native Plant Society (CNPS)), and agencies such as the California Coastal Commission and USFWS. More importantly, this plan has been informed by early data collection as part of a CSUF graduate project and associated monitoring and observations by GLA biologists. These early data collection and observations also have informed specific data needs that will need to be developed to implement the adaptive management components, which are also set forth below.

Specifically, Sections 5 and 6 detail the proposed actions and management practices within an Adaptive Management framework, detailed in Section 4 to achieve the following objectives:

1. Protect, maintain, enhance and/or restore designated environmentally sensitive coastal dune habitat between B Street and G Street;
2. Enhance conditions within the Critical Habitat Unit 48 and east of the Critical Habitat Unit that could provide for potential nesting of the WSP, which would also require that predator populations are discouraged/managed;
3. Monitor the WSP population in conjunction with human activities that result in stressors for the WSP on the Balboa Peninsula within the guidelines of the WSP recovery plan to augment ongoing “Window Surveys”;
4. Establish a consistent and unified set of activities and associated behaviors for beach operations to reduce disturbances in Critical Habitat Unit 48 and beach and dune areas east of the Critical Habit to the Wedge;
5. Maintain access to recreation and resources while improving compliance with existing regulations, such as the City’s leash laws;
6. Establish an effective suite of visual Indicators/barriers to clearly identify boundaries that define and create an awareness of the Critical Habitat Unit 48 area and areas east of the Critical Habit to the Wedge, including temporary seasonal fencing during the wintering period to ensure protection of wintering WSP;

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7. Develop a program that instills greater public awareness, education and need for compliance with existing laws and codes through diverse and effective signage adjacent to and within Critical Habitat Unit 48 and proposed ACA near the Wedge; and
8. Generate awareness of importance and sensitivity of the WSP wintering population to the public through a diverse approach adjacent to and within Critical Habitat Unit 48 and proposed ACA near the Wedge.

### 4.1 Adaptive Management

To ensure that the goals of the Plan are achieved, an “Adaptive Management” approach will be implemented for the Critical Habitat area and the proposed ACA between the Critical Habitat Area and the Wedge. Implementation of an Adaptive Management approach will require that the City develop a dataset to make management decisions in response to specific stressors identified during data collection. As noted above, data collection was initiated at the beginning of November 2019 by a graduate student in the CSUF Graduate Environmental Studies Program that includes such activities (i.e., potential stressors) as occurrences of walking, jogging, dog walking (leashed and unleashed), vehicles, etc., as well as the numbers and locations of WSP during each monitoring visit.

This version of the Plan outlines the starting point for management actions, which are set forth below, which have been designed/developed to achieve the above-referenced goals. Where the data show that certain management activities are not providing necessary protection for WSP, then modifications to the management actions would be made. For example, if it is determined that the educational outreach and associated signage is not preventing beachgoers or dogs from entering the dunes, then additional measures as determined appropriate would be implemented.

As noted, data collection will be critical as appropriate management decisions can only be made where there is adequate information to inform the decision makers. The importance of data collection has become even more important in the light of the early data collection associated with the CSUF graduate project and observations by GLA. Review of data would include a WSP Technical Working Group Pilot Program (“WSPTWGPP”) discussed in detail in Section 5.3.3 below. As such, data collection will be a focus of the Plan and will incorporate a diversity of sources, including both existing/ongoing and new efforts that would include:

- Awareness by the dog-walking beach users of the WSP roosting areas on the peninsula and associated threat posed by unleashed dogs, and
- Awareness of beach users regarding the sensitivity of the coastal dune habitat.

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## 5 CONSERVATION MEASURES

### 5.1 Education and Outreach

*Objective 1: Develop a program that instills greater public awareness, education and need for compliance with existing laws and codes through diverse and effective signage adjacent to and within Critical Habitat Unit 48, and Avian Conservation Area.*

*Objective 2: Generate awareness of importance and sensitivity of the WSP wintering population to the public through a diverse approach adjacent to and within Critical Habitat Unit 48 and Avian Conservation Area.*

Education and awareness are essential to the conservation and recovery of WSP at Balboa Peninsula. Interviews with dog owners with unleashed dogs on the beach indicate an overall lack of awareness of the presence of WSP and its status as a federally listed species, the presence and location of potential winter roosting sites on the peninsula, the sensitivity of the roosting sites, and the potential threat posed by unleashed dogs. Increased awareness will be critical to ensure the protection of the WSP roosting site. Thus, education is the critical first step in the adaptive management program and is expected to lead to greater acceptance and compliance with management measures. Increased awareness is also expected to inspire advocates and volunteers to assist with monitoring and habitat restoration. The City will provide the public with the necessary information to develop an understanding and appreciation for the WSP population, habitat, and natural resources present at Balboa Peninsula.

#### 5.1.1 Educational Materials

The Recreation and Senior Services Department will continue to develop educational materials in cooperation with a pilot educational program that will be implemented through a cooperative Orange County Coastkeeper (“OC Coastkeeper”) to support the City’s overall management plan. Material may include flyers, posters, brochures, monitoring reports, or correspondence. Material will highlight the WSP, the Critical Habitat area designation, best management practices, regulations and protection efforts.

#### 5.1.2 Education and Outreach Opportunities

The City’s WSP outreach and education strategy will include Balboa Peninsula residents, with a focus on residents who regularly walk dogs on the beach, beachgoing visitor populations, and youth, however, dissemination will also target the general-public. The key to increased public understanding and awareness will include adoption of a variety of communication techniques and methods of distribution. To this end, OC Coastkeeper proposes a pilot program that would include an educational community outreach program that would provide a booth managed by OC Coastkeeper staff and trained volunteer docents. At the booth, the public could speak with

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knowledgeable docents, obtain an informational brochure on the Western Snowy Plover (and California Least Tern), and learn how to protect the birds while in the area. The booth will also provide fliers with a map and rules for the specific locale and doggie bags for dog owners. The booth will be active two days each week, on alternating days and locations, to reach as many beachgoers as possible.

An additional platform for educational efforts to the public will be through the City's website and social media platforms. Materials may also be distributed to the public through mail and email, as well as the Newport Mesa Unified School District to reach school age children. The City may also consider other techniques such as videos, programming, presentations, and news releases for outreach. Information about WSP conservation efforts will also be shared through the City Manager's Newsletter and email to improve interdepartmental outreach efforts. Signage at points of access will remain a critical tool in educating the public regarding stewardship of the WSP roost sites.

As an example of expanded educational efforts, the City will establish a program for the Junior Lifeguard Program that would entail presentations by a City naturalist (or other knowledgeable staff, such as OC Coastkeeper) for the Junior Lifeguards. This is noteworthy because the Junior Lifeguard program has approximately 1400 participants ranging from 9-15 years old, annually.

As a component of the Adaptive Management Program, the City will conduct four public meetings in conjunction with quarterly posting of the OC Coastkeeper pilot study monitoring results in the first year following approval of this Plan, with the first meeting to occur six months after initiation of the OC Coastkeeper pilot study. Noticing would be through the platforms mentioned above, that would include direct mailings to Balboa Peninsula residents. The meetings would focus on the WSP wintering population, management actions to protect the roosts and the potential threats posed by unleashed dogs and/or leashed dogs in proximity to occupied roost sites.

### 5.1.4 Community Partners

Cooperation between the City and researchers interest groups (particularly OC Coastkeeper), and private individuals can increase effectiveness of outreach efforts and provide expertise and financial resources money for conservation efforts. The City may seek out additional partnerships to achieve the plans of the objective. The City also encourages educational and outreach efforts through the mission and objectives of local organizations and individual advocates.

### 5.1.5 Recreation and Youth Services

Activities to educate youth participants on the Western Snowy Plover will be incorporated into the following City run programs:

- The *Fostering interest in Nature (FiiN)* program is a four day, three-night science camp that explores Newport Back Bay and surrounding ecosystems and serves up to 400 Title 1 students from Orange County

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- *Active Kids* After School program at Mariners Elementary School, Newport Elementary School and Community Youth Center serves up to 450 kids during the school year from Newport Mesa Unified School District
- *Summer Day Camp* program at Newport Elementary School/15<sup>th</sup> Street Beach and Community Youth Center/Corona del Mar State Beach serves up to 1,200 kids during the summertime.
- *Preschool 101* program at Mariners Park and Newport Coast Community center serves 100 preschool age kids during the school year.
- *Pint Size Campers* summer camp at Newport Coast Elementary serves up to 130 preschool age kids during the summer

The City's *Mayor's Youth Council* engages 15 high school students each year to increase awareness and civic mindedness on local issues and will include protection efforts on the Western Snowy Plover as one of the monthly, open forum topics.

The City can also provide information of the WSP at **special events** geared for youth (aggregate attendance of up to 5,000). These are City events that the Recreation and Senior Services Department hosts and will have a booth with informational materials about park programs available for the public.

### 5.2 Adaptive Management Implementation

#### 5.2.1 Adaptive Management and Monitoring

In order to establish the efficacy of the broad-based educational program, the City will retain the OC Coastkeeper's services to implement a comprehensive monitoring program. Monitoring reports will be posted publicly on a quarterly basis with an annual report provided at the end of the 4<sup>th</sup> quarter summarizing the monitoring data to date. The monitoring will consist of all human activities, including beach recreation, lifeguard and beach maintenance activity, dogs on and off leash and bird presence. Monitoring will occur seven days a week on a random schedule. All monitors will undergo classroom and field training before conducting surveys that are consistent with the window survey methodology prescribed in this plan (Section 5.4.1 Wintering and Nesting Window Surveys). A minimum of 200 surveys will be completed annually. In addition to the OC Coastkeeper efforts, a graduate student from California State University Fullerton, has developed a questionnaire for determining the extent of public awareness regarding the WSP and associated stressors and will be implementing her study beginning in August 2021, as part of a Master's graduate project. Dog walkers observed during weekly monitoring will be interviewed to determine level of awareness regarding the WSP roosting sites, sensitive nature of the roosting sites, and the threats posed by unleashed dogs. Specific performance standards and adaptive management "triggers" are discussed below in the discussion of performance standards.

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*Objective 3: Protect, maintain and restore designated environmentally sensitive coastal dune habitat and WSP Winter Roosts between B Street and the Wedge*

### **5.2.2 Install Temporary Seasonal Fencing**

Exhibit 6 depicts the locations where wintering WSPs have roosted between 2015 and 2019 within the Critical Habitat Unit 48 area and areas east of the Critical Habit to the Wedge between 2012 and 2019. Following approval of this plan, temporary seasonal fencing would be installed during the first wintering period, beginning October 1, to ensure protection of wintering WSP. Exhibit 6 depicts areas where temporary seasonal fencing would be installed to protect the winter roost locations. As depicted on Exhibit 6, winter roost locations occur in roughly the same areas with variation not only from year to year but variations from day to day and even hour to hour based on initial monitoring results. GLA has observed the winter roosting WSP move between roost sites in the Critical Habitat and the and areas east of the Critical Habit to the Wedge. Exhibit 6 depicts alternative fencing locations. Concept 1 provides a concept for a complete enclosure of the WSP, based on historic locations but which would be subject to seasonal modifications where WSP returning for the wintering season congregate in a different location. As depicted, Concept 1 includes a narrow corridor for lifeguard vehicles and beachgoers moving from east to west and west to east. Concept 2 provides “staggered” fencing that would allow for movement of beachgoers and vehicles and would ensure that both are fully aware of the potential presence of WSP roosting sites.

Advantages and disadvantages for each of the concepts are addressed below; however, in considering the alternative concepts it is important to note that the WSP often use the depressions made by the vehicles that traverse the beach as well as footprints made by walkers and joggers. The depressions provide shelter for the WSP from the wind and thus, installation of temporary fencing must account for this behavior as discussed below under Concepts 1 and 2.

Concept 1 provides temporary seasonal fencing that would enclose the winter roost sites, thereby preventing human or canine intrusion into areas occupied by WSP. The advantage of this concept is that it would exhibit the highest potential for preventing direct human or canine intrusion into roost sites. This disadvantage is that it would result in a very narrow travel corridor for beachgoers and vehicles and more importantly, it would prevent ongoing creation of new tire ruts and footprints in the fenced area while creating such features outside the fenced area that could attract WSP, which would then be encouraged to move outside of the enclosed roost areas to the narrow unprotected sites. Such narrow sites would be subject to concentrated vehicle and beachgoer traffic within areas occupied by WSP, which could increase the potential for harm. Under this scenario, remediation would consist of regular shifting of the temporary fencing during the winter season to coincide with shifts in the roosting area, which itself exhibits potential for disturbing the WSP.

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Concept 2 would incorporate staggered fencing, perpendicular to the water line east and west of the Critical Habitat Unit 48 area and of the ACA near the Wedge. The staggered fencing would include signage warning beachgoers of the presence of WSP roosts and would direct beachgoers to maintain maximum distance from roosting WSP. This concept would continue to create tire ruts and footprints for use by WSP but would also require careful monitoring by vehicle operators to ensure that WSP are avoided or are allowed to move out of the path of vehicles, which is also the case for Concept 1.

### **5.2.3 Adaptive Management**

Because of the disadvantages of Concept 1 and advantages of Concept 2, the Plan will implement Concept 2 – Staggered Seasonal Fencing, as depicted in concept on Exhibit 6 and 6a, would be installed and in place at the beginning of the first wintering season, which for purposes of this Plan is defined as October 1. Weekly monitoring would be implemented within the first week of October and be conducted through the wintering period, which for purposes of this plan is defined as March 31. Monitoring will record all activities that represent potential WSP stressors including walking, jogging, dogs on leash, dogs off leash and vehicles. Monitoring would also include the number of the above categories of beach users that pass through the staggered fencing and those who avoid staggered fence which would inform the need to adjust locations or add additional fencing and associated signage.

### **5.2.4 Restoration**

Restoration of areas of degraded coastal dune habitat is potentially important for reestablishing high-quality habitat coastal sand dune habitat which could also be suitable WSP wintering habitat. The primary efforts necessary for coastal sand dune restoration in Critical Habitat Unit 48 will be removal of non-native and invasive vegetation with reestablishment of coastal sand dune species native to the Newport Beach ecosystem. As noted above, such an effort would be focused on the areas between the dunes and the boardwalk and would include areas of fig marigold (ice plant) and small pockets of ornamental vegetation immediately adjacent to the boardwalk as depicted on Exhibit 9. Areas of dune habitat between G Street and the Wedge include areas of undisturbed dune habitat supporting only native vegetation mixed with areas of dune that supports areas of non-native fig marigold which exhibits low densities ranging from an estimated ten-percent cover to approximately 40-percent cover in the areas with highest density. Native vegetation occurs throughout these areas.

Restoration efforts will be conducted in compliance with all applicable federal, state and local policies and regulations, including a Coastal Development Permit as applicable. Restoration implementation would focus on a variety of measures to minimize impacts to the WSP and the existing habitat (USFWS 2007a). Restoration will emphasize protecting existing native species, establishing

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buffers between native and non-native species and minimizing dune grading and sand movement. The implementation schedule will avoid planting during the WSP nesting season and prevent excessive disturbance to wintering WSP. Appropriate buffers will be established between work areas and documented nests, if necessary. Restoration efforts will also be incorporated into signage to educate beach visitors.

Removal of non-native species may be initiated concurrently with restoration activities and will focus on reducing the density of non-native species to allow for expansion of existing native dune vegetation along with reestablishment of natives through use of seed and/or container stock. Non-native species will be removed manually or in some instances will be sprayed and allowed to decompose to provide protection from blowing sand. The target invasive species in the critical habitat area will include crystalline ice plant (*Mesembryanthemum crystallinum*), fig marigold (*Carpobrotus edulis*) sea rocket (*Cakile maritima*), and buttercup oxalis (*Oxalis pes-caprae*).

The proposed native plant palette for future dune restoration in the Critical Habitat Unit 48 includes species native to Newport Beach dune habitat and include Beach burweed (*Ambrosia chamissonis*), Beach sand verbena (*Abronia umbellata*), beach evening primrose (*Camissoniopsis cheiranthifolia*), coast woolly heads (*Nemacaulis dendudata* var. *dendudata*), beach cryptantha (*Cryptantha leiocarpa*), and beach morning glory *Calystegia soldanella*). This native pallet is consistent with the recommendations of CNPS based on the Masters' Project of Josh Weinik from California State University Fullerton (Weinik, 2015).<sup>11</sup>

### 5.2.5 Dune Habitat Maintenance

City staff will evaluate/monitor conditions within areas subject to vegetation reestablishment and determine appropriate maintenance efforts on a year-to-year basis based on site inspections following initial vegetation reestablishment. Maintenance activities may include continued removal of invasive species, watering of container stock during the establishment period and for up to two years following establishment, installation of additional and/or replacement plants, erosion control and sand stabilization measures. Ongoing habitat maintenance will eliminate invasive species by manually removing non-native plants within the areas subject to vegetation reestablishment. In general, areas that have been restored as described above and in which the non-native species have been removed will show recruitment by native dune species, provided that the non-natives are controlled and there is limited soil disturbance during the non-native species removal activities.

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<sup>11</sup> Josh Brett Weinik. Fall 2015. A Comparative Study on the Vegetation of Western Snowy Plover Habitat within Urban and Natural Coastal Dune Systems of Southern California. A Project Present to the Faculty of California State University, Fullerton.

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## 5.3 Predator Management

***Objective 4: Enhance conditions within Critical Habitat Unit 48 and east of the Critical Habitat to reduce predator presence in beach and dune habitat***

Potential predators of WSP identified within the Project Area include native and non-native predator species. The structural changes to the Peninsula associated with urbanization and human uses include an increase in perch availability for avian predators such as hawks, falcons, corvids; an increase in non-native species such as rats and cats.

The last documented nesting attempt on the Balboa Peninsula occurred in 2013 with successful nesting occurring in 2008 and 2009. Successful implementation of this Plan would result in protection of the wintering WSP while enhancing the beach and dune habitat used by the WSP.

Predators primarily prey on WSP nests and chicks. The WSP habitat on the Balboa Peninsula is primarily a wintering habitat and nesting has not occurred since 2013. However, conservation measures (Section 5) and operation and recreation management (Section 6) will support predator management strategies and contribute to minimizing predation threats to the WSP should nesting occur. As noted, Corvids are unlikely to prey on adult plovers; nevertheless, implementation of the proposed measures also would reduce or eliminate other species which could harm plovers during the wintering period.

### 5.3.1 Non-Lethal Control Measures

An efficient method of non-lethal control is litter control. Controlling litter on the beaches by including covered trash containers, reduces the presence of potential predators. Municipal Operations Department beach operations schedule (Section 6.1.2) outlines best management practices to effectively manage trash on the beach. Expansion of native coastal dune vegetation as well as limiting removal of driftwood and wrack deposited during high tides and storms also provide WSP shelter from airborne predators, such as hawks and falcons during the wintering season and from crows and gulls during the breeding season.

### 5.3.2 Control Measures When Nests are Present

Nest success appears to rely on various environmental factors, as well as effective recreation and predator management. Nest success is supported by lethal and non-lethal predator management combined with effective use of exclosures (use of exclosures would be coordinated with USFWS prior to use as discussed below). People recreating in or near a nesting area have the potential to impact nest success. This may occur when beachgoers move too close to nest sites, as well as from illegal fireworks, off-leash dogs and beachgoers flying kites. Environmental factors can affect the suitability of a site for nesting where non-native vegetation encroaches into an otherwise suitable

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nesting area. Vegetation that is not native to the coastal dunes can provide cover for predators causing direct impacts on nesting success. When nests are observed in designated sensitive habitat areas, an exclusion cage may be required. A qualified biologist who holds a recovery permit for this activity with respect to WSP must install the exclusion cage.

Exclosures allow passage of adult snowy plovers but exclude larger predators from gaining access to nests. It should be noted, however, that an exclosure can increase the predation on adult plovers, thus careful consideration of the site characteristics must be implemented, and a qualified biologist will need to consult with the USFWS. For example, at Bandon State Natural Area (Oregon Parks and Recreation Department 2012), nest success of exclosed nests was much higher than for non-exclosed nests. However, when nest success of non-exclosed nests is within the expected range, using the exclosure may not increase the overall productivity of WSP.

### 5.4 WSP Monitoring

***Objective 5: Monitor the WSP population on Balboa Peninsula within the guidelines of the WSP recovery plan***

As discussed above, there are a variety of data sources that describe the WSP population within the Critical Habitat Unit as well as the ACA to the east and in general, the data report a consistent picture of the wintering WSP population. Nevertheless, to ensure that the Adaptive Management Program has sufficient information on which to base management decisions, the City will be seeking to expand the data base and collect additional data that addresses WSP-human interactions such that potentially negative interactions could be eliminated. OC Coastkeeper will be implementing a pilot monitoring and educational program in cooperation with the City. Also, monitoring by a CSUF graduate student, as part of a graduate project, is proposed to start in August 2021 and it is expected that graduate students from CSUF and potentially other universities in the area, would be available to conduct annual monitoring. Whatever the source, the City is committed to weekly monitoring necessary to implement the Adaptive Management Program.

Population monitoring of WSP would include wintering WSP. Individuals and primary use areas would be recorded, as this information would be important to Adaptive Management to make informed decisions with regard to wintering WSP. Monitoring would also include documenting any observed nesting behaviors that would trigger site-specific management actions for the Critical Habitat Areas and/or areas east of the Critical Habitat. Monitoring data regarding WSP wintering individuals and locations would be collected and correlated with other information (e.g., animal enforcement contacts, citations issued, etc.) to determine whether the initial adaptive management measures set forth in Section 6 below require modification. As already noted, activities that represent potential stressors would also be recorded during weekly monitoring.

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### **5.4.1 Wintering and Nesting Window Surveys**

One source of population data will be collected during two range wide, “window surveys,” conducted annually by USFWS. The purpose of a window survey is to obtain an estimate of the number of wintering and nesting snowy plovers within a longitudinal study that includes collection of banding information. The nesting season window surveys occur between late May and mid-June and the wintering season window surveys will take place between December 1 and January 31. A repository for survey data has been established by the USFWS for the entire WSP Population. Access to the window survey data will be provided on the City website. The current survey protocol and standard field survey form for the nesting season window survey are outlined in the WSPRP: Monitoring Guidelines.

### **5.4.2 WSP Population Monitoring**

Year-round monitoring by the “WSP Partners,” OC Coastkeeper, or other suitable groups or organizations will occur in the Balboa Peninsula, between Balboa Pier and the Wedge, to document WSP use. Support from such local organizations will be pursued to expand monitoring efforts on the City’s behalf. Monitoring protocols and the field survey forms would be consistent with the window survey methodology as prescribed by the WSP Recovery Plan (Appendix E). Collaboration with other agencies, such as USFWS, may provide additional data on the WSP Balboa Peninsula population to inform the City’s adaptive management efforts. The City recognizes the need for establishing a reliable, consistent and robust data set that will be needed to inform adaptive management decisions.

Additionally, as noted, the City has implemented monitoring of WSP and activities within the Critical Habitat area by a graduate student or students currently enrolled in the Graduate Environmental Studies Program at CSUF beginning with the 2019/2020 wintering season that will also include monitoring of activities on the beach that have potential effects on the WSP. Data collected would be used in making recommendations relative to adaptive management for the WSP. Currently, monitoring is occurring within the Critical Habitat area and ACA area east to the Wedge. Based on this initial phase of monitoring it is recommended that the area to the west of the Balboa Pier surveyed by Josh Weinik during the 2013 – 2015 period would be included in the surveys to provide data relative to the within wintering season movements as this may be important information, necessary to understanding the requirements of and associated management of the WSP.

### **5.4.3 WSP Technical Working Group Pilot Program**

To effectively implement that Adaptive Management program for the wintering WSP associated with Critical Habitat Unit 48 and proposed ACA to the east, the City will establish a WSP

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Technical Working Group Pilot Program (“WSPTWGPP”) that would meet quarterly to review the WSP data in conjunction with other data and information provided by the City regarding the various activities (e.g., animal control, dune restoration, etc.) as well as data that informs the Adaptive Management Program. The WSPTWGPP would initially be convened for a three-year period at which time, the program would be subject to refinements as determined appropriate during the initial three-year pilot period. The Working Group would include representatives from the City Departments who operate or participate in beach management. The effort would be led by the Natural Resources Supervisor from the Recreation and Senior Services Department. The Working Group would also include two residents living in the area, USFWS, and a representative from OC Coastkeeper. The California Department of Fish and Wildlife (CDFW) and Coastal Commission staff would also be invited to serve on the working group but their participation would not be required if they are unable to participate. The Working Group would be responsible for making management recommendations regarding implementation of the adaptive management measures in response to the monitoring data and ongoing management actions.

Upon completion of the three-year pilot program, the WSP Technical Working Group would re-evaluate the effectiveness of the plan and either recommend changes or the continuation of management efforts proven to be effective. It is also envisioned by the City that the WSP Technical Working Group would review and recommend management efforts of the WSP in other areas of the City as subsequent site-specific plans are prepared for other areas in the City used by wintering WSP.

## **6 BEACH OPERATION AND RECREATION MANAGEMENT**

### **6.1 Non-Recreational Operations**

*Objective 6: Establish a consistent and unified set of activities and associated behaviors for beach operations to reduce disturbances in the Project Area, including Critical Habitat Unit 48 and beach and dune areas east of the Critical Habit to the Wedge*

The City of Newport Beach provides thorough, efficient and effective services for residents and visitors to the City’s beaches. City Departments that coordinate and execute beach-related operations and services within Critical Habitat Unit 48 will expand interdepartmental communication and coordination and adapt best management practices to reduce disturbances and minimize potential take of the WSP. The City notes the comment by Ryan (2017) that “This roost had the highest numbers of speeding vehicles in 2015-16, a City of Newport Fire Department vehicle was observed in September and two City of Newport trucks in October”. It is the City’s goal to ensure protection of WSP while still ensuring the public’s safety. Thus, management practices will be conducted within an Adaptive Management Framework and would incorporate

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the Beach Ecology Coalition recommendation for “Basic Beach Driving”<sup>12</sup> For all pertinent City departments.

The Adaptive Management framework begins with a suite of measures targeted to protect wintering WSP as well as nesting WSP should such occur. The Adaptive Management framework also includes additional conservation actions and/or measures that would be implemented should it be determined that certain actions or measures are not adequate based on monitoring data or other site-specific data presented to the City.

### 6.1.1 Marine Operations Division

Under the Marine Operations Division, Newport Beach Lifeguards will continue to engage in and prioritize lifesaving services, prevention and preparedness and provide a safe, effective and expeditious response to requests for assistance. All Lifeguard personnel that operate a motorized vehicle that may travel through the Project Area will receive an annual training to increase awareness of the WSP and reinforce best management practices while exercising responsibilities within areas occupied by WSP.

Lifeguard personnel shall travel through the critical habitat area with vehicles during essential trips only and take non-essential trips along surface streets when possible. During the wintering period of the WSP, lifeguard vehicles shall travel on or within close-proximity to the wet sand, when possible, to reduce the potential of striking a WSP. Lifeguard vehicles shall refrain from driving on the coastal dune habitat, as noted above, except for emergency purposes. When responding to emergencies, lifeguard’s vehicles will respond with lights. When traveling through the Project Area, vehicle operators should be mindful of WSP activity, limit speed to no more than 5 MPH, and when possible, safely alter routes to avoid flushing or incidental harm. All lifeguard vehicles will be equipped with a list of best management practices that would implement WSP protection in the Project Area [Exhibit 10]. Finally, Basic Lifeguard academy for new lifeguards will include information about the Western Snowy Plover (WSP) Habitat Management Plan. Lifeguards will include information about the WSP Habitat plan in our training for Lifeguard Certification and Recertification classes for our new and returning vehicle operators. Lifeguards will continue to monitor the beach area for dogs off leash or on the beach during the restricted hours of 10 a.m. to 4:30 p.m., where they provide important protection for areas occupied by the WSP.<sup>13</sup>

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<sup>12</sup> [www.BeachEcologyCoalition.org](http://www.BeachEcologyCoalition.org)

<sup>13</sup> In 2018, The Newport Beach Lifeguards made 124 animal warnings and 64 Code enforcement contacts in the WSP habitat areas between B Street and G Street.

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### 6.1.2 Municipal Operations Division

Municipal Operations Division (MOD) staff and contracted service providers perform most beach maintenance and cleaning related services. City staff will receive annual training to increase awareness of the WSP and to reinforce best management practices (BMPs). These BMPs will also be communicated and reinforced with contracted maintenance staff. City staff and contractors will be provided a map of the Project Area [Exhibit 11]. It is important to note that MOD staff have been and continue to be engaged in WSP protection and attend a variety of environmental seminars that address a wide range of environmental issues. For example, MOD staff regularly attend meetings of the Beach Ecology Coalition, which has the mission: “To enhance ecosystem conservation and beach management to balance natural resource protection and recreational use.”

Table 2 summarizes best management practices for the Project Area to mitigate the potential to attract predators, reduce vehicular traffic during the WSP wintering season and eliminate destruction and degradation of coastal dune habitat. Vehicular traffic traveling through the Critical Habitat area and the area east of the Critical Habitat will be extremely limited [Exhibit 11]. If traveling through the Critical Habitat area, vehicle operators shall be mindful of WSP activity, limit speed to no more than 5 MPH, and when possible, safely alter routes to avoid flushing or incidental harm. It may also be necessary to have additional staff walk in front of vehicles within areas occupied by wintering WSP including with the Project Area, if determined appropriated as part of the Adaptive Management program. No vehicles are authorized to drive on or through coastal dunes or dune vegetation. No trash trucks will be allowed to drive within Critical Habitat Unit 48. Where feasible, trash containers will be manually retrieved. During the winter months, trash container pickup will be limited to only two days per week and will be performed manually. Trash collection in the summer months will be five times a week because of high visitor numbers and to ensure that trash does not accumulate on the beach as an attractant to potential predators of the WSP.

Litter in the Critical Habitat area will be collected manually along the wrack line and throughout the coastal dune plants seven days a week in the summer and two days a week, or as needed, in the winter. Beach cleaning equipment will not be utilized and wrack will remain along the shoreline in the Critical Habitat area, which is also a benefit to grunion, to the extent that they breed on the peninsula and is consistent with grunion grooming protocols.<sup>14</sup> Table 3 summarizes best management practices in the area east of the Critical Habitat, from G Street to the Wedge. Maintenance within the Project Area may occur on the boardwalks, pathways and hardscape, when necessary, but will be limited to those areas.

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<sup>14</sup> (<http://grunion.pepperdine.edu/beachecologycoalition/bmp.htm>)

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In extenuating scenarios where health, safety and protection from loss of life and of property is necessary and work is unavoidable in the Project Area, (e.g. berm construction to prevent flooding, berm removal, sand grooming, sand removal), the area will be surveyed for WSP and measures will be incorporated to reduce disruption of WSP roosting and foraging. City staff will assist with coordination to reduce potential for disturbance and avoid degradation and destruction of coastal dune habitat.

In the event that WSP nesting occurs in the Project Area, the beach service schedule can be modified to minimize disturbances and continued until fledging occurs. Exclosures may be used as described in Section 5.2.2.

As noted in Tables 2 and 3, beach wrack will not be removed from the Critical Habitat and will only be removed, with monitoring during summer from areas between G Street and the Wedge. As explained on a University of California Santa Barbara website, Beach wrack

*(“Wrack”) is the term for seaweed, surfgrass, driftwood, and other organic materials produced by coastal ecosystems that wash ashore on the beach. In Southern California, giant kelp is an important component of wrack. Coastal storm waves tear giant kelp off the rocky seafloor and wash it ashore where it fuels the beach food web. Piles of slippery wrack are delicious buffets and key food resources for many creatures that live on the beach. Wrack provides food and shelter for a variety of beach inhabitants. Recently, biologists found that about 40% of the invertebrate species living on sandy beaches depend on wrack. Common wrack-dependent species include sand-dwelling invertebrates, such as beach hoppers, roly polies, kelp flies, and predatory rove beetles. These little creatures are also food for a variety of birds including shorebirds, flycatchers, sparrows and pipits. Many shorebirds feast on the abundant invertebrate animals associated with kelp wrack, including snowy plovers, black-bellied plovers, sanderlings, marbled godwits, whimbrels, and willets.<sup>15</sup>*

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<sup>15</sup> <http://explorebeaches.msi.ucsb.edu/sandy-beach-life/wrack-community>.

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**Table 2**  
**Critical Habitat Area MOD**  
**Beach Services Schedule**

	Summer	Winter
<b>Trash pickup</b>	Five days per week	Two Days per week
<b>Beach cleaning (equipment)*</b>	None	None
<b>Beach cleaning (hand pick)</b>	Seven days a week	Two days per week or as needed
<b>Wrack removal*</b>	None	None
<b>Berm construction</b>	Limited to emergencies**	Limited to emergencies

\* Beach cleaning and wrack removal may be necessary periodically (once or twice per summer months) to maintain the historic recreational uses between B and C streets. If wrack removal is necessary between B and C Street, it will be done manually, and wrack will be moved to the CH between C and D street, any maintenance efforts in this area will avoid the dune vegetation and be done with appropriate monitoring.

\*\* Berm Construction is limited to the beach access walkways and at the B Street Parking lot as the existing dunes provide sufficient protection in other areas. Access points would normally be at B Street, F Street or the Wedge. At no time would the equipment impact the adjacent dune habitat.

**Table 3.**  
**G Street to the Wedge**  
**MOD Beach Services Schedule**

	Summer	Winter
<b>Trash pickup (mechanized on designated route only)</b>	Five days per week	Two Days per week
<b>Beach cleaning (equipment)***</b>	Monthly with monitoring	Monthly with monitoring
<b>Beach cleaning (hand pick)</b>	Seven days a week	Two days per week or as needed
<b>Wrack removal</b>	Limited with monitoring	Limited to emergencies
<b>Berm construction</b>	Limited with monitoring****	Limited to emergencies

\*\*\* Beach cleaning would be limited to areas above the wrack line as identified by the biological monitor.

\*\*\*\* Berm Construction is limited to the beach access walkways and at the B Street Parking lot as the existing dunes provide sufficient protection in other areas. Access points would normally be at B Street, F Street or the Wedge. At no time would the equipment impact the adjacent dune habitat.

### 6.1.3 Public Works Department

To date, there are no capital improvement projects scheduled by Public Works Department within the WSP habitat areas including both Critical Habitat Unit 48 and the area east of the Critical Habitat. Future project planning for improvements and/or additions to sidewalks, boardwalks or other beach infrastructure on the Balboa Peninsula will identify the Critical Habitat area. In addition, project planning should consider subsequent impacts to habitat and WSP. Buffers may

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be required to protect areas used by WSP within the Critical Habitat area and areas east of the Critical Habitat Area.

## 6.2 Recreational Activities

*Objective 7: Maintain access to recreation and resources while improving compliance with existing regulations, such as the City's leash laws;*

As noted, it is a goal of this Plan to ensure protection of the WSP while also maintaining access to recreation in conjunction with beach and marine resources while enhancing adherence to existing regulations.

### 6.2.1 Public Access

In accordance with the Coastal Act, Section 30001.5, the City of Newport Beach will continue to “maximize public access to and along the coast and maximize public recreational opportunities” ... “consistent with sound resources conservation principles and constitutionally protected rights of private property owners.” Public accessibility to the beach will remain open, however passive uses that are consistent with WSP conservation will be encouraged within CH Unit 48 and the ACA to the east of the Critical Habitat unit. Any means of delineation for designating or protecting the habitat shall not impede public access to and along the coast.

Through the educational efforts set forth in Section 5 above, the City will discourage pedestrian traffic on the upper beach habitat within the Critical Habitat Unit 48 and ACAs to maintain habitat value for WSP, but will encourage passive beach recreation activities in these areas to utilize areas below the mean high tide line. No new recreational amenities will be placed within the Critical Habitat or the ACA. The volleyball court within the Critical Habitat area between F Street and G Street will be removed and the court located between C Street and D Street will also be removed. To minimize beach activities that could disturb WSP in the Critical Habitat area, special event applications requesting permitted use of areas within the boundaries of the Critical Habitat area will not be allowed in the Critical Habitat or ACA. Unpermitted special events observed within the Critical Habitat area will be ordered to cease and subject to potential citation.

Newport Beach Police Department will continue to take enforceable actions for violations related to conduct (NBMC 11.04.110), obstruction (NBMC 11.08.010) and prohibited hours (NBMC 11.08.030). No new restrictions or municipal codes regarding public access or public recreational opportunities are needed at this time.

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### 6.2.2 Dogs

The City has demonstrated commitment to provision of protection for WSP from dogs that are off leash or that are present in the Critical Habitat area and ACA between G Street and the Wedge, during prohibited hours through warnings and citations. As described above, interviews with owners of unleashed dogs, indicates a significant lack of awareness regarding the WSP wintering roost areas on the Balboa Peninsula and the threat that unleashed dogs pose to WSP. Therefore, as outlined in Section 5 above, education will be the first component of the Adaptive Management Program as it will be critical to educate residents in limiting and ultimately eliminating unleashed dogs from making their presence in the Critical Habitat and ACA areas. In conjunction with the education efforts, the City will be increasing the enforcement to expand this protection. Newport Beach Animal Control Division will continue to provide a presence and enforce leash laws and prohibited hours. Lifeguards will issue warnings and can issue citations as well. The patrol schedule will continue to vary in times of the day and during the week. Increased visits within routine patrol to the designated sensitive habitat areas will include early morning and evenings. This aligns with hours dogs are permitted to be on the beach and more likely to be off-leash. Patrol efforts may also be focused during peak visitation times including weekends, holidays and the summer season. Additional signage, education and outreach efforts regarding City codes related to dogs on the beach will be emphasized within the surrounding Balboa Peninsula environs. As part of the Adaptive Management approach, if the data indicates that compliance with leash laws is not occurring, then fines could be increased for non-compliance. If non-compliance continues, additional measures could be implemented such as expanded signage, modifications to temporary seasonal fencing, and expanded educational efforts, and/or increased patrolling and possibly warning and citations.

In addition, signage, temporary seasonal fencing, and other visual indicators that delineate sensitive areas (Section 6.3), will ensure more effective protection for the Critical Habitat and ACA areas necessary to deter, legal or illegal, dog-related activity. Expansion and modification of the existing signage that educate the public regarding dog-related municipal codes (See Section 5.4) will serve to improve compliance when enforcement is not on site. Signage with a regulatory message will educate the public regarding the serious nature of the illegal act of “taking” of a protected species, as defined by the FESA, and the penalties for a FESA violation. Interpretative and educational signage in the Critical Habitat area will complement the regulatory signage by reinforcing the importance of compliance and educating the public regarding the importance of protecting the WSP when present on the beach. Examples of interpretive, educational, and regulatory signage are depicted on Exhibit 12.

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## 6.3 Critical Habitat and ACA Delineation

*Objective 8: Establish an effective suite of visual Indicators/barriers to clearly identify boundaries that define and create an awareness of the Critical Habitat Unit 48 dunes, and Avian Conservation Area*

As noted in the introduction, this Plan includes an “Adaptive Management” framework that would include modifications to the City’s actions that are outlined in the Plan if the initial measures proposed and implemented are determined by the WSP Technical Committee to need modifications to provide better protection of the WSP and associated roosting areas. The proposed measures seek to balance protection of the WSP wintering sites and sensitive dune habitat with the potential stressors addressed in Sections 6.1 and 6.2 above, as well as the delineation of areas subject to the protections outlined in this plan. Thus, this section of the Plan identifies the suite of approaches for delineating WSP use areas, including the boundaries of Critical Habitat Unit 48, the boundaries of the coastal sand dunes, and other areas used by wintering WSP.

### 6.3.1 Visual Indicators/Barriers

Visual indicators are critical for delineating area that are sensitive, such as beach areas that are heavily used by WSP, as well as the coastal sand dunes. Visual indicators can include various types of traditional fencing that provides a physical barrier. Common examples include chain link, post and cable, split rail, T-bar and paracord, or other types of physical barriers. Visual indicators can also include different types of bollards, posts with signs (educational signage is discussed in Section 6.4 below), or other features which provide “symbolic fencing”, by creating a “do-not-cross” line in the absence of a physical barrier as depicted on Exhibits 13 and 14. Visual indicators can also include painted lines and other cues on sidewalks, which, like the “symbolic fencing” defines a clear “do-not-cross” line for the beachgoing public. USFWS recommended use of symbolic fencing in a letter to California Department of Parks and Recreation dated January 19, 2016 as an effective way for the public and beach operations to visualize when crossing into sensitive habitat. Such symbolic fencing to delineate boundary lines for sensitive areas without impeding appropriate access.

In addition to symbolic fencing, stenciled signage (“icons”) identifying WSP Critical Habitat areas will be painted on the boardwalk and public pathways at potential entry points into the Critical Habitat area or areas used by WSP east of the Critical Habitat [Exhibit 15]. Icons will be located such that the beachgoing public would be aware of sensitive resources and spacing would be determined based on potential entry points to sensitive areas [Exhibits 13 and 14]. As an Adaptive Management measure, icons could be added as necessary where entry points were not previously recognized.

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As an initial component of the Adaptive Management program, the existing T-bar with paracord would be removed and would be replaced as addressed below for the initial phase of the Adaptive Management proposal. Identified WSP roost sites in Critical Habitat Unit 48 along with roost sites in the ACA between G Street and the Wedge would be protected during the wintering season (October 1 through March 31) with temporary seasonal fencing, utilizing Concepts 2 described above. Any temporary seasonal fencing approach implemented would be subject to review in accordance with the Adaptive Management provisions of the Plan and therefore modified as determined by the WSPTWGPP.

### 6.3.2 Visual Indicators/Barriers – Adaptive Management Proposal: Phase 1

- a. As noted at various points above, the City has already implemented various measures to protect WSP wintering areas in the Project Area. The following measures would be implemented as the first phase of the Adaptive Management approach: It will be necessary to establish standards or triggers for when measures would be modified or expanded. However, it will require collection and assembly of baseline conditions in order to establish such standards or triggers. Seasonal signage would be placed along the eastern and western boundaries of the critical habitat to notify beachgoers of the limits of Critical Habitat Unit 48 and associated restrictions. The locations of signage are depicted on Exhibits 16 and 17. Temporary seasonal fencing as described for Concept 2 would be installed prior to October 1 of each year and maintained in place through the winter roosting season (March 31). The location of the temporary seasonal fencing is depicted on Exhibits 6 and 6a. A-Frame signage is also proposed seasonally to augment the temporary seasonal fencing. The seasonal signage would be maintained during the peak of the wintering season for the WSP (October – March). An example of the A-Frame seasonal sign is depicted on Exhibit 18.

The Concept 2 temporary seasonal fencing depicted on Exhibit 6a and 6b would consist of T-bar or similar material with three strands of cord or wire that includes flagging or other material to enhance visibility. The temporary seasonal fencing would be a minimum of 36 inches high and each segment would include signage that would include the following information: “Use caution – entering winter roost area of federally listed threatened western snowy plover. Dogs must be on a leash at all times and roosting areas should be avoided by a minimum of 30 feet”. Photographs of WSP in footprints and tire ruts would also be included to show the public what to look for and what they need to avoid.

- b. Permanent signage with information and beach regulations (including dog rules) regarding the WSP, WSP Critical Habitat, and sensitive coastal sand dunes would be located at the beach access points at B, C, D, E and F Streets as well as at the eastern edge of the Balboa Peninsula Park parking area, which demarcates the edge of Critical Habitat at this location. Exhibits 16 and 17 depicts the location of the various signage types.

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- c. Permanent “icons” would be stenciled along the boardwalk to indicate that the northern limit of the Critical Habitat begins immediately adjacent to the boardwalk. A variety of icons would include information regarding the WSP, fragile nature of the coastal sand dunes, prohibited activities with a focus on leash laws and associated penalties for lack of compliance.
- d. The “finger” walkways extending from C, D, E and F Streets would have similar icons at the intersection of each walkway with the boardwalk and the shoreward end of each walkway. In addition, portions of each walkway, where it is adjacent to coastal sand dune habitat would have symbolic fencing in the form of a solid line painted at the edge of the walkway with intermittent signage indicating the presence of adjacent sensitive sand dune habitat this is off-limits to the beach-going public. Finally, as discussed further below, at approximately midpoint between the boardwalk and end of each walkway would be an educational sign explaining the sensitive nature of the dune habitat and the importance of precluding human and dog access.

The symbolic fencing and icons along the boardwalk and finger walkways are expected to provide adequate protection for the coastal sand dune habitat on three sides because beachgoers accessing the beach from the boardwalk and/or walkways would receive clear notice regarding the sensitive nature of the dunes. Nevertheless, as data regarding the effectiveness of the symbolic fencing and icons becomes available, additional measures such as low fencing (24-inches) would be added if determined necessary.

- e. For beachgoers entering from the east and west of the Critical Habitat, permanent signage would be placed at the first dune formation accessible from the east and west, respectively alerting the beachgoer to the characteristics of the sensitive dune habitat and associated access restrictions. This would ensure that access from any direction toward the coastal dune habitat would include symbolic fencing and appropriate signage/notifications. The locations for this signage are depicted on Exhibits 16 and 17.

In addition, the finger walkways extending from C, D, E, and F Streets end beyond the dune, and in the upper beach habitat of CH Unit 48. To discourage pedestrian traffic from traversing the upper beach where WSP frequently roost, markers will be placed on the sand to encourage pedestrians to travel toward the water in a consistent, rather than dispersed fashion.

In order to ensure protection of WSP winter roosts within the Critical Habitat and ACA between G Street and the Wedge, temporary seasonal fencing would be installed in accordance with the descriptions set forth in Section 5.1.1 above.

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- f. As noted in Section 5.1.1, seasonal temporary fencing Concepts 1 and 2 each have advantages and disadvantages and based on the advantages, Concept 2 will be the initial approach. It will be necessary to monitor the following factors to determine effectiveness and possible modifications to the alternative fencing concepts to increase effectiveness.
- Establish importance of microhabitat features such as tire ruts and footprints for WSP and whether WSP will relocate roost sites to maintain access to such features.
  - Establish use patterns within roost sites to determine effectiveness of the selected fencing (e.g., should Concept 1 be selected, will WSP remain within the fenced area or are roosting areas sufficiently dynamic to render this alternative ineffective).
  - Establish human reactions to fencing and whether fencing is protecting WSP roost sites from both human and canine intrusion (e.g., should Concept 2 be selected, do walking and jogging beachgoers follow the directions on the signage so as to avoid WSP and do dog walkers similarly follow the directions, maintaining dogs on leash and avoiding WSP sufficiently to minimize disturbance to WSP).
  - Monitor effects of vehicle traffic on WSP roost sites associated with selected Concept.

### **6.3.3 Visual Indicators/Barriers – Adaptive Management Proposal: Phase 2**

Should it be determined that modification of or additional measures, relative to installation of visual and/or physical barriers need to be implemented to ensure protection of the wintering WSP, such measures would include the following as determined suitable by the WSP Technical Working Group.

1. Installation of additional signage to delineate the boundaries of the Critical Habitat and inform the public of the sensitive nature of the Critical Habitat and wintering WSP.
2. Modify temporary fencing for selected Alternative or change Concept/Alternative if it is determined that the Concept/Alternative initially selected is not effective.
3. Enhancement of the symbolic fencing which could include the following as determined necessary the WSP Technical Working Group:
  - a. Installation of bollards to delineate the boundaries of the Critical Habitat;
  - b. Installation of bollards to delineate the boundaries of the coastal sand dune habitat;
  - c. Installation of low (e.g., 24-inch high) post and cable fence to prevent sand dune access from the finger walkways; and

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- d. Installation of low (e.g., 24-inch high) post and cable fence to delineate the shoreward boundaries of the sand dune habitat. An example of the post and cable fence is depicted on Exhibit 18.

4. Other measures determined necessary by the WSP Technical Working Group.

The delineation of the area with visual indicators and removal of the existing fence are consistent with other proposed conservation measures and will provide for a full delineation of the Critical Habitat, including all 25.04 acres of within the “sensitive area”. These efforts will also pose minimal direct threat to the existing population of WSP. Generally, WSP are observed closer to the shore, between the shore and the edge of the coastal sand dune, and near wrack.

### 6.4 Signage

The adaptive management principles that are foundational for this Plan will be applied to the signage and icons intended to educate beachgoers regarding the WSP and Critical Habitat. Thus, educational and regulatory signage will be placed at strategic access points and along high traffic routes within and adjacent to the Critical Habitat area to inform the public of the presence of the wintering WSP, the Critical Habitat boundaries and associated regulations. As noted, in Section 5.1.1, for Alternative 2 (if implemented), signage on the fencing will be important to direct beachgoers to avoid WSP at roost sites. Signage will be consistent with visual resource policies of the Coastal Act and WSPRP: Information and Education Plan. New signage will be compatible with existing signage in the vicinity, relative to size and appearance, and will be located to avoid obstruction of existing views or significant degradation the scenic views of the beach. As appropriate (e.g., within the Critical Habitat area) the design of the signage will consider size and placement that would minimize potential perching opportunities for WSP predators. Because of the adaptive management approach, signage may be adjusted, augmented, or potentially removed or relocated, based on effectiveness.

#### 6.4.1 Interpretive and Educational signage

Interpretive and educational signs and or sidewalk icons will be permanently installed along the hardscape in areas adjacent to the Critical Habitat area. Potential placement for signs depicted on Exhibits 16 and 17 would be:

1. At the boardwalk entry point at B Street
2. At each finger entry, adjacent to the boardwalk, at C, D and E Street
3. Along each finger at C, D, E, and F Street
4. At each beach access entry between G Street and Channel Road.

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Signs will be a limited in height and size to ensure that view sheds are not adversely impacted. Sign content will include text, photos and diagrams related to the characteristics, life history and population status of the WSP. Educational signage will also highlight human activities that impact wintering WSP, recovery efforts, coastal dune habitat and the designated boundaries of the Critical Habitat area. If determined to be necessary, based on observed effectiveness, additional seasonal (i.e., during the WSP wintering season), seasonal fencing and/or educational signs may be placed immediately above the high tide line if the above-referenced signage is not sufficient for the necessary protection of the wintering WSP.

### **6.4.2 Regulatory signage**

As appropriated, regulatory signage will be included with educational sign. Regulatory sign content may include but is not limited to dog-related rules (including Newport Beach Municipal Code references), Federal regulations related to the harm and take of a protected species, designation of Critical Habitat area and noticing of sensitive wildlife and closed areas. Regulatory signs will be of sufficient size to be effective as with the educational signage but will be limited in height and width to prevent obstruction of views. Regulatory signs may also be incorporated into seasonal signage referenced above. The locations of regulatory signage are depicted on Exhibit 16.

## **7 ADAPTIVE MANAGEMENT TRIGGERS AND PERFORMANCE STANDARDS**

The Adaptive Management Program is a dynamic process which is highly dependent on data to inform appropriate actions necessary to protect the WSP winter roosting areas within the Critical Habitat and the ACA between the Critical Habitat Area and the Wedge. The Triggers and Performance Standards set forth below are therefore provisional and may be subject to modification based on efficacy of the various components of this Plan set forth above.

As set forth at the beginning of Section 3 above, many of the concerns identified by Ryan et al.(2017), regarding activities within the Critical Habitat and the ACA between the Critical Habitat Area and the Wedge have already been addressed or will be addressed with implementation of this Plan. The issues of concern, addressed in Section 3 are set forth below, with proposed monitoring and where appropriate, triggers and/or performance standards proposed for the Plan.

### **1. A lack of public awareness of the presence of WSP roosts and a lack of information about how to avoid disturbing the plovers while enjoying the beach**

As discussed in Section 5.1 interviews with the owners of unleashed dogs indicate a lack of awareness regarding the presence, sensitivity and locations for the WSP in the Critical Habitat and the ACA areas. Thus, this factor alone exhibits significant potential for reducing the number of

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unleashed dogs on the beach and associated potential impacts on the WSP. Based on preliminary data collected weekly between November 1, 2019 and January 25, 2020, approximately 25-percent of dogs observed are unleashed.

### **Goal: Achieve no more than 10-percent unleashed dogs within three years**

**Performance Standard:** By end of 2021/2022 monitoring season (March 31 is end of winter monitoring season), achieve no more than 15-percent unleashed dogs.

By end of 2023/2023 monitoring season (March 31 is end of winter monitoring season), achieve no more than 10-percent unleashed dogs.

### **Adaptive Management Measures**

If 10-percent standard is not achieved by the end of second monitoring season, one or more of the following measures as determined in consultation with the WSP Technical Working Group:

- Expand and/or retarget educational efforts;
- Modify, including relocation and/or expansion of temporary seasonal fencing;
- Modify, including relocation and/or expansion of signage.

**Performance Standard:** By end of 2023/2024 monitoring season (March 31 is end of winter monitoring season), achieve no more than 10-percent unleashed dogs.

By end of 2023/2024 monitoring season (March 31 is end of winter monitoring season), maintain no more than 5-percent unleashed dogs.

### **Adaptive Management Measures**

If the 10-percent standard is not achieved by the end of fourth monitoring season, one or more of the following measures as determined in consultation with the WSP Technical Working Group:

- Expand and/or retarget educational efforts;
- Modify, including relocation and/or expansion of temporary seasonal fencing;
- Modify, including relocation and/or expansion of signage.

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### **2. Lack of training and information on locations of WSP roosts among some staff that drive and operate equipment on the beaches**

As discussed in Section 6 above, this Plan includes a commitment for significant training for city staff, which is already ongoing, relative to activities on the beaches that could affect WSO roosting areas, including but not limited to lifeguards, maintenance personnel, animal control, and recreation.

### **3. Regular disturbance, removal of foraging resources, and occasional mortality resulting from beach grooming, operation of heavy equipment, and regular vehicular traffic**

As summarized in Tables 2 and 3, beach grooming with heavy equipment has been eliminated from the Critical Habitat area and for the areas between the Critical Habitat and the Wedge, limited to monthly with monitoring and with no heavy equipment below the wrack line as summarized in Table 2. Thus, this concern is addressed. Similarly, vehicle traffic in the Critical Habitat is limited to lifeguard vehicles with maximum speed limits of 5 MPH and trash trucks entering the Critical Habitat from F Street as depicted on Exhibit 6a. Trash trucks would be limited during winter roosting season between the Critical Habitat and the Wedge to two days per week as set forth in Table 2.

### **4. Regular disturbance and occasional mortality from off-leash dogs**

As discussed in “Concern 1” above, potential harm through flushing or occasional mortality associated with unleashed dogs is one of the major concerns and is appropriately, the major focus of the initial efforts of this Plan. As noted, interviews with owners of unleashed dogs indicate a lack of awareness regarding the presence of the WSP roosts, the designation of WSP Critical Habitat, and the sensitive nature of roosting WSP. Thus, a substantial expansion of the education program, which is in part addressed through the signage that will be installed on the boardwalk, vertical walkways and street entrances as depicted on Exhibits 13 and 14. The Performance Standards and associated Adaptive Management Measures are set forth in Concern 1 above.

### **5. Recreational activities and occasional large events that flush WSP from roosts and leave large amounts of refuse near roosts**

The City has committed to eliminating organized recreational activities such as lifeguard exercises from the Critical Habitat and areas between the Critical Habitat and the Wedge during the winter roost season. Volleyball courts will be removed from the Critical Habitat as well.

Native and non-native predators drawn in unusually large concentrations to human refuse on and near the beach and pet food placed outside at nearby residences. With the elimination of

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recreational activities, the potential source of refuse would be eliminated along with associated impacts to the WSP roosts.

### **8 REPORTING**

To ensure that the Adaptive Management approach is providing adequate protection for the WSP, annual reports will be submitted to the CCC for five years following implementation of the program. The initial report will include all baseline and pertinent data collected on the WSP and activities within the Critical Habitat Area as well as the proposed ACA between the Critical Habitat Area and the Wedge. The initial report will include, at a minimum, monthly counts of WSP at both locations, potential stressors observed (e.g., off-leash dogs, human incursion into the dunes, etc.). The data in the initial report will provide the baseline conditions from which future adaptive management decisions will be determined.

Subsequent reports for years 2 – 5 will include all data collected along with any Adaptive Management Measures previously adopted and an evaluation of their effectiveness. The first annual report will be submitted within one year of issuance of the Coastal Development Permit and subsequent reports will be submitted annually on the same date as the initial report.

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# **EXHIBITS**

*1 - 15*

# **APPENDIX A**

## *Natural Resources Element Goals and Policies*

# **APPENDIX B**

## *Western Snowy Plover Policies*

**APPENDIX C**  
*Municipal Codes*

# **APPENDIX D**

*US Fish & Wildlife Service  
WSP Window Survey Results  
2005-2017*

# **APPENDIX E**

*Recovery Plan for the  
Pacific Coast Population of the  
Western Snowy Plover*