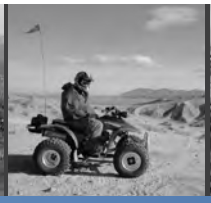
OCOTILLO WELLS
STATE VEHICULAR RECREATION AREA
General Plan






Working Paper #2: Existing Conditions

OCOTILLO WELLS SVRA GENERAL PLAN UPDATE AND EIR

SEPTEMBER 2013

www.planocotillowells.org

Ocotillo Wells SVRA General Plan Update

Working Paper #2

Final – September 2013

PREFACE

This working paper describes the existing conditions for a set of topics relevant to the Ocotillo Wells State Vehicular Recreation Area (SVRA) General Plan. The overall purpose of this document is to present data and information regarding the existing character of Ocotillo Wells SVRA and provide a baseline inventory of the physical, environmental, and social resources present. Information presented in this working paper will also serve as background for the development of the draft planning alternatives that will be presented in a separate working paper and will be the subject of future public meetings.

Specific terminology (i.e., “Open Riding” and “Trail Riding Only”) used in this working paper currently applies only to the Ocotillo Wells District. However, these terms are not explicitly defined by California State Parks Off-Highway Motor Vehicle Recreation (OHMVR) Division or through any existing policies, regulations, guidelines, or standards. The OHMVR Division is developing new terminology that will be used throughout all of California State Park’s SVRAs. New terminology established by the OHMVR Division will be incorporated into the Ocotillo Wells SVRA General Plan.

The content of this working paper will ultimately serve as the basis for the “Existing Conditions” chapter of the Ocotillo Wells SVRA General Plan. Some changes are likely to occur between the point in time that this working paper is published, and when the Draft Ocotillo Wells SVRA General Plan is published. The technical information included in this document will continue to be refined during that period. Environmental compliance documents will be prepared for the Draft Ocotillo Wells SVRA General Plan subsequent to the public workshop for the preferred alternative as part of the planning process. These documents will assess the potential environmental impacts of implementing the General Plan and will include an existing setting section similar to the contents of this working paper.

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CHAPTER 1. INTRODUCTION

Ocotillo Wells State Vehicular Recreation Area (SVRA) is a popular place for residents of Southern California and beyond to engage in a variety of recreational activities, including off-highway vehicle (OHV) recreation (e.g., all-terrain vehicles [ATVs], motorcycles, dune buggies, and four-wheel-drive vehicles [4x4s]), camping, hiking, and geocaching (see description in Section 2.4.2). Visitors of all ages come to Ocotillo Wells SVRA to enjoy the OHV recreational opportunities; experience the scenic beauty of the desert; discover its diverse natural resources; and learn about the rich history of those who have inhabited, passed through, or used the land in the past.

Ocotillo Wells is, by far, the largest SVRA in the California State Parks system, with more than 85,000 acres of expansive desert managed by the California State Parks Off-Highway Motor Vehicle Recreation (OHMVR) Division, Ocotillo Wells District. The unique opportunities for open riding and trail riding through the vast desert landscape and the variety of terrain types and topographic features challenge the skills of OHV recreation enthusiasts of all types and expertise, making Ocotillo Wells SVRA a premier destination for OHV recreation. Ocotillo Wells SVRA has been used for OHV recreation for decades, and many visitors have a long tradition of riding and camping with family and friends at Ocotillo Wells SVRA.

1.1 LOCATION AND REGIONAL CONTEXT

Ocotillo Wells SVRA is located a few miles from the western shore of the Salton Sea, in the open expanse of the western Colorado Desert in Southern California. It is approximately 90 miles northeast of the city of San Diego. Figure 1 shows the regional location of Ocotillo Wells SVRA.

The small rural community of Ocotillo Wells is adjacent to Ocotillo Wells SVRA on the south, and the small rural community of Salton City is adjacent to the east. Figure 2 shows the local context of Ocotillo Wells SVRA.

To the north of Ocotillo Wells SVRA are the Santa Rosa Mountains and the metropolitan area and cities of the Coachella Valley. To the west, the Anza-Borrego

Desert slopes upward toward the Laguna Mountains, where Julian and other rural mountain communities of San Diego County are located. To the northwest is the small desert community of Borrego Springs and the Borrego Valley. To the south and east are Brawley, El Centro, and other cities and communities in the Imperial Valley agricultural region.

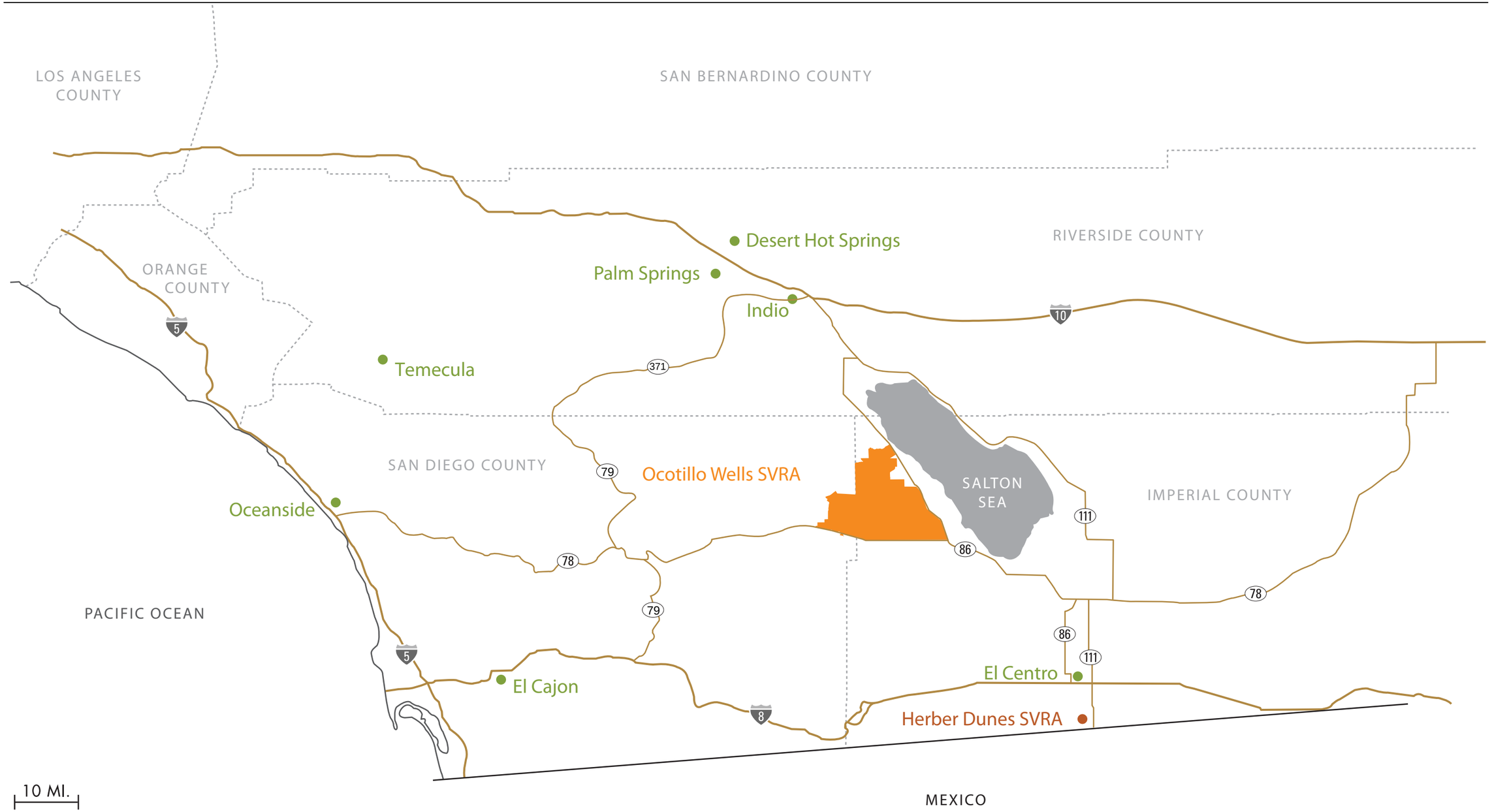
From San Diego County and points west, Ocotillo Wells SVRA is accessed via State Route (SR) 78, which parallels the southern boundary of Ocotillo Wells SVRA, or via County Highway 22 (S-22), which bisects the northern portion of Ocotillo Wells SVRA and connects Salton City and Borrego Springs. SR-86 parallels the eastern boundary of Ocotillo Wells SVRA and provides access from the north from Interstate (I) 10 in eastern Riverside County and the Coachella Valley. SR-78 and SR-86 intersect near the southeastern corner of Ocotillo Wells SVRA and become a single road, continuing southeast and providing access to Ocotillo Wells SVRA from the south.

1.2 CHARACTERISTICS OF OCOTILLO WELLS SVRA

Ocotillo Wells SVRA is located in a rugged desert with extreme terrain, intense climate, and a variety of soil types and topography. The desert landscape often appears flat, sloping to the south and east toward the Salton Sea, but there are many topographical variations and rough surfaces. Mud hills and steep escarpments distinguish the northern area of Ocotillo Wells SVRA and intermittently break up the flat topography in other areas. Washes meander across Ocotillo Wells SVRA, serving as drainage channels for the surrounding mountains to the northwest after heavy rain. Washes also provide natural routes for OHV recreationists to navigate through Ocotillo Wells SVRA.

The landscape in Ocotillo Wells SVRA is dominated by a diverse mix of desert shrub and limited woodland vegetation communities intermixed with barren or sparsely vegetated areas. Many specialized plants and animals are present that have adapted to the harsh desert environment.

Ocotillo Wells SVRA also has a rich and varied history that is documented in the details of the land. Lake Cahuilla, a freshwater lake six times the size of the Salton Sea, covered much of the Imperial Valley and receded many times until it finally dried up



Source: California Department of Parks and Recreation 2009, 2010; STATSGO 2006; ESRI 2009

Figure 1

Regional Location

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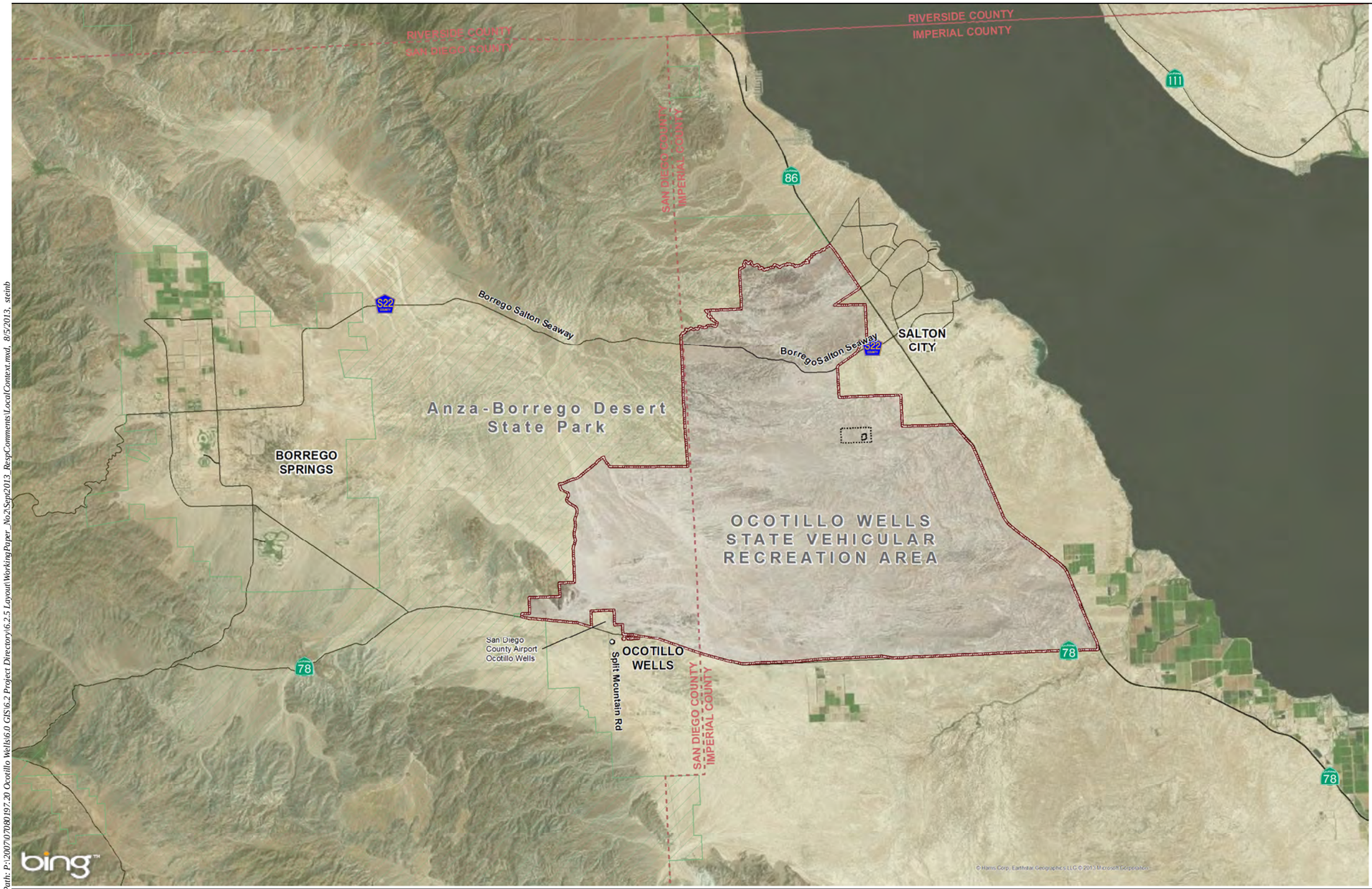

Legend

- Ocotillo Wells SVRA Study Area Boundary
- Anza-Borrego Desert State Park
- County Boundary
- Landfill

Note/Disclaimer:

All efforts have been made to ensure the accuracy of the data and information on this map; however, some information may not be accurate. California Department of Parks and Recreation and AECOM assumes no responsibility from use of this information.

Source: California Department of Parks and Recreation 2009, 2010; SanGIS 2010; Imperial County 2009; ESRI 2009

3.5 1.75 0 3.5 Miles

Scale: 1 = 221,760; 1 inch = 3.5 miles

Figure 2

Local Context

Ocotillo Wells SVRA General Plan and EIR
Working Paper #2

September 2013

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around 300 years ago. Remnants of the lake's aquatic life and archaeological evidence of the native peoples, such as the Kamia band of the Kumeyaay and the Desert Cahuilla, are reminders of the area's rich history. Ocotillo Wells SVRA also features historical remnants of homesteads, past military use, mining, and drilling operations, and even Hollywood film productions.

Due to the hot and arid climate, visitation to Ocotillo Wells SVRA is seasonal, with peak periods occurring on holiday weekends during the late fall, winter, and early spring, when temperatures are cooler. Although basic facilities are available, visitors also enjoy the rugged desert environment and value the unique open camping and open riding opportunities.

1.3 PURPOSE ACQUIRED

Since at least the 1930s, OHV use has occurred informally on the land now known as Ocotillo Wells SVRA. Substantial recreational OHV use began after World War II when surplus military jeeps and dune buggies became available to the public. Prior to the establishment of a formal SVRA, OHV use in the area received little direct management.

Ocotillo Wells SVRA was formed after 12,500 acres of private land were acquired using OHV Trust Fund monies and combined with 2,100 acres of reclassified state park lands. A total of 14,600 acres were classified as Ocotillo Wells SVRA by the California State Parks OHMVR Commission in 1976 (DPR 1982). Ocotillo Wells SVRA has continued to expand and develop as a California SVRA. Additional land management milestones include the acquisition of 28,300 acres in 1986 (DPR 1986); a 1991 agreement with the U.S. Bureau of Land Management (BLM), renewed as recently as 2008, that includes approximately 21,543 acres of BLM land managed as part of Ocotillo wells SVRA (BLM and DPR 2008); and the addition of approximately 7,800 acres to Ocotillo Wells SVRA north of S-22 through the passage of California Senate Bill 855 in 2010 (California State Legislature 2010). Ocotillo Wells SVRA was acquired by the California Department of Parks and Recreation (DPR) to provide opportunities for OHV recreation while managing the resources that make Ocotillo Wells SVRA unique (DPR 1982).

1.4 SENSE OF PLACE

Ocotillo Wells SVRA is a treasured gathering place for people seeking both motorized and nonmotorized recreational activities. Located within San Diego and Imperial Counties and a close distance from Los Angeles, Riverside, Orange, and San Bernardino Counties, Ocotillo Wells SVRA offers an escape from the nearby urban areas of Southern California. Many visitors have a long tradition of riding and camping in Ocotillo Wells SVRA, and value it as a place that builds bonds among friends and family, and fosters a connection between people and the land. The rugged landscape provides opportunities for people to spend time outdoors, learn about the rich history of the area, experience the scenic beauty and solitude of the desert, and seek out adventure.

Ocotillo Wells SVRA's recreational diversity allows visitors to experience the freedom of open riding and open camping. The varied terrain (such as mud hills, technical rock riding, and washes) provides opportunities for a wide range of OHV skill levels and riding interests. Due to the variation in terrain, different areas of Ocotillo Wells SVRA support different types of OHVs, such as motorcycles, ATVs, and 4x4s. Ocotillo Wells SVRA offers various activities for the entire family, such as camping, sightseeing, stargazing, geocaching, wildlife viewing, riding to distinctive destinations, and participating in a variety of interpretive programs and special events. More than 50,000 people participate annually in the interpretive programs at Ocotillo Wells SVRA.

1.5 PURPOSE OF THE OCOTILLO WELLS SVRA GENERAL PLAN

The Ocotillo Wells SVRA General Plan provides broad policy and program guidance to direct the long-range management, development, and operation of Ocotillo Wells SVRA. The original General Plan was developed by California State Parks, OHMVR Division, Ocotillo Wells District in 1982 following the designation of Ocotillo Wells as an SVRA in 1976. This comprehensive update to the original General Plan will incorporate management strategies that have been added to Ocotillo Wells SVRA after 1982.

The Ocotillo Wells SVRA General Plan, required by state law, establishes a framework for Ocotillo Wells SVRA that managers, staff, and the public use as a benchmark for

making decisions. The General Plan guides future and day-to-day decision-making, and serves as the basis for developing focused feasibility and management plans, planning and implementing specific projects, and performing other management actions. The General Plan update will provide a long-term, forward-looking vision for Ocotillo Wells SVRA through goals and guidelines that will support decision-makers well into the future.

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CHAPTER 2. EXISTING CONDITIONS

Documenting existing conditions at Ocotillo Wells SVRA helps to establish a baseline from which to identify issues and opportunities and helps to support the development and understanding of the General Plan's goals and guidelines.

The sections below provide context and information on land uses and recreation in the region; document the current conditions of Ocotillo Wells SVRA, including existing facilities, recreation opportunities, and visitor trends; identify significant physical, natural, cultural, and aesthetic resources; and describe operations, interpretation and education programs, and important planning influences, including regulations and land ownership.

2.1 REGIONAL LAND USE

Ocotillo Wells SVRA is far from large population centers. The land use setting in the surrounding area reflects the arid climate and resulting sparse and rural development patterns. Ocotillo Wells SVRA spans the border between Imperial County and San Diego County. Approximately 71,210 acres (83%) of Ocotillo Wells SVRA are in Imperial County, and the remaining 15,060 acres (17%) are in San Diego County. Ocotillo Wells SVRA is surrounded by extensive public lands, including Anza-Borrego Desert State Park, with which it shares a boundary, and other public land managed by BLM, the County of San Diego, and the County of Imperial. Figure 3 shows the San Diego County and Imperial County General Plans land use designations for areas surrounding Ocotillo Wells SVRA.

The small rural communities of Ocotillo Wells, in San Diego County, and Salton City, in Imperial County, are located adjacent to Ocotillo Wells SVRA. Both communities are sparsely developed and offer a limited variety of visitor-serving uses, housing, and commercial development that is generally compatible with Ocotillo Wells SVRA. Nearby Borrego Springs is located approximately 15 miles northwest of the western border of Ocotillo Wells SVRA and has more substantial development. Although Ocotillo Wells SVRA is not visible from Borrego Springs, Ocotillo Wells SVRA visitors may travel there for support services and other amenities, including restaurants, hotels, and commercial

development. Housing in these areas is a combination of year-round occupants and seasonal visitors who own second homes in these communities.

2.1.1 Ocotillo Wells

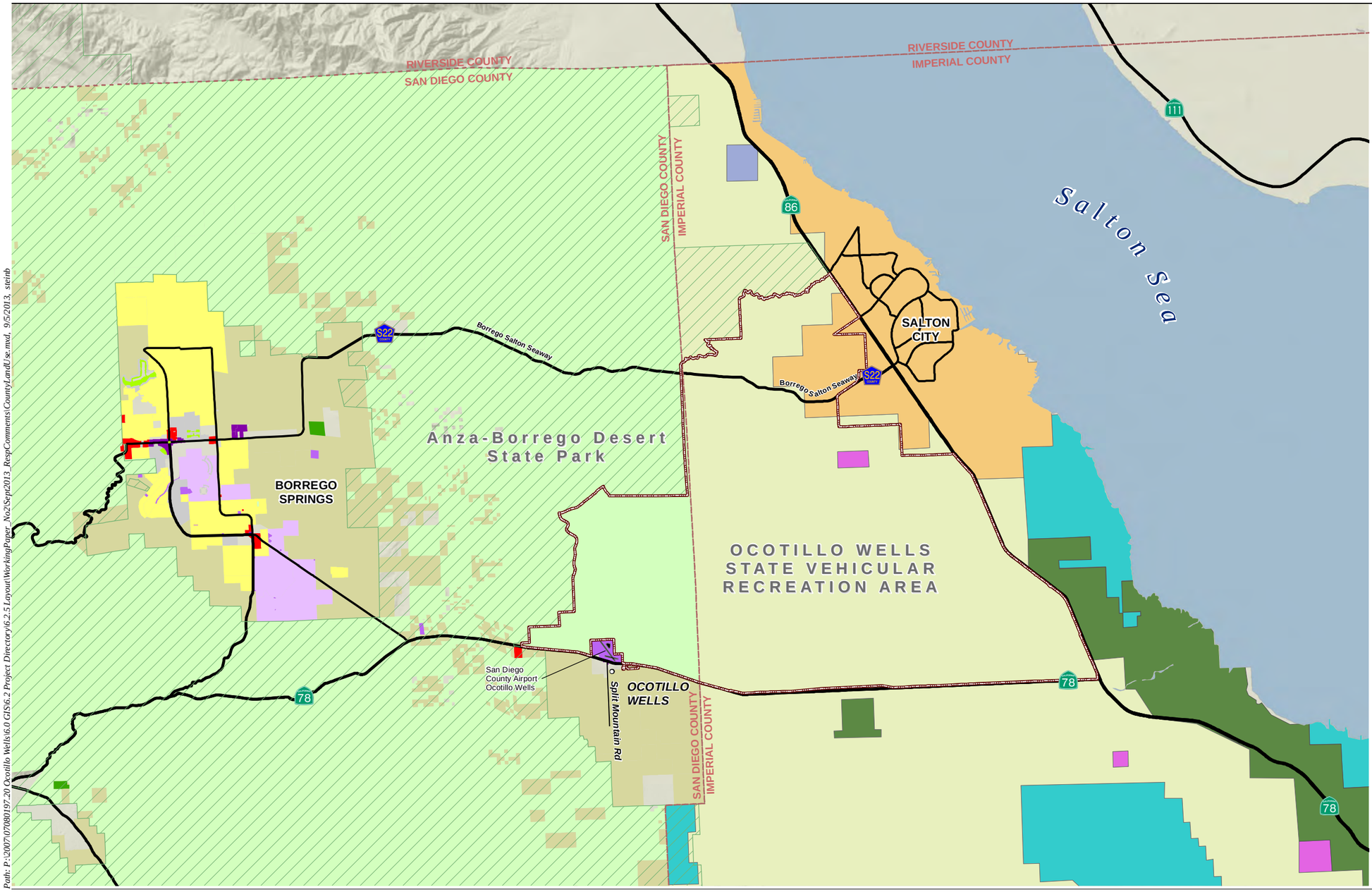
The community of Ocotillo Wells is located in San Diego County, south of Ocotillo Wells SVRA's southern boundary. The community has a number of dispersed residences on large lots and several mobile home parks. A limited number of businesses are located along SR-78 in Ocotillo Wells and provide amenities and facilities for Ocotillo Wells SVRA visitors. The Iron Door and the Split Mountain Store are located approximately 1 mile south of SR-78 along Split Mountain Road. Both of these businesses are open part-time during the summer to serve local residents and full-time during the cooler months to accommodate residents and visitors. The Split Mountain Store carries groceries, beverages, and OHV parts, and includes a recreational vehicle (RV) park. The Iron Door is a small bar that has two pool tables and serves beer, wine, and food. Several seasonal RV parks are located along Split Mountain Road.

The Desert Ironwoods Resort, located approximately 3 miles west of Split Mountain Road, contains a 24-unit motel, RV park, and store, and provides ATV rentals, parts, and repair. Several other clusters of mostly seasonally occupied homes, mobile homes, and RV sites are located in the area east of Desert Ironwoods Resort; these include B-R Ranch, Heck 2 U Estates, and the Ocotillo Oasis mobile home park for year-round and seasonal residents.

Blu-In Park, an RV park with a store and restaurant, is located approximately 5.4 miles east of Split Mountain Road, where San Felipe Wash crosses beneath the highway. It provides a sanitary dump station for a fee to registered guests and the public.

Ocotillo Airport

Ocotillo Airport (Federal Aviation Administration ID: L90) is a local landmark managed by the County of San Diego Department of Public Works, Airport Administration. The airport is located on Benson Dry Lake, on the north side of SR-78, and abuts Ocotillo Wells SVRA on three sides. SR-78 borders Ocotillo Airport on the south side. The airstrip is used for U.S. military training, and by small planes, sailplanes, and motorized



Legend

- Ocotillo Wells SVRA Study Area Boundary
- County Boundary
- Anza-Borrego Desert State Park
- Highways and Freeways
- Major Roads

San Diego County General Plan

Land Use Designations

- Industrial
- Commercial
- Open Space (Conservation)
- Open Space (Recreation)
- Public Agency Lands
- Public/Semi-public Facilities
- Rural Lands
- Semi-Rural Residential
- Specific Plan Area
- Village Residential

Imperial County General Plan

Land Use Designations

- Agriculture
- Government/Special Public
- Industry
- Recreation/Open Space
- Special Purpose Facility
- Specific Plan Area
- Urban Area

Note/Disclaimer:
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Source: California Department of Parks and Recreation 2009, 2010; SanGIS 2010; Imperial County 2009; ESRI 2009

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Scale: 1 = 221,760; 1 inch = 3.5 miles

Figure 3

San Diego and Imperial County General Plan Land Use Designations

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hang gliders on two dirt runways. Runway extents are marked by white paving blocks. Aircraft tie-downs are in the airstrip's transient area. The airport is also used for emergency medical helicopter flights.

2.1.2 Salton City

Salton City is adjacent to Ocotillo Wells SVRA's northeastern boundary and includes a small number of partially built housing developments that extend west from the shores of the Salton Sea across SR-86, where development abuts Ocotillo Wells SVRA. The housing developments in Salton City include streets and subdivided lots typical of suburban development. However, many of the lots remain undeveloped. Salton City includes Sea View Elementary, West Shores High School, and other government and institutional facilities. Salton City also has a number of businesses that cater to visitors of Ocotillo Wells SVRA and to passers-by on SR-86; these businesses include a gas station with a convenience store, restrooms, showers, and an RV dump station, and a restaurant and bar. The Red Earth Casino, operated by the Torrez-Martinez Desert Cahuilla Indian Tribe, is located to the north of Salton City.

2.1.3 Borrego Springs

Borrego Springs is located approximately 15 miles northwest of Ocotillo Wells SVRA in San Diego County. It has more substantial commercial and residential development than Ocotillo Wells and Salton City, and has additional visitor-serving uses such as lodging, dining, and shopping. S-22 cuts through Ocotillo Wells SVRA, connecting Borrego Springs and Salton City.

2.1.4 Anza-Borrego Desert State Park

Anza-Borrego Desert State Park is located on the eastern side of San Diego County, with portions extending east into Imperial County and north into Riverside County. Anza-Borrego Desert State Park shares a boundary with Ocotillo Wells SVRA and is managed by California DPR. At more than 600,000 acres, Anza-Borrego is the largest of the State Parks within the California State Park system, and includes two State Wildernesses and 13 Wilderness Management Areas. The area contains several developed campgrounds and day-use areas, and primitive/backcountry camping

opportunities. Many additional opportunities are provided in Anza-Borrego Desert State Park, including nonmotorized recreation and highway-licensed vehicles operating on established roads and trails, which are described further in Section 2.2.

2.1.5 Bureau of Land Management

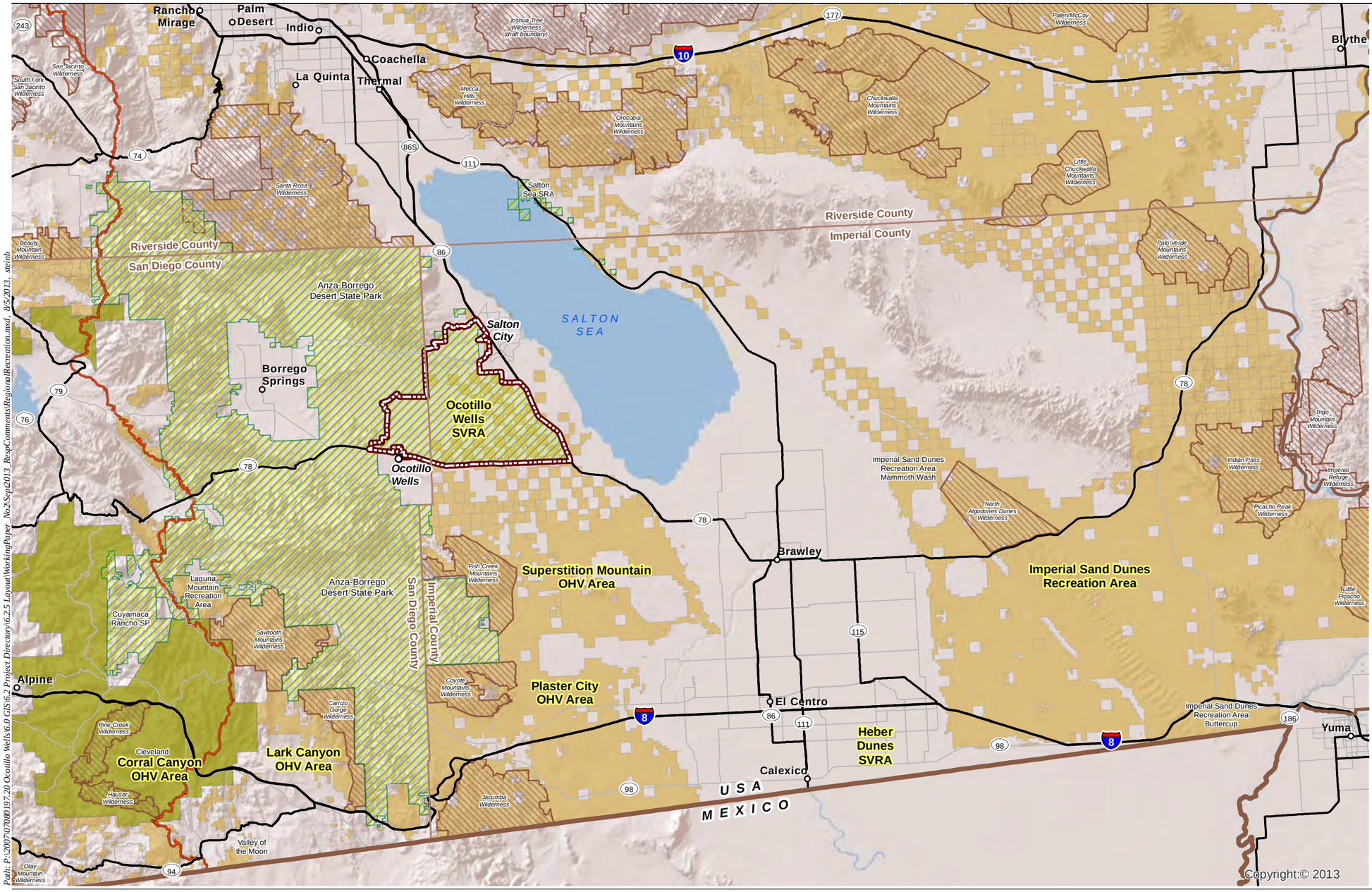
The BLM El Centro Field Office manages 1.4 million acres of public lands in Imperial and San Diego Counties (BLM 2010). Public lands administered by BLM are used for recreation and nonrecreation purposes. Nonmotorized and OHV recreation opportunities on BLM lands are described further in Section 2.2. BLM also owns approximately 21,466 acres within Ocotillo Wells SVRA and has granted DPR surface management authority on BLM lands within Ocotillo Wells SVRA (BLM and DPR 2008).

2.1.6 Other Public Lands

Extensive public lands are held by various federal and state agencies in the region surrounding Ocotillo Wells SVRA. The Salton Sea Test Base (SSTB) is located east of SR-86 on the shore of the Salton Sea, adjacent to Ocotillo Wells SVRA. The 7,945 acres of land and 13,642 acres of water are no longer in use by the Navy, and have been inactive since 1987 (NAVFAC 2012). BLM is managing the resources at SSTB, but the land is still under the Navy's jurisdiction. The Department of Defense operates the Chocolate Mountains Aerial Gunnery Range (R2507N, R2507S, and R2507E) and Inkey Barley Range (R2512) to the east, and the Shade Tree Range and Loom Lobby Range (R2510A) to the south. Naval Air Facility El Centro is located south of Ocotillo Wells SVRA. The Torres-Martinez tribal reservation is located approximately 2.5 miles north of Ocotillo Wells SVRA's most northern border. The California State Lands Commission (CSLC) owns lands within Ocotillo Wells SVRA north of S-22.

2.2 REGIONAL RECREATION FACILITIES

Southern California residents and visitors are provided a wide variety of recreational activities through extensive beaches, mountains, and deserts on public lands, parks, and recreation areas. In the area surrounding Ocotillo Wells SVRA, Anza-Borrego Desert State Park, BLM lands, and other regional and local parks provide opportunities for nonmotorized and motorized recreation (Figure 4).



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Source: California Department of Parks and Recreation 2009, 2010; ESRI 2009; Wilderness Institute, College of Forestry and Conservation, University of Montana

10 5 0 10 Miles

Scale: 1 = 633,600; 1 inch = 10 miles

Figure 4

Regional Recreation Facilities

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2.2.1 Anza-Borrego Desert State Park

Anza-Borrego Desert State Park provides recreational opportunities such as hiking, camping, stargazing, wildlife/scenery viewing, picnicking, bicycling, horseback riding, and interpretive activities and tours. Anza-Borrego Desert State Park is rich in resources and is an outstanding place to see the annual wildflower bloom, when a wide array of native annual plant species, shrubs, and cacti are in bloom during spring.

Limited OHV activity is permitted within Anza-Borrego Desert State Park, restricted to highway-licensed vehicles on established roads and trails. Highway-licensed vehicles capable of driving on unpaved roads, uneven surfaces, and sandy washes can travel on a number of roads or trails throughout the park, including connections between Anza-Borrego Desert State Park and Ocotillo Wells SVRA. Riding non-street-legal OHVs or riding off of roads and trails is not allowed in Anza-Borrego Desert State Park. Much of the topography along the western boundary between Anza-Borrego Desert State Park and Ocotillo Wells SVRA is steep and inaccessible to OHVs. The northern boundary between Ocotillo Wells SVRA and Anza-Borrego Desert State Park partially follows Grave Wash and is marked with signage indicating regulations for OHV recreation within Anza-Borrego Desert State Park.

2.2.2 Bureau of Land Management

Many recreational activities occur on BLM-administered lands surrounding Ocotillo Wells SVRA, including camping, stargazing, picnicking, hiking, biking, OHV recreation, hobby prospecting and rock hounding, sightseeing, photography, hunting, painting, bird watching, and wildlife viewing. Vehicles engaged in OHV recreation must display a current OHV registration sticker from the State of California, an OHV sticker from another state that provides OHV registration, or a California Nonresident OHV Use Permit. Numerous opportunities for OHV recreation are available on BLM lands, including open riding areas, limited use areas, and riding on designated routes.

2.2.3 Off-Highway Vehicle Recreation Facilities

OHV use is a popular recreational activity, and federal and state agencies provide a variety of opportunities for OHV recreation in the region surrounding Ocotillo Wells

SVRA. General descriptions of public OHV facilities in the region surrounding Ocotillo Wells SVRA are identified in Table 1. Private OHV facilities also exist in the region surrounding Ocotillo Wells SVRA, and typically provide motocross courses that are suited for racing and jumping. Private OHV facilities are not listed in Table 1.

Table 1. Off-Highway Vehicle Recreation Facilities in the Region Surrounding Ocotillo Wells SVRA

Facility	Manager	Location	Size	OHV Recreation
Imperial Sand Dunes Recreation Area ("Glamis"), East Mesa and West Mesa	U.S. Bureau of Land Management	40 miles southeast of Ocotillo Wells SVRA	215,000 acres	Open OHV riding, trails only (East and West Mesa), and primitive camping
Lark Canyon OHV Area	U.S. Bureau of Land Management	30 miles southwest of Ocotillo Wells SVRA	1,200 acres	Trail riding for motorcycles and camping
Superstition Mountain OHV Area	U.S. Bureau of Land Management	25 miles southeast of Ocotillo Wells SVRA	13,000 acres	Open OHV riding and primitive camping
Plaster City OHV Area	U.S. Bureau of Land Management	30 miles southwest of Ocotillo Wells SVRA	41,000 acres	Open riding and primitive camping
Wildomar OHV Area	U.S. Forest Service, Trabuco Ranger District	75 miles northwest of Ocotillo Wells SVRA	360 acres	Multi-use OHV trail riding (hiking and camping allowed) and youth riding
Corral Canyon OHV Trails	U.S. Forest Service, Descanso Ranger District	40 miles southwest of Ocotillo Wells SVRA	1,800 acres	Trail riding dedicated to motorcycles and other OHVs
Heber Dunes SVRA	OHMVR Division	65 miles southeast of Ocotillo Wells SVRA	340 acres	Open OHV riding and trail riding. No overnight camping.

2.2.4 Nonmotorized Recreation Facilities

Federal, state, and local agencies provide many opportunities for nonmotorized recreation such as camping, stargazing, hiking, fishing, wildlife watching, and many other activities in the region surrounding Ocotillo Wells SVRA. General descriptions of these facilities are found in Table 2.

Table 2. Nonmotorized Recreation Facilities in Region Surrounding Ocotillo Wells SVRA

Facility	Manager	Location	Size	Highway-Licensed OHV Use Allowed	Other Recreation
Joshua Tree National Park	National Park Service	95 miles northeast of Ocotillo Wells SVRA	790,636 acres	Designated back country roads only.	• Camping • Hiking • Biking • Horseback riding • Climbing • Wildlife viewing • Stargazing
Fish Creek Mountains Wilderness Area	U.S. Bureau of Land Management	7.5 miles south of Ocotillo Wells SVRA	21,390 acres	No	• Camping • Hunting • Fishing • Hiking • Wildlife viewing • Stargazing
San Sebastian Marsh/San Felipe Creek Area of Critical Environmental Concern	U.S. Bureau of Land Management	Adjacent to Ocotillo Wells SVRA, south of SR-78, west of SR-86	7,800 acres	No	• Hiking • Wildlife viewing
Yuha Desert Area of Critical Environmental Concern	U.S. Bureau of Land Management	25 miles south of Ocotillo Wells SVRA	40,069 acres	Limited highway-licensed OHV use on designated routes only	• Hiking • Wildlife viewing • Back-packing • Rock-hounding
Salton Sea National Wildlife Refuge	U. S. Fish and Wildlife Service	15 miles east of Ocotillo Wells SVRA		No	• Bird watching • Picnicking • Fishing • Wildlife viewing • Hunting • Hiking
Cleveland National Forest	U.S. Forest Service	30 miles west of Ocotillo Wells SVRA	460,000 acres	Only in designated areas	• Camping • Hunting • Fishing • Hiking • Wildlife viewing • Stargazing
Anza-Borrego Desert State	California State Parks	Borders Ocotillo Wells	600,000 acres	Limited highway-	• Camping • Hiking

Facility	Manager	Location	Size	Highway-Licensed OHV Use Allowed	Other Recreation
Park		SVRA, extending north and south		licensed OHV use on established roads and trails only	• Wildlife viewing • Bicycling • Limited OHV recreation • Picnicking • Horseback riding
Salton Sea State Recreation Area	California State Parks	15 miles northeast of Ocotillo Wells SVRA	14 miles of shoreline	No	• Camping • Fishing • Water-skiing • Bird watching • Boating • Swimming • Kayaking • Hiking
Cuyamaca Rancho State Park	California State Parks	28 miles southwest of Ocotillo Wells SVRA	26,000 acres	No	• Camping • Horseback riding • Biking • Wildlife viewing
Agua Caliente County Park	San Diego County Parks and Recreation Department	45 miles southwest of Ocotillo Wells SVRA	910 acres	No	• Camping • Picnicking • Swimming • Hiking
Vallecito County Park	San Diego County Parks and Recreation Department	40 miles southwest of Ocotillo Wells SVRA	71 acres	No	• Camping • Picnicking • Hiking
Ocotillo Community Park	Imperial County Parks and Recreation Department	75 miles south of Ocotillo Wells SVRA	4 acres	No	• Playground • Baseball • Basketball courts • Picnicking
Salton City Community Park	Imperial County Parks and Recreation Department	3 miles east of Ocotillo Wells SVRA	10.7 acres	No	• Picnicking • Swimming • Basketball courts

2.3 OCOTILLO WELLS SVRA LAND USE

2.3.1 History of Ocotillo Wells SVRA

Ocotillo Wells SVRA has a rich and varied history. Native peoples with extensive knowledge of the area's natural resources lived and traveled through the region for centuries. Early Spanish explorers, including Juan Bautista de Anza, trekked across the land leading scouting parties in search of an overland route to Alta California.

Development in the Borrego Valley area began in 1910, and in the Ocotillo Wells area in the 1920s as settlers moved into the Imperial Valley region. One of the first homesteads was filed in the 1930s. Additional interest in Ocotillo Wells began in the 1930s when Hollywood production companies filmed a number of well-known movies there, such as the World War II classic *Sahara*, starring Humphrey Bogart. Around the same time, and continuing up to World War II, some oil and gas well drilling occurred in what is now Ocotillo Wells SVRA. These wells were not productive, but some of the original owners still hold property and/or mineral rights to the sites. During World War II, the U.S. government commandeered portions of the land for military training and firing practice. Known as the Borrego Maneuver Area, it was used for vehicle training, dummy bombing and gunnery practice, and troop maneuvers. Intensive military use ended in 1944, shortly before the end of World War II. After the war, another period of oil drilling occurred and residential development increased. Military training continues in Ocotillo Wells SVRA by special event permit, usually occurring mid-week during the non-peak season.

OHV use has occurred, at least informally, on what is now Ocotillo Wells SVRA since the 1930s. However, when surplus military jeeps were made available to the public after World War II, OHV use substantially increased. In the early 1970s, Ocotillo Wells was also the site of a short-lived "hippie" commune. Formal management of the land that is now Ocotillo Wells SVRA began when it was classified as an SVRA in April 1976.

The open terrain of Ocotillo Wells SVRA has always been attractive to OHV enthusiasts for desert travel and exploring, and has offered unique opportunities for cross-country travel, often along natural sand washes. Other trails were developed along old military

and exploration roads (DPR 1982). Some trails developed as a way to travel between popular points of interest. Ocotillo Wells SVRA has continued to expand and develop as a California SVRA and a premier destination for OHV recreation.

2.3.2 Land Ownership

The pattern of land ownership in Ocotillo Wells SVRA, as with much of the desert land in California, is complex. While DPR owns most of the land within the boundary of Ocotillo Wells SVRA, there are other inholdings owned by BLM, CSLC, and various private owners. The extent of land within Ocotillo Wells SVRA that is owned by other entities besides DPR is described below and shown in Figure 5.

California State Parks

Approximately 51,859 acres of the lands within Ocotillo Wells SVRA are owned by DPR. DPR has direct authority and management responsibility over these lands, which are the primary focus of the Ocotillo Wells SVRA General Plan. Lands that are acquired by DPR in the future will also be subject to the requirements of the Ocotillo Wells SVRA General Plan.

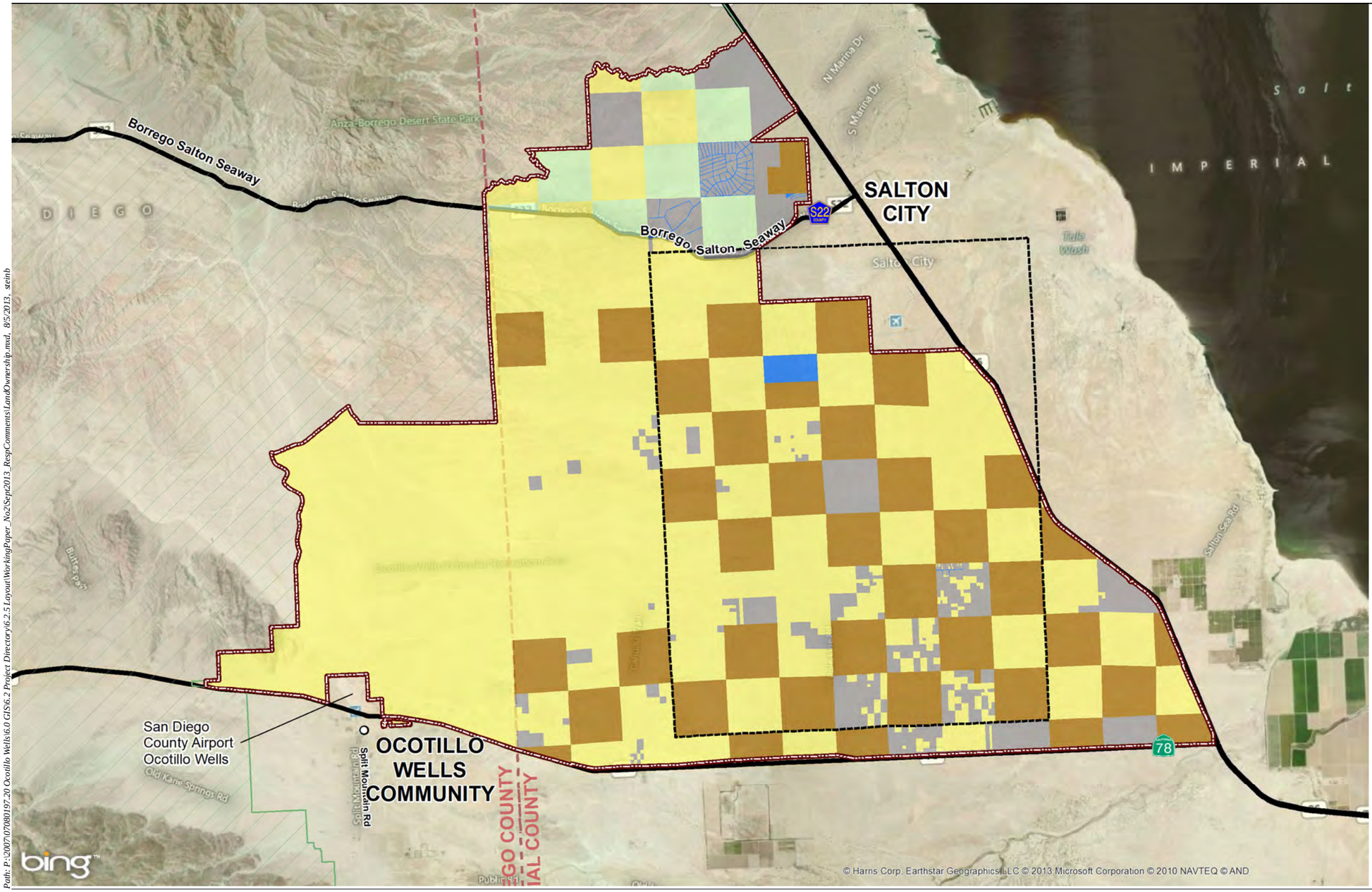
Bureau of Land Management Lands

Approximately 21,466 acres of BLM lands are located within Ocotillo Wells SVRA. DPR and BLM have entered into a Memorandum of Understanding (MOU), most recently updated in 2008, that sets forth conditions concerning responsibility for managing OHV use on BLM lands within Ocotillo Wells SVRA (BLM and DPR 2008).[1] The MOU does not preclude using public lands owned by BLM for purposes other than OHV recreation.

California State Lands Commission

CSLC owns approximately 3,329 acres of land within Ocotillo Wells SVRA. CSLC has the authority and responsibility to manage and protect the important natural and cultural resources on certain public lands within the state, and the public's rights to access these lands. Public lands under CSLC jurisdiction include school lands and sovereign

[1] The MOU includes most of the BLM land within Ocotillo Wells SVRA. However, the MOU erroneously excludes portions of T12S R9E Section 18 and T12S R11E Section 18. In addition, it is assumed that the MOU includes a typographical error in listing T11S R11E, Section 26 (partial) that should be corrected to include section T11S R10E, Section 26 (partial).



Legend

- Ocotillo Wells SVRA Study Area Boundary
- Anza-Borrego Desert State Park
- County Boundary
- Truckhaven Geothermal Leasing Area

Ownership

- BLM
- CA Parks & Recreation
- County
- State Lands
- Private
- Highways and Freeways

Note/Disclaimer:

All efforts have been made to ensure the accuracy of the data and information on this map; however, some information may not be accurate. California Department of Parks and Recreation and AECOM assumes no responsibility from use of this information.

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Source: California Department of Parks and Recreation 2009, 2010; SanGIS 2010; Imperial County 2009; ESRI 2009

2 1 0 2 Miles

Scale: 1 = 126,720; 1 inch = 2 miles

Figure 5

Land Ownership

Ocotillo Wells SVRA General Plan and EIR
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lands. CSLC manages 4 million acres of sovereign lands throughout California, including the beds of naturally navigable rivers, lakes, and streams, and submerged lands along the 1,100 miles of California's coastline.

CSLC also manages 468,600 acres of school lands that were originally granted to California by the U.S. Congress in 1853 to benefit public education. CSLC also retains surface and/or mineral ownership of these lands. California DPR submitted an application in fiscal year 2005/2006 to purchase 5,758 acres of school lands in Imperial County from CSLC (CSLC 2006). The acquisition is still pending and the land would be split between Anza-Borrego Desert State Park and Ocotillo Wells SVRA in accordance with the boundary established by Senate Bill 855 in October 2010. Additionally, CSLC owns the mineral rights for properties owned by State Parks, which are subject to geothermal development.

Private Lands

Ocotillo Wells SVRA contains 8,623 acres of privately held land owned by multiple land owners. Inholdings within the central area are generally smaller than those in the eastern and northern areas of Ocotillo Wells SVRA. The extensive inholdings in the southeast corner of Ocotillo Wells SVRA are generally smaller rectangular or square lots that have been subdivided and are unimproved. In the northern areas of Ocotillo Wells SVRA, many of the properties have been subdivided into residential lots and sold to individual owners. The status of actual development intentions for these lots is uncertain. Private lands are subject to the land development regulations established by the County of San Diego and County of Imperial,(see Section 2.3.3, Land Use Planning and Management for a further discussion of land development regulations).

Salton City Landfill

The Salton City Landfill is located on land owned by the County of Imperial within the boundaries of Ocotillo Wells SVRA; its operations preclude recreational opportunities. The Salton City Landfill has obtained approval to significantly expand operations within its existing site so it can import regional trash (County of Imperial 2011).

2.3.3 Land Use Planning and Management

Multiple land use plans provide context and policy direction for managing the land within Ocotillo Wells SVRA. The current Ocotillo Wells SVRA General Plan was adopted in 1982 after Ocotillo Wells SVRA was established by the State of California – The Resource Agency Department of Parks and Recreation in 1976 (DPR 1982), and is the primary land management document in Ocotillo Wells. The Ocotillo Wells SVRA General Plan is being updated to reflect land acquisitions and management agreements by DPR that have occurred since the Ocotillo Wells SVRA General Plan was first adopted.

BLM has multiple land management plans that cover BLM lands within Ocotillo Wells SVRA. The California Desert Conservation Area Plan (CDCA Plan) was adopted in 1980 and is BLM's comprehensive land management plan. The CDCA Plan has been amended multiple times since it was first adopted. A revised version of the CDCA Plan was published by BLM in 1999, incorporating all the amendments adopted up to that year. Subsequently, the BLM has issued a Record of Decision for the Draft Plan Amendment and Environmental Assessment for the Western Colorado (WECO) Desert Routes of Travel Designation in 2002. The WECO Routes of Travel Designation amended the CDCA Plan specifically to manage OHV recreation on BLM lands.

The BLM is also currently participating in the preparation of the Desert Renewable Energy Conservation Plan (DRECP) with other federal and state agencies (BLM 2013). The DRECP is anticipated to include plans and policies that relate to the land within Ocotillo Wells SVRA. A more detailed description of the DRECP is provided in Section 2.12.3, Regional Plans and Programs.

In addition, the private land within the Ocotillo Wells SVRA Study Area Boundary is subject to general plans and zoning requirements that have been adopted in San Diego and Imperial Counties, where applicable.

Ocotillo Wells SVRA General Plan (1982)

The current Ocotillo Wells SVRA General Plan presents management policies and makes recommendations that were intended to shape the future development of

Ocotillo Wells SVRA. The Ocotillo Wells SVRA General Plan is organized into five major elements:

- Resource Element: Describes unit resources and presents resource management policies based on the unit's classification, purpose, and environmental sensitivity.
- Land Use and Facilities Element: Describes existing land use and facilities and recommended changes.
- Interpretive Element: Presents programs for interpreting unit resources and recreational values to the public.
- Operations Element: Presents management strategies to implement the Ocotillo Wells SVRA General Plan.
- Environmental Impact Element: Assesses the potential impact of Ocotillo Wells SVRA General Plan proposals on the environment within and outside the unit.

The Ocotillo Wells SVRA General Plan also includes specific discussion on potential acquisitions. These areas now function as part of Ocotillo Wells SVRA. The overall objectives of the Ocotillo Wells SVRA General Plan were:

1. Establishment of land-use designations that protect resources and accommodate recreation activities.
2. Establishment of interpretive programs that educate OHV users about desert safety and point out the need for user assistance in minimizing unit maintenance as well as preserving resources.
3. Provision of increased OHV recreational opportunities through the interpretation of desert resources.
4. Provision of facilities required for unit operation.
5. Provision of sewage storage and water supplies to handle increased visitation.

The major recommendations of the Ocotillo Wells SVRA General Plan are grouped into two categories:

- Resources
- Land use and facilities

Major Resource Related Recommendations

- Establish a one-acre cultural preserve at Barrel Springs to perpetuate significant cultural values. Vehicle use will not be permitted there.
- Establish trails-use zones to protect sensitive biotic and geologic resources, and to minimize the impacts of OHV use in a proposed operations and ranger residential area.
- Make it a management priority to monitor accelerated erosion and contain impacts to areas within the unit.
- Rehabilitate areas when important natural and recreational values are in danger of being lost.

Major Land Use and Facilities Related Recommendations

- With the exception of the one-acre cultural preserve, make the entire unit available for OHV activities. The plan proposes 12,470 acres for open, unrestricted use and 2,120 acres for trail use only.
- Establish an identifiable entrance off Highway 78, to include highway signing, information panels, orientation maps, and trash receptacles.
- Connect unit trails to existing OHV trails in neighboring Anza-Borrego Desert State Park.
- Consider potential development of a “Future Use Area” for additional camping based on visitor needs. Identified long-range improvements include construction of a trailer sanitation station and rehabilitation of water wells and an access road.
- Upgrade the headquarters area by adding a maintenance shop, equipment storage, ranger station, and trailer sanitation station. Information, first aid, and additional drinking water will also be available in this area.
- Construct trailer pads for additional staff housing.

Some of the Ocotillo Wells SVRA General Plan's objectives have been achieved, along with some of the major recommendations related to resources and land use and facilities, since it was approved in 1982. However, some of the objectives and major recommendations are no longer relevant due to changing conditions in Ocotillo Wells SVRA and the regulatory environment in which it operates. The Ocotillo Wells District has undertaken an update of the Ocotillo Wells SVRA General Plan to establish new policies and major recommendations that will provide long-term guidance for management (DPR 1982).

Bureau of Land Management

In 1976, Congress passed the Federal Land Policy Management Act (FLPMA). FLPMA is a law to direct the management of the public lands of the United States. In that law, a special section, Section 601, was included to give direction about a specific place—the California Desert Conservation Area (CDCA). The 25-million-acre CDCA contains over 12 million acres of public lands. Section 601 of FLPMA requires that BLM develop a plan to "…provide for the immediate and future protection and administration of the public lands in the California Desert within the framework of a program of multiple use and sustained yield, and the maintenance of environmental quality" (BLM 1980).

CDCA Plan provides direction for BLM land use managers when developing subsequent resource management plans and recreation management plans. CDCA includes both general guidelines and implementation activities. There are 12 elements of CDCA: Cultural Resources; Native American Values; Wildlife; Vegetation; Wilderness; Wild Horses and Burros; Livestock Grazing; Recreation; Motorized-Vehicle Access; Geology-Energy Minerals; Energy Production and Utility Corridors; and Land Tenure Adjustment.

All of the public lands in the CDCA under BLM management, except for a few small and scattered parcels (approximately 300,000 acres), have been designated geographically into four multiple-use classes. Each describes a different type and level or degree of use that is permitted within that particular geographic area. The class designations govern the type and degree of land use actions allowed within the areas defined by class boundaries (BLM 1980).

- Class I (Intensive Use): These lands are managed for concentrated use to meet human needs. Reasonable protection is provided for sensitive natural values, and mitigation of impacts and rehabilitation of impacted areas will occur when possible. Vehicle open areas are available for unrestricted vehicle access except where private land, Areas of Critical Environmental Concern (ACECs), and active mining areas are included.

- Class M (Moderate Use): These lands are managed in a controlled balance between higher intensity use and protection. A wide variety of uses such as mining, livestock grazing, recreation, energy, and utility are allowed. Motorized-vehicle use will be allowed on "existing" routes of travel unless closed or limited by the authorized officer. New routes may be allowed upon approval of the authorized officer.

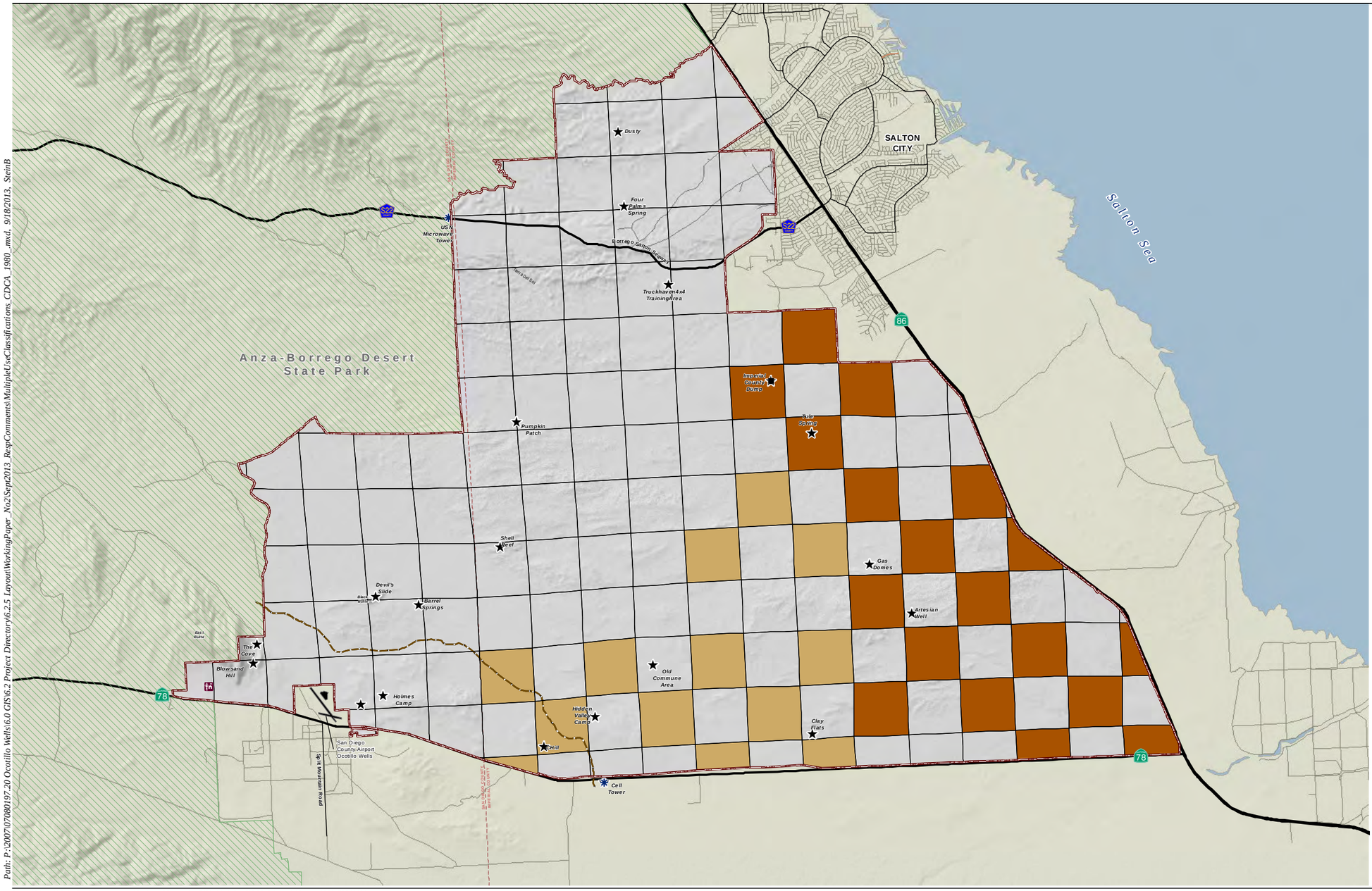
- Class L (Limited Use): These lands are managed to protect sensitive, natural, scenic, ecological, and cultural resource values. They provide for generally lower intensity, carefully controlled multiple uses that do not significantly diminish resource values. New roads and routes may be developed under right-of-way grants pursuant to regulations or approved plans of operation.

- Class C (Controlled Use): These lands are to be preserved in a natural state; access is generally limited to nonmotorized, nonmechanized means. Motorized-vehicle use is generally not allowed.

Figure 6 shows the multiple use classifications shown within Ocotillo Wells SVRA on maps included as part of the original 1980 version of the CDCA Plan.[2]

The CDCA Plan also includes specific management policies for "Motorized-Vehicle Access." The CDCA defines three types of areas:

[2] This does not reflect any amendments to the CDCA Plan by BLM. No map was published as part of the 1999 publication that includes amended policies.



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Note/Disclaimer:
All efforts have been made to ensure the accuracy of the data and information on this map; however, some information may not be accurate. California Department of Parks and Recreation and AECOM assumes no responsibility from use of this information.

Source: BLM 1980; California Department of Parks and Recreation 2009, 2010; SanGIS 2013; Imperial County 2009; ESRI 2013

2 1 0 2 Miles

Scale: 1 = 126,720; 1 inch = 2 miles

Figure 6

Multiple-Use Classifications in CDCA Plan (1980)

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- Open Area: Vehicle travel is permitted anywhere in the area if the vehicle is operated responsibly. Open Areas are specifically designated "open" for vehicle travel.[3]

- Closed Area: No vehicle travel is allowed. Closed Areas are specifically designated "closed" for vehicle travel, and include wilderness areas, designated ACECs, and other specific locations.

- Limited Area: Motorized-vehicle access is allowed only on certain "routes of travel," which include roads, ways, trails, and washes. On BLM lands that are designated as Class I, areas that are not designated as "open" will be limited to use of existing routes, unless it is determined that further limitations are necessary. On BLM lands designated as Class M, access will be on existing routes, unless it is determined that use on specific routes must be limited further.

Figure 7 shows the motorized-vehicle access designations presented in the CDCA Plan within Ocotillo Wells SVRA on maps included as part of the original 1980 version of the CDCA Plan.[4]

BLM also designates ACECs, which are special management areas to protect significant historic, cultural, or scenic values; fish and wildlife resources; natural process or systems; and/or natural hazards that:

- have more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource;

- have qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change;

[3] The area west of Poleline Road and South of S-22 has historically been an "open area" within Ocotillo Wells SVRA.

[4] This does not reflect any amendments to the CDCA Plan by BLM. No map was published as part of the 1999 publication that includes amended policies.

- have been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA;
- have qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare; and/or
- pose a significant threat to human life and safety or to property.

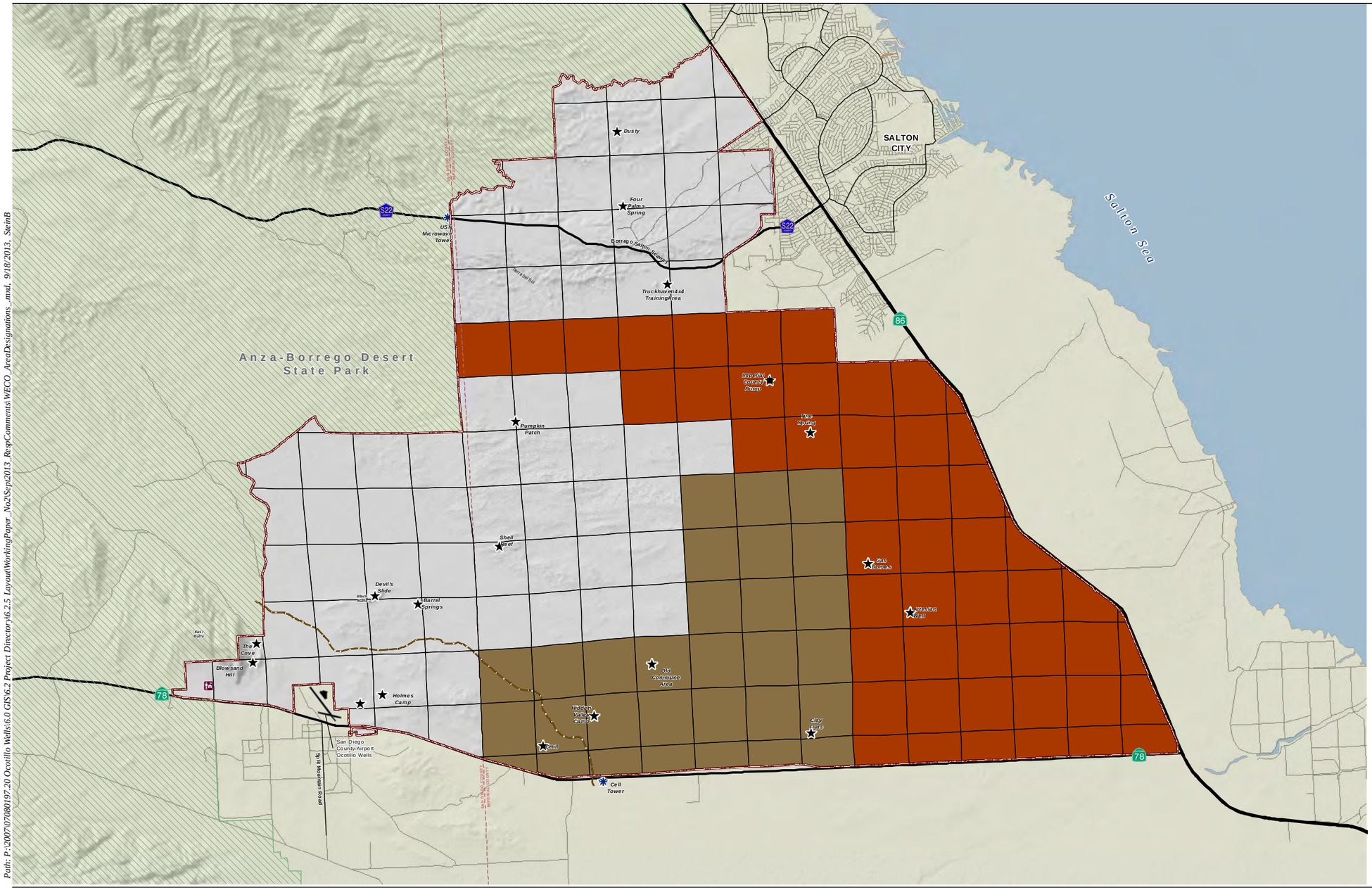
The San Sebastian Marsh/San Felipe Creek ACEC is located adjacent to Ocotillo Wells SVRA to the south of SR-78.

Environmental Assessment and Draft Plan Amendment for the Western Colorado Routes of Travel Designation

As an amendment to the CDCA Plan, the WECO Plan modifies previous route designations and existing routes in approximately 475,000 acres and approximately 2,320 miles of OHV areas within Imperial County (BLM 2002), (The WECO Plan does not include the Imperial Sand Dunes Recreation Area.) The purpose of the WECO Plan is to designate routes of travel as open, limited, or closed on land that is managed by BLM. The goal is to support the recreational and general access uses of BLM-managed land while conserving cultural and natural resources. A network of routes currently exists that provides general access and recreational opportunities to the public. The WECO Plan covers BLM lands within Ocotillo Wells SVRA that are managed by California State Parks as part of Ocotillo Wells SVRA (BLM and DPR 2008). The open riding areas and open trails that are identified in the WECO Plan are shown in Figure 8.

Record of Decision and Final Environmental Impact Statement for the Truckhaven Geothermal Leasing Area

The Truckhaven Geothermal Leasing Area encompasses approximately 40,320 acres. Of these, approximately 14,400 acres are BLM surface and subsurface lands. The remainder of the Truckhaven area is composed of private lands or lands owned by the State of California. The State owns the surface and mineral estate in approximately 4,344 acres, and the mineral estate in 473 acres, where the surface is private. Other State-owned lands include those under the jurisdiction of DPR and the California Department of Transportation (Caltrans), along SR-86. Currently, the Ocotillo Wells



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Note/Disclaimer:
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Source: BLM 1980; California Department of Parks and Recreation 2009, 2010; SanGIS 2013; Imperial County 2009; ESRI 2013

2 1 0 2 Miles

Scale: 1 = 126,720; 1 inch = 2 miles

Figure 7

Vehicle Access Designations in CDCA Plan (1980)

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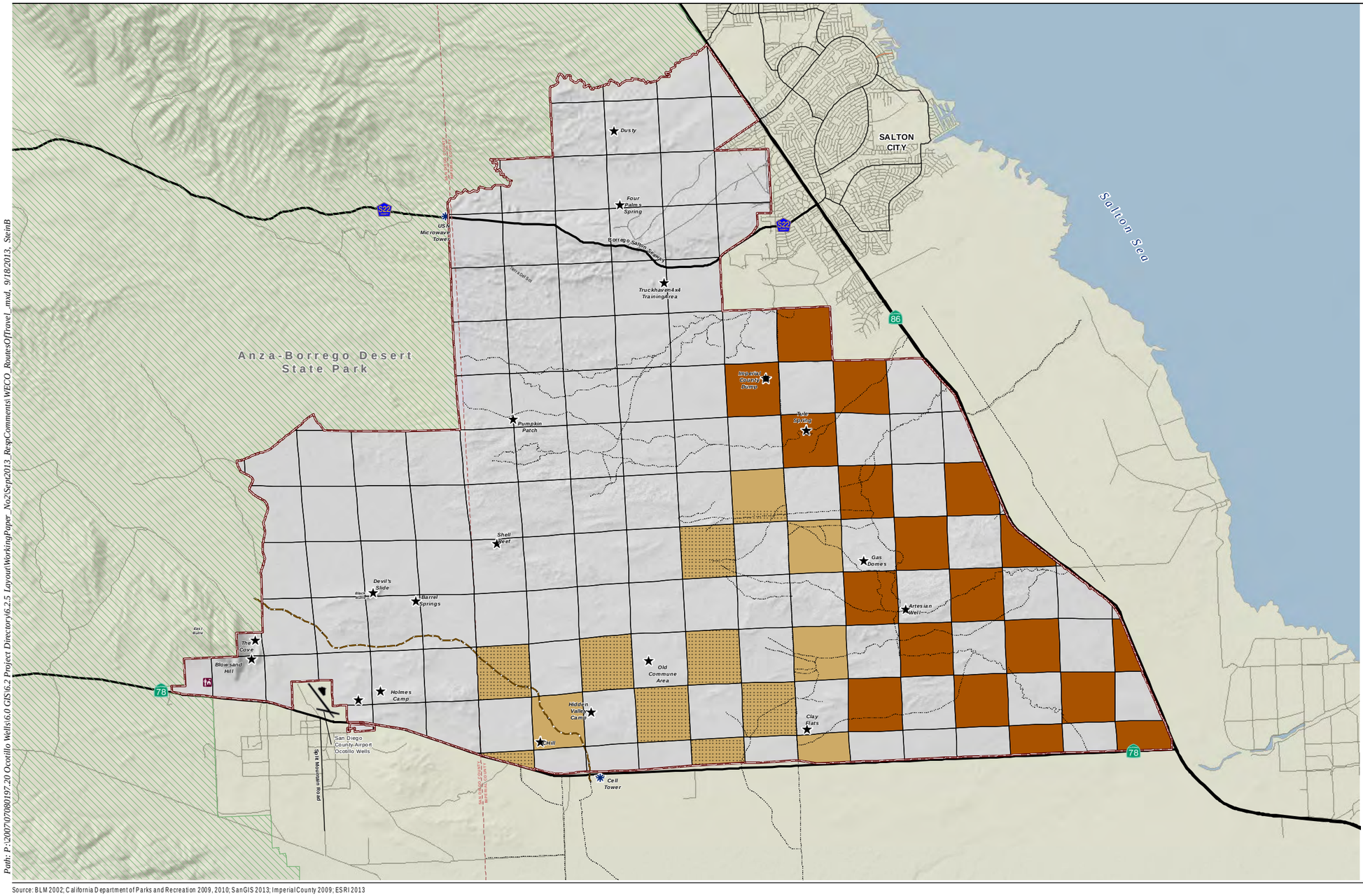

Legend

- Ocotillo Wells SVRA Study Area Boundary
- Points of Interest
- Ranger Station
- Communication Towers
- Points of Interest
- Imperial County Dump
- County Boundary
- State and National Parks
- Juan Bautista de Anza National Historic Trail
- Ocotillo Wells Airport
- Water Bodies

BLM Multiple-Use Classification

- Class I - Intensive
- Class M - Moderate

BLM WECO Designations

- Open Area
- WECO Designated Open Route of Travel

Note/Disclaimer:
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Source: BLM 2002; California Department of Parks and Recreation 2009, 2010; SanGIS 2013; Imperial County 2009; ESRI 2013

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Scale: 1 = 126,720; 1 inch = 2 miles

Figure 8

WECO Area Designations and Designated Routes of Travel

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District has surface management jurisdiction over 3,628 acres. Figure 5 shows the location of the Truckhaven Geothermal Leasing Area. It should be noted that the Truckhaven Geothermal area does not coincide geographically with the Truckhaven recreational area in Ocotillo Wells SVRA.

The purpose of the Truckhaven Geothermal Leasing Area Environmental Impact Statement (EIS) was to address impacts of leasing, and not development; therefore, the EIS does not address specific impacts. The purpose of the action was to determine whether to approve leases for federal geothermal resources on public lands with pending noncompetitive lease applications in the Truckhaven Geothermal Leasing Area, and to determine whether to offer competitive leases for federal geothermal resources on public lands in the Truckhaven Geothermal Leasing Area that do not have pending lease applications.

Of the three alternatives considered, The Record of Decision adopts Alternative 3, leasing all BLM-managed lands within the Truckhaven Geothermal Leasing Area. BLM approves leases for sections with pending noncompetitive leasing applications and offers competitive leases for all other BLM-managed lands at Truckhaven.

The Record of Decision states that the proposed action will not cause undue or unnecessary impact to the public lands. Approved mitigation measures and best management practices to avoid or reduce environmental impacts are listed in the Record of Decision. These measures apply to future site-specific Plans of Operation and do not include measures specifically for land Use and Planning.

BLM Conservation Planning

BLM also established the San Sebastian Marsh/San Felipe Creek Area, which is located adjacent to Ocotillo Wells SVRA to the south of SR-78.

San Diego County General Plan

The San Diego County General Plan establishes future growth and development patterns for the unincorporated areas of San Diego County. The General Plan provides a framework for land use and development decisions and outlines mechanisms to achieve desired community goals and objectives through a coordinated implementation

program. Land use decisions such as area plans, zoning, subdivisions, and public agency projects must be consistent with the San Diego County General Plan.

Although the County has no jurisdiction over the State land, the land within Ocotillo Wells SVRA that is within San Diego County is designated as "Public Agency Lands" in the San Diego County General Plan (County of San Diego 2011). This designation applies to the majority of publicly owned lands not restricted to military use within unincorporated portions of San Diego County.

The land use regulation in the community of Ocotillo Wells reflects its rural and semi-rural setting, and the limited infrastructure and utilities that are available. The majority of land in the community of Ocotillo Wells is designated as "Rural Lands (RL-40)" and "Rural Lands (RL-80)" in the San Diego County General Plan. Smaller areas are designated as "Semi-Rural Residential (SR-4)" and "Rural Commercial." Figure 3 shows the San Diego County General Plan designations for Ocotillo Wells SVRA.

San Diego County Zoning Ordinance

The San Diego County Zoning Ordinance regulates land uses in unincorporated areas of San Diego County. The Zoning Ordinance regulates land use and establishes development regulations, among other regulations. Although the County has no jurisdiction over the State land, the land within Ocotillo Wells SVRA that is within San Diego County is zoned "S92 – General Rural." This zone allows for limited residential and agricultural uses in rural areas (County of San Diego 2012). Zoning for the community of Ocotillo Wells is predominantly "S92 – General Rural" but also includes "C36 – General Commercial," "C40 – Rural Commercial," "RMH1 – Mobilehome Residential," and "RMH8 – Mobilehome Residential" (County of San Diego 2012).

Imperial County General Plan

The Imperial County General Plan presents a comprehensive guide for development within Imperial County and, like the San Diego County General Plan, provides mechanisms to achieve desired community goals and objectives through a coordinated implementation program. Likewise, land use decisions such as area plans, zoning, subdivisions, and public agency projects must be consistent with the General Plan.

Although the County of Imperial has no jurisdiction over the State land, the land within Ocotillo Wells SVRA that is within Imperial County is primarily designated as "Recreation/Open Space" in the Imperial County General Plan, which applies to areas that are essentially unimproved, not predominantly used for agriculture, and have "the potential for development as public or private parks and recreation facilities in appropriate areas" (County of Imperial 2008a). The Imperial County General Plan designates Salton City as "Urban Area"; "Urban Areas" are characterized by a "full level" of services, including water and sewer systems, and a range of residential, commercial, and industrial land uses (County of Imperial 2008a). In the northeast part of Ocotillo Wells SVRA, the site of the Salton City Landfill, a 320-acre parcel just south of S-22 is designated as "Special Purpose Facility" in the Imperial County General Plan. Also, a portion of Salton City, an unincorporated community of Imperial County, is within the boundaries of Ocotillo Wells SVRA and is designated as "Urban Area" in the Imperial County General Plan (approximately 4,236 acres) (County of Imperial 2008a). Figure 3 shows the Imperial County General Plan designations for Ocotillo Wells SVRA.

Imperial County Land Use Ordinance (Zoning Ordinance)

Although the County has no jurisdiction over the State land, land within Ocotillo Wells SVRA that is within Imperial County is zoned as "Open Space/Recreation" (S-1). This designation recognizes the unique characteristics of the land, including low-intensity human use. The area adjacent to Ocotillo Wells SVRA to the south of SR-78 and within Imperial County is primarily zoned as "Open Space/Recreation" (S-1), but there are small areas that are zoned as "Pre-Existing Allowed General Commercial" (C-2-PE), "Agricultural General" (A-2), and "Open Space/Preservation" (S-2) (County of Imperial 2008b). Salton City is primarily zoned for residential and commercial uses that range in permitted density and intensity (County of Imperial 2008b).

2.3.4 Ocotillo Wells SVRA Study Area

A "Study Area" has been defined as part of the Ocotillo Wells SVRA General Plan process. The Ocotillo Wells SVRA Study Area is identified to provide a comprehensive management perspective for the Ocotillo Wells SVRA General Plan update. Land within the Ocotillo Wells SVRA has been identified to be within the sphere of influence for

Ocotillo Wells SVRA and includes land that functions as part of, or is adjacent to, Ocotillo Wells SVRA. The Study Area provides a realistic and unified management approach to address the complex land ownership and multiple management plans and policies. Although the Ocotillo Wells SVRA Study Area covers all land within the boundary, the General Plan only has direct authority over land owned or managed by California State Parks as part of Ocotillo Wells SVRA. The Study Area boundary differs slightly from the version of the boundary shown on the current Ocotillo Wells SVRA map. The Ocotillo Wells SVRA General Plan does not apply to private lands. The existing conditions of the land within the Study Area are described in this working paper.

2.3.5 Existing Land Use

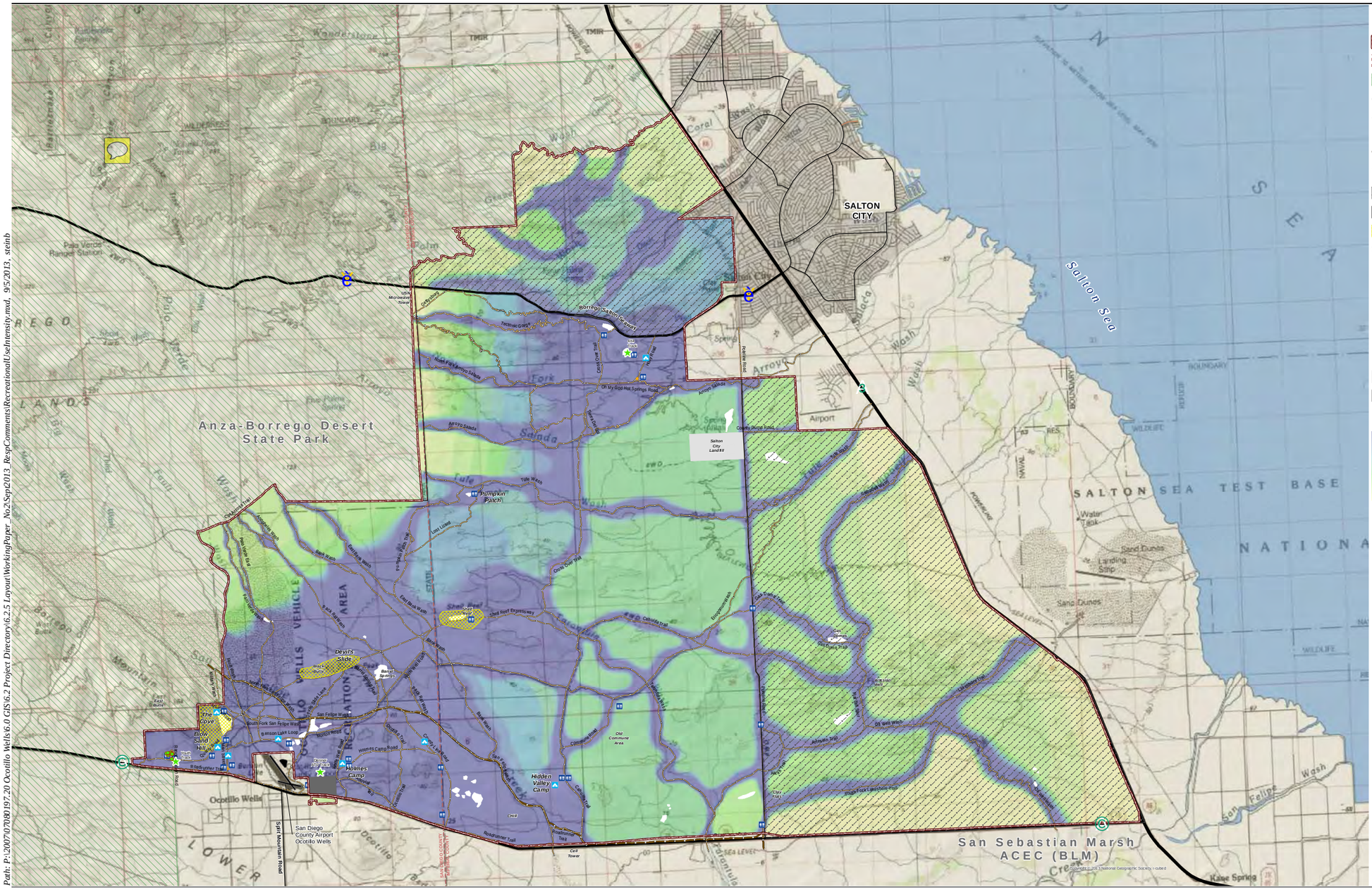
There are three broad categories of existing land use in Ocotillo Wells SVRA: (1) OHV recreation areas; (2) visitor support, operation, and facilities areas; and (3) resource protection and interpretive areas. Each of the categories of land use represents the dominant type of use in a given area and is fundamentally different than the other categories. Each of the land use categories includes subcategories that reflect more specific land uses and management approaches. Figure 9 shows the location and extent of existing land uses within Ocotillo Wells SVRA.

OHV Recreation Areas

OHV recreation areas include the current open and undeveloped areas of Ocotillo Wells SVRA that are primarily used for OHV recreation. The subareas in this category reflect the permitted recreational activities in these OHV recreation areas:

- Open Riding – The area west of Poleline Road and south of S-22 provides the unique opportunity of open riding, and riding on trails is encouraged. Open/primitive camping is also allowed in most of these areas.

- Trail Riding Only – OHV use is limited to trails, washes, and WECO routes east of Poleline Road. Also, north of S-22, OHV use is limited to trails and existing small focused riding areas. Limited open/primitive camping is allowed in portions of these areas; however, they are primarily used for OHV recreation



Legend

- Ocotillo Wells SVRA Study Area Boundary
- County Boundary
- State and National Parks
- Highways and Freeways
- Major Roads
- Juan Bautista de Anza National Historic Trail

Off-Highway Vehicle Recreation Areas

- Trail Riding Only Areas
- Trail Riding and Open Riding Permitted
- Intensive Riding Area

Visitor Services and Facilities Areas

- Discovery Center/Ocotillo Wells District Facilities
- Developed Camping Areas
- Training Tracks

Restricted Areas

- Resource Protection (shown in white)
- Salton City Landfill
- Toner Property

Recreation Use

High

The existing activity patterns shown are based on qualitative assumptions.

Low

Note/Disclaimer:
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Figure 9

Land Use and Recreational Use Intensity

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September 2013

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- Focused Use Areas – Shell Reef, Devil's Slide, and Blowsand Hill are popular riding destinations and focused use areas. Camping is not allowed in or near these three areas. The Truckhaven 4x4 Training Area and the surrounding camping area is another popular focused use area.

Visitor Support, Operation, and Facilities Areas

Visitor support, operation, and facilities areas provide a variety of visitor services and/or facilities that support the maintenance and operation of Ocotillo Wells SVRA. Subareas are as follows:

- Discovery Center and Ocotillo Wells District Headquarters – Areas near the Ocotillo Wells SVRA Discovery Center where there is a high concentration of visitor-serving facilities and facilities necessary for the management and operations of the California State Parks OHMVR Division, Ocotillo Wells District.

- Toner property – This area is fenced to control access and includes the Denner ATV Safety Track, staff housing, and equipment/materials storage areas.

- Open developed and developed camping areas – Includes the Quarry, Cove, Main Street, Holly Road, County Line Road, Benson Lake Loop, Cross Over, and Hidden Valley (open developed). These areas are defined by a limited number of facilities for visitors. Holmes Camp (developed) is defined by full-service visitor facilities. Americans with Disabilities Act (ADA)-compliant campsites are located in the more developed areas.

- Training tracks – Includes the Harold Soens Youth Training Track at the Ocotillo Wells District Headquarters area, the Truckhaven 4x4 Training Area near S-22, and the Denner ATV Safety Track located on the Toner property.

Resource Protection and Interpretive Areas

In restricted areas, OHV recreation and camping activities are prohibited or precluded, usually for resource protection. These areas are typically fenced to protect unique features and resources, and designated as Cultural Preserves (CPs). A CP is an internal California State Park unit classification for distinct nonmarine areas of

outstanding cultural interest within the boundaries of a State Park. As of January 1, 1988, no new cultural and/or natural preserves may be designated within an SVRA (Public Resources Code [PRC] Section 5090.43[c]).

2.3.6 Recreational Intensity

Using Geographic Information System (GIS) software, a computer-generated model was developed to estimate the relative level and dispersion of recreational activity within Ocotillo Wells SVRA. The GIS model was based on existing land use, existing facilities, and assumptions about the relative levels and distribution of recreational activity in Ocotillo Wells SVRA. Figure 9 shows the areas within Ocotillo Wells SVRA that are estimated to have higher levels of recreational activity (shown in purple and blue) and lower levels of recreational activity (shown in green and yellow).

The following assumptions were used in the development of the GIS model:

- Facilities are attractors of recreational activity.
- Trails are attractors of recreational activity.
- Prominent physical features are popular points of interest and riding destinations, and are attractors of recreational activity.
- Areas where open riding is permitted have a higher level of recreational activity than areas where riding is permitted on trails only.
- Riding along much of the western boundary of Ocotillo Wells SVRA is primarily on limited existing trails due to vegetation or difficult terrain.
- Restricted areas limit the possibility of OHV recreational activity.

Recreational intensity distribution (Figure 9) is intended to depict the overall differences in existing activity patterns within Ocotillo Wells SVRA, and is only for general reference based on qualitative assumptions.

2.3.7 Circulation and Access

Official access into Ocotillo Wells SVRA is mostly confined to primary and secondary access points located along SR-78, S-22, and SR-86. However, access to Ocotillo Wells SVRA is unrestricted, and a number of unmarked access points have developed

off of SR-78 and S-22. This is more frequent in the southwestern area along SR-78 where visitors often cross the highway from the community of Ocotillo Wells to enter and exit Ocotillo Wells SVRA. Access from SR-86 is a bit more restricted, as it is a limited-access expressway and there is fencing along the majority of its border with Ocotillo Wells SVRA. Visitors also cross under SR-78 and SR-86 at various locations where washes go under the road. Figure 10 shows the main roadways and access points to Ocotillo Wells SVRA.

State Route 78

Most visitors travel to Ocotillo Wells SVRA from the greater San Diego area via SR-78. There are a number of primary access points from SR-78, including the Ranger Station, Main Street, Wolfe Well Road, County Line, Cahuilla, and Poleline Road. A number of secondary access points also exist along SR-78. Other access points are not marked or controlled. SR-78 has open shoulders that lead into Ocotillo Wells SVRA, allowing entrance and exit at the discretion of the visitor.

State Route 86

SR-86 forms much of the eastern boundary of Ocotillo Wells SVRA and intersects with S-22 southeast of Salton City. One primary access point occurs along SR-86 at the County Dump, and there are several secondary access points with turnout areas. The northern area of Ocotillo Wells SVRA can be accessed from SR-86 via North Marina Drive, a paved county road that passes through a residential community of Salton City.

County Highway S-22

S-22 is a paved road that bisects the northern portion of Ocotillo Wells SVRA, connects Salton City and Borrego Springs, and passes through Anza-Borrego Desert State Park. Primary access points from S-22 are located at Holly Road, 4x4 Track Entry Road, and Cross Over.

OHV Trails

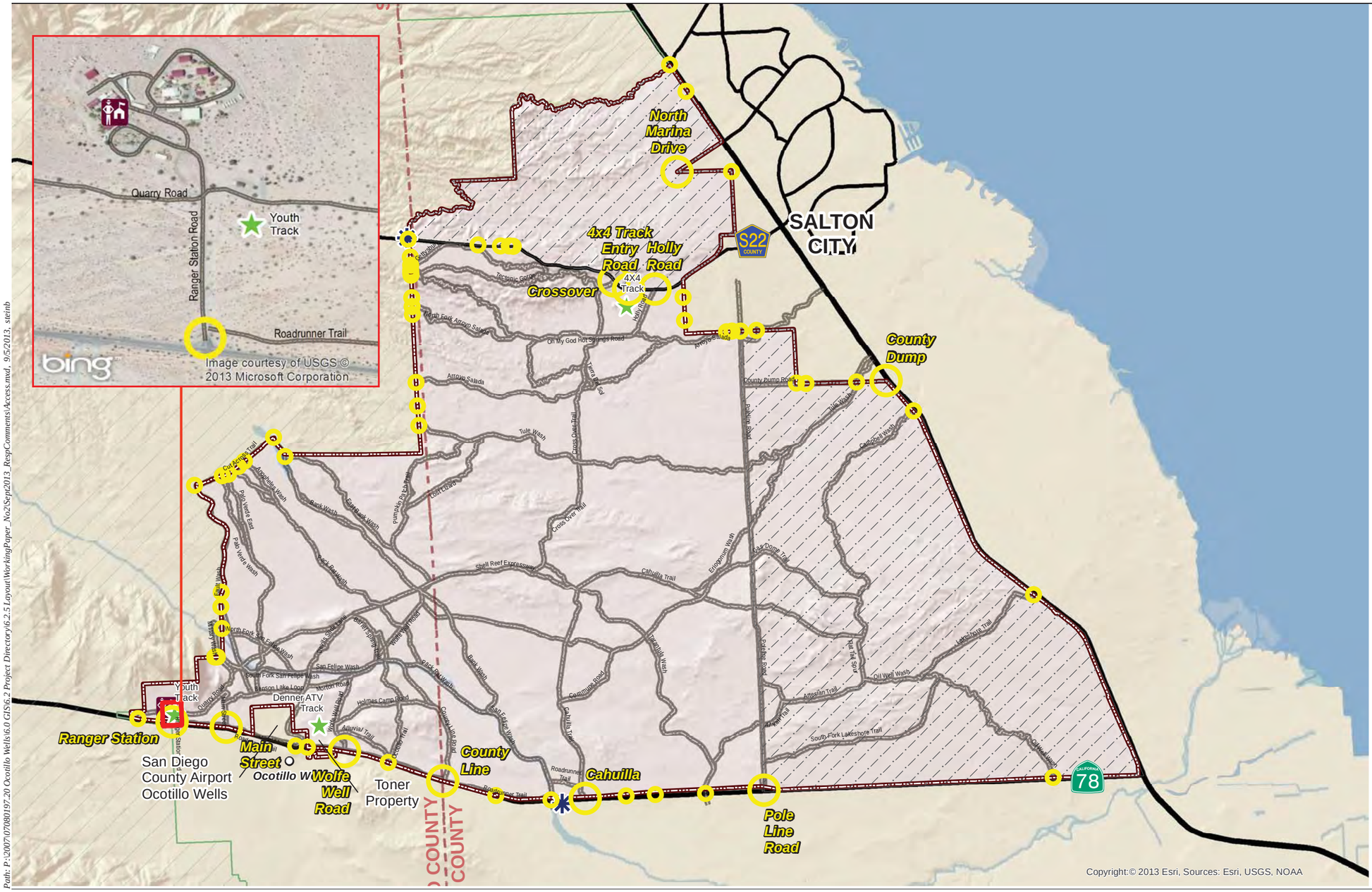
A network of trails provides organized recreational and operational access throughout Ocotillo Wells SVRA. Major trails are maintained, and wayfinding signage is in place to facilitate more efficient travel. Other trails have signs to provide navigation assistance for visitors, but these trails are minimally graded or improved. Many trails have been

developed throughout the long history of OHV recreation in the area. Ocotillo Wells SVRA has an ongoing trail restoration program to identify preferred secondary routes and restore other routes to natural habitat.

Differences in trail width, slope, and soil type provide for a variety of trails in Ocotillo Wells SVRA, which are suitable for different types of OHVs. Ocotillo Wells SVRA features a number of high-clearance and technical trails that are more popular with 4x4s and sometimes recreational off-highway vehicles (ROVs). Open, barren desert landscape is popular for motorcycles and ATVs, and soft sandy hills are popular for sand rails. Mudhills present a challenge to climb in all types of OHVs. Washes are important wayfinding landmarks for all OHVs and are often used as primary routes of travel due to flatter terrain, sand, and less vegetation compared to the other rough surfaces of the desert.

Trails provide access throughout Ocotillo Wells SVRA and to the most popular points of interest. Poleline Road is straight and graded, and provides relatively easy access to the interior of Ocotillo Wells SVRA from SR-78. Roadrunner Trail roughly parallels SR-78 along the southern boundary of Ocotillo Wells SVRA most of the way from the Discovery Center to Poleline Road, helping to keep OHVs off of the shoulders of SR-78.

A number of OHV trails in Ocotillo Wells SVRA connect with primitive roads and trails in Anza-Borrego Desert State Park, and highway-licensed vehicles are allowed to cross



Legend

- Ocotillo Wells SVRA Study Area Boundary
- Anza-Borrego Desert State Park
- County Boundary
- Off-Highway Vehicle Trails
- Trail Riding Only Areas
- Ranger Station
- Communication Towers
- Primary Access Point
- Secondary Access Point
- Training Tracks

Note/Disclaimer:
All efforts have been made to ensure the accuracy of the data and information on this map; however, some information may not be accurate. California Department of Parks and Recreation and AECOM assumes no responsibility from use of this information.

Source: California Department of Parks and Recreation 2009, 2010; SanGIS 2010; Imperial County 2009; ESRI 2009

2 1 0 2 Miles

Scale: 1 = 126,720; 1 inch = 2 miles

Figure 10

Circulation and Access

Ocotillo Wells SVRA General Plan and EIR
Working Paper #2

September 2013

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the boundary on these primitive routes. The primitive routes designated in Anza-Borrego Desert State Park that cross into Ocotillo Wells SVRA are Military Wash, Palo Verde Wash, Cut Across Trail, Tule/Basin Wash, Arroyo Salado Wash, North Fork Arroyo Salado, North/South Palm Wash, Big Wash, and Graves Wash (DPR 2003; Wilderness Press 2006).

The BLM WECO Plan designates open trails that cross from Ocotillo Wells SVRA into adjacent BLM lands. A trail following San Felipe Wash (BLM Trail T670183) crosses SR-78 from Ocotillo Wells SVRA to BLM lands to the south. This trail is part of the California Backcountry Discovery Trail. Another trail on the south side of SR-78 connects to Poleline Road in Ocotillo Wells SVRA and is designated as a portion of the De Anza National Historic Trail (BLM Trail T670191); a separate trail (BLM Trail T670183) branches off of this trail just south of SR-78 and continues north into Ocotillo Wells SVRA, connecting with Alkali Trail.

Two other trails just west of San Felipe Wash are designated as open trails on BLM land (BLM Trails T670077 and T670080) but do not cross into Ocotillo Wells SVRA. Along the eastern boundary of Ocotillo Wells SVRA, just south of Campbell Wash, another open trail approaches the boundary of Ocotillo Wells SVRA but does not cross into it (BLM Trail T670175). This trail also connects to areas near the Salton Sea. A separate open trail (BLM Trail T670179) parallels SR-86 along much of Ocotillo Wells SVRA's eastern boundary (BLM 2002).

2.4 VISITOR USE AND RECREATION

Ocotillo Wells SVRA is a premier destination for OHV recreation and is a popular place to visit in Southern California. Visitors enjoy a diverse range of recreational activities, and many points of interest provide unique settings and distinctive features that represent the variety of Ocotillo Wells SVRA. Due to the hot and arid climate in the late spring, summer, and early fall, peak visitation periods occur during the cooler months. Multi-day, overnight visits to Ocotillo Wells SVRA on the weekends or holidays are typically more common than day-use only. Many visitors have a long tradition of visiting Ocotillo Wells SVRA with family and friends.

2.4.1 Points of Interest

Ocotillo Wells SVRA has a variety of destinations for visitors, including unique natural, geological, historical, and human-built points of interest. These points of interest are popular among visitors and provide waypoints in Ocotillo Wells SVRA. Figure 11 shows the locations of the primary points of interest in Ocotillo Wells SVRA.

Park Headquarters/Ranger Station

This area is located on Ranger Station Road near the Ocotillo Wells SVRA Discovery Center, and consists of facilities that support park staff volunteers for the operation of Ocotillo Wells SVRA and the Ocotillo Wells District.

Discovery Center

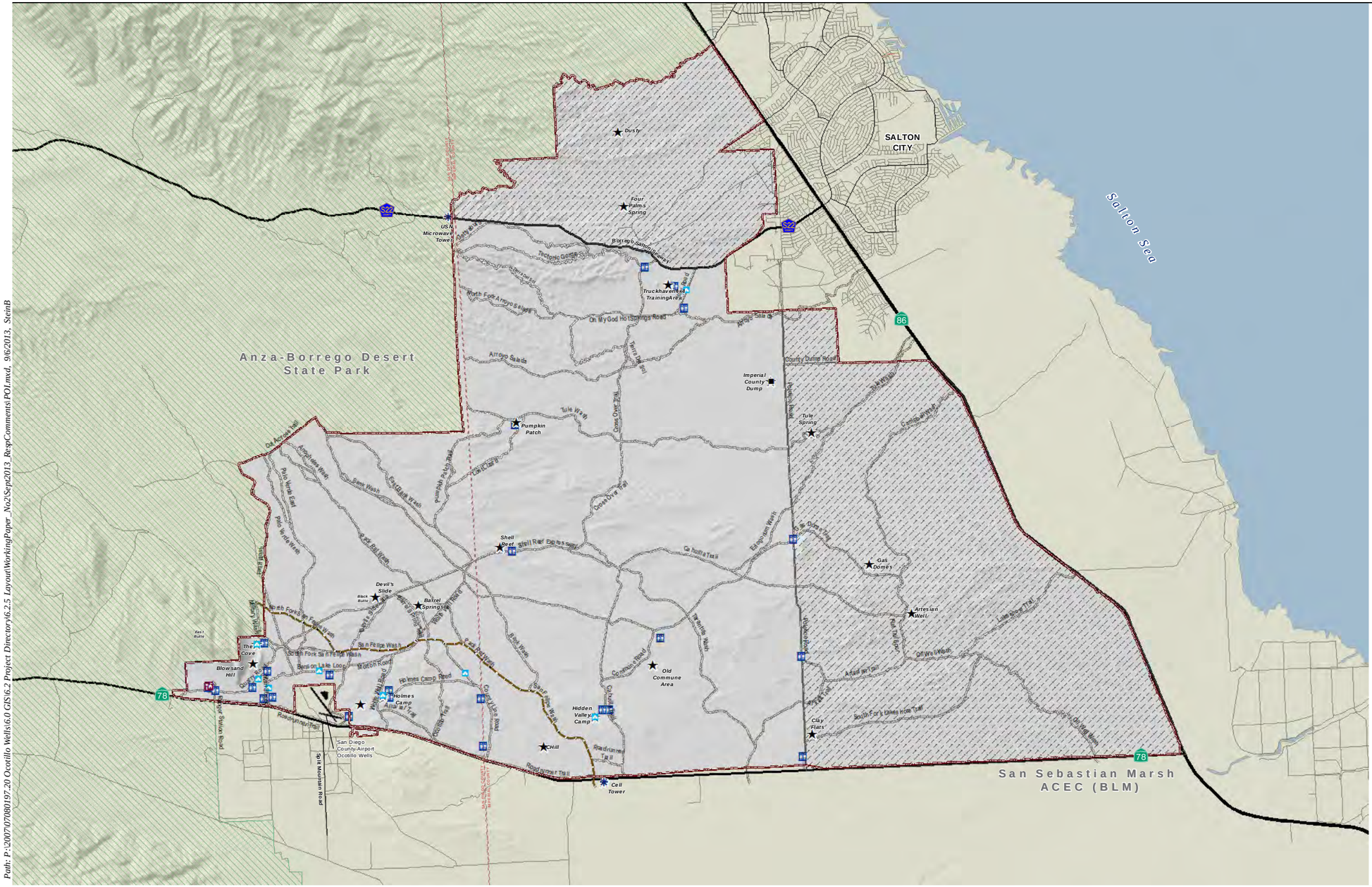
The Discovery Center provides a central location for visitor information at Ocotillo Wells SVRA and is the first facility at the entrance to Ocotillo Wells SVRA. State Park staff members are available to answer questions and share their knowledge of the desert. The Discovery Center features informational displays and hands-on educational activities for families and is also where visitors go to get a park map, visitor's guide, or schedule of activities. Surrounding the Discovery Center is a relatively high-use area for visitors; it is close to public restrooms and showers. Other facilities include an ADA-accessible interpretive nature trail, amphitheater, and parking area.

Harold Soens Youth Track

Behind a fenced enclosure and lined with protective hay bales, the Youth Track provides a safe riding area for children to build their skill sets. It is for riders 12 years old and under on 70cc engines or less. This track is dedicated to Harold Soens, who worked tirelessly to open up the world of OHV to kids.

Blowsand Hill

Blowsand Hill is one of the most popular OHV recreation features in Ocotillo Wells SVRA. The area is frequented by visitors day and night. The strong westerly winds that blow through Ocotillo Wells SVRA have deposited sand in a notch on the side of a large hill. The finest sand grains, being the lightest, are deposited on the top; the larger,



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Source: California Department of Parks and Recreation 2009, 2010; SanGIS 2010; Imperial County 2009; ESRI 2009

2 1 0 2 Miles

Scale: 1 = 126,720; 1 inch = 2 miles

Note/Disclaimer:
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Figure 11

Points of Interest

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heavier grains collect at the bottom. Riders of OHVs of all types enjoy the challenge presented by climbing and descending this sandy feature.

Main Street

Main Street is located just off of SR-78 and is a popular camping area. This area is also used for staging special events, and a new special event facility is planned for construction in 2013.

The Cove

Adjacent to Blowsand Hill is The Cove, a popular camping area that provides easy access to riding areas, is protected from high winds, and provides shade ramadas and a restroom.

Devil's Slide

The dark rockface and nearby sands at Devil's Slide present a popular challenge for OHV enthusiasts of all types and experience levels. Devil's Slide, also known as Black Butte, was once the site of gold prospecting. It is one of the more prominent peaks in Ocotillo Wells SVRA, with an elevation of nearly 400 feet, and offers challenging rocky and sandy features.

Barrel Springs

The mesquite sand dunes at Barrel Springs are a concentration point for desert wildlife. The springs seep from the ground, especially after heavy rain. The sand holds water like a sponge, allowing thorny mesquite to grow. Without the mesquite roots to anchor them, the dunes would quickly erode. Portions of the dunes at Barrel Springs have been fenced to allow for restoration of the natural mesquite dune vegetation.

The water source at Barrel Springs served as an important resource for Native Americans and early settlers. The biological resources and cultural history present at Barrel Springs are a strong example of the interesting features that the desert landscape offers to visitors of Ocotillo Wells SVRA.

Shell Reef

At Shell Reef, visitors can see a 5-foot-thick layer of fossilized shells, evidence that this desert was once covered by a sea. This hard “coquina” resists erosion so well that it has preserved this ridge and provides a window to the past. Part of this area has been fenced to preserve Shell Reef as one of Ocotillo Wells SVRA’s unique natural landmarks for future generations to enjoy. Although much of Shell Reef is closed to vehicles, visitors can still explore this area on foot and learn about this valuable area through the interpretive signs. The hills to the east and above Shell Reef are a popular destination for hill climbing, motorcycle jumping, and spectating. Large crowds often gather there, making it one of Ocotillo Wells SVRA’s most intense activity zones.

Denner ASI Track

Ocotillo Wells SVRA provides ATV Safety Institute (ASI) classes for children and their accompanying adults. This facility was named in honor of Roy Denner, a champion of OHV recreation.

Holmes Camp

This is a popular camping area in the Ocotillo Badlands located on Wolfe Well Road near SR-78, just east of Ocotillo Wells Airport. Holmes Camp is the most developed camping area within Ocotillo Wells SVRA, with separated and open campsites, shade ramadas, trees, trash bins, a bathroom, showers, and two ADA-accessible campsites.

Old Hippie Commune

This commune site was used in the early 1970s by a local community. Today this area is still used by visitors as a more rustic camping area without facilities. This camping area is located on Commune Road northeast of the Hidden Valley campsite.

The Anza Trail (San Felipe Wash)

San Felipe Wash is the historic route of two expeditions led by the Spanish officer Anza in the 1770s. Anza guided about 200 settlers from Mexico to San Francisco Bay. Wayside interpretive signs detailing the experiences of these explorers are positioned along the marked route, inviting visitors to follow in their footsteps.

Pumpkin Patch

This unique landscape is a popular destination in Ocotillo Wells SVRA. Wind and water have been eroding the surface soil for years, revealing round sandstone rocks called concretions in a formation that resembles a field of pumpkins. These rocks are formed by the natural cementing of sand particles to a small object such as a piece of shell, a grain of sand, or even an insect. The Pumpkin Patch site is fenced to prevent OHV activity in the area, but visitors are able to access the concretions on foot.

Truckhaven 4x4 Area

Opened in March 2011, the Truckhaven 4x4 area includes 22 named obstacles spread across about 15 acres in the northern section of Ocotillo Wells SVRA. Built of heavy equipment tires, logs, concrete tubes, boulders, and more (sealed together with Shotcrete and dirt), these obstacles are ranked in three difficulty levels and offer a variety of challenges for beginners to advanced riders. For safety purposes, ATVs and motorcycles are prohibited in the area.

Tectonic Gorge

This huge canyon and its accompanying badlands is one of the most challenging terrains in Ocotillo Wells SVRA. Not only is this a popular place for riding, it was also the location for the television series finale of *The X-Files*.

Borrego Badlands

Located along the western boundary of Ocotillo Wells SVRA, to the south of S-22, the easternmost edge of the Borrego badlands lies adjacent to the multi-colored plains of the old Lake Cahuilla shoreline. The badlands feature steep, rugged canyons with high-quality views; deep, vegetated sandy washes; and many types and colors of sedimentary rocks.

Coral Wash

An astounding arch is found along Coral Wash, one of the drainage channels in the northern area of Ocotillo Wells SVRA known locally as “Truckhaven.” Driving up Coral Wash requires the challenge of a variety of technical OHV maneuvers to wind through the narrow walls.

Four Palms Oasis

Located on private property, this natural spring just north of S-22 (easily identified by the palm trees that grow there) is a popular riding destination. A chain has been erected to discourage visitors from riding or walking on the spring.

Dusty Mountain

This steep hill is a prominent landscape feature, often used as a navigation point by those exploring the northern area of Ocotillo Wells SVRA. The peak of this unique hill has an elevation of 314 feet and is marked with an official U.S. Geological Survey (USGS) marker, a novelty phone booth, and a variety of visitor-installed ”off-road folk art,” including totem poles and a concrete motorcycle. It is a challenge to reach due to the complexity of its surrounding terrain and the steep ascent to its flat top.

Washes

The local washes are the drainage channels for the surrounding mountains to the northwest of Ocotillo Wells SVRA. After rain, large flows of water transport sand and debris at a heavy rate, making the bed and banks of the washes highly dynamic. In the desert, washes are important wayfinding landmarks, and are often used as primary routes of travel when they are dry due to the flatter terrain and less vegetation.

Springs in the Tule Wash, Arroyo Salado, and Other Locations

Water from the mountains to the northwest of Ocotillo Wells SVRA follows subterranean fault lines and trickles out of the ground at the springs in Tule Wash. Named for the rare tule reeds that grow there, the springs are a strong draw for a variety of wildlife. The salty water tends to leave behind a white, chalky residue that is visible on the surrounding banks of the wash, especially after severe thunderstorms when the wash actually runs. The springs are fenced to protect the plants, natural water flow, and fragile spring ecology, while allowing for wildlife access.

Gas Domes

An almost constant stream of gas bubbles up through the muddy water at Gas Domes, which keeps these unique geologic features wet year-round. The mud pots are a dynamic reminder of the geologic character of the area, and a strong draw for visitors.

Stands of salt grass grow on the surrounding salty crust. Gas Domes has been fenced to protect the fragile soil structure that surrounds it. Educational signage and interpretive programs presented by the Ocotillo Wells SVRA interpretive team provide visitors with fascinating facts about this unique geologic feature. The Salton Sea is visible from Gas Domes.

Artesian Well

In 1919, a massive derrick was built to drill for oil; however, geothermal water was found instead. Remnants of the drilling operation remain, including holding tanks, cables, and bricks. The numerous salts and minerals in the water are evident in the corrosion of the metal spillway that has long since begun to crack and erode.

Clay Flats

The clay here was deposited by the Colorado River millions of years ago. Over time and up until about 300 years ago, a large freshwater lake periodically covered the valley to the east. In the last 50 years, this has become a popular camping area. Camping is limited and OHV travel is restricted to trails only in the portion of Clay Flats that is east of Poleline Road,

2.4.2 Recreational Opportunities

Ocotillo Wells SVRA offers a diverse range of recreational activities for visitors to enjoy. OHV use is the most popular and primary recreational activity, but camping, geocaching, hiking, wildlife viewing, participating in special events, and stargazing are also popular.

Off-Highway Vehicle Recreation

Ocotillo Wells SVRA is among the largest contiguous areas designated for OHV recreation in Southern California, and is the largest SVRA in the California State Parks system. It allows visitors to experience the freedom of riding OHVs through the vast desert landscape, and offers unique opportunities for both open and trail riding. Visitors enjoy riding to the many distinct landmarks that serve as destinations and waypoints. Features such as mud hills, escarpments, and washes present opportunities for a variety of OHV skill levels, vehicle types, and riding interests.

Ocotillo Wells SVRA is popular among different types of OHV enthusiasts, including 4x4s, ATVs, dirt bikes, sand rails, ROVs (side by side), and other specially designed or modified OHVs. Any motor vehicle operated off-highway is an OHV. A highway-licensed vehicle is an OHV when it is operated off of the local agency or state roadway system. When operating an OHV in Ocotillo Wells SVRA, visitors must display either a license plate or an OHV registration sticker. OHV registration stickers include “green stickers,” “red stickers,” California Nonresident OHV Use Permits, and OHV stickers from states that have an OHV program.

Camping

Fewer people visit Ocotillo Wells SVRA for day-use than for multi-day and overnight visits. Camping is permitted for up to 30 days per calendar year. No fees are currently charged for camping or day-use. Limited camping facilities are available for visitors at Ocotillo Wells SVRA; nine open/developed camping areas (Quarry, Cove, Main Street, Holmes Camp, Holly Road, County Line Road, Benson Lake Loop, Cross Over, and Hidden Valley) with each offering shade ramadas, picnic tables, and fire rings. Holmes Camp has numbered campsites and full restrooms with showers, with water available at the restrooms; it is the only fully developed campground within Ocotillo Wells SVRA. Vault toilets are available at all other open/developed camping areas; however, these campsites do not feature designated numbered sites. Full restrooms with showers are also available at Ranger Station Road to serve the Quarry, Cove, and Main Street camping areas.

Although many visitors prefer camping near restrooms and other facilities, others enjoy the rugged desert environment. Open/primitive camping is permitted throughout much of Ocotillo Wells SVRA, although camping is limited east of Poleline Road. Camping is not permitted at Shell Reef, Devil’s Slide, Blowsand Hill, or the Truckhaven 4x4 Training Area. Although tent camping occurs occasionally, camping in RVs is more popular because they provide water, toilets, shade, and protection from the wind, among other conveniences. Holiday weekends are especially popular for camping, and visitors enjoy “circling the wagons”—setting up a camp with friends and family around one central fire ring.

Geocaching

Geocaching is a popular recreational activity at Ocotillo Wells SVRA that involves using a Global Positioning System (GPS) device and other navigation techniques to hide and seek containers called “geocaches” or “caches.” A typical cache is a small weatherproof container that contains a logbook to keep a record of the finders of the cache. Geocaches may also contain items for trading, such as toys or trinkets. Ocotillo Wells SVRA offers a unique location where the whole family can explore the beauty, wonder, and history of the desert while seeking a cache.

Hiking

Visitors also enjoy hiking in Ocotillo Wells SVRA, especially in conjunction with OHV recreation, as they can hike to destinations near OHV trails or to destinations that are inaccessible to OHVs. Northwest of Ranger Station Road is a dedicated hiking trail starting at the Discovery Center. An ADA-accessible guided nature trail is also located near the Discovery Center.

Nature Viewing

Although much of the area appears sparsely vegetated, it is home to a diversity of desert-dwelling plants and animals. Ocotillo Wells SVRA, and the educational and interpretive programs it offers, provides an opportunity for visitors to see many types of plants, birds, reptiles, bats, insects, and other species. Ocotillo Wells SVRA is a designated California Watchable Wildlife Viewing Site and is a great place to see unique desert wildlife in its native habitat (see a comprehensive description of wildlife in Section 2.7.2). Many visitors enjoy riding OHVs in Ocotillo Wells SVRA to access the many opportunities to experience and view nature, especially when the spring flowers are blooming.

Special Events/Commercial Filming

Ocotillo Wells SVRA hosts a number of special events each year. Most special events are organized by private or nonprofit organizations. Major privately sponsored annual events include the California Off-Road Vehicle Association (CORVA) Truckhaven Challenge (currently this event does not take place north of S-22), Tierra Del Sol (TDS) Desert Safari, and Treasure Trails’ Treasure Hunt and Spooktacular Run. Ocotillo Wells SVRA organizes an annual Roughneck Rendezvous geocaching event with help from

the Friends of Ocotillo Wells (a 501c nonprofit organization). Small special events may include such things as vehicle testing (with photo shoots), weddings, church group rides, sponsored events, celebrity rides, and military training. The park continues to attract an occasional film shoot as well.

Other Recreational Activities

Visitors ride bicycles, run, and participate in various other recreational activities in Ocotillo Wells SVRA. Although rare, horseback riding is permitted. No dedicated equestrian facilities are available.

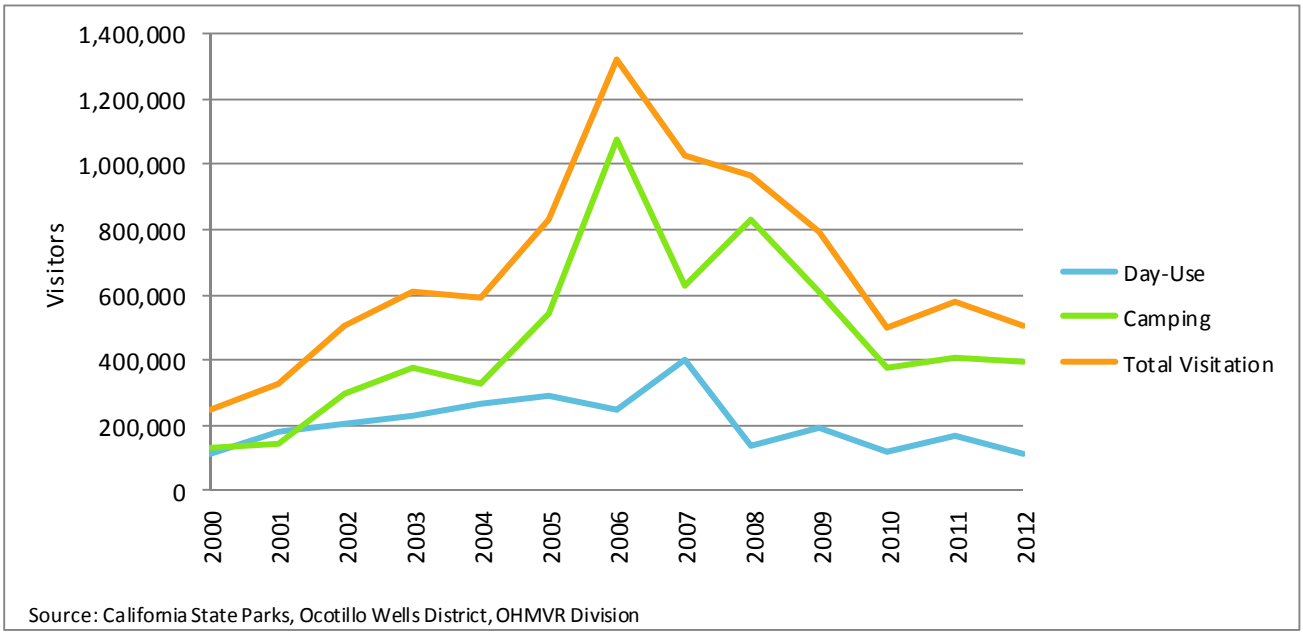
2.4.3 Visitation

Due to the hot and arid climate, visitation to Ocotillo Wells SVRA is seasonal. Peak periods occur during the winter months when temperatures are cooler and allow for a more comfortable recreation experience. With favorable weather, visitation can begin to increase in mid-fall and usually lasts into mid-April. Holiday weekends during the peak season are very popular, and Ocotillo Wells SVRA can experience more than 100,000 daily visitors on these peak weekends. Visitation is typically lower on weekdays and is nominal during hot summer months. Summer visitation is almost exclusively by local residents or seasonal homeowners during the early morning or at night. Although a limited number of people visit Ocotillo Wells SVRA for a single day, multi-day, overnight visits are more common. Ocotillo Wells SVRA hosts several annual special events that draw many visitors.

Visitation to Ocotillo Wells SVRA is reported in the annual California State Park System Statistical Report. Usage counts are conducted by Ocotillo Wells SVRA rangers and staff and reported to California State Parks. The counts are conducted whenever possible; occasionally, reported figures are estimated. Ocotillo Wells SVRA has seen an overall increase in day-use and camping visitation during the past decade and recorded the greatest annual visitation in 2006. Attendance increased each year from 2000 until the peak in 2006 with over 1.3 million visitors. Visitation has been generally decreasing since that peak attendance to approximately 506,000 total visitors in 2012. Over the past 12 years, overnight visitors have constituted a larger percentage of total visitation

relative to day-use visitors. Table 3 shows the total number of visitors to Ocotillo Wells SVRA who visit for day-use and for overnight camping.

Table 3. Visitation at Ocotillo Wells SVRA, 2000 through 2012



Source: California State Parks, Ocotillo Wells District, OHMVR Division

2.4.4 Visitor Profile

Visitors to Ocotillo Wells SVRA typically live in San Diego, Imperial, Riverside, Los Angeles, Orange, or San Bernardino Counties. Few visitors come from outside of Southern California, and even fewer come from outside of California. However, some visitors from out of state routinely return to Ocotillo Wells SVRA for annual events such as the Treasure Trails event or for Factory Vehicle testing promotions. Many visitors have been coming to Ocotillo Wells SVRA for more than 10 years, with some having visited for 20 years or more (AECOM 2012). In general, OHV visitors tend to be younger than 50 years, white, and male, with slightly higher incomes than the general population. However, OHV recreation is increasingly popular across all demographic groups, including women and Latinos (U.S. Forest Service 2005). Many families and groups of friends visit Ocotillo Wells SVRA together.

2.4.5 Recreation Trends and Future Opportunities

The number of visitors to Ocotillo Wells SVRA has continually increased from 2000 to 2006, as shown in Table 3. Visitation to Ocotillo Wells SVRA has decreased from 2006 through 2012, most likely due to the declining economy. Visitation to Ocotillo Wells SVRA is connected to overall interest in OHV recreation, the cost of participating in OHV recreation (including gas prices), and other available opportunities for OHV recreation in the region, but trends are difficult to predict with certainty. Table 4 presents factors that affect the overall level of visitation to Ocotillo Wells SVRA. These factors help to explain fluctuations in visitation and will likely shape future recreation opportunities at Ocotillo Wells SVRA. An explanation of the factor and its relationship to visitation at Ocotillo Wells SVRA is also described in Table 4. Factors with a direct relationship to visitation are those expected to increase as visitation to Ocotillo Wells SVRA increases. Factors with an inverse relationship are those expected to decrease as visitation increases.

Table 4. Factors Affecting Overall Level of Visitation to Ocotillo Wells SVRA

Factor	Explanation	Relationship to Visitation
General economic conditions	Participation in OHV recreation and, therefore, visitation to Ocotillo Wells SVRA, is affected by macro-economic trends. Assuming that all else remains equal, a growing economy may lead to an increase in visitation.	Direct relationship
Gasoline prices	Prices in gasoline affect the cost of visiting Ocotillo Wells SVRA and participating in OHV recreation. Assuming that all else remains equal, decreasing gasoline prices may lead to an increase in visitation to Ocotillo Wells SVRA.	Inverse relationship
Loss of OHV riding areas in the surrounding region	Loss of OHV riding areas in the surrounding region limits the available areas for OHV recreation. Assuming that all else remains equal, the loss of OHV riding areas in the surrounding region may lead to an increase in visitation to Ocotillo Wells SVRA.	Inverse relationship

Factor	Explanation	Relationship to Visitation
Fees at other OHV areas in region	Assuming Ocotillo Wells SVRA continues to operate without charging fees, and all else remains equal, increased fees at other OHV riding areas in Southern California may drive an increase in visitation to Ocotillo Wells SVRA.	Direct relationship
Number of special events at Ocotillo Wells SVRA	Special events continue to draw a larger number of visitors compared to other weekends. Assuming that all else remains equal, more special events may lead to an increase in visitation to Ocotillo Wells SVRA.	Direct relationship
Variety of OHV types and allowable uses	A wider variety of OHV types and evolving OHV technology can lower barriers to participating in OHV recreation. Assuming that all else remains equal, new and varied vehicles may lead to an increase in visitation to Ocotillo Wells SVRA.	Direct relationship

Although not included in Table 4, weather is a factor that affects visitation to Ocotillo Well SVRA. Extreme fluctuation in temperatures, wind, and rain events can cause significant changes in seasonal and weekend visitation.

2.4.6 Demographics, Trends, and Projections

Visitation to Ocotillo Wells SVRA is also related to demographic trends in Southern California, since that is where most visitors live. Regional population growth is expected to increase over the long term. Although expected future population growth would result in an increase in the potential number of visitors to Ocotillo Wells SVRA, it would not necessarily result in increased visitation. The proportion of new visitors created by population growth is difficult to predict with certainty due to changing recreational trends and economic factors. Table 5 shows the 2010 population for San Diego, Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties, as reported by the U.S. Census Bureau. The forecasted future population by county, as reported by the State of California, is also included.

Table 5. Southern California Regional Population Forecast by County

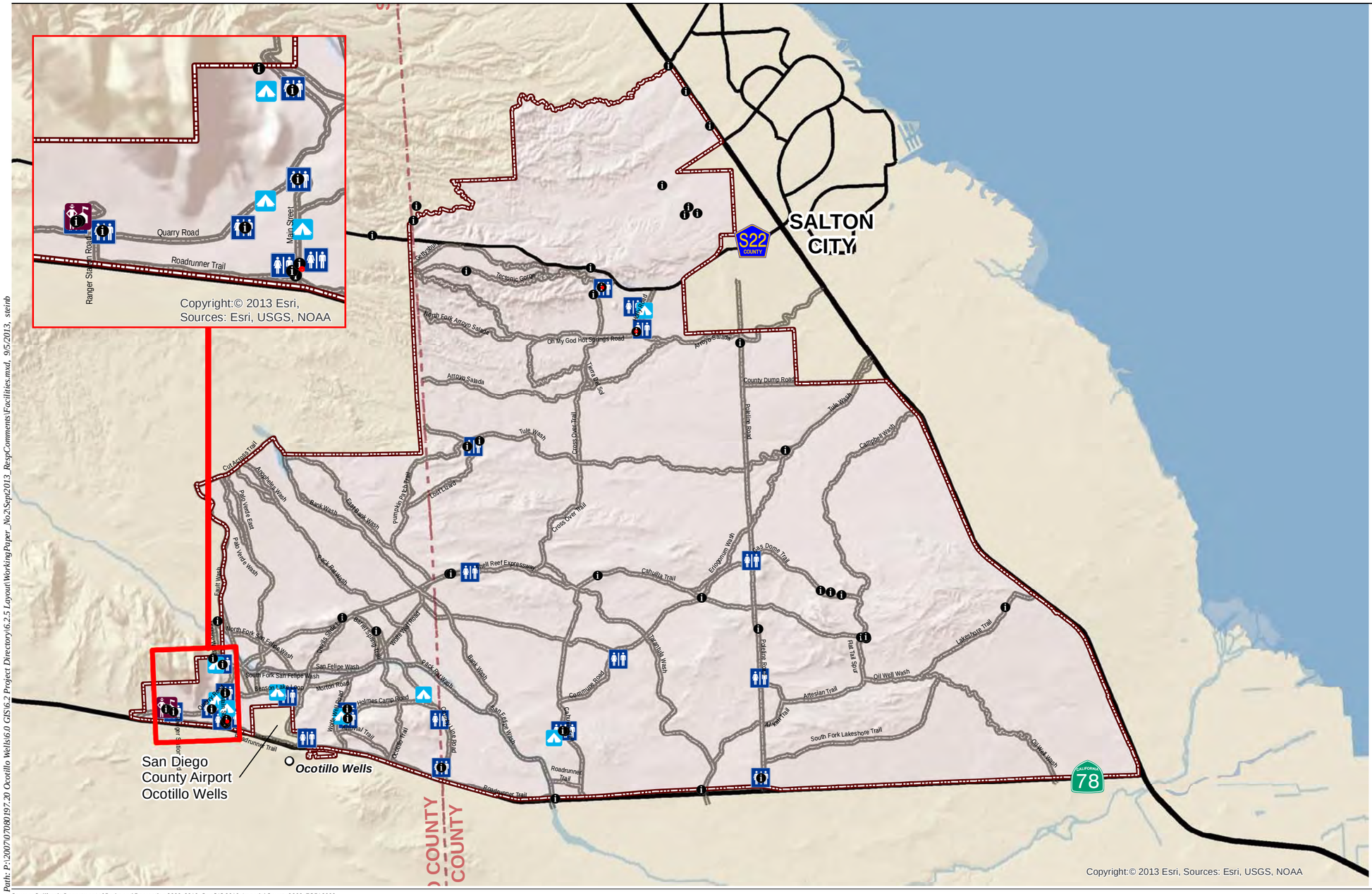
	Total Population Projections				
	2010	**2020**	**2030**	**2040**	**2050**
San Diego County	3,095,313	3,391,010	3,665,358	3,891,793	4,081,292
Imperial County	174,528	200,521	228,164	256,872	285,308
Los Angeles County	9,818,605	10,500,679	11,138,280	11,451,688	11,567,914
Orange County	3,010,232	3,220,788	3,385,762	3,509,352	3,565,648
Riverside County	2,189,641	2,626,222	3,145,948	3,678,119	4,137,882
San Bernardino County	2,035,210	2,283,798	2,588,990	2,885,687	3,159,003
Ventura County	823,318	885,196	956,324	1,025,693	1,085,882

Source: U.S. Census Bureau 2013, State of California 2012

2.5 OCOTILLO WELLS SVRA FACILITIES

Many visitors enjoy the rugged desert environment and value the unique open/primitive camping and open riding available at Ocotillo Wells SVRA. Limited facilities exist at the nine open/developed camping areas. Most developed facilities in Ocotillo Wells SVRA are wheelchair accessible per the ADA, including all restrooms, showers, the Discovery Center, the ranger station, and an interpretive pathway with a native plant garden. Two ADA-accessible campsites are located at Holmes Camp. More information on ADA accessibility can be found in Section 2.10.4.

OHV routes traverse Ocotillo Wells SVRA and provide access to different destinations and a variety of riding terrain. Other facilities enhance visitor experience and opportunities, and support operations at Ocotillo Wells SVRA. Figure 12 shows the locations of the various facilities described in this section, and Table 6 provides an inventory.



Legend

- Ocotillo Wells SVRA Study Area Boundary
- Anza-Borrego Desert State Park
- County Boundary
- Off-Highway Vehicle Trails
- Camping Location
- Restrooms
- Ranger Station
- Signage
- Trash Cages

Note/Disclaimer:
All efforts have been made to ensure the accuracy of the data and information on this map; however, some information may not be accurate. California Department of Parks and Recreation and AECOM assumes no responsibility from use of this information.

Source: California Department of Parks and Recreation 2009, 2010; SanGIS 2010; Imperial County 2009; ESRI 2009

2 1 0 2 Miles

Scale: 1 = 126,720; 1 inch = 2 miles

Figure 12

Facilities

Ocotillo Wells SVRA General Plan and EIR
Working Paper #2

September 2013

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Table 6. Inventory of Existing Facilities of Ocotillo Wells SVRA (2012)

Facility	Number
Developed Camping Areas	9
Amphitheater	1
OHV Training Tracks	3
Full Restrooms with Shower Facilities*	2
Vault Toilets*	16
Shade Ramadas*	65
Trash Bins	8
Wayfinding Signage*	1,411
Interpretive Signage*	58

* Ocotillo Wells SVRA is expanding these facilities on an annual basis.

Ocotillo Wells SVRA District Headquarters

Ocotillo Wells SVRA District Headquarters consists of the Discovery Center, the District Office, the ranger station, and maintenance facilities. The Discovery Center provides a central location for visitor information. Ocotillo Wells SVRA staff members are available to answer questions and share their knowledge of the desert. The Discovery Center features informational displays and hands-on educational activities for families, and is where visitors can go to obtain a map of Ocotillo Wells SVRA, a visitor's guide, and a schedule of activities. An ADA-accessible guided nature pathway, amphitheater, and picnic area with a shade ramada are also available near the Discovery Center. The District Office, a ranger station, and other support facilities necessary for the operation of the Ocotillo Wells District are located near the Discovery Center. Relative to other areas of Ocotillo Wells SVRA, a high concentration of visitor facilities surrounds the Discovery Center, including the Harold Soens Youth Training Track; full restrooms with shower facilities; and the Quarry, Cove, and Main Street camping areas.

The ranger station provides a central location for visitors to interact with an Ocotillo Wells SVRA ranger. During the peak riding season, multiple rangers patrol Ocotillo Wells SVRA throughout the day and, during the non-peak season, at least one Ocotillo Wells SVRA ranger is always on-site. In emergency situations, visitors can contact

rangers at the ranger station via telephone or connect with rangers in person while on patrol. Ocotillo Wells SVRA rangers are qualified to administer first aid and are the closest source of help in emergency situations. Further information regarding public safety is provided in Section 2.10.2. Further discussion on operations and management is provided in Section 2.10.

Permanent block structures located behind Ocotillo Wells District Headquarters house a maintenance shop and fuel station.

Toner Property

Located just north of SR-78, the 105-acre Toner property is named after the Toner Turkey Ranch that was once located at the site. The Toner property contains maintenance facilities, including materials and equipment storage; a native plant nursery; and employee housing. The Roy Denner ATV Safety Training Track is also located on the Toner property. The Toner property is fenced for security to limit public access, except during ASI safety classes.

Training Tracks

Three training tracks are offered at Ocotillo Wells SVRA. The Harold Soens Youth Training Track is designated for riders 12 years or younger who ride vehicles of 70cc or less. It provides an ideal place for kids to ride under the guidance of parent supervision. The Roy Denner ATV Safety Training Track is the site of Ocotillo Wells SVRA's ASI safety classes. The Truckhaven 4x4 Training Area offers OHV enthusiasts 22 different obstacles, ranging from beginner to expert. The Truckhaven 4x4 Training Area is limited to 4x4 vehicles and contains one of the region's largest tubular pyramid climbs.

Restroom and Shower Facilities

Full restrooms with showers are available at Ranger Station Road and at Holmes Camp. The restrooms at Ranger Station Road immediately serve the Quarry, Cove, and Main Street camping areas. Additional vault toilets are located at the developed camping areas and other locations throughout Ocotillo Wells SVRA.

Shade Ramadas

Shade ramadas provide respite from the hot desert sun and are available at each of the developed camping areas and in other areas throughout Ocotillo Wells SVRA.

Trash Facilities

The Holmes, Hidden Valley, and Holly Road camping areas have trash bins available for visitor use. Refer to Figure 12 for the location of these trash bins.

Signage

Signage is an important way to communicate with visitors. Wayfinding signs mark OHV routes and assist visitors with navigating Ocotillo Wells SVRA. Wayfinding signage is especially important in areas where OHV recreation is allowed only on trails. More than 1,500 wayfinding signs are found throughout Ocotillo Wells SVRA. More than 60 interpretive signs are also located throughout Ocotillo Wells SVRA to provide visitors with important information about Ocotillo Wells SVRA and its unique natural, cultural, and historical features. A number of additional signs are posted to inform visitors about rules and regulations, including restrictions on OHV use.

Utilities

Ocotillo Wells SVRA is primarily undeveloped and underserved by utilities. The Discovery Center, Ocotillo Wells District Headquarters, and Toner property offer water, septic sewer, electrical, and telephone services. Full restrooms at Ranger Station Road and Holmes Camp also have water and septic sewer connections. However, no drinking water, lighting, or electrical service is available for visitors at any of the developed camping areas or any other areas of Ocotillo Wells SVRA. No dump stations for RVs are provided in Ocotillo Wells SVRA. Dump stations are available at facilities in the surrounding communities of Ocotillo Wells, Salton City, and Borrego Springs.

There is an electrical transmission line along Poleline Road in Ocotillo Wells SVRA and an electrical substation located just outside of Ocotillo Wells SVRA, south of the intersection of Poleline Road and SR-78. Two communications towers are located just outside of Ocotillo Wells SVRA; however, cell service is inconsistent and unavailable in

many areas of Ocotillo Wells SVRA. No other utility lines serve or cross Ocotillo Wells SVRA. The Salton City Landfill is located within the boundary of Ocotillo Wells SVRA.

Employee Housing

Employee housing in Ocotillo Wells SVRA is located at the District Headquarters (separated from and without public access) and at the Toner property. Mobile homes with shade structures are used as staff housing. Limited spaces are available for additional RVs or travel trailer campers used by employees for housing. The employee housing areas have a few additional shade structures for parking personal and state vehicles.

2.6 PHYSICAL RESOURCES

Ocotillo Wells SVRA is located in a rugged desert with intense summer heat; rocky, sandy soils; and a variety of terrain types and topographic features. The landscape gradually slopes from the Santa Rosa Mountains to the north and Laguna Mountains to the northwest toward the Salton Sea to the south and east. The landscape generally appears flat, but there are many topographical variations and rough surfaces, especially in the northern areas where the terrain is punctuated by mud hills, escarpments, and washes.

2.6.1 Topography

Ocotillo Wells SVRA is located on a relatively flat alluvial plain with intermittent areas of relief provided by mud hills, escarpments, and washes. The highest point in Ocotillo Wells SVRA is on the southeast flank of Borrego Mountain, at 950 feet above sea level. The lowest point is in the southeast corner of Ocotillo Wells SVRA near the Salton Sea, at 175 feet below sea level.

Many distinct topographic features in Ocotillo Wells SVRA provide commanding views of the entire area and help to orient trail riders. The peak of Black Butte (Devil's Slide) rises more than 400 feet above sea level in the middle of the flat desert and is a prominent feature in Ocotillo Wells SVRA. Blowsand Hill, a large sand dune on the east face of Borrego Mountain, is another prominent feature and is easily visible from SR-78.

The dune on Blowsand Hill is also identifiable from other high points in Ocotillo Wells SVRA. Dusty Mountain, another peak located in the northern part of Ocotillo Wells SVRA, has an elevation of 314 feet. Many washes created by rapid storm runoff from the surrounding mountains to the northwest interlace the area. Washes are often eroded below normal grade and are not clearly visible until seen at close range.

2.6.2 Climate

Four types of weather patterns occur in Ocotillo Wells SVRA: (1) moist, unstable air from the east and southeast during summer months causes occasional monsoonal rainstorms and can be responsible for much of the region's rainfall; (2) thunderstorms or storms that originate from hurricanes in the Pacific may bring rain during late summer and early fall, and can alter the landscape substantially with flash floods; (3) high wind storms (primarily from the west or north) can cause severe dust storms and are associated with dry, low-pressure systems or thunderstorms; (4) low-pressure storm systems from the Pacific Ocean bring rain any time from mid-October through mid-April (DPR 1982).

Ocotillo Wells SVRA is located in the rain shadow of the Peninsular Range. Rainfall in the Colorado Desert varies according to location and topography. At Ocotillo Wells SVRA, the annual normal rainfall is about 3.5 inches (County of Imperial 2009a); at Borrego Springs near Colorado Desert District/Anza-Borrego Desert State Park headquarters, the average annual rainfall is 5.85 inches (Western Regional Climate Center 2012). Winter rains vary from extreme to gentle, while the summer season can produce thunderheads, strong winds, and fierce cloudbursts that cause flash floods that erode the landscape. Damaging flash flooding has occurred repeatedly, especially in the badlands area of Ocotillo Wells SVRA.

Winds are another of the desert's weather phenomena. Summer winds, though hot, are usually moderate, while fall, spring, and winter winds can be fierce. The fierce winds are usually a result of low-pressure systems, and some of the strongest winds have occurred in the spring, sometimes reaching velocities of up to 90 miles per hour. The winds achieve maximum velocities as the low-pressure systems move through the area,

often in the late afternoon, evenings, and into the night. Winds often blow the fine sand and soil particles from dry lakes and dunes. These winds can cause sandstorms that last several days.

As in all deserts, there is a considerable daily range in temperature. In summer, temperatures range from hotter than 120 degrees Fahrenheit (°F) in the day to cooler than 70°F to 75°F at night. In winter, temperatures range from 65°F to 70°F at mid-day to below freezing at night. The hottest days of summer result when high-pressure areas move in from the coast and form over the Great Basin. Summer shade temperatures of 105°F to 118°F are frequent (DPR 1982). Monsoonal moisture travels from the southeast in July and August, raising the humidity levels.

2.6.3 Air Quality

Air quality is an issue of regional concern in San Diego and Imperial Counties. Both counties have an Air Pollution Control District (APCD) that is responsible for administering federal and state air quality laws and policies. The California Air Resources Board and U.S. Environmental Protection Agency (EPA) work with each APCD to identify areas with air quality problems. Attainment areas meet air quality standards for criteria air pollutants and nonattainment areas do not meet air quality standards.

Ocotillo Wells SVRA is primarily within the Salton Sea Air Basin (SSAB). The SSAB and Imperial County are designated as a nonattainment area for respirable particulates (i.e., particulate matter with an aerodynamic resistance diameter of 10 micrometers or less [PM_{10}]) for state and federal standards. PM_{10} in Imperial County comes from both natural and manmade sources and may also travel across the international border. To comply with federal guidelines to reduce PM_{10} emissions from manmade sources, publicly owned OHV recreation areas must submit a dust control plan to Imperial County APCD biannually to identify Best Available Control Measures (BACMs). Ocotillo Wells SVRA complies by utilizing BACMs that include but are not limited to dust suppressants, watering, graveling access roads and parking areas, and speed limitation in specific areas.

The portion of Ocotillo Wells SVRA west of the Imperial County border is within the boundary of the San Diego Air Basin (SDAB). The SDAB is designated as nonattainment for PM_{10} by the state and as unclassified by EPA for federal standards. The SDAB is also designated as nonattainment by the state for particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less ($PM_{2.5}$). However, San Diego County APCD has not identified BACMs specific to OHV use.

The SSAB and SDAB are currently designated by state and federal standards as nonattainment areas for the ozone standard. The SSAB and SDAB are in attainment for the remaining criteria air pollutants for both state and federal standards (California Air Resources Board 2011).

2.6.4 Geology

Ocotillo Wells SVRA is located within the Basin and Range Physiographic Province, along the border between the Colorado Desert Geomorphic Province (also called the Salton Trough) and the Peninsular Ranges Geomorphic Province. The Santa Rosa Mountains and Laguna Mountains dominate the horizon west and north of Ocotillo Wells SVRA, and form the easternmost of the Peninsular Ranges (DPR 1982).

The Salton Trough is an extension of the East Pacific Rise as it emerges from the 1,000-mile-long rifting trough occupied by the Gulf of California and continues northwestward to Palm Springs. The Salton Trough has a long history of alternately being filled by freshwater from the Colorado River and being a dry basin. The Salton Sea is within the prehistoric basin of Lake Cahuilla, which was separated from the Gulf of California by silt deposited by the Colorado River approximately 37,000 years ago. The isolated lake basin is believed to have filled and evaporated three to five times between 100 B.P. (Before Present) and A.D. 1700. Soils, fossils (Shell Reef), paleontological resources, and other evidence show that Lake Cahuilla once covered large areas of what is now Ocotillo Wells SVRA. Figure 13 shows the geological features in Ocotillo Wells SVRA.

Seismology

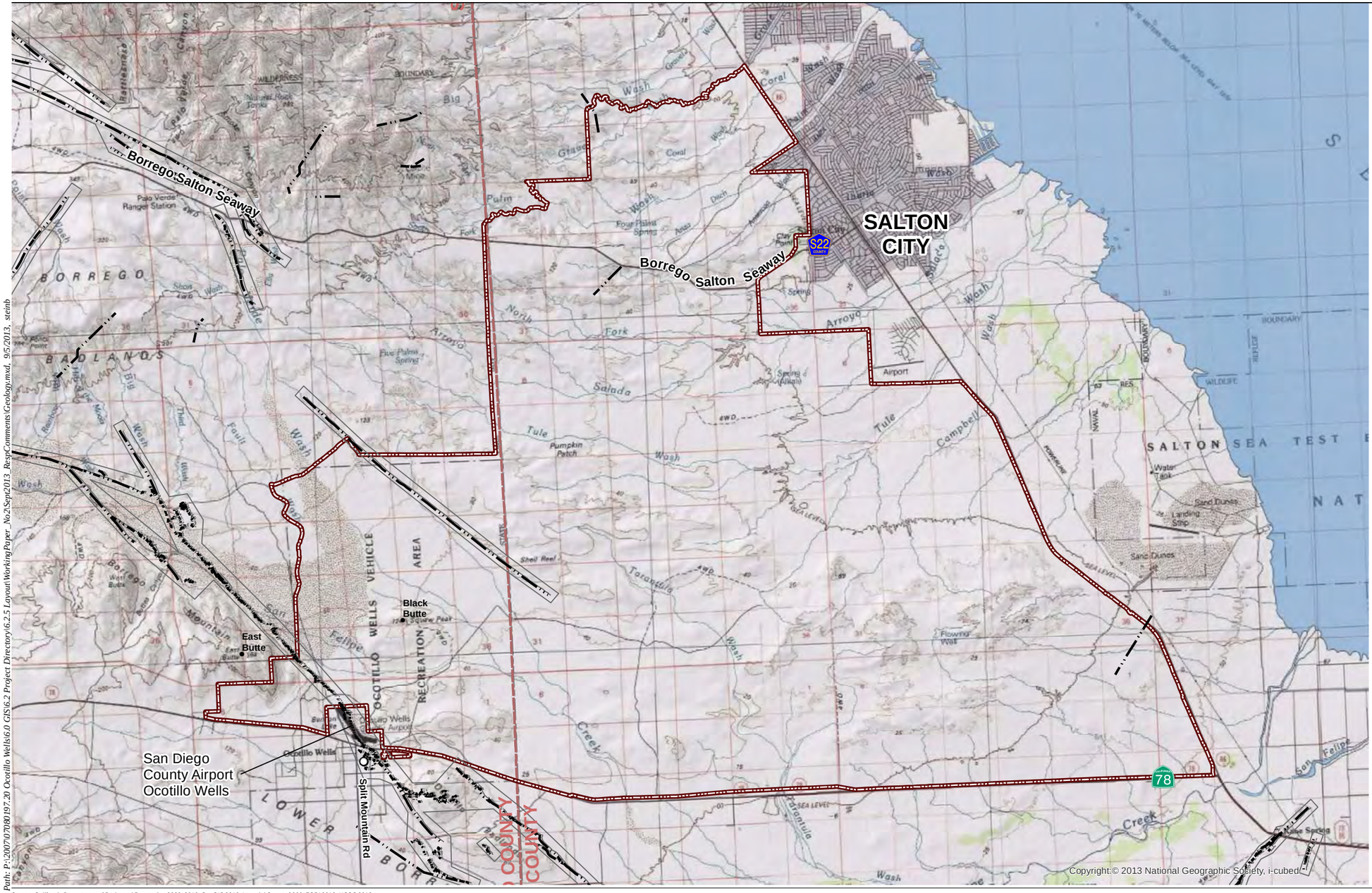
Imperial Valley and its surrounding mountains have a significant history of tectonic deformation, basin subsidence, seismicity, and earthquakes. Regionally active faults and potentially active faults have historically generated damaging earthquakes with epicenters near Ocotillo Wells SVRA. These faults include the Imperial Fault that crosses near the southwestern edge of Ocotillo Wells SVRA, the Superstition Hills Fault about 6 miles southwest, the San Andreas Fault about 20 miles northeast, and the San Jacinto Fault about 5 miles northwest.

Several active faults occur in and near Ocotillo Wells SVRA, including the Imperial and Coyote Creek Faults. Potentially active faults (related to the Coyote Creek Fault) are mapped within an Alquist-Priolo Fault-Rupture Hazard Zone in the southwestern portion of Ocotillo Wells SVRA. Strong to possibly violent ground motion and shaking are possible within the vicinity of Ocotillo Wells SVRA from earthquakes on the Coyote Creek or Imperial Fault. Rockfalls and other landslides occur throughout the region and may occur without warning, triggered by earthquakes and intense rainfall.

Energy and Mineral Resources

Oil drilling, geothermal drilling, and mining have occurred within Ocotillo Wells SVRA. Oil exploration generally proved unfruitful and has not occurred since 1982. Evidence of past drilling remains, including Artesian Well, a prominent point of interest located in the eastern portion of Ocotillo Wells SVRA. Several areas near Ocotillo Wells SVRA are defined as Known Geothermal Resource Areas (California Department of Conservation 2002), and two geothermal exploration wells were drilled in the northeast portion of Ocotillo Wells SVRA as part of the Truckhaven Geothermal Leasing Area (BLM 2007). Both wells are currently capped and fenced. However, exploration and testing of geothermal wells are ongoing and anticipated to continue. Mining is not currently allowed within Ocotillo Wells SVRA, but scattered abandoned mine features can be found (Wright Environmental Services 2010).

A large gold deposit exists several miles to the north of Ocotillo Wells SVRA. No records were found to indicate a precious metal deposit within Ocotillo Wells SVRA, but



Legend

- Ocotillo Wells SVRA Study Area Boundary
- County Boundary
- Fault Line (USGS)
- Alquist Priolo (USGS)
- Peaks

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Source: California Department of Parks and Recreation 2009, 2010; SanGIS 2010; Imperial County 2009; ESRI 2012; USGS 2012

2 1 0 2 Miles

Scale: 1 = 126,720; 1 inch = 2 miles

Note/Disclaimer:
All efforts have been made to ensure the accuracy of the data and information on this map; however, some information may not be accurate. California Department of Parks and Recreation and AECOM assumes no responsibility from use of this information.

Figure 13

Geology

Ocotillo Wells SVRA General Plan and EIR
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the geological environment supports the possibility that one may exist in the subsurface. Abundant industrial minerals such as rock, sand, and gravel occur in the area.

2.6.5 Soils

Twelve soil types have been identified in Ocotillo Wells SVRA. Soils in Ocotillo Wells SVRA consist primarily of Badland-Beeline-Rillito soils, which dominate the northern and eastern areas. Rositas-Carrizo-Orita soils are prevalent in the western and southwestern areas, and Meloland-Vint-Indio is prevalent in the southern and southeastern portions of Ocotillo Wells SVRA. A small area in the northeast is underlain by Gilman-Indio-Coachella soils. Figure 14 shows the various soils that are present in Ocotillo Wells SVRA.

Badland soils in the central part of Ocotillo Wells SVRA consist of barren, eroded soft shale or sandstone broken by numerous gullies. Erosion and sediment yields from badland areas are typically very high. Beeline-Badland-Rillito soils are typically associated with hilly and rocky outcrop areas throughout Ocotillo Wells SVRA; these soils are usually well-drained soils that form on mixed alluvium, fan terraces, and hill slopes. The Badland-Beeline-Rillito soil association is formed on moderately sloping to steep dissected drainages and in mixed alluvium. These relatively barren soils are underlain by sediments and eroded sedimentary rock, including soft sandstone and shale. Soil texture ranges from gravelly loam to sandy loam, and the soils are calcareous. These soils are generally somewhat excessively drained and exhibit slow to medium runoff and moderate permeability (U.S. Department of Agriculture 1973).

Rositas-Carrizo-Orita association soils typically consist of excessively drained, very deep and gravelly sands derived from granitic alluvium. They are often found on alluvial plains and alluvial fans and have gentle to moderate slopes. Runoff is very slow to slow, and the erosion hazard is slight (U.S. Department of Agriculture 1973).

Meloland-Vint-Indio association soils commonly consist of well-drained and moderately well-drained, very deep slit loams that formed in alluvium derived from acid, igneous, and micaceous rocks. These soils are also found on alluvial plains and alluvial fans and

have gentle slopes. Runoff is very slow to slow, and the erosion hazard is slight to none (U.S. Department of Agriculture 1973).

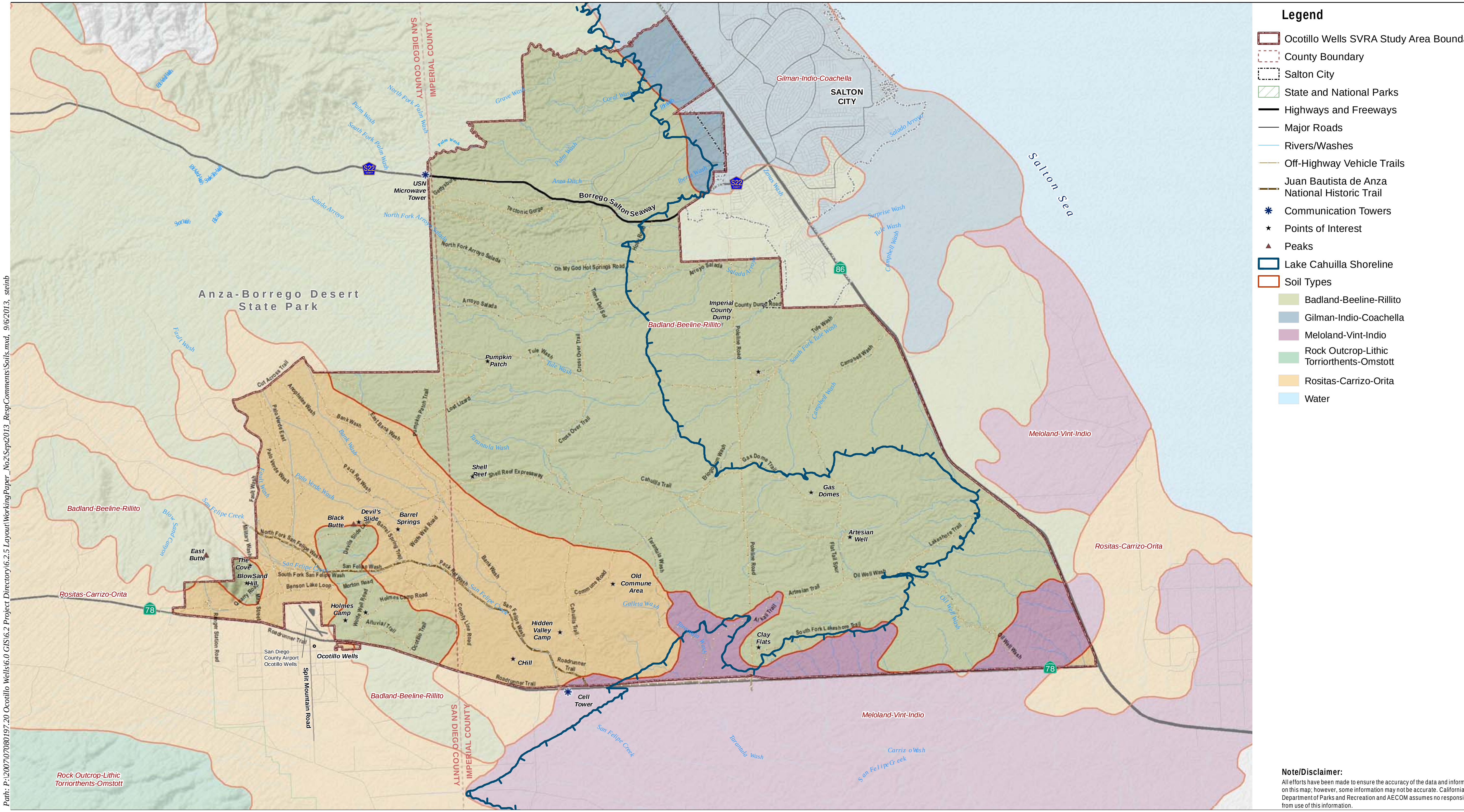
Gilman-Indio-Coachella association soils consist of well-drained, moderately rapid permeable soils in lacustrine basins; sediments are from dominantly igneous rocks. Slopes are gently sloping to nearly level. Runoff is slow to moderate (U.S. Department of Agriculture 1973).

2.6.6 Hydrology and Water Resources

Ocotillo Wells SVRA is within the Colorado River Basin, which contains portions of Mexico, California, Arizona, New Mexico, Utah, Colorado, and Wyoming. Despite its dry climate, this region contains two water bodies of state and national significance: the Colorado River and the Salton Sea. The Salton Sea Transboundary Watershed, which contains the Salton Sea, is the region's priority watershed. The hydrology and water resources within Ocotillo Wells SVRA are shown in Figure 15.

The southern portion of Ocotillo Wells SVRA lies within the Anza Borrego Hydrologic Unit of the Colorado River Basin; the northern portion is within the West Salton Hydrologic Unit of the Colorado River Basin. Surface drainage from Ocotillo Wells SVRA generally flows toward the Salton Sea. Numerous major washes cross the Ocotillo Wells SVRA, including Grave Wash, Coral Wash, Palm Wash, Arroyo Salado, Tule Wash, Tarantula Wash, and San Felipe Wash. Washes are the drainage channels for the surrounding mountains to the northwest of Ocotillo Wells SVRA. After rains, large flows of water transport sand debris at a heavy rate, quickly eroding, or sloughing, a channel. Washes are often used as routes of travel due to flatter terrain and less vegetation.

The southeast corner of Ocotillo Wells SVRA drains south and east through Tarantula Wash and San Felipe Creek, and ultimately to the Salton Sea. The San Felipe Creek Watershed is the largest of all the washes and drainages in Ocotillo Wells SVRA, draining from the Laguna Mountains through much of Anza-Borrego Desert State Park, crossing to the south of SR-78. Approximately 760 square miles of land drain into San Felipe Creek upstream of SR-78. Carrizo Creek joins San Felipe Creek directly south of



Source: California Department of Parks and Recreation 2009, 2010; STATSGO 2006; ESRI 2009

2 1 0 2 Miles

Scale: 1 = 126,720; 1 inch = 2 miles

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Figure 14

Soil Types

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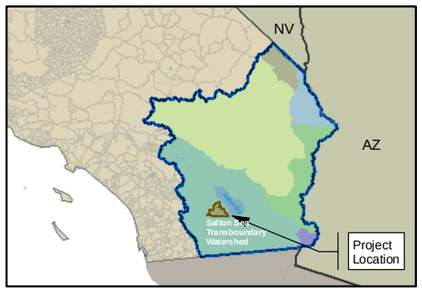
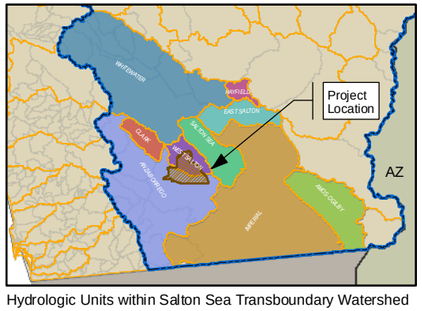
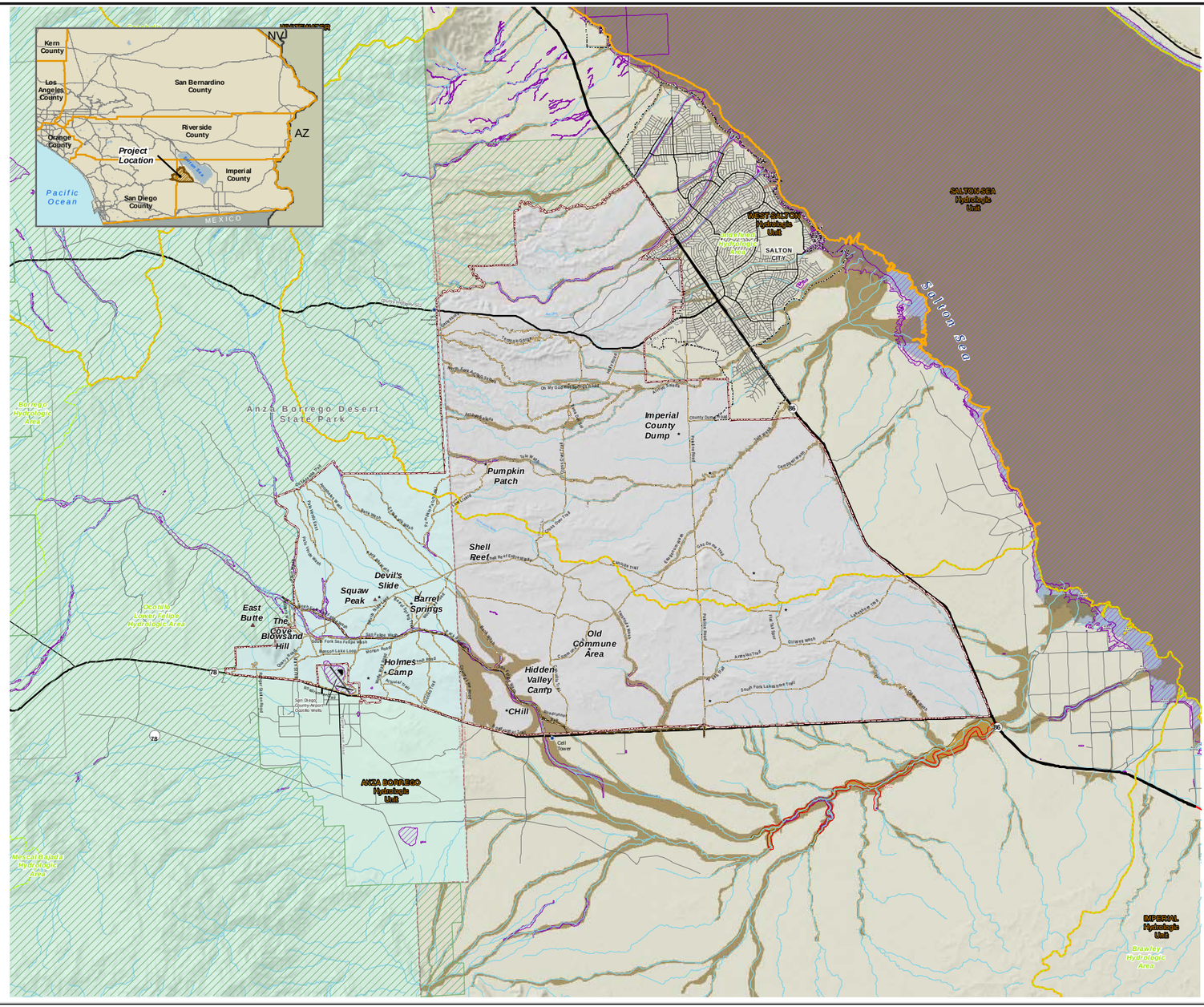
Drainage Basins within Southern California



Watersheds within Colorado River Basin



Hydrologic Units within Salton Sea Transboundary Watershed



Legend

- Ocotillo Wells SVRA Study Area Boundary
- County Boundary
- Salton City
- Highways and Freeways
- Major Roads
- Rivers/Washes
- Off-Highway Vehicle Trails
- Juan Bautista de Anza National Historic Trail
- Towers
- Points of Interest
- Peaks

Hydrology

- Hydrologic Areas
- Hydrologic Units

NHD Flowline

Description

- Artificial Path
- Canal/Ditch
- Connector
- Stream/River: Intermittent
- Wetlands

CNDDB Species Inventory

- Specific Bounded Area

Critical Habitat

- Desert Pupfish Critical Habitat

FEMA Floodplains

- FEMA Floodplains

Note/Disclaimer:

All efforts have been made to ensure the accuracy of the data and information on this map; however, some information may not be accurate. The California State Park or AECOM assumes no responsibility arising from use of this information.

Source: California State Parks 2009, 2010; University of Redlands, The Salton Sea Database Program 2009; ESRI 2009

3 1.5 0 3 Miles

Scale: 1 = 190,080; 1 inch = 3 miles

Figure 15

Hydrology

Ocotillo Wells SVRA General Plan and EIR
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the southeast corner of Ocotillo Wells SVRA. South of SR-78, San Sebastian Marsh, a BLM-designated ACEC, is formed at the junction of the two creeks. San Felipe Creek is usually a dry wash where it crosses Ocotillo Wells SVRA, but it fills intermittently following storms, has extensive channel reinforcement north of SR-78, and is USGS mapped as a steam/river or artificial path.

Numerous Caltrans earthen berms/levees/channel reinforcement (buried gabion and other metal reinforcement) traverse Ocotillo Wells SVRA, particularly near SR-78 and SR-86. These berms/levees generally serve to divert water toward Caltrans culverts, drainages, or bridges, keeping flood flows off of the highways. However, these berms/levees appear to have redirected natural storm flows and exacerbated erosion issues at Ocotillo Wells SVRA, leading to deeply incised channels throughout, particularly along the boundaries with SR-78 and SR-86. Additionally, Caltrans has more recently begun to construct and implement sediment basins adjacent to SR-78 throughout Ocotillo Wells SVRA. These basins are typically between levees and are meant to capture and settle out coarse sediments (DPR 2008a).

Springs and Wells

Multiple springs and seeps exist within Ocotillo Wells SVRA and private property within the Study Area. The most well-known water sources are Four Palms Spring in the northern area (located on private property); Artesian Spring, Tule Spring, and other unnamed seeps in the eastern area; McCain Spring in the eastern central area; and Barrel Spring in the southwest. Additionally within Ocotillo Wells SVRA, one geothermal well is located in the eastern area, two geothermal wells are located in the northern area, and three active water wells are located in the far southwestern area.

Groundwater Quality

Ocotillo Wells SVRA lies within the West Salton Sea Subbasin, the Clark Ocotillo Valley Subbasin, and the Borrego Valley Subbasin, all part of the Colorado River Basin. Beneficial uses of groundwater in these subbasins are municipal and agricultural (California Regional Water Quality Control Board, Region 7, 2006). Groundwater quality in this subbasin is generally of marginal to poor quality. Groundwater has been found in

monitoring wells at the Imperial County landfall within Ocotillo Wells SVRA at depths of 20 to 32 feet below ground surface (BLM 2007).

Surface Water Quality

None of the water bodies within Ocotillo Wells SVRA are listed as impaired per the Clean Water Act 303(d). However, all runoff from Ocotillo Wells SVRA ultimately discharges into the Salton Sea, which is 303(d) listed for a variety of pollutants (State Water Resources Control Board 2006). Beneficial uses for surface water bodies (San Felipe Creek, Tule Creek, and general ephemeral washes) include potential for municipal use; agricultural supply; groundwater recharge; natural or artificial maintenance of surface water quantity or quality; contact and noncontact water recreational activities; warm freshwater habitat; wildlife habitat; and water that supports habitats for rare, threatened, or endangered species (California Regional Water Quality Control Board, Region 7, 2006; California Regional Water Quality Control Board, Region 9, 2007).

2.7 NATURAL RESOURCES

Ocotillo Wells SVRA has a variety of natural resources that are as diverse as its terrain and riding opportunities. Many uniquely specialized plants and animals have adapted to survive in the harsh desert environment. Ocotillo Wells SVRA management works simultaneously to protect riding opportunities and manage resources for the long-term benefit of visitors and the environment in a sustainable manner.

2.7.1 Vegetation Communities

Vegetation communities in Ocotillo Wells SVRA provide habitat to desert wildlife. Vegetation also provides visual interest, unique riding destination points, and wayfinding assistance to OHV users. Some vegetation communities are more rare and sensitive to disturbance than others.

Three broad categories of vegetation communities have been identified in Ocotillo Wells SVRA: wash and woodland vegetation communities, upland scrub vegetation

communities, and other vegetation communities. In addition, a number of individual special-status plant species have also been identified at Ocotillo Wells SVRA.

Dominant species were identified in different locations of Ocotillo Wells SVRA and categorized as closely as possible into the appropriate vegetation community following *A Manual of California Vegetation* (California Native Plant Society Press 2009). Classification of vegetation proved difficult in a number of locations within Ocotillo Wells SVRA. In some locations, the classifications were slightly modified or generalized from those listed in the manual to better suit the vegetation of Ocotillo Wells SVRA and the planning level analysis conducted for the General Plan.

Figure 16 shows the locations of the different vegetation communities in Ocotillo Wells SVRA. Vegetation communities were mapped into a GIS database based on field visits, site photos, aerial photos, and previous studies. The map represents a general overview of the locations of the vegetation communities discussed below.

Wash and Woodland Vegetation Communities

Wash and woodland scrub vegetation communities are characterized by desert trees and larger shrubs in relatively dense communities that thrive in washes and wetland areas in various locations of Ocotillo Wells SVRA. This category includes the vegetation communities discussed below.

Desert wash scrub: This general name refers to a variable vegetation community that occurs in and along wash areas. Major components are alkali goldenbush (*Isocoma acradenia*), catclaw acacia (*Acacia greggii*), Galleta grass (*Hilaria rigida*), cheese bush (*Ambrosia salsola*), arrow weed (*Pluchea sericea*), indigo bush (*Psorothamnus schottii*), and nonnative tamarisk (*Tamarix ramosissima*), with some small component of smoke tree (*Psorothamnus spinosus*). It may also include desert willow (*Chilopsis linearis*), mesquite (*Prosopis glandulosa*), and palo verde (*Parkinsonia floridum*) in some locations. This vegetation community is highly variable and occurs in some locations with a sparse cover so that barren wash surfaces exist between the shrubs and small trees. The shrubs are often concentrated along the edges of the washes. In a very few

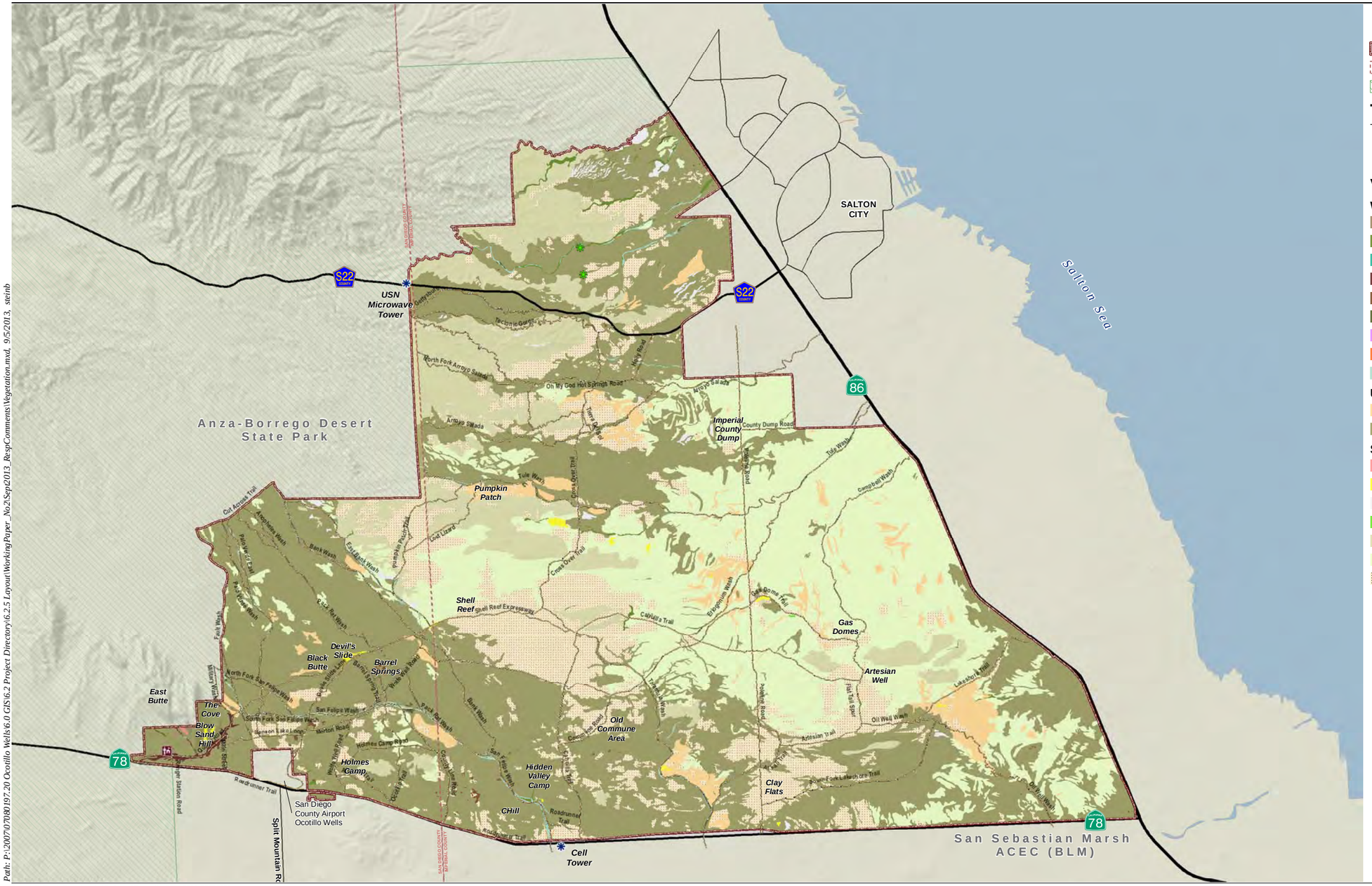
locations, mud holes that occasionally hold water were identified. These mud holes were included in the desert wash scrub category.

Desert willow woodland: This community occurs in only a few locations, mainly near the southern edge of Ocotillo Wells SVRA, north of major lines of tamarisk trees (tamarisk is actively being eradicated). The dominant species in this community is desert willow (*Chilopsis linearis*), and associated species include cheese bush and arrow weed. Desert willow woodland may occur in other wash locations where it may be classified as desert wash scrub.

Saltgrass (*Distichlis spicata* grassland): This community is dominated by saltgrass that grows in patches where soil moisture is near the surface. In Ocotillo Wells SVRA, this occurs in the Gas Dome area on ridges, other slopes that are moist with alkali conditions, and a few wash locations where the moisture is near the surface and surface water stands for a significant part of the year.

Palo verde–ironwood woodland (*Parkinsonia floridum–Olneya tesota* woodland): Observed in several locations throughout Ocotillo Wells SVRA, the largest mapped area of this vegetation community is located in the large wash that is east and west of the Discovery Center. Palo verde was observed in several other locations and, in a few of those sites, created a large enough patch to be identified on the vegetation communities map. This community occurs predominately in the lowland areas of Ocotillo Wells SVRA associated with wash features. However, palo verde may also grow on upland areas such as the mesa near Grave and Coral Washes and along the washes northwest of Devil's Slide. Associated species may include creosote bush (*Larrea tridentata*), desert willow, and cheese bush. Some areas of palo verde–ironwood woodland may be included in the desert wash scrub vegetation community.

Mesquite bosque (*Prosopis glandulosa*): Within Ocotillo Wells SVRA, mesquite is most commonly associated with dune areas and is sometimes mapped as mesquite dune formations. Mesquite dune formations occur in a number of locations in the northern and southeastern portions of Ocotillo Wells SVRA, often growing in rounded rosette formations in the midst of sandy soils. Mesquite also grows in arroyos and washes, and



Legend

- Ocotillo Wells SVRA Study Area Boundary
- County Boundary
- State and National Parks
- Highways and Freeways
- Major Roads
- Ranger Station
- Communication Towers

Vegetation Communities

Wash and Woodland Vegetation

- Desert Willow Woodland
- Desert Wash Scrub
- Saltgrass
- Palo Verde Ironwood Woodland
- Mesquite Bosque
- Smoke Tree Woodland
- American Bulrush
- Tamarisk Thickets
- Unvegetated Wash

Upland Scrub Vegetation

- Creosote Bush Scrub Sparse
- Creosote Bush Scrub

Sparse Vegetation Communities

- Desert Holly Scrub
- Sandy Soils
- Barrens
- Dune Scrub
- Badland Scrub
- Four Winged Saltbush – Burro-Bush Scrub
- Unvegetated
- California Fan Palm Woodland

Note/Disclaimer:
All efforts have been made to ensure the accuracy of the data and information on this map; however, some information may not be accurate. California Department of Parks and Recreation and AECOM assumes no responsibility from use of this information.

Path: P:\2007\07080197.20 Ocotillo Wells\6.0 GIS\6.2 Project Directory\6.2.5 Layout\WorkingPaper_No2\Sept2013_RespComments\Vegetation.mxd, 9/5/2013, steinb

Source: California Department of Parks and Recreation 2009, 2010; ESRI 2009

2 1 0 2 Miles

Scale: 1 = 126,720; 1 inch = 2 miles

Figure 16

Vegetation Communities

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may be included in the desert wash woodland category in locations where it is not growing in the characteristic rounded formations. This vegetation community is dominated by mesquite, but has smoke tree, indigo bush, cheese bush, alkali goldenbush, and arrow weed as associated species.

Smoke tree woodland (*Psorothamnus spinosa* woodland): Associated with the larger or wetter washes and large areas of sheetflow, smoke trees grow in groups or as individuals in a number of the major washes in Ocotillo Wells SVRA. Associated species are cheese bush, catclaw acacia, four-winged saltbush (*Atriplex canescens*), creosote bush, and burrobush (*Ambrosia dumosa*). Smoke tree woodland may also be included in the desert wash scrub category in areas where it was difficult to specifically identify it to species level.

American bulrush (*Schoenoplectus americanus* alliance): This community is composed of American bulrush growing in a location along the Tule Wash where the soil is moist all year.

Tamarisk thickets (*Tamarix* semi-natural shrubland stands): Tamarisk is intermixed in the wash vegetation in a number of locations throughout Ocotillo Wells SVRA. In a few locations, it is dense enough to be mapped. The majority of the plants are salt-cedar tamarisk (*Tamarix ramosissima*), but, in a few locations, larger athel tamarisk (*Tamarix aphylla*) were planted in rows. Ocotillo Wells SVRA has implemented eradication efforts to target all of the salt cedar and some athel tamarisks within the Study Area.

Unvegetated wash: Throughout Ocotillo Wells SVRA, various washes and drainages are present that have been scoured by flash floods that frequently occur in the desert. In some cases, the center of the wash may be unvegetated with the sides supporting desert wash scrub or other wash vegetation.

Upland Scrub Vegetation

Creosote bush scrub (*Larrea tridentata* scrub): This is one of the dominant vegetation communities in Ocotillo Wells SVRA. It has a number of forms that can be distinguished by its variable mixtures of associated species. Within Ocotillo Wells SVRA, due to the area's dryness, the density of shrubs is low and very low in a number of locations. While

other species do grow with creosote bush, creosote bush is the primary indicator. Associated species include burrobush, incienso (*Encelia farinosa*), four-winged saltbush, desert holly (*Atriplex hymenelytra*), ocotillo (*Fouqueria splendens*), cheese bush, common desert thorn (*Lycium brevipes*), and silver cholla (*Cylindropuntia echinocarpa*).

Creosote bush scrub sparse (*Larrea tridentata* scrub sparse): This community generally has the same species composition as the creosote bush scrub of regular density; however, it is very sparse and may appear unvegetated or is intermixed with some naturally barren areas. Large sections of the eastern and southern portions of Ocotillo Wells SVRA have low-density creosote bush.

Other Vegetation Communities

A number of vegetation communities in Ocotillo Wells SVRA occur in isolated locations or are naturally sparse vegetation communities. These communities include a diverse range of species that can be found throughout Ocotillo Wells SVRA.

Four-winged saltbush–burrobush scrub (*Atriplex canescens–Ambrosia dumosa* scrub): In a number of locations, such as along the Shell Reef Expressway and in major portions of the northeast and eastern portions of Ocotillo Wells SVRA, four-winged saltbush is the dominant and, in many areas, the only, shrub present. Next to creosote bush, four-winged saltbush is probably the most widespread and common plant in Ocotillo Wells SVRA. Burrobush scrub is most commonly intermixed in this community in areas of the northwest and eastern portions of Ocotillo Wells SVRA. This is the dominant vegetation community where creosote bush is absent and the terrain is not broken up into badlands. Desert holly is also found in portions of this community. While this vegetation community may not include many shrubs, a number of annuals do occur, including desert trumpet (*Eriogonum inflatum*), desert sunflower (*Geraea canescens*), desert pincushion (*Chaenactis carphoclinia*), several species of popcorn flower (*Cryptantha* spp.), Parish's gold poppy (*Eschscholzia parishii*), and others.

Desert holly scrub (*Atriplex hymenelytra* shrubland): This is often a very sparse vegetation community that grows on the edge of badland and mudhill formations, as

well as the edges of gravel terraces. It may occur as the only shrub in these areas, or it may occur with very sparse creosote bush and four-winged saltbush.

Dune scrub (*Eriogonum deserticola scrub*): Although limited in area, this community appears in a variety of locations throughout Ocotillo Wells SVRA on the sandy, dune soils. Associated species include four-winged saltbush, Russian thistle (*Salsola kali*), and creosote bush. A number of annual and herbaceous perennials also occur in these locations, including desert lily (*Hesperocallis undulata*) and desert sunflower.

Badland scrub: Typical species found on mudhill and badland formations are four-winged saltbush, desert holly, and creosote bush. In some locations, Orcutt's aster (*Xylorhiza orcuttiana*) grows on the edges of the gravel terraces on the lower slopes of the badland formations. In all locations, the density of shrubs is very low, and individuals are spaced widely apart.

California fan palm woodland (*Washingtonia filifera* woodland): California fan palms occur in two locations of Ocotillo Wells SVRA in very low numbers. At Four Palm Spring, less than six grown trees exist; a few are not living, although seedlings are reproducing. In one other location, a single tree stands alone. These are not fully functional woodlands, but they are notable as representatives of a unique vegetation community.

Sandy soils: Some locations within Ocotillo Wells SVRA are covered with sandy soils and a few shrubs. The *Eriogonum* vegetation and some locations with mesquite occur on sandy soils. Significant areas mapped as creosote bush scrub also occur on sandy soils. However, this classification applies to areas that are not well vegetated and are distinguished from the badland and barren categories due to the sandy nature of the soil. Annual and herbaceous perennials found on this soil category include desert sand verbena (*Abronia villosa*) and evening primrose (*Oenothera deltoides*).

Naturally barren: This is a general term applied to portions of Ocotillo Wells SVRA that, under natural conditions, are generally devoid of shrubs. However, on a number of these apparently barren mudhill, gravel pavement, and badland areas, vegetation does exist, but it consists of annual ephemeral species; the density and abundance of the

plants vary depending on rainfall. The most common plant found in these areas is desert trumpet, but a number of other annuals occur in barren areas, including desert sunflower, several species of popcorn flower, desert lantern (*Camissonia boothii*), Peirson's evening primrose (*Camissonia claviformis*), bristly Langloisia (*Langloisia setosissima*), Parish's gold poppy, and ghost flower (*Mohavea confertiflora*).

Unvegetated: There are large portions of Ocotillo Wells SVRA that primarily lack vegetation. Many of these areas are popular for OHV use and have been used historically as homesteads, for oil and mineral extraction, and for military training. It cannot be determined whether these areas were sparsely or naturally unvegetated prior to anthropogenic uses.

Special-Status Plant Species within Ocotillo Wells SVRA

Special-status plant species are those that are included on state or federal lists of endangered, threatened, sensitive, or otherwise protected species. Currently, five special-status plant species are known to occur within Ocotillo Wells SVRA:

- Thurber's pilostyles, Apodanthaceae (*Pilostyles thurberi*)
- Peirson's pincushion, Asteraceae (*Chaenactis carphoclinia* var. *peirsonii*)
- Orcutt's woody aster, Asteraceae (*Xylorhiza orcuttii*)
- Ashen cryptantha, Boraginaceae (*Cryptantha costata*)
- Salton milkvetch, Fabaceae (*Astragalus crotalariae*)

Additionally, mecca-aster (*Xylorhiza cognate*) is considered to have a high potential for occurrence on the site, but is not known to occur.

Sensitive Vegetation Communities within Ocotillo Wells SVRA

Two sensitive vegetation communities are known to occur within Ocotillo Wells SVRA. Mesquite dune habitat occurs sporadically throughout Ocotillo Wells SVRA and is a critically important habitat. It consists of small mounds of sand called hummocks, which are held in place by large vegetation and is easily damaged. Springs are also considered a sensitive habitat, as they provide a critical source of water for many desert

species. Ocotillo Wells SVRA management protects a number of mesquite dune and spring habitats from damage by enclosing them with protective fencing.

Invasive Nonnative Species within Ocotillo Wells SVRA

The primary nonnative species of concern are athel tamarisk and salt-cedar tamarisk. Athel tamarisk trees are very large and can preclude other species (both native and nonnative) from growing near or under their canopy. The deep taproots produced by the tamarisk trees are capable of depleting the water table and affecting native vegetation up to 100 feet away. Ocotillo Wells SVRA management has implemented a parkwide eradication program to remove tamarisk trees as funding allows.

Invasive herbaceous species are also known to occur. The 2008 Annual Habitat Monitoring Report noted that Sahara mustard (*Brassica tournefortii*) and Paulsen's Russian thistle (*Salsola paulsenii*) continued to advance in various areas of Ocotillo Wells SVRA (DPR 2008a). Paulsen's Russian thistle is found in sandy depressions but also appears on the mudhills. Sahara mustard is found throughout Ocotillo Wells SVRA, especially in disturbed areas. Both species are invasive nonnative species. Ocotillo Wells SVRA participates in the Sahara mustard eradication program initiated in Borrego Valley.

Other invasive nonnative species found in Ocotillo Wells SVRA are as follows:

- Mexican fireweed (*Kochia scoparia*)
- London rocket (*Sisymbrium irio*)
- Foxtail chess (*Bromus rubens*)
- Schismus grass (*Schismus barbatus*)
- Wild oats (*Avena fatua*)
- Bermuda grass (*Cynodon dactylon*)

2.7.2 Wildlife

The desert is home to diverse and interesting wildlife species. Visitors often see many types of birds, reptiles, bats, insects, and mammals. Ocotillo Wells SVRA is a designated California Watchable Wildlife Viewing Site. Ocotillo Wells SVRA also serves

as an important wildlife corridor and habitat linkage to other public lands in the vicinity, including Anza-Borrego Desert State Park and lands managed by BLM.

Survival in the hot, dry desert is not easy, and wildlife species depend on the ability to locate water, shade, and food.

Birds

Many species of migratory and nesting birds can be observed at Ocotillo Wells SVRA, including yellow and yellow-rumped warblers (*Dendroica petechia* and *Dendroica coronate*), Swainson's hawk (*Buteo swainsoni*), turkey vulture (*Cathartes aura*), roadrunner (*Geococcyx californianus*), raven (*Corvus corax*), and burrowing owl (*Athene cunicularia*). Golden eagles (*Aquila chrysaetos*) have also been spotted at Ocotillo Wells SVRA.

Reptiles

Reptiles are common throughout Ocotillo Wells SVRA. The zebra-tailed lizard (*Callisaurus draconoides*), desert iguana (*Dipsosaurus dorsalis*), and sidewinder (*Crotalus cerastes laterorepens*) are common, and are often observed in the early to mid-morning. Banded geckos (*Coleonyx variegatus variegatus*) and side-blotched lizards (*Uta stansburiana stejnegeri*) are also quite common. The coachwhip snake (*Masticophis flagellum piceus*) and shovel-nosed snake (*Chionactis occipitalis annulata*) are also present in the area. The flat-tailed horned lizard (*Phrynosoma mcallii*) is the most numerous special-status species in Ocotillo Wells SVRA.

Mammals

Mammal species observable at Ocotillo Wells SVRA include the kit fox (*Vulpes macrotis*), coyote (*Canis latrans*), kangaroo rat (*Dipodomys deserti*), black-tailed jackrabbit (*Lepus californicus*), bobcat (*Felis rufus*), desert pocket mouse (*Chaetodipus penicillatus*), pocket gopher (*Thomomys bottae*), and many other species.

Bat species detected on the northwestern portion of Ocotillo Wells SVRA include the California bat (*Myotis californicus*), canyon bat (*parastrellus hesperus*), Mexican free-tailed bat (*Tadarida brasiliensis*), and western yellow bat (*Lasiurus xanthinus*).

Special-Status Animal Species within Ocotillo Wells SVRA

Special-status species are generally defined as those species that are legally protected or otherwise considered sensitive by federal, state, or local resource conservation agencies and organizations. Special-status bird, reptile, and mammal species are known to occur at Ocotillo Wells SVRA. Although no species considered endangered or threatened as defined by California or federal law were observed during a 2009 survey, species identified as special status were observed, specifically those on the California Department of Fish and Wildlife's Species of Special Concern priority list.

Birds

The golden eagle, Swainson's hawk, northern harrier (*Circus cyaneus*), loggerhead shrike (*Lanius ludovicianus*), Bendire's thrasher (*Toxostoma bendirei*), burrowing owl, and crissal thrasher (*Toxostoma crissale*) have all been observed on-site during seasonal migrations but are not known to nest on-site. The prairie falcon (*Falco mexicanus*) and Le Conte's thrasher (*Toxostoma lecontei*) are known to nest within Ocotillo Wells SVRA.

Mammals

No designated Peninsular bighorn sheep (*Ovis canadensis*) critical habitat exists inside Ocotillo Wells SVRA (USFWS 2009); however, seasonal presence within the northern portion of Ocotillo Wells SVRA has been observed (Cashen 2011). American badger (*Taxidea taxus*) has been observed at Barrel Springs and near other water sources. Ring tail cats (*Bassariscus astutus*) have also been observed at Ocotillo Wells SVRA.

Reptiles

Colorado Desert fringe-toed lizard (*Uma notate*) has been observed in sandy portions of Ocotillo Wells SVRA.

Flat-tailed horned lizard is currently listed as a special-status species in Ocotillo Wells SVRA, and significant management attention is given to this species. Ocotillo Wells SVRA participates in the Interagency Coordinating Committee and Management Oversight Group to help address management of this species. It was recently

determined by the U.S. Fish and Wildlife Service that the species should not be listed as a threatened species under the Endangered Species Act (USFWS 2011).

Flat-tailed horned lizard has been documented in numerous locations and a variety of habitats in Ocotillo Wells SVRA. Past studies indicate that flat-tailed horned lizard requires fine sand to escape the desert heat, although it has been found in firm soil areas. Important sites for flat-tailed horned lizard include the enclosures at Barrel Springs, Gas Dome dunes, and Eriogonum Wash. These areas are also important for Colorado Desert fringe-toed lizard.

2.8 CULTURAL RESOURCES

Prehistoric and historic resources have been found at Ocotillo Wells SVRA. Resources from known archaeological sites have been documented and inventoried by California State Parks archaeologists and historians as part of cultural resource surveys. Yet-to-be-discovered archaeological sites also likely exist within Ocotillo Wells SVRA.

2.8.1 Ethnographic Background

The first well-documented distinct cultural group to occupy the Ocotillo Wells area was the San Dieguito-Lake Mojave native people, approximately 12,000 to 7000 B.P. At that time, the regional climate was cooler and moister than it is today. Evidence of these people has been found in artifacts such as percussion-flaked cores and flaked-based tools such as crescentics, choppers, planes, and scrapers, as well as leaf-shaped projectile points and the distinctive Lake Mojave and Silver Lake projectile points.

Two major periods of occupation within the prehistory of the area surrounding present-day Ocotillo Wells SVRA are the Archaic period (7000 B.P. to 1500 B.P.) and the Late Prehistoric period. The Archaic period saw an increase in groundstone tools. The Patayan or Late Prehistoric period, from approximately 1500 B.P. to the historic period, marked economic and settlement pattern changes. Ancient Lake Cahuilla covered much of Imperial Valley at this time, and it is thought to have attracted people from the Colorado River. Horticulture and subsistence farming began, and people began to make

pottery and use tools and weapons. Lake Cahuilla experienced several fill and recession episodes before it finally dried up around 400 B.P.

In historic times, the arid region of the Colorado Desert supported relatively small groups of people, including the Kamia and the Cahuilla. The Kamia are one of three closely related Native American groups that reside in Southern California who are collectively referred to as the Kumeyaay. Present-day Kamia live in the deserts east of San Diego, closest to Ocotillo Wells SVRA. Their traditional territory included what is now known as the Southern Imperial Valley, from the southern portion of the Salton Sea to past the international border with Mexico. They may have had seasonal settlements along the southern shores of Lake Cahuilla near the current location of Ocotillo Wells SVRA. The Kamia survived by hunting and gathering and through floodplain horticulture, using small dams and ditches for irrigation. North of the Kamia lived the Cahuilla, with whom they interacted, visited, and traded. Primary desert Cahuilla settlement areas were in the Coachella Valley as far south as the Salton Sea. Archaeological evidence suggests that ancestral Cahuilla groups may have maintained permanent or semi-permanent settlements along the northern Lake Cahuilla shoreline when the lake was full. The Cahuilla focused on gathering plant foods to survive the harsh desert climate.

2.8.2 Historic Background

As early as 1539, the Spanish began to explore parts of California. However, Spanish exploration for the next 200 years was intermittent in the Colorado Desert area, as it was considered remote and difficult to access. The first recorded explorer, Father Eusebo Francisco Kino, began to establish a string of missions, reaching the Colorado River in 1702. In 1775, Spanish border captain Juan Bautista de Anza entered the area following the San Felipe Creek on his way to Monterey. Approximately 12 miles of that trail runs through the southwestern area of Ocotillo Wells SVRA. In the next century, most travel from Arizona to San Francisco followed de Anza's route, including settlers on their way to California to look for gold. From the 1840s through the 1880s, the U.S. cavalry established a series of camps and forts throughout Arizona, Nevada, and the California desert.

Significant economic development of the Colorado Desert region began in the 1870s and came to fruition in the early part of the 20th century. Development was dependent largely on two things: transportation and water. A transportation system came in 1872, with the construction of the Southern Pacific Railroad from Los Angeles to present-day Indio and, eventually, Yuma. The second transcontinental railroad was completed in 1881, providing settlers relatively quick and easy access to the region. The San Diego and Arizona Eastern Railroad ran from 1919 to 1983, connecting San Diego and Imperial Counties.

Development in the Borrego Valley area began in 1910. In the 1920s, it started in Ocotillo Wells as settlers moved into the Imperial Valley region. Albert Toner, a World War I veteran, homesteaded 160 acres west of Benson Dry Lake and became a turkey rancher with Elbert Benson in the early 1930s. In 1935, the ranch was moved and eventually ceased operations. The property remained in the Toner family until the 1970s. The 105-acre Toner property is currently owned by DPR and is part of Ocotillo Wells SVRA.

Oil Exploration

The demand for crude oil as a fuel in North America and around the world drew prospectors to the area during the early 1900s. Attempted oil drilling was abandoned, however, and wells were shut down due to lack of commercially viable oil, with the last well shut down in 1982. A few access roads constructed during this time are still in use today, such as Wolfe Well Road and part of the southern leg of Poleline Road. Remnants of other roads can also be found in Ocotillo Wells SVRA. Mineral rights and private property still exist within Ocotillo Wells SVRA.

Modern Era

Additional interest in the Ocotillo Wells SVRA area was garnered beginning in the 1930s when Hollywood production companies filmed a number of well-known movies there. Around the same time, and continuing up to World War II, some oil and gas well drilling occurred in what is now Ocotillo Wells SVRA. In the 1940s, the military used the Ocotillo Wells area for training and testing. After World War II, the military sold its 4x4 vehicles to civilians, which began the modern history of the area for OHV recreation.

2.8.3 Archaeological and Historic Archaeological Resources

Numerous surveys and site-level investigations have been conducted at Ocotillo Wells SVRA, and more than 1,200 artifacts are recorded in the Cultural Resource Management Database on file at Ocotillo Wells SVRA. The majority of archaeological sites identified are those related to the Lake Cahuilla shoreline; artifacts include those from habitations of prehistoric and native peoples. Historic archaeological resources at Ocotillo Wells SVRA include remnants from settlements, roads, oil wells and development, and military activities. Some historic archaeological resources are identified to the public with interpretive signage, such as those at Artesian Well. Few remnants of historic structures remain in Ocotillo Wells SVRA and are usually associated with wells, bunkers, or World War II structures, including roadways.

Juan Bautista de Anza National Historic Trail and Los Puertecitos

Approximately 12 miles of the Juan Bautista de Anza National Historic Trail passes through Ocotillo Wells SVRA. The overall trail stretches from Nogales, Arizona, to the Presidio of San Francisco, and marks the journey made by de Anza in 1775 and 1776 to establish a new, secure route from Sonora up to Alta California. The trail generally follows San Felipe Creek and Coyote Creek. *Los Puertecitos* ("the little passes") was a campsite named by de Anza, and it was located adjacent to Ocotillo Wells SVRA on the south side of SR-78, approximately 1.6 miles east of Split Mountain Road. *Los Puertecitos* is designated as California Historical Landmark No. 635.

2.8.4 Paleontological Resources

Paleontological resources (i.e., fossils) are the buried remains and/or traces of prehistoric organisms (i.e., animals, plants, and microbes). Body fossils such as bones, teeth, shells, leaves, and wood, as well as trace fossils such as tracks, trails, burrows, and footprints, are found in the geological deposits (formations) within which they were originally buried. The primary factor determining whether an object is a fossil is not how the organic remains or trace is preserved (e.g., "petrified"), but, rather, how old the organic remain or trace is. Although it is assumed that fossils must be older than approximately 10,000 years (i.e., the generally accepted end of the last glacial period of

the Pleistocene Epoch), organic remains of early Holocene age can also be considered to represent fossils because they are part of the record of past life.

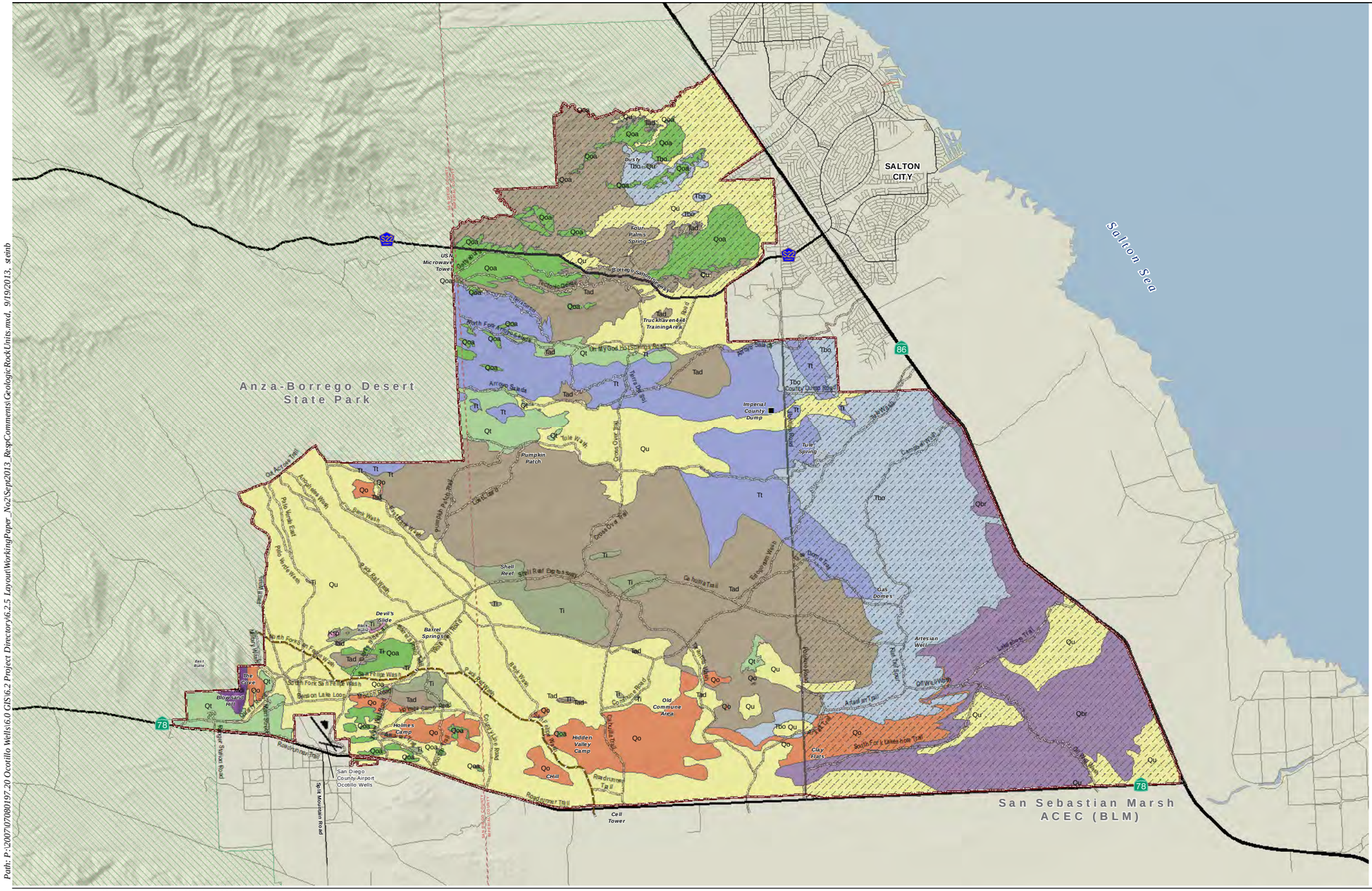
The documented paleontological resources of Ocotillo Wells SVRA consist of fossil remains representing a variety of taxonomic groups, including marine benthic invertebrates (e.g., oysters, scallops, clams, snails, barnacles, and crabs), freshwater benthic invertebrates (e.g., mussels and snails), freshwater vertebrates (e.g., bony fish and turtles), terrestrial plants (e.g., woodland trees, cone-bearing trees, and palms), and terrestrial vertebrates (e.g., turtles, horses, llamas, and mammoths) (San Diego Natural History Museum 2012). These fossils are preserved in a series of geological rock units that record dramatic changes in the local environment, ecosystem, and climate spanning approximately 7 million years. Potential fossil-bearing geological rock units (formations) are widespread within Ocotillo Wells SVRA, and range in age from Late Miocene (approximately 7 million years ago [Ma; mega annum]) through the entire Pliocene (approximately 5.3 to 2.5 Ma) and most of the Pleistocene (approximately 2.5 Ma to 11,000 years ago) and Holocene (11,000 years ago to the present). Figures 17 and 18 identify the geological rock units and the fossil-bearing potential (paleontological resource sensitivity) within Ocotillo Wells SVRA.

2.9 AESTHETIC RESOURCES

The desert landscape is the predominant aesthetic resource in Ocotillo Wells SVRA, and the unique sights, sounds, smells, and textures of the landscape enrich the beauty and experience of visiting Ocotillo Wells SVRA.

2.9.1 Scenic Resources

Ocotillo Wells SVRA presents a dramatic undeveloped desert landscape set within views of the Santa Rosa Mountains to the northwest and the Salton Sea to the southeast. Visual relief is provided by mudhills, escarpments, washes, and peaks that punctuate the generally flat, gently sloping desert terrain. Topographic features provide visual clues to help orient OHV users. Unique rock formations and sedimentation in washes are part of the natural landscape.



Legend

Geological Rock Units

Note/Disclaimer:
All efforts have been made to ensure the accuracy of the data and information on this map; however, some information may not be accurate. California Department of Parks and Recreation and AECOM assumes no responsibility from use of this information.

Source: California Department of Parks and Recreation 2009, 2010; SanGIS 2010; Imperial County 2009; ESRI 2009

2 1 0 2 Miles

Scale: 1 = 126,720; 1 inch = 2 miles

Figure 17

Geologic Rock Units

Ocotillo Wells SVRA General Plan and EIR
Working Paper #2

September 2013

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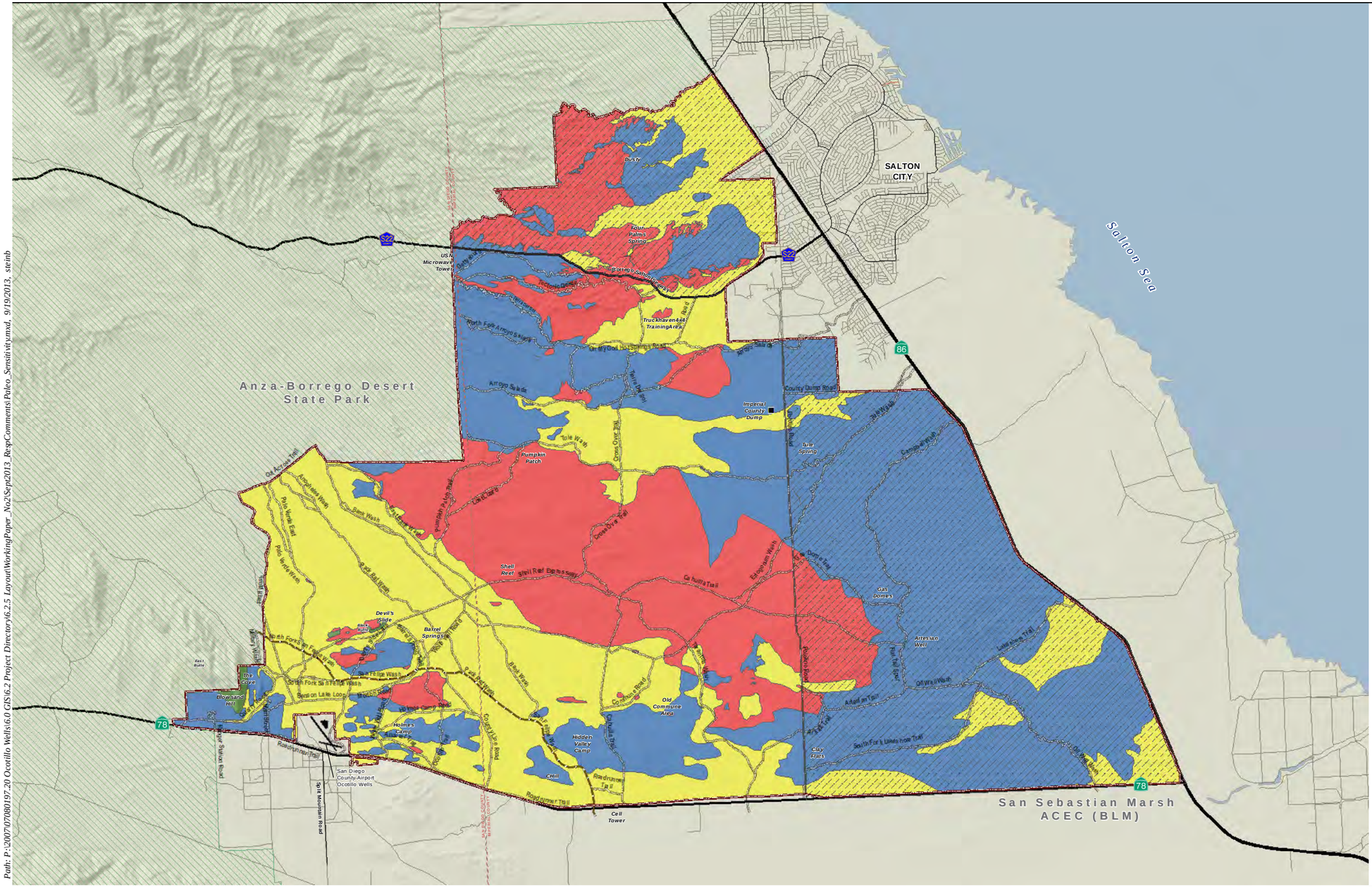

Legend

- Ocotillo Wells SVRA Study Area Boundary
- Imperial County Dump
- Trail Riding Only Areas
- County Boundary
- State and National Parks
- Juan Bautista de Anza National Historic Trail
- Ocotillo Wells Airport
- Off-Highway Vehicle Trails
- Water Bodies

Paleontological Potential (PFYC)

- High (Class 4)
- Moderate/Unknown (Class 3)
- Low (Class 2)
- Very Low (Class 1)

Path: P:\2007\07080197.20 Ocotillo Wells\6.0 GIS\6.2 Project Directory\6.2.5 Layout\WorkingPaper_No2\Sept2013_RespComments\Paleo_Sensitivity.mxd, 9/19/2013, steinb

Source: California Department of Parks and Recreation 2009, 2010; SanGIS 2010; Imperial County 2009; ESRI 2009

2 1 0 2 Miles

Scale: 1 = 126,720; 1 inch = 2 miles

Note/Disclaimer:
All efforts have been made to ensure the accuracy of the data and information on this map; however, some information may not be accurate. California Department of Parks and Recreation and AECOM assumes no responsibility from use of this information.

Figure 18

Paleontological Resource Sensitivity

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Ocotillo Wells SVRA includes unique vegetation that provides color and texture, especially the annual wildflowers that add brightness to the tan, red, and gray-toned desert. Isolated palm trees provide a unique view. Desert wildlife can be an exciting distraction, from crawling insects to soaring birds and camouflaged reptiles, as well as mice, bats, coyotes, foxes, and badgers.

The undeveloped landscape and distance from major urban areas make Ocotillo Wells SVRA a popular place for stargazing. The faint lights from the highways and the rural communities that border Ocotillo Wells SVRA provide the nearest constant source of illumination. A flashing red light from two cell phone towers can be seen from far away at night, providing a navigation point for nighttime OHV use.

2.9.2 Auditory Resources

Sounds of engines are common at Ocotillo Wells SVRA. Each different type of OHV has its own pitch; the rumble of a 4x4 vehicle and the buzz from a dirt bike are easy to distinguish. The whish of traffic from the nearby highways can also be heard, especially on a still night. Occasionally, small aircraft operating out of Ocotillo Wells Airport can be heard. U.S. Marine Core Osprey, Apache, and Huey helicopters regularly land at the airport. Other military craft and emergency rescue helicopters are sometimes heard flying over Ocotillo Wells SVRA.

Camping at Ocotillo Wells SVRA comes with its own set of sounds, like conversations and music at camp. Sometimes Ocotillo Wells SVRA is very quiet. At other times, small gas-powered generators from RVs can be heard as visitors rise in the morning and turn-in for the night. It should be noted that there are peace and quiet noise regulations that are applicable to Ocotillo Wells SVRA, as stated in California Code of Regulations Section 4320.

Sound-Sensitive Land Uses

Sound-sensitive land uses are generally considered to include those uses where sound exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of an intended purpose. Residential dwellings are of primary

concern because of the potential for increased and prolonged exposure of individuals to loud noise.

Sound-sensitive land uses in the vicinity of Ocotillo Wells SVRA include on-site housing for the resident rangers and staff assigned to Ocotillo Wells SVRA. There are also residences south of SR-78 and in Salton City adjacent to the northeast boundary of Ocotillo Wells SVRA. Most land uses in the adjacent area surrounding Ocotillo Wells SVRA are vacant land or agricultural land, and are not considered sound-sensitive.

2.9.3 Olfactory Resources

Visitors to Ocotillo Wells SVRA can enjoy the smell of campfires and barbecues while relaxing outdoors. Occasionally, odors from the Salton Sea may be carried by the wind into Ocotillo Wells SVRA. These odors may arise during the fall or winter, and are associated with algae blooms and fish die-offs.

2.9.4 Textural Resources

Visitors associate Ocotillo Wells SVRA with certain textures, such as fresh air, sand, and gravel or rocks from the desert environment. Dust and sand from a strong windstorm can be an unpleasant experience for visitors.

2.10 OPERATIONS AND MAINTENANCE FUNCTIONS

Ocotillo Wells SVRA provides the services necessary to maintain existing infrastructure and facilities, and to provide a secure and enjoyable experience for visitors. Certain visitor facilities, however, are underserved.

2.10.1 Facility Management

Facilities present throughout most of Ocotillo Wells SVRA are limited to roadways, OHV trails, storm water features, and interpretive and wayfinding signage. Ocotillo Wells SVRA has two locations with full restrooms and showers. The nine developed camping areas in Ocotillo Wells SVRA also include a limited number of facilities for visitors such as vault toilets, shade ramadas, picnic tables, and fire rings. Permanent block structures located behind the Ocotillo Wells District Headquarters house a maintenance shop and

fuel station. The Toner property has shaded storage structures, and also provides ample space for storing maintenance materials that include sand, gravel, fencing materials, and campsite furniture.

The Ocotillo Wells District is responsible for management, maintenance, and operations in Ocotillo Wells SVRA, and provides the facilities and staff resources necessary to maintain existing facilities. Roadways are generally developed at a level appropriate for OHV riding; some are maintained for a relatively wide range of uses, where others are intentionally maintained to provide interesting and challenging riding opportunities. Storm water facilities constructed by other agencies (i.e., Caltrans, County of San Diego, and Imperial County) generally consist of dikes and ditches intended to capture and funnel site runoff to specific crossings as it approaches regional highways and roads. The fast and intense nature of desert runoff events makes storm water management difficult, and many such facilities are experiencing erosion and channel incision.

2.10.2 Public Safety

Ensuring public safety is the primary responsibility of the Ocotillo Wells SVRA peace officers, the State Parks rangers. Peace officers are responsible for law enforcement, including rules and regulations of Ocotillo Wells SVRA, the California Vehicle Code, and illegal uses. Multiple emergency response agencies provide service to Ocotillo Wells SVRA, including the California Department of Forestry and Fire Protection, San Diego County Fire Authority, Salton City Fire Department, Mercy Air Reach Aeromedical Service, U.S. Border Patrol, San Diego Sheriff, and Imperial County Sheriff. Ocotillo Wells SVRA has an Interagency Action Plan with these agencies for responding to emergencies.

During the peak riding season, multiple rangers patrol Ocotillo Wells SVRA throughout the day. Lifeguards (who are in their off-season from the coastal beaches) serve as emergency medical responders and provide additional support during peak periods. During the non-peak season, Ocotillo Wells SVRA rangers are on-site daily and conduct patrols in the SVRA.

Ocotillo Wells SVRA also uses volunteers and staff from other DPR properties to assist during the highest visitation weekends. Local emergency response organizations set up command centers on the busiest weekends to be better prepared for accidents. Special events organized by OHV groups and held at Ocotillo Wells SVRA require permits, planning, and preparation to manage some of the issues related to crowding and event operations.

Signage within Ocotillo Wells SVRA facilitates navigation and wayfinding. There are also signs located throughout Ocotillo Wells SVRA disclosing the risks of OHV recreation. Speed limitations are enforced in camping areas and other areas, as appropriate. California Vehicle Code Section 38503 states no person under age 18 shall operate an ATV on public lands unless satisfying one of the following conditions:

- They are taking a prescribed safety training course under the direct supervision of a certified all-terrain vehicle safety instructor.
- They are in possession of an appropriate ATV safety certificate issued by this state or issued under the authority of another state.
- They are under the direct supervision of a parent or guardian, or an adult authorized by the parent or guardian, who is in possession of an appropriate ATV safety certificate issued by this state or issued under the authority of another state.
- In addition, riders under the age of 14 must either possess an ATV safety certificate or the adult supervising the rider must possess an ATV safety certificate.

Safety training is regularly offered by Ocotillo Wells SVRA staff or volunteers during the riding season.

2.10.3 Concessions

No permanent concession facilities or services are provided in Ocotillo Wells SVRA. Currently, the delivery of RV rentals to Ocotillo Wells SVRA is permitted and is

considered a temporary concession service. During special events, limited concessions such as food sales and OHV repairs and parts are managed and provided by event organizers. Private concessions outside of Ocotillo Wells SVRA offer a variety of goods and services for visitors, including food, lodging, camping, OHV accessories, and ATV rentals. Also, private companies rent out RVs that can be delivered and picked up on-location.

2.10.4 Accessibility (Americans with Disabilities Act Compliance)

Most developed facilities in Ocotillo Wells SVRA are wheelchair accessible, per the ADA. The Discovery Center, a central location for visitor information and activities, is accessible to all visitors. An ADA-accessible amphitheater and guided nature trail are also available near the Discovery Center. Visitors with disabilities who need assistance can contact the Discovery Center and receive additional support. Additional ADA upgrades are under construction in 2013 for upgraded compliance at the combination buildings at Holmes Camp and Ranger Station Road. Portable toilets throughout Ocotillo Wells SVRA have been replaced with permanent, accessible vault toilets. The accessible toilets permit side transfers, and showers meet ADA requirements. Holmes Camp features two fully accessible ADA campsites. Four vault-type toilets in Holmes Camp accommodate side and front transfers. Routes of travel to all restrooms, showers, and trash receptacles traverse unstable soft sand, and visitors using wheelchairs may need to drive or be dropped off. California State Parks supports equal access for all visitors. Visitors with disabilities who need assistance should contact the Discovery Center at 760-767-5393 or 711 TYY relay service prior to their arrival. The Ocotillo Wells SVRA park map is available in alternative formats by contacting the OHMVR Division at ohvinfo@parks.ca.gov. Although the majority of Ocotillo Wells SVRA is undeveloped, OHV recreation provides access to natural areas that would be difficult to reach by walking.

2.11 INTERPRETATION AND EDUCATION

Interpretation and education at Ocotillo Wells SVRA include many programs, events, activities, publications, and other means of communicating information. Good

interpretation increases visitors' understanding and enjoyment of the resources in Ocotillo Wells SVRA. In 2009, the Ocotillo Wells SVRA interpretive team was awarded the Olmsted Award for its leadership and vision in California State Parks.

2.11.1 Existing Interpretation and Education

Ocotillo Wells SVRA offers a wide variety of interpretive and educational programs. These programs seek to develop an understanding of the responsibilities required for visiting and build an appreciation for the resources found in Ocotillo Wells SVRA. Ocotillo Wells SVRA staff provided interpretation and educational information to more than 65,000 visitors during the 2011/2012 season. As shown in Table 7, visitor attendance to the interpretative programs has grown over the last 4 years. The interpretation and educational programs at Ocotillo Wells SVRA as of the 2012/2013 season include the following:

- Interpretive Programming
  - Two permanent year-round interpreters
  - One permanent intermittent interpreter
  - Five interpretive specialists (6-month intervals)
- Interpretive Publications
  - One park interpretive specialist (6 months)
- ATV Safety Program
  - One office assistant (permanent intermittent)
  - One park interpretive specialist (6 months)
- Discovery Center
  - One office assistant (permanent intermittent)
  - One park interpretive specialist (6 months)

Three permanent interpreters, six seasonal interpreters, and four staff in administrative positions compose the paid staff.

Table 7. Visitor Attendance for the Interpretation and Education Programs

Fiscal Year	Interpretive Program Attendance	Percent of Total Park Attendance
2011–2012	64,996	11%
2010–2011	58,466	11%
2009–2010	7,771	1%

Current interpretation and education programs are geared toward different ages, skill levels, and interests to attract a wide variety of participants. Personal contact is the most desirable way for staff to communicate with visitors at Ocotillo Wells SVRA, particularly during routine patrols, which provide valuable interpretation opportunities. Informal demonstrations, portable interpretive exhibits, tours, and campfire programs provide fun group settings and allow staff to take programs to points of interest within Ocotillo Wells SVRA and to off-site schools and events. Programs are designed to reflect the independent and mobile nature of many OHV enthusiasts. Some of the featured interpretive programs, events, activities, publications, and digital materials are described in Table 8.

Table 8. Existing Interpretation and Education Programs, Events, Activities, Publications, and Digital Materials (2012)

Programs, Events, and Activities	
ATV Safety Institute	ASI training classes are held each weekend during the riding season at the Denner ATV Safety Track. Participants are taught safe riding techniques and obtain an ATV Safety Certificate upon completion.
Geocaching	Ocotillo Wells SVRA embraces the increasingly popular recreational activity of geocaching, a treasure-hunting game where participants use a GPS unit to hide and seek containers with other participants. Each year, Ocotillo Wells SVRA hosts the Roughneck Rendezvous, California's largest OHV and multi-day geocaching event.
Celestial Programs	Each weekend during the riding season, the Ocotillo Wells SVRA staff presents evening star- and moon-gazing programs at the amphitheater. Programs include viewing celestial objects through an 11-inch Celestron telescope, listening to presentations about astronomy, and enjoying hot chocolate. Visitors are also able to view solar flares and sunspots using a solar telescope. Each spring, the park hosts its Hot Stars and Heavenly Bodies Astronomy Festival where guest astronomers bring large telescopes to view deep-space objects. The event has astronomy-based Junior Ranger programs, movies, and constellation identification opportunities.

Junior Ranger Program	Ocotillo Wells SVRA's Junior Ranger program teaches youth ages 7 to 12 about geology, history, wildlife, and other topics. Upon completion, participants earn a Junior Ranger badge.
Off-Highway Adventure Tour Series	Led by Ocotillo Wells SVRA's award-winning interpretive staff, these 4-hour tours offer visitors an opportunity to learn about a variety of topics while exploring with a seasoned guide.
Roving Interpretive Exhibits	Ocotillo Wells SVRA offers an assortment of interpretive exhibits at popular riding destinations. The most common locations for the portable exhibits, especially during high visitation periods, are Shell Reef, Devil's Slide, Main Street, Pumpkin Patch, 4x4 Training Track, Gas Domes, and Holly Road. Ocotillo Wells SVRA staff also bring portable exhibits to community events throughout Southern California.
School Programs	Ocotillo Wells SVRA offers on-site and off-site programs for school-aged children. Two formal programs have been developed: desert ecology and astronomy. The Interpretive Department also conducts after-school educational programming for area schools.
In-Park Special Events	Ocotillo Wells SVRA participates in visitor-group-sponsored special events by displaying interpretive exhibits in the special event area. Events include the Lost Lizard Fun Run (San Diego Off Road Coalition), Truckhaven Challenge (CORVA), Treasure Trails, and Desert Safari (TDS).
Outreach Special Events	Participating in special events/trade shows held outside of Ocotillo Wells SVRA is an effective way to educate the public about Ocotillo Wells SVRA. These outreach events include the Sand Sports Super Show (Orange County, California), Lucas Off-Road Show (Los Angeles), and the High Desert Off-Road Expo (Victorville, California).
Interpretive Special Events	The Interpretive Department sponsors several interpretive-based special events during the riding season. These events include the Roughneck Rendezvous Geocaching Adventure, Geology Days, Hot Stars and Heavenly Bodies Astronomy Festival, and Bug-a-pa-looza.
Photography Workshops	Ocotillo Wells SVRA hosts a series of digital photography workshops for guests. Programs include night sky photography, wildflower photography, digital-scope photography, close-up photography, and basic photography.
Wildflower Programming	When conditions are optimal, the desert can be carpeted in brilliantly colored desert wildflowers. The Interpretive Department provides wildflower-based programming and information, including off-highway tours, guided walks, wildflower-based Junior Ranger programs, a "Where are the flowers?" informational center, flower "hot-spot" maps, flower identification guides, and wildflower trading cards.
Publications	
Ocotillo Wells SVRA Map	A map of Ocotillo Wells SVRA is available in print and online to assist in navigation. It identifies points of interest and contains information on recreational opportunities, facilities, park history, park resources, desert safety tips, rider responsibilities, accessibility, and park rules and regulations.
Ocotillo Wells SVRA Visitors Guide	The guide includes information about current programs and events, an Ocotillo Wells SVRA map with destination points, safety tips and emergency information, natural and biological resource information and updates, the history of Ocotillo Wells

	SVRA, and ways participants can engage in education and volunteer programs.
Blowsand Reader	This electronic periodical contains a message from the Ocotillo Wells SVRA superintendent; administration and operation news updates; facility updates; news on biological, natural, and cultural resource monitoring; interpretation and education program news; updates from Friends of Ocotillo Wells; and more.
Desert Natural History Guides	The series includes separate guides for mammals, reptiles, birds, bugs, and wildflowers. Each guide contains pictures and information about the biological resources found at Ocotillo Wells SVRA.
Trading Cards	This series of 169 "trading cards" features facts about an animal, plant, geologic or historic resource, astronomy, recycling, Tread Lightly!, OHV equipment, and rider safety gear, or an OHV league. These cards are available at the Discovery Center and mobile exhibit booths, and can be hidden in geocaches.
Self-Guided Youth Activity Guides	Ocotillo Wells SVRA has various self-guided activity booklets to aid in exploration and discovery. Publications include an Ocotillo Wells Activity Guide covering interpretive stories, a Desert Riding Safety Guide covering safety and responsible recreation, and a Night Sky Adventure Booklet.
Electronic Interpretation and Other Media	
Ocotillo Wells SVRA Website	The website includes a detailed schedule of events, the latest desert wildflower guide, the Off-Highway Adventure Tour Schedule, a description of the geocaching policy, and links to information on Ocotillo Wells SVRA-sponsored geocaches.
Park Welcome Kits	Ocotillo Wells SVRA distributes welcome kits at designated campsites and to visitors in general. The kit includes a visitor's guide, park map, schedule of interpretive events, and trash bag.
Email List Server	The Interpretive Department maintains an email list that is used to distribute information to guests. Email blasts include an interpretive teaser and program advertisements.
Radio Rock-otillo, AM 1620	The radio station broadcasts interpretive program advertising, natural resource messages, visitor information, and safety advice in a fast, fun format. It also features music samples, sound-bites, and a DJ-like atmosphere combined with teasers about upcoming tours, fun facts about desert wildlife, and reminders of the policies of Ocotillo Wells SVRA.
Ocotillo Wells SVRA Facebook Page	A public community page with information about Ocotillo Wells SVRA and destinations, upcoming events, photos of natural and biological resources, a "Historic Scrapbook," and ways to get involved.
Electronic Message Signs	The Electronic Message Board (EMB) is a mobile electronic sign that is used to welcome visitors, inform them about health and safety issues, and notify them about the various interpretive events going on. Additionally, the EMB is used to communicate weather and highway conditions/closures.

Interpretation and Education Facilities

The Discovery Center is the heart of Ocotillo Wells SVRA's interpretive program. The center provides visitors a centralized location to obtain information about Ocotillo Wells SVRA, and is a place to pick up publications such as a trail map or visitor's guide. The Discovery Center also contains displays about the desert and OHV recreation. When the Discovery Center is not open, brochures and a bulletin board are available outside the building. The area surrounding the Discovery Center includes an ADA-accessible amphitheater and guided nature pathway.

Roving interpretation exhibits cater to the mobile nature of visitors to Ocotillo Wells SVRA, and are an important component of the interpretation and education program. Temporary installations include a trailer with tents and materials that are often set up at popular destination points and during special events.

Universal Accessibility

Interpretation and education programs that are conducted in the Discovery Center and surrounding area are wheelchair accessible. Due to the undeveloped nature of Ocotillo Wells SVRA, mobile and off-highway interpretation and education programs are not accessible to visitors with certain physical limitations.

Collections

The Discovery Center and mobile exhibitions showcase physical evidence and demonstrations of the natural, cultural, and biological resources that are found at Ocotillo Wells SVRA. Ocotillo Wells SVRA holds a collection of historic photos, several of which are available on its Facebook page. Ocotillo Wells SVRA is currently soliciting stories, photos, souvenirs, equipment, and other materials to support a collection of historical resources about the "birthplace of off-highway recreation."

Interpretive and Educational Signage

Ocotillo Wells SVRA has more than 60 interpretive signs located in gathering spots and at points of interest. Interpretive signs present information about Ocotillo Wells SVRA's biological resources, geological features, cultural resources, oil exploration, early explorers, responsible recreation, and OHV history.

2.11.2 Ocotillo Wells SVRA Support

California DPR manages a volunteer program for people to support Ocotillo Wells SVRA. The program provides training and certification to qualify volunteers for work in Ocotillo Wells SVRA. Most volunteer support is provided through organized groups.

Cooperating associations are nonprofit charitable organizations that raise money to enhance educational and interpretive programs at Ocotillo Wells SVRA. Friends of Ocotillo Wells, established in 2008, is one such organization. Friends of Ocotillo Wells helps to provide a variety of interpretive programs and resources for children and adults. Another group, United Desert Gateway (UDG), was formed to promote the safety of OHV recreational activities in Imperial County and surrounding communities. UDG's priority is to enhance OHV recreational experiences. This group organizes events and cleanup days in Ocotillo Wells SVRA and surrounding OHV areas. An archaeological site stewardship program and a wildlife tracking program are also available.

Supporting groups contribute time, funds, and resources to California DPR, and are not part of an official state program. The California State Parks Foundation, the California State Park Rangers Association, and the California League of Park Associations are a few groups that provide statewide support to all California State Parks. Another supporting group that partners with DPR is California Watchable Wildlife; its goals are to promote wildlife viewing sites, educate the public, and build support for the conservation of California's natural resources.

2.12 PLANNING INFLUENCES

Many factors influence the visitor experience and opportunities, resource management, park operations, and interpretation and education programs at Ocotillo Wells SVRA. Systemwide planning conducted by California State Parks and the OHMVR Division provide guidance for management decisions at Ocotillo Wells SVRA, including many of the existing resource management policies and programs. Regional planning and land ownership also significantly influence planning at Ocotillo Wells SVRA.

2.12.1 System Planning

Systemwide planning enhances the ability of California State Parks to fulfill its multi-faceted mission, which is to provide for the health, inspiration, and education of the people of California by helping to preserve the state's extraordinary biological diversity, protect its most valued natural and cultural resources, and create opportunities for high-quality outdoor recreation. Planning for Ocotillo Wells SVRA must consider issues that cross regional, local/community, and jurisdictional boundaries.

Various management directives guide the planning process and content, including the following resources that are relevant to the Ocotillo Wells SVRA planning effort:

- OHMVR Division Mission Statement
- OHMVR Strategic Plan 2009
- OHMVR Commission Program Report 2011
- California State Parks Strategic Action Plan "Brilliance in the Basics" 2013-2014
- California State Parks Strategic Initiatives
- California State Parks Accessibility Guidelines 2009
- Access to Parks Guidelines
- California Public Resources Code
- Off-Highway Motor Vehicle Recreation Act 2003
- Soil Conservation Standard and Guidelines 2008
- OHMVR Resource Management Protocols

OHMVR Division Mission Statement

"The mission of the OHMVR Division is to provide statewide leadership for OHV recreation; to acquire, develop, and operate SVRAs; to otherwise provide for a statewide system of managed OHV recreational opportunities through funding to other public agencies; and to ensure that quality recreational opportunities remain available for future generations by providing for education, conservation, and enforcement efforts that balance OHV recreation impacts with programs that conserve and protect cultural and natural resources."

OHMVR Strategic Plan 2009

The California State Parks Off-Highway Motor Vehicle Recreation Division Strategic Plan (OHMVR Strategic Plan) provides guidance to the OHMVR Division on a strategic approach for administering SVRAs and a statewide financial assistance program that provides OHV-related activities. It reaffirms a commitment to protecting California's unique natural areas by providing for well-managed OHV recreation. The OHMVR Strategic Plan seeks to actively engage the public to achieve its goals through multiple approaches, including providing transparency in program management and providing opportunities for children to connect with the natural environment. The OHMVR Strategic Plan includes five guiding principles, four strategic themes, and six goals, described in Table 9, that provide a framework to meet legislative mandates.

Table 9. OHMVR Strategic Plan Strategic Themes, Guiding Principles, and Goals

Guiding Principles	
Sustainability	Manage lands and resources in such a way that they will be available for the enjoyment of many generations of Californians to come.
Transparency in Decision Making	Restore public trust in the administration of the OHMVR program by creating an understanding of the reasons behind decisions made by program managers.
Working with Partners and Volunteers	Meet OHMVR program goals with assistance from numerous related agencies and participation from individuals and volunteer organizations.
Considering the Needs and Concerns of Stakeholders	The OHMVR program will only be relevant to the degree to which it responds to the needs and concerns of those who are most invested in its success.
Sound Data for Management Decision Making	Commitment of resources and management actions must be based on the best available information.
Strategic Themes	
Emphasize the Basics	Maintain existing OHV areas in good condition and prevent environmental damage.
The Greening of OHV Recreation	Manage OHV recreation in ways that significantly reduce impacts to the environment.
Improve Technology	Respond to OHV technology improvements by providing facilities that are appropriate for more capable vehicles.
The New Gateway	Take advantage of the large numbers of young people and nontraditional user groups in OHV recreation areas by providing educational programs that teach appreciation of nature and the outdoors.
Goals	
Sustain Existing Opportunities	Protect, preserve, and enhance existing OHV opportunities in a manner that ensures well managed, interesting, and high-quality experiences, and addresses the environmental impacts that may be associated with those activities.

Increase OHV Opportunities	Add new OHV opportunities where appropriate and needed to replace loss of existing opportunities and respond to changing and future demand.
Staff Development	Enhance the abilities of program managers and staff dedicated to the development, management, and implementation of the OHMVR program.
Develop an Informed and Educated Community	Achieve a highly informed and educated community associated with OHV recreational activities who is dedicated to safe and lawful OHV operation and responsible environmental stewardship.
Cooperative Relationships	Establish and maintain productive relationships between individuals, organizations, industry, and government agencies to cooperatively identify problems and develop and implement solutions to advance the mission and goals of the OHMVR program.
Informed Decision-Making	Improve the quality, quantity, and accessibility of information needed to support sound decision making, transparency of administration, and communication with the interrelated groups interested in, and associated with, the OHMVR program.

OHMVR Commission Program Report 2011

As required by PRC Section 5090.24(h), beginning in 2011, the OHMVR Commission must prepare and submit a Program Report every 3 years to inform the Governor and Legislature of progress and developments in the state's OHMVR program. The Program Report is required to address:

- The results of the strategic planning process completed pursuant to subdivision (1) of Section 5090.32.
- The condition of natural and cultural resources of areas and trails receiving state off-highway motor vehicle funds and the resolution of conflicts of use in those areas and trails.
- The status and accomplishments of funds appropriated for restoration pursuant to paragraph (2) of subdivision (b) of Section 5090.50.
- A summary of resource monitoring data compiled and restoration work completed.
- Actions taken by the division and department since the last program report to discourage and decrease trespass of off-highway motor vehicles on private property.
- Other relevant program-related environmental issues that have arisen since the last program report.

State Parks Strategic Action Plan "Brilliance in the Basics" 2013-2014

In response to recent challenges faced by the California State Parks Department, Major General Anthony L. Jackson, USMC (retired) Director, California Department of Parks and Recreation has developed a strategic action plan that identifies broad goals and objectives to achieve its long-term vision and plan to ensure a vibrant and sustainable State Park system. The following are the goals of this plan:

- Restore public trust and accountability.
- Protect and preserve resources and facilities in the existing State Park System.
- Maintain the cleanest park facilities and restrooms in the country.
- Connect people to California's State Park System.
- Build the foundation for a sustainable future.

State Parks Strategic Initiatives

DPR's Strategic Initiatives were crafted to correspond with its philosophy to preserve, protect, and interpret California's natural, cultural, and recreational resources. Strategic Initiatives look to what the DPR system requires to meet future needs. The initiatives address current and future issues and opportunities to protect California's most important natural resources and special places, even with an increasing number of visitors.

California State Parks Accessibility Guidelines

The California State Parks Accessibility Guidelines, revised in 2009, detail the procedures to make State Parks universally accessible while maintaining the quality of park resources. Also included are recommendations and regulations for complying with the standards for accessibility. The guidelines most applicable to Ocotillo Wells SVRA include those directing facilities planning and interpretation and education programs.

Off-Highway Motor Vehicle Recreation Act 2003

The Off-Highway Motor Vehicle Recreation Act requires DPR's OHMVR Division to implement and administer the Off-Highway Motor Vehicle Recreation Program, which provides opportunities for OHV recreation at specified areas throughout the state (PRC Section 5090 et seq.). The act states that effectively managed areas and adequate

facilities for the use of OHVs and conservation and enforcement are essential for ecologically balanced recreation. The act further states that when areas or trails or portions thereof cannot be maintained to appropriate established standards for sustained long-term use, they should be closed until they can be managed within the standards or restored.

Soil Conservation Standard and Guidelines 2008

The 2008 Soil Conservation Standard and Guidelines (soil standard) provides guidance for conserving soil in parks managed by the OHMVR Division, and includes measures to maintain trails to a sustainable standard. The 2008 Soil Conservation Standard and Guidelines (DPR 2008b) requires that the State Parks OHMVR Division manage OHV recreation facilities to meet the following soil standard:

> Off-highway vehicle (OHV) recreation facilities shall be managed for sustainable long-term prescribed use without generating soil loss that exceeds restorability, and without causing erosion or sedimentation [that] significantly affects resource values beyond the facilities. Management of OHV facilities shall occur in accordance with Public Resources Code, Sections 5090.2, 5090.35, and 5090.53.

The soil guidelines provide tools and techniques that may be used to meet the soil standard. Other tools and techniques that are more applicable to specific facility conditions and organizational protocols also may be used to comply with the soil standard. The soil standard applies to OHV areas funded by the California OHV Trust Fund, including all SVRAs. In the context of the soil standard and the PRC, restoration means the restoration of land to the contours, plant communities, and plant cover types of comparable surrounding lands or to those that existed prior to OHV use. The soil standard also provides measures to help anticipate and prevent accelerated and unnatural erosion, and to guide the maintenance and repair of trails.

OHMVR Resource Management Protocols

Specific biological provisions in the Off-Highway Motor Vehicle Recreation Act 2003 outline management programs designed to work with natural processes of vegetation

succession, to control the spread of noxious and invasive weeds, and to protect natural wildlife habitats. OHMVR resource management protocols were developed to emphasize a broad range of scientifically accepted techniques and measures that are appropriate for the unique habitats found within SVRAs. The OHMVR resource management protocols provide information on baseline studies, focused studies, monitoring, and survey guidelines. These resource management protocols were used throughout the Ocotillo Wells SVRA General Plan process to aid in documenting existing biological resources.

2.12.2 Existing Ocotillo Wells SVRA Resource Management Policies and Programs

With more than 85,000 acres open to exploration, Ocotillo Wells SVRA seeks to balance recreation opportunities with protection of unique natural and cultural resources. Ocotillo Wells SVRA administers programs and policies to protect natural habitats, preserve cultural and paleontological resources, maintain air quality, prevent erosion, and maintain water quality. Ocotillo Wells SVRA is committed to protecting these resources, while maximizing opportunities for OHV recreation, so that Ocotillo Wells SVRA remains a unique place that future generations can enjoy as much as visitors do today.

Erosion Control

Ocotillo Wells SVRA implements erosion-control measures to help sustain the unique desert landscape, and protects soils through the policies and programs described in Table 10.

Table 10. Existing Erosion-Control Policies and Programs at Ocotillo Wells SVRA

Conservation Management	Adhering to the 2008 Soil Conservation Standard and Guidelines for Off-Highway Vehicle Recreation Management ensures that projects are designed and constructed in a way that limits soil erosion and water runoff.
Enclosures and Signage	Providing regulatory signage and interpretive and educational signage, and fencing areas with fragile soil structures and sensitive habitat decrease the rate of soil erosion.
Trail Riding	For greater protection of resources, including reducing soil erosion, certain areas are “trails only.” Trail riding is encouraged in all other parts of Ocotillo Wells SVRA through wayfinding signage and trail maintenance.

Cultural and Paleontological Resource Management

Ocotillo Wells District cultural resources specialists evaluate Ocotillo Wells SVRA's resources through an existing database and new surveys and studies. New discoveries of cultural and paleontological resources are evaluated by archaeologists to determine their significance and integrity, and appropriate actions to protect them, if necessary. Active stewardship ensures that these resources are preserved, protected, and made available for public understanding and appreciation today and for future generations.

Air Quality Management

Ocotillo Wells SVRA is committed to reducing vehicle pollution and controlling dust through BACMs. Air quality is maintained through many programs and policies, including those included in Table 11.

Table 11. Existing Air Quality Management Policies and Programs at Ocotillo Wells SVRA

Red Sticker/Green Sticker Program	A vehicle that does not comply with the emissions standards set by the California Air Resources Board receives a red sticker, which restricts the operation of these vehicles to the approved season when air quality is better. Red sticker riding is allowed at Ocotillo Wells SVRA from October 1 through May 31.
Dust Control Measures	Ocotillo Wells District has submitted a Dust Control Plan to the Imperial County Air Pollution Control District. Some measures have already been implemented and include posting speed limits, installing gravel road base on primary access roads to facilities and camping areas, and watering during special events. In addition, only riding on existing trails and roads is allowed in the areas east of Poleline Road and north of County Highway S-22.

Natural Habitat Management

Native habitats are monitored and protected by evaluating changes in habitat areas, such as differences in soil erosion and wildlife populations. Conservation projects, policies, and programs, including those described in Table 12, help protect wildlife and restore habitat.

Table 12. Natural Habitat Management Policies and Programs at Ocotillo Wells SVRA

Regulating Riding	Ocotillo Wells SVRA regulations prohibit OHV riding over vegetation or harassment of wildlife.
Enclosures and Signage	Regulatory signs, interpretive panels, and fencing areas, such as those with mesquite dune habitat, help repair and restore sensitive native habitat or special natural features.
Trail Construction and Restoration	OHV trails are constructed or selected to avoid restoration areas and sensitive resources.
Habitat Monitoring	State Parks staff conduct annual surveys in compliance with the OHMVR Division Habitat Monitoring System to evaluate Ocotillo Wells SVRA's natural habitats and wildlife. These surveys are analyzed to address trends and natural resources management goals within Ocotillo Wells SVRA. Additionally, Ocotillo Wells District was a founding member of the Flat-Tailed Horned Lizard Coordinating Committee, which was established to guide the stabilization and increase of this species of concern.

2.12.3 Regional Plans and Programs

The following local and regional plans may influence the management, operations, and visitor experiences at Ocotillo Wells SVRA:

- BLM California Desert Conservation Area Plan (BLM 1980)
- Desert Renewable Energy Conservation Plan (DRECP)
- State Implementation Plan for San Diego County and Imperial County
- San Diego Association of Governments Regional Comprehensive Plan (SANDAG 2004)
- Southern California Association of Governments Regional Comprehensive Plan (SCAG 2008)

BLM California Desert Conservation Area Plan

The CDCA covers 25 million acres, of which 12 million are public lands. The purpose of the CDCA Plan is to establish guidance for the balanced and environmentally sustainable management of public lands of the California desert by BLM. The CDCA Plan provides direction for developing resource management plans and includes general guidelines and specific management activities related to cultural resources, Native American values, wildlife, vegetation, wilderness, wild horses and burros, livestock grazing, recreation, motorized-vehicle access, geology-energy minerals,

energy production and utility corridors, and land tenure adjustment (BLM 1980). The CDCA Plan is further discussed in Section 2.3.3, Land Use Planning and Management.

Desert Renewable Energy Conservation Plan

The purpose of the DRECP is to conserve and manage plant and wildlife communities in the desert regions of California while facilitating the timely permitting of compatible renewable energy projects. The DRECP allows local, state, and federal agencies to plan for renewable energy development and long-term conservation of desert areas across jurisdictional boundaries and on a landscape and ecosystem-based scale.

The DRECP is a collaborative effort being developed under the California Natural Community Conservation Planning Act and the Federal Endangered Species Act, and FLPMA. The DRECP is being prepared by a collaboration of state and federal agencies through an MOU to ensure implementation of California Executive Order S-14-08 and Interior Secretarial Order 3285.

The DRECP defines a list of "Covered Activities" that include "the construction, operation, maintenance, and decommissioning of renewable energy projects and related transmission lines within the Plan Area." The Covered Activities include High-voltage Transmission Facilities; Solar (Photovoltaic and Thermal); Wind; Geothermal; and DRECP Conservation Actions.

Approximately 22.5 million acres of federal and nonfederal California desert land are in the DRECP Plan Area. The DRECP Plan Area includes seven counties: Imperial, Inyo, Kern, Los Angeles, Riverside, San Bernardino, and San Diego, which are located in the Mojave and Colorado desert regions.

State Implementation Plan for San Diego County and Imperial County

A State Implementation Plan (SIP) is an enforceable plan developed by the state to set how it will comply with air quality standards according to the federal Clean Air Act. The SIP includes strategies and tactics to attain and maintain acceptable air quality. The San Diego County APCD prepares the San Diego County portion of the SIP (County of San Diego 2007). Like the San Diego County APCD, the Imperial County APCD prepares the Imperial County portion of the SIP. One of the programs implemented by

the Imperial County APCD is the Salton Sea Air Quality Monitoring Network, which monitors air quality at receptors located around the Salton Sea shore at sites near existing communities, significant emissions sources, and sensitive-receptor areas (County of Imperial 2009b).

San Diego Association of Governments Regional Comprehensive Plan

The SANDAG 2004 Regional Comprehensive Plan (RCP) is the strategic planning framework for the San Diego region. Each chapter of the SANDAG RCP addresses major elements of regional planning, including urban form, transportation, housing, healthy environment, economic prosperity, public facilities, and borders (SANDAG 2004).

Southern California Association of Governments Regional Comprehensive Plan

Similar to the SANDAG RCP, the SCAG 2008 RCP addresses issues of regional growth. The SCAG RCP includes chapters on land use and housing, open space and habitat, water, energy, air quality, solid waste, transportation, security and emergency preparedness, and the economy (SCAG 2008).

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