CHAPTER 3—MARINE AND LAND RESOURCES

A. Introduction

The City of Solana Beach is located on the northern coast of San Diego County, between the cities of Encinitas (to the north), Del Mar and San Diego (to the south). Solana Beach includes a stretch of approximately 1.7 miles of shoreline. Land use categories consist of primarily residential and recreational/open space uses and also include commercial, industrial, and public institution.

The City of Solana Beach is almost entirely built-out, with only a few vacant parcels and pockets of native and/or naturalized vegetation remaining. There are two main north-south roadway corridors (Pacific Coast Highway/ Highway 101 and Interstate 5 [I-5] and two main east-west corridors (Lomas Santa Fe Drive through the central portion of the City and Via de la Valle at its southern boundary). A rail line traverses the western portion of the City, paralleling Coast Highway 101, stretching between San Diego to the south and Los Angeles to the north. The main business district is located near Coast Highway 101, with newer commercial developments occurring closer to I-5. The Lomas Santa Fe Executive Golf Course and surrounding residential development occupies much of the City east of I-5. The largest areas of native vegetation communities occur in the northern portion of the City, in and adjacent to the San Elijo Lagoon Ecological Reserve, as well as on canyon slopes within the golf course and adjacent to San Andres Drive (Exhibits 3-1 through 3-5). The areas of native vegetation mapped along the lagoon are part of a larger mosaic of native habitats extending into the City of Encinitas. The City supports several small, isolated pockets of undeveloped land, typically along canyon slopes that are surrounded by single-family residences.

The main public beach access is at Fletcher Cove, located centrally along the City's coastline. The entire coastline is developed, with single and multi-family residences occurring along the coastal bluff, broken only by the beach and ramp access at Fletcher Cove, which provides access for lifeguard trucks and emergency vehicles.

Marine and Aquatic Vegetation Communities

The 1.7-mile Solana Beach coastline extends from the top of the coastal bluffs to the intertidal zone. Lands seaward of the MHTL are not within the City limits or jurisdiction of the City. The subtidal zone offshore of Solana Beach is characterized by a soft-bottom (sand) substrate with several rocky intertidal and low relief reef hard-bottom areas. The hard-bottom rocky intertidal community is characterized by simple green algae (Chaetomorpha, Enteromorpha, and Ulva). In more permanent substrates in the intertidal zone, simple green algae species, coralline algae (Corallina spp.), and surfgrass (Phyllospadix) occur. The subtidal reefs support a variety of coral species and fish species, described below. Farther offshore, giant kelp (Macrocystis pyrifera) and feather boa kelp (Egregia menziesii) forests occur.

The following is summarized from the biological resources report prepared for the City in June 2008 by Helix Environmental Planning (Helix). Additional field work was conducted in April 2009 to further refine mapping of chaparral communities, largely in, and adjacent

to, the San Elijo Lagoon Ecological Reserve. Mapping was conducted primarily on foot, although a combination of aerial interpretation and use of Multi-Habitat Conservation Plan (MHCP) mapping was relied upon in areas where access was not possible. Additional information prepared by Helix in 2009 on habitats and associated species of the City area available is on file with the City.

Twelve sensitive vegetation communities occur within the City: southern coastal salt marsh, freshwater marsh, southern willow scrub, mule fat scrub, open water/estuarine, beach, southern coastal bluff scrub, southern maritime chaparral, Diegan coastal sage scrub, southern mixed chaparral, coastal sage-chaparral scrub, and non-native grassland (Helix 2009).

Five sensitive plant species were observed during the field surveys: wart-stemmed ceanothus, San Diego marsh-elder (*Iva hayesiana*), south-western spiny rush (*Juncus acutus ssp. leopoldii*), Nuttall's scrub oak, and San Diego viguiera (*Viguiera laciniata*) (Helix 2009).

Four sensitive animal species were observed or detected during field surveys in and/or adjacent to the San Elijo Lagoon: yellow-breasted chat (*Icteria virens*), coastal California gnatcatcher (*Polioptila californica californica*), southern mule deer (*Odocoileus hemionus fuliginata*), and western bluebird (*Sialia mexicana*).

Each of these environmentally sensitive areas and species can be impacted by upland development, particularly that which occurs on hillsides and slopes. Such development may affect natural topography and scenic qualities, coastal sage/chaparral and grassland habitat, existing watersheds, soil erosion conditions, land slide potential, and other natural conditions (Helix 2009).

Terrestrial Vegetation Communities – A Citywide biological resources inventory was prepared in 2008 and updated in April 2009. The City's terrestrial vegetation communities are shown in Exhibits 3-1 through 3-5. Following provides a summary of vegetation acreages by type.

Southern Coastal Salt Marsh – Southern coastal salt marsh is a highly productive community composed of herbaceous, salt-tolerant hydrophytes that form a dense cover of up to one meter tall. This plant community is found along sheltered inland margins of bays, lagoons, and estuaries where the hydric soils are subjected to regular tidal inundation by salt water (Holland 1986).

Southern coastal salt marsh occupies approximately 4.88 acres within the City and is found in the San Elijo Lagoon Ecological Reserve. Typical species observed include pickleweed (*Salicornia bigelovii* and *S. virginica*), alkali-heath (*Frankenia salina*), southwestern spiny rush (*Juncus acutus* ssp. l*eopoldii*), and fleshy jaumea (*Jaumea carnosa*).

Freshwater Marsh – Freshwater marsh is dominated by perennial, emergent monocots that reach a height of 12 to 15 ft, often forming completely closed canopies. This vegetation type occurs along the coast and in coastal valleys near river mouths and around the margins of lakes and springs. These areas are permanently flooded by freshwater yet lack a significant current (Holland 1986).

Freshwater marsh was mapped adjacent to the railroad tracks in the San Elijo Lagoon Ecological Reserve, as well as along an urban drainage in the central portion of the City, northeast of the intersection of Stevens Avenue and Genevieve Street. Characteristic species observed include cattail (*Typha* sp.), California bulrush (*Scirpus californicus*), cocklebur (*Xanthium strumarium*), and marsh fleabane (*Pluchea odorata*). Approximately 0.20 acre of freshwater marsh was mapped within the City.

Southern Willow Scrub (including disturbed) – Southern willow scrub consists of dense, broadleaved, winter-deciduous stands of trees dominated by shrubby willows (*Salix* sp.) in association with mule fat (*Baccharis salicifolia*), along with scattered emergent cottonwood (*Populus fremontii*) and western sycamores (*Platanus racemosa*). This vegetation community occurs on loose, sandy, or fine gravelly alluvium deposited near stream channels during flood flows. Frequent flooding maintains this early seral community, preventing succession to a riparian woodland or forest (Holland 1986).

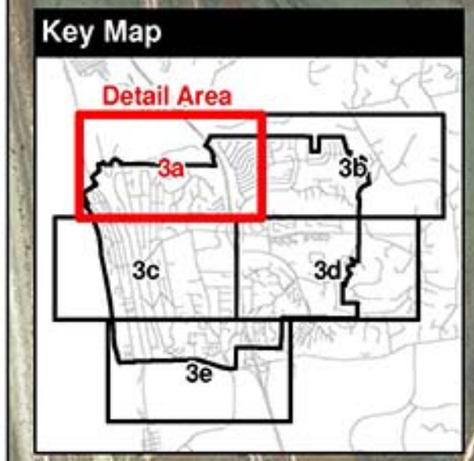
This habitat occurs as a small stand of trees and shrubs in the San Elijo Lagoon Ecological Reserve just northeast of Rios Avenue as well as east of I-5, and as a portion of a riparian corridor in the canyon north of Santa Victoria Drive, also in the San Elijo Lagoon Ecological Reserve. It also occurs along an urban drainage near Stevens Avenue, another urban drainage in the southeastern corner of the City, and as an isolated stand west of a self-storage facility. Typical species observed include arroyo willow (*Salix lasiolepis*), red willow (*S. laevigata*), and mugwort (*Artemisia douglasiana*). Disturbed areas of this habitat support a high percentage of non-native plants such as curly dock (*Rumex crispus*) and pampas grass (*Cortaderia selloana*). Approximately 1.98 acres of southern willow scrub were mapped within the City.

Mule Fat Scrub – Mule fat scrub is a depauperate, riparian scrub community dominated by mule fat and interspersed with small willows. This vegetation community occurs along intermittent stream channels with a fairly coarse substrate and moderate depth to the water table. This early seral community is maintained by frequent flooding, the absence of which would lead to a cottonwood or sycamore dominated riparian woodland or forest (Holland 1986).

This habitat was mapped adjacent to both southern willow scrub and southern coastal salt marsh in the San Elijo Lagoon Ecological Reserve. Characteristic species present included mule fat, western ragweed (*Ambrosia psilostachya*), and horseweed (*Conyza* sp.). Approximately 0.34 acre of mule fat scrub was mapped within the City.

EXHIBIT 3-1 CITYWIDE BIOLOGICAL RESOURCES

Adopted Local Coastal Program Land Use Plan
City of Solana Beach, February 2013

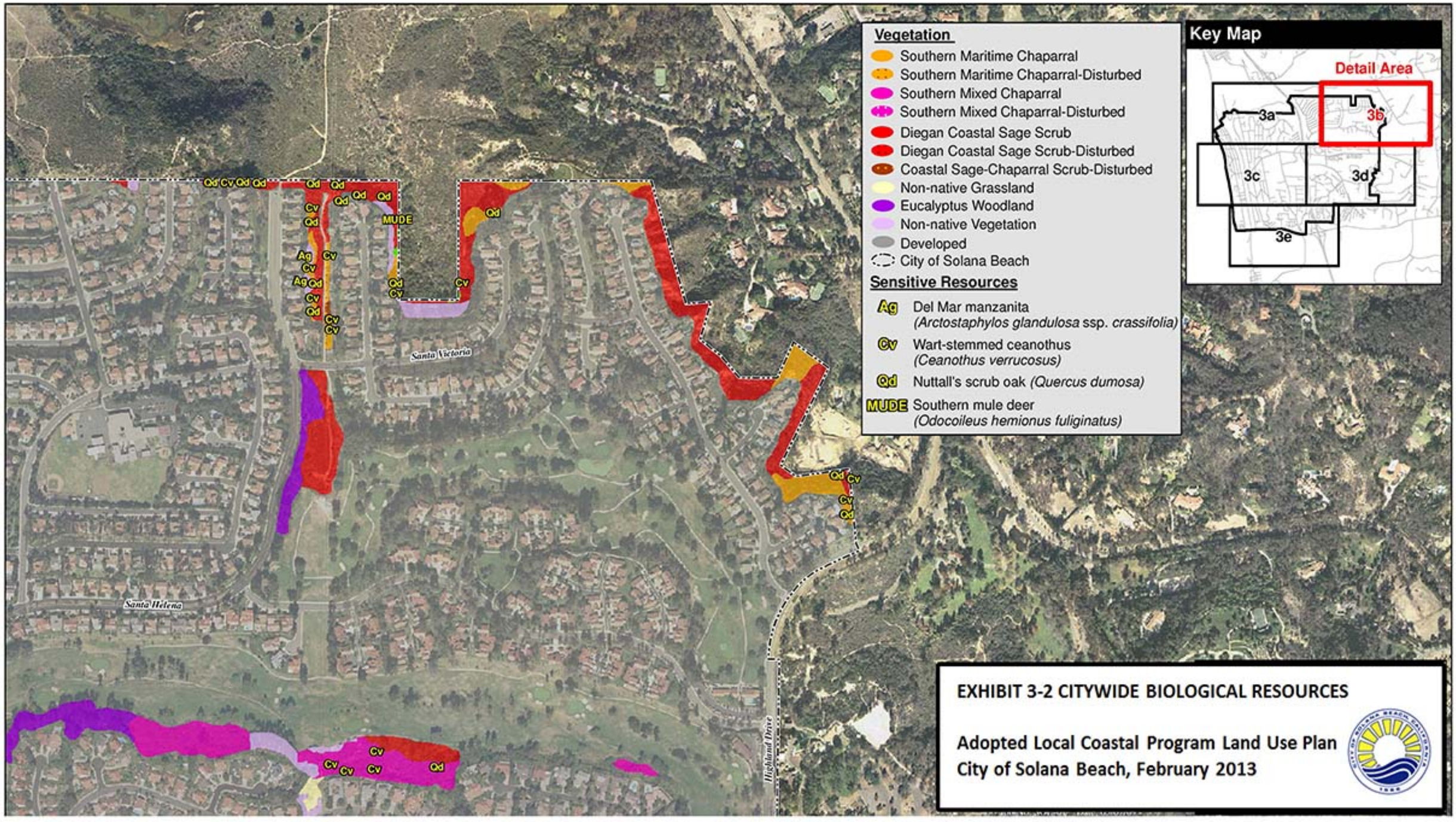


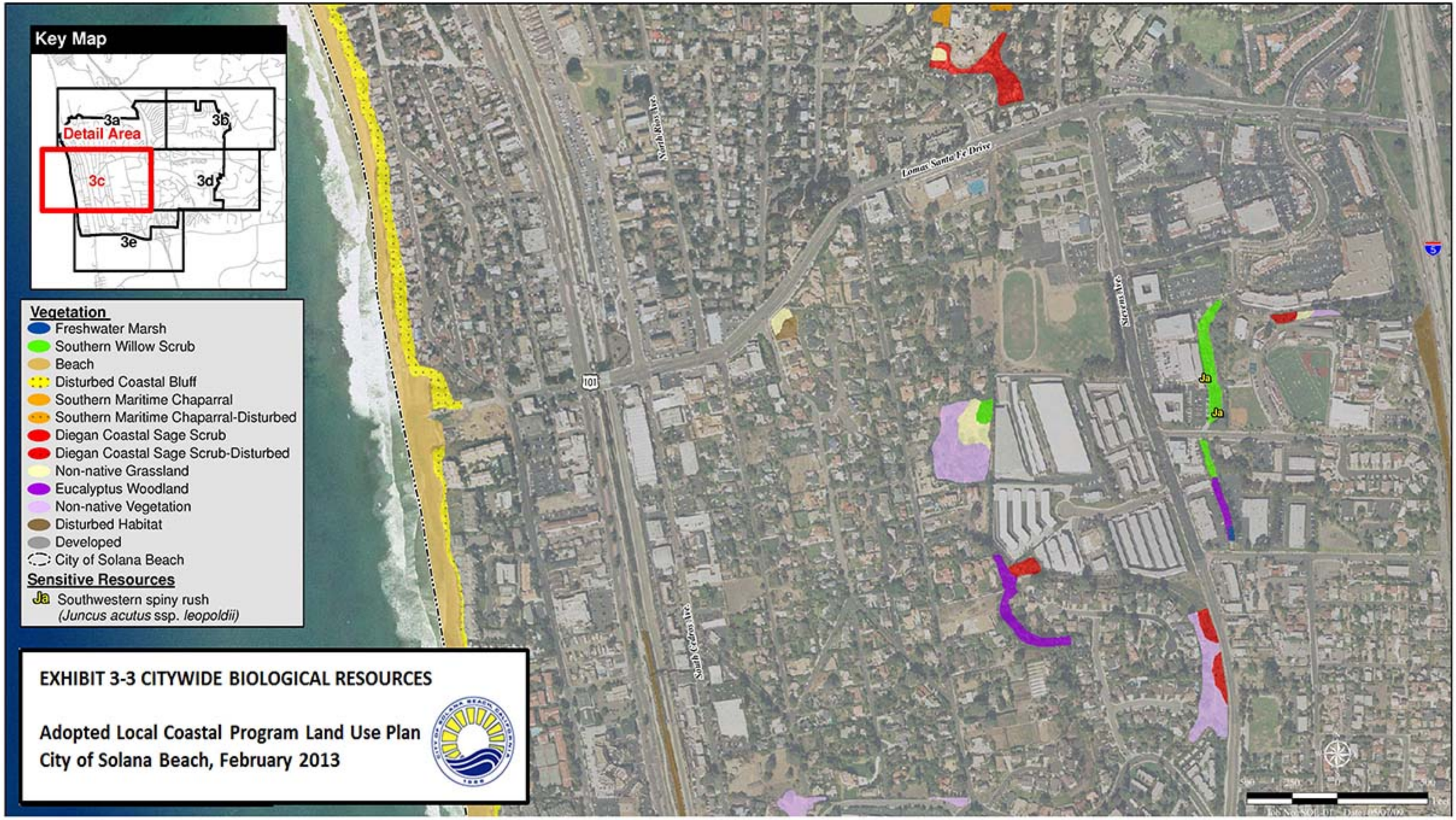
Vegetation

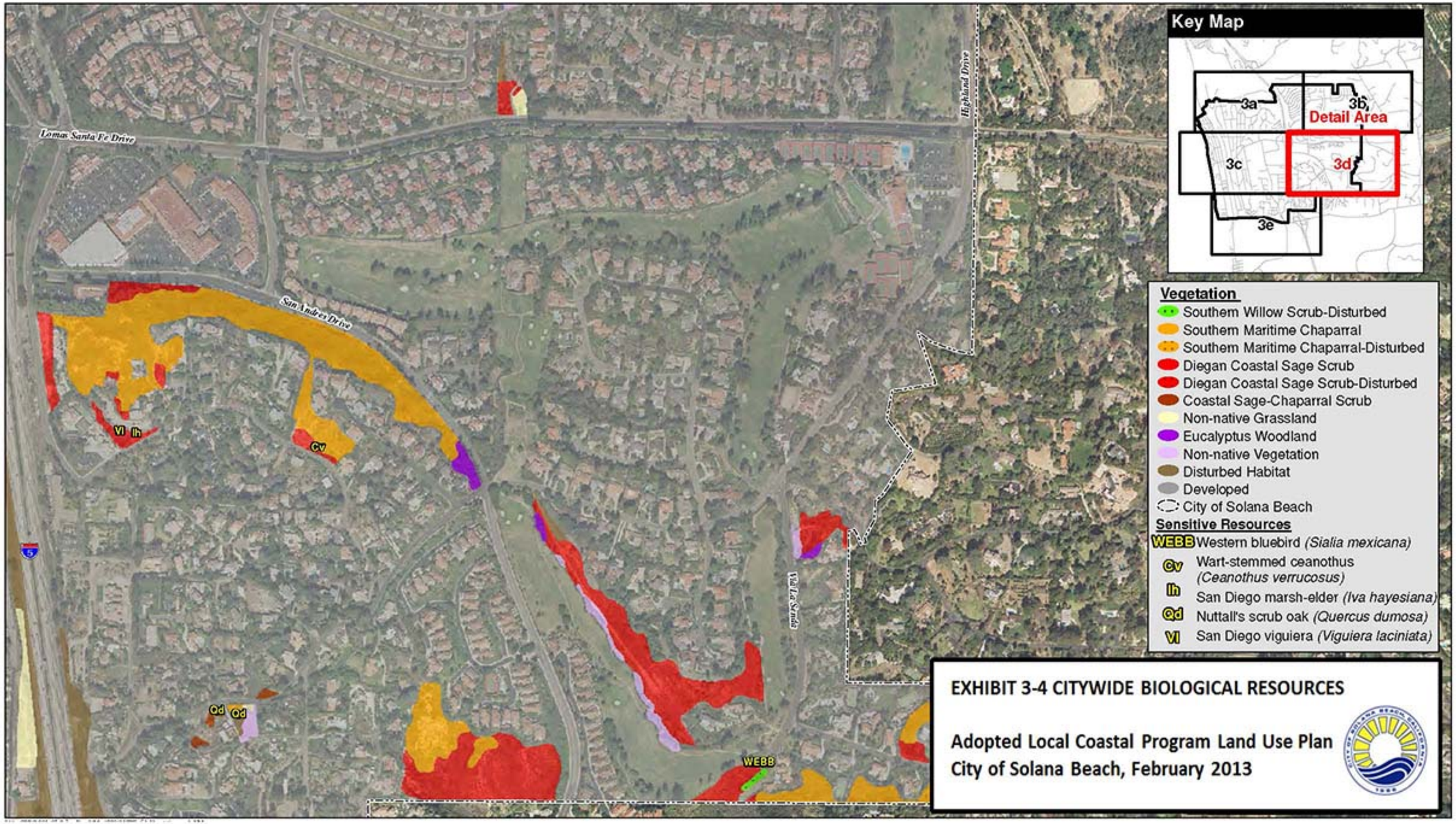
- Southern Coastal Salt Marsh
- Freshwater Marsh
- Southern Willow Scrub
- Southern Willow Scrub-Disturbed
- Mule Fat Scrub
- Open Water/Estuarine
- Beach
- Disturbed Coastal Bluff
- Southern Maritime Chaparral
- Southern Maritime Chaparral-Disturbed
- Southern Mixed Chaparral
- Southern Mixed Chaparral-Disturbed
- Diegan Coastal Sage Scrub
- Diegan Coastal Sage Scrub-Disturbed
- Coastal Sage-Chaparral Scrub
- Non-native Grassland
- Eucalyptus Woodland
- Non-native Vegetation
- Disturbed Habitat
- Developed
- City of Solana Beach

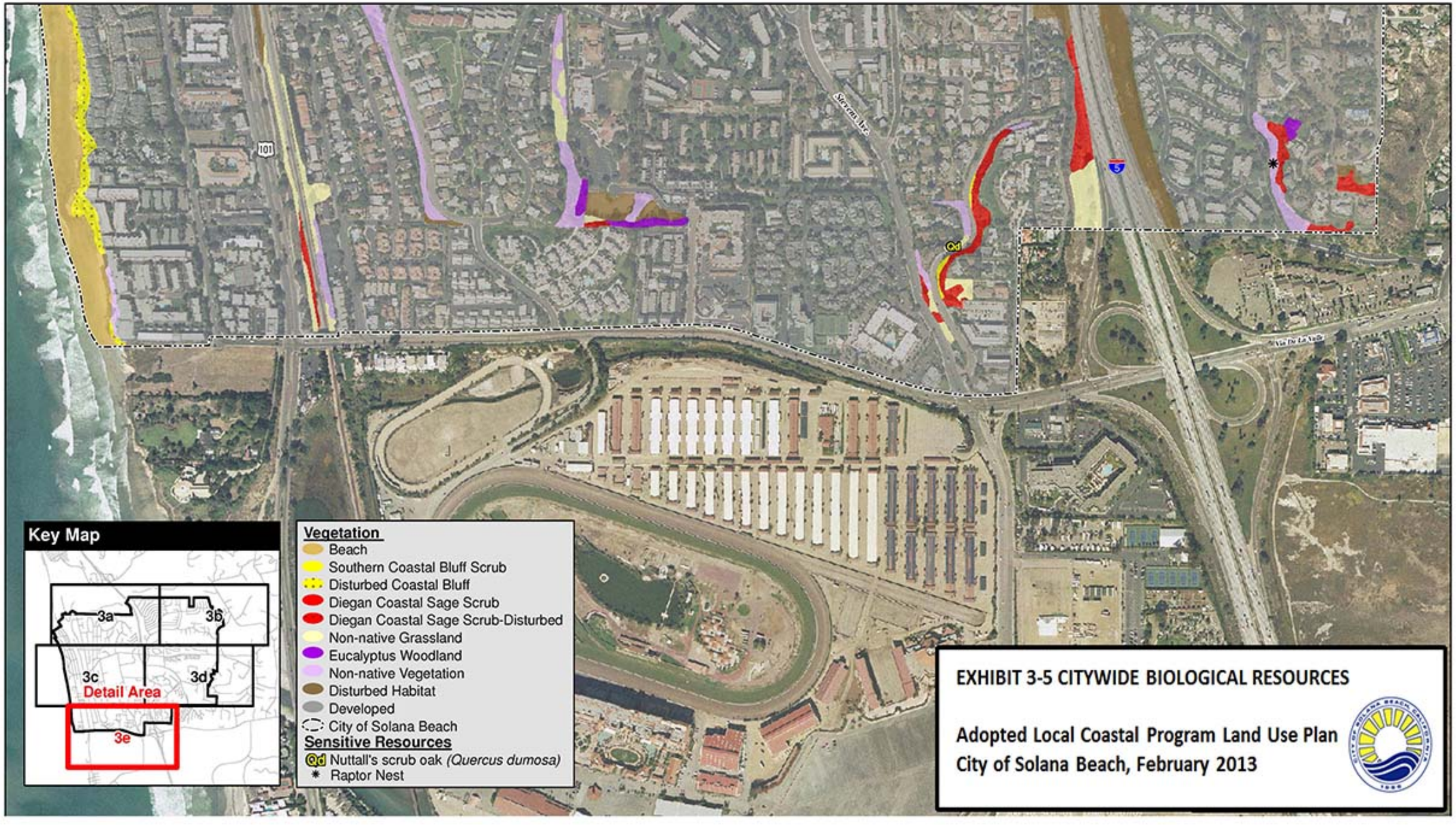
Sensitive Resources

- **CAGN** Coastal California gnatcatcher *(Polioptila californica californica)*
- **YBCH** Yellow-breasted chat *(Icteria virens)*
- **Ag** Del Mar manzanita *(Arctostaphylos glandulosa* ssp. *crassifolia)*
- **Cv** Wart-stemmed ceanothus *(Ceanothus verrucosus)*
- **Ja** Southwestern spiny rush *(Juncus acutus* ssp.*leopoldii)*
- **Qd** Nuttall's scrub oak *(Quercus dumosa)*


Vegetation
Southern Maritime Chaparral
Southern Maritime Chaparral-Disturbed
Southern Mixed Chaparral
Southern Mixed Chaparral-Disturbed
Diegan Coastal Sage Scrub
Diegan Coastal Sage Scrub-Disturbed
Coastal Sage-Chaparral Scrub-Disturbed
Non-native Grassland
Eucalyptus Woodland
Non-native Vegetation
Developed
City of Solana Beach
Sensitive Resources
Ag Del Mar manzanita (Arctostaphylos glandulosa ssp. crassifolia)
Cv Wart-stemmed ceanothus (Ceanothus verrucosus)
Qd Nuttall's scrub oak (Quercus dumosa)
MUDE Southern mule deer (Odocoileus hemionus fuliginatus)
Key Map
Detail Area
3a
3b
3c
3d
3e
Santa Victoria
Santa Helena
Highland Drive
EXHIBIT 3-2 CITYWIDE BIOLOGICAL RESOURCES
Adopted Local Coastal Program Land Use Plan
City of Solana Beach, February 2013


Key Map
3a
Detail Area
3b
3c
3d
3e
Vegetation
Freshwater Marsh
Southern Willow Scrub
Beach
Disturbed Coastal Bluff
Southern Maritime Chaparral
Southern Maritime Chaparral-Disturbed
Diegan Coastal Sage Scrub
Diegan Coastal Sage Scrub-Disturbed
Non-native Grassland
Eucalyptus Woodland
Non-native Vegetation
Disturbed Habitat
Developed
City of Solana Beach
Sensitive Resources
Ja Southwestern spiny rush
(Juncus acutus ssp. leopoldii)
North Rios Ave
Lomas Santa Fe Drive
Nardo Ave
South Cedros Ave
101
5
Ja
Ja
EXHIBIT 3-3 CITYWIDE BIOLOGICAL RESOURCES
Adopted Local Coastal Program Land Use Plan
City of Solana Beach, February 2013


Key Map
3a
3b
Detail Area
3c
3d
3e
Vegetation
Southern Willow Scrub-Disturbed
Southern Maritime Chaparral
Southern Maritime Chaparral-Disturbed
Diegan Coastal Sage Scrub
Diegan Coastal Sage Scrub-Disturbed
Coastal Sage-Chaparral Scrub
Non-native Grassland
Eucalyptus Woodland
Non-native Vegetation
Disturbed Habitat
Developed
City of Solana Beach
Sensitive Resources
WEBB Western bluebird (Sialia mexicana)
Cv Wart-stemmed ceanothus (Ceanothus verrucosus)
Ih San Diego marsh-elder (Iva hayesiana)
Qd Nuttall's scrub oak (Quercus dumosa)
Vl San Diego viguiera (Viguiera laciniata)
Lomas Santa Fe Drive
San Andres Drive
Highland Drive
Via La Cumbre
Vl
Ih
Cv
Qd
Qd
WEBB
5
EXHIBIT 3-4 CITYWIDE BIOLOGICAL RESOURCES
Adopted Local Coastal Program Land Use Plan
City of Solana Beach, February 2013


Stevens Ave.
101
5
Via De La Valle
Key Map
3a
3b
3c
Detail Area
3d
3e
Vegetation
Beach
Southern Coastal Bluff Scrub
Disturbed Coastal Bluff
Diegan Coastal Sage Scrub
Diegan Coastal Sage Scrub-Disturbed
Non-native Grassland
Eucalyptus Woodland
Non-native Vegetation
Disturbed Habitat
Developed
City of Solana Beach
Sensitive Resources
Qd Nuttall's scrub oak (Quercus dumosa)
Raptor Nest
EXHIBIT 3-5 CITYWIDE BIOLOGICAL RESOURCES
Adopted Local Coastal Program Land Use Plan
City of Solana Beach, February 2013

Open Water/Estuarine – Open water/estuarine habitat occurs offshore of the City and includes three small areas adjacent to marsh habitat in the San Elijo Lagoon, comprising approximately 0.72 acre. As the name suggests, no plants are present and the areas are subject to freshwater and saltwater input resulting in brackish conditions.

Beach – The beach community refers to the expanse of sandy substrate between mean tide and the furthest inland reach of waves. The beach is characterized by a maritime climate, high exposure to salt spray and sand blast, and a shifting sandy substrate with low water-holding capacity and low organic matter content. Beach steepness, height, and width are affected by wave height, tidal range, sand grain size and supply.

This habitat occurs as a flat, narrow band of unvegetated sands along the City's shoreline adjacent to the Pacific Ocean. High and medium tides regularly inundate this entire zone. The City's beaches are highly trafficked by beachgoers in addition to the occasional lifeguard truck. Approximately 20 acres of beach occur within the City.

Southern Coastal Bluff Scrub/Disturbed Coastal Bluff – Southern coastal bluff scrub is a low scrub habitat forming continuous or more scattered mats. Most plants are woody and/or succulent. Dwarf shrubs, herbaceous perennials, and annuals are represented, with the majority of growth and flowering occurring from late winter through spring. This vegetation community is exposed to nearly constant winds with high salt content and the soil is usually rocky and poorly developed.

This habitat occurs along a narrow band of eroded bluff near Stevens Avenue and Via de la Valle, as well as along the majority of the steep beach-front coastal bluff, comprising approximately 7.8 acres. The 7.6 acres of beach-front bluff is highly disturbed and largely supports non-native species such as crystalline iceplant (*Mesembryanthemum crystallinum*), Perez's marsh-rosemary (*Limonium perezii*), and sea rocket (*Cakile maritima*), with the occasional California encelia (*Encelia californica*), coast prickly-pear (*Opuntia littoralis*), and sun cup (*Camissonia* sp.). Large areas of bluff are unvegetated and severely eroding. Areas near Stevens Avenue (0.02 acre) support lemonadeberry (*Rhus integrifolia*), California encelia, chalk dudleya (*Dudleya pulverulenta*), crystalline iceplant, coast paintbrush (*Castilleja affinis*), and coast morning-glory (*Calystegia macrostegia*).

Southern Maritime Chaparral (including disturbed) – Southern maritime chaparral is restricted to the weathered sands within the coastal fog belt in San Diego County from La Jolla to Carlsbad, with some scattered patches to the south; Point Loma, Spooner's Mesa, and Peñasquitos Canyon. This low, fairly open chaparral is dominated by wart-stemmed ceanothus (*Ceanothus verrucosus*) and thick-leaved Eastwood's manzanita (*Arctostaphylos glandulosa*). Additional species include mission manzanita (*Xylococcus bicolor*), chamise (*Adenostoma fasciculatum*), Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*), scrub oak (*Quercus dumosa*), and summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*). Similar to other chaparral communities, fire is necessary for the reproduction of many of the constituent species that generally resprout from underground root crowns (Conrad 1987). The distribution of this community

coincides with some of the most developed areas in San Diego County. Species observed within this vegetation community include chamise, wart-stemmed ceanothus, Nuttall's scrub oak (*Quercus dumosa*), Del Mar Manzanita, bush-rue (*Cneoridium dumosum*), mission manzanita, black sage (*Salvia mellifera*), and small-flowered soap-plant (*Chlorogalum parviflorum*). Disturbed areas support relatively higher coverage by non-native grasses and forbs. This habitat occurs on certain canyon slopes in the San Elijo Lagoon Ecological Reserve, and on undeveloped slopes along San Andres Drive, as well as in a few small, isolated stands throughout the City. Not all stands were accessible, and aerial interpretation was relied upon for portions of the mapping effort. Approximately 36.0 acres of southern maritime chaparral were mapped within the City.

Diegan Coastal Sage Scrub (including disturbed) – Coastal sage scrub is one of two major shrub types that occur in southern California, occupying xeric sites characterized by shallow soils (the other is chaparral). Four distinct coastal sage scrub geographical associations (northern, central, venturan, and diegan) are recognized along the California coast. Coastal sage scrub is dominated by subshrubs with leaves that abscise during drought and are replaced by a lesser amount of smaller leaves. This adaptation of drought evasion allows these species to better withstand the prolonged drought period in the summer and fall in areas of low precipitation.

This habitat has a scattered distribution within the City, occurring on numerous hillsides as remnant patches in an otherwise developed landscape, in addition to covering various canyon slopes in the San Elijo Lagoon Ecological Reserve. Characteristic species include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), black sage, and lemonadeberry. Disturbed areas of this habitat have sparser shrub coverage and a high percentage of non-native grasses (such as bromes or oats) and/or forbs (such as filaree [*Erodium* spp.]). This habitat type covers approximately 73.7 acres within the City. Not all areas were accessible and aerial interpretation was relied upon for portions of the mapping effort.

Coastal Sage-Chaparral Scrub – Coastal sage-chaparral scrub is a mixture of sclerophyllous chaparral shrubs and drought-deciduous sage scrub species regarded as an ecotone (transition) between the two vegetation communities. This singular community contains floristic elements of both communities, including California sagebrush, California buckwheat, laurel sumac, chamise, scrub oak (*Quercus* sp.), and ceanothus (*Ceanothus* sp.).

This vegetation community covers approximately 3.3 acres within the City and is found on slopes in the San Elijo Lagoon Ecological Reserve as well as in a few scattered locations surrounded by development. Typical species observed include chamise, Nuttall's scrub oak, California sagebrush, black sage, lemonadeberry, and California buckwheat. Four sensitive animal species were observed or detected during field surveys: yellow-breasted chat (*Icteria virens*), coastal California gnatcatcher (*Polioptila californica californica*), southern mule deer (*Odocoileus hemionus fuliginata*), and western bluebird (*Sialia mexicana*).

Southern Mixed Chaparral – Southern mixed chaparral is composed of broad-leaved sclerophyllous shrubs that can reach six to ten feet in height and form dense often nearly impenetrable stands with poorly developed under stories. In this mixed chaparral, the shrubs are generally tall and deep rooted, with a well developed soil litter layer, high canopy coverage, low light levels within the canopy, and lower soil temperatures (Keeley and Keeley 1988). This vegetation community occurs on dry, rocky, often steep north-facing slopes with little soil. As conditions become more mesic, broad-leaved sclerophyllous shrubs that resprout from underground root crowns become dominant. Depending upon relative proximity to the coast, southern mixed chaparral is dominated by chamise, mission manzanita, wart-stemmed ceanothus, Ramona lilac (*Ceanothus tomentosus*), white-stem wild-lilac (*Ceanothus leucodermis*), manzanita (*Arctostaphylos* sp.), and scrub oak.

Dominant species observed in this habitat include chamise, mission manzanita, and wart-stemmed ceanothus. This habitat type covers approximately 13.7 acres within the City, and is found on certain canyon slopes in the San Elijo Lagoon Ecological Reserve located in the City of Encinitas, as well as on undeveloped slopes in the Lomas Santa Fe Executive Golf Course.

Non-native Grassland – Non-native grassland is a dense to sparse cover of annual grasses, often associated with numerous species of showy-flowered native annual forbs. This association occurs on gradual slopes with deep, fine-textured, usually clay soils. Characteristic species include oats (*Avena* sp.), red brome (*Bromus rubens*), ripgut (*B. diandrus*), ryegrass (*Lolium* sp.), and mustard (*Brassica* sp.). Most of the annual introduced species that comprise the majority of species and biomass within non-native grassland originated from the Mediterranean region, an area with a long history of agriculture and a climate similar to California. These two factors, in addition to intensive grazing and agricultural practices in conjunction with severe droughts, contributed to the successful invasion and establishment of these species and the replacement of native grasslands with an annual-dominated non-native grassland (Jackson 1985).

The City supports several small patches of non-native grassland, occurring in a widely scattered distribution. Most areas were mapped in the southwestern quadrant of the City, along portions of I-5, as well as in a few isolated locales. Typical species observed include ripgut grass, oats, and Mediterranean schismus (*Schismus barbatus*), with lesser coverage by barley (*Hordeum* sp.), mustard, wild radish (*Raphanus sativus*), and cheeseweed (*Malva parviflora*). Approximately 7.6 acres of non-native grassland were mapped within the City.

Eucalyptus Woodland – Eucalyptus woodland is dominated by eucalyptus (*Eucalyptus* sp.), an introduced species that has often been planted purposely for wind blocking, ornamental, and hardwood production purposes. Most groves are monotypic, with the most common species being either the blue gum (*Eucalyptus gunnii*) or red gum (*E. camaldulensis* ssp. *obtusa)*. The understory within well-established groves is usually very sparse due to the closed canopy and allelopathic nature of the abundant leaf and bark litter. If sufficient moisture is available, this species become naturalized and is able to

reproduce and expand its range. The sparse understory offers only limited wildlife habitat; however, these woodlands provide excellent nesting sites for a variety of raptors.

Eucalyptus woodland consists of scattered, naturalized stands of eucalyptus with an herbaceous understory typically dominated by ripgut grass. This habitat is found in several locations within the Lomas Santa Fe Executive Golf Course, as well as two narrow, linear stands east and west of Stevens Avenue, and as three small stands in the southern portion of the City near Spindrift Road and Peppertree Lane. Many of the stands are adjacent to native habitat, such as chaparral or coastal sage scrub. Approximately 6.4 acres of this habitat type were mapped within the City.

Non-native Vegetation – Non-native vegetation areas include exotic tree and groundcover species that are naturalized or were purposefully planted for landscaping or another utilitarian purpose and are now no longer maintained. This habitat type covers small areas of the City and typically consists of one or several of the following species: myoporum (*Myoporum laetum*), sea-fig (*Carpobrotus chilensis*), Brazilian pepper tree (*Schinus terebinthifolius*), and cyclops acacia (*Acacia cyclops*). Approximately 15.0 acres of non-native vegetation were mapped within the City.

Disturbed Habitat - Disturbed habitat includes unvegetated or sparsely vegetated areas, particularly where the soil has been heavily compacted by prior development or where agricultural lands have been abandoned. Disturbed habitat is generally dominated by non-native weedy species that adapt to frequent disturbance or consists of dirt trails and roads.

Disturbed habitat consists of dirt roads, portions of the slopes adjacent to the railroad, graded pads left idle, as well as cleared and graded side slopes along I-5. Certain slopes along I-5 were under construction at the time of the field surveys and will likely be revegetated. Approximately 19.4 acres of disturbed habitat were mapped within the City.

Developed – Lands classified as developed are clearly altered, tended, and maintained, and include areas with permanent structures where land is kept cleared or landscaped and irrigated. Developed lands account for approximately 1,981 acres, or 90 percent of the City. These lands include paved roadways, parking lots, residences, commercial buildings, plant nurseries, schools, landscaped slopes, maintained yards, golf courses, mowed/maintained parks, and the railroad.

1. Coastal Act Provisions

A chief objective of the Coastal Act is the preservation, protection, and enhancement of coastal resources, including land and marine habitats, and water quality. The rarest and most ecologically important habitats are protected from development. The Coastal Act provides a definition of “environmentally sensitive area”: “Any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments” (Section 30107.5).

Section 30240 requires the protection of ESHA against any significant disruption of habitat values. No development, with the exception of uses dependent on the resources, is allowed within any ESHA. This policy further requires that development adjacent to ESHA be sited and designed to prevent impacts that would significantly degrade ESHA and to be compatible with the continuance of the habitat areas. Finally, development adjacent to parks and recreation areas must be sited and designed to prevent impacts.

In addition to the protection of ESHA, streams and associated riparian habitat are also protected in order to maintain the biological productivity and quality of coastal waters. Section 30231 requires that natural vegetation buffer areas that protect riparian habitats be maintained, and that the alteration of natural streams be minimized. Section 30236 limits channelizations, dams, or other substantial alterations of rivers and streams to only three purposes: necessary water supply; protection of existing structures where there is no feasible alternative; or improvement of fish and wildlife habitat. Such projects must also incorporate the best mitigation measures feasible.

Marine resources are protected to sustain the biological productivity of coastal waters and to maintain healthy populations of all species of marine organisms. Section 30230 requires that marine resources be maintained, enhanced, and where feasible restored. Uses of the marine environment must provide for the biological productivity of coastal waters and that will maintain healthy populations of marine organisms. Section 30233 provides that the diking, filling, or dredging of open coastal waters, wetlands, or estuaries may only be permitted where there is no less environmentally damaging alternative, where feasible mitigation measures have been provided to minimize adverse environmental effects, and restricted to a limited number of allowable uses.

Finally, the Coastal Act requires that the biological productivity and quality of coastal waters be protected. Section 30231 requires managing waste water discharges, controlling runoff, protecting groundwater and surface water, encouraging waste water reclamation, and protecting streams, in order to maintain and enhance water quality.

2. Land Use Plan Provisions

The LUP contains policies that protect the ESHA of the City. The LUP ESHA Maps (Exhibits 3-6 through 3-10) show the areas that are designated ESHA. The ESHA Maps will be reviewed and updated periodically to reflect up to date information and necessary revisions shall be made as an amendment to the LUP. As explained in more detail below, even if an area is not designated on the ESHA Map as ESHA, it will be treated as ESHA if a site-specific study at the time of the proposed development shows that it is ESHA.

Areas of ESHA were identified based on direct coordination with CCC staff (by Helix pers. comm. 2009 a-b) as well as researching ESHA designations in other areas of southern California (City of Malibu 2002). A total of 89.9 acres of ESHA were mapped within the City (Exhibits 3-6 through 3-10). They include lands in the San Elijo Lagoon Ecological Reserve and contiguous areas supporting either functionally intact native vegetation communities or presence of rare species, as well as relatively large areas of southern

maritime chaparral and coastal sage scrub communities near and along San Andres Drive.

A few areas of native habitat within the City cannot be definitively identified as ESHA without further site-specific study and as such were identified as “Areas of Potential ESHA” (Exhibits 3-6 through 3-10). These include small, discontinuous areas of southern maritime chaparral habitat and any adjacent coastal sage scrub, and total 4.6 acres (Table 3-3). A final determination of ESHA would be made for these areas on the basis of site-specific study prior to the approval of any development.

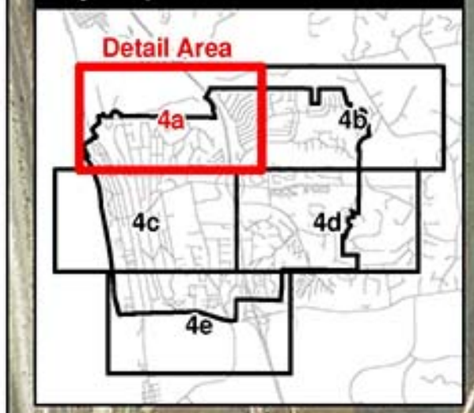
The following areas were not identified as ESHA: Wetlands occurring outside of the San Elijo Lagoon Ecological Reserve, beaches and coastal bluffs, isolated areas of coastal sage scrub and southern mixed chaparral, and cut slopes along I-5. Wetlands occurring outside of the Reserve are both small and isolated, or they occur along a channelized stream, and in both cases have low habitat value. The beaches are very narrow, subject to daily inundation, with no native beach or dune habitat, are completely devoid of vegetation, and are constantly shifting due to daily high tides and storm waves. Coastal bluffs in the City are highly erosive and degraded, supporting little vegetation, most of which is non-native or ornamental landscaping. Seawalls and other shoreline protective devices have been constructed along more than half of the City’s coastal bluff face, and the bluff tops are developed with residential land uses, public facilities and other infrastructure.

Isolated areas of coastal sage scrub are often disturbed by adjacent development and do not support sensitive species or contribute to a wildlife corridor. Southern mixed chaparral is an abundant vegetation community in southern California, and isolated areas of this habitat occurring on the southern slopes of the golf course were not considered rare or especially valuable in terms of an ESHA designation. However, the mixed chaparral supports regionally rare species (Nuttall’s scrub oak and wart-stemmed ceanothus), and as such, when looked at on a case-by-case basis, even isolated patches could be considered ESHA. Cut-slopes along I-5 were not considered ESHA as they are highly disturbed, supporting only sparse coastal sage scrub species intermixed with non-native grasses, and are constantly exposed to visual and noise disturbances from the adjacent interstate, resulting in low habitat value.

EXHIBIT 3-6 ENVIRONMENTALLY SENSITIVE HABITAT MAP

Adopted Local Coastal Program Land Use Plan
City of Solana Beach, February 2013

Key Map

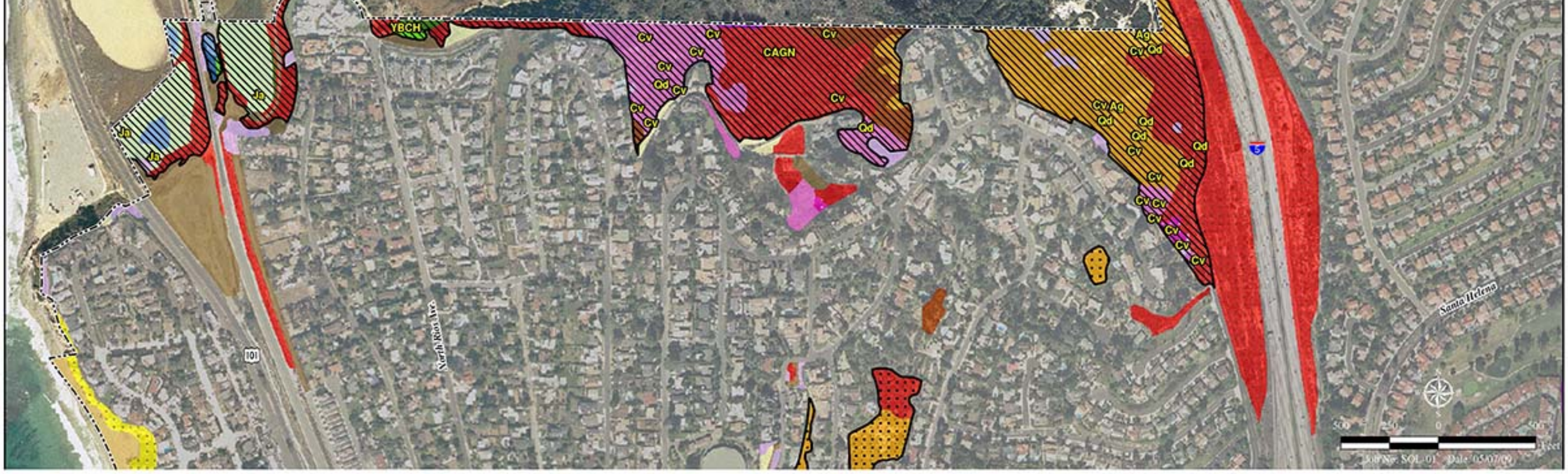


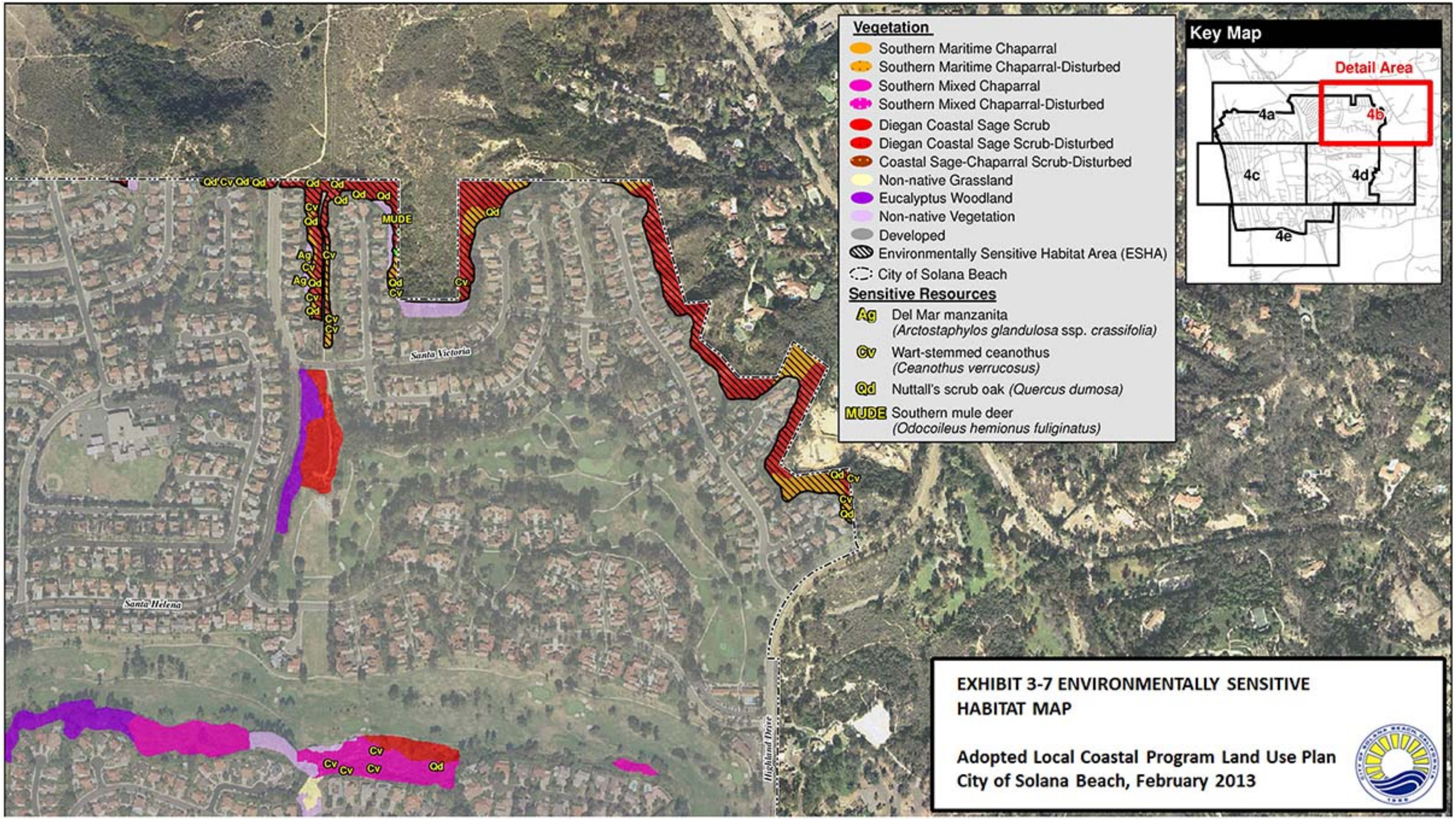
Vegetation

- Southern Coastal Salt Marsh
- Freshwater Marsh
- Southern Willow Scrub
- Southern Willow Scrub-Disturbed
- Mule Fat Scrub
- Open Water/Estuarine
- Beach
- Disturbed Coastal Bluff
- Southern Maritime Chaparral
- Southern Maritime Chaparral-Disturbed
- Southern Mixed Chaparral
- Southern Mixed Chaparral-Disturbed
- Diegan Coastal Sage Scrub
- Diegan Coastal Sage Scrub-Disturbed
- Coastal Sage-Chaparral Scrub
- Non-native Grassland
- Eucalyptus Woodland
- Non-native Vegetation
- Disturbed Habitat
- Developed
- City of Solana Beach
- Environmentally Sensitive Habitat Area (ESHA)
- Potential ESHA (needs site-specific study)

Sensitive Resources

- **CAGN** Coastal California gnatcatcher *(Polioptila californica californica)*
- **YBCH** Yellow-breasted chat *(Icteria virens)*
- **Ag** Del Mar manzanita *(Arctostaphylos glandulosa* ssp. *crassifolia)*
- **Cv** Wart-stemmed ceanothus *(Ceanothus verrucosus)*
- **Ja** Southwestern spiny rush *(Juncus acutus* ssp.*leopoldii)*
- **Qd** Nuttall's scrub oak *(Quercus dumosa)*




Vegetation
Southern Maritime Chaparral
Southern Maritime Chaparral-Disturbed
Southern Mixed Chaparral
Southern Mixed Chaparral-Disturbed
Diegan Coastal Sage Scrub
Diegan Coastal Sage Scrub-Disturbed
Coastal Sage-Chaparral Scrub-Disturbed
Non-native Grassland
Eucalyptus Woodland
Non-native Vegetation
Developed
Environmentally Sensitive Habitat Area (ESHA)
City of Solana Beach
Sensitive Resources
Ag Del Mar manzanita (Arctostaphylos glandulosa ssp. crassifolia)
Cv Wart-stemmed ceanothus (Ceanothus verrucosus)
Qd Nuttall's scrub oak (Quercus dumosa)
MUDE Southern mule deer (Odocoileus hemionus fuliginatus)
Key Map
Detail Area
4a
4b
4c
4d
4e
Santa Victoria
Santa Helena
Highland Drive
EXHIBIT 3-7 ENVIRONMENTALLY SENSITIVE HABITAT MAP
Adopted Local Coastal Program Land Use Plan
City of Solana Beach, February 2013

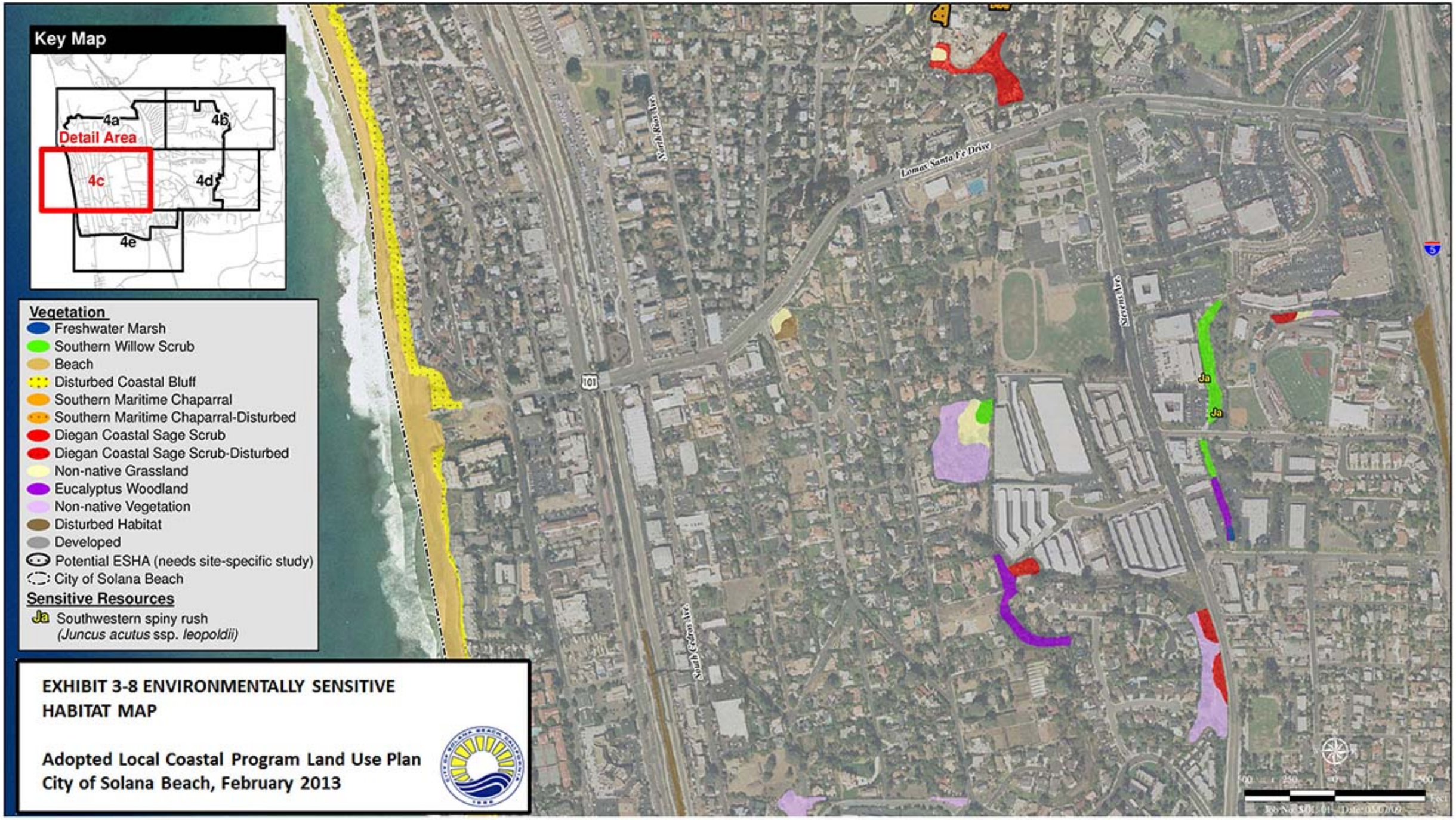


EXHIBIT 3-8 ENVIRONMENTALLY SENSITIVE HABITAT MAP

Adopted Local Coastal Program Land Use Plan
City of Solana Beach, February 2013

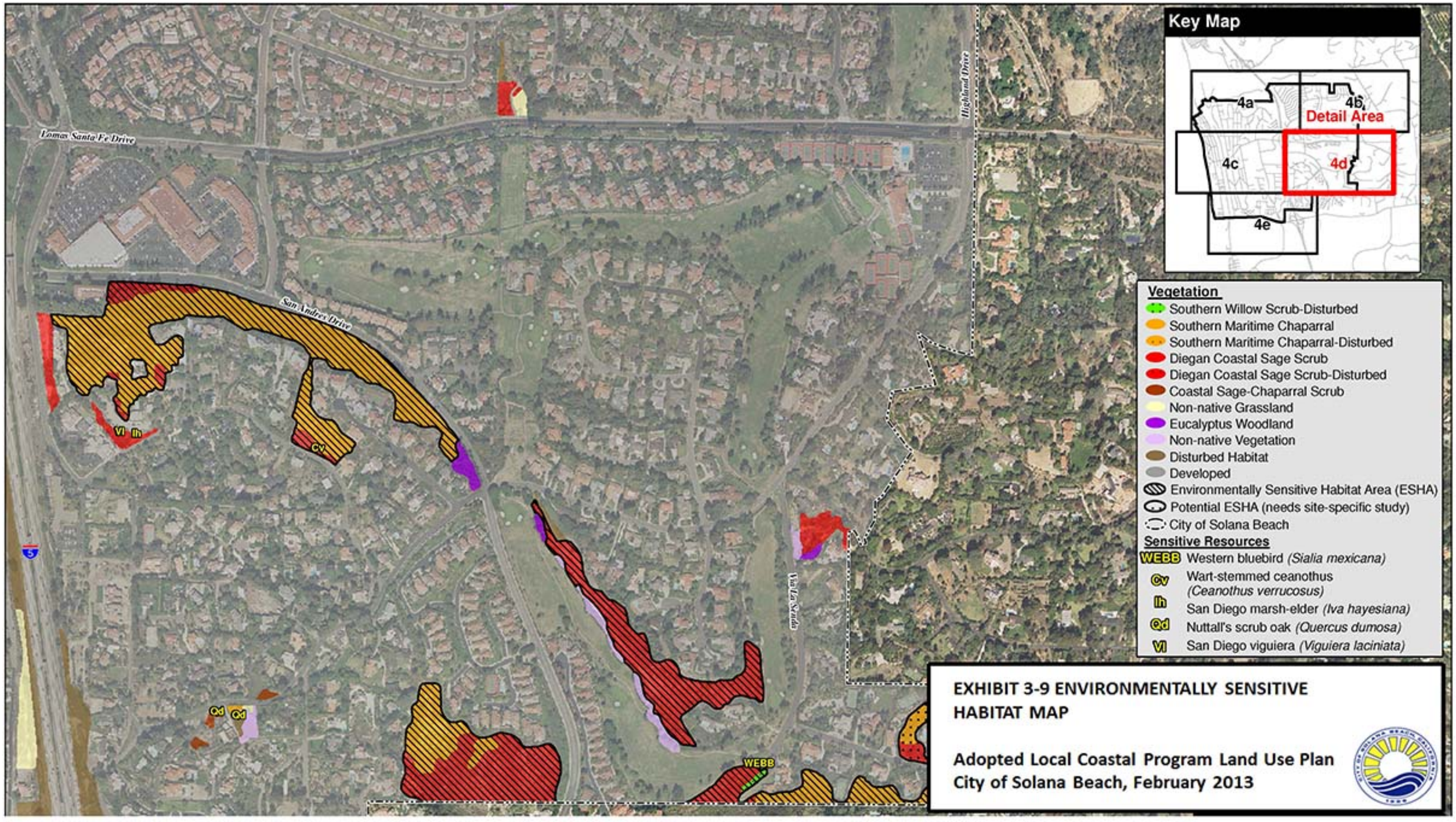


EXHIBIT 3-9 ENVIRONMENTALLY SENSITIVE HABITAT MAP

Adopted Local Coastal Program Land Use Plan
City of Solana Beach, February 2013

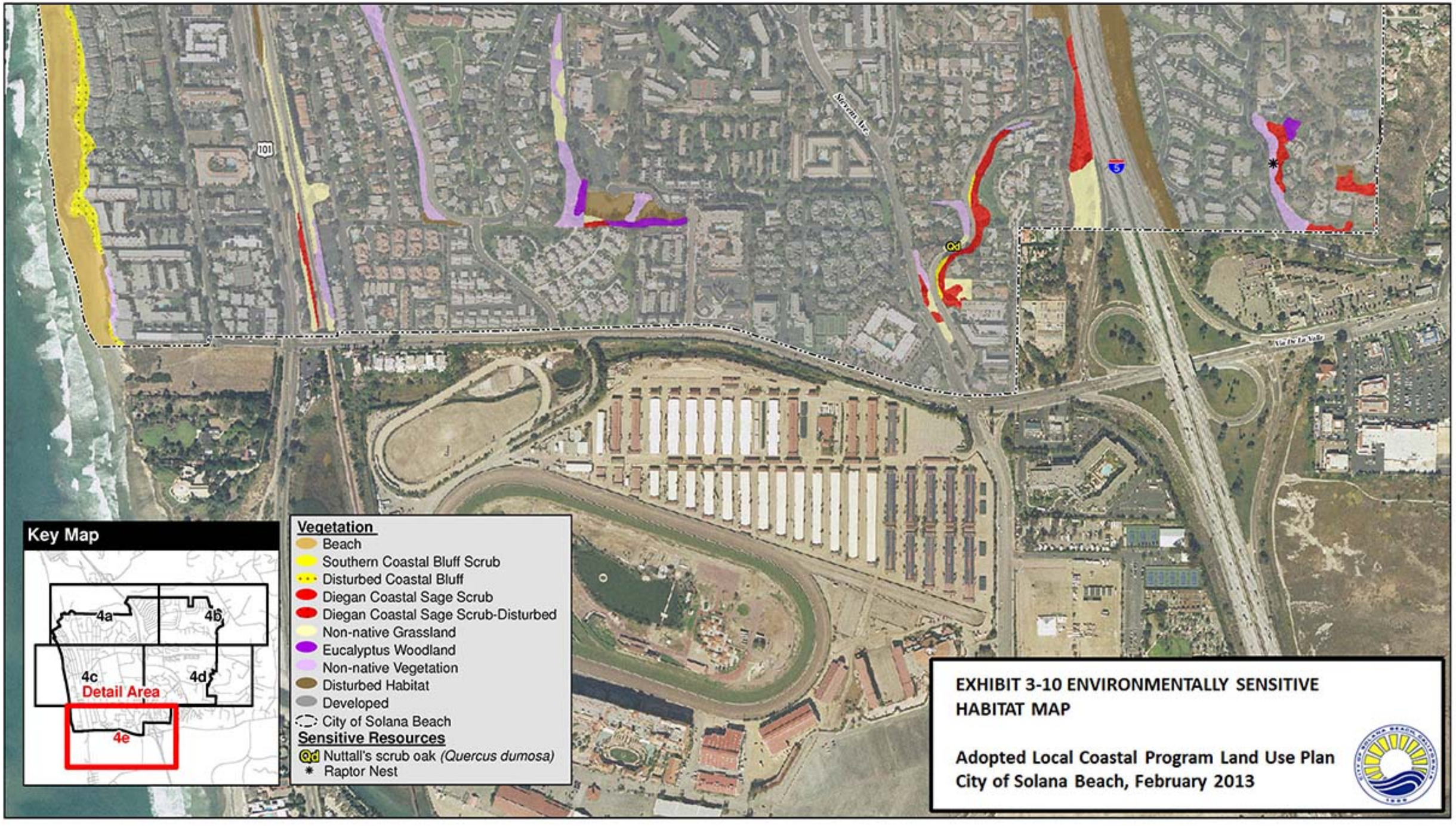

Key Map
4a
4b
4c
Detail Area
4d
4e
Vegetation
Beach
Southern Coastal Bluff Scrub
Disturbed Coastal Bluff
Diegan Coastal Sage Scrub
Diegan Coastal Sage Scrub-Disturbed
Non-native Grassland
Eucalyptus Woodland
Non-native Vegetation
Disturbed Habitat
Developed
City of Solana Beach
Sensitive Resources
Nuttall's scrub oak (Quercus dumosa)
Raptor Nest
101
Stevens Ave.
Via De La Valle
EXHIBIT 3-10 ENVIRONMENTALLY SENSITIVE HABITAT MAP
Adopted Local Coastal Program Land Use Plan
City of Solana Beach, February 2013

Table 3-1
EXISTING VEGETATION COMMUNITIES IN THE CITY

HABITAT TYPE	AREA*
Habitat Group A**	
Southern coastal salt marsh (52120)†	4.88
Freshwater marsh (including disturbed; 52400)	0.20
Southern willow scrub (including disturbed; 63320)	1.98
Mule fat scrub (63310)	0.34
Open water/Estuarine (13130)	0.72
Group A Subtotal	**8.12**
Habitat Group B	
Beach (13400)	20.0
Southern coastal bluff scrub/disturbed coastal bluff (31200)	7.8
Southern maritime chaparral (including disturbed; 37C30)	36.0
Group B Subtotal	**63.8**
Habitat Group C	
Diegan coastal sage scrub (including disturbed; 32500)	73.7
Coastal sage-chaparral scrub (including disturbed; 37G00)	3.3
Group C Subtotal	**77.0**
Habitat Group D	
Southern mixed chaparral (including disturbed; 37120)	13.7
Habitat Group E	
Non-native grassland (42200)	7.6
Habitat Group F	
Eucalyptus woodland (79100)	6.4
Non-native vegetation (11000)	15.0
Disturbed habitat (11300)	19.4
Developed (12000)	1,981.0
Group F Subtotal	**2,021.8**
TOTAL	**2,192.1**

*Area presented in acre(s) rounded to the nearest hundredth for wetland habitats and to the nearest tenth for upland habitats; thus, totals reflect rounding.

**Habitat Groups refer to the MHCP Habitat Classification System. Numerical codes are from Holland (1986) and/or Oberbauer (2008).

Table 3-2
ENVIRONMENTALLY SENSITIVE HABITAT AREAS

HABITAT TYPE	AREA*
Southern coastal salt marsh (52120)†	4.88
Freshwater marsh (including disturbed; 52400)	0.16
Southern willow scrub (including disturbed; 63320)	0.58
Mule fat scrub (63310)	0.34
Open water/Estuarine (13130)	0.72
Southern maritime chaparral (including disturbed; 37C30)	32.6
Diegan coastal sage scrub (including disturbed; 32500)	40.1
Coastal sage-chaparral scrub (including disturbed; 37G00)	2.6
Southern mixed chaparral (including disturbed; 37120)	7.0
Eucalyptus woodland (79100)‡	0.1
Non-native vegetation (11000)‡	0.6
Disturbed habitat (11300)‡	0.3
TOTAL	**89.9**

*Area presented in acre(s) rounded to the nearest hundredth for wetland habitats and to the nearest tenth for upland habitats; thus, totals reflect rounding.

*Numerical codes are from Holland (1986) and/or Oberbauer (2008).

*Small acreages of eucalyptus woodland, non-native vegetation, and disturbed habitat were grouped with ESHA because of their location within the San Elijo Lagoon Ecological Reserve, and because they are surrounded by native vegetation communities.

Table 3-3
POTENTIAL AREAS OF ESHA

HABITAT TYPE	AREA*
Southern maritime chaparral (including disturbed; 37C30)	3.3
Diegan coastal sage scrub (including disturbed; 32500)	1.3
TOTAL	**4.6**

*Area presented in acre(s) rounded to the nearest tenth; thus, totals reflect rounding.

*Numerical codes are from Holland (1986) and/or Oberbauer (2008).

The LUP policies establish that the presence of ESHA not already designated on the ESHA map shall be determined on the basis of site-specific study prior to the approval of any development. Such determinations shall be reviewed by the City Council. Regardless of the mapped ESHA designation of any particular area, habitat area found to meet the definition of ESHA shall be accorded all protection provided for ESHA by the LUP. ESHA shall be protected against significant disruption of habitat values and only resource dependent uses may be permitted within ESHA. If the application of the ESHA policies would result in taking private property for public use, without the payment of just compensation, then a use that is not resource dependent will be permitted in accordance with the policies in this chapter of the LUP. The LUP sets forth the process and parameters for approval of such a use.

The LUP establishes policies calling for the protection of areas adjacent to ESHA through the provision of buffers. Native vegetation buffer areas must be provided around ESHA that are adequate to prevent impacts that would significantly degrade these areas. Development, excluding required fuel modification activities in accordance with the County Fire and Fuel Hazard Management Plan, shall not be permitted within required buffer areas. The LUP policies require that new development be sited and constructed to avoid impacts, including fuel modification, which could significantly degrade ESHA. Graded and other disturbed areas in or adjacent to ESHA must be landscaped or revegetated with native, tolerant, salt-tolerant, non-invasive drought and fire resistant plants at the completion of grading. If new development removes or adversely impacts native vegetation, measures to restore disturbed or degraded habitat on the project site shall be included as mitigation. Fencing should be limited, in or adjacent to ESHA, and should be sited and designed to allow wildlife to pass through except where needed to mitigate fire risk. The LUP requires exterior lighting to be of low intensity and shielded to minimize impacts on wildlife.

The LUP policies require that new development minimize the removal of natural vegetation. The policies acknowledge that vegetation is sometimes required by the Fire Marshal to be removed, thinned or otherwise modified in order to minimize the risk of hazard for properties located in the WUI. A memorandum of understanding (MOU) between the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), California Department of Forestry, the San Diego Fire Chief's Association and the Fire District's Association of San Diego County establishes guidelines and a cooperative mechanism whereby the USFWS and the CDFW assess, minimize and help account for potential effects to sensitive species and habitats resulting from vegetation abatement activities necessary to reduce wildfire risk.

In January 2009, the City along with the USFWS, CDFW, County of San Diego and the San Elijo Lagoon Conservancy prepared the San Elijo Lagoon Vegetation Management Plan (http://www.ci.solana-beach.ca.us/vertical/Sites/%7B840804C2-F869-4904-9AE3-720581350CE7%7D/uploads/SAN_ELIJO_-_VEG._MGMT_PLAN.pdf) and signed a second more specific MOU for the purpose of establishing a vegetation management program for the lands in and adjacent to the lagoon. This program maximizes the protection of natural resources and minimizes the risk from wildfire in the City at the

wildland-urban interface along the San Elijo Lagoon. Fire hazard related policies are consolidated in Chapter 4 of the LUP.

The LUP requires the protection of native trees; including oak, manzanita, sycamore, cottonwood, willow, and toyon trees. Development must be sited and designed to avoid removal of trees and encroachment into the root zone of each tree. Where the removal of trees cannot be avoided by any feasible project alternative, replacement trees must be provided. If trees are located within the Very High Fire Hazard Severity Zone as identified in a City Fire Department map, any new trees planted shall be only approved species acceptable to the Fire and Planning Department (see Exhibit 4-7) based upon the County of San Diego "Suggested Plant List for a Defensible Space" and shall be native, non-invasive, drought-tolerant, salt-tolerant and fire resistant species. Additionally, the policies require that if on-site mitigation is not feasible, then off-site mitigation must be provided either through the planting of replacement trees on a suitable site that is public parkland or otherwise restricted from development, or by providing an in-lieu fee. Any fees required through permits will be used to restore or create native tree habitat as mitigation.

The LUP policies provide for the protection of wetlands. The biological productivity and the quality of wetlands shall be protected and where feasible restored. The policies set forth the limited instances in which the diking, filling or dredging of wetlands or open coastal waters could be allowed, where there is no feasible less environmentally damaging alternative and where all feasible mitigation measures have been provided. Lagoon or water level modification shall not be permitted until and unless a management plan for the lagoon is developed and approved, except in the case a public health or safety emergency.

The LUP also provides for the protection of water quality. The policies require that new development protects, and where feasible, enhances and restores wetlands or streams. The policies promote the elimination of pollutant discharge, including non-point-source pollution, into the City's waters through new construction and development regulation, including site planning, environmental review and mitigation, and project and permit conditions of approval. Additionally, the policies require the implementation of Best Management Practices (BMP) to limit water quality impacts from existing development, including septic system maintenance and City services. Finally, the policies require that the water quality objectives established in the California Water Quality Control Plan, San Diego Region (Basin Plan), and the policies established by the Regional Water Quality Control Board (RWQCB) in the San Diego County municipal storm water permit and the Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County and the Cities in San Diego County be incorporated into planning and implementation of new development.

The City of Solana Beach includes approximately 1.7 miles of ocean shoreline and limited areas of wetland habitat. The City shall preserve and protect wetlands within the City's planning area. Wetlands shall be defined and delineated consistent with the definitions of the Coastal Act and the Coastal Commission Regulations, as applicable, and shall include, but not be limited to, all lands which may be covered periodically or permanently

with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens. Any unmapped areas that meet these criteria are wetlands and shall be accorded all of the protections provided for wetlands in the LCP.

Wetland delineations will be conducted according to the definitions of wetland boundaries contained in section 13577(b) of the California Code of Regulation. A preponderance of hydric soils or a preponderance of wetland indicator species will be considered presumptive evidence of wetland conditions. The delineation report will include at a minimum a map at a scale of 1":200' or larger with polygons delineating all wetland areas, polygons delineating all areas of vegetation with a preponderance of wetland indicator species, and the location of sampling points, and a description of the surface indicators used for delineating the wetland polygons. Paired sample points will be placed inside and outside of vegetation polygons and wetland polygons identified by the consultant doing the delineation. The biological productivity and the quality of wetlands shall be protected and, where feasible enhanced.

Wetlands occur primarily in the San Elijo Lagoon Ecological Reserve and along a few urban drainages in the City. Jurisdictional areas include wetlands and non-wetland waters (e.g., reservoirs, lagoons, and streams) subject to California Fish and Game Code Section 1600 et seq. and Section 404 of the federal Clean Water Act. Wetland communities that occur within the Coastal Overlay Zone also include areas subject to Section 30233 of the California Coastal Act and applicable LCP regulations. Typical buffer zone widths in southern California include 100 ft. around all wetlands and 50 ft. around all riparian areas (CCC 1994), although final buffer widths for a project must be determined in consultation with the USACE, CDFW, and CCC, as applicable. Buffer zones are intended to protect the functions and services of a wetland, including wildlife habitat, food chain productivity, water quality, ground water recharge, and storm water abatement. Buffer zones are often protected through the execution of open space easements.

It is the City’s policy that there shall be no net loss of wetland acreage or resource value as a result of land use or development. The City's goal is to realize a net gain in acreage and value whenever possible. Applications for new development within or adjacent to wetlands shall include evidence of the preliminary approval of the CDFW, USACE, USFWS, and other resource management agencies, as applicable.

Coastal Wetlands: Two primary areas of wetland habitat, the San Elijo Lagoon and the San Dieguito Lagoon, lie immediately north and south of the City respectively. These two important wetland areas are affected by drainage from the upland habitat in Solana Beach, as well as from other surrounding and inland cities.

San Elijo Lagoon is approximately 1,000 acres in size and includes the 590-acre San Elijo Ecological Reserve managed by the CDFW and the San Diego County Department of Parks and Recreation. The lagoon mouth is regularly mechanically opened to allow tidal flushing. Currently, most of the lagoon habitat consists of brackish/freshwater marsh, non-

tidal flats and open water. San Elijo Lagoon is an important waterfowl habitat because of its diverse character and shallow brackish water conditions.

The San Dieguito Lagoon is the gateway to the San Dieguito River Park. It has vital importance for the ecology of the region, for birds as a stop on the Pacific Flyway, as nesting and foraging areas for endangered species, and as a fish hatchery. The San Dieguito coastal area is also a significant scenic resource for residents and visitors in Solana Beach, Del Mar, and San Diego.

The San Dieguito Wetland Restoration Project is nearly complete and is intended to: (1) restore the aquatic functions of the lagoon through permanent inlet maintenance and expansion of the tidal basin; and (2) create subtidal and intertidal habitats on both the east and west sides of Interstate 5 (I-5). This proposal is part of a Park Master Plan that was adopted in 2000 for the coastal area that would also provide for non-tidal wetland and upland habitat restoration and public access. The restoration work was a condition of the CCC permit for the construction and operation of the San Onofre Nuclear Generating Station (SONGS).

Sand and Reef Biological Habitats: In addition to coastal processes and wetland ecosystems of the area, sand and reef biological habitats occur offshore in the nearshore marine environment, including non-vegetated low relief benches and rock, low relief limited vegetation areas and higher relief areas that support surfgrass. Intertidal surfgrass exists about 2,000 feet north of Fletcher Cove at “Pill Box” reef, near Tide Park and at “Table Tops” reef. Giant kelp has historically occurred offshore at depths of 25 feet and greater.

Importantly, beach replenishment associated with the SANDAG Regional Beach Sand Project (RBSP) (2001) did not adversely impact sensitive marine resources offshore of Solana Beach. A second RBSP is currently planned for 2012. Assessment of environmental impacts associated with other opportunities for beach replenishment is required under the Coastal Act, and either the California Environmental Quality Act (CEQA) or the National Environmental Policy Act (NEPA) or both statutes, as applicable.

Recent research has reinforced the importance of protecting the beach wrack as part of the marine ecosystem. Beach wrack refers to the piles of seaweed and plant and animal remains that are washed ashore by waves. While this may appear to beach visitors as unsightly debris, wrack occurs as a result of natural processes. Research has found that it is an important nutrient source and provides micro-habitat for a variety of organisms. Regular grooming of sandy beaches can destroy the wrack and help to degrade the nearshore habitat because of beach construction activities, including excavation and deposition of sand, and recontouring of sand, shall be implemented in a manner to avoid the removal or disturbance of wrack. Permitted mechanized excavation or deposition activities shall be restricted to dry sand area only and should not occur any closer than ten feet landward of the wrack line as identified and marked in the field by a biological monitor following a spring tide just prior to construction, or the mean high tide line, whichever is further landward.

Beach grooming or other activities on the dry beach can also have negative impacts to grunion. The grunion is a fish that comes ashore in the spring and summer during particularly high night-time tides to reproduce and lay their eggs. The eggs develop while buried in the sand and hatch two weeks later when high tides again wash the high-shore and enable the baby grunion to reach the sea.

Beach maintenance must strike a balance between protection of this habitat and maintaining the recreational value of sandy beach. In the absence of focused surveys, grunion eggs must be presumed present from March 1 through August 31. Sand disturbing activities are prohibited when grunion eggs are present. During those periods, beach grooming and other disruptive activities shall only take place above the semi-lunar high tide mark.

Non-Point Source Pollution: The water quality of the two lagoons and ocean water are impacted by urban runoff from human activities within Solana Beach and surrounding communities. The SDRWQCB has the authority to implement and enforce the laws and regulations requiring control of water quality. The SDRWQCB has developed policies, rules, and procedures for this purpose.

The principal federal and state laws pertaining to regulation of water quality are known, respectively, as the 1972 Federal Water Pollution Control Act (also known as the Clean Water Act) and Division 7 of the 1969 California Water Code (also known as the Porter-Cologne Water Quality Control Act). The laws are similar in many ways. The fundamental purpose of both laws is to protect the beneficial uses of water. An important distinction between the two is that the Porter-Cologne Water Quality Control Act addresses both ground and surface waters while the Clean Water Act addresses surface water only.

The Clean Water Act (CWA) also established the National Pollutant Discharge Elimination System (NPDES), which requires permits for discharges of pollutants from certain point sources into waters of the United States. The CWA allows the U.S. Environmental Protection Agency (EPA) to delegate NPDES permitting authority to states with approved environmental regulatory programs.

The City's goal is to ensure the health, safety and general welfare of its citizens through improving and protecting water quality and the beneficial uses of receiving waters. This is accomplished by controlling storm water runoff, other polluted (or urban) runoff and pollution that may cause or contribute to adverse impacts on recreational access to beaches or other coastal resources such as sensitive habitat areas. The LUP policies are intended to meet the City's legal obligations under SDRWQCB Permit No. 2007-0001 and any subsequent permits issued by the RWQCB or successor agency.

B. Coastal Act Policies

Section 30107.5:
"Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments. The Coastal Act Policies set forth below are incorporated herein as policies of the LUP:

Section 30230:
Marine resources shall be maintained enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231:
The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entertainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Section 30233:
(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

(3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.

(4) Incidental public service purposes, including, but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

(5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(6) Restoration purposes.

(7) Nature study, aquaculture, or similar resource-dependent activities.

- Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for these purposes to appropriate beaches or into suitable longshore current systems.

(b) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any alteration of coastal wetlands identified by the Department of Fish and Wildlife, including, but not limited to, the 19 coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal Wetlands of California", shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division.

(c) Erosion control and flood control facilities constructed on water courses can impede the movement of sediment and nutrients that would otherwise be carried by storm runoff into coastal waters. To facilitate the continued delivery of these sediments to the littoral zone, whenever feasible, the material removed from these facilities may be placed at appropriate points on the shoreline in accordance with other applicable provisions of this division, where feasible mitigation measures have been provided to minimize adverse environmental effects. Aspects that shall be considered before issuing a coastal development permit for these purposes are the method of placement, time of year of placement, and sensitivity of the placement area.

Section 30236:

Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to: (1) necessary water supply projects; (2) flood control projects where no other method for protecting existing structures in the flood plain is feasible and where such protection is necessary for public safety or to protect existing development; or (3) developments where the primary function is the improvement of fish and wildlife habitat.

Section 30240:
(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas; and (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.

C. Land Use Plan Policies

1. Land Resources

a. ESHA Designation

Policy 3.1: Areas in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments are ESHAs and are generally shown on the LUP ESHA Maps. The ESHAs in the City of Solana Beach are shown in Exhibits 3-6 through 3-10. Regardless of whether streams and wetlands are designated as ESHA, the policies and standards in the LCP applicable to streams and wetlands shall apply.

Policy 3.2: Any Areas of Special Biological Significance (as designated by the California Department of Fish and Game), shall be considered ESHA and shall be accorded all protection provided for ESHA in the LCP.

Policy 3.3: Any area not designated on the LUP ESHA Maps that meets the ESHA criteria is ESHA and shall be accorded all the protection provided for ESHA in the LCP. The following areas shall be considered ESHA, unless there is compelling site-specific evidence to the contrary:

- Any habitat area that is rare or especially valuable from a local, regional, or statewide basis.
- Areas that contribute to the viability of plant or animal species designated as rare, threatened, or endangered under State or Federal law.
- Areas that contribute to the viability of species designated as Fully Protected or Species of Special Concern under State law or regulations.
- Areas that contribute to the viability of plant species for which there is compelling evidence of rarity, for example, those designated by the California Native Plant Society as 1b (Rare or endangered in California and elsewhere), such as Nuttall's scrub oak or two (rare, threatened or endangered in California but more common elsewhere), such as wart-stemmed Ceanothus.

Policy 3.4: If a Multi-Species Conservation Plan (MSCP) or other similar habitat plan is prepared in the future that includes lands within the City of Solana Beach, it shall be submitted to the Coastal Commission for certification as an amendment to the LCP.

Policy 3.5: The LUP ESHA Maps shall be reviewed every ten years and updated to reflect current information, including information on rare, threatened, or endangered species. Areas subject to habitat restoration projects shall also be considered for designation as ESHA. Revisions to the map depicting ESHA shall be treated as LCP amendments and shall be subject to the approval of the CCC.

Policy 3.6: Any area mapped as ESHA shall not be deprived of protection as ESHA, as required by the policies and provisions of the LCP, on the basis that habitat has been illegally removed, degraded, or species that are rare or especially valuable because of their nature or role in an ecosystem have been eliminated.

Policy 3.7: If a site-specific biological study contains substantial evidence that an area previously mapped as ESHA does not contain habitat that meets the definition of ESHA, the City Community Development Director shall review all available site-specific information to determine if the area in question should no longer be considered ESHA and not subject to the ESHA protection policies of the LUP. If the area is determined to be adjacent to ESHA, LUP ESHA buffer policies shall apply. The Community Development Director shall provide recommendations to the City Council as to the ESHA status of the area in question. If the City Council finds that an area previously mapped as ESHA does not meet the definition of ESHA, a modification shall be made to the LUP ESHA Maps, as part of an LCP map update and LCP Amendment. If an area is not ESHA or ESHA buffer, LCP policies and standards for protection of ESHA and ESHA buffer shall not apply and development may be allowed (consistent with other LCP requirements) after the ESHA map and LCP has been amended.

b. ESHA Protection

Policy 3.8: ESHA shall be protected against significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.

Policy 3.9: Public access-ways and trails are considered resource dependent uses. New access-ways and trails located within or adjacent to ESHA shall be sited to minimize impacts to ESHA to the maximum extent feasible. Measures, including but not limited to signage, placement of boardwalks, and limited fencing shall be implemented as necessary to protect ESHA.

Policy 3.10: If the application of the policies and standards contained in this LCP regarding use of property designated as ESHA or ESHA buffer, including the restriction of ESHA to only resource-dependent use, would likely constitute a taking of private property without just compensation, then a use that is not consistent with the ESHA provisions of the LCP shall be allowed on the property, provided such use is consistent with all other applicable policies of the LCP, the approved project is the alternative that would result in the fewest or least significant impacts, and it is the minimum amount of development necessary to avoid a taking of private property without just compensation. In such a case, the development shall demonstrate the extent of ESHA on the property and include mitigation, or, if on-site mitigation is not feasible, payment of an in-lieu fee, for unavoidable impacts to ESHA or ESHA buffers from the removal, conversion, or

modification of natural habitat for new development, including required fuel modification and brush clearance per Policy 3.12. Mitigation shall not substitute for implementation of a feasible project alternative that would avoid adverse impacts to ESHA.

Policy 3.11: New development shall be sited and designed to avoid impacts to ESHA. For development permitted pursuant to Policy 3.10, if there is no feasible alternative that can eliminate all impacts, then the alternative that would result in the fewest or least significant impacts shall be selected. Impacts to ESHA that cannot be avoided through the implementation of sitting and design alternatives shall be fully mitigated, with priority given to on-site mitigation. Off-site mitigation measures shall only be approved when it is not feasible to fully mitigate impacts on-site or where off-site mitigation is more protective. Mitigation shall not substitute for implementation of the project alternative that would avoid impacts to ESHA. Mitigation for impacts to ESHA shall be provided at a 3:1 ratio.

Policy 3.12: Mitigation measures for impacts to ESHA that cannot be avoided through the implementation of siting and design alternatives, including habitat restoration and/or enhancement shall be monitored for a period of no less than five, and no more than ten years following completion. Specific mitigation objectives and performance standards shall be designed to measure the success of the restoration and/or enhancement. Adaptive management techniques shall be implemented if necessary. Monitoring reports shall be provided to the City annually and at the conclusion of the monitoring period that document the success or failure of the mitigation. If performance standards are not met by the end of five years, the applicant may request that the monitoring period be extended until the standards are met. However, if at any time after five years the applicant concludes that performance standards cannot be met, or if ten years have elapsed and performance standards have still not been met, the applicant shall submit an amendment proposing alternative mitigation measures.

Policy 3.13: ESHA shall be protected and, where feasible, enhanced. Where pedestrian access through ESHA is permitted, well-defined footpaths or other means of directing use and minimizing adverse impacts shall be used. Nesting and roosting areas for sensitive birds such as Western snowy plovers and least terns shall be protected by means, which may include, but are not limited to, fencing, signing, or seasonal access restrictions.

Policy 3.14: Access to beach areas by motorized vehicles, including off-road vehicles shall be prohibited, except for beach maintenance, emergency or lifeguard services. Such vehicular uses shall avoid any known sensitive habitat areas to the maximum extent feasible.

Policy 3.15: The use of insecticides, herbicides, rodenticides or any toxic chemical substance which has the potential to significantly degrade ESHA, shall be prohibited within and adjacent to ESHAs, except where necessary to protect or enhance the habitat itself, such as eradication of invasive plant species, or habitat restoration or as required for fuel modification. Application of such chemical substances shall not take place during the winter season or when rain is predicted within a week of application.

Policy 3.16: The use of insecticides, herbicides, rodenticides or other toxic substances by City employees and contractors in construction and maintenance of City facilities and other development shall be minimized in and adjacent to ESHA.

Policy 3.17: Mosquito abatement within or adjacent to ESHA shall be limited to the implementation of the minimum measures necessary to protect human health, and shall minimize adverse impacts to ESHA.

Policy 3.18: Wildfire burn areas shall be allowed to revegetate naturally, except where re-seeding is necessary to minimize risks to public health or safety. Where necessary, re-seeding shall utilize a mix of native plant seeds appropriate for the site and collected in a similar habitat within the same geographic region, where feasible. Wildfire burn areas that were previously subject to fuel modification or brush clearance for existing structures, pursuant to the requirements of the Solana Beach or San Diego County Fire Departments, may be revegetated to pre-fire conditions using appropriate native propagules.

Policy 3.19: Interpretive signage may be placed in ESHA to provide information to the public about the value and need to protect sensitive natural resources.

c. Areas adjacent to ESHA

Policy 3.20: Limit redevelopment and development in environmentally sensitive areas, such as upland slopes and watershed areas in and adjacent to, and draining directly to Holmwood Canyon, and San Elijo Lagoon Ecological Reserve to activities supporting its preservation.

Policy 3.21: Walls, fences, and gates situated along coastal bluffs and adjacent to the San Elijo Lagoon Reserve should be constructed with materials designed to minimize bird-strikes with the wall, fence, or gate. As feasible, material selection and structural design shall be made in consultation with a qualified biologist, CDFW, or USFWS. Such materials may consist, all or in part, of wood, wrought iron, frosted or partially-frosted glass, plexiglass or other visually permeable barriers that are designed to prevent creation of a bird strike hazard. Clear glass or plexiglass should not be installed unless appliqués (e.g. stickers/decals) designed to reduce bird-strikes by reducing reflectivity and transparency is also used. Use of opaque or partially opaque materials is preferred to clear glass or plexiglass and appliqués. All materials shall be maintained throughout the life of the development to ensure continued effectiveness.

Policy 3.22: Development adjacent to ESHAs shall minimize impacts to habitat values or sensitive species to the maximum extent feasible. Native vegetation buffer areas shall be provided around ESHAs to serve as transitional habitat and provide distance and physical barriers to human intrusion. Buffers shall be of a sufficient size to ensure the biological integrity and preservation of the ESHA they are designed to protect.

All buffers around (non-wetland) ESHA shall be a minimum of 100 feet in width, or a lesser width may be approved by the Planning Department and Fire Marshal as addressed in Policy 3.65. However, in no case can the buffer size be reduced to less than 50 feet.

Policy 3.23: New development adjacent to parklands or conservation areas, where the purpose of the park is to protect the natural environment and ESHA, shall be sited and designed to minimize impacts to habitat and recreational opportunities, to the maximum extent feasible. Natural vegetation buffer areas shall be provided around parklands. Buffers shall be of a sufficient size to prevent impacts to parkland resources, but in no case shall they be less than 50 feet in width.

Policy 3.24: New development, including, but not limited to, vegetation removal, vegetation thinning, or planting of non-native or invasive vegetation shall not be permitted in required ESHA or park buffer areas. Habitat restoration and invasive plant eradication may be permitted within required buffer areas if designed to protect and enhance habitat values.

Policy 3.25: Required buffer areas shall extend from the outer edge of the tree or shrub canopy of ESHA.

Policy 3.26: Modifications to required development standards that are not related to ESHA protection (street setbacks, height limits, etc.) shall be permitted where necessary to avoid or minimize impacts to ESHA.

Policy 3.27: Protection of ESHA and public access shall take priority over other development standards and where there is any conflict between general development standards and ESHA and/or public access protection, the standards that are most protective of ESHA and public access shall have precedence.

Policy 3.28: Permitted development located within or adjacent to ESHA and/or parklands that can adversely impact those areas shall include open space or conservation restrictions or easements over ESHA, ESHA buffer, or parkland buffer in order to protect resources.

Policy 3.29: Landscaping adjacent to ESHA must consist entirely of native, non-invasive drought tolerant, salt-tolerant and fire resistant species; however, the use of ornamental species may be allowed provided they are fire-resistant, drought-tolerant, and non-invasive as a small component for single-family residences.

d. Stream Protection

Policy 3.30: Channelization or other substantial alterations of streams shall be prohibited except for: (1) necessary water supply projects where no feasible alternative exists; (2) flood protection for existing development where there is no other feasible alternative, or (3) the improvement of fish and wildlife habitat. Any channelization or stream alteration permitted for one of these three purposes shall minimize impacts to coastal resources, including the depletion of groundwater, and shall include maximum feasible mitigation

measures to mitigate unavoidable impacts. Bioengineering alternatives shall be preferred for flood protection over "hard" solutions such as concrete or riprap channels. Limit further channelization of Steven's Creek, unless necessary to protect existing development or for flood control. Ongoing maintenance and clearing as necessary to protect existing structures in the flood plain, and incorporating any necessary mitigation measures maintaining Steven's Creek in a manner that protects flood capacity while enhancing open space and habitat value over the long term.

e. Application Requirements

Policy 3.31: If located in, or adjacent to, ESHA new development shall include an inventory conducted by a qualified biologist of the plant and animal species present on the project site. If the initial inventory indicates the presence or potential for sensitive species or habitat on the project site, a detailed biological study shall be required. Sensitive species are those listed in any of three categories: federally listed, state listed, and California Native Plant Society (CNPS) categories 1B and 2.

f. Environmental Review

Policy 3.32: For development in locations known, or determined by environmental review, to potentially have breeding or nesting sensitive birds species, two weeks prior to any scheduled development, a qualified biological monitor shall conduct a pre-construction survey of the site and within 500 feet of the project site. Sensitive bird species are those species designated "threatened" or "endangered" by state or federal agencies, California Species of Special Concern, California Fully Protected Species, raptors, and large wading birds. In addition, surveys must be conducted every two weeks for sensitive nesting birds during the breeding season. If nesting sensitive birds are detected at any time during the breeding season, the California Department of Fish and Wildlife shall be notified and an appropriate disturbance set-back will be determined and imposed until the young-of-the-year are no longer reliant upon the nest. The set-back or buffer shall be no less than 100 feet.

Policy 3.33: The City should coordinate with the CDFW and USFWS, NMFS, and other resource management agencies, as applicable, in the review of development applications in order to ensure that impacts to ESHA and marine resources, including rare, threatened, or endangered species, are avoided and minimized.

g. New Development

Policy 3.34: Manage development in coastal hillside areas to protect sensitive habitat.

Policy 3.35: Utilize the Hillside/Coastal Bluff Overlay (HOZ) requirements to restrict the grading of natural non-coastal bluff slopes with an inclination of 25% or greater in order to preserve the natural topography and scenic qualities of the City; protect native coastal sage/chaparral and grassland habitat; preserve existing watersheds and reduce the potential for environmental hazards including soil erosion and siltation of coastal wetlands; landslides; adverse impacts due to runoff; and other impacts which could affect

public health, safety, and welfare. None of the above shall restrict the ability to construct a bluff retention device which meets the criteria set forth in this LCP.

Policy 3.36: Require a permit for developments proposed on property within hillside/coastal bluff overlay areas, and where site-specific analysis indicates that the parcel contains natural slopes exceeding 25 percent grade, as a method to review and mitigate potential impacts. Submittal requirements for the permit shall include:

- A slope analysis prepared by a certified civil, soils or geotechnical engineer describing and graphically depicting areas of less than 25 percent slope, 25 to 40 percent slope and greater than 40 percent slope.
- A geological reconnaissance report where structures or improvements are proposed within any areas of greater than 25 percent slope, as such development is strongly discouraged and traditionally denied approval.
- Slopes of 25 percent and over shall be preserved in their natural state unless the application of this policy would result in a taking of private property without just compensation, in which case an encroachment (including grading) not to exceed ten percent of the steep slope area over 25 percent slope may be permitted.
- For existing legal parcels with all or nearly all of their area consisting of slopes over 25 percent, encroachment may be permitted; however, any such encroachment shall be limited so that at no time is more than 20 percent of the entire parcel (including the areas under 25 percent slope) permitted to be disturbed from its natural state. Use of slopes over 25 percent may be made in order to provide access to flatters areas if there is no less environmentally damaging alternative available.
- Grading and/or development-related vegetation clearance shall be prohibited where the slope exceeds 40 percent (2.5:1), except that driveways and/or utilities may be located on such slopes, where there is no less environmentally damaging feasible alternative means of providing access to a building site, provided that the building site is determined to be the preferred alternative and consistent with all other policies of the LCP.
- Where unstable geological conditions are indicated by the reconnaissance report, a preliminary engineering geology report is also required to identify the nature and magnitude of unstable conditions, and alternative mitigation measures that can be applied.
- An assessment of the impact(s) of the proposed development on biological habitat and sand supply.

Policy 3.37: Limit development in hillside areas to minimize potential impacts on native plant and animal species and protect remaining native habitats.

Policy 3.38: New development shall be sited and designed to minimize impacts to coastal resources by:

- Minimizing grading and landform alteration.
- Minimizing the removal of natural vegetation, both that required for the building pad or driveway, as well as, the required fuel modification around structures.
- Limiting the maximum number of structures to one main residence, one second residential structure, and accessory structures such as, workshop, gym, studio, pool cabana, office, or tennis court, provided that such accessory structures are located within the approved development area and structures are clustered to minimize the need for fuel modification.
- Minimizing the length of the access road or driveway, except where a longer roadway can be demonstrated to avoid or be more protective of resources. Access roads and driveway lengths must comply with fire code requirements.
- Grading for access roads and driveways should be minimized; the standard for new on-site access roads shall be a maximum of 300 feet or one-third the parcel depth, whichever is less. Longer roads may be allowed on approval of the City Council or Commission on appeal, if the determination can be made that adverse environmental impacts will not be incurred. Such approval shall constitute a conditional use to be processed consistent with the LIP provisions.
- Limiting earthmoving operations during the rainy season to prevent soil erosion, stream siltation, reduced water percolation, and increased runoff.
- Prevent net increases in baseline flows for any receiving waterbody.
- Minimizing impacts to water quality.

Policy 3.39: New septic systems shall be sited and designed to ensure that impacts to coastal resources are minimized, including those impacts from grading and site disturbance as well as the introduction of increased amounts of water. Adequate setbacks and/or buffers shall be required to protect ESHA and to prevent lateral seepage from the leach field(s) or seepage pit(s) into stream waters or the ocean.

Policy 3.40: Land divisions, including certificates of compliance, shall only be permitted if each new parcel being created could be developed (including construction of any necessary access road), without building in ESHA or ESHA buffer.

Policy 3.41: Grading or earthmoving exceeding 50 cubic yards shall require a Development Review Permit from the City. Grading plans shall meet the requirements of the LIP with respect to maximum quantities, maximum cuts and fills, remedial grading, grading for safety purposes, and maximum heights of cut or fill.

Policy 3.42: Earthmoving during the rainy season (extending from November 1 to March 1) should be restricted for development that is (1) located within or adjacent to ESHA, or (2) that includes grading on slopes greater than 4:1 except for grading on coastal bluffs that is required for bluff retention devices. In such cases, approved grading shall not be undertaken unless there is sufficient time to complete grading operations before the rainy season. If grading operations are not completed before the rainy season begins, grading

shall be halted and temporary erosion control measures shall be put into place to minimize erosion until grading resumes after March 1, unless the City determines that completion of grading would be more protective of resources.

Policy 3.43: Where grading is permitted during the rainy season (extending from November 1 to March 1), erosion control measures such as sediment basins, silt fencing, sandbagging, installation of geofabrics, shall be implemented prior to and concurrent with grading operations. Such measures shall be maintained through final grading and until landscaping and permanent drainage is installed.

Policy 3.44: Grading during the rainy season may be permitted to remediate hazardous geologic conditions that endanger public health and safety.

Policy 3.45: Cut and fill slopes and other areas disturbed by construction activities (including areas disturbed by fuel modification or brush clearance) shall be landscaped or revegetated at the completion of grading. Landscape plans shall provide that:

- Plantings shall be native, non-invasive drought-tolerant salt-tolerant and fire resistant plant species, and blend with existing natural vegetation and natural habitats on the site, except as noted below.
- Invasive plant species that tend to supplant native species and natural habitats shall be prohibited.
- Non-invasive ornamental plants and lawn may be permitted in combination with native, drought-tolerant, salt tolerant and fire resistant species within the irrigated zone(s) required for fuel modification nearest approved residential structures.
- Landscaping or revegetation shall provide 90 percent coverage within five years, or that percentage of ground cover demonstrated locally appropriate for a healthy stand of the particular native vegetation type chosen for restoration. Landscaping or revegetation that is located within any required fuel modification thinning zone shall provide 60 percent coverage within five years.
- Any landscaping, or revegetation shall be monitored for a period of at least five, and no more years than ten years following the completion of planting. Performance criteria shall be designed to measure the success of the plantings. Adaptive management techniques shall be implemented if necessary. If performance standards are not met by the end of five years, the applicant may request that the monitoring period be extended up to an additional five years until the standards are met. However, if at any time after five years the applicant concludes that performance standards cannot be met, or if ten years have elapsed and performance standards have still not been met, the applicant shall submit an amendment proposing alternative mitigation measures

Policy 3.46: Disturbed ESHAs shall not be further degraded, and if feasible, restored. If new development removes or adversely impacts native vegetation, measures to restore any disturbed or degraded habitat on the property shall be included as mitigation.

Policy 3.47: Fencing or walls shall be prohibited within riparian habitat and on bluffs, except where necessary for public safety, wildfire risk abatement, habitat protection, or restoration. Fencing or walls that do not permit the free passage of wildlife shall be prohibited in any wildlife corridor. Walls installed for public fire safety reasons, which are located within very high fire hazard severity zones as identified on the City's WUI map, shall be constructed of non-combustible materials. Openings in walls and gates for emergency access or wildlife movement purposes may be required.

Policy 3.48: Fencing adjacent to ESHA shall be sited and designed to be wildlife permeable, enabling wildlife to pass through, except where the fencing is adjacent to residential areas and intended to prevent domestic animals from entering the ESHA or buffer area, and does not cross probable wildlife corridors.

Policy 3.49: Exterior night lighting shall be minimized, restricted to low intensity fixtures, shielded, and directed away from ESHA in order to minimize impacts on wildlife. High intensity perimeter lighting and lighting for sports courts or other private recreational facilities in ESHA, ESHA buffer, or where night lighting would increase illumination in ESHA is prohibited.

Policy 3.50: New recreational facilities or structures on beaches shall be designed and located to minimize impacts to ESHA and marine resources.

h. Native Tree Protection

Policy 3.51: New development shall be sited and designed to preserve oak, sycamore, alder, willow, toyon, or other native trees that are not otherwise protected as ESHA. Removal of native trees shall be prohibited except where no other feasible alternative exists. Structures, including roads or driveways, shall be sited to prevent any encroachment into the root zone and to provide an adequate buffer outside of the root zone of individual native trees in order to allow for future growth.

Policy 3.52: New development on sites containing native trees shall include a tree protection plan.

Policy 3.53: Where the removal of native trees cannot be avoided through the implementation of project alternatives or where development encroachments into the protected zone of native trees result in the loss or worsened health of the trees, mitigation measures shall include, at a minimum, the planting of replacement trees on-site, if suitable area exists on the project site, at a ratio of 1:1 for every tree removed. Where on-site mitigation is not feasible, off-site mitigation shall be provided through planting replacement trees or by providing an in-lieu fee based on the type, size and age of the tree(s) removed. The number of replacement trees allowed to be planted within the very high fire hazard severity zone will be approved by the Fire Marshal. Proper spacing of tree trunks and canopies will be maintained in accordance with the Fire Code for trees in this zone. Any new or replacement tree planted in this zone shall be fire resistive and on the Planning and Fire Department approved planting list.

2. Marine Resources

Policy 3.54: Manage development and land alteration to protect marine resources.

Policy 3.55: For the ocean shoreline area, limit development on sand or rock beaches to lifeguard towers/stations, temporary public comfort stations, safety and public information signs, public stairways, public recreation equipment, bluff retention devices as permitted herein, and pollution control devices approved by the RWQCB. Any permitted structures shall be the alternative with the least impact on coastal resources and recreation, the minimum size necessary, and shall provide any necessary mitigation.

Policy 3.56: New development shall prevent or reduce non-point source pollution in the nearshore environment through implementation of the non-point source pollution and private sewage disposal system policies.

Policy 3.57: Efforts by the CDFW and RWQCB to increase monitoring to assess the conditions of nearshore species, water quality and kelp beds, and to rehabilitate or enhance areas that have been degraded by human activities shall be encouraged.

Policy 3.58: Nearshore shallow fish habitats and shore fishing areas shall be preserved, and where appropriate and feasible, enhanced.

3. Wetlands

Policy 3.59: Solana Beach shall encourage and support efforts to restore the San Elijo Lagoon and San Dieguito Lagoon in coordination with all applicable resource management agencies.

Policy 3.60: Restrict and regulate development or land alteration in, adjacent to, or draining into a coastal lagoon or wetland area to protect these important resources.

Policy 3.61: The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes may be permitted in accordance with all policies of the LCP, where there is no feasible less environmentally damaging alternative and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(a) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

(b) Restoration purposes.

(c) Nature study, aquaculture, or similar resource dependent activities.

Policy 3.62: Identification of wetland acreage and resource value shall precede any consideration of use or development on sites where wetlands are present or suspected. With the exception of development for the primary purpose of the improvement of wetland resource value, all public and private use and development proposals which would intrude into, reduce the area of, or reduce the resource value of wetlands shall be subject to

alternatives and mitigation analyses, and shall be limited to those uses listed in Policy 3.61. Practicable project and site development alternatives which involve no wetland intrusion or impact shall be preferred over alternatives which involve intrusion or impact. Wetland mitigation, replacement or compensation shall not be used to offset impacts or intrusion avoidable through other practicable project or site development alternatives.

Policy 3.63: Where wetland fill or development impacts are permitted in wetlands in accordance with the Coastal Act and any applicable LCP policies, mitigation measures shall include, at a minimum, creation or substantial restoration of wetlands of the same type lost. Adverse impacts will be mitigated at a ratio of 4:1 for all types of wetland, and 3:1 for non-wetland riparian areas. The mitigation ratio may be 1:1, if, prior to the development impacts occurring, the mitigation is completed and is empirically demonstrated to meet performance criteria that establish that the created or restored wetlands are functionally equivalent to relatively pristine natural wetlands of the same type as the impacted wetlands. Replacement of wetlands on-site or adjacent to the project site, within the same wetland system, shall be given preference over replacement off-site or within a different system. Areas subjected to temporary wetland impacts shall be restored to the pre-project condition at a 1:1 ratio. Temporary impacts are disturbances that last less than 12 months and do not result in the physical disruption of the ground surface, death of significant vegetation within the development footprint, or negative alterations to wetland hydrology.

Policy 3.64: Provide a buffer of at least 100 feet in width from the upland edge of wetlands and at least 50-feet in width from the upland edge of riparian habitat. Buffers should take into account and adapt for rises in sea level. Under this policy, the CDFW, USFWS, and USACE must be consulted in such buffer determinations and in some cases, the required buffer, especially for salt marsh wetlands, could be greater than 100 feet. Uses and development within buffer areas shall be limited to minor passive recreational uses, with fencing, desiltation or erosion control facilities, or other improvements deemed necessary to protect the habitat, to be located in the upper (upland) half of the buffer area; however, water quality features required to support new development shall not be constructed in wetland buffers. All wetlands and buffers identified and resulting from development and use approval shall be permanently conserved or protected through the application of an open space easement or other suitable device. All development activities, such as grading, buildings and other improvements in, adjacent to, or draining directly to a wetland must be located and built so they do not contribute to increased sediment loading of the wetland, disturbance of its habitat values, or impairment of its functional capacity.

Policy 3.65: In some cases, smaller buffers may be appropriate, when conditions of the site as demonstrated in a site specific biological survey, the nature of the proposed development, etc. show that a smaller buffer would provide adequate protection. In such cases, the CDFW must be consulted and agree that a reduced buffer is appropriate and the City, or Commission on appeal, must find that the development could not be feasibly constructed without a reduced buffer. However, in no case shall the buffer be less than 50 feet.

a. Wetland Designation

Policy 3.66: Wetlands shall be defined and delineated consistent with the definitions of the Coastal Act and the Coastal Commission Regulations, as applicable, and shall include, but not be limited to, lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens shall be designated as wetland. Any unmapped areas that meet these criteria are wetlands and shall be accorded all of the protections provided for wetlands in the LCP.

Wetland shall be further defined as land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent and drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salts or other substances in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deep-water habitats.

Policy 3.67: Any wetland area mapped as ESHA or otherwise determined to have previously been wetlands shall not be deprived of protection, as required by the policies and provisions of the LCP, on the basis that habitat has been illegally removed, filled, degraded, or that species of concern have been illegally eliminated.

Policy 3.68: Where the required initial site inventory indicates the presence or potential for wetland species or indicators, the City shall require the submittal of a detailed biological study of the site, with the addition of a delineation of all wetland areas on the project site. Wetland delineations shall be based on the definitions contained in Section 13577(b) of Title 14 of the California Code of Regulations.

Policy 3.69: The biological productivity and the quality of wetlands shall be protected and, where feasible, restored.

b. New Development

Policy 3.70: Applications for new development within, or adjacent to wetlands shall include evidence of the preliminary approval of the California Department of Fish and Wildlife, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and other resource management agencies, as applicable.

4. Water Quality

a. Watershed Planning

Policy 3.71: Minimize, avoid or eliminate non-point source pollution impact to marine, coastal lagoon and wildland resources by controlling storm water runoff, other polluted dry weather runoff, and pollution. The City has been issued an NPDES Permit by the RWQCB, Permit No. 2007-0001. This Permit requires the City to control non-point source

pollution to the maximum extent practicable under the Porter-Cologne Act and the Federal Clean Water Act. The City shall adhere to the Permit and follow the legal requirements of the Permit as required by law.

Policy 3.72: Complete a storm water master plan that will: (1) produce an inventory and assessment of the City's current storm water system; (2) evaluate the condition and ability of the City's existing system to handle flows and meet water quality objectives for current conditions and for expected future changes in precipitation and sea level rise; and; (3) identify projects needed to improve the system for flood protection and water quality protection.

Policy 3.73: A component of the storm water master plan that identifies methods to encourage public participation in managing development and minimizing stormwater and urban runoff impacts to the coast shall be developed. This component should outline a public education and involvement program designed to: raise public awareness about storm water and urban runoff issues and the potential impacts of water pollution, change public behaviors to improve water quality, and involve the public in the development and implementation of the City's pollution control goals.

Policy 3.74: The City should pursue opportunities to actively participate in watershed level planning and management efforts directed towards reducing storm water and urban runoff impacts to water quality and related resources, including restoration efforts and regional mitigation, monitoring and public education programs. Such efforts will involve coordination with other local governments, applicable resource agencies and stakeholders in the surrounding areas. The City should participate in the respective watershed groups as defined by the RWQCB to assist neighboring jurisdictions in developing and implementing the Watershed Urban Runoff Management Program (WURMP). The WURMP shall be amended from time to time as required by the RWQCB.

Policy 3.75: The City will support and participate in watershed based planning efforts with the City of Encinitas, County of San Diego and the RWQCB. Watershed planning efforts shall be facilitated by helping to:

- Pursue funding to support the development of watershed plans;
- Identify priority watersheds where there are known water quality problems or where development pressures are greatest;
- Assess land uses in the priority areas that degrade coastal water quality;
- Ensure full public participation in the plan's development.

b. New Development

Policy 3.76: All new development, public and private, shall meet or exceed the storm water standards of the State of California, and the most recent standards of the RWQCB with regard to storm water runoff and other polluted runoff.

Policy 3.77: All new development shall be designed to avoid or minimize the creation of impervious surfaces, reduce the extent of existing unused impervious surfaces, and to reduce directly connected impervious area to the maximum extent practicable on the site. No new development shall result in an increase in storm water flow discharge or redirected/diverted storm water flow in a manner that results in a negative impact to downstream properties. The permittee shall put into effect and maintain all precautionary measures necessary to ensure that pollutant discharges from the site will be reduced to the maximum extent practicable and will not cause exceedances of water quality objectives or adversely impact water quality.

Policy 3.78: Plans for new development and redevelopment projects shall incorporate BMPs during construction, as well as, post-construction BMPs that will reduce to the maximum extent practicable the amount of pollutants generated and/or discharged into the City's storm drain system and surrounding coastal waters. BMPs should be selected based on their efficacy at mitigating Constituents of Concern (COC) associated with respective development types/uses and the surrounding watershed (see the San Diego RWQCB Permit No. 2007-0001 or the current municipal stormwater permit applicable to Solana Beach for guidance on BMP selection). For design purposes, post-construction structural BMPs (or suites of BMPs) should be designed to treat, infiltrate or filter storm water runoff from each storm up to and including the 85th percentile storm event. Volume-based BMPs shall be designed to treat, infiltrate, or filter storm water runoff volume from a 24-hour 85th percentile storm event. Flow-based BMPs shall be designed to treat, infiltrate or filter storm water runoff produced by an 85th percentile hourly rainfall intensity with an appropriate safety factor (i.e., 2 or greater). All new developments and significant redevelopment projects as defined in the City's SUSMP must comply with regulations contained in the City's adopted SUSMP, as approved by the RWQCB.

For construction taking place on the beach, the permittee shall not store any construction materials or waste where it will be, or could potentially be subject to wave erosion and dispersion. In addition, no machinery shall be placed, stored, or otherwise located in the intertidal zone at any time except for the minimum necessary to construct the development.

Policy 3.79: If a new development, substantial rehabilitation, redevelopment, or related activity poses a threat to the biological productivity and the quality of coastal waters, or wetlands; and if compliance with all other applicable legal requirements does not alleviate that threat, the City shall require the applicant to take additional feasible actions, and provide necessary mitigation to minimize the threat, and if the preceding measures fail, then deny the project.

Policy 3.80: In planning, siting, designing, constructing, and maintaining grounds, landscapes, and structures owned and managed by the City, site objectives should include management and maintenance practices that protect and enhance natural ecosystems. City grounds designers, planners, managers, crews, and their contractors should give priority to:

(a) Practicing the principles of Integrated Pest Management including the reduced use of pesticides and rodenticides;

(b) Selecting and using fertilizers that minimize negative impacts on soil organisms and aquatic environments;

(c) Designing new and renovating existing landscaped areas to suit the site conditions, protect water quality, and support sustainable maintenance.

(d) Using drought-tolerant native and non-invasive plant species.

(e) Incorporating low impact development design techniques.

Policy 3.81: Design and manage development to avoid or minimize increases in stormwater runoff volume and peak runoff rate, and to avoid detrimental water quality impacts caused by excessive erosion or sedimentation.

Policy 3.82: Design and manage new development to eliminate dry weather flow where it will be discharged in a manner that may adversely impact the biological productivity or diversity of intertidal or marine organisms; especially where the dry weather flow discharges to water bodies with poor circulation or tide pools.

Policy 3.83: New development shall be sited and designed to protect water quality and minimize impacts to coastal waters by incorporating measures designed to ensure the following:

- Protecting areas that provide important water quality benefits, areas necessary to maintain riparian and aquatic biota and/or that are susceptible to erosion and sediment loss.
- Limiting increases of impervious surfaces.
- Limiting land disturbance activities such as clearing and grading, and cut-and-fill to reduce erosion and sediment loss.
- Limiting disturbance of natural drainage features and vegetation.

Policy 3.84: New development shall not result in the degradation of the water quality of groundwater basins or coastal surface waters including the ocean, coastal streams, or wetlands. Urban runoff pollutants shall not be discharged or deposited such that they adversely impact groundwater, the ocean, coastal streams, or wetlands, consistent with the requirements of the RWQCB's municipal stormwater permit and the California Ocean Plan.

Policy 3.85: Development must be designed to avoid or minimize to the maximum extent feasible, the introduction of pollutants of concern into coastal waters. To meet the requirement to minimize "pollutants of concern," new development shall incorporate a BMP or a combination of BMPs best suited to reduce pollutant loading to the maximum extent feasible.

Policy 3.86: Post-development peak stormwater runoff discharge rates shall not exceed the estimated pre-development rate. Dry weather runoff from new development must not exceed the pre-development baseline flow rate to receiving water bodies and may only consist of non-storm runoff explicitly allowed by Stormwater Permit 2007-0001 or updates of that permit.

Policy 3.87: New development shall be sited and designed to minimize impacts to water quality from increased runoff volumes and nonpoint source pollution. All new development shall meet the requirements of the San Diego RWQCB in its SUSMP for San Diego County

Policy 3.88: If the State Water Resources Control Board (State Board) or the RWQCB revise the California Water Quality Control Plan, San Diego Region (Basin Plan), the Water Quality Control Plan for Ocean Waters of California (California Ocean Plan), or other applicable regulatory requirements, the City of Solana Beach should consult with the State Board, RWQCB and the CCC to determine if an LCP amendment is appropriate.

Policy 3.89: Land divisions that would result in building pads, access roads, or driveways located on slopes over 30%, or result in grading on slopes over 30% shall be prohibited. The maximum grade allowed for fire apparatus access road is 20%. All land divisions shall be designed such that the location of building pads and access roads minimizes erosion and sedimentation.

Policy 3.90: New roads, bridges, culverts, and outfalls shall not cause or contribute to stream bank or hillside erosion or creek or wetland siltation and shall include BMPs to minimize impacts to water quality including construction phase erosion control and polluted runoff control plans, and soil stabilization practices. Where space is available, dispersal of sheet flow from roads into vegetated areas or other on-site infiltration practices shall be incorporated into road and bridge design.

Policy 3.91: Beach-front development shall incorporate BMPs designed to minimize or prevent polluted runoff to the beach and ocean waters.

Policy 3.92: Commercial development shall use BMPs to control the runoff of pollutants from structures, parking and loading areas, roofs and landscaping.

Policy 3.93: Restaurants shall incorporate BMPs designed to minimize runoff of oil and grease, solvents, phosphates, and suspended solids to the storm drain system.

Policy 3.94: Gasoline stations, car washes and automotive repair facilities shall incorporate BMPs designed to minimize runoff of oil and grease, solvents, car battery acid, coolant and gasoline to stormwater system.

Policy 3.95: The City should develop and implement a program to detect and remove illicit connections and to stop illicit discharges.

Policy 3.96: New development shall include construction phase erosion control and polluted runoff control plans. These plans shall specify BMPs that will be implemented to minimize erosion and sedimentation provide adequate sanitary and waste disposal facilities and prevent contamination of runoff by sediment, construction chemicals and materials.

Policy 3.97: New development shall include post-development phase drainage and polluted runoff control plans. These plans shall specify site design, source control and treatment control BMPs that will be implemented to minimize post-construction polluted runoff, and shall include the monitoring and maintenance plans for these BMPs.

Policy 3.98: Storm drain stenciling and signage shall be provided for new storm drain construction in order to discourage dumping into drains. Signs shall be provided at creek public access points to similarly discourage creek dumping.

Policy 3.99: Outdoor material storage areas shall be designed using BMPs to prevent stormwater contamination from stored materials.

Policy 3.100: Trash storage areas shall be designed using BMPs to prevent stormwater contamination by loose trash and debris.

Policy 3.101: Permits for new development shall be conditioned to require ongoing maintenance where maintenance is necessary for effective operation of required BMPs. Verification of maintenance shall include the permittees signed statement accepting responsibility for all structural and treatment control BMP maintenance until such time as the property is transferred and another party takes responsibility, at which time the new permittee will be obligated to comply with all permit conditions, including on-going maintenance.

Policy 3.102: The City, property owners, or homeowners associations, as applicable, shall be required to maintain any drainage device to insure it functions as designed and intended. All structural BMPs shall be inspected, cleaned, and if necessary, repaired prior to September 30th of each year. Owners of these devices will be responsible for insuring that they continue to function properly and additional inspections should occur after storms as needed throughout the rainy season. Repairs, modifications, or installation of additional BMPs, as needed, should be carried out prior to the next rainy season.

Policy 3.103: Public streets and parking lots shall be swept frequently to remove debris and contaminant residue. For private streets and parking lots, the property owner shall be responsible for frequent sweeping to remove debris and contaminant residue.

Policy 3.104: Some BMPs for reducing the impacts of non-point source pollution may not be appropriate for development on steep slopes, on sites with low permeability soil conditions, or areas where saturated soils can lead to geologic instability. New development in these areas should incorporate BMPs that do not increase the degree of geologic instability.

Policy 3.105: New development that requires a grading permit or local Storm Water Pollution Prevention Plan (SWPPP) shall include landscaping and re-vegetation of graded or disturbed areas. Any landscaping that is required to control erosion shall use native or drought-tolerant noninvasive plants to minimize the need for fertilizer, pesticides, herbicides, and excessive irrigation. Where irrigation is necessary, efficient irrigation practices shall be required. Landscaping maintenance and irrigation shall be designed and built to avoid or minimize dry weather runoff.

Policy 3.106: New development shall protect the absorption, purifying, and retentive functions of natural systems that exist on the site. Where feasible, drainage plans shall be designed to complement and utilize existing drainage patterns and systems, conveying drainage from the developed area of the site in a non-erosive manner. Disturbed or degraded natural drainage systems shall be restored, where feasible, except where there are geologic or public safety concerns.

Policy 3.107: Use of treatment control BMPs with a high or medium removal efficiency rating is needed in order to meet the maximum extent practicable (MEP) standard, unless it can be exhibited that implementation of such treatment control BMPs is infeasible.

Policy 3.108: Priority Development Projects, as defined on page 18 of the Stormwater Permit 2007-0001, shall be required to implement Low Impact Development (LID) BMPs. Priority Development Project Categories include:

(a) Housing subdivisions of ten or more dwelling units. This category includes single-family homes, multi-family homes, condominiums, and apartments.

(b) Commercial developments greater than one acre. This category is defined as any development on private land that is not for heavy industrial or residential uses where the land area for development is greater than one acre. The category includes, but is not limited to hospitals, laboratories and other medical facilities, educational institutions, recreational facilities, municipal facilities, commercial nurseries, multi-apartment buildings, car wash facilities, mini-malls and other business complexes, shopping malls, hotels, office buildings, public warehouses, automotive dealerships, airfields, and other light industrial facilities.

(c) Developments of heavy industry greater than one acre. This category includes, but is not limited to, manufacturing plants, food processing plants, metal working facilities, printing plants, and fleet storage areas (bus, truck, etc.).

(d) Automotive repair shops. This category is defined as a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.

(e) Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the land area for development is greater than 5,000 square feet. Restaurants where land development is less than 5,000 square feet shall meet all

SUSMP requirements except for structural treatment BMP and numeric sizing criteria requirement D.1.d.(6)(c) and hydro modification requirement D.1.g.

(f) All hillside development greater than 5,000 square feet. This category is defined as any development which creates 5,000 square feet of impervious surface which is located in an area with known erosive soil conditions, where the development will grade on any natural slope that is twenty-five percent or greater.

Policy 3.109: Priority development projects include all development located within or directly adjacent to or discharging directly to an Environmentally Sensitive Area (ESA) (where discharges from the development or redevelopment will enter receiving waters within the ESA), which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10% or more of its naturally occurring condition. Directly adjacent means situated within 200 feet of the ESA. “Discharging directly to” means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.

ESHAs are defined in the Stormwater Permit 2007-0001 to be areas that include, but are not limited to, all Clean Water Act Section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the State Water Resources Control Board (Water Quality Control Plan for the San Diego Basin (1994) and amendments), water bodies designated with the RARE beneficial use by the State Water Resources Control Board (Water Quality Control Plan for the San Diego Basin (1994) and amendments), areas designated as preserves or their equivalent under the Multi Species Conservation Program within the Cities and County of San Diego, and any other equivalent environmentally sensitive areas which have been identified by the Copermittees (including the City of Solana Beach)

Policy 3.110: To the extent required by law, the City shall apply regulations approved by the RWQCB intended to preserve the natural drainage and the hydrologic cycle. The City shall impose conditions on development that will minimize land disturbance, encourage infiltration and minimize the introduction of pollutants into coastal waters.

Policy 3.111: The City’s water quality protection measures are primarily based on requirements of the Stormwater Permit 2007-0001 approved by the RWQCB. The City will make amendments to its Ordinances, Policies and Regulations so that they comply with the Stormwater Permit 2007-0001 and other applicable water quality regulations as required by law. Changes to those ordinances, policies and regulations that apply to development in the Coastal Zone, will require amendments to the Solana Beach Land Use Plan or LCP Implementation Plan. All permits issued by the City, or the Commission on appeal, must meet all requirements of the LCP, even if those requirements are more protective than those required by Stormwater Permit 2001-0001 or its successor permits.

Policy 3.112: Development involving onsite wastewater discharges shall be consistent with the LCP as well as the rules and regulations of the San Diego RWQCB, including Waste Discharge Requirements, revised waivers and other regulations that apply.