Part II of II

(404)

FINAL

SECOND ADDENDUM
TO THE
CHULA VISTA BAYFRONT MASTER PLAN
FINAL ENVIRONMENTAL IMPACT REPORT

COASTAL COMMISSION ADOPTED POLICIES TO THE CHULA VISTA BAYFRONT MASTER PLAN PORT MASTER PLAN AMENDMENT
-AND-
RV PARK PROJECT

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APRIL 2018

APPENDIX A

Port Master Plan Amendment

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San Diego Unified Port District
Port Master Plan Amendment

Chula Vista Bayfront Master Plan
&
Port Master Plan Amendment

Existing/Proposed Plan Text
and
Plan Graphics

May 2010, Revised July 2012
**Certified by the California Coastal Commission*

*Note: Text to be **deleted** shown in ~~strike-out~~ and text to be **added** shown in underline.*
Text in italics is for clarification only and is not part of the Plan Amendment.

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TABLE 4
PORT MASTER PLAN
LAND AND WATER USE ALLOCATION SUMMARY

LAND USE	ACRES	WATER USE	ACRES	TOTAL ACRES	% OF TOTAL
COMMERCIAL	~~373.5~~ 455.2		~~383.0~~ 388.6	~~756.5~~ 843.8	~~14~~15%
Marine Sales and Services	~~18.8~~ 9.1	Marine Services Berthing	17.7		
Airport Related Commercial	38.0				
Commercial Fishing	8.3	Commercial Fishing Berthing	18.8		
Commercial Recreation	~~304.1~~ 395.5	Recreational Boat Berthing	~~335.4~~ 341.0		
Sportfishing	4.3	Sportfishing Berthing	11.1		
INDUSTRIAL	~~1206.4~~ 1158.7		~~217.7~~ 212.0	~~1424.1~~ 1370.7	~~26~~24%
Aviation Related Industrial	152.9	Specialized Berthing	~~170.5~~ 164.8		
Industrial Business Park	~~113.7~~ 69.5	Terminal Berthing	47.2		
Marine Related Industrial	~~322.1~~ 318.6				
Marine Terminal	149.6				
International Airport	468.1				
PUBLIC RECREATION	~~280.5~~ 409.5		~~681.0~~ 681.3	~~961.5~~ 1090.8	~~18~~19%
Open Space	~~19.0~~ 66.7	Open Bay/Water	~~681.0~~ 681.3		
Park/Plaza	~~146.4~~ 213.0				
Golf Course	97.8				
Promenade	~~17.3~~ 32.0				
CONSERVATION	~~399.2~~ 485.3		~~1058.6~~ 1084.6	~~1457.8~~ 1569.9	~~27~~28%
Wetlands	~~304.9~~ 375.8	Estuary	~~1058.6~~ 1084.6		
Habitat Replacement	~~94.3~~ 109.5				
PUBLIC FACILITIES	~~222.9~~ 242.1		~~394.3~~ 387.9	~~617.2~~ 630.0	~~12~~11%
Harbor Services	~~2.7~~ 2.6	Harbor Services	10.5		
City Pump Station	0.4	Boat Navigation Corridor	~~284.6~~ 274.3		
Streets	~~219.8~~ 239.1	Boat Anchorage	25.0		
		Ship Navigation Corridor	~~50.0~~ 53.9		
		Ship Anchorage	24.2		
MILITARY	**25.9**		**125.6**	**151.5**	**3%**
Navy Fleet School	25.9	Navy Small Craft Berthing	6.2		
		Navy Ship Berthing	119.4		
TOTAL LAND AREA	~~2508.4~~ 2776.7	**TOTAL WATER AREA**	~~2860.2~~ 2880.0		
MASTER PLAN LAND AND WATER ACREAGE TOTAL				~~5368.6~~ 5656.7	100%

Commercial Recreation

Land use demand forecasts have established a basis for anticipating continued demand for commercial recreational type facilities due to trends drawn from the convergence of numerous factors, of which the most significant are expendable income, paid holidays, leisure time, population, education, travel habits, and new modes of transportation. All of these are increasing while the average number of working hours is decreasing. It seems likely that activities associated with water-based pursuits will continue to be among the most popular. The trends are almost certain to have considerable repercussions on the full range of leisure services. Tourism in the San Diego Bay region is a significant economic base activity, and at the national level, it figures highly in maintaining the balance of payment.

Activities associated with commercial recreation contribute to the economic base of the region with full-time jobs, secondary employment for part-time help, and spin-off employment opportunities in construction, warehousing, trucking, custodial, and personal services. It is the intent of this Master Plan to create attractive destinations in carefully selected locations around the bay to serve the needs of recreationalists for lodging, food, transportation services, and entertainment. Site amenities are to be enhanced and over-commercialization is to be avoided by the balanced development of commercial and public recreational facilities.

Commercial recreation allocations of the Land and Water Use Map include approximately ~~287~~400 acres of land and about ~~343~~352 acres of water area, including sportfishing and recreational craft berthing. The Commercial Recreation category includes hotels, restaurants, convention center, recreational vehicle parks, specialty shopping, pleasure craft marinas, water dependent educational and recreational program facilities and activities, dock and dine facilities (public boat docks located in proximity to a restaurant or other retail use where boaters may tie up and disembark for a short period of time to dine, shop, or enjoy other recreational activities), and sportfishing, which are discussed or illustrated in the various District Plans.

Hotels and Restaurants located on San Diego Bay cater to markets involving leisure recreation, tourism, business travel and specialized conference facilities accommodating conventions, training, seminars and meetings. Of growing importance are the attractions or amenities of the restaurant, which caters to the varied age groups dining for pleasure, and the hotel as a provider of more than just rooms. Overnight accommodations should be provided for a range of incomes.

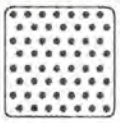
Hotels constitute a significant part of the local recreation industry and, as generators of ancillary business such as restaurants and specialty shops, have an important influence on land use. Uses typically associated with hotels, frequently in the same building or on the same site, include lodging; coffee shop; cocktail lounge and restaurant; specialty shops for gifts, sundries, cigarettes, candy, liquor, clothing and sporting goods; tourist information and travel services; auto service station; personal services such as dry cleaning, barber and beauty shop; convention, banquet and conference rooms; and recreational facilities such as swimming pools, cabanas, game rooms, tennis courts, putting green, boat and bicycle rental or charter, and theatrical entertainment. In addition to the man-made structures and organized sports facilities, hotel locations on the bay feature waterfront locations with easy access to beaches, scuba diving and snorkeling, deep sea fishing, sailing, water skiing, boat rides, and "whale watching" during the whale migration season. New hotel locations are allocated in Planning Districts 2, 3, 6, 7 and possibly 8.

Specialty Shopping involves the planned assembly of stores, frequently operating within a unified building complex, designed to give patrons a varied selection of retail goods, personal services, and entertainment facilities. Activities typically found in specialty shopping areas include restaurants and the retail sale of ice cream, dessert items, beverages and sandwiches; artisan activities associated with the production and sale of hand-crafted gift items, and original works of art; professional office

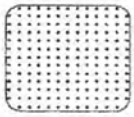
space; retail shops handling gifts, novelties, clothing, jewelry, and home furnishings; wholesale and retail fish sales, fish and seafood processing, and unloading docks for vessels and trucks. Characteristic of shopping centers, the specialty shopping developments allocated on tidelands are usually managed and operated as a unit. Shopping areas will feature a major open space format, separate pedestrian traffic from vehicular movement by emphasizing pedestrian mall and plaza developments improved with landscaping, sitting areas, fountains and sculpture. Specialty shopping areas are allocated in Precise Plans for Planning Districts 3 ~~and~~ 6, and 7.

Pleasure Craft Marinas are encouraged to provide a variety of services for boats and boat owners. Services could possibly include in-season wet and dry berthing and dock lockers; boat rentals, charter and sales; sailing schools and membership sailing clubs; fueling docks; launching for transients; automobile parking; dockside electricity; fresh water and telephones; holding tank pumpout stations and disposal facilities for waste oil and hazardous substances; restrooms and showers; repairs; maintenance; off-season storage; ice and fuel. Accessory facilities provided as part of a full-service marina or in the commercial recreational areas and within close proximity to the marinas should include shopping areas for groceries, medicine and clothing; restaurants; shoreside living and recreational accommodations for boatmen; marine supplies; boating equipment; navigation instruments; marine electronics; and sailmaking. Users requiring water frontage are given preference because it is desirable to maintain a dynamic waterfront in recreational areas, which is functionally sound and capable of providing essential services to the operation of a small craft harbor. Proposed recreational boating facilities, to the extent feasible, are to be designed and located so as not to interfere with the needs of the commercial fishing industry.

Recreational Vehicle / Camping parks provide low cost, visitor serving recreational opportunities for enjoying scenic and commercial amenities on the Bay. Such parks may contain ancillary facilities such as offices, pool/spas, snack bars, general stores, meeting spaces, game rooms, laundry rooms, associated parking spaces, and playground equipment. Recreational Vehicle/Camping park designated areas are found in Planning District 7.



Recreational Boat Berthing. Water area used primarily for recreational craft storage, refueling, boat brokerage storage area, sailing school docking, water taxi, excursion ferry and charter craft operations, guest docking, boat launching, sewage pump out, water craft rental, boat navigation corridors, breakwaters for recreational craft protection, navigation facilities, aids to navigation, floats, docks, piers, breakwaters, wave attenuation structures, seawalls, shoreline protection, and any other necessary or essential facilities for providing water-side docking refuge to recreational marine craft and commercial passenger vessels.



Sportfishing. Deep-sea sportfishing is big business in California and San Diego enjoys a major share of that activity. The local fleet takes a large portion of the State's total sportfishing catch of the larger sport fish – yellowtail, yellowfin, albacore, and giant sea bass. Sportfishing brings new revenue into the region from customers heavily drawn from the Los Angeles metropolitan area, and from a small but important segment of out of state fishermen.

The intensity of sportfishing activities reflects the cyclical nature of the sportfishing operations (half day and full day), and the seasonal nature of sportfishing for certain fish species that produces a winter slack season. The size of the local sportfishing fleet also increases two to three times during the peak period from April to September. Operating schedules for most boats provide for pre-dawn

Industrial-Business Park is a land use category that permits a wide range of industrial and business uses sited in development that emphasizes clustering of buildings, extensive landscaping~~, landscaping~~, and shared open space.

Coastal dependent developments, including, but not limited to, Marine Related Industrial or Commercial uses, shall have priority over other developments on or near the shoreline. The development of industrial-business parks can be an asset to the bay region because of the stimulating effect such developments usually have on the local economy by attracting new businesses as well as retaining existing firms that might otherwise leave the area. The industrial-business park area is reserved for the types of industrial activities associated with the manufacture, assembling, processing, testing, servicing, repairing, storing or distribution of products; wholesale sales; retail sales that are incidental to permitted uses; transportation and communication uses; parking; industrial, construction, government and business services; and research and development. The Industrial-Business Park classification will also integrate other land uses within the industrial environment. Such integration is prompted by recognition of the fact that the traditional industrial park, while carefully providing for efficient operation for industrial purposes, typically has ignored many community, employee and tenant needs. This use group would allow industrial, commercial, professional, business service, and recreation uses and facilities.

Hotel, restaurant, integrated meeting and conference space, cultural (museums and similar), specialized retail store, and business-professional office uses would be allowed in a campus setting. Permitted recreational uses include, but are not limited to, landscaped areas, promenades, public walkways, parks, picnic areas, and active sports facilities (where associated with a business park campus and intended for employees). A 1000-foot separation shall be maintained between any childcare facility and any facility using or storing hazardous materials, whichever facility is developed first.

Public Recreation Use

Land Use Objectives & Criteria

Parks, plazas, public accessways, vista points and recreational activities on Port lands and tidelands should:

- provide a variety of public access and carefully selected active and passive recreational facilities suitable for all age groups including families with children throughout all seasons of the year.
- enhance the marine, natural resource, and human recreational assets of San Diego Bay and its shoreline for all members of the public.
- provide for clear and continuous multi-lingual information throughout Port lands and facilities to and about public accessways and recreational areas.

Master Plan Interpretation

A growing population, greater discretionary incomes and more leisure time all contribute significantly to the increasing demand for both active and passive outdoor recreational opportunities. The public recreation opportunities developed on tidelands by the Port District along with the commercial recreation opportunities developed by private investment provide a balanced recreation resource for San Diego Bay. When thoughtfully planned, both public recreational developments and commercial recreational developments benefit from each other as off-site improvements, although as a matter of planning policy, commercial activities within public recreation areas will be limited. Recreational areas must be of the appropriate type and size to be efficiently developed, administered and maintained by the Port District at a reasonable cost. This Plan places primary emphasis on the development of public facilities for marine oriented recreational activities for the purposes of fishing, boating, beach use, walking and driving for pleasure, nature observation, picnicking, children's playing, bicycling and viewing.

Recreation Area/Open Space is a category illustrated on the Land and Water Use Element Map to portray a wide array of active and passive recreational areas allocated around the bay. More specific information on public recreational areas is provided at the Planning District level under the following use categories.

Park, Plaza is a use category designating landscaped urban type recreational developments and amenities. Users are

generally drawn from the region so that access to the site needs to link with regional and statewide roadways, regional bicycle ways, and regional mass transit, and provide adequate traffic facilities to handle large volumes of traffic and peak use demands. Parks and plazas encourage and accommodate public access to and along the interface zone of land and water. Recreational facilities frequently associated with parks include public fishing piers, boat launching ramps, beaches, historic and environmentally interpretive features, public art, cultural uses, vista areas, scenic roads, bicycle and pedestrian ways, water dependent educational and recreational program facilities and activities, small food and beverage vending, and other park-activating uses that are ancillary to the public uses. Maintenance of park and other landscaped areas shall be provided through integrated pest management and Best Management Practices to avoid or minimize the application of chemicals to such areas.

Promenade indicates the shoreline public pedestrian promenade-bicycle route system that is improved with landscaping, lighting,

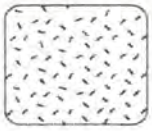
directional and informational signage and other street fixtures, works of art, and seating. Many short trips, especially recreation related, can involve walking or bicycling rather than motorized transportation. There are many assumed benefits of walking and bicycling; it is inexpensive, exerts no adverse impact on the environment, contributes to the physical well-being of the individual, and affords an unfettered opportunity to enjoy the amenities of San Diego Bay. Where feasible, Class I bikeways should be provided consistent with SANDAG's regional Bayshore Bikeway system. A Class I bikeway shall include a

minimum paved width of 8 feet separated from vehicular roadways.

Pedestrian and bicycle facilities located on tidelands should: insure physical access to the water's edge unless safety, security or compatibility reasons negate; be accessible to parking and mass transit facilities; and link appropriate portions of the waterfront for continuous longitudinal access. A variety of route locations is encouraged to extend the pedestrian and bike environment through parks, commercial development and by the working port areas. Special provision for persons with disabilities shall conform to applicable Law.

Open Space provides amenities contributing to a more satisfying and stimulating environment. These areas include landscaped traffic inter-change and median strips, and isolated narrow and irregular shoreline areas where use and development potential is severely limited and where publicly placed works of art can enhance and enliven the waterfront setting. The Open Space designation may also include limited use and/or transitional zones from biologically significant resources deserving protection and preservation.

Public access within open space setback areas is limited to passive uses, such as outlooks, picnic areas, and/or spur-trails. Such uses should include interpretive and educational opportunities while allowing coastal access in a manner that will ensure the protection and preservation of sensitive habitat areas.



Golf Course is used in Planning District 6 to illustrate this 98-acre land allocation. The continuation of this use is anticipated for the duration of the planning period.

Open Bay is a category allocated to water areas adjoining shoreline recreational areas, the boat launching ramp, fishing pier, vista areas and other public recreational facilities where the need for open water is related to the proper function of the shoreside activity. Multiple use of open bay water areas for recreational and for natural habitat purposes is possible under this use category designation.

Boat Launching Ramp indicated by symbols on the Planning Maps, provides facilities for launching thousands of trailerable pleasure craft throughout the year for purposes of boating, fishing, regattas, and water skiing. The requirements for new or expanded launching ramps need to be carefully considered since boat access areas and parking areas for both car and boat trailer consume large land areas. While existing boat launching ramps are to continue operation during the planning period, alternatives other than providing new launching areas should be considered due to the high land consumption involved. Dry stack storage, which accommodates trailerable size boats, is proposed in Planning District 6.

Public Fishing Pier areas include the pier structures, necessary land support area adequate for parking and access, and the surrounding water area. Boating activities near the pier, which may interfere with fishing, are discouraged. Commercial activities relating to food and beverage, and bait and tackle sales and rental are generally associated with the activity. While pier site selections should be based on a number of criteria, including fish species surveys, fish habitat or artificial reef-like improvements are frequently desirable. Three existing piers are used by fishermen at all hours of the day and night currently. Three more piers are recommended in Planning Districts 2, 3 and 6. Fishing piers are indicated by symbol on the Land and Water Use Maps.

Public Access has been highlighted by symbol on the Plan maps for public recreational areas. The development of these physical accessways is only one of the four access categories established in this Plan and discussed in Section III of this document.

Vista Areas include points of natural visual beauty, photo vantage points, and other panoramas. It is the intent of this Plan to guide the arrangement of development on those sites to preserve and enhance such vista points. Major vista areas are indicated by symbol on the Plan maps.

Conservation

Land Use Objectives & Criteria

Natural marine resource utilization activities on tidelands should:

- be planned and located so as to present minimum conflicts with existing and proposed incompatible uses.
- promote the multiple utilization of the unique plant, shellfish, fish and wildlife resources of the bay.
- encourage the protection and restoration of functional areas which have a high ecological value.
- be accessible to the public for non-appropriative uses consistent with nature interpretive functions.
- enhance the open space character of San Diego Bay.

Master Plan Interpretation

Areas included in the conservation group are scheduled for little or no development. The intent is to preserve, maintain and enhance natural habitat areas so that biological productivity will be sustained.

Areas of extraordinary biological significance are identified and given special protection under four categories of use: wetlands, estuary, salt ponds and habitat replacement. Much of the shallow water areas located in the South Bay are considered to have great potential for restoration.

Wetlands

Wetland areas are undeveloped ~~area~~lands having high biological productivity that are alternately covered with water and exposed to air. ~~They occur in the South Bay in Planning Districts 7 and 9.~~ Wetlands ~~total 392 acres, although the~~ delineations ~~is~~are conceptual in nature and may fluctuate with changing natural cycles.

Wetlands may house unique forms of life, some species of which are considered rare or endangered. In any case, they are recognized in the plan as important natural habitat for microscopic plant and animal life which form basic food for larger fish. They also provide breeding and nesting sites for migratory or native birds.

Wetlands are to be preserved, protected and, where feasible, restored. Development shall be limited to restoration, nature study 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. Any diking, filling or dredging occurring in these areas shall maintain or enhance functional capacity of the wetlands.

The Wetlands designation may include required wetland buffers from delineated wetland areas. Where new development is proposed near an identified wetland, 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 wetlands habitat must be provided. Buffers should take into account and adapt for rises in sea level by incorporating wetland migration areas or other sea level rise adaptation strategies as appropriate. The CDFG and USFWS 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. Development within wetland buffers is limited to minor passive recreational uses, such as outlooks, and/or spur-trails, with fencing, or other improvements deemed necessary to protect the habitat, to be located in the upper (upland) half of the buffer area. Such improvements should include interpretive and educational opportunities while allowing coastal access in a manner that will ensure the protection and preservation of these sensitive habitat areas.

This land use designation may include areas designated for mitigation, or areas that have been identified for potential wetland enhancement, restoration and/or creation opportunities. Such mitigation would be implemented in conjunction with development projects, or could be implemented and banked for use as mitigation for future development projects.

An **Estuary** is the confluence of a river with the ocean, especially an area of the sea at the lower end of a river. In the Master Plan, estuaries comprise the shallow, sub-merged areas of South San Diego Bay and are valuable in much the same way as are wetlands. The warm shallow water nurtures microscopic plants that are eaten by the small fish inhabiting the estuary.

The Otay River, historically the source of the South Bay estuary, now contributes little fresh water to the area; however, natural tidal fluctuations provide some salt-water exchange. The northerly extent of the estuary area occurs where development in the form of dredging has deepened the water to a point where the productivity and its biological importance is significantly reduced. Estuary designation is found in Planning Districts 7, 8 and 9.

Development in estuaries is limited to new or expanded boating facilities (including entrance channels), intake and outfall lines, restoration work, nature study, aquaculture, and 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. Diking, filling or dredging in existing estuaries shall maintain or enhance the functional capacity of the wetland or estuary.

Use of the water surface for boating, fishing and similar water oriented recreational uses is also permitted; however, efforts should be made to reduce potential environmental damage.

Salt Ponds occupy the extreme southerly end of San Diego Bay (Planning District 9). The shallow, diked ponds are used to produce salt by solar evaporation. The ponds and dikes have proved to be suitable habitat for many bird species, providing nesting, resting and specialized feeding areas for local and migratory aquatic birds.

A continuation of salt production is proposed in the South Bay. This activity provides for salt production, maintains bird habitat, and provides open space and vistas, which enhance the appearance of the South Bay. Reutilization of some salt ponds for mariculture uses has potential for development. See Planning District 9 description for further information.

Habitat Replacement~~, an area of about 55 acres,~~ is delineated in Planning District 7 for the creation of a marsh island to be used to replace wildlife habitat removed during other development around the bay.~~ This project is under construction.~~ Habitat replacement refers to the concept of recreating, as closely as possible, the type of

environment conducive to the maintenance, protection and growth of wildlife species deemed important. This might include endangered species as well as ~~economically~~ environmentally significant wildlife.

Uses which conflict with the above objective would be prohibited in habitat replacement areas. After creation of the area by diking, dredging and filling, the only activities which would be permitted would be nature study, academic research and instruction related to the area, and similar resource dependent activities. It is not anticipated that public access would be provided or allowed unless detrimental environmental conflicts could be avoided.

CHULA VISTA BAYFRONT:
Planning District 7

Planning District 7 includes all Port District lands within the City of Chula Vista. As shown on the Precise Plan map (Figure 19), these District lands extend beyond the U.S. Pierhead Line (the usual Port District boundary) to the city limits.

Historically, harbor development in the South Bay has lagged behind the North Bay because of shallow water, distance from the harbor entrance, environmental concerns, and other factors. However, by about 1990, Port land on the Chula Vista Bayfront had been developed into public parks, excursion pier, boat launching ramp, recreational vehicle (RV) park, marinas, boatyards, warehouses, and a recreated wildlife habitat island. Police and emergency waterborne services are provided to the South Bay from the Harbor Police substation near the boat launching ramp. The Chula Vista Bayside Park Pier provides public fishing and large vessel berthing, and the Marina Parkway Pier provides berthing and landside automobile parking for users. The major development on the Chula Vista Bayfront ~~is~~ was an aircraft parts manufacturing plant, which ~~occupies~~ occupied both District lands and uplands, that has consolidated its operations north of H Street and now occupies only uplands.

Marine and biological resources are abundant throughout the entire planning district, primarily due to its proximity to San Diego Bay and the estimated 3,940-acre South San Diego Bay National Wildlife Refuge.

Over recent years, the Port has acquired approximately 291 acres of uplands in this planning district, including the former Goodrich South Campus, park area, and properties at the south end of the planning district containing the existing switchyard and power plant. Most recently, as part of the Chula Vista Bayfront Master Plan (CVBMP) and in an effort to improve land use compatibility at the north and middle portions of the planning district, the Port completed a land exchange with a private entity. The exchange enables residential and non-trust related retail and office development to occur on approximately 35 acres of former Port properties now under the City of Chula Vista's (City) jurisdiction, and places approximately 97 acres of land at the north end of the planning district, formerly under the City's jurisdiction, within the Port's trusteeship and jurisdiction. In addition, the City has acquired from the Port a vacant parcel for a proposed fire station. Planned uses for the acquired land areas are further described in each of the planning subareas.

Precise Plan Concept

With the goal of transforming the planning district into a world-class bayfront, the Port developed the Chula Vista Bayfront Master Plan (CVBMP or plan) in 2005. The CVBMP resulted from a cooperative planning effort with the City of Chula Vista, which involved extensive public outreach and community participation.

The CVBMP is intended to guide the development of approximately 556 acres of the Chula Vista Bayfront over the next 24-year period. The ~~P~~plan ~~Concept for District lands~~ proposes a multi~~ple~~-faceted land use allocation within this ~~P~~planning ~~D~~district, including environmental conservation and development of public park and commercial recreational uses. ~~The~~ Proposed development ~~proposal~~ emphasizes public waterfront amenities ~~and public access~~to enhance the bayfront's natural and economic resources. The plan increases public access opportunities while restoring and protecting natural resources, serving to attract visitors from outside the region as well as local residents to use the marine related recreational facilities and public areas. Additionally, the plan strengthens the bayfront's connection to the Chula Vista urban core and neighborhoods to the east by extending the City's traditional street grid to ensure pedestrian, vehicular, bicycle, and transit, and water linkages. ~~Recreation boating marinas have been developed to meet part of the increasing regional demand for recreational boating and wet storage marinas. A recreational vehicle park provides short-term parking spaces for visitors so they can enjoy the Chula Vista Bayfront. Other public recreational opportunities can be found in the large Bayside Park, the public boat launching ramp and its existing peninsula, and Marina View Park.~~

Although planning policy encourages marine-related industrial uses, the plan provides the flexibility to attract new industrial, ~~and~~ business-commercial, and commercial recreational development to this planning district. To accomplish this goal, the plan allocates a large amount of land in the Chula Vista Bayfront Planning District for Commercial Recreation, and some area for Industrial-Business Park use. Much of the land is currently vacant or underutilized. As the South Bay regional economy expands in the future, the Commercial Recreation and Industrial-Business Park designations will both stimulate and accommodate appropriate industrial and commercial redevelopment, thereby enabling the Chula Vista Bayfront to realize its full potential.

~~The Plan provides for a range of development options from complete industrial to complete commercial, with the most likely a combination of both land use types. Two possible scenarios are presented in this plan. One scenario concentrates on industrial development for the approximately 80 acres of Industrial-Business Park zoned land, with up to one million square feet of floor area. Approximately 20 of these acres are expected to be allocated to a 250,000 square-foot biomedical and pharmaceutical manufacturing plant employing about 400-600 people.~~

~~The second scenario consists of a combination of industrial and commercial development on the 80 acres. A parcel of approximately 14 acres located to the north of "H" Street and to the east of Marina Parkway is already developed for industrial purposes. The remaining 66 acres of Industrial-Business Park land would be available for up to 600,000 square feet of commercial buildings.~~

~~Both scenarios provide for the extension of "H" Street from its present terminus to Bayside Parkway, as well as associated public accessways, landscaping, and park/open space areas. Public access from H Street extended, G Street, and Bayside Parkway would be maintained and enhanced.~~

The plan proposes to redevelop underutilized and vacant areas with a mix of land uses, along with a new roadway and infrastructure system throughout the planning district. A variety of public amenities are proposed, including: a signature park and other open space areas, buffers, cultural uses, piers, a new commercial harbor and reconfiguration of marina slips, a community boating center, a ferry terminal, navigation channel improvements, an RV park, a continuous and comprehensive pedestrian pathway system, bicycle paths, ample parking areas, and public art. Proposed development includes hotel and conference facilities, retail/entertainment, cultural (museums and similar uses), and marine related office. A maximum of 2,850 hotel rooms are allowed within the boundaries of the CVBMP.

There are a multitude of existing and proposed recreational opportunities within the planning district. Recreation boating marinas have been developed to meet part of the increasing regional demand for recreational boating and wet storage marinas. An RV park provides short-term parking spaces for visitors to enjoy the Chula Vista Bayfront. Other public recreational opportunities can be found at the large Bayside Park that includes a public fishing pier, the Chula Vista Bayfront Park with its public boat launching ramp, and Marina View Park. Planned recreational improvements include two new large parks, enhancements to existing park areas, a new pier, as well as a continuous open space system that is fully accessible to the public and seamlessly connects the bayfront to the region. This open space system will create a comprehensive greenbelt linkage throughout the entire planning district with a continuous pedestrian walkway, or "baywalk", and a bicycle path that would tie into the regional Bayshore Bikeway system. Where appropriate, Class I bicycle paths, including 8-foot minimum paved widths separated from vehicular roadways, will be provided. The CVBMP emphasizes an active commercial harbor with public spaces at the water's edge as well as enhanced existing and newly created visual corridors to the bay.

The plan also includes buffers adjacent to environmentally sensitive resources in order to ensure such habitat areas are protected and preserved. Best management practices and natural retention basins will be implemented throughout the planning area to prevent degradation to sensitive areas and to curb storm water pollution to the bay. Additional measures for the protection of natural resources and the environment, including specific planning, design, education,

implementation and management elements have been incorporated into the CVBMP.

To ensure adequate coastal access is provided for the public, the CVBMP requires appropriately allocated on-site parking spaces to be developed with bayfront commercial and recreational uses. Additionally, commercial development throughout the planning district is required to participate in and contribute a fair share to the implementation of an employee shuttle system that connects users to a collector parking structure located near Interstate 5, thereby ensuring the availability of bayfront parking for the public. In the Harbor District, typical parking requirement standards for high intensity uses may be reduced if it can be demonstrated that the use will be adequately served by alternative transit.

In addition, the Chula Vista Bayfront Shuttle service will be phased concurrent with development. At a minimum, service will be provided upon the issuance of Certificate of Occupancy for either the H-3 resort conference center hotel or the 500th residential unit in the City CVBMP area. Implementation of the shuttle is anticipated to include participation by commercial development within the plan area.

~~These scenarios are cited to indicate only the magnitude or possible range of development. The ultimate use will depend on the development market and on opportunities created by more flexible land use classifications~~Implementation of the CVBMP is envisioned to occur in four phases over the next 24 years, and will be contingent upon and subject to many factors, such as availability and timing of public financing and construction of public improvements, terms of existing long-term leases, actual market demand for and private financing of proposed development, lease negotiations, approvals for and demolition and/or relocation of existing uses, approvals for new uses, and other approvals.

Redevelopment of the Chula Vista Bayfront is guided by the "Chula Vista Bayfront Development Policies" document, which is incorporated into this document by reference. The "Chula Vista Bayfront Development Policies" document contains policies from adopted and approved plans, certified environmental documents, required mitigation measures, enforceable settlement agreements, and conditions included in the approval process. All development projects must comply with these policies and standards. Implementation of the "Chula Vista Bayfront Master Plan Public Access Program", which is also incorporated into this document by reference, must occur as redevelopment takes place.

Land and Water Use Allocations

A total ~~1,690~~of 1,978 acres of Chula Vista Bayfront are allocated to commercial, industrial, public recreation, conservation, and public facilities activities (Table 18).

Chula Vista Bayfront Planning Subareas

Nine planning subareas have been delineated (see Figure 20) to facilitate a description of the ~~plan~~ planning district.

D Street Area

The D Street Area includes approximately 63 acres of land and water area designated for Habitat Replacement, Estuary, Open Bay, Boat Navigation Corridor, and Ship Navigation Corridor uses. A 33.2-acre portion of the northwest corner of the City of Chula Vista lies within Port District jurisdiction. Under the p~~P~~lan, tidelands have been reserved for uses which would take advantage of the deep water channel in the Sweetwater Flood Control Channel, and for ~~the habitat~~ Habitat ~~replacement~~Replacement.

It is intended that the tideland uses will not only utilize the valuable deep water to a high potential and provide the income to develop public recreation areas, but will establish a buffer zone between the National City Marine Terminal (with its associated industrial uses) and the ultimate use of the uplands. The D Street Fill area adjacent to the Sweetwater Flood Control Channel, designated as Estuary, mitigates the loss of intertidal and shallow sub-tidal habitat resulting from the National City Marine Terminal Wharf Extension project.

Gunpowder Point Shoreline

Between the D Street Area and G Street lies a very small sliver of land (2 acres) and a broad intertidal mud flat. This area will be preserved as wetlands and has been designated as such, as discussed in Section III under the Conservation category. This subarea totals approximately 223 acres and includes mostly land area designated for Wetlands use, along with some water areas designated as Estuary. To provide for the long-term protection and management of the sensitive habitat known as the Sweetwater Tidal Flats (running north from the boatyard to the Sweetwater River Channel), the Port will enter into a cooperative agreement with the US Fish and Wildlife Service that will address the placement of educational and enforcement signage, long-term maintenance, and additional protection measures such as increased monitoring and enforcement. The cooperative agreement will be executed prior to development commencement in the Sweetwater or Harbor districts.

Chula Vista Bayfront Master Plan

The CVBMP planning area consists of the northern Sweetwater District, the middle Harbor District, the southern Otay District, Chula Vista Harbor, and Boat Channel subareas. The Sweetwater District proposes the lowest intensity development and focuses on lower scale, environmentally sensitive and ecologically themed uses. In contrast, the Harbor District is intended to provide a significant link from the City to the bayfront and includes the highest intensity development. Lastly, the Otay District proposes moderate intensity mixed-use development. Each of the districts contain substantial amounts of open space and public amenities, and are seamlessly connected by greenbelt linkages that include pathways for pedestrians and bicyclists. A maximum of 2,850 hotel rooms are allowed within the boundaries of the CVBMP. Each CVBMP district, or planning subarea, is further described below.

Sweetwater District

The Sweetwater District, acquired by the Port as part of the aforementioned land exchange, is approximately 97 acres in size and is generally undeveloped and consists predominantly of fallow fields.

Public spaces and development planned for this subarea focus on lower scale, environmentally sensitive and environmentally themed uses. Land use designations include Open Space, Habitat Replacement, Wetlands, Park/Plaza, Commercial Recreation, and Promenade.

Undeveloped land along the northern and western boundaries of the district will be established as a 400-foot-wide buffer/setback area. The buffer/setback is intended to preserve and protect the adjacent Sweetwater Marsh Wildlife Refuge from planned development and to provide a gradual transition from undeveloped native landscape to developed areas. From west to east, the buffer/setback area consists of a 200-foot-wide "no-touch" zone, a 100-foot-wide "limited use" zone, and a 100-foot-wide "transitional use" zone. The no-touch zone primarily consists of wetland and upland habitat. To prohibit access by the public and nuisance predators into the sensitive habitat areas, the eastern boundary of the no-touch zone will include six-foot-high vinyl-coated chain link fencing. Fence installation shall include land contouring to minimize visual impacts of the fence. The limited use zone will contain outlook stations, open space areas, and a meandering trail system. The transitional use zone will accommodate increased recreational uses such as picnic areas and trails, and consists of revegetated open space. The southwestern portion of the buffer, which is designated as Wetlands, consists of lands identified for potential enhancement, restoration or creation of wetland mitigation areas. The outlook stations, which will be connected by meandering trails designated as Promenade, will provide viewing areas of the bay and wildlife, and will include educational elements such as kiosks, sculptures, or interpretive signs.

In addition, a 21-acre signature park is proposed with greenbelt linkages to park areas in the Harbor District. The park is envisioned as a passive use, meadow-type open space with amenities such as: landscaping, lighting, restrooms, drinking fountains, bicycle racks, children play areas, picnic areas, benches, trash receptacles,

interpretive signage, landscaped berms, public art, decomposed granite paving, and parking. The park is to be passive in nature, be low-impact and contain minimal structures. Allowed structures include restrooms, picnic tables, shade structures and overlooks, and are limited to single-story heights. No athletic field amenities or unattended food vending will be allowed. The park will utilize low water-use ground cover alternatives where possible and trails will not be paved. Due to the immediate adjacency to sensitive habitat areas, amplified sound equipment and issuance of park use permits for group events will be prohibited. The signature park parcel is assigned the Park/Plaza land use designation.

At the northern end of the district, planned development includes: a low-scale, low profile, lower-cost overnight accommodations, such as a campground and/or RV park and limited meeting space, food service, and retail shops associated with the development. Other uses include a parking area and access road for the Chula Vista Nature Center; and a low-intensity mixed use commercial recreation/marine related office development of approximately 60,000 to 120,000 square feet in size. Building heights in the Sweetwater District range from one-story on the north side of the E Street extension to 45 feet on the south side of E Street. An approximately 100-foot-wide buffer will separate the existing seasonal wetland, located between E and F Streets, from adjacent development.

Roadway improvements planned include the extension of E Street into the Harbor District, and re-routing of the terminus of F Street to connect to the E Street extension. A trail connection west of the F Street terminus will be limited to emergency vehicles and pedestrian and bicycle access. Each of the new roadways, as well as the connecting trail, include the Promenade land use designation to indicate pedestrian and bicycle connections to the rest of the planning district.

Harbor District

The Harbor District includes a total of approximately 223 acres of land area, of which approximately 191 acres lie within District jurisdiction. As a result of the land exchange previously described, an interior portion of this subarea falls under the City's jurisdiction and is intended for private residential, general office, retail and hotel development – all of which has been planned in conjunction with the CVBMP.

The Harbor District encompasses the greatest diversity of existing uses, including the majority of the planning district's developed commercial uses and areas accessible by the public. Existing uses include a boat yard, yacht club, marinas, restaurants, RV park, former industrial and supporting parking facilities, and waterfront parks.

Proposed development in the Harbor District is the highest intensity of the plan and encourages an active, vibrant mix of uses and public spaces. Land use designations within this subarea include Open Space, Wetlands, Park/Plaza, Commercial Recreation, and Promenade. Up to 2,850 hotel rooms are proposed in the Harbor District at two separate sites. The exact number of rooms may be allocated among either site, up to the 2,850 room maximum for the Harbor District.

Public amenities in this subarea include Park/Plaza-designated land areas, which include the existing Bayside Park that will be improved as a 25-acre extension of the signature park with similar amenities, such as lighting, sculptures, restrooms, interactive fountains, plaza areas, drinking fountains, bicycle racks, tot lots, picnic areas, benches, trash bins, interpretive signage, a sculpture garden, landscaped berms, public art, decomposed granite paving, and open lawn area. The park area could also include cultural uses; small food and beverage vending; and other park-activating ancillary uses. Allowed structures include restrooms, picnic tables, shade structures and overlooks, and are limited to single-story heights. Other public spaces to remain in the subarea include the existing Marina View and Chula Vista Bayfront Parks, both designated as Park/Plaza, and the existing fishing pier. The existing boat launch ramp, restrooms, and Harbor Police facility within Chula Vista Bayfront Park will remain. In contrast to the passive use emphasis of the Sweetwater District park areas, parks within the Harbor District are planned to accommodate flexible spaces and programmable elements that allow for more active uses or events.

Shoreline erosion protection is provided by stone rip-rap. Both the beach and the rip-rap require periodic maintenance. The park terminates at the Chula Vista Bayside Park Pier, which provides protective wave attenuation for the marina, berthing for vessels, and access for fishing.

The land lying north of ~~G Street~~ E Street South is designated for Commercial Recreation, Park/Plaza, Open Space, and Wetlands. ~~except for the conservation adjacent designation of Wetlands, Open Space, and Habitat Replacement~~. The 100-foot-wide Open Space designation north of the expanded park area abutting the area designated Commercial Recreation (the site of an existing boatyard) would serve as a buffer between future commercial development ~~adjacent to~~ and the ~~surrounding~~ adjacent habitat. The extent of buffer coverage will depend upon future resource conditions and will be reevaluated as new development proposals are submitted. The parcels formerly designated as Marine Related Industrial are envisioned to be part of a future redevelopment project which is planned to be compatible with the surrounding conservation land uses. The public promenade will be extended along the entire water frontage of the Commercial Recreation site. The existing boatyard use may continue to operate until the site is redeveloped to a conforming Commercial Recreation use. Prior to redevelopment, additional boat repair capacity will be identified. The shoreline south of G Street has been developed as an extension of the Chula Vista Bayside Park, with promenade, restrooms, parking, landscaping, lawn areas, and picnic facilities. The Bayside Park shoreline promenade will~~, as a long-term objective,~~ be extended along the Chula Vista Harbor to connect with the promenade on the Marina Way arm.

The anchor component of the district is a large resort conference center proposed just east of Bayside Park. The resort conference center will be a destination attracting visitors from, and providing public amenities to, the region. The resort conference center will include a portion of the allowed 2,850 rooms in the Harbor District, approximately 100,000 square feet of restaurant space, approximately 20,000 square feet of retail, a conference center with up to approximately 415,000 square feet of meeting space (with a maximum of 200,000 square feet of contiguous exhibit and flex space in a single enclosed room), expansive open space areas, and other ancillary uses. The maximum heights for the resort conference center components are 240 feet for the hotel and 120 feet for the convention center. The bayward half of this site will be developed with public open space upland of E Street, and a specialty retail shopping village consisting of low-scale commercial retail buildings interspersed with plazas, landscaping, public art and other pedestrian oriented public amenities. Any proposal to construct more than 1,600 rooms as part of the resort conference center will require evaluation of the impacts areas needing additional analysis and the need for additional mitigation measures to reduce significant impacts, if any, associated with any increase in rooms. Development of the resort conference center site will require the relocation of the existing RV park. None of the existing RV sites will be removed until an equivalent number of RV sites are constructed and operating within the planning district. The replacement RV park will be located on either parcel O-3 or S-1. In the event the replacement park cannot be opened to visitors prior to closing the existing RV Park, an interim site with an equivalent number of RV sites will be established and opened elsewhere in the CVBMP at parcels S-1, H-23, or in the Otay District.

South of H Street, the plan allows for a hotel with conference room, retail, and open space, and other ancillary hotel uses. The hotel will include a portion of the allowed 2,850 rooms in the Harbor District. An additional 200,000 square feet of cultural/retail uses and integrated open space would be developed on the site. East of this site, the plan includes approximately 100,000 square feet of mixed-use commercial recreation/marine related office uses wrapped around a 1,100- to 3,000-space collector parking garage. The garage is intended to function as remote employee and/or visitor parking to supplement on-site parking needs for bayfront businesses. –The garage site may be utilized as an interim surface parking lot with approximately 1,100 spaces during Phase I. Heights in the Harbor District will not exceed 25 feet (30 feet with architectural or mechanical features)

immediately adjacent to the water, with a maximum height of 300 feet away from the shoreline.

A new ferry terminal/restaurant is proposed on the harbor that will provide water transportation linkages to the central portion of the bay. New visitor-serving retail and marina support uses totaling approximately 25,000 to 50,000 square feet will be established around the northern periphery of the harbor. An additional approximately 75,000 to 150,000 square feet of retail and marina support uses and parking are planned around the south end of the harbor. Marina support uses may include: offices, restrooms, showers, lockers, ship chandlery, boat/bicycle rentals, bait and tackle sales, delicatessens, and snack bars. Only water dependent uses such as docks can be constructed in or over the water; retail and restaurant uses must be located on land. The waterside components of the marinas are further described as part of the Chula Vista Harbor subarea.

Roadway improvements include the extension of H Street that will connect to the E Street extension in the Sweetwater and Harbor districts. The H Street extension, which will end with a pedestrian connection and a new pier, will provide a significant link from eastern Chula Vista to the waterfront. Modifications to Marina Parkway and new access roads are also proposed throughout the Harbor District.

Construction of a new, approximately 60-foot-wide, 36,000-square-foot pier is proposed at the terminus of the extended H Street corridor above existing open water area. The 600-linear-foot pier would connect downtown Chula Vista to the Bay via H Street, and would enhance pedestrian and visual access to the water and offer picturesque views of San Diego Bay. Approximately half (300 linear feet) of the H Street Pier would be developed in Phase II at a length just short of the existing navigation channel. The remainder of the H Street Pier would be constructed in Phase IV, following realignment of the existing navigation channel. Development and uses on the pier may include small scale amenities such as a bait shop or snack bar.

A minimum wide 25-foot-wide shoreline pedestrian promenade or "baywalk" is planned to wrap around the perimeter of the park and harbor front businesses, connecting the pedestrian and bicycle greenbelt linkage to the other subareas, while maximizing public visual and physical access to the water. The baywalk will contain public amenities such as pedestrian-scale landscaping, lighting, and furniture, providing public seating and gathering spaces while offering views of the harbor. Private uses shall not encroach into the public walkway, and view corridors through the site towards the bay will be incorporated into the project design.

The eastern areas of the district within existing right-of-way/easement areas are planned for landscaping and pedestrian/bicycle trails as part of the greenbelt system that will link to the rest of the City.

~~G Street Corridor~~

~~The land lying north of G Street is designated for Commercial Recreation, except for the conservation designations of Wetlands and Habitat Replacement, which would serve as a buffer between future commercial development adjacent to the surrounding habitat. The extent of buffer coverage will depend upon future resource conditions and will be reevaluated as new development proposals are submitted. The parcels formerly designated as Marine Related Industrial are envisioned to be part of a future redevelopment project which is planned to be compatible with the surrounding conservation land uses. The public promenade will be extended along the entire water frontage of the Commercial Recreation site.~~

~~The existing boatyard use may continue to operate until the site is redeveloped to a conforming Commercial Recreation use. Prior to redevelopment, additional boat repair capacity will be identified. The shoreline south of G Street has been developed as an extension of the Chula Vista Bayside Park, with promenade, restrooms, parking, landscaping, lawn areas, and picnic facilities. The Bayside Park shoreline promenade will, as a long-term objective, be extended along the Chula Vista Harbor to connect with the promenade on the Marina Way arm.~~

~~Shoreline erosion protection is provided by stone rip-rap. Both the beach and the rip-rap require periodic maintenance. The park~~

~~terminates at the Chula Vista Bayside Park Pier, which provides protective wave attenuation for the marina, berthing for vessels, and access for fishing.~~

~~Approximately 11 acres of vacant land bounded by Marina Parkway, G Street, Bayshore Parkway, and Bayside Park has been designated as the site for initial development of the biomedical-pharmaceutical manufacturing plant mentioned in the Precise Plan Concept for the Chula Vista Bayfront. Ultimately, the plant will include another ten acres of land east of Sandpiper Way in the Marina Parkway Corridor subarea.~~

~~*Marina Parkway Corridor*~~

~~Most of the Marina Parkway Corridor subarea is either vacant or leased to an aircraft parts manufacturer. Under the plan concept, H Street will be extended from its present terminus to Marina Parkway, creating a third major entry into the Chula Vista Bayfront.~~

~~All of this planning subarea has been designated for Industrial-Business Park uses (except the small area to the south that is part of Marina View Park). When future economic conditions change to stimulate redevelopment demand, this demand can be accommodated under the Industrial-Business Park classification. As mentioned in the Plan Concept section of this planning district, the proportion of industrial or commercial development, which would ultimately be allocated would depend on the type and amount of uses attracted to the Bayfront. The property north of H Street, which is currently leased to an aircraft manufacturer, would likely be retained in industrial use, however.~~

~~*Bayside Parkway Area*~~

~~The Bayside Parkway planning subarea contains two uses: a recreational vehicle park, under the Commercial Recreation use category, and a shoreline recreation park, shown on the precise plan as Park.~~

~~A nine-acre shoreline park fronts on both the boat access channel and the boat basin. Park uses include a landscaped leisure site for local residents and visitors, a restful lunchtime picnic spot for nearby workers, and a recreational resource for the public. To provide additional access to the coast, a promenade is shown coming off the access street and continuing around the park back to Marina Parkway.~~

Chula Vista Harbor

~~The basin created by dredging and filling at the south end of the Planning District is used primarily for recreational boat berthing.~~ The Chula Vista harbor basin includes approximately 50 acres of water area and is protected by two structures: a 300-foot-long rock breakwater extending north from the Marina Way arm and a 650-foot-long wave attenuation pier extending south from Bayside Park. They are separated by about 200 feet of channel. The harbor is currently occupied by two marinas totaling approximately 900 boat slips. The existing Chula Vista Boat Launch has been upgraded with additional shore protection.

An essential component of the CVBMP is the creation of an active commercial harbor that encourages public access to the water and activity on the water. To facilitate the development of this activated harbor, the existing marina boat slips will be reconfigured to create an approximately 4-acre open water area. Of the existing 900 marina slips, 700 slips would be reconfigured within the existing harbor at HW-1 and HW-4, and 200 slips would be relocated to HW-6. The new open water area will enhance boating activity on the water and is envisioned to be utilized for ferry loading and unloading, water taxis, dinner boats, harbor cruises, visiting historic vessels, and boat rentals. The reduction in boat slips may only occur if replacement slips are provided elsewhere within the CVBMP.

Prior to approval of any changes in the slip size or distribution, the Port will undertake an updated comprehensive boater use, slip size, and slip distribution study which is no more than five years old for each dock redevelopment project that affects slip size and distribution of slips, to assess current boater facility needs within the individual project and the Bay as a whole. The Port will continue to provide a mix of small, medium and large boat slips based on updated information from the comprehensive study with priority given to

boats less than 25 feet in length and a goal of no net loss in number of slips within the CVBMP. Should future projects propose reducing the number or proportion of small slips for boats 25 feet or less within the Chula Vista marina, a Port Master Plan amendment will be required.

Landside improvements around the harbor, including commercial development and public amenities, are further described above in the Harbor District subarea.

The water areas within the Harbor have been designated as Recreational Boat Berthing, Specialized Berthing, and Boat Navigation Channel.

~~Two marinas occupy most of the boat basin. One, occupying about four acres of land on Marina Parkway, has about 560 slips in the north half of the basin. The other, south of the first, occupies almost three acres of land and has room for 350 boats. Both marinas have facilities, for the convenience of their patrons.~~

~~The commercial recreation area is developed with a restaurant and associated marine sales and service establishments. Since many potential customers come from the nearby marinas, parking needs are reduced. The design provides a visual focal point and identification symbol for the boat basin.~~

~~The vacant six-acre parcel north of Marina Way will be developed with Commercial Recreation uses compatible with the existing marinas. A hotel/motel of approximately 200 rooms, with a restaurant and ancillary retail shops, is anticipated.~~

~~The Chula Vista Boat Launch has been upgraded with additional shore protection, landscaping and picnic facilities. Public access to the water is provided by a promenade around the outside edge of the arm. The entire south edge of the arm is designated as a leisure park, offering landscaped viewing areas and additional parking.~~

Otay District

The Otay District is approximately 124 acres in size and includes recently acquired upland areas. This subarea was characterized by industrial uses, including the existing SDG&E electrical switchyard and South Bay Power Plant. Uses within this district will be designed in consideration of the adjacent sensitive habitat areas.

The proposed development for the Otay District consists of a mix of uses, including industrial and low-cost visitor serving recreational uses. The extreme northern and southern parcels are designated for Industrial Business Park use. The southern Industrial Business Park parcel could include industrial distribution and related facilities, or other uses allowed under the Industrial Business Park designation. Land use designations for this subarea include Open Space, Park/Plaza, Habitat Replacement, Wetlands, Industrial Business Park, Commercial Recreation, and Promenade.

A new approximately 24-acre passive South Park is proposed and will include amenities such as: pedestrian trails, landscaping, berms, lighting, restrooms, drinking fountains, benches, picnic areas, outlook areas, trash receptacles, public art, filtration basins, and parking. The park is to be passive in nature, be low-impact and contain minimal structures. Allowed structures include restrooms, picnic tables, shade structures and overlooks, and are limited to single-story heights. No athletic field amenities or unattended food vending will be allowed. The park will utilize low water-use ground cover alternatives where possible and trails will not be paved. Due to the immediate adjacency to sensitive habitat areas, amplified sound equipment and issuance of park use permits for group events will be prohibited.

Abutting the north side of this park area is Commercial Recreation-designated property that is intended to provide low-cost visitor serving recreational uses. This area may be developed as an RV park that will include approximately 237 RV parking spaces and ancillary uses such as offices, pool/spa, snack bar, general store, meeting space, game room, laundry facilities, and playground equipment. Both parcels could allow for camping activities. The existing concrete Telegraph Canyon Creek channel is proposed to be replaced with a more natural vegetated channel. Efforts to naturalize and vegetate the

creek will be maximized as is consistent with its function as a storm water conveyance.

A buffer/setback area will be provided along the western boundary of the district between J Street and the RV park. The buffer/setback area will consist of a 100 to 200-foot-wide no-touch zone, within which public access is prohibited, to protect the adjacent J Street Marsh and wildlife reserve from proposed development. The buffer/setback area, which is designated as Habitat Replacement and Wetlands, will be utilized for wetland and upland habitat mitigation and will prohibit public access. To prohibit access by the public and nuisance predators into the sensitive habitat areas, the eastern boundary of the no-touch zone will include six-foot-high vinyl-coated chain link fencing. Fence installation shall include land contouring to minimize visual impacts of the fence.

The construction of the northern Industrial Business Park parcel, South Park, and RV park in this district is subject to demolition of the existing power plant, and demolition and relocation of the existing switchyard.

New roadways will be constructed throughout the Otay District to serve new uses. A new bike path is proposed alongside the new roadways. A shoreline pedestrian trail is proposed in the Otay District, and its design will ensure protection of the adjacent sensitive habitat areas. Like the Harbor District subarea, the eastern portion of this subarea within existing right-of-way/easement areas are planned for landscaping and pedestrian/bicycle trails that will connect to the shoreline pedestrian and bike trail in the Otay District. This district will also contain parking areas. The pedestrian/bicycle trail in the Otay District will be part of the greenbelt system that will link the CVBMP area together, and link it to the rest of the City greenbelt.

Boat Channel

The water area directly west of the Chula Vista Bayfront is occupied by the main boat channel providing access to the harbor, which is designated Boat Navigation Corridor on the Precise Plan. Areas outside the channel will remain in the Estuary category.

The CVBMP proposes to realign and straighten the existing navigation channel in order to increase accessibility to the harbor. The realignment will utilize an existing abandoned access channel and remove the "dog leg" portion of the current channel, thereby enhancing boat access between the Chula Vista Harbor and the northern portions of San Diego Bay. In addition, the new channel will be located farther away from sensitive resources located along the shoreline west of the Sweetwater District.

Outer South Bay

The remaining water area in Chula Vista is scheduled to stay designated as ~~estuary~~Estuary. Limited surface water use for boating and fishing, for example, will be permitted but other uses will be discouraged.

Wildlife Reserve

South of the Chula Vista Harbor lies a large tidal mud flat, the San Diego Gas and Electric Company (SDG&E) dike, and the South Bay Wildlife Reserve, a 55-acre island which was built from dredged material and where native habitat has been established. The Master Plan has ~~four~~ three designations for this subarea: Wetlands, Estuary, and Habitat Replacement~~, and Marine Related Industrial~~.

The Wetlands (refer to the Master Plan Interpretation section on Wetlands~~, page 33~~), includes the area known as the J Street Marsh and is roughly the mud flat and marsh area exposed to air during low tide. It is undeveloped, except for a small channel that was used as a water intake trough for the SDG&E thermal power plant. ~~The function of the SDG&E dike is to separate this cool water intake from the warm water outfall area located on the south side of the dike. Other~~ than potential habitat restoration activities, no alterations to the ~~former~~ existing intake/discharge channel area are proposed; however ~~I~~it is the intent of this plan to preserve the surrounding wetlands in their natural state ~~but to retain and maintain the intake channel~~. To provide for the long-term protection and management of the J Street Marsh sensitive habitat area, the Port will enter into a cooperative agreement with the US Fish and Wildlife Service that will address the placement of educational and enforcement

signage, long-term maintenance, and additional protection measures such as increased monitoring and enforcement. The cooperative agreement will be executed prior to the redevelopment of the Otay District.

Estuary refers to the shallow water outward of the wetlands which is not exposed at low tide. This area will not be developed; however, limited surface water activities such as boating and fishing would be permitted. Efforts should be made to avoid or reduce potential environmental damage.

The Habitat Replacement concept involves engineering, dredging, planting and developing a valuable supratidal salt marsh habitat as part of a master-planned complex. Unauthorized access by humans and predators will be greatly discouraged by fencing the SDG&E dike, although controlled access will be provided for nature instruction and research. Its location reduces conflicts between development and preservation activities, and its size enables other shoreline projects to be completed by substituting the inferior habitats at the project sites for a carefully nurtured and highly productive habitat.

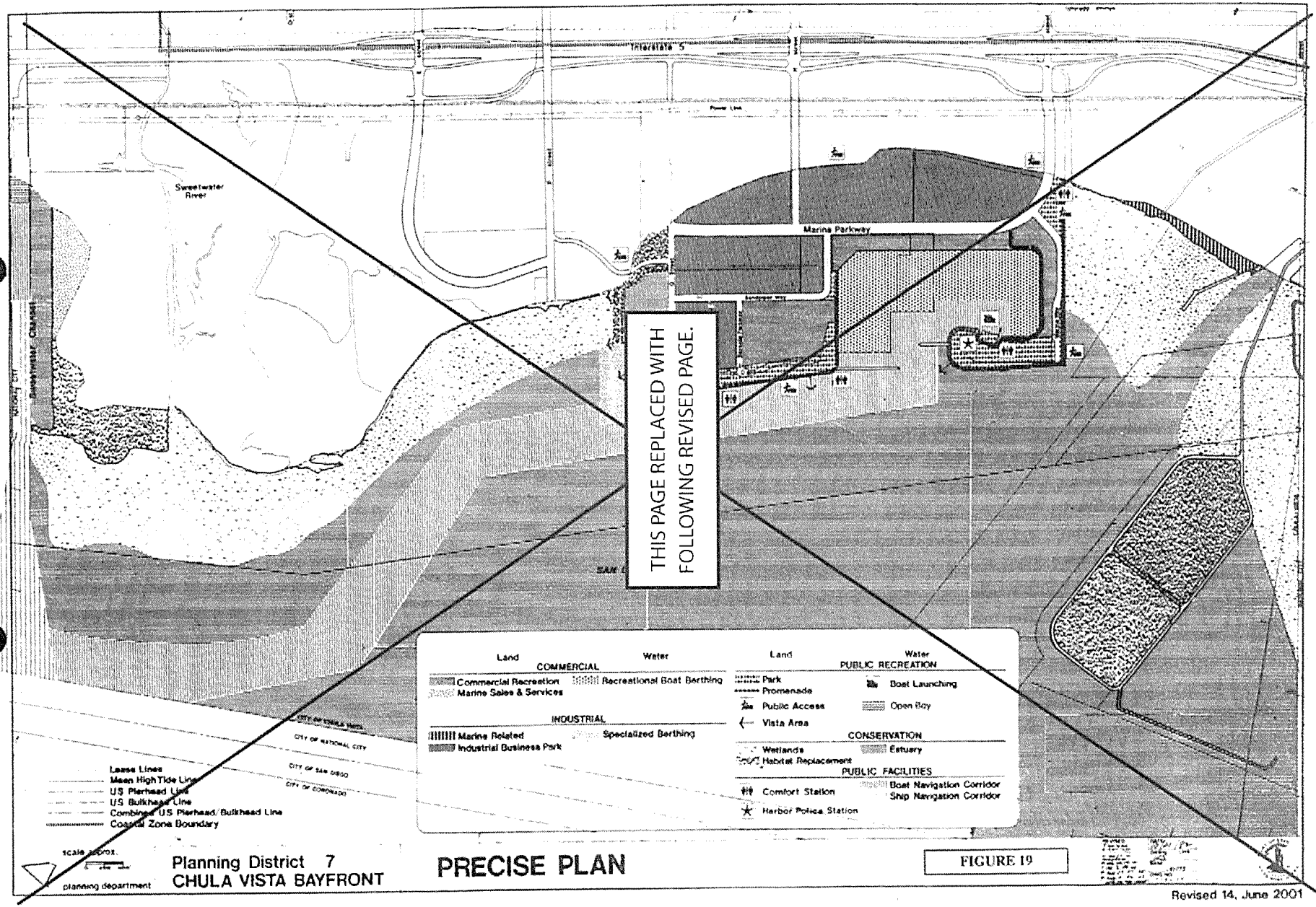
The Port District provides continual protection and management, as part of a comprehensive South Bay wildlife preserve program.

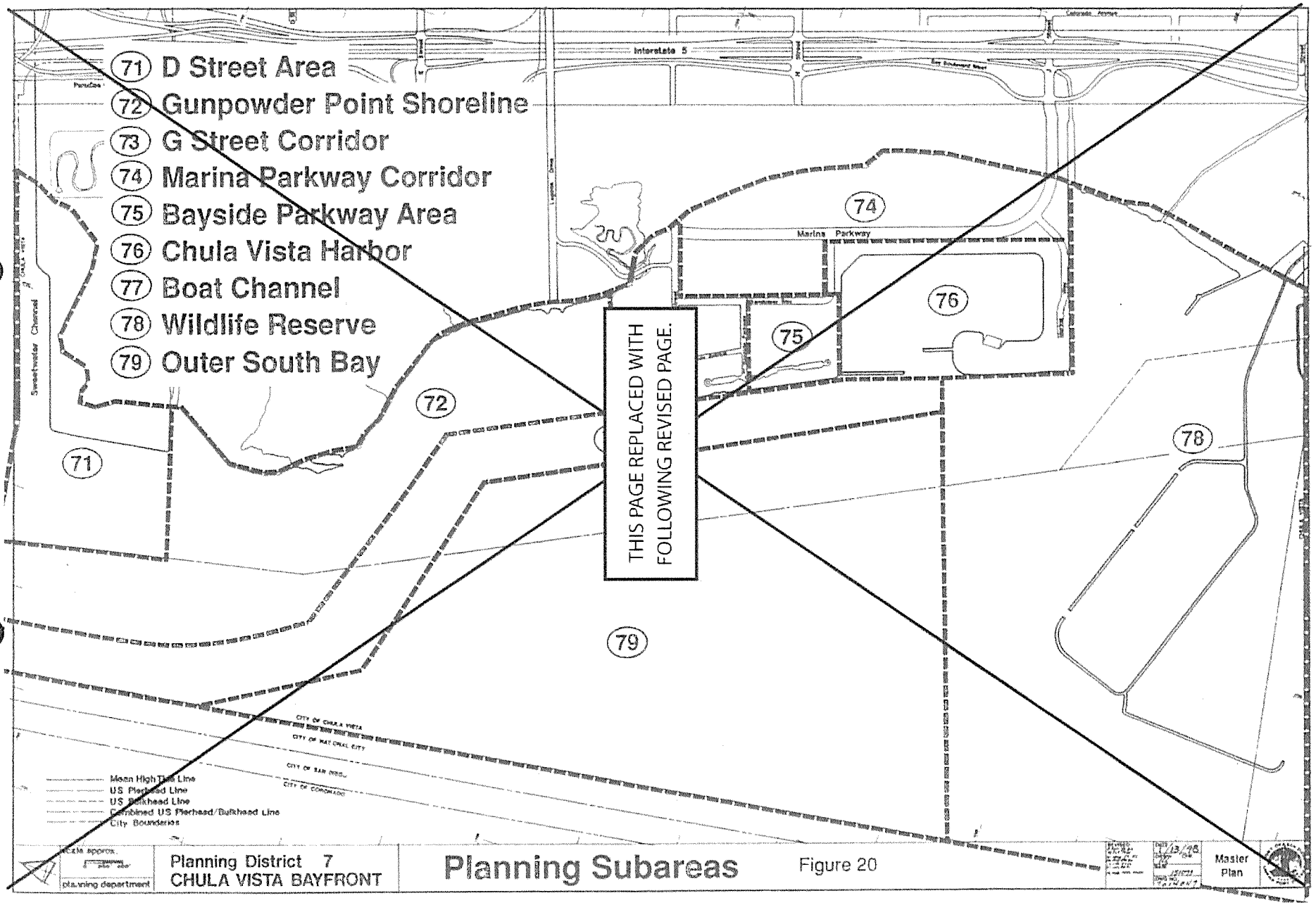
A narrow strip of District-owned land, designated ~~Marine Related Industrial~~ Wetlands, ~~follows along the estern edge of this planning subarea. It~~is currently leased ~~for an electric generating plant~~to the existing power plant operator, ~~and is expected to remain in this use for the future~~ but upon demolition of the existing power plant, is intended for mitigation and/or restoration area that will include a buffer between existing and created wetland areas and upland use.

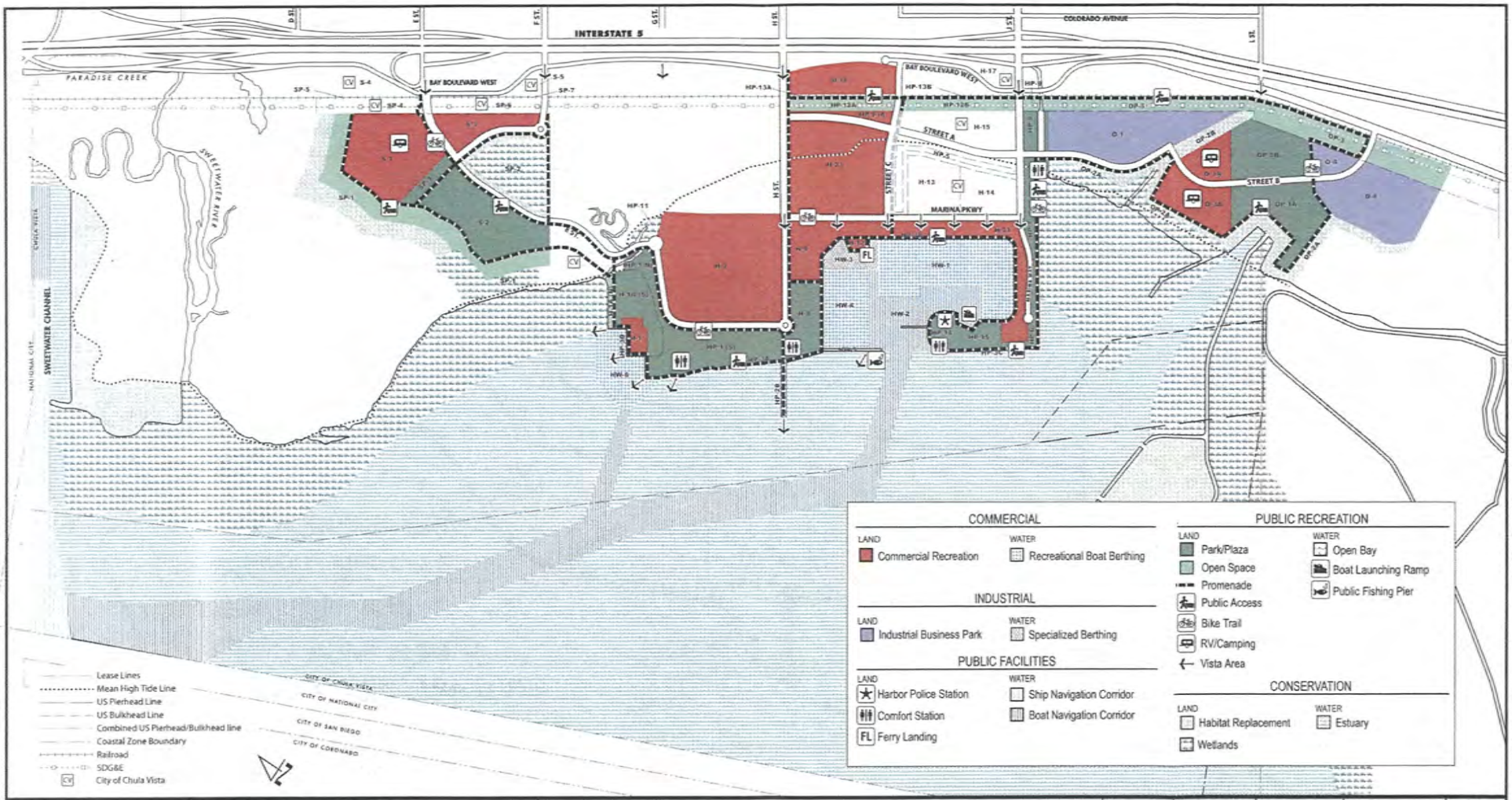
TABLE 18
Precise Plan Land and Water Use Allocation

CHULA VISTA BAYFRONT: PLANNING DISTRICT 7

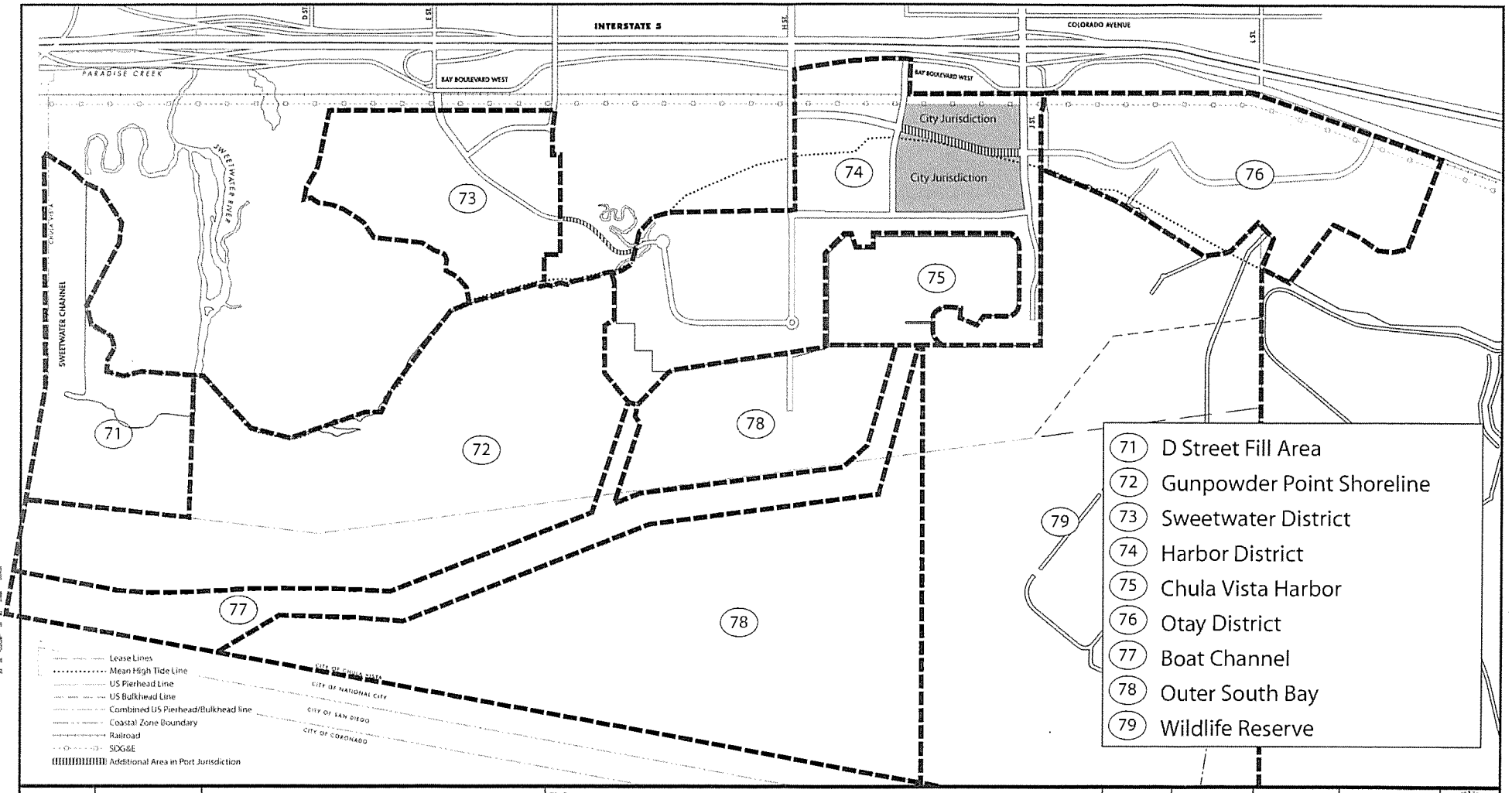
LAND USE	ACRES	WATER USE	ACRES	TOTAL ACRES	% OF TOTAL
COMMERCIAL	~~48.5~~ 130.2		~~34.0~~ 39.6	~~82.5~~ 169.8	~~5~~ 8%
~~Marine Sales and Service~~	~~9.7~~				
Commercial Recreation	~~38.8~~ 130.2	Recreational Boat Berthing	~~34.0~~ 39.6		
INDUSTRIAL	~~84.1~~ 36.4		~~9.5~~ 3.8	~~93.6~~ 40.2	~~6~~ 2%
Industrial Business Park	~~80.6~~ 36.4				
~~Marine Related Industrial~~	~~3.5~~	Specialized Berthing	~~9.5~~ 3.8		
PUBLIC RECREATION	~~23.9~~ 152.9		~~0.9~~ 1.2	~~24.8~~ 154.1	~~1~~ 8%
Open Space	47.7				
Park/Plaza	~~21.3~~ 87.9	Open Bay/Water	~~0.9~~ 1.2		
Promenade	~~2.6~~ 17.3				
CONSERVATION	~~327.3~~ 413.4		~~941.2~~ 967.2	~~1268.5~~ 1380.6	~~75~~ 70%
Wetlands	~~233.0~~ 303.9	Estuary	~~941.2~~ 967.2		
Habitat Replacement	~~94.3~~ 109.5				
PUBLIC FACILITIES	~~23.3~~ 42.5		~~196.8~~ 190.4	~~220.1~~ 232.9	~~13~~ 12 %
~~Harbor Services~~	~~0.1~~	Boat Navigation Corridor	~~166.8~~ 156.5		
Streets	~~23.2~~ 42.5	Ship Navigation Corridor	~~30.0~~ 33.9		
TOTAL LAND AREA	~~507.1~~ 775.4	**TOTAL WATER AREA**	~~1,182.4~~ 1202.2		
PRECISE PLAN LAND AND WATER ACREAGE TOTAL				~~1,689.5~~ 1977.6	~~100~~100%


Sweetwater River
Marina Parkway
THIS PAGE REPLACED WITH FOLLOWING REVISED PAGE.
Land
Water
COMMERCIAL
Commercial Recreation
Recreational Boat Berthing
Marine Sales & Services
INDUSTRIAL
Marine Related
Specialized Berthing
Industrial Business Park
Land
Water
PUBLIC RECREATION
Park
Boat Launching
Promenade
Public Access
Open Bay
Vista Area
CONSERVATION
Wetlands
Estuary
Habitat Replacement
PUBLIC FACILITIES
Comfort Station
Boat Navigation Corridor
Ship Navigation Corridor
Harbor Police Station
Lease Lines
Mean High Tide Line
U.S. Pierhead Line
U.S. Bulkhead Line
Combined U.S. Pierhead/Bulkhead Line
Coastal Zone Boundary
CITY OF NATIONAL CITY
CITY OF SAN DIEGO
CITY OF CORONADO
scale approx.
planning department
Planning District 7
CHULA VISTA BAYFRONT
PRECISE PLAN
FIGURE 19
Revised 14, June 2001





*Not to scale	ENVIRONMENTAL AND LAND USE MANAGEMENT	PLANNING DISTRICT 7 - CHULA VISTA BAYFRONT	TITLE: PRECISE PLAN	DATE 071812	DWG NO. FIGURE 19	DRWN / CHK TO/LN	BASE NO.



68404 PAGE 166

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TABLE 19: Project List

CHULA VISTA BAYFRONT: PLANNING DISTRICT 7	SUBAREA ↓	DEVELOPER ↓	APPEALABLE ↓	~~FISCAL YEAR~~ PHASE
~~2. MARINE-RELATED INDUSTRY: Construct marine-related industrial Development~~	~~73~~	~~T~~	~~N~~	~~2002~~
~~3. BIOMEDICAL/PHARMACEUTICAL MANUFACTURING: Construct facility~~	~~73~~	~~T~~	~~N~~	~~2002~~
~~5. HOTEL/RESTAURANT: Construct hotel and restaurant~~	~~76~~	~~T~~	~~Y~~	~~1998~~
~~7. D STREET FILL MITIGATION SITE*: Excavate and construct a salt marsh habitat as mitigation for the National City Marine Terminal Wharf Extension~~	~~71~~	~~P~~	~~N~~	~~2001~~
GENERAL				
~~6~~1. STORM DRAIN~~S~~: Construct, enhance, and maintain storm drain~~s~~.	73/74	P/T	N	ONGOING
SWEETWATER DISTRICT				
2. SWEETWATER PARK (S-2): Development of 21-acre signature park in Sweetwater District, including associated public amenities, promenades, and parking areas as detailed in Planning District text.	73	P	N	Phase I
3. NATURE CENTER PARKING AREA (SP-3): Construct new 100-space parking area and access road for Chula Vista Nature Center.	73	T	N	Phase I
4. SWEETWATER DISTRICT LODGING (S-1): Construct a low-scale, low profile, lower-cost overnight accommodations such as a campground and/or RV park; associated meeting rooms, retail stores and food service are limited to one story within a maximum height of 25 feet.	73	T	Y	Phase I
5. SWEETWATER DISTRICT ROADWAY AND INFRASTRUCTURE IMPROVEMENTS: Reconfiguration of existing (F Street) and construction of new interior (E Street) roadways, as well as necessary utility improvements and pedestrian/bicycle connections to support planned projects. E and F Streets are appealable category developments.	73	P	Y	Phase I – IV
6. SWEETWATER DISTRICT WETLAND AND UPLAND HABITAT ENHANCEMENT (SP-1 / SP-2): Creation, restoration, and enhancement of identified wetland and upland habitat areas, as well as the establishment of buffers; these areas may also be utilized for mitigation opportunities as CVBMP development impacts occur.	~~73~~	P	N	Phase I — IV
7. F STREET TERMINATION: Termination of F Street segment/Lagoon Drive and construction of new roadway connection to E Street, as well as pedestrian/bike trail connection on former F Street segment.	73	P	Y	Phase II / IV
8. MIXED-USE COMMERCIAL RECREATION/MARINE RELATED OFFICE DEVELOPMENT (S-3): Construct low-intensity mixed-use marine commercial recreation/marine related office development of up	73	T	Y	Phase IV

to 60,000 to 120,000 square feet in size, along with associated on-site landscaping and parking improvements; maximum building height is limited to 45 feet.				
HARBOR DISTRICT				
~~19.~~ SHORELINE MAINTENANCE (HP-1/H-8): Maintain stone revetment and replenish Beach at Bayside Park	~~75~~74	P	N	~~2002~~ ONGOING
410. H STREET EXTENSION: Extend H Street to Marina Parkway	74	P	Y	~~1997~~ UNDERWAY
11. RESORT CONFERENCE CENTER (H-3): Construct resort conference center, including a portion of the allowed 2,850 hotel rooms in the Harbor District, up to 100,000 square feet of restaurant, up to 20,000 square feet of retail, up to 415,000 square feet of net meeting space, and other associated ancillary uses. The bayward portion of this site will be developed with a 150-foot wide public open space esplanade inland of E Street, and a specialty retail shopping village consisting of buildings no more than 35 feet in height with commercial retail on the ground floor, and hotel/conference center uses above. The special shopping area shall be interspersed with plazas, landscaping, public art and other pedestrian oriented public amenities. Maximum heights are limited to 240 feet for the hotel and 120 feet for the conference center.	74	T	Y	Phase I
12. INTERIM SURFACE PARKING LOT (H-18): Construction of approximately 1,100 surface parking spaces for use as collector and off-site parking lot.	74	T/P	N	Phase I
13. SIGNATURE PARK EXTENSION (HP-1N, HP-1S, H-1AS, H-8): A 25-acre extension of Sweetwater Signature Park into Harbor District, including improvements to existing Bayside Park as detailed in Planning District text.	74	P	N	Phase I / IV
14. HARBOR DISTRICT ROADWAY AND INFRASTRUCTURE IMPROVEMENTS: Reconfiguration of existing (H Street, J Street and Marina Parkway) and construction of new interior (E Street, Street A and C) roadways, as well as necessary utility improvements and pedestrian/bicycle connections to support planned projects. All new streets are appealable category developments.	74	P	Y	Phase I - III
15. HARBOR DISTRICT BAYWALK (HP-3): Development of new Baywalk promenade along the shoreline.	74	P	N	Phase I - IV
16. H STREET PIER (FIRST HALF) (HP-28): Construct new 60-foot wide, 300-lineal-foot pier at terminus of extended H Street corridor above existing open water area (only portion eastward ~~only~~ of existing navigation channel; second half of total 600-linear-foot pier totaling 36,000 square feet to be constructed in Phase IV following realignment of navigation channel).	74	P	Y	Phase II
17. HARBOR RESORT HOTEL AND CULTURAL/RETAIL (H-23): Construct hotel with portion of allowed 2,850 rooms in Harbor District, associated conference room, retail, and ancillary uses, along with up to 200,000 square feet of cultural/retail uses and integrated open space; maximum heights are limited to 300 feet for the hotel and 65 feet for the cultural/retail uses.	74	T	Y	Phase II
18. NORTH HARBOR RETAIL AND MARINA SUPPORT (H-9): Construct	74	T	Y	Phase II

visitor-serving retail and marina support uses totaling up to 25,000 to 50,000 square feet within maximum building heights of 25 feet (30 feet with architectural or mechanical features) around northern periphery of Chula Vista Harbor.				
19. MARINA WAY RECONFIGURATION: Reconfiguration of Marina Way, including modifications to Marina View Park (HP-7, HP-8) and parking areas (HP-6) to accommodate reconfigured J Street/Marina Parkway, including construction of pedestrian promenade (HP-3) with minimum 25-foot width.	74	P	N	Phase III
20. CHULA VISTA BAYFRONT PARK IMPROVEMENTS (HP-14): Reconfiguration of existing boat trailer parking lot and modifications to park area to accommodate installation of minimum 25-foot wide shoreline promenade. No change in number of parking spaces.	74	P	N	Phase III
21. OPEN SPACE IMPROVEMENTS (HP-12, HP-13, OP-3): Construct greenbelt improvements, such as landscaping and trails for pedestrians and bicyclists, along SDG&E and Coronado Branch Railroad rights-of-way.	74/76	P	N	Phase III
22. SOUTH HARBOR RETAIL AND MARINA SUPPORT (H-21): Construct up to 75,000 to 150,000 square feet with maximum building heights of 25 feet (30 feet with architectural or mechanical features) of visitor-serving retail, marina support, and parking uses around southern periphery of Chula Vista Harbor.	74	T	Y	Phase III
23. CHULA VISTA HARBOR RECONFIGURATION AND MARINA SUPPORT (HW1, HW-2, HW-3, HW-4): Reconfiguration of existing marina slips to create new open water commercial harbor (HW-2 and HW-3), and development of landside marina support facilities; of the existing 900 marina slips, 700 slips would be reconfigured within the existing harbor at HW-1 and HW-4.	75	P	Y	Phase IV
24. BOAT CHANNEL REALIGNMENT: Realign and straighten existing boat navigation channel	77	P	N	Phase IV
25. H STREET PIER (SECOND HALF) (HP-28): Construct second phase of new 60-foot wide, 600-lineal-foot pier totaling up to 36,000 square feet at terminus of extended H Street corridor (extension into former navigation channel)	74	P	Y	Phase IV
26. MIXED-USE OFFICE/COMMERCIAL RECREATION AND COLLECTOR PARKING GARAGE (H-18): Construct approximately 100,000 square feet of mixed-use marine-related office/commercial recreation and a 1,100 to 3,000-space collector parking garage; maximum building heights is 155 feet (10 stories).	74	T/P	Y	Phase IV
27. FERRY TERMINAL (H-12): Construct ferry terminal with second story restaurant/retail totaling up to 10,000 to 25,000 square feet of building area; building height is limited to 25 feet (30 feet with architectural or mechanical features).	74	T	Y	Phase IV
OTAY DISTRICT				
28. RECREATIONAL VEHICLE PARK (O-3A, O-3B): Construct replacement recreational vehicle park with minimum 237 spaces, along with supporting ancillary uses with building heights limited to 25 feet (30	76	T	Y	Phase I

feet with architectural or mechanical features).				
29. OTAY DISTRICT ROADWAY AND INFRASTRUCTURE IMPROVEMENTS: Reconfiguration of existing and construction of new interior roadways (Street B), as well as necessary utility improvements and pedestrian/bicycle connections to support planned projects.	76	P	Y	Phase III
30. OTAY DISTRICT WETLAND AND UPLAND HABITAT MITIGATION (OP-2A, OP-2B): Creation, restoration, and enhancement of identified wetland and upland habitat areas, as well as the establishment of buffers; replacement of existing concrete Telegraph Canyon Creek channel with wider, naturally vegetated channel.	76	P	N	Phase III
31. SOUTH PARK (OP-1A, OP-1B): Development of 24-acre park in Otay District, including associated public amenities, promenades, and parking areas as detailed in Planning District text.	76	P	N	Phase III
P- Port District N- No T- Tenant Y- Yes				

Phase I refers to the time period of approximately 1-7 years after PMPA certification
Phase II refers to the time period of approximately 4-10 years after PMPA certification
Phase III refers to the time period of approximately 11-17 years after PMPA certification
Phase IV refers to the time period of approximately 18-24 years after PMPA certification

PLANNING DISTRICT 9

South Bay Salt Ponds

This subarea ~~includes both leased and unleased areas. A parcel is leased to San Diego Gas and Electric Company for a warm water outlet and dispersal area as part of the South Bay Power Generating Plant operation. The remaining area~~ is predominantly submerged bay tidelands, including the terminus channel of the Otay River. The water area remaining under Port District control is included in the Estuary classification.

Project List

No specific projects are identified, although it is anticipated that some environmental enhancement or mitigation project may be identified later as plans are implemented around the bay.

TABLE 22

Precise Plan Land and Water Use Allocation

SOUTH BAY SALT LANDS: PLANNING DISTRICT 9

LAND USE	ACRES	WATER USE	ACRES	TOTAL ACRES	%OF TOTAL
CONSERVATION	192.0		605.5	797.5	100%
Wetlands	192.0	Estuary	185.3		
		Salt Ponds	420.2		
TOTAL LAND AREA	**192.0**	**TOTAL WATER AREA**	**605.5**		
PRECISE PLAN LAND AND WATER ACREAGE TOTAL				**797.5**	**100%**

APPENDIX B

Development Policies

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San Diego Unified Port District

Chula Vista Bayfront

Development Policies

August 2012
**Certified by the California Coastal Commission*

Table of Contents

Exhibits

CHULA VISTA BAYFRONT
Development Policies

PLANNING AND DEVELOPMENT POLICIES

The policies below form the Chula Vista Bayfront Master Plan Development Policies (Plan). These policies are taken from the adopted and approved plans, certified environmental documents, enforceable settlement agreements, required mitigation measures, and conditions included in the approval process. They are meant to bring together, in one document, the conditions and policies that will apply to and guide the development of the Bayfront. This document has been incorporated by reference into Planning District 7, Chula Vista Bayfront, of the Port Master Plan.

1. Environmental Management Policies

Policy 1.1: In recognition of the sensitivity of the natural resources and the importance of protection, restoration, management and enforcement in protecting those resources, the District and City will prepare a Natural Resources Management Plan (NRMP) for the Chula Vista Bayfront. The NRMP will be designed to achieve the Management Objectives (defined below) for the Wildlife Habitat Areas. The NRMP will be an adaptive management plan, reviewed and amended as necessary by the District and City in coordination with the Wildlife Advisory Group. The Wildlife Advisory Group shall be formed to advise the District and City in the creation of a NRMP, cooperative management agreements, Adaptive Management Review and any related wildlife management and restoration plans or prioritizations. Because it will be frequently revised and updated, the NRMP has not been incorporated into the Port Master Plan (PMP). If there are any conflicts between the NRMP and any portion of the PMP, the provisions of the PMP shall control and take precedence.

Policy 1.2: A NRMP will be created as a condition of this Plan and will meet the management objectives below.

Policy 1.3: Taking into consideration the potential changes in functionality of Wildlife Habitat Areas due to rising sea levels, the NRMP will promote, at a minimum, the following objectives ("Management Objectives") for the Wildlife Habitat Areas:

a) Long term protection, conservation, monitoring, and enhancement of: 1) Wetland habitat, with regard to gross acreage as well as ecosystem structure, function, and value; 2) Coastal sage and coastal strand vegetation; and 3) Upland natural resources for their inherent ecological values, as well as their roles as buffers to more sensitive adjacent wetlands.
b) Upland areas in the Sweetwater and Otay Districts will be adaptively managed to provide additional habitat or protection to create appropriate transitional habitat during periods of high tide and taking into account future sea level rise.
c) Preservation of the biological function of all Bayfront habitats serving as avifauna for breeding, wintering, and migratory rest stop uses.
d) Protection of nesting, foraging, and rafting wildlife from disturbance.
e) Avoidance of actions within the Chula Vista Bayfront area that would adversely impact or degrade of water quality in San Diego Bay or watershed areas or impair efforts of other entities for protection of the watershed.
f) Maintenance and improvement of water quality where possible and coordination with other entities charged with watershed protection activities.

Wildlife Habitat Areas is defined below and are depicted on Exhibit 1:

- All National Wildlife refuge lands, currently designated and designated in the future, in the South San Diego Bay and Sweetwater Marsh National Wildlife Refuge Units. These areas are included in the definition of Wildlife Habitat Areas for the sole purpose of addressing adjacency impacts and not for the purpose of imposing affirmative resource management obligations with respect to the areas within the National Wildlife Refuge lands.
- All District designated lands and open water areas in the Conservation Land Use Designations of Wetlands, Estuary, and Habitat Replacement as depicted in the Precise Plan for Planning District 7.
- Parcels 1g and 2a from the City's Bayfront Specific Plan.

Policy 1.4: In addition to the standards described above, the NRMP will include:

a) All elements which address natural resource protection in the Final Environmental Impact Report Mitigation Monitoring and Reporting Program (MMRP) including but not limited to those which assign responsibility and timing for implementing mitigation measures consistent with the City's Multiple Species Conservation Program (MSCP) Subarea Plan.
b) Pertinent sections of the MSCP Subarea Plan.
c) References to existing District policies and practices, such as Predator management programs and daily trash collections with public areas and increase service during special events.
d) Establishment of design guidelines to address adjacency impacts, such as storm water, landscape design, light and noise and objectives as discussed in this Plan.
e) Establishment of baseline conditions and management objectives.
f) Habitat enhancement objectives and priorities.

Policy 1.5: The NRMP will be a natural resource adaptive management and monitoring plan initially prepared in consultation with the Wildlife Advisory Group and regularly reviewed and amended in further consultation with the Wildlife Advisory Group. Periodic Review will address, among other things, monitoring of impacts of development as it occurs and monitoring the efficacy of water quality improvement projects (if applicable) and management and restoration actions needed for resource protection, resource threats, management (i.e., sea-level rise, trash, window bird strikes, lighting impacts, bird flushing, water quality, fireworks, human-wildlife interface, education and interpretation programs, public access, involvement, and use plan, management of the human-wildlife interface, wildlife issues related to facilities, trails, roads, overlooks planning, and watershed coordination) and other issues affecting achievement of Management Objectives and related to Adaptive Management Review.

2. Wetlands

Policy 2.1: The biological productivity and the quality of wetlands shall be protected and, where feasible, restored.

Policy 2.2: Wetlands shall be defined and delineated consistent with the Coastal Act and the Coastal Commission Regulations, 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. Any unmapped areas that meet these criteria are wetlands and shall be accorded all of the protections provided for wetlands in the PMP.

Wetlands 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 2.3: Where the required initial site inventory indicates the presence or potential for wetland species or other wetland indicators, the District 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 2.4:

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 Plan, 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.

Policy 2.5: Where wetland fill or development impacts are permitted in wetlands in accordance with the Coastal Act and any applicable PMP policies, mitigation measures shall include creation 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.

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 2.6: Wherever wetlands are identified, 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 shall be established. In some unusual 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 California Department of Fish and Game (CDFG) must be consulted and agree that a reduced buffer is appropriate and the District, 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.

Policy 2.7: At the time of adoption of the Chula Vista Bayfront plan, the seasonal ponds designated "Former Industrial Areas in Process of Remediation" on O-1 and O-4 have been identified as wetland habitat. These areas will be preserved and infrastructure rerouted to preserve the resource. Site-specific studies to assess the extent and quality of natural resources on the site will be required at the time development is proposed.

3. Climate Change and Sea Level Rise:

"Sea level rise" means a change in the mean level of the ocean. Accepted sea level rise scenarios shall be based on best available science (such as the October 2010 State of California Sea Level Rise Interim Guidance Document by the California Climate Action Team) and are presently projected at a range of approximately 10 to 17 inches for 2050.

Policy 3.1: Buffers within the Port Master Plan area have been designed to accommodate potential areas of future sea level rise inundation and are identified on Exhibit 2. The Chula Vista Bayfront plan also provides for an adequate amount of habitat migration within the identified buffer areas based on a projected sea level rise.

In cases where buffers have not yet been established, 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 shall be established. Buffers should take into account and adapt for rises in sea level by incorporating wetland migration areas or other sea level rise adaptation strategies as appropriate. The CDFG and U.S. Fish and Wildlife Service (USFWS) 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 3.2: Development shall consider the potential changes in functionality of Wildlife Habitat Area due to rising sea levels and coordinate management with the District and City Climate Mitigation and Adaptation Plans. Siting and design of new shoreline development shall take into account predicted future changes in sea level. In particular, an acceleration of the historic rate of sea level rise shall be considered and based upon up-to-date scientific papers and studies, agency guidance (such as the 2010 Sea Level Guidance from the

California Ocean Protection Council), and reports by national and international groups such as the National Research Council and the Intergovernmental Panel on Climate Change. Consistent with all provisions of the PMP, new structures shall be set back a sufficient distance landward or other sea level rise adaptation strategies incorporated to eliminate or minimize, to the maximum extent feasible, hazards associated with anticipated sea level rise over the expected economic life of the structure.

Policy 3.3: Upland areas in the Sweetwater and Otay Districts will be adaptively managed to provide additional habitat or protection to create appropriate transitional habitat during periods of high tide and taking into account future sea level rise.

Policy 3.4: Prospective development on S-1 shall be evaluated for potential hazards associated with the current year 2050 and 2100 projected sea level rise scenarios developed by the District. Development and siting decisions shall take into account identified risks on the site as well as to surrounding resources and incorporate building setbacks or other sea level rise adaptation strategies as appropriate.

4. Wildlife Protection: Bird Strikes and Disorientation

Policy 4.1: Prior to issuance of any building permits, building plans shall be reviewed by a qualified biologist retained by the developer and approved by the District, to verify that the proposed building has incorporated specific design features to avoid or to reduce the potential for bird strikes and that employ measures described below:

Policy 4.1.1: Lighting

a) No solid red or pulsating red lights shall be installed on or near the building unless required by the Federal Aviation Administration (FAA).
b) Where lighting must be used for safety reasons (FAA 2000 Advisory Circular), minimum intensity, maximum off-phased (3 seconds between flashes) white strobes shall be used.
c) No solid spot lights or intense bright lights shall be used during bird migration periods in the spring (from March to May) and fall (from August to October). All event lighting shall be directed downward and shielded, unless such directed and shielded minimized light spills beyond the area for which illumination is required.
d) Exterior lighting shall be limited to that which is necessary and appropriate to ensure general public safety and way finding, including signage for building identification and way finding.
e) Exterior lighting shall be directed downward and shielded to prevent upward lighting and to minimize light spill beyond the area for which illumination is required.
f) Office space, residential units, and hotel rooms shall be equipped with motion sensors, timers, or other lighting control systems to ensure that lighting is extinguished when the space is unoccupied.
g) Office space, residential units, and hotel rooms shall be equipped with blinds, drapes, or other window coverings that may be closed to minimize the effects of interior night lighting.

Policy 4.1.2: Glass and Reflection

a) Use of reflective coatings on any glass surface is prohibited.

b) Buildings shall incorporate measures to the satisfaction of the District or the City to indicate to birds that the glass surface is solid by creating visual markers and muting reflection.
c) Project design standards will encourage window stencilling and angling.
d) These measures may include but are not limited to the following:
    i. Glass surfaces which are non-reflective
    ii. Glass surfaces which are tilted at a downward angle
    iii. Glass surfaces which use fritted or patterned glass
    iv. Glass surfaces which use vertical or horizontal mullions or other fenestration patterns
    v. Glass surfaces which are fitted with screening, decorative grills, or louvers
    vi. Glass surfaces which use awnings, overhangs, bris sole, or other exterior sun-shading devices
    vii. Glass surfaces which use external films or coatings perceivable by birds
    viii. Artwork, drapery, banners, and wall coverings that counter the reflection of glass surfaces or block "see through" pathways.

Policy 4.1.3: Building Articulation

a) Structure design will include secondary and tertiary setbacks and, to the maximum extent possible, stepped back building design, protruding balconies, recessed windows, and mullioned glazing systems, shall be incorporated to the extent feasible. Balconies and other elements will step back from the water's edge.
b) Design features that increase the potential for bird strikes, such as walkways constructed of clear glass and "see through" pathways through lobbies, rooms and corridors, shall be avoided except for minor features intended to enhance view opportunities at grade level and only when oriented away from large open expanses.
c) Buildings shall be sited and designed to minimize glass and windows facing Wildlife Habitat Areas to the maximum extent possible. Design for towers on Parcel H-3 should avoid east-west monolith massing and shall include architectural articulation.
d) Parcels containing surface parking, such as those depicted for the Sweetwater District, will be designed with parking lots located nearer to the Wildlife Habitat Areas. Site plans on parcels adjacent to Wildlife Habitat Areas will maximize distance between structures and such areas.

Policy 4.1.4: Landscaping

a) Exterior trees and landscaping shall be located and glass surfaces shall incorporate measures so that exterior trees and landscaping are not reflected on building surfaces.
b) In small exterior courtyards and recessed areas, the building's edge shall be clearly defined with opaque materials and non-reflective glass.
c) Interior plants shall be located a minimum of 10 feet away from glass surfaces to avoid or reduce the potential for attracting birds.

Policy 4.1.5: Public Education

a) The owner or operator of each building shall implement an ongoing procedure to the satisfaction of the District or the City to encourage tenants, residents, and guests to close their blinds, drapes, or other window coverings to reduce or avoid the potential for bird strikes.

b) The owner or operator of each building shall enroll in the Fatal Light Awareness Program's "Bird-Friendly Building Program" and shall implement ongoing tenant, resident, and guest education strategies, to the satisfaction of the District or the City, to reduce or avoid the potential for bird strikes, such as elevator and lobby signage and educational displays, e-mail alerts and other bulletins during spring and fall migratory seasons, and other activities designed to enlist cooperation in reducing bird collisions with the building.

Policy 4.1.6: Monitoring Bird Strikes and Collisions

For Phase I projects, the project applicant shall retain a qualified biologist to design a protocol and schedule, in consultation with the USFWS and subject to the approval of the District or City, as appropriate depending on jurisdiction, to monitor bird strikes which may occur during the first 12 months after the completion of construction. Within 60 days after completion of the monitoring period, the qualified biologist shall submit a written report to the District or the City, which shall state the biologist's findings and recommendations regarding any bird strikes that occurred. Based on the findings of those reports, the District or the City, as appropriate depending on jurisdiction, in coordination with the USFWS, will evaluate whether further action is required, which may include further monitoring or redesign of structures for future phases.

Policy 4.2: Bird strikes must be monitored and measures developed to address persistent problem areas in accordance with the NRMP. Nighttime lighting in tower buildings must be addressed and evaluated through adaptive management such that impacts on birds are avoided or minimized. Minimization of impacts of buildings on birds and the Wildlife Habitat Areas will be a priority in the selection of window coverings, glass color, other exterior materials, and design of exterior lighting and lighting of signs.

5. Buffer Areas for Wildlife Protection

Policy 5.1: Designate "No Touch" Buffer Areas as defined and described in Exhibit 2. Such areas will contain fencing designed specifically to limit the movement of domesticated, feral, and nuisance predators (e.g. dogs, cats, skunks, opossums and other small terrestrial animals [collectively, "Predators"]) and humans between developed park and No Touch Buffer Areas and Wildlife Habitat Areas. The fence will be a minimum 6-foot high, black vinyl chain link fence or other equally effective barrier designed to take into consideration public views of the Bay and the need to protect natural resources. Fence design may include appropriate locked access points for maintenance and other necessary functions. Installation of the fence will include land contouring to minimize visual impacts of the fence. The installation of such fencing must be completed prior to the issuance of Certificates of Occupancy for development projects on either Parcel H-3 or H-23 and in conjunction with development or road improvements in the Sweetwater District.

Policy 5.2: Prohibit active recreation, construction of any road (whether paved or not), within No Touch Buffer Areas and "Transition Buffer Areas" as that term is defined and described in Exhibit 2, with the exception of existing or necessary access points for required maintenance.

Policy 5.3: Protect the No Touch Buffer Areas from the impacts of the Chula Vista Bayfront project including, without limitation, fencing necessary to protect the Sweetwater Marsh and the Sweetwater parcel tidal flats, the J Street Marsh next to the San Diego Bay National Wildlife Refuge, and the north side of Parcel H-3.

Policy 5.4: Include additional controls and strategies restricting movement of humans and Predators into sensitive areas beyond the boundaries of the designated Buffer Areas.

Policy 5.5: Require the Recreational Vehicle (RV) Park to install fencing or other barriers sufficient to prevent passage of predators and humans into sensitive adjacent habitat.

Policy 5.6: Require all dogs to be leashed in all areas of the Chula Vista Bayfront at all times except in any designated and controlled off-leash areas.

Policy 5.7: Impose and enforce restrictions on all residential development to keep cats and dogs indoors or on leashes at all times. Residential developments will be required to provide education to owners and/or renters regarding the rules and restrictions regarding the keeping of pets.

Policy 5.8: Habitat buffers shall include a 100-foot-wide buffer from the seasonal pond (parcel SP-2) within the Sweetwater District, a 400-foot combined buffer in the Sweetwater District and a minimum 100-foot buffer in the Otay District.

Policy 5.9: "Environmentally sensitive habitat area" (ESHA) 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 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 (CNPS) as 1b (Rare or endangered in California and elsewhere), such as Nuttall's scrub oak or "2" (rare, threatened or endangered in California but more common elsewhere), such as wart-stemmed Ceanothus.

Policy 5.10: New development shall be sited and designed to avoid impacts to ESHA. ESHA shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

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 those areas, and shall be compatible with the continuance of those habitat and recreation areas. These uses include enhancement/restoration work, passive recreational parks and public access or recreational facilities such as trails and bike paths integrated into the natural environment and sited and designed to preserve, and be compatible with, native habitat.

Policy 5.11: At the time of adoption of the Chula Vista Bayfront plan, the Coastal Sage Scrub on the berm in the S-1 and S-2 parcel areas and the non-native grasslands located in various locations within the Chula Vista Bayfront Master Plan were not identified as ESHA.

Site-specific studies to assess the extent and quality of natural resources on a site will be required at the time development is proposed.

Policy 5.12: In the 1-g parcel area, a pedestrian bridge is proposed to create a linkage over a tidal inlet associated with the F and G Street Marsh. Tidal habitats should be treated as ESHA and the bridge crossing must be designed to enhance the habitat values present and reduce erosion. This bridge span must be extended and the existing incised channel slope should be cut back, reducing the slope and then creating additional salt marsh habitat on the created floodplain. Site-specific studies to assess the extent and quality of natural resources at the site will be required at the time development is proposed.

Policy 5.13: 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 or designated species of special concern or fully protected species, and CNPS categories 1B and 2.

Policy 5.14: 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.

Policy 5.15: All buffers around (non-wetland) ESHA shall be a minimum of 100 feet in width, or a lesser width may be approved by the District if findings are made that a lesser buffer would adequately protect the resource. However, in no case can the buffer size be reduced to less than 50 feet.

Policy 5.16: 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 5.17: 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 5.18: 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 5.19: Impacts to native habitat that does not constitute ESHA that cannot be avoided through the implementation of siting 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 for impacts to native habitat shall be provided at a 3:1 ratio.

6. Landscaping and Vegetation

Policy 6.1: The following landscape guidelines will apply to the Chula Vista Bayfront area:

a) Invasive plant species (as listed in the California Invasive Plant Inventory list or California Invasive Plant Inventory Database or updates) will not be used in the Chula Vista Bayfront area. Any such invasive plant species that establishes itself within the Chula Vista Bayfront area will be immediately removed to the maximum extent feasible and in a manner adequate to prevent further distribution into Wildlife Habitat Areas. A condition of approval for coastal development permits will require applicants to remove any such invasive plant species that established itself within the Chula Vista Bayfront area.
b) Only designated native plants will be used in No Touch Buffer Areas, habitat restoration areas, or in the limited and transitional zones of Parcel SP-1 adjacent to Wildlife Habitat Areas.
c) Non-native plants will be prohibited adjacent to Wildlife Habitat Areas and will be strongly discouraged and minimized elsewhere where they will provide breeding of undesired scavengers.
d) No trees will be planted in the No Touch Buffer Areas or directly adjacent to a National Wildlife Refuge, J Street Marsh, or SP-2 areas where there is no Buffer Area.

7. Lighting and Illumination

Policy 7.1: All roadways will be designed, and where necessary edges bermed, to ensure penetration of automobile lights in the Wildlife Habitat Areas will be minimized subject to applicable City and District roadway design standards.

Policy 7.2: Explicit lighting requirements to minimize impacts to Wildlife Habitat Areas will be devised and implemented for all Bayfront uses including commercial, residential, municipal, streets, recreational, and parking lots. Beacon and exterior flood lights are prohibited where they would impact a Wildlife Habitat Area and use of this lighting should be minimized throughout the project.

Policy 7.3: All street and walkway lighting should be shielded to minimize sky glow.

Policy 7.4: To the maximum extent feasible, all external lighting will be designed to minimize any impact on Wildlife Habitat Areas, and operations and maintenance will be devised to ensure appropriate long-term education and control of light impacts. To the maximum extent feasible, ambient light impacts to the Sweetwater or J Street Marshes will be minimized.

Policy 7.5: Sweetwater and Otay District parks will open and close in accordance with District Park Regulations.

Policy 7.6: Laser light shows will be prohibited.

Policy 7.7: Construction lighting will be controlled to minimize Wildlife Habitat Areas impacts.

Policy 7.8: In Sweetwater and Otay District parks, lighting will be limited to that which is necessary for security purposes. Security lighting will be strictly limited to that required by

applicable law enforcement. All lighting proposed for the Sweetwater and Otay District parks and the shoreline promenade will be placed only where needed for human safety. Lights will be placed on low-standing bollards, shielded, and flat bottomed, so the illumination is directed downward onto the walkway and does not scatter. Lighting that emits only a low-range yellow light will be used to minimize ecological disruption. No night lighting for active sports facilities will be allowed.

8. Noise

Policy 8.1: Construction noise shall be controlled to minimize impact to Wildlife Habitat Areas.

9. Public, Resident, Visitor, Worker Education Program Education

Policy 9.1: An environmental education program will be developed and implemented and will include the following:

a) The program must continue for the duration of the Chula Vista Bayfront project and must target both residential and commercial uses as well as park visitors.

b) The program's primary objective will be to educate Bayfront users, residents, visitors, tenants and workers about the natural condition of the Bay, the ecological importance of the Chula Vista Bayfront area and the public's role in the restoration and protection of wildlife resources of the Bay.

Policy 9.2: The environmental education program will include educational signage, regular seminars and interpretive walks on the natural history and resources of the area, and regular stewardship events for volunteers (i.e., shoreline and beach cleanups, exotic plant removal, etc.).

Policy 9.3: The environmental education program will include adequate annual funding for personnel or contractor/consultant and overhead to ensure implementation of the following functions and activities in collaboration with the Chula Vista Nature Center or USFWS:

a) Coordination of volunteer programs and events;
b) Coordination of interpretive and educational programs;
c) Coordination of tenant, resident and visitor educational programs;
d) Docent educational; and
e) Enhancements and restoration events.

10. Boating Impacts

Policy 10.1: All boating, human, and pet intrusion must be kept away from F&G Street channel mouth and marsh.

Policy 10.2: Water areas will be managed with enforceable boating restrictions No boating will be allowed in vicinity of the J Street Marsh or east of the navigation channel in the Sweetwater District during the fall and spring migration and during the winter season when flocks of birds are present.

Policy 10.3: All rentals of personal water craft (PWC) will be prohibited in the Chula Vista Bayfront. (Note: PWC will mean a motorboat less than sixteen feet in length which uses an inboard motor powering a jet pump as its primary motive power and which is designed to be operation by a person sitting, standing, or kneeling on rather than in the conventional manner of sitting or standing inside the vessel.)

Policy 10.4: Use of PWCs will be prohibited in Wildlife Habitat Areas, subject to applicable law.

Policy 10.5: A five (5) mile per hour speed limit will be enforced in areas other than the navigation channels.

Policy 10.6: Boating in the project area will be managed in a manner that protects water quality and that ensures persons or employees maintaining boats in slips or using slips on a transient basis are made aware of water quality provisions.

a) Approval of projects within Chula Vista Bayfront Master Plan marinas shall include appropriate requirements from the District Jurisdictional Urban Runoff Management Document (JURMP) that includes appropriate Best Management Practices (BMPs) for controlling adverse impacts to water quality related to the boating facilities, including those BMPs for activities occurring over water.
b) Approval of projects within the Chula Vista Bayfront Master Plan marinas shall include a requirement for boating facilities to identify procedures for inspection of boater activities and sanctions for boaters that may be adversely impacting water quality.
c) Marinas in the Chula Vista Bayfront Master Plan project area shall provide evidence of ongoing efforts to protect water quality, such as a current certification by the Clean Marinas program (cleanmarina.org), stormwater BMP Plan, or other equivalent documentation of clean marina practices (http://www.cleanmarina.org/cleanmanual.shtml).
d) San Diego Bay is a federally designated No Discharge Zone. The District shall ensure that District-leased facilities are adequately informing their boater tenants of their responsibilities regarding the discharge of sewage and are providing information to boaters on ways to anonymously report violators.
e) The District shall adopt an addendum to leasing agreements for boating facilities that specifies actions that should be taken to protect water quality. This addendum should reflect applicable water quality laws and regulations pertaining to San Diego Bay.

11. Walkway and Pathway Design

Policy 11.1: Walkways, paths, and overlooks near Wildlife Habitat Areas outside of the No Touch Buffer Areas will be designed in accordance with the following:

a) Alignment, design, and general construction plans of walkways and overlooks will be developed to minimize potential impacts to Wildlife Habitat Areas.
b) Path routes will be sited with appropriate setbacks from Wildlife Habitat Areas.
c) Paths running parallel to shore or marsh areas that will cause or contribute to bird flushing will be minimized throughout the Chula Vista Bayfront.
d) Walkways and overlooks will be designed to minimize and eliminate, where possible, perching opportunities for raptors and shelter for skunks, opossums or other Predators.

e) Walkways and overlooks that approach sensitive areas must be blinded, raised, or otherwise screened so that birds are not flushed or frightened. In general, walkway and overlook designs will minimize visual impacts on the Wildlife Habitat Areas of people on the walkways.

12. Predator Management

Policy 12.1: The NRMP will include provisions designed to manage Predator impacts on Wildlife Habitat Areas which will include and comply with the following:

a) Year-round, funded Predator management will be implemented for the life of the Chula Vista Bayfront project with clearly delineated roles and responsibilities for the District, City and Resource Agencies. The primary objective of such provisions will be to adequately protect terns, rails, plovers, shorebirds, over-wintering species, and other species of high management priority as determined by the Resource Agencies.
b) Predator management will include regular foot patrols and utilize tracking techniques to find and remove domestic or feral animals.
c) Predator attraction and trash management shall be addressed for all areas of the Chula Vista Bayfront project by identifying clear management measures and restrictions. Examples of the foregoing include design of trash containers, including those in park areas and commercial dumpsters, to be covered and self-closing at all times, design of containment systems to prevent access by sea gulls, rats, crows, pigeons, skunks, opossums, raccoons, and similar animals and adequate and frequent servicing of trash receptacles.
d) All buildings, signage, walkways, overlooks, light standards, roofs, balconies, ledges, and other structures that could provide line of sight views of Wildlife Habitat Areas will be designed in a manner to discourage their use as raptor perches or nests.

13. Stormwater and Urban Runoff Quality

Policy 13.1: Provisions for access for non-destructive maintenance and removal of litter and excess sediment will be integrated into these facilities. In areas that provide for the natural treatment of runoff, cattails, bulrush, mulefat, willow, and the like are permissible.

Policy 13.2: In order to protect the quality of coastal waters the District shall promote the protection of water quality that meets state standards and the restoration of waters that do not meet state standards, and encourage and support public outreach and education regarding the water quality impacts of development.

All new development shall:

a) Comply with the Regional Water Quality Control Board Order No. R9-2007-0001, National Pollutant Discharge Elimination System Permit No. CAS0108758, Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems Draining the Watersheds of the County of San Diego, the Incorporated Cities of San Diego County, and the San Diego Unified Port District (Municipal Permit), as adopted, amended, and/or modified or replaced by the Regional Water Quality Control Board with a new Municipal Permit. The Municipal Permit prohibits any activities that could degrade stormwater quality.
b) Comply with the District Jurisdictional Urban Runoff Management Document and the District Standard Urban Stormwater Mitigation Plan which provides BMP requirements for new development and redevelopment.

c) Be designed and managed to minimize the introduction of pollutants into coastal waters to the maximum extent practicable.
d) Be designed and managed to minimize increases in peak runoff rate and volume in order to avoid detrimental water quality impacts caused by excessive erosion or sedimentation.
e) Include Site Design and Source Control BMPs and Low Impact Development practices, where feasible, in all developments.
f) Implement the requirements of Hydromodification Management Plan developed pursuant to the Municipal Permit, as required.
g) Minimize impervious surfaces in new development, especially directly connected impervious areas, and, where feasible, increase the area of pervious surfaces in redevelopment.
h) Minimize erosion, sedimentation, and polluted runoff from construction-related activities of development, to the maximum extent practicable.
i) Minimize the land disturbance activities of construction (e.g., clearing, grading, and cut-and-fill), especially in erosive areas (including steep slopes, unstable areas, and erosive soils), to avoid detrimental water quality impacts caused by increased erosion or sedimentation. Incorporate soil stabilization BMPs on disturbed areas as soon as feasible.
j) Require Treatment Control BMPs, in addition to Site Design and Source Control measures, when the combination of Site Design and Source Control BMPs is not sufficient to protect water quality.
k) Be designed, constructed and maintain any required Treatment Control BMPs (or suites of BMPs) are designed and constructed so that they treat, infiltrate, or filter the amount of storm water runoff produced by all storms up to and including the 85th percentile, 24-hour storm event for volume-based BMPs, and/or the 85th percentile, 1-hour storm event (with an appropriate safety factor of 2 or greater) for flow-based BMPs.

Policy 13.3: An on-site pump out facility shall be required with the development of any new marinas.

Policy 13.4: Stormwater and non-point source urban runoff into Wildlife Habitat Areas must be monitored and managed so as to prevent unwanted ecotype conversion or weed invasion. A plan to address the occurrence of any erosion or type conversion will be developed and implemented, if necessary. Monitoring will include an assessment of stream bed scouring and habitat degradation, sediment accumulation, shoreline erosion and stream bed widening, loss of aquatic species, and decreased base flow.

Policy 13.5: The use of insecticides, herbicides, rodenticides or any toxic chemical substance that drains into Wildlife Habitat Areas or 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. Application of such chemical substances shall not take place during the winter season or when rain is predicted within a week of application.

Policy 13.6: Integrated Pest Management must be used in all outdoor, public, buffer, habitat, and park areas.

Policy 13.7: Fine trash filters are required for all storm drain pipes that discharge toward Wildlife Habitat Areas.

14. Additional Habitat Management and Protection

Policy 14.1: The District will exercise diligent and good faith efforts to enter into the following cooperative agreements with the USFWS or other appropriate agency or organization:

a) An agreement providing for the long-term protection and management of the sensitive biological habitat running north from the South Bay Boatyard to the Sweetwater River Channel (known as the Sweetwater Tidal Flats) and addressing educational signage, long-term maintenance, and additional protection measures such as increased monitoring and enforcement, shared jurisdiction and enforcement by District personnel with legal authority to enforce applicable rules and regulations ("District Enforcement Personnel"), shared jurisdiction and enforcement by District Enforcement Personnel and other appropriate Resource Agencies of resource regulations, and placement of enforcement signage. Subject to the cooperation of the applicable Resource Agency, such cooperative agreement will be executed prior to the Development Commencement of any projects subject to District's jurisdiction within the Sweetwater or Harbor Districts.

b) An agreement for the long-term protection and management of the J Street Marsh and addressing additional protective measures such as educational signage, long-term maintenance, and monitoring and enforcement by District Enforcement Personnel and enforcement of resource regulations by District Enforcement Personnel and other Resource Agencies and placement of enforcement signage. Subject to the cooperation of the applicable Resource Agency, such cooperative agreement will be executed prior to the Development Commencement within the Otay District.

c) If either of the cooperative agreements contemplated above is not achievable within three (3) years after Final Environmental Impact Report certification, the District will develop and pursue another mechanism that provides long-term, additional protection and natural resource management for these areas.

Policy 14.2: The District will include an analysis of the appropriate level and method for wetland and marine life habitat restoration of the intake/discharge channels associated with the South Bay Power Plant in the environmental review document for the demolition of the South Bay Power Plant that includes below grade or in water structures.

Policy 14.3: A permanent 100-foot-wide buffer shall be provided from proposed development around the seasonal wetland within Parcel SP-2.

Policy 14.4: In order to ensure that sensitive resources are protected from adjacent development, at the time project specific development is proposed on parcel S-1, shading impacts, appropriate setbacks, step backs, and/or height reductions, will be analyzed as part of the necessary subsequent environmental review for those projects.

Policy 14.5: As a future and separate project, the District will investigate, in consultation with the USFWS, the feasibility of restoring an ecologically meaningful tidal connection between the F & G Street Marsh and the upland marsh on parcel SP-2 consistent with USFWS restoration concepts for the area. At a minimum, the investigation will assess the biological value of tidal influence, the presence of hazardous materials, necessary physical improvements to achieve desired results, permitting requirements, and funding opportunities for establishing the tidal connection. This investigation will be completed prior to the

initiation of any physical alteration of SP-2, F Street, and/or the F & G Street Marsh. In addition, once emergency access to the Chula Vista Bayfront area has been adequately established such that F Street is no longer needed for public right-of-way, the District and City will abandon/vacate the F Street right-of-way for vehicular use, but may reserve it for pedestrian and bicycle use if ecologically appropriate.

Policy 14.6: Channelizations 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.

15. Energy

The development of the Chula Vista Bayfront offers the District and City a unique opportunity to demonstrate the viability of responsible and sustainable development practices. Accordingly, the Chula Vista Bayfront Development Policies seek to establish guidelines to govern the future build-out of the programmatic elements of Chula Vista Bayfront and to ensure that the project is comprised of high performance and highly energy-efficient buildings and clean, efficient generation. The standards in this section are intended to be interpreted broadly and with the flexibility to adapt to new energy technology and evolving building construction and design practices.

Policy 15.1: The following energy standards shall be applied to development of all parcels within the Chula Vista Bayfront area *except Parcels HP-5, H-13, H-14 and H-15.* These parcels are addressed on separate standards provided below. The term "Development" will mean the development of an individual parcel within the Chula Vista Bayfront area.

a) To help reduce the need for fossil-fueled power generation, reduce greenhouse gas emissions, and support the California Energy Commission's Loading Order for Electricity Resources, all Developments will achieve a minimum of a fifty (50) percent reduction in annual energy use in accordance with these policies.
b) Each building in each Development will perform at least fifteen (15) percent better than Title 24, Part 6 of the California Building Energy Efficiency Standards ("Title 24") in effect on the date of the execution of the Chula Vista Bayfront Master Plan Settlement Agreement (May 2010). The minimum energy efficiency performance standard adopted by the City is hereinafter described as its "Energy Efficiency Requirement" or "EER". Should revised Title 24 standards be adopted by the State of California, the City's EER at the time a building permit application is submitted for such Development shall apply.
c) The balance of the fifty (50) percent reduction in annual energy use will be achieved through the use of any combination of the energy reduction measures described in these policies. To achieve compliance with this policy, sponsors of Developments may select one of two paths. The first path is based on Title 24 ("Title 24 Path") and the second is described in Energy and Atmosphere, Credit 1 "Optimize Energy Performance" (Credit EA-/c1) in the US Green Building Council's Leadership in Energy and Environmental Design (LEED) v3 system ("LEED Path"). The definition of the term "Baseline" against which energy reduction will be measured will vary depending on the path selected and is

further described in Exhibit 3. Choosing the LEED Path does not require a Development to achieve LEED Certification, but simply uses the methodology of EA-/c1.

d) Renewable Energy generated within the boundaries of the Development will be credited toward the minimum of a fifty (50) percent reduction in annual energy use in accordance energy reduction requirement. The term "Renewable Energy" will mean energy derived from the sources described in California Public Resources Code section 25741 (b) 1.

e) Renewable Energy generated on one or more sites ("Renewable Energy Sites") within the boundaries of the Chula Vista Bayfront by the District, City or other third party and fed to the electrical grid or to the Development will be credited toward the minimum of a fifty (50) percent energy reduction requirement. Aggregate energy generated on Renewable Energy Sites may be allocated to an individual Development up to the amount necessary to achieve such Development's compliance with the minimum of a fifty (50) percent energy reduction requirement. Once allocated to a Development, the amount of energy generated by Renewable Energy Sites so allocated may not be further allocated to another Development.

f) Participation in a City of Chula Vista sponsored energy efficiency program provided that the resulting energy reduction may be calculated and verified. The methodology for calculating the amount of the credit toward the minimum of a fifty (50) percent energy reduction requirement under the Title 24 Path and the LEED Path is described in Exhibit 3.

g) Each Development will develop, implement, and for the life of each Development, maintain a measurement and verification plan ("M&V Plan"). Such participation has been shown to increase the persistence of energy efficiency ("EE") and also to provide a way of recognizing and encouraging the ongoing conservation efforts of occupants and facility managers and will be awarded a waiver for five (5) percent credit against the Baseline to determine compliance with the minimum of a fifty (50) percent energy reduction requirement. The District will include in all leases the requirement to perform an energy audit every three (3) years for the convention centers and hotel Developments over 300 rooms and five (5) years for all other Developments to ensure that all energy systems are performing as planned or corrective action will be taken if failing to meet EE commitments.

h) Participation in one of SDG&E's Voluntary Demand Reduction (DR) utility rates will be awarded a waiver for three (3) percent credit against the Baseline to determine compliance with the minimum of a fifty (50) percent energy reduction requirement.

i) Participation in one of SDG&E's Mandatory Demand Reduction (DR) utility rates will be awarded a waiver for five (5) percent credit against the Baseline to determine compliance with the minimum of a fifty (50) percent energy reduction requirement.

j) Incorporation of natural ventilation into design such that at least 75% of the conditioned area is naturally ventilated according to the guidelines set forth in Exhibit 3, and if this benefit was not included in the energy efficiency calculations, the project will be awarded either: a waiver for five (5) percent credit against the Baseline to determine compliance with the minimum of a fifty (50) percent energy reduction requirement; or, a waiver for ten (10) percent credit will be awarded if the natural ventilation system is coupled with an energy or cooling system that does not draw from the grid if and when natural ventilation is not used. This may

be prorated if less than seventy-five (75) percent of the conditioned area is naturally ventilated.

k) The parties understand and acknowledge that the energy reduction measures described above for a Development or component of a Development may be phased in over time to achieve compliance with the minimum of a fifty (50) percent energy reduction requirement provided such energy reduction measures are completed no later than thirty-six (36) months following issuance of a Certificate of Occupancy for such Development or such component thereof.

l) To further incentivize responsible and sustainable development practices within the boundaries of the Chula Vista Bayfront, District and City will consider voluntary commitments to levels of energy reduction in excess of the requirements of above, commitment to achievement of a LEED Certification, and/or a "Living Building Challenge" in connection with the selection of respondents in Request for Proposals/Request for Qualifications (RFP/RFQ) processes for Developments within the Chula Vista Bayfront area.

Policy 15.2: Within one year following the California Coastal Commission's (CCC) approval of a Port Master Plan amendment substantially consistent with the Chula Vista Bayfront project, the District will in good faith consider adoption of an ordinance in a public hearing process that, if approved by the Board of Port Commissioners, will require the following:

a) Within six (6) months following adoption of the ordinance and every three (3) years thereafter, the District will conduct an energy efficiency and renewable energy analysis that will:
   (i) Assess the feasibility and cost-effectiveness of programs and options to reduce demand on the electric grid from all lands under District's jurisdiction; and,
   (ii) Include, but not be limited to, an assessment of the potential for reduction in energy use on all land under District's jurisdiction through increases in energy efficiency, demand response, clean renewable and distributed energy generation and other methods and technologies.

b) Upon the completion of each analysis, the District will consider good faith implementation of cost-effective programs and options as part of its commitment to greenhouse gas reductions and global climate change prevention activities consistent with Assembly Bill 32.

c) The results of each analysis will be published on the District's website and received by the District's Board of Port Commissioners in a public forum.

16. Hazardous Materials and Exposure Policies

Policy 16.1: Parcels contaminated with hazardous materials will be remediated to levels adequate to protect human health and the environment.

17. Public Engagement

Policy 17.1: A South Bay Wildlife Advisory Group ("Wildlife Advisory Group") will be formed to advise the District and City in the creation of the NRMP, cooperative management agreements, Adaptive Management Review and any related wildlife management and restoration plans or prioritizations. The Wildlife Advisory Group will also address management issues and options for resolution. The Wildlife Advisory Group will initiate and support funding requests to the District and City, identify priorities for use of these funds and engage in partnering, education, and volunteerism to support the development of the Chula

Vista Bayfront in a manner that effectively protects and enhances the fish, wildlife, and habitats of the area and educates and engages the public. The Wildlife Advisory Group will meet as needed, but at a minimum of every six (6) months for the first ten (10) years and annually thereafter.

Policy 17.2: The Wildlife Advisory Group will meet to: (i) determine the effectiveness of the NRMP in achieving the Management Objectives; (ii) identify any changes or adjustments to the NRMP required to better achieve the Management Objectives; (iii) identify any changes or adjustments to the NRMP required to respond to changes in the man-made and natural environments that are affecting or, with the passage of time may affect, the effectiveness of the NRMP in achieving the Management Objectives; and (iv) review priorities relative to available funding. At its periodic meetings, the Wildlife Advisory Group may also consider and make recommendations regarding (a) implementation of the NRMP as needed, (b) Adaptive Management Review and (c) NRMP Amendments.

Policy 17.3: The Wildlife Advisory Group will advise the joint powers authority ("JPA") on expenditure of the Community Benefits Fund consistent with this Plan subject to applicable law. Written recommendations from the Wildlife Advisory Group will be forwarded to the District and City for consideration on key decisions as the build-out of the Chula Vista Bayfront project occurs.

Policy 17.4: A Bayfront Cultural and Design Committee ("BCDC") shall be formed to advise the District in addressing the design of parks, cultural facilities, and development projects. The public participation process for the BCDC will include broad community representation and will be modeled after the Community Advisory Committee (CAC) process. Membership will include at least one member each from the District, Chula Vista Planning Commission, Design Review Committee, and Resource Conservation Committee. The BCDC will advise the District in the establishment of Chula Vista Bayfront Master Plan design guidelines to address cohesive development and streetscape design standards, walkways and bikeways design to promote safe walking and biking, standards for design of park areas, and cultural facilities but will not address NRMP and Wildlife Habitat Areas design guidelines described above. A minimum of three public meeting/workshops will be held to establish the design guidelines.

18. Public Access

Policy 18.1: The concept approval for the Signature Park will include a refined plan to address the linkage between the parks over the F and G Street channel. The design will ensure that the linkage between the two parks is easily accessed, obvious, and allows visitors to flow naturally and safely between the two parts of the park. A separate pedestrian bridge will be evaluated and, if necessary, a supplemental environmental review will be performed to address any necessary issues prior to the concept approval being forwarded to the Board of Port Commissioners.

Policy 18.2: Phase I Signature Park improvements (including development of Parcel S-2, within the Transition Buffer Areas and Limited Use zones of parcel SP1, and the fencing of the No Touch Buffer Area of Parcel SP1) will be completed prior to the issuance of Certificates of Occupancy for projects developed on either Parcel H-3 or H-23 and after any additional necessary environmental review. The public participation process for the design of the park will be completed prior to District Staff seeking Concept Approval from the Board of Port Commissioners.

19. Sweetwater and Otay District Public Park Requirements

Policy 19.1: Sweetwater and Otay District Public Parks will meet the following minimum standards in addition to those described above:

a) The parks will be Passive in nature and encourage Passive recreation, be low-impact and contain minimal permanent structures. Structures will be limited to single-story heights and will be limited in function to restrooms, picnic tables, shade structures and overlooks. The term "Passive" will mean that which emphasizes the open-space aspect of a park and which involves a low level of development, including picnic areas and trails. In contrast, active recreation is that which requires intensive development and includes programmable elements that involve cooperative or team activity, including, ball fields and skate parks.
b) The parks will be constructed using low water-use ground cover alternatives where possible.
c) Pedestrian and bike trails will be segregated where feasible. A meandering public trail will be provided along the entire length of the Bayfront. The meandering trail within the Sweetwater Park and adjacent to Buffer Areas will not be paved.
d) The parks will not include athletic field amenities.
e) No unattended food vending will be allowed.
f) The parks will include enforcement signage that prohibits tenants, employees, residents, or visitors from feeding or encouraging feral cat colonies and prevents feral cat drop-off or abandonment of pets; and prohibits leash free areas near buffers.
g) Due to their immediate adjacency to Wildlife Habitat Areas, the following restrictions will apply to parks located within the Sweetwater and Otay Districts:
    (i) Such parks will be designated as Passive use parks and use of amplified sound equipment will be prohibited.
    (ii) Reservations for group events and activities will be prohibited.

20. Circulation and Pedestrian Orientation

Policy 20.1: Shoreline promenades shall be a minimum of 25 feet in width allowing both pedestrians and bicyclists and shall be constructed directly along the waterfront where feasible and maintained free of private encroachment around the Bayfront. Pathways and walking trails not proposed along the shoreline shall be a minimum width of 12 feet.

Policy 20.2: Provide a continuous open space system, fully accessible to the public, which would seamlessly connect the Sweetwater, Harbor, and Otay Districts through components such as a continuous shoreline promenade or "Baywalk" and a continuous bicycle path linking the parks and ultimately creating greenbelt linkages.

Policy 20.3: Create a meandering pedestrian trail constructed of natural material that is easily maintained and interwoven throughout the Signature Park. Create, as part of the E Street Extension, a pedestrian pathway/bridge to provide a safe route for pedestrians to walk and to transition from the Sweetwater District to the Harbor Park Shoreline Promenade and park in the Harbor District.

Policy 20.4: Segregate Pedestrian and bike trails where feasible. Provide a meandering public trail along the entire length of the Bayfront. Leave unpaved the meandering trail within the Sweetwater Park and adjacent to Buffer Areas.

Policy 20.5: Open spaces integrated into the hotels must include activating uses such as restaurants, outdoor sitting and dining areas and retail shops, which would be open to the public as well as hotel patrons.

Policy 20.6: Public access and other path-finding signage should be placed at strategic locations throughout the hotel complexes and to guide guests and visitors to and from public use areas, shops and restaurants, restrooms, and other facilities.

Policy 20.7: To help integrate all publicly accessible areas and provide convenience and low cost services for the general public, the ground floor of the hotel developments and associated outdoor areas should contain a variety of pedestrian-oriented amenities, which may include reasonably priced restaurants, newspaper stands, outdoor cafes with sit down and walkup service, informational kiosks, ATM's, public art or gift shops easily accessible to the public.

Policy 20.8: The design of the Resort Conference Center (H-3) development must provide a strong public interface with the adjacent Signature Park by including publicly accessible areas with convenience and low cost services for the general public. Specifically, on the west side of the site, the ground floor of the development and associated outdoor areas must include a variety of pedestrian-oriented amenities and activating uses, such as restaurants, outdoor cafes with sit down and walkup service, informational kiosks, ATMs, public art or gift shops easily accessible to the public. The RFP for the development of the Resort Conference Center (H-3) site will identify these requirements and will emphasize the need for establishing linkages to, from and through the site such that the public feels welcome on the site and encouraged to connect to public promenades and other public amenities in the park areas or along H Street and Marina Parkway. Other public amenities that may be provided at various locations around the hotel site include public wireless connectivity, drinking fountains, bike racks, horticultural interpretive labels on landscape elements, educational and historic plaques/displays, and dog drinking fountains. These elements represent public recreational opportunities and will encourage access to and around the site.

21. Visitor Serving Policies

Policy 21.1: Overnight visitor-serving accommodations shall be encouraged and protected within the Chula Vista Bayfront Master Plan area.

Policy 21.2: Limited Use Overnight Visitor Serving Accommodations (i.e., fractional ownership condominium hotels and timeshares) shall be prohibited on District Tidelands.

Policy 21.3: Lower cost visitor and recreational facilities shall be protected, encouraged and provided where feasible. Specifically, a range of room types, sizes, and room prices should be provided in order to serve a variety of income ranges.

Where a new hotel or motel development would consist of entirely high cost overnight accommodations, after thorough consideration of a supply/demand analysis within the Chula Vista Bayfront Master Plan and South Bay area, in-lieu fees or comparable mitigation may be required as a condition of approval for a coastal development permit, to ensure a range of overnight accommodations are provided within the Chula Vista Bayfront Master Plan and South Bay area. High cost is defined as those hotels with daily room rates 25% higher than the statewide average for coastal areas.

The mitigation payment would be for providing funding for the establishment of lower cost overnight visitor accommodations within the City of Chula Vista or South San Diego County coastal area. The monies and accrued interest shall be used for the above-stated purpose, in consultation with the CCC Executive Director. Any development funded by this account will require review and approval by the Executive Director of the Coastal Commission and a coastal development permit.

Policy 21.4: If removal or conversion of lower or moderate cost overnight accommodations is proposed in the District, the inventory shall be replaced with units that are of comparable cost with the existing units to be removed or converted. The District shall proactively work with hotel/motel operators and offer incentives to maintain and renovate existing properties.

If replacement of lower or moderate cost units is not proposed (either on-site or elsewhere in District Tidelands or Chula Vista within five (5) miles of the coast), then the new development shall be required to pay, as a condition of approval for a coastal development permit, a mitigation payment to provide significant funding for the establishment of lower cost overnight visitor accommodations within Chula Vista, preferably, or within South San Diego County, for each of the low or moderate units removed/converted on a 1:1 basis.

Policy 21.5: Lower-cost RV camping uses shall be protected by maintaining at least an equivalent number of RV sites within the Chula Vista Bayfront Master Plan boundaries. Removal of the existing RV park for construction of a resort hotel and conference center (RCC) is proposed as part of the Chula Vista Bayfront Master Plan, with a replacement RV park to be constructed either in the Otay District (parcel O-3) or the Sweetwater District (parcel S-1). In the event that the replacement park cannot be opened to visitors prior to closing the existing RV park, an interim site with an equivalent number of RV sites shall be established and opened elsewhere with the Chula Vista Bayfront Master Plan area, at parcels S-1, H-23, or in the Otay District.

Policy 21.6: Public recreational opportunities, such as parks, open space, and other no-cost visitor serving amenities shall be provided.

Policy 21.7: Waterfront visitor-serving retail uses and public gathering spaces shall be provided.

Policy 21.8: Marinas within the planning area shall provide lower-cost visitor-serving boating opportunities and shall preserve a varied range of slip sizes. Prior to approval of any changes in the slip size or distribution, the District will undertake an updated comprehensive boater use, slip size, and slip distribution study which is no more than five (5) years old for each dock redevelopment project that affects slip size and distribution of slips, to assess current boater facility needs within the individual project and the Bay as a whole. The District will continue to provide a mix of small, medium and large boat slips based on updated information from the comprehensive study with priority given to boats less than 25 feet in length and a goal of no net loss in number of slips within the Chula Vista Bayfront Master Plan area. Should future projects propose reducing the number or proportion of small slips for boats 25 feet or less within the Chula Vista marina, a Port Master Plan amendment will be required.

22. Funding and Community Benefits

Policy 22.1: Funding for the implementation of the NRMP and for the enforcement and implementation measures shall be provided by the District and City. To meet these

obligations, the District and City will commit revenues or otherwise provide funding to the JPA formed pursuant to the California Marks-Roos Act, Articles 1, 2, 3 and 4 of Chapter 5 of Division 7 of Title 1 of the California Government Code. District and City will ensure the JPA is specifically charged to treat the financial requirements described this policy as priority expenditures that must be assured as project-related revenues are identified and impacts initiated. The District and City expressly acknowledge the funding commitments contemplated herein will include, but not be limited to, funding for personnel and overhead or contractor(s)/consultant(s) to implement and ensure the following functions and activities:

a) On-site management and enforcement for parks and Wildlife Habitat Areas as necessary to enforce restrictions on human and Predator access regarding Wildlife Habitat Areas;
b) Enforcement of mitigation measures including, but not limited to, trash collection, noise restrictions, removal of invasive plants, habitat restoration, and park use restrictions;
c) Coordination, development, implementation and evaluation of effectiveness of education and mitigation programs, including implementation of NRMP;
d) Evaluation of effectiveness of bird strike mitigation and design measures;
e) Water quality protections; and
f) Coordination of injured animal rehabilitation activities.

23. Views and Aesthetics

Policy 23.1: Public views to the beach, lagoons, and along the shoreline as well as to other scenic resources from major public viewpoints, as identified by the "vista" icon on the Precise Plan for Planning District 7 shall be protected. Development that may affect an existing or potential public view shall be designed and sited in a manner so as to preserve or enhance designated view opportunities. Street trees and vegetation shall be chosen and sited so as not to block views upon maturity.

Policy 23.2: The impacts of proposed development on existing public views of scenic resources shall be assessed by the District or City prior to approval of proposed development or redevelopment.

Policy 23.3: Buildings and structures shall be sited to provide unobstructed view corridors from the nearest view corridor road. These criteria may be modified when necessary to mitigate other overriding environmental considerations such as protection of habitat or wildlife corridors.

Policy 23.4: Public views of the Bay and access along the waterfront shall be provided via a proposed "Baywalk" promenade. This pedestrian path will also connect to the Signature Park, and the pathway system within the Sweetwater District, ultimately linking the two districts and "enabling viewers to experience visual contact at close range with the Bay and marshlands."

Policy 23.5: Existing views to the water from the following view corridor roads shall be protected and enhanced: E Street, F Street, Bay Boulevard between E and F Streets, Marina Parkway, and G and L Streets (in the City of Chula Vista); as shall the new views of the Bay created from the H Street corridor. These protected views shall be denoted by the "vista" icons on the Precise Plan for Planning District 7.

Policy 23.6: Building setbacks and coordinated signage shall be provided along Marina Parkway.

Policy 23.7: Prior to approval of development in the Otay District, views of the Bayfront from Bay Boulevard shall be identified and preserved.

Policy 23.8: View corridors to the Bay shall be established on Marina Parkway between H and J Streets approximately every 500 feet as denoted by the "vista" icon on the Precise Plan for Planning District 7.

Policy 23.9: Landscaping shall be planted along Marina Parkway to frame and enhance this scenic corridor, as well as on E Street and Bay Boulevard, adjacent to the project site.

Policy 23.10: Bayfront Gateway Objective/Policies: Certain points of access to the Bayfront will, by use, become major entrances to the different parts of the area. A significant portion of the visitors' and users' visual impressions are influenced by conditions at these locations. Hence, special consideration should be given to roadway design, including signage and lighting, landscaping, the protection of public views towards the Bay, and the siting and design of adjoining structures. Concurrent with the preparation of Phase I infrastructure design plans for E and H Streets, a Gateway plan shall be prepared for E and H Streets. Prior to issuance of certificates of occupancy for any projects within the District's jurisdiction in Phase I, the E and H Street Gateway plan shall be approved by the District and City's Directors of Planning and Building. The E and H Street Gateway plan shall be coordinated with the Gateway plan for J Street. All Gateway plans must conform with the setback policies and height limits in the PMP.

Policy 23.11: The landscape designs and standards shall include a coordinated street furniture palette including waste containers and benches, to be implemented throughout the Bayfront at appropriate locations.

Policy 23.12: As a condition for issuance of coastal development permits, buildings fronting H Street shall be designed to step away from the street. More specifically, design plans shall protect open views down the H Street Corridor by ensuring that an approximate 100-foot ROW width (curb–curb, building setbacks, and pedestrian plaza/walkway zone) remains clear of buildings, structures, or major landscaping. Placement of trees should take into account potential view blockage at maturity, and, trees should be spaced in order to ensure "windows" through the landscaping. Trees should also be considered to help frame the views and they should be pruned to increase the views from pedestrians and vehicles, underneath the tree canopy. In order to reduce the potential for buildings to encroach into view corridors, and to address the scale and massing impact, buildings shall step back at appropriate intervals or be angled to open up a broader view corridor at the ground plane to the extent feasible. All plans shall be subject to review and approval by the District. All future development proposals shall conform to District design guidelines and standards.

Policy 23.13: Prior to issuance of coastal development permits for projects within the District's jurisdiction, the project developer shall ensure that design plans for any large scale projects (greater than two stories in height) shall incorporate standard design techniques such as articulated facades, distributed building massing, horizontal banding, stepping back of buildings, and varied color schemes to separate the building base from its upper elevation and color changes such that vertical elements are interrupted and smaller scale massing implemented. These plans shall be implemented for large project components to diminish imposing building edges, monotonous facades and straight-edge building rooflines and profiles, and to avoid the appearance or effect of "walling off" the Bayfront.

Policy 23.14: Resort Conference Center (H-3) Development: In addition to policies 23.12 and 23.13 above, development of the Resort Conference Center (H-3) site shall incorporate additional building setbacks and stepbacks to further reduce the visual impact of building massing and to further widen view corridors towards the bay. Minimum building setbacks of 50 feet from the H Street right-of-way shall be required to result in a 145 foot wide minimum view corridor width at grade level with minimum tower stepbacks of 75 feet from the H Street right-of-way to generally achieve a 170 foot wide view corridor width at tower level.

Exhibit 4 to this Plan illustrates the general design parameters for the Resort Conference Center (RCC) site. The bayward portion of the RCC site shall be devoted to a mix of public open space, public plazas, limited amounts of parking, and low-scale development with ground floor commercial recreation and visitor commercial uses. Upper floor conference center/hotel uses are allowed. The inland portion of Parcel H-3 will be developed with hotel and conference center structures.

Exhibit 4 shows a setback of an average of 100 feet from the E Street right-of-way on the west side of the site and 50 feet from the E Street right-of-way on the north side of the site. This "esplanade" setback shall be for the creation of publicly accessible areas such as pedestrian promenades, bicycle access ways, landscaping, street furniture, and other pedestrian friendly features. Various public amenities, such as shade structures, benches, or bus stops are allowed within the esplanade.

In addition to the esplanade, this bayward portion shall be developed with a mix of public open spaces and structures to a maximum height of 35 feet. All structures shall include retail or restaurant uses on the ground floor in a pedestrian-friendly specialty shopping "village" style. Conference rooms or other uses associated with the hotel or conference center may be located on the upper level. A minimum of 40% of this portion of the site at ground floor shall be open plaza, seating (including seating for cafés), public art, and landscaping. Uses such as vendor carts, bicycle rentals, etc., shall be permitted in this area.

Within these broad use parameters, flexibility in the specific design and layout of the site is permitted. In order to achieve a lively, pedestrian oriented development attractive to the public and welcoming to visitors, E Street could be shifted inland to allow the development of additional public esplanade-type uses on the bay side of the street, at the adjacent Harbor Park. Retail uses could also be expanded into the area designated esplanade, as long as these structures are designed to create visual interest and variety at a human scale. The boundary between the esplanade and the commercial retail shown on Exhibit 4 is intended to be illustrative only, and it is expected that the distinction between the areas will be meandering and visually appealing.

To ensure that pedestrians can cross between the park and the RCC safely and easily, pedestrian crossing distances shall be minimized where feasible, and crosswalks aligned with retail nodes and points of interest.

On the inland portion, the tallest buildings on Parcel H-3 will be located in the southern portion of the parcel with building heights decreasing towards the north and west. The foregoing will not be interpreted to preclude incorporating secondary and tertiary setbacks along public streets. Hotel structures shall be no more than a maximum height of 240 feet and the conference facility height is limited to a maximum of 120 feet. Design for the hotel structures on Parcel H-3 shall avoid east-west monolith massing and shall include architectural articulation. The hotel structures shall not result in lot coverage exceeding 30% of the inland portion of the parcel.

Policy 23.15: Sweetwater District Lodging (S-1): Sweetwater District Lodging (S-1): Development of the Sweetwater District Lodging (S-1) shall consist of low-scale, low profile, lower-cost overnight accommodations such as a campground and/or RV park. A mix of camping facilities is encouraged. Limited meeting rooms, retail stores, and food service associated with the development shall be permitted. No structures over 1 story within a maximum height of 25 feet shall be permitted. Proposed development shall take into account potential sea level rise when site plans are prepared. The development shall incorporate a setback from the E Street view corridor as shown in Exhibit 5, where no structures shall be permitted.

Policy 23.16: Sweetwater District Mixed-Use Commercial Recreation/Marine Related Office Development (S-3). Development of the Sweetwater District Mixed Use development (S-3) shall incorporate setbacks of 50 feet from E Street in order to reduce visual and shading impacts of building massing and to widen view corridors towards the Bay. Building heights are limited to 45 feet and shall be located in the northeastern portion of the parcel in order to ensure views from the Bay Boulevard to the Bay are preserved to the extent feasible. The development shall incorporate a setback from the F Street view corridor as shown in Exhibit 5, where no structures shall be permitted.

Policy 23.17: All building height limits listed herein are measured from finished grade. Building pads shall not be raised from existing grade more than 8 feet.

24. Transit

The Project's transportation system was developed to focus vehicular activity on the eastern edges of the property, near I-5 and its interchanges, by placing a majority of the common parking areas on the eastern properties, while designing for pedestrian connections and transit service. This will result in narrower, more pedestrian-friendly streets along the waterfront. In order to reduce traffic-related impacts within the Chula Vista Bayfront Master Plan area, the following transit policies shall be considered in the development of the Chula Vista Bayfront Master Plan:

Policy 24.1: The project shall be designed to encourage the use of alternate transportation by including the H Street transit center close to the rail line, bike and pedestrian pathways, water taxis, and a private employee parking shuttle.

Policy 24.2: The project shall include connections to the planned Bayshore Bikeway and provide an additional local bikeway loop that will be safer and more scenic as it is located closer to the water.

Policy 24.3: The District and City shall explore the operating and funding potential for a shuttle service that would link various destinations within the western portions of Chula Vista, including the Chula Vista Bayfront Master Plan area. Implementation of the Chula Vista Bayfront Shuttle is anticipated to include participation by commercial development within the Chula Vista Bayfront Master Plan area.

Policy 24.4: The Chula Vista Bayfront shuttle will service the Chula Vista Bayfront Master Plan area with a key focus on connecting general users to and from: downtown areas east of I-5, the resort conference center, the residential project, park areas, and existing trolley stops. The shuttle system shall be designed with the following design considerations:

a) Ensure that it has fewer stops than a conventional bus and is located as close as possible to the major traffic generators.

b) Plan the general route of the transit shuttle to travel along Third Avenue between F Street and H Street, along F Street between Woodlawn Avenue and Third Avenue, along Woodlawn Avenue between E Street and F Street, along E Street, Marina Parkway, Street C, and Street A within the Bayfront development area, and along H Street between the Bayfront and Third Avenue
c) Plan the route to operate as a two-way loop with stops in both directions.
d) Plan for shuttles to initially run every 15 minutes.
e) Consider a private shuttle system to transport employees between the H-18 parking structure and the H-3 parcel in the Harbor District.

Policy 24.5: Shuttle service shall be phased concurrent with development. At a minimum, service shall be provided upon the issuance of Certificate of Occupancy for either the H-3 resort conference center hotel or the 500th residential unit. Additional stops shall be provided at the Signature Park, the Recreational Vehicle Park, the H-18 parking structure, and the Park in Otay District, as these uses are developed.

Policy 24.6: In the Harbor District, typical parking requirement standards for high intensity uses may be reduced if it can be demonstrated that the use will be adequately served by alternative transit.

Policy 24.7: In order to reduce transportation-related air quality impacts, the following items should be encouraged at the project-level planning phase:

a) Limit idling time for commercial vehicles, including delivery and construction vehicles.
b) Use low- or zero-emission vehicles, including construction vehicles.
c) Promote ride sharing programs, for example, by designating a certain percentage of parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading and waiting areas for ride sharing vehicles, and providing a web site or message board for coordinating rides.
d) Provide the necessary facilities and infrastructure to encourage the use of low- or zero-emission vehicles (e.g., electric vehicle charging facilities and conveniently located alternative fueling).
e) Provide public transit incentives, such as free or low-cost monthly transit passes.
f) For commercial projects, provide adequate bicycle parking near building entrances to promote cyclist safety, security, and convenience. For large employers, provide facilities that encourage bicycle commuting, including (for example) showers, lockers, locked bicycle storage or covered or indoor bicycle parking.
g) Institute a telecommute work program. Provide information, training, and incentives to encourage participation. Provide incentives for equipment purchases to allow high-quality teleconferences.
h) Provide information on all options for individuals and businesses to reduce transportation-related emissions. Provide education and information about public transportation.

Policy 24.8: The District and the City shall participate in a multi-jurisdictional effort conducted by the California Department of Transportation (Caltrans) and San Diego Association of Governments (SANDAG) to assist in developing a detailed I-5 corridor-level study that will identify transportation improvements along with funding, including federal, state, regional, and local funding sources, and phasing that would reduce congestion management with Caltrans standards on the I-5 South corridor from the SR-54 interchange to the Otay River. Local funding sources identified in this Plan shall include fair-share

contributions related to private and/or public development based on nexus as well as other mechanisms.

25. In-water Activities

Policy 25.1: Excess dredge material from within the project area shall be tested for beach compatibility and placed on local beaches if suitable.

Policy 25.2: Development in San Diego Bay waters shall be reviewed for potential impacts to open water (foraging) and eelgrass, including any direct (e.g., construction activity) and indirect (e.g., shading from structures or boats) impacts. Efforts must be made to maintain the eelgrass habitat available and improve water quality. No net loss of eelgrass meadows shall be permitted. Pre-construction and post-construction eelgrass surveys shall be prepared in full compliance with the "Southern California Eelgrass Mitigation Policy or any later revised policy adopted by the National Marine Fisheries Service. Any existing eelgrass impacted shall be replaced at a minimum 1.2:1 ratio, in accordance with the Southern California Eelgrass Mitigation Policy. In addition, impacts to open water habitat shall be assessed and mitigated.

Policy 25.3: Prior to commencement of any in water development that involves disturbance of the subtidal water bottom, surveys will be done of the project area and a buffer area to determine the presence of the invasive alga *Caulerpa taxifolia*. The survey protocol shall be prepared in consultation with the Regional Water Quality Control Board, the California Department of Fish and Game, and the National Marine Fisheries Service.

26. Signage

Policy 26.1: Signs shall be designed and located to minimize impacts to visual resources. Signs approved as part of commercial development shall be incorporated into the design of the project and shall be subject to height and width limitations that ensure that signs are visually compatible with surrounding areas and protect scenic views. Permitted monument signs shall not exceed eight feet in height. Free-standing pole or roof signs are prohibited. Permanent advertising signs and banners shall be prohibited in public beaches and beach parks.

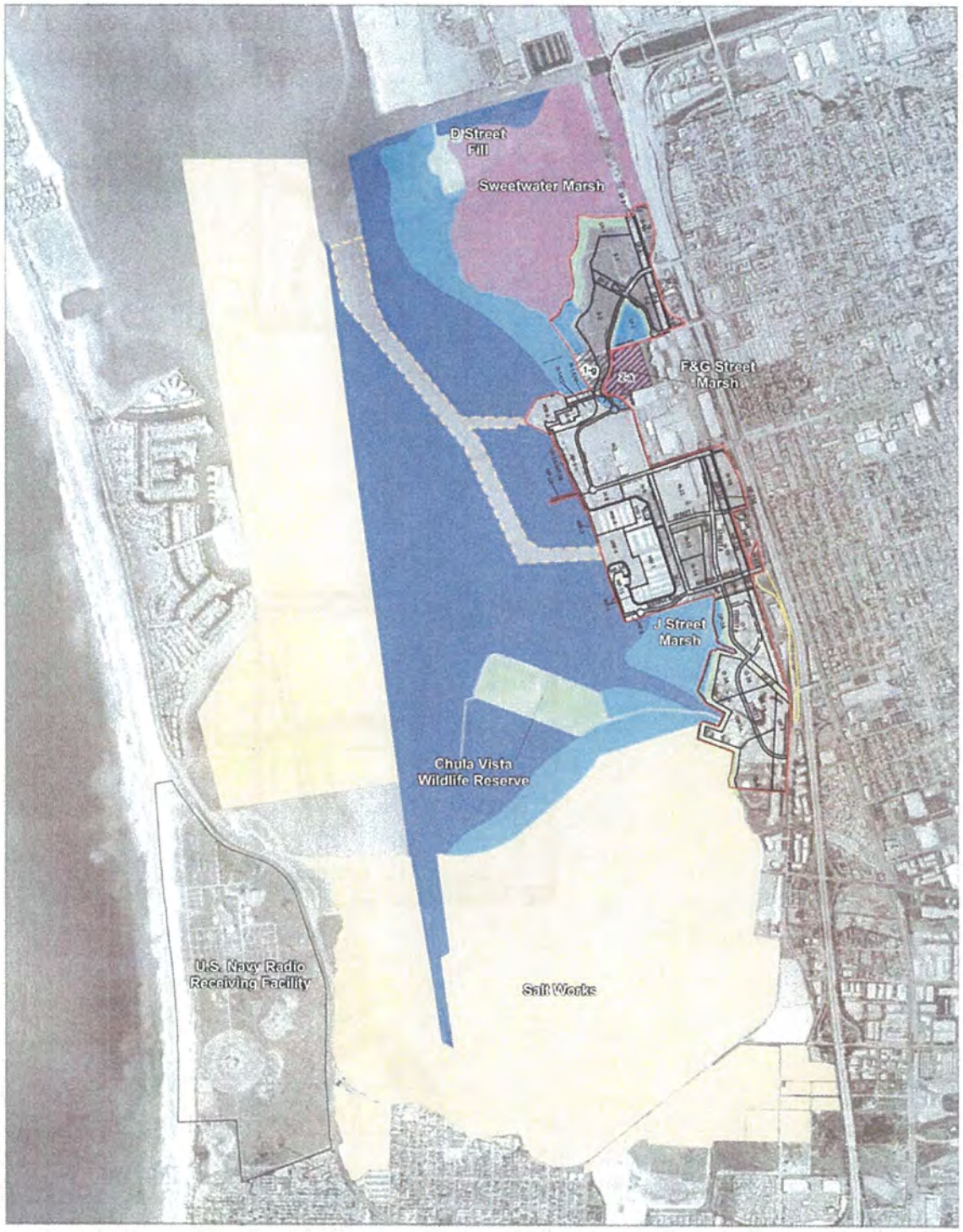


Exhibit 1
Wildlife Habitat Areas

(Defined by § 3.1 of the Chula Vista Bayfront Master Plan Settlement Agreement; the agreement prevails over any conflict with this exhibit.)

*National Wildlife Refuge lands are included in the definition of Wildlife Habitat Areas for the sole purpose of addressing adjacency impacts and not for the purpose of imposing affirmative resource management obligations with respect to the areas within the National Wildlife Refuge lands

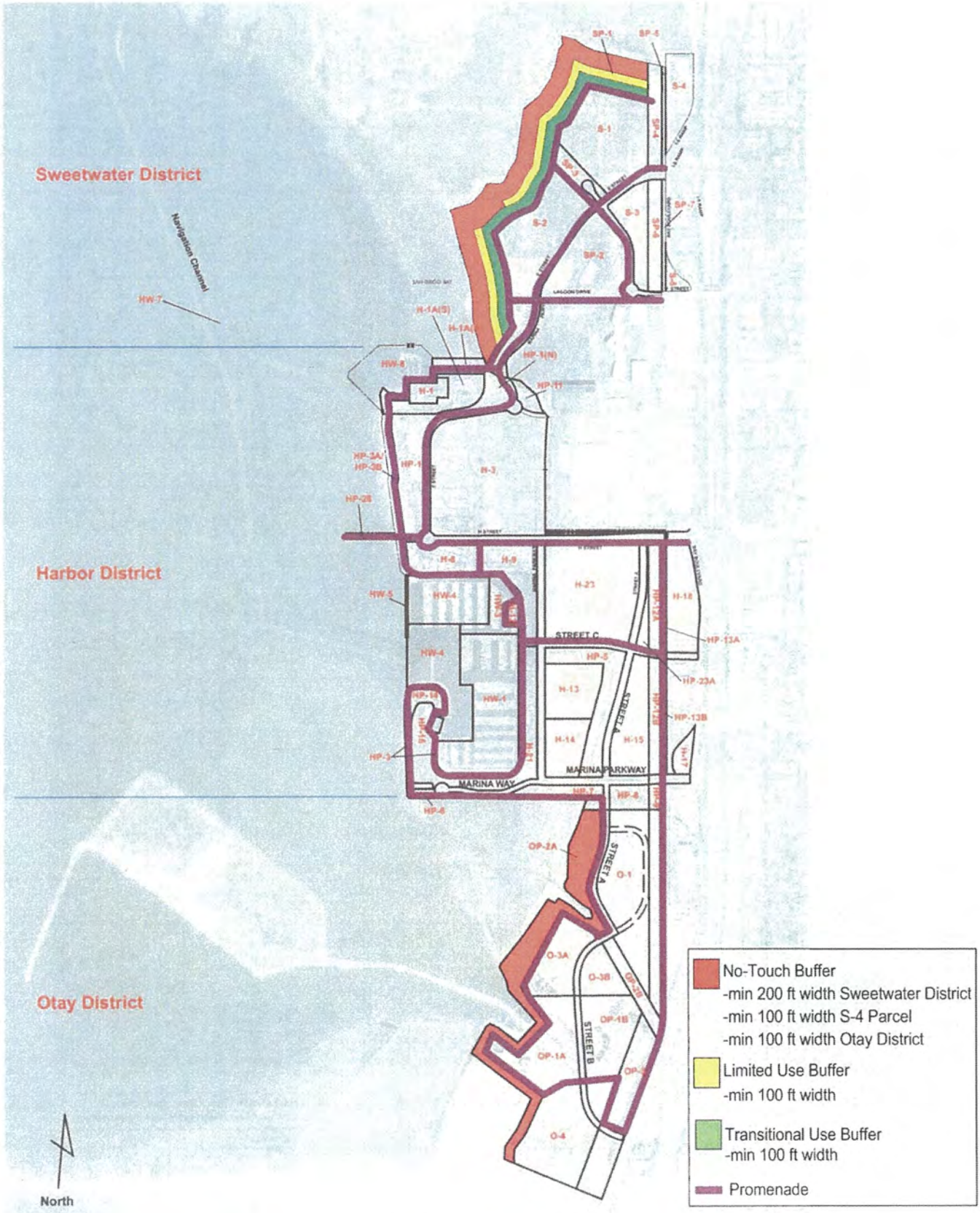


Exhibit 2 – Buffer Areas

(Defined by § 4.1.3 and 4.1.4 of the Chula Vista Bayfront Master Plan Settlement Agreement; the agreement prevails over any conflict with this exhibit)

EXHIBIT 3

Exhibit 3 outlines the metholodogies for determing that the goals of the Energy Section are met. The Sample Worksheets are for illustration purposes, to provide a format which may be used both by Developments and by the City of Chula Vista's Building Department. Note that the Energy Section outlines requirements and approaches for projects which will be subject to future codes, regulations, tariffs, and technologies, all of which are subject to change. When clarifications are needed, they will be provided by the City of Chula Vista.

Baseline. The term "Baseline" refers to the amount of energy against which the energy reduction will be measured.

SAMPLE Worksheets. Sample worksheets are provided as suggested approaches. Actual worksheets for calculating the energy requirements should be coordinated with the City of Chula Vista Building Department.

Title 24 Path. Title 24 language refers to the "Standard Budget" and "Proposed Budget." The Whole Building Performance Method, which generates the Standard and Proposed Energy Budgets, is specifically for energy uses within a conditioned building, and does not include lighting which is in Interior Unconditioned Spaces or lighting which is outside. However, for the purposes of the Energy Section, this lighting energy will be added to the energy budgets for the conditioned building, and the combined energy uses will become the Baseline for the "Title 24 Path." Each of the various energy uses will be converted into Site kBtu, except for the final 5% energy reduction waiver allowed for Ongoing Measurement and Verification.

LEED Path. LEED language refers to the "Baseline Design" and "Proposed Design." The LEED Path Baseline is likely to be different and higher than the Title 24 Path Baseline because LEED counts all of the energy uses within the site boundary, some of which are not counted by Title 24. However, LEED is also likely to be better and more comprehensive in calculating overall energy performance features, such as district thermal plants, combined heat and power, natural ventilation, efficiencies in process loads, aggregating multiple buildings, and the benefits of renewable energy. Each of the various energy uses will be converted into dollars ($), except for the final 5% energy reduction waiver allowed for Ongoing Measurement and Verification.

If the LEED Path is chosen, the Development may be subject to an additional fee to the City of Chula Vista for a 3rd party plan check by an experienced LEED reviewer acceptable to the City. Recognizing that LEED Templates may not be complete at the time of the initial Building Department submittals, draft Templates may be used, at the discretion of the reviewer.

Natural Ventilation. When using Natural Ventilation (NV) to qualify as an energy reduction feature, the Development may qualify for a waiver of up to 10% if at least 75% of the area that would normally be cooled relies solely on natural ventilation strategies to help maintain comfortable temperatures. Pro-rations are possible.

City of Chula Vista Sponsored Energy Efficiency Program. Refer to the appropriate City ordinances for details on this program.

Measurement and Verification. Each Development shall develop and implement an ongoing Measurement and Verification (M&V) Plan consistent with the International Performance Measurement and Verification Protocol (IPMVP) Volume III, Concepts and Options for Determining Energy Savings in New Construction, April 2003. The Development may choose either Option B or Option D. If the LEED Path is chosen, the M&V Plan should be consistent with Credit EAc5, except that LEED only requires one year of implementation, and the Energy Section of this Agreement requires M&V to be ongoing.

Demand Response Tariffs. Developments which enroll in SDG&E Demand Response rate tariff(s) which are designed to reduce the load on the electric grid during critical times may be awarded up to a 5% waiver.

EXHIBIT 3

SAMPLE Worksheet A: Title 24 Path

Name: Example Development

Description[1]	Source of Info (Attachments)	Input Standard	Input Proposed	Typical Units of Measure	Convert to Site kbtu	Standard = Baseline	Proposed	Units	Minimum % Reduction	Actual % Reduction	
15.2.1 MINIMUM EFFICIENCY											
Title 24 Whole Building Performance	T24 UTIL-1, Part 1			Source TDV kbtu/sf-yr					15%		
15.2.2 CALCULATE BASELINE AND REDUCTIONS											
A. Energy Uses											
T24 Electricity	T24 UTIL-1, Part 2			Site KWH/year	3.413	-	-	kBtu			
T24 Gas	T24 UTIL-1, Part 2			Site Therms/year	100.000	-	-	kBtu			
T24 Lighting Outside and Uncond	Worksheet A-LTG	-	-	Site KWH/year	3.413	-	-	kBtu			
A. Summary of Efficiency of End Uses						-	-	kBtu			
B. Renewable Energy Contributions											
PV: within Development	CSI calculation or PV-Watts[2]	n/a		Site KWH output/year	3.413	n/a	-	kBtu			
PV: Credited from Project		n/a		Site KWH output/year	3.413	n/a	-	kBtu			
Solar Thermal: within Development	F-Chart or equal	n/a		Site kbtu offset/year	1.000	n/a	-	kBtu			
Other	as appropriate	n/a		as appropriate		n/a					
B. Combined Renewable Reductions											
C. Natural Ventilation	Worksheet C						0% to 10%				
D. Chula Vista Program Savings	Confirm with Program Administrator										
Verified Electricity Savings		n/a		Site KWH	3.413		-	kBtu			
Verified Gas Savings		n/a		Site Therms	100.000		-	kBtu			
D. CV Program Combined Reduction											
E. Ongoing Measure & Verify	Worksheet E						Required				
F. Demand Response Tariff	Worksheet F						0% to 5%				
TOTAL REDUCTION FROM BASELINE (Must be at least 50% Reduction)											**0.0%**

NOTES TO WORKSHEET A

Note 1: If the Development includes more than one building, then use multiple Worksheets, or, add backup calculations or line items to this spreadsheet, as most appropriate.

Note 2: Final photovoltaic design and output informatio shall use industry standard software, including at least site location, array orientation, array tilt, and system efficiency. California Solar Initiative (CSI) rebate calculations and PV-Watts are examples of acceptable software.

EXHIBIT 3

Worksheet A-LTG: Lighting Outside and in Interior Unconditioned Spaces

Name: Example Development

Category[1]	Source of Info (Attachments)	T24 Allowed Watts	Proposed Watts	Occupancy	hours /day[2]	Days /year	Hours /year	Standard KWH/yr	Proposed KWH/yr
Unconditioned spaces	T24 LTG Forms						-	-	-
Unconditioned spaces	T24 LTG Forms						-	-	-
Unconditioned spaces	T24 LTG Forms						-	-	-
Unconditioned spaces	T24 LTG Forms						-	-	-
Unconditioned spaces	T24 LTG Forms						-	-	-
General Site Illumination (Tradable)	T24 OLTG Forms						-	-	-
General Site Illumination (Tradable)	T24 OLTG Forms						-	-	-
General Site Illumination (Tradable)	T24 OLTG Forms						-	-	-
General Site Illumination (Tradable)	T24 OLTG Forms						-	-	-
General Site Illumination (Tradable)	T24 OLTG Forms						-	-	-
Specific Applications (Non-Tradable)	T24 OLTG Forms						-	-	-
Specific Applications (Non-Tradable)	T24 OLTG Forms						-	-	-
Specific Applications (Non-Tradable)	T24 OLTG Forms						-	-	-
Signs (Non-Tradable)	T24 OLTG Forms						-	-	-
Signs (Non-Tradable)	T24 OLTG Forms						-	-	-
Totals (Subtotals are inputs to Worksheet A)								-	-

NOTES TO WORKSHEET A-LTG

Note 1: If more lines are needed, create a spreadsheet in similar format, and enter above, as appropriate.

Note 2: For average runtimes, use the hours in this chart, unless proposer demonstrates to the Bldg Department's satisfaction that a different value should be used.

EXHIBIT 3

SAMPLE Worksheet B: LEED Path

Name: Example Development

Description	Source of Info (Attachments)	Standard or Baseline	Proposed	Typical Units of Measure	Virtual Rate	Baseline	Proposed	Units	Minimum % Reduction	Actual % Reduciton	
15.2.1 MINIMUM EFFICIENCY											
Title 24 Whole Building Performance	T24 UTIL-1, Part 1			Source TDV kbtu/sf-yr					15%		
15.2.2 CALCULATE BASELINE AND REDUCTIONS											
A. Energy Costs: LEED Performance Rating Method (PRM) EAp2/c1 Letter Template											
Conditioned Building(s)	LEED EAp2/c1 Letter Template	*Included*	*Included*								
Other energy uses on site		*Included*	*Included*								
Lighting: Outside and Uncond		*Included*	*Included*								
Onsite Renew Energy: Development		*Included*	*Included*								
Campus Renew Energy: Project		*Included*	*Included*								
Other		*Included*	*Included*								
Natural Ventilation		May be included in LEED EAp2/c1, OR, use Worksheet C									
Electricity (Summary)	LEED EAp2/c1 Section 1.8 Summary[1]			kWh	#DIV/0!			Site $			
Natural Gas (Summary)				therms	#DIV/0!			Site $			
A. Summary of Efficiency of Energy Costs						$ -	$ -	Site $			
B. Combined Renewable Reductions	Included in EAp2/c1 above										
C. Natural Ventilation	May be included in LEED EAp2/c1 above, OR, use Worksheet C										
Alternate:	Worksheet C						0% to 10%				
D. Chula Vista Program Savings	Confirm with Program Administrator										
Verified Electricity Savings				Site KWH	#DIV/0!		#DIV/0!	Site $			
Verified Gas Savings				Site Therms	#DIV/0!		#DIV/0!	Site $			
D. CV Program Combined Reduction											
E. Ongoing Measure & Verify	LEED EAc5. See Worksheet E.						Required				
F. Demand Response Tariff	Worksheet F						0% to 5%				
TOTAL REDUCTION FROM BASELINE (Must be at least 50% Reduction)											**0.0%**

NOTES TO WORKSHEET B

Note 1: LEED EAp2/c1 Letter Template: Section 1.8, "Energy Cost and Consumption by Energy Type - Performance Rating Method Compliance Table"

EXHIBIT 3

SAMPLE Worksheet C: Natural Ventilation

Name: Example Development

When using Natural Ventilation (NV) to qualify as an energy reduction feature for this Agreement, the Development may qualify for a waiver if at least 75% of the area that would normally cooled includes effective natural ventilation strategies to help maintain comfortable temperatures. A 5% waiver is granted if the area is also served by an energy or cooling system drawing energy from the grid. A 10% waiver is granted if the area is not served by an energy or cooling system drawing from the grid. The waiver may be prorated if the area is less than 75%. Final determination of normally cooled areas are at the discretion of the Building Department. For example, in CA Climate Zone 7, spaces such as warehouses and kitchens do not normally have electric cooling.

Two approaches are possible:

1. A Development may use a performance approach, such as macro-flow or Computational Fluid Dynamics (CFD) modeling, to design and confirm the maintenance of comfort using natural ventilation techniques.

2 . As an alternate, the prescriptive calculations outlined in the Collaborative for High Performance Schools (CHPS) may be used. CHPS identifies an approach to achieving ventilation strategies which are likely to be effective in helping to maintain interior comfort when outside conditions are moderate. Even though the CHPS program targets school campuses, the approach is useful for many occupancies. It is publicly available at www.chps.net. Suggested references are from CHPS 2006 Volume II Best Practices Manual - Design, HVAC Guidelines, Sections TC 13 (Cross Ventilation), TC-14 (Stack Ventilation), and TC-15 (Ceiling Fans).

The designer should follow the CHPS guidelines. To satisfy the prescriptive approach, the following table may be used. Inlets and Outlets should each be at least 4% of the floor area of the space, totalling at least 8%. Ideally they are on opposite sides, but at a minimum may be on perpendicular walls. Inlets are to be on the side which is typically windward, and lower than outlets.

Space Name	Source of Cooling	Conditioned Floor Area (CFA)	Qualifying CFA	Performance or Prescriptive Calculation	Prescriptive: Inlet (Windward)			Prescriptive: Outlet (Leeward)				
					Area	Orientation	% CFA	Area	Orientation	% CFA	higher than inlet	opposite or corner wall
Space A	NV with grid cooling											
Space B	NV with grid cooling											
Space C	NV with grid cooling											
Subtotal:			**0**									
Space D	NV only											
Space E	NV only											
Space F	NV only											
Subtotal:			**0**									
Other spaces	no NV											
Total Normally Conditioned Floor Area		-										

CFA which is Naturally Ventilated, with Grid Cooling	0	
Energy Reduction Allowed		
CFA Which is Naturally Ventilated Only	0	
Energy Reduction Allowed		
Combined Energy Reduction Allowed		

CFA: NV + grid	Reduction
0%	0%
15%	1%
30%	2%
45%	3%
60%	4%
75%	5%

CFA: NV Only	Reduction
0%	0%
15%	2%
30%	4%
45%	6%
60%	8%
75%	10%

EXHIBIT 3

SAMPLE Worksheet D: Chula Vista Energy Efficiency Program

Name: Example Development

Refer to the appropriate City ordinances for details on this program, including, but not limited to:

City of Chula Vista Municipal Code Section 15.12 "Green Building Standards Ordinance"
City of Chula Vista Municipal Code Section 15.26.030 "Increase Energy Efficiency Ordinance"

EXHIBIT 3

SAMPLE Worksheet E: Ongoing Measurement & Verification (M&V)

Name: Example Development

Develop and implement a Measurement and Verification (M&V) Plan consistent with the International Performance Measurement and Verification Protocol (IPMVP) Volume III, Concepts and Options for Determining Energy Savings in New Construction, April 2003. The Development may choose either Option B or Option D.
M&V shall be on-going for the length of the lease.
Tenants shall have sub-meters for electricity. Sub-meters for gas and water should also be considered, but are not required.
The plan shall include a process for corrective action if energy performance goals are not achieved as planned. Refer to ASHRAE Guideline 14 for suggested ranges of discrepancy, appropriate to the meter, magnitude of energy uses, and overall plan.
If the LEED Path is chosen, the M&V Plan should be consistent with EAc5, except that LEED only requires one year of implementation, and the Energy Section of this Agreement requires M&V to be ongoing.

EXHIBIT 3

SAMPLE Worksheet F: Demand Response Tariffs

Name: Example Development

If the development chooses an SDG&E Demand Response tariff in which the customer has the option to manually or semi-automatically reduce electricity use when requested by the utility, then it will be awarded a 3 % waiver towards the overall energy reduction.

If the development chooses an SDG&E Demand Response tariff in which the utility can automatically reduce the customer's electricity use, then it will be awarded a 5 % waiver towards the overall energy reduction.

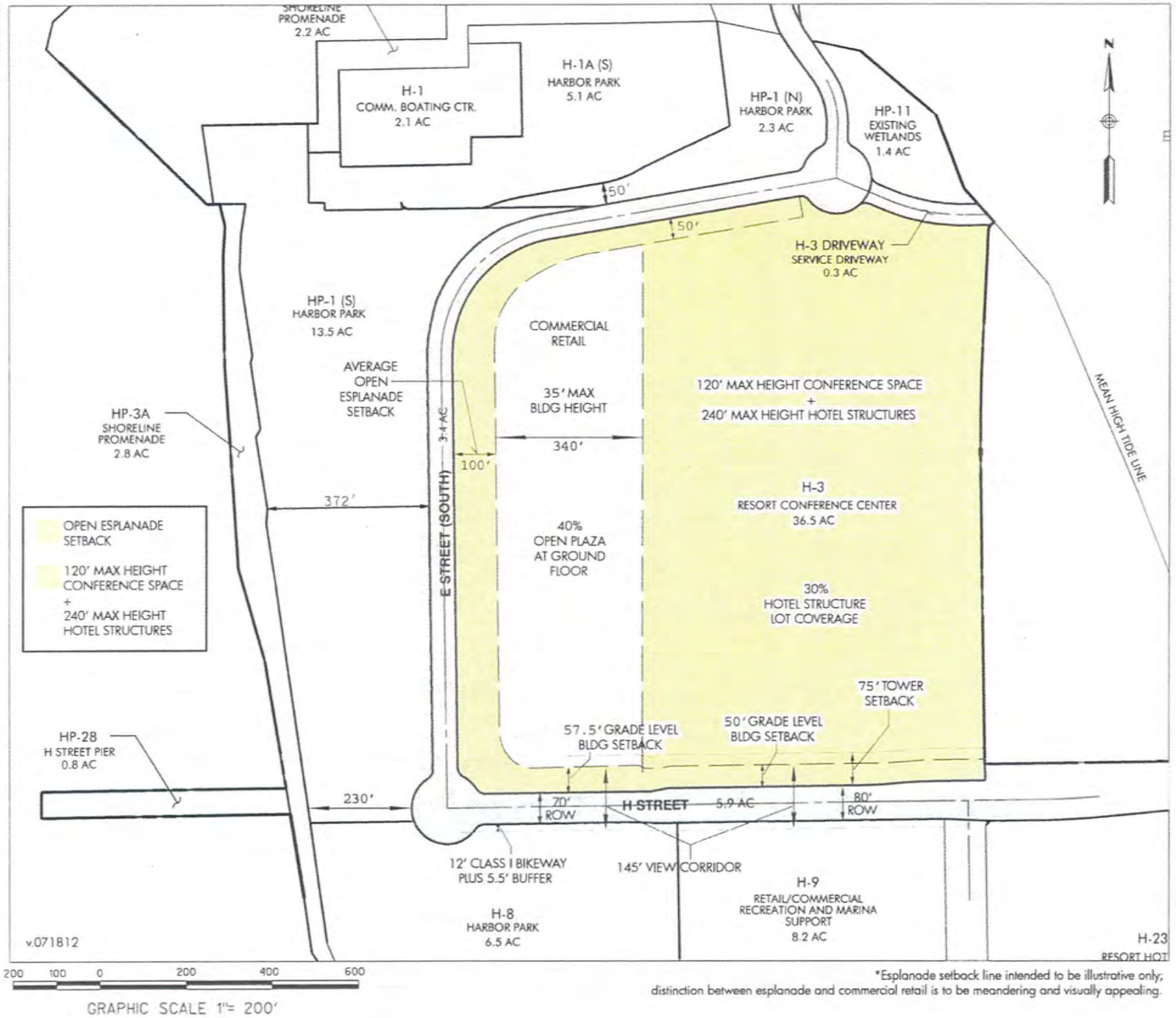
Meter(s)	Tariff	Manual or Semi-Automatic: Customer Controlled: 3%	Automatic, or Utility Controlled: 5%	% Reduction Awarded

EXHIBIT 3

Links for References used in EXHIBIT 3

Title 24 Building Energy Efficiency Standards	www.energy.ca.gov/title24/
Collaborative for High Performance Schools (CHPS) CHPS 2006 Volume II Best Practices Manual - Design	www.chps.net/dev/Drupal/node/31
IPMVP, Volume III, Concepts and Options for Determining Energy Savings in New Construction, April 2003.	www.evo-world.org Products & Services / IPMVP / Applications Volume III
Leadership in Energy and Environmental Design (LEED™)	www.usgbc.org
City of Chula Vista sponsored energy efficiency program	
Living Building Challenge	www.ilbi.org

Exhibit 4
Resort Conference Center (H-3) Development



*Esplanade setback line intended to be illustrative only; distinction between esplanade and commercial retail is to be meandering and visually appealing.

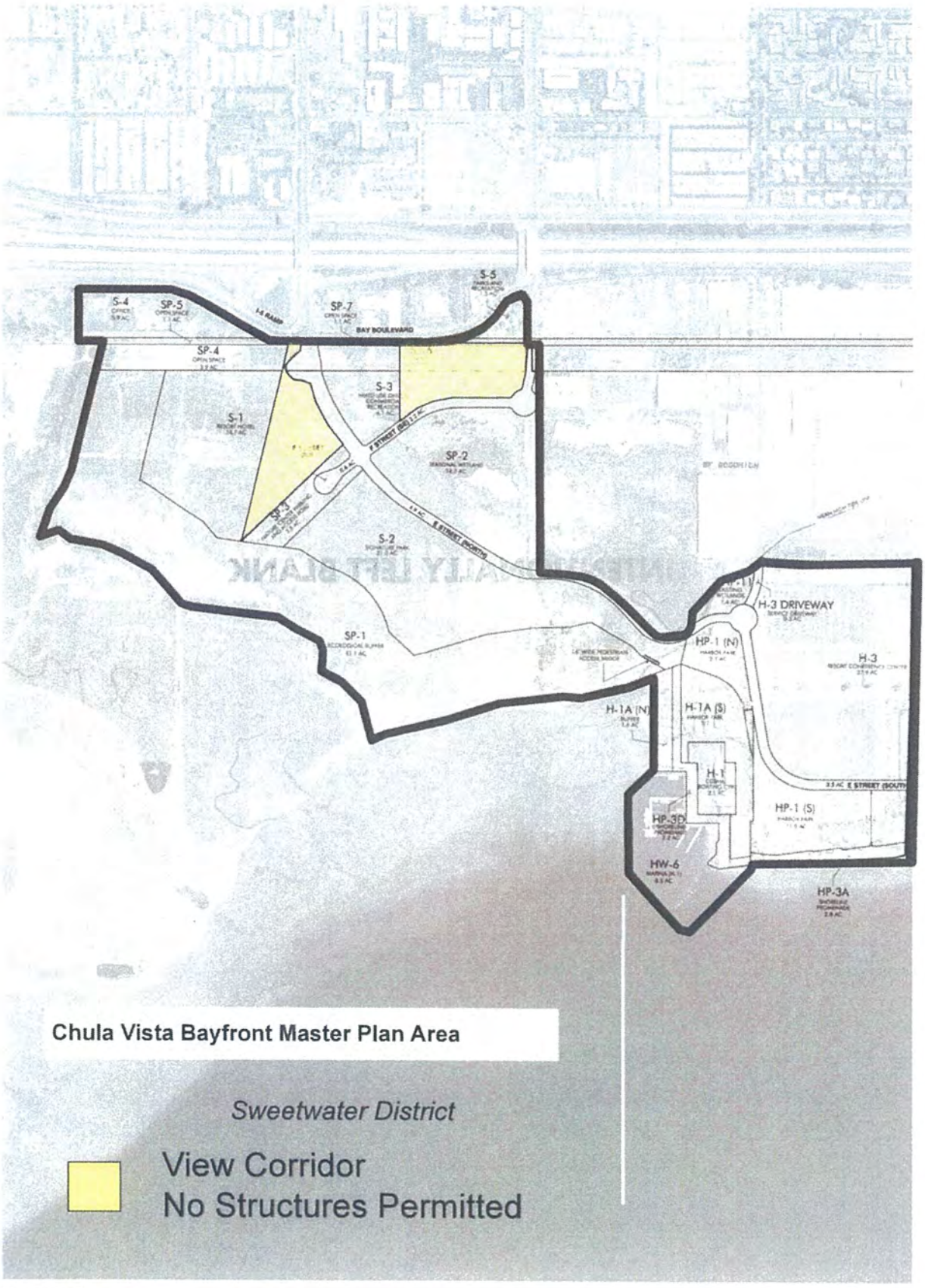


Exhibit 5
Sweetwater District (S-1/S-3) Development

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APPENDIX C

Public Access Plan

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San Diego Unified Port District
and
City of Chula Vista

Chula Vista Bayfront Master Plan

Public Access Program

August 2012
**Certified by the California Coastal Commission*

CHULA VISTA BAYFRONT MASTER PLAN PUBLIC ACCESS PROGRAM

Contents:

1. Introduction and Statement of Purpose

A fundamental goal of the California Coastal Act is the protection and maximization of public access to California's shoreline. In accordance with this goal, the Chula Vista Bayfront Master Plan (CVBMP) implements a Public Access Program (PAP) that ensures the public's right of access to the shoreline. The CVBMP PAP defines and implements an extensive multi-modal pedestrian, bicyclist, mass-transit and automobile-based system to provide a variety of free and low-cost Chula Vista waterfront public recreational opportunities for the residents and visitors of the region. The PAP is a supplemental document to the City of Chula Vista's (City) Local Coastal Program (LCP) and San Diego Unified Port District's (District) Port Master Plan (PMP) amendments for the CVBMP. The CVBMP improves the public's access to the shoreline by increasing pedestrian and bikeway connections, increasing public transportation connections, and improving circulation along the coast.

The CVBMP guides development within the Chula Vista Bayfront. Chula Vista's Bayfront lies within the Chula Vista Coastal Zone, an area that totals 1,345 acres. Of these 1,345 acres, 722 acres are within the City's jurisdiction and 536 acres are within the District's jurisdiction (see Exhibit 1, Chula Vista Coastal Zone).

Exhibit 1 – Chula Vista Coastal Zone

2. Public Access—Current Conditions

Currently, public access to Chula Vista's shoreline is limited. The only direct public access is located within the jurisdiction of the District. A boat launch, marina, and a park are located off of the westerly extension of J Street. Also on District property is a park and public beach located west of the Goodrich facility. Public access is also currently provided via a shuttle bus that serves the Chula Vista Nature Center, located on Gunpowder Point, and within the boundaries of the National Wildlife Refuge (NWR).

The types of land use that currently exist along the shoreline limit public access. Goodrich's major industrial/manufacturing facility, boat yards, SDG&E utility infrastructure, power plant operations, and undeveloped property all have resulted in very limited direct public access opportunities. Another key consideration is the environmental sensitivity of the shoreline within the Bayfront area, such as the National Wildlife Refuge. This results in limited or restricted access in some areas in order to preserve the habitat value of the shoreline itself. A significant objective of the CVBMP is to rectify this lack of public access while still preserving sensitive habitat.

3. Circulation Improvements

Among the primary goals of the CVBMP is to increase pedestrian access to the shoreline. The CVBMP enhances pedestrian access within its developed and open space areas, and enhances pedestrian visual and physical access to the waterfront, through a comprehensive, continuous pedestrian circulation plan totaling approximately 54,000 linear feet (see Exhibit 2, Pedestrian Circulation Plan). Pedestrian access will be limited or prohibited where public safety issues and proximity to sensitive resource issues may arise. The CVBMP includes an approximately 8-acre shoreline promenade or baywalk, trails, and sidewalks with appropriate pedestrian-scale landscaping, lighting, and furniture. The pedestrian pathways will be constructed concurrently with adjoining or adjacent development within the districts, and shall be open prior to or concurrent with occupancy of the first use within each district, with the ultimate goal of continuous pedestrian access and linkages within the CVBMP area.

Exhibit 2 – Pedestrian Circulation Plan

Specific pedestrian circulation areas will also allow for bicycles, as described below. The specific design of the pedestrian pathways will depend on public safety issues, land use adjacency issues, and other factors. These factors, in turn, will determine the appropriate materials (i.e., pavement, decomposed granite, etc.) to be used for the pathways, and whether bicycles and other wheeled items, such as skateboards, will be allowed.

At the north end of the CVBMP in the Sweetwater District, a pedestrian pathway is proposed along the proposed extension of E Street into the Harbor District. Pedestrian access is also proposed west of F Street, within the proposed abandoned segment of F Street/Lagoon Drive. An approximately 12-foot-wide pedestrian trail is proposed along the western edge of the Sweetwater District. Other pedestrian paths will be located along the SDG&E transmission corridor, and along a proposed F Street that will link pedestrians at F Street to the Signature Park and pedestrian trail. Design of the pedestrian paths in the Sweetwater District will be sensitive to the paths' adjacency to sensitive resources at the F & G Street Marsh and the Sweetwater Marsh NWR.

In the Harbor District, or the central portion of the CVBMP, an approximately 12,000-linear-foot, 25- to 50-foot-wide shoreline promenade or baywalk is proposed along the entire shoreline, from the existing boatyard site south to the shoreline north of the J Street Marsh. The proposed extension of H Street is viewed as a significant physical and visual corridor for pedestrians, ultimately connecting the City to the waterfront, ending in a 60-foot-wide, 600-foot-long pier. Additional pedestrian paths will be located on E Street, J Street/Marina Parkway, proposed Street A, proposed Street C, and a pedestrian trail along the SDG&E transmission corridor. Pedestrian linkages to the waterfront will be provided within the proposed residential development, between the Bayside Park and marina retail development.

At the south end of the CVBMP, the Otay District includes pedestrian paths along Street A as it transitions from the Harbor District and along the western perimeter of the Otay District. A pedestrian trail is proposed along the SDG&E transmission corridor that would continue from the Harbor District through the Otay District. As in the Sweetwater District, design of the pedestrian paths within the Otay District will be sensitive to the paths' adjacency to sensitive resources at the J Street Marsh.

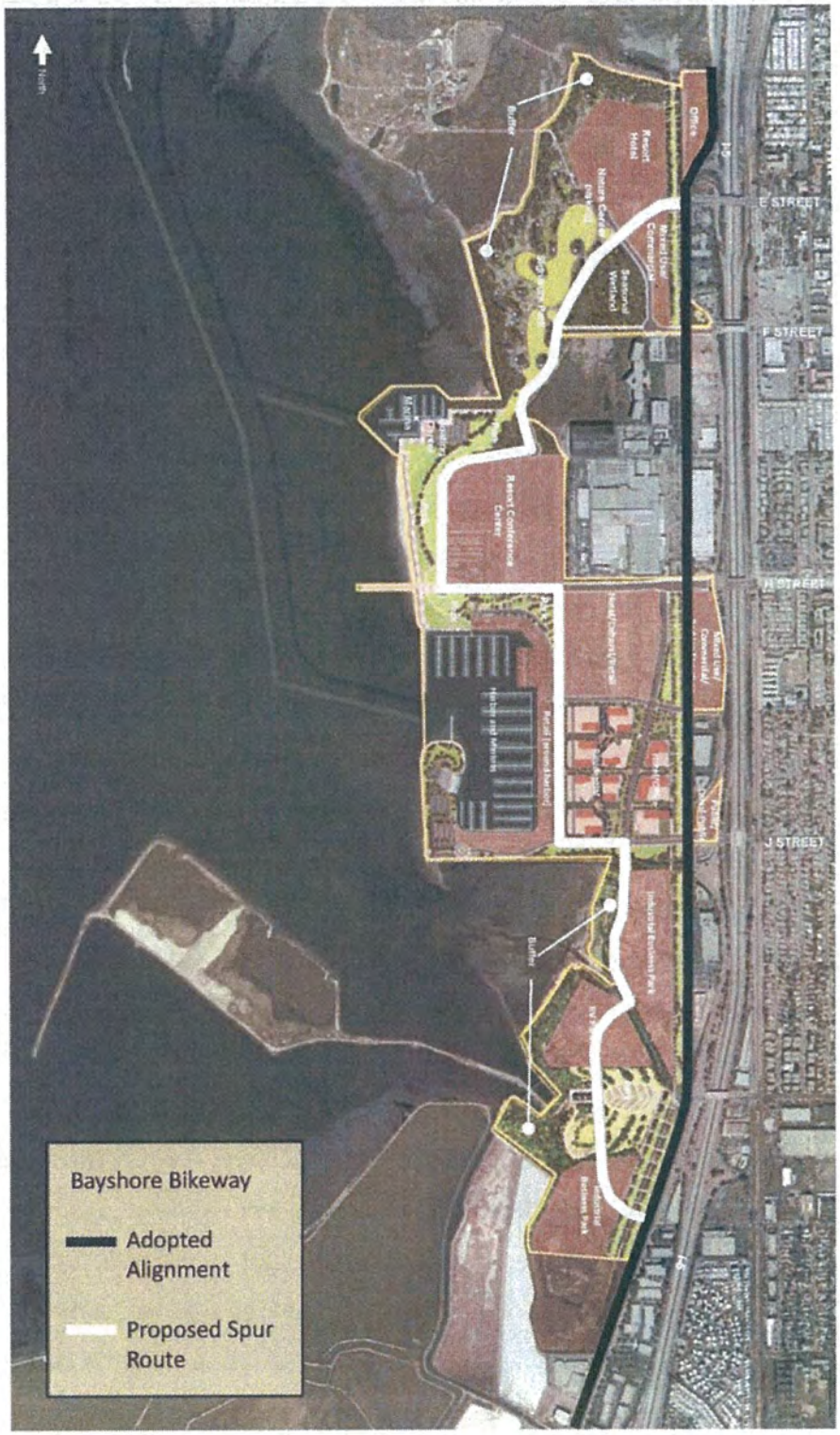
Planned improvements to pedestrian and bikeway networks all further the goal of increased public access to California's shoreline by not only facilitating circulation but also lessening reliance on personal vehicles to access the coast. Walking will be encouraged with the creation of pedestrian corridors of paseos, docks, promenades, and courtyards. An effort will be made to foster a system of interconnected bicycle routes throughout the City and the region. This will be aided by connections made with the Bayshore Bikeway. This regional bikeway network is intended to connect major bike trails throughout the region.

4. Integration of the Bayshore Bikeway

The Bayshore Bikeway is the result of a coordination of regional efforts. The goal of the Bayshore Bikeway is to provide a continuous bikeway system between National City and Imperial Beach. The CVBMP proposes a bikeway loop connecting the Bayshore Bikeway with the various activity centers and elements of the CVBMP. This Class I bike path is proposed along: the western edge of E Street in the Sweetwater and Harbor Districts within parcels and along the south side of H Street east to Marina Parkway; along the west side of Marina Parkway south to J Street; along the south side of J Street east to Bay Boulevard; and, along the west side of Street A and Street B in the Otay District southeast to Bay Boulevard. Due to right-of-way (ROW) constraints within the transition from the Sweetwater to the Harbor Districts, bicycle access along the E Street bridge would be provided within a 16-foot-wide multipurpose trail that will be shared with pedestrians. In addition, bicycle access along the portion of the E Street extension adjacent to the existing boatyard site will be provided within a 10-foot-wide buffer. The Bayfront Loop will re-join the Bayshore Bikeway at Bay Boulevard south of L Street.

The proposed extension of the Bayshore Bikeway along the frontage of the CVBMP will have a paved width of approximately 12 feet, and will allow for two-way bicycle travel, with minimal crossings of vehicular roadways. The alignment of the path will be routed to serve the proposed Resort Conference Center (RCC), new commercial harbor/marinas, and the commercial/residential areas. The specific alignment of the loop will be determined at the time that the project and roadways are designed. The proposed extension will be constructed as the CVBMP roadway improvements are constructed. The proposed extension will also connect to downtown Chula Vista via Class II bike lanes along the new F Street to the existing F Street overcrossing of I-5 (see Exhibit 3, Bayshore Bikeway).

Exhibit 3 – Bayshore Bikeway



5. Public Transit Improvements

In addition to pedestrian and bikeway improvements, the CVBMP intends to make use of public transit in order to increase shoreline access. The increased utilization of public transit reflects two goals of the CVBMP: 1) maximize the two trolley stops adjacent to the Bayfront area and 2) provide future shuttle bus service to interconnect the Bayfront with the trolley stations and the adjacent community. Currently, there are two Trolley stations that serve the Bayfront: one at H Street and one at E Street. These two stations will be integrated into the greater transit network of the City and the region. In addition to the planned transit system, the City is developing a convenient, destination-oriented shuttle system within the City that links activity centers, recreation opportunities, and other appropriate important destinations. This system, known as the Chula Vista Bayfront Shuttle, will be environmentally friendly, affordable, and accessible. The Chula Vista Bayfront Shuttle would service the Master Plan area with a key focus on connecting general users to and from: downtown areas east of I-5; the resort conference center; the residential project; park areas; and, existing trolley stops. It would stop frequently along its entire route to provide a fast and convenient link between the high-density redevelopment areas in the City and Bayfront and the regional light rail trolley system. The shuttle would have fewer stops than a conventional bus, located as close as possible to the major traffic generators. In addition, a private shuttle system to transport employees between the H-18 parking structure and the H-3 parcel in the Harbor District will be considered.

Shuttle service shall be phased concurrent with development. At a minimum, service shall be provided upon the issuance of certificate of occupancy for either the H-3 resort conference center hotel or the 500th residential unit in the City of Chula Vista Bayfront. Implementation of the shuttle is anticipated to include participation by commercial development within the plan area. Additional stops shall be provided at the Signature Park, the Recreational Vehicle Park, the H-18 parking structure, and the Park in Otay District as these uses are developed.

The initial general route of the transit shuttle would be along Third Avenue between F Street and H Street, along F Street between Woodlawn Avenue and Third Avenue, along Woodlawn Avenue between E Street and F Street, along E Street, Marina Parkway, Street C, and Street A within the Bayfront development area, and along H Street between the Bayfront and Third

Avenue. Variations in the route near the E Street Trolley Station are also considered. The route would operate as a two-way loop with stops in both directions.

To initially encourage public use of the shuttle, shuttles would typically run every 15 minutes. After the shuttle service has been established, it may be prudent to reevaluate shuttle frequency based on the ridership that is achieved to determine changes in headways.

As shown in Exhibit 4, a minimum of four shuttle stops will initially be included within the Proposed Project area. Each of these stops is further described below:

- Stop #1 (Sweetwater Lodging/Nature Center): This stop is near the north end of the Master Plan area. Although development densities here are not especially high, this location is directly on the shuttle route, not otherwise served by transit, and would benefit from a direct, non-stop connection to the E Street Trolley Station.
- Stop #2 (RCC): This stop is located along E Street adjacent to the proposed RCC.
- Stop #3 (Marina): This stop is located near the Marina Parkway/Street C intersection and near the various uses in the marina. This station will be within a quarter-mile walking distance of the high-density residential component of the Master Plan.
- Stop #4 (Street A): This stop is located along Street A and will serve the hotel, retail, and cultural uses on site.

Increasing access to public transit options will increase the public's access to the shoreline.

6. Roadway Improvements

In addition to the above discussion of circulation improvements, the CVBMP identifies a number of roadway improvements that will result in increased public access to the shoreline. Already, the I-5/SR 54 interchange has been completed and provides regional access to the Bayfront. However, the regional entries to the Bayfront are limited by the off-ramp configurations of Interstate 5 and the location of wetland resources.

Exhibit 4 – Chula Vista Bayfront Shuttle

At the present time, access is available at E Street, H Street, and J Street. One additional bridge at F Street provides a local connection to the east side of I-5 but no freeway on- or off-ramps are provided. The H Street ramps, because of their location, will primarily serve the Goodrich facilities. The J Street ramps primarily serve District lands and the marina westerly of Goodrich. J Street also serves as the termination of Marina Parkway. Marina Parkway will be the main street through the Bayfront and run from the J Street/Bay Boulevard intersection west toward the marina, then north-south parallel to the marina within the District's jurisdiction. Marina Parkway will be constructed as a divided roadway with a landscaped median. In addition, Bay Boulevard will be an improved frontage road serving the areas easterly of the railroad ROW. These proposed improvements are designed to increase access to the shoreline.

7. Parking Allocations

Access to parking is paramount for allowing for public access to the shoreline. The CVBMP seeks to encourage public access to the shoreline by ensuring that adequate parking is provided. This includes parking for all public, park, and open spaces uses in the Bayfront. In general, sufficient parking will be required and incorporated into the private development of the Bayfront with some additional off-street and on-street public parking to serve the community parks and other open space resources to assure there is adequate public access to coastal resources. In the Harbor District, typical parking requirement standards for high intensity uses may be reduced if it can be demonstrated that the use will be adequately served by alternative transit. The implementation of restrictions on public parking, which would impede or restrict public access to beaches, trails or parklands, (including, but not limited to, the posting of "no parking" signs, red curbing, physical barriers, imposition of maximum parking time periods, and preferential parking programs) shall be prohibited.

By utilizing "shared parking" among uses that have predictable and opposite peak parking demands, increased public access is supported. The redevelopment of the Bayfront is meant to entice people to the shoreline. It is therefore imperative that parking is provided in an efficient manner, sharing spaces among uses when practical, and in a manner that does not intrude upon the scenic qualities of the Bayfront. Where feasible, public use of private parking facilities underutilized on weekends and holidays (i.e., office buildings) shall be permitted in all locations

within ¼ mile of the shoreline. Tables 1 through 4 detail parking requirements for the various phases of the project.

As illustrated in Tables 1 through 4, more than adequate parking will be provided for all phases of the project. In most cases parking provided is well above the parking required.

8. Summary

The CVBMP implements a strategy for an extensive multi-modal pedestrian, bicyclist, mass-transit and automobile-based system. In addition, it provides a variety of inviting and low-cost public recreational opportunities for the residents and visitors of the Chula Vista waterfront. Overall, the CVBMP entices people to the shoreline by creating a vibrant Bayfront community that includes a mix of residential and commercial uses which is complemented in design by enhancing the public's access to the shoreline by increasing pedestrian, bikeway, and public transit connections.

TABLE 1

Phase I Parking Summary

Phase	Parcel	Land Use	Intensity[1]	Rate[2]	Parking Required	Parking Provided	Provided – Required
Sweetwater District							
I	S-2	Signature Park	18.0 ac	12 : ac	216	216	0
I	SP-3	Nature Center Parking and Access Road	—	—	100	100	0
Subtotal					**316**	**316**	**0**
Harbor District							
I	H-3	Hotel	2,000 rm	1 : rm	2,000	2000	0
I	H-3	Hotel Restaurant	1,600 seats	0.11 : seats	176	200	24
I	H-3	Conference Center	415 ksf	1.6 : ksf	664	700	36
—	H-8/HP-1	Signature Park	18.0 ac	12 : ac	216	237	21
—	H-9	Existing Marina	—	—	241 (c)	241	0
I	H-13/H-14	Residential (d)	1,500 du	1.5 : du	2,250	2,300	50
I	H-17	Fire Station	2.0 ac	—	15	15	0
I	H-18	Interim Surface Parking	9.0 ac	—	0	1100	1100
I	H-21	Existing Marina	—	—	338 (c)	338	0
I	HP-3	50-Foot Baywalk	2.6 ac	4 : ac	11	0	-11
I	HP-7	Existing Marina View Park	6.6 ac	12 : ac	79	79	0
I	HP-15	Existing Bayfront Park (e)	10.1 ac	12 : ac	160	160	0
Subtotal					**6,150**	**7,370**	**1,220**
TOTAL					**6,466**	**7,686**	**1,220**

SOURCE: Kimley-Horn and Associates 2008.

rm = rooms; ac = acres; ksf = thousand square feet; du = dwelling units

[1]The intensity of each land use was provided by the Port of San Diego.

[2]The parking rate was provided by the Port of San Diego (Port 1991).

TABLE 2

Phase II Parking Summary

Phase	Parcel	Land Use	Intensity[1]	Rate[2]	Parking Required	Parking Provided	Provided – Required
Harbor District							
II	H-9	Retail/Commercial Recreation	50 ksf	4 : ksf	200	203	3
—	H-9	Existing Marina	—	—	241 (c)	241	0
II	H-15	Mixed Use Office	210 ksf	3 : ksf	630	630	0
II	H-15	Visitor Hotel	250 rm	1.04 : rm	260	260	0
II	H-15	Retail	120 ksf	4 : ksf	480	480	0
II	H-15	General Office	90 ksf	3 : ksf	270	270	0
II	H-18	Interim Surface Parking	—	—	0	1,100	1,100
—	H-21	Existing Marina	—	—	338 (c)	338	0
II	H-23	Hotel	500 rm	1 : rm	500	400	−100
II	H-23	Cultural	100 ksf	1 : ksf	100	100	0
II	H-23	Retail	100 ksf	4 : ksf	400	300	−100
II	HP-03	50-Foot Baywalk	0.9 ac	4 : ac	3	0	−3
—	HP-07	Existing Marina View Park	6.6 ac	12 : ac	79	79	0
—	HP-15	Existing Bayfront Park (e)	10.1 ac	12 : ac	160	160	0
II	HP-28	H Street Pier	0.4 ac	12 : ac	5	0	−5
Subtotal					**3,666**	**4,561**	**895**
TOTAL					**3,666**	**4,561**	**895**

SOURCE: Kimley-Horn and Associates 2008.

rm = rooms; ac = acres; ksf = thousand square feet; du = dwelling units

[1]The intensity of each land use was provided by the Port of San Diego.

[2]The parking rate was provided by the Port of San Diego (Port 1991).

TABLE 3

Phase III Parking Summary

Phase	Parcel	Land Use	Intensity[1]	Rate[2]	Parking Required	Parking Provided	Provided – Required
Harbor District							
—	H-9	Existing Marina	—	—	241(c)	241	0
III	H-18	Interim Surface Parking	9.0 ac	—	0	900	900
III	H-21	Retail/Commercial Recreation	150 ksf	4 : ksf	600	262	-338
—	H-21	Existing Marina	—	—	338 (c)	338	0
III	HP-3	50-Foot Baywalk	3.0 ac	4 : ac	12	0	-12
III	HP-15	Existing Bayfront Park (e)	10.1 ac	12 : ac	160	160	0
Subtotal					**1,351**	**1,901**	**550**
Otay District							
III	O-3A/O-3B	RV Park	236 du	1 : du	236	236	0
III	OP-1/OP-3	South Park/Open Space	51.0 ac	4 : ac	204	204	0
Subtotal					**440**	**440**	**0**
TOTAL					**1,791**	**2,341**	**550**

TABLE 4

Phase IV Parking Summary

Phase	Parcel	Land Use	Intensity[1]	Rate[2]	Parking Required	Parking Provided	Provided – Required
Sweetwater District							
IV	S-1	Resort Hotel	750 rm	1 : rm	750	750	0
IV	S-3	Mixed Use Commercial	120 ksf	4 : ksf	480	480	0
IV	S-4	Office	120 ksf	3 : ksf	360	360	0
Subtotal					**1,590**	**1,590**	**0**
Harbor District							
IV	H-1A	Signature Park	5.0 ac	12 : ac	60	68	8
IV	H-1/HW-6	Community Boating Center	200 berth	0.7 : berth	180	180	0
IV	H-9	Reconfigured Marina	200 berth	0.7 : berth	140	220	80
IV	H-12	Restaurant	25 ksf	9.3 : ksf	233	0	-233
IV	H-12	Ferry Terminal	1 site	22 : site	22	0	-22
IV	H-18	Office/Parking	100 ksf	3 : ksf	300	2,450	2,150
IV	H-21	Reconfigured Marina	500 berth	0.7 : berth	350	350	0
IV	HP-3	50-Foot Baywalk	2.0 ac	4 : ac	8	0	-8
IV	HP-28	H Street Pier	0.4 ac	12 : ac	5	0	-5
Subtotal					**1,297**	**3,268**	**1,971**
TOTAL					**2,887**	**4,858**	**1,971**

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APPENDIX D

Biological Resources Survey Report

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DUDEK

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March 27, 2015 8313-03

Mayra Medel
San Diego Unified Port District
3165 Pacific Highway
San Diego, California 92112

Subject: ***Biological Resources Survey Report for the E Street Realignment in Chula Vista, Chula Vista Bayfront Master Plan, California***

Dear Ms. Medel:

This biological resources survey report describes the existing biological conditions of the Sweetwater District parcel and the H-3 parcel within the Harbor District, located within the boundary of the Chula Vista Bayfront Master Plan (CVBMP) in Chula Vista, California. This report describes the results of vegetation mapping, rare plant survey, jurisdictional delineation, and focused surveys for burrowing owl (*Athene cunicularia*), coastal California gnatcatcher (*Polioptila californica californica*), northern harrier (*Circus cyaneus*), and Belding's savannah sparrow (*Passerculus sandwichensis beldingi*) and discusses survey methods, vegetation communities and special-status biological resources present on site. This report was also prepared in accordance with the Chula Vista Bayfront Development Policies. Specifically, this report identifies the relevant conditions and policies that will help guide the development of the Chula Vista Bayfront and determines consistency with those policies.

Since completion of the Final Environmental Impact Report (FEIR) for the CVBMP in 2010, site conditions and elements of the project have changed. This biological resources survey report addresses some of the site updates within the Sweetwater District and H-3 parcels relating to the realignment of E Street.

1 PROJECT LOCATION

The E Street Realignment study area is located west of Interstate 5, north of Lagoon Drive and Marina Parkway, and abuts the San Diego Bay in the City of Chula Vista, California (Figure 1). The CVBMP planning area incorporates three separate districts, but the E Street Realignment study area is restricted to the Sweetwater District and H-3 parcels within the Harbor District. Specifically, the study area is mapped in the northwest portion of Section 4 and the northeast portion of Section 5, Township 18 South, Range 2 West on the National City and Imperial Beach U.S. Geological Survey 7.5-minute quadrangle (Figure 2).

2 REGULATORY CONTEXT

This section describes the regulatory framework relevant for this project.

2.1 Federal

The federal Endangered Species Act (FESA) of 1973 (16 U.S.C. 1531 et seq.), as amended, is administered by U.S. Fish and Wildlife Service (USFWS) for most plant and animal species, and by the National Oceanic and Atmospheric Administration–National Marine Fisheries Service for certain marine species. This legislation is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend and provide programs for the conservation of those species, thus preventing extinction of plants and wildlife. FESA defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Under FESA, it is unlawful to take any listed species; "take" is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

FESA allows for the issuance of incidental take permits for listed species under Section 7, which is generally available for projects that also require other federal agency permits or other approvals, and under Section 10, which provides for the approval of habitat conservation plans on private property without any other federal agency involvement. Upon development of an habitat conservation plan, USFWS can issue incidental take permits for listed species.

Pursuant to Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (ACOE) regulates the discharge of dredged and/or fill material into waters of the United States. The term "wetlands" (a subset of waters) is defined in 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." In the absence of wetlands, the limits of ACOE jurisdiction in non-tidal waters, such as intermittent streams, extend to the ordinary high water mark, as defined in 33 CFR 328.3(e).

The Migratory Bird Treaty Act was originally passed in 1918 as four bilateral treaties, or conventions, for the protection of a shared migratory bird resource. The primary motivation for the international negotiations was to stop the "indiscriminate slaughter" of migratory birds by market hunters and others (16 U.S.C. 703–712). Each of the treaties protects selected species of birds and provides for closed and open seasons for hunting game birds.

The Migratory Bird Treaty Act protects over 800 species of birds. Two species of eagles that are native to the United States, the bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*), were granted additional protection within the United States under the Bald and Golden Eagle Protection Act (16 U.S.C. 668–668d) to prevent the species from becoming extinct.

2.2 State

The California Department of Fish and Wildlife (CDFW) administers the California Endangered Species Act (CESA), which prohibits the take of plant and animal species designated by the Fish and Game Commission as endangered or threatened in the state of California. Under CESA Section 86, "take" is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA Section 2053 stipulates that state agencies may not approve projects that will "jeopardize the continued existence of any endangered species or threatened species, or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy."

CESA defines an endangered species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease." CESA defines a threatened species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the Commission as rare on or before January 1, 1985, is a threatened species." A candidate species is defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the Commission has published a notice of proposed regulation to add the species to either list." CESA does not list invertebrate species.

Section 2081(b) and (c) of the California Fish and Game Code authorizes take of endangered, threatened, or candidate species if take is incidental to otherwise lawful activity and if specific criteria are met. These provisions also require CDFW to coordinate consultations with USFWS for actions involving federally listed species that are also state-listed species. In certain circumstances, Section 2080.1 of CESA allows CDFW to adopt a federal incidental take statement or a 10(a) permit as its own, based on its findings that the federal permit adequately protects the species and

is consistent with state law. A Section 2081(b) permit may not authorize the take of "Fully Protected" species and "specified birds" (California Fish and Game Code, Sections 3505, 3511, 4700, 5050, 5515, and 5517). If a project is planned in an area where a fully protected species or a specified bird occurs, an applicant must design the project to avoid take.

Pursuant to Section 1602 of the California Fish and Game Code, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. A Streambed Alteration Agreement is required for impacts to jurisdictional wetlands in accordance with Section 1602 of the California Fish and Game Code.

Section 2835 of the California Fish and Game Code allows the Department to authorize incidental take in a natural communities conservation plan (NCCP). Take may be authorized for identified species whose conservation and management is provided for in the NCCP, whether or not the species is listed as threatened or endangered under FESA or CESA, provided that the NCCP complies with the conditions established in Section 2081 of the California Fish and Game Code. The NCCP provides the framework for the San Diego Multiple Species Conservation Program (MSCP) plans.

2.3 California Coastal Act

Under the California Coastal Act of 1976 (CCA), the California Coastal Commission (CCC) regulates the "coastal zone" and requires a coastal development permit for almost all development within this zone. The CCA also protects designated sensitive coastal areas by providing additional review and approvals for proposed actions in these areas. The CCA defines wetlands as "lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, swamps, mudflats, and fens" (California Public Resources Code, Section 30121). The CCA allows diking, filling, or dredging of wetlands for certain uses, such as restoration. The CCA also directs each city or county within the coastal zone to prepare a local coastal program for CCC certification (California Public Resources Code, Section 30500). Under this definition, the CCC takes jurisdiction over all wetlands (as defined by the presence of any one of the three ACOE criteria (i.e., using the Cowardin method)), and all land lower than the 4.5-foot contour.

2.4 Chula Vista MSCP Subarea Plan

Due to the number of endangered species in the region, the State of California enacted the Natural Communities Conservation Planning Act, which promotes the development of regional conservation plans to ensure adequate protection of special-status species to such a degree that

lead agencies participating under approved plans would not need to seek project-specific approval for pre-authorized take of listed species and/or their supporting habitats. Within southern San Diego County, a regional MSCP was developed in the mid-1990s that provided a framework for the development of individual subarea plans that would allow for participating municipalities and special districts to obtain take authorization through compliance with the MSCP. The H-3 parcels are located within the jurisdiction of the City of Chula Vista MSCP Subarea Plan (City of Chula Vista 2003).

2.5 Chula Vista Bayfront Development Policies

As a condition of the Port Master Plan Amendment (PMPA) for the CVBMP, a series of development policies reflect "policies from adopted and approved plans, certified environmental documents, enforceable settlement agreements, required mitigation measures, and conditions included in the approval process" of the FEIR and PMPA (Port of San Diego 2012). The policy document "reflects all conditions and policies that will apply to and guide the development of the Bayfront" (Port of San Diego 2012). This biological resources survey report considers and reflects the relevant policies as described in the document.

2.6 CEQA

The California Environmental Quality Act (CEQA) requires identification of a project's potentially significant impacts on biological resources and ways that such impacts can be avoided, minimized, or mitigated. The act also provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts.

2.6.1 Special-Status Plants and Wildlife

The CEQA Guidelines define endangered animals or plants as species or subspecies whose "survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors" (14 CCR 15380(b)(1)). A rare animal or plant is defined in CEQA Guideline 15380(b)(2) as a species that, although not currently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or … [t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act." Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing, as defined further in CEQA Guideline 15380(c).

For purposes of this impact analysis, species are considered sensitive if they are (1) listed or proposed for listing by state or federal agencies as threatened or endangered (CDFW 2014a, 2014b); (2) plant species with a California Rare Plant Rank (CRPR) (formerly CNPS List) of 1A, 1B, 2A, or 2B (CNPS 2014); (3) included on the City of Chula Vista's MSCP Subarea Plan list of species evaluated for coverage or list of narrow endemic plant species (City of Chula Vista 2003) (for lands within the City's jurisdiction); or (4) considered rare, endangered, or threatened by the California Natural Diversity Database (CDFW 2014b).

Some mammals and birds are protected by the state as fully protected species, as described in the California Fish and Game Code, Sections 4700 and 3511, respectively. Fully protected species may not be taken or possessed without a permit from the California Fish and Game Commission, and no permit is available for the incidental take of a fully protected species. Species considered state candidates for listing as threatened or endangered are subject to the taking prohibitions and provisions under CESA as if the species were listed.

2.6.2 Special-Status Vegetation Communities

Section IV, Appendix G (Environmental Checklist Form) of the CEQA Guidelines (14 CCR 15000 et seq.) requires an evaluation of impacts to "any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game[1] or the U.S. Fish and Wildlife Service." For the purposes of this analysis, native vegetation communities identified as requiring mitigation under the MSCP are considered special status due to having been identified in a local and regional conservation plan.

3 METHODS

Dudek conducted vegetation mapping, rare plant surveys, a jurisdictional delineation, and focused surveys for Belding's savannah sparrow, burrowing owl, and coastal California gnatcatcher for the E Street Realignment between March and June 2014. Surveys for the northern harrier were conducted in conjunction with other surveys, especially the surveys for the burrowing owl and Belding's savannah sparrow. Table 1 lists the dates, conditions, and survey focus for each survey performed.

[1] Effective January 1, 2013, the California Department of Fish and Game (CDFG) changed its name to the California Department of Fish and Wildlife. In this document, references to guidance or documents prior to the official name change use CDFG, whereas references after the name change use CDFW. References in quoted material are not altered.

Table 1
Schedule of Surveys

Date	Hours	Personnel	Focus	Conditions
3/28/14	0710–1205	AMH	Belding's savannah sparrow surveys	58°F–66°F, overcast–clear, 1–3 mph wind
4/1/14	0800–1540	SCG	Burrowing owl	57°F–65°F, 100%–30% cc, 1–5 mph wind
4/2/14	0810–1530	SCG	Burrowing owl	61°F–67°F, 35%–10% cc, 1–3 mph wind
4/4/14	0630–1030	JDP	Belding's savannah sparrow surveys	49°F–68°F, 90% cc, 1–2 mph wind
4/14/14	0800–1630	VRJ, EAW	Vegetation mapping and jurisdictional delineation	64°F–68°F, 0% cc, 0–5 mph wind
4/18/14	0600–1130	JDP	Belding's savannah sparrow surveys	53°F–70°F, 100%–90% cc, 1–5 mph wind
4/24/14	0630–1030	JDP	Coastal California gnatcatcher	58°F–67°F, 10% cc; 0–4 mph wind
4/25/14	0630–1100	JDP	Belding's savannah sparrow surveys	57°F–64°F, 100% cc, 1–10 mph wind
4/29/14	0700–1100	EAW, SCG	Burrowing owl	67°F–76°F; 0% cc; 0–4 mph wind
4/29/14	0630–1030	JDP	Belding's savannah sparrow surveys	65°F–78°F, 0% cc, 1–2 mph wind
5/9/14	0630–0930	JDP	Coastal California gnatcatcher	57°F–67°F, 10%–0% cc, 0–4 mph wind
5/16/14	0730–1030	JDP	Coastal California gnatcatcher	68°F–80°F, 30%–20% cc, 0–3 mph wind
5/22/14	NR	ACT, KM	Rare plant survey	60°F–70°F; 75% cc – clear; 0–4 mph wind
5/27/14	0900–1430	SCG	Burrowing owl	63°F–77°F; 10%–20% cc; 0–3 mph wind
6/16/14	0800–NR	SCG	Burrowing owl	66°F; 5% cc; 0–2mph wind

Notes: ACT = Andy C. Thomson; AMH = Anita M. Hayworth, PhD; EAW = Emily A. Wier; KM = Kyle Matthews; JDP = Jeffrey D. Priest; SCG = Scott C. Gressard; VRJ = Vipul R. Joshi.
°F = degrees Fahrenheit; mph = miles per hour; cc = cloud cover; NR = not recorded.

3.1 Vegetation Community and Land Cover Mapping

Plant communities were mapped in the field directly onto a 100-scale (1 inch = 100 feet) color digital orthographic map of the property. These boundaries and locations were digitized by Dudek geographic information system (GIS) technician Amna Javed using ArcGIS software.

Vegetation community classifications used in this report follow Holland (1986), as revised by Oberbauer et al. (2008).

3.2 Flora

All native and naturalized plant species encountered on the project site were identified and recorded. Latin and common names for plant species with a CRPR follow the California Native Plant Society (CNPS) online *Inventory of Rare and Endangered Plants* (2013). For plant species

without a CRPR, Latin names follow the *Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California* (Jepson Flora Project 2013), and common names follow the U.S. Department of Agriculture Natural Resources Conservation Service PLANTS Database (USDA 2013).

The potential for special-status plant and wildlife species to occur on the project site was evaluated based on site location, elevation, vegetation condition, vegetation/land covers, and soils present. Land covers on site were mapped in the field directly onto a 200-scale (1 inch = 200 feet) aerial base (Bing Maps 2014).

3.3 Fauna

Dudek biologists walked the study area to identify and record all wildlife species, as detected during field surveys by sight, calls, tracks, scat, or other signs. In addition to species actually observed, expected wildlife usage of the site was determined according to known habitat preferences of regional wildlife species and knowledge of their relative distributions in the area. No trapping or focused surveys for nocturnal species was conducted. Latin and common names of animals follow Crother (2008) for reptiles and amphibians, American Ornithologists' Union (AOU 2012) for birds, Wilson and Reeder (2005) for mammals, North American Butterfly Association (NABA 2001) or San Diego Natural History Museum (SDNHM 2012) for butterflies, and Moyle (2002) for fish.

All wildlife species detected during the field surveys by sight, vocalizations, burrows, tracks, scat, and other signs were recorded. Binoculars (10 mm × 40 mm) were used to aid in the identification of observed wildlife.

3.3.1 Belding's Savannah Sparrow

A total of five focused surveys for the Belding's savannah sparrow were conducted within suitable coastal salt marsh habitat within the Sweetwater District parcel according to the California Department of Fish and Game (CDFG) protocol (CDFG 2001). Any savannah sparrows observations were recorded and mapped and digitized using ArcGIS.

3.3.2 Burrowing Owl

Protocol-level surveys for burrowing owl, a CDFW Species of Special Concern (SSC), were conducted in potentially suitable habitat types (e.g., grasslands, fallow agricultural fields) located throughout the project area. The surveys were conducted according to the CDFG Staff Report on Burrowing Owl Mitigation (CDFG 2012), which provides guidance for conducting a habitat

assessment as well as breeding and non-breeding season surveys. A total of four survey visits were conducted according to the CDFG 2012 schedule: at least one site visit between February 15 and April 15 and a minimum of three survey visits, at least 3 weeks apart, between April 15 and July15, with at least one visit after June15.

3.3.3 Coastal California Gnatcatcher

Surveys for the federally threatened coastal California gnatcatcher (gnatcatcher) were conducted under the authorization of permit TE-840619 (permit-holder Jeff Priest) according to the schedule provided in Table 1. The survey followed the most current protocol established by the USFWS, *Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol, July 28, 1997* (USFWS 1997).

Suitable habitat within the project, including suitable coastal sage scrub habitat, was surveyed three times for the gnatcatcher. The selected route ensured complete coverage of all suitable habitat within the study area. A topographic map of the site (scale: 1 inch = 100 feet) overlaid with vegetation polygons was used for the survey. Weather conditions during surveys are provided in Table 1, and were suitable for detecting gnatcatcher. Binoculars were used to aid in detecting and identifying bird species. Taped gnatcatcher vocalizations were played frequently to elicit a response from the species, if present. The tape was played approximately every 50 to 100 feet within suitable habitat. When a gnatcatcher was detected, playing of the tape ceased in order to avoid harassment and the gnatcatcher location was recorded on the site map. In addition, all species observed within the project site during the focused gnatcatcher surveys were recorded.

3.3.4 Northern Harrier

The surveys conducted for Belding's savannah sparrow and burrowing owl also included the detection of the nesting northern harrier (harrier) within the marshland habitats. There is currently no survey protocol for the harrier and the species is not listed by either the state or federal agencies; however, the agencies consider nesting of the species a rare occurrence. Nesting behavior was included, as were observation of a food pass from the male to the female; observations of territorial behavior, since the hunting females often search near the nest locations; and observations of young birds, which would indicate that a nest site is near. Breeding harriers are very aggressive and easily detected. Any nesting harriers observed were recorded and mapped.

3.4 Jurisdictional Delineation

A jurisdictional delineation was conducted within the project boundary to delineate areas under the jurisdiction of the CDFW, pursuant to Sections 1600–1603 of the California Fish and Game Code; under the jurisdiction of the ACOE, pursuant to Section 404 of the federal Clean Water Act; under jurisdiction of Regional Water Quality Control Board (RWQCB), pursuant to Clean Water Act Section 401 and the Porter-Cologne Water Quality Control Act; and under the jurisdiction of the CCC under the CCA. The delineation was further conducted consistent with Policies 2.2 and 2.3 of the Chula Vista Bayfront Development Policies guidance (Port of San Diego 2012). The ACOE-jurisdictional wetlands delineation was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (ACOE 1987), the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (ACOE 2008), and *Rapanos* guidance (ACOE and EPA 2008); hydrology, vegetation, and soils were examined at potential wetland sites and were recorded on wetland determination data forms.

A predominance of hydrophytic vegetation, where associated with a stream channel, was used to define CDFW-regulated riparian vegetation. The limits of areas under the jurisdiction of the RWQCB generally match those areas delineated as ACOE jurisdictional. However, stream channels with evidence of an ordinary high water mark that lack connectivity to waters of the United States may be considered to be under the jurisdiction of RWQCB and CDFW but not under the jurisdiction of ACOE. CCC jurisdiction was based on presence of any one of the three wetland criteria. ACOE jurisdiction over tidal wetlands, regardless of the presence/absence of indicators, extends to 18 inches above mean ordinary high tide elevation. Based on tide charts for the San Diego area, ordinary mean high tide was determined to be approximately 3 feet above mean sea level (amsl); therefore, ACOE's tidal wetlands jurisdiction extends to the 4.5-foot contour amsl (NOAA 2014). It is assumed that RWQCB and CCC also take jurisdiction over this tidal area. Additional wetlands jurisdiction may occur above the 4.5-foot contour, but would be based on presence of appropriate wetlands indicators. CDFW, under the Lake and Streambed Alteration program, does not regulate impacts to marine wetlands that are supported by tidal influences. The extent of wetland features was determined in the field by collecting data using a Global Positioning System (GPS) unit; the shapes were then transferred to a topographic base, and GIS coverage was created.

4 RESULTS

4.1 Site Description

Topography within the project area ranges from sea level in the western portion of the site to approximately 30 feet amsl in the easternmost portion of the site. Soils on site include tidal flat; made land; Huerhuero loam, 2% to 9% slopes; and Huerhuero–Urban land complex, 2% to 9% slopes (USDA 2014). There are no streams or waters located within the study area included in the National Hydrography Dataset. Much of the site was previously used for agriculture and therefore has been subjected to continual perturbation and is currently disturbed. North of the study area is the Sweetwater Marsh National Wildlife Refuge, to the east is Interstate 5 and commercial and industrial businesses, and to the south is a marina and industrial uses. To the west is San Diego Bay.

4.2 Vegetation Communities and Land Covers

Four upland vegetation communities (plus two disturbed forms), two wetland vegetation communities, and six land cover types are present within the study area. Upland vegetation communities include Diegan coastal sage scrub (plus its disturbed form), Diegan coastal sage scrub: broom baccharis dominated (plus its disturbed form), Menzies' goldenbush scrub, and non-native grassland. Wetland vegetation communities include coastal salt marsh and mulefat scrub. Land cover types include beach, developed, disturbed land, eucalyptus woodland, ornamental, and open water. Acreages of vegetation communities and land covers are listed in Table 2 and their spatial distribution is depicted on Figures 3a and 3b.

Table 2
Acreages of Vegetation Communities and Land Covers

Vegetation Community / Land Cover	Holland Code	Acreage
Upland Vegetation Communities		
Diegan coastal sage scrub	32510	10.6
Diegan coastal sage scrub: broom baccharis dominated	32530	2.5
Disturbed Diegan coastal sage scrub	32510	0.8
Disturbed Diegan coastal sage scrub: broom baccharis dominated	32530	13.1
Diegan coastal sage scrub: Isocoma dominated (Menzies' goldenbush scrub)	32510	1.3
Non-native grassland	42200	1.0
	Subtotal	29.2
Wetlands		
Coastal salt marsh	52100	2.8

Table 2
Acreages of Vegetation Communities and Land Covers

Vegetation Community / Land Cover	Holland Code	Acreage
Mulefat scrub	63310	0.2
	Subtotal	*3.0*
Land Cover Types		
Beach	64400	0.3
Developed	12000	51.6
Disturbed land	11300	95.6
Eucalyptus woodland	79100	1.0
Ornamental	12000	1.4
Open water	64110	0.3
	Subtotal	*150.4*
	Total	**182.6**[a]

[a] Total may not sum due to rounding.

4.2.1 Diegan Coastal Sage Scrub

According to Holland (1986), Diegan coastal sage scrub is composed of a variety of soft, low shrubs, characteristically dominated by drought-deciduous species such as California sagebrush (*Artemisia californica*), Eastern Mojave buckwheat (*Eriogonum fasciculatum*), and sages (*Salvia* sp.), with scattered evergreen shrubs, including lemonadeberry (*Rhus integrifolia*) and laurel sumac (*Malosma laurina*). It typically develops on xeric (dry) slopes.

Diegan coastal sage scrub and all its variants generally are recognized as special-status plant communities by federal, state, and local resource agencies. It supports a diversity of special-status plants and animals, and has been reduced by 75% to 80% of its historical coverage throughout Southern California. It is the focus of the current California Natural Communities Conservation Planning Program. Diegan coastal sage scrub is an MSCP Tier II vegetation community (County of San Diego 2010).

Within the Sweetwater District parcel, a man-made berm is planted with coastal sage scrub species, dominated by California sagebrush and California brittlebush (*Encelia californica*) with scattered Eastern Mojave buckwheat. Coastal sage scrub is also mapped adjacent to several of the roadways, dominated by Australian saltbush (*Atriplex canescens*). Areas mapped as disturbed coastal sage scrub contain approximately 20% cover of non-native species, including sweet fennel (*Foeniculum vulgare*), black mustard (*Brassica nigra*), broom baccharis (*Baccharis sarothroides*), and horehound (*Marrubium vulgare*).

4.2.2 Diegan Coastal Sage Scrub: Broom Baccharis Dominated

Broom baccharis scrub is strongly dominated by broom baccharis, and supports other coastal scrub species, such as California sagebrush, Eastern Mojave buckwheat, and sages (Holland 1986). Broom baccharis scrub is an MSCP Tier II vegetation community (County of San Diego 2010).Within the study area, broom baccharis scrub is mostly a monotypic stand of broom baccharis, with scattered California brittlebush, Eastern Mojave buckwheat, and laurel sumac.

The disturbed form of broom baccharis scrub is characterized by more than 20% cover of non-native species, including Uruguayan pampas grass (*Cortaderia selloana*), black mustard, and sweet fennel.

4.2.3 Menzies' Goldenbush Scrub

Menzies' goldenbush scrub (Gray and Bramlet 1992) is a plant association that is dominated by coastal goldenbush (*Isocoma menziesii* var. *vernonioides*). It is not a plant community identified in Holland (1986) or Oberbauer et al. (2008) and would typically be included in the California sage scrub community for mapping purposes. It has been separated from California sage scrub in this report because it supports nearly monotypic patches of Menzies' goldenbush and appears most commonly alongside the edges of salt marsh habitat along the southern and northern boundaries of the project site.

Because this alliance is considered a sub-association of California sagebrush scrub, which is the obligate habitat type for the federally listed threatened coastal California gnatcatcher, it is considered a special-status vegetation community. Areas mapped as Menzies' goldenbush scrub within the study area are dominated by Menzies' goldenbush, along with scattered other species including sweet fennel and Australian saltbush. Menzies' goldenbush scrub is an MSCP Tier II vegetation community (County of San Diego 2010).

4.2.4 Non-Native Grassland

Non-native grassland is characterized by a mixture of weedy, introduced annuals, primarily grasses. It may occur where disturbance by maintenance (mowing, scraping, disking, spraying, etc.), repetitive fire, agriculture, or other mechanical disruptions have altered soils and removed native seed sources from areas formerly supporting native vegetation. Holland (1986) states that non-native grasslands have a sparse to dense cover of annual grasses that are typically 0.2–0.5 meter (0.7–1.6 feet) tall and can be up to 1 meter (3 feet) tall. Wildflowers are often associated with non-native grasslands, especially in years with favorable precipitation (Holland 1986).

According to Holland (1986), grasses that occur in non-native grasslands include oats (*Avena* spp.), bromes (*Bromus* spp.), fescue (*Vulpia* spp.), and Italian ryegrass (*Lolium perenne* ssp. *multiflorum*). Forbs that commonly occur with these grasses include California poppy (*Eschscholzia californica*), filaree (*Erodium* spp.), goldfields (*Lasthenia* spp.), phacelias (*Phacelia* spp.), gilias (*Gilia* spp.), and baby blue-eyes (*Nemophila menziesii*). Non-native grassland also includes land that is used as pasture for grazing purposes. Grasses such as barley (*Hordeum* spp.) and wild oats may grow in these areas. This land has very few native species. Non-native grassland is an MSCP Tier III vegetation community (County of San Diego 2010).

Within the study area, cover of non-native grasses present include slender oat (*Avena barbata*), ripgut brome (*Bromus diandrus*), compact brome (*Bromus madritensis*), mouse barley (*Hordeum murinum*), and smilograss (*Stipa miliacea* var. *miliacea*).

4.2.5 Coastal Salt Marsh

Southern coastal salt marsh is described by Oberbauer et al. (2008) as a coastal community dominated by highly productive salt-tolerant hydrophytes. This vegetation community has a long growing season in the summer, and is found in sheltered areas of bays, lagoons, and estuaries (Holland 1986). Characteristic species include California seablite (*Suaeda californica*), pickleweed (*Salicornia* spp.), alkali seaheath (*Frankenia salina*), turtleweed (*Batis maritima*), and dwarf coastweed (*Amblyopappus pusillus*).

Coastal salt marsh within the project site is found along the coastline and in a depression in the central part of the site. This vegetation community is dominated by Parish's glasswort (*Arthrocnemum subterminale*), marsh jaumea (*Jaumea carnosa*), turtleweed, and saltgrass (*Distichlis spicata*). Scattered alkali seaheath and Lindley's saltbush (*Atriplex lindleyi*) are also present in this vegetation community. Southern coastal salt marsh is an MSCP Tier I vegetation community (County of San Diego 2010).

4.2.6 Mulefat Scrub

Mulefat scrub is an herbaceous riparian scrub dominated by mulefat (*Baccharis salicifolia*) that typically occurs along intermittent stream channels with generally coarse substrate and a moderate depth to the water table (Holland 1986). Frequent flooding and/or scouring apparently maintain this community in an early successional state. Characteristic plant species in this community include mulefat, Santa Barbara sedge (*Carex barbarae*), willows (*Salix* spp.), and giant stinging nettle (*Urtica holosericea*).

Two small areas within the study area were mapped as mulefat scrub and are principally dominated by mulefat with other species, including tree tobacco (*Nicotiana glauca*) and broom baccharis, also present. Mulefat scrub is an MSCP Tier I vegetation community (County of San Diego 2010).

4.2.7 Beach

Beach habitat is described by Oberbauer et al. (2008) as sandy and/or cobbly habitats that line coastal strands, lagoons, lakes, or oceans. Beaches form from wave action, disturbance, and geologic processes. Most beaches are unvegetated, but may support sparse herbaceous species. Within the study area, beach habitat is mapped along the western boundary adjacent to the Pacific Ocean. Beach habitat is generally disturbed, and trash, debris, and concrete slabs are present. Beach habitat is not associated with an MSCP tier (County of San Diego 2010).

4.2.8 Developed Land

Urban/developed land refers to areas that have been constructed upon or disturbed so severely that native vegetation is no longer supported. Developed land includes areas with permanent or semi-permanent structures, pavement or hardscape, landscaped areas, and areas with a large amount of debris or other materials (Oberbauer et al. 2008). Developed areas are generally graded and compacted, sometimes covered with gravel road base or built, and have little to no vegetation present. Developed land is an MSCP Tier IV vegetation community (County of San Diego 2010).

Developed land within the study area includes paved roads, old rail tracks, parking lots, and compacted dirt paths and trails that support no vegetation. Developed land is located within the Sweetwater District and H-3 parcels.

4.2.9 Disturbed Land

Disturbed land is not described by either Holland (1986) or Oberbauer et al. (2008) but is utilized in this report to describe much of the study area. Disturbed land supports nearly complete vegetative cover of primarily non-native and invasive species. This habitat covers much of the study area and has little biological value. Disturbed land is dominated by fennel, black mustard, crown daisy (*Glebionis coronaria*), Maltese star-thistle (*Centaurea melitensis*), Australian saltbush, horehound, and Uruguayan pampas grass. In particular, the site was determined to support a thick layer of thatch that would essentially exclude many special-status species, including burrowing owl or special-status plant species, from being found throughout the site.

Within this land cover type, there are scattered locations of native species, including broom baccharis and California brittlebush. However, these plants are found at too low a density (less than 10% cover) and over too small an area to be specifically incorporated into this habitat community as an identifying characteristic. Areas of dense native vegetation that were identified to provide greater biological value are specifically identified as a different habitat community in order to capture the varied biological makeup of the study area. Disturbed land is an MSCP Tier IV land cover type (County of San Diego 2010).

4.2.10 Eucalyptus Woodland

Although not recognized by Holland (1986) as a native plant community, eucalyptus woodland is a distinct "naturalized" vegetation type that is fairly widespread in Southern California and is considered a woodland habitat. It typically consists of monotypic stands of introduced Australian eucalyptus trees (*Eucalyptus* spp.). The understory is either depauperate or absent owing to shade and the possible allelopathic (toxic) properties of the eucalyptus leaf litter. Although eucalyptus woodlands are of limited value to most native plants and animals, they frequently provide nesting and perching sites for several raptor species. Eucalyptus woodland is an MSCP Tier IV vegetation community, indicating its low value for covered species under the MSCP (County of San Diego 2010).

One area is mapped as eucalyptus woodland within the study area, in the southern region of the Sweetwater District parcel. The woodland is dominated by eucalyptus, but some non-native pine trees (*Pinus* sp.) and palms (*Washingtonia robusta*) are also present.

4.2.11 Ornamental

Areas in the study area mapped as ornamental principally refer to areas where Athel tamarisk (*Tamarix aphylla*) was planted adjacent to roads and the business park. These areas of tamarisk are not associated with any riparian habitat or drainage areas, but contain large (more than 30-foot-tall) planted trees in the form of a windbreak. "Ornamental" also describes areas where non-native pines and scattered sycamores are planted along Bay Boulevard. Ornamental is not formally listed with an MSCP tier, but is considered a Tier IV land cover type due to its similarity to other disturbed and developed land covers (County of San Diego 2010).

4.2.12 Floral Diversity

A total of 99 species of native or naturalized vascular plants, 52 native (50%) and 52 non-native (50%), was recorded on the site (see Appendix A). The high percentage of non-native species is likely due to past uses of the site for agriculture and that much of the site is mapped as disturbed land.

4.3 Special-Status Plant Species

Endangered, rare, or threatened plant species, as defined in Section 15380(b) of the CEQA Guidelines (14 CCR 15000 et seq.), are referred to as "special-status plant species" in this report and include endangered or threatened plant species recognized in the context of CESA and FESA (CDFW 2014a, 2014c), plant species with a CRPR 1 through 4 (CNPS 2014), and plant species covered under the Chula Vista MSCP Subarea Plan (City of Chula Vista 2003).

Special-status plant surveys were conducted within the study area to determine the presence or absence of plant species that are considered endangered, rare, or threatened under CEQA Guideline 15380 (14 CCR 15000 et seq.), as described in Section 3.2. Special-status plant species observed or with a high potential to occur within the study area are presented in Appendix B1. All species with a moderate or high potential to occur have been determined, through the focused survey, to be either present or absent. Special-status plant species known to occur in the surrounding region that are absent or with low potential to occur on site are presented in Appendix B2. The evaluation of each species' potential to occur on site is based on the elevation, habitat, and soils present on site and Dudek's knowledge of biological resources in the area and regional distribution of each species. A number of potentially occurring plant species are conspicuous (e.g., large, woody shrubs) and readily observed if present within an open and largely disturbed site. Due to low rainfall levels during the survey year, many annuals with potential to occur would likely not have bloomed. As a result, there are eight species that were considered to have a high potential to occur on site (but could likely be excluded from this list during a survey year with average rainfall or greater). Three special-status plant species were detected within the study area during the April 2014 survey: San Diego County viguiera (*Bahiopsis laciniata*), California box-thorn (*Lycium californicum*), and estuary seablite (*Suaeda esteroa*) (see Figure 3a).

4.3.1 Species Observed on Site

San Diego County viguiera (*Bahiopsis laciniata*)

San Diego County viguiera is a shrub in the Asteraceae family. This species is found in chaparral and coastal scrub habitats throughout Orange and San Diego Counties in California, and in Baja California and Sonora, Mexico. This species is locally common but threatened by continuing development within the region. It blooms from February through June, and is found at elevations from 60 to 750 meters (200 to 2,460 feet) amsl (CNPS 2014).

A total of 25 individuals were mapped within the project area at the eastern periphery of the Sweetwater District parcel in disturbed broom baccharis scrub and non-native grassland.

California box-thorn (*Lycium californicum*)

California box-thorn is a shrub in the Solanaceae family. This species has a CRPR of 4.2. This species is found in coastal bluff scrub and coastal scrub habitats throughout much of Southern California and the Channel Islands, as well as Arizona, and into Baja California and Sonora, Mexico. California box-thorn blooms from March to August, and is found at ranges from 5 to 150 meters (16 to 500 feet) amsl (CNPS 2014). This species is currently threatened by development, and potentially by foot traffic and trail maintenance.

A total of 10 individuals were mapped throughout the project area. California box-thorn was primarily mapped on the periphery of coastal salt marsh habitats.

Estuary seablite (*Suaeda esteroa*)

Estuary seablite is a perennial herb in the Chenopodiaceae family. This species has a CRPR of 1B.2, indicating that it is rare, threatened, or endangered in California and elsewhere, and is fairly endangered in California as it is restricted to coastal environments. This coastal species is found in coastal salt marshes and swamps at elevations from sea level to 15 feet (5 meters) amsl. The range of this species extends south from Ventura County to Baja California (CNPS 2014). This species is currently threatened by development and recreation.

A total of 85 individuals were mapped within the project area in areas mapped as coastal salt marsh, disturbed land, and adjacent to beach habitat.

4.3.2 Species with High Potential to Occur

The following species were considered to have a high potential to occur within the study area based on the presence of suitable habitat, appropriate elevation, and favorable soil conditions. None of these species was observed during 2014 surveys. However, because these species are annuals that are reliant on seasonal rainfall for growth and there was very little rainfall during the 2013–2014 growing season, the absence of these species during the 2014 surveys cannot be considered conclusive. Considering this condition, the study area has been separated to evaluate these species' presence within different zones, including within the 100-foot buffer area and within the proposed redevelopment area. The study area includes a wide range of habitat quality, from disturbed land composed of non-native species to intact native vegetation communities. The areas where these species are considered to have a high potential to occur are along the western and northern boundaries of the study area, where there is some intact coastal salt marsh habitat. In contrast, they are expected to have a low to moderate potential to occur elsewhere

within the study area (which would be impacted by realignment of E Street), where most of the land is disturbed.

Nuttall's acmispon (*Acmispon prostratus*)

Nuttall's acmispon is an annual herb in the Fabaceae family. This species is found in coastal dune and coastal scrub habitats, generally with sandy soils. There are records for this species primarily in coastal San Diego County and south into Baja California (CNPS 2014). Nuttall's acmispon has a CRPR of 1B.1, indicating that it is rare, threatened, or endangered in California and elsewhere, and it is seriously endangered in California. CNPS (2014) lists threats to this species as development, encroachment by non-native plants, and naval operations at Silver Strand and Imperial Beaches. This species has a high potential to occur along the western and northern boundaries of the study area, but a low potential to occur in the E Street Realignment area.

Coastal dunes milk-vetch (*Astragalus tener* var. *titi*)

Coastal dunes milk-vetch is an annual herb in the Fabaceae family. This species is federally and state endangered, and has a CRPR of 1B.1. Coastal dunes milk-vetch is found in coastal habitats, including coastal bluff scrub, coastal dunes, and coastal prairie, often in areas of sandy soils or vernally mesic areas. There are fewer than 10 occurrences for this species, and it is threatened by urbanization, recreational activities, and non-native plants (CNPS 2014). This species has a high potential to occur along the western and northern boundaries of the study area, but a low potential to occur in the E Street Realignment area.

South coast saltbush (*Atriplex pacifica)*

South coast saltbush is an annual herb in the Chenopodiaceae family. This species has a CRPR of 1B.2, indicating that it is rare, threatened, or endangered in California and elsewhere, and it is fairly endangered in California. This species is found in coastal bluff scrub, coastal dunes, coastal scrub, and playa habitats along coastal California, south into Mexico, and even some occurrences in Arizona. However, this species is fairly rare throughout its range and many historical occurrences are likely extirpated (CNPS 2014). This species has a high potential to occur along the western and northern boundaries of the study area, but a moderate potential to occur in the E Street Realignment area.

Orcutt's pincushion (*Chaenactis glabriuscula* var. *orcuttiana)*

Orcutt's pincushion is an annual herb in the Asteraceae family, and it has a CRPR of 1B.1. This species is found in coastal habitats south of Ventura County, and into Baja California. Orcutt's

pincushion is found in coastal bluff scrub and coastal dune habitats, and is threatened by development and recreation (CNPS 2014). This species has a high potential to occur along the western and northern boundaries of the study area, but a low potential to occur in the E Street Realignment area.

Salt marsh bird's beak (*Chloropyron maritimum* ssp. *maritimum*)

Salt marsh bird's beak is an annual herb hemiparasite in the Orobanchaceae family. This species is federally and state listed as endangered, and has a CRPR of 1B.2. This species is found in coastal California south of San Luis Obispo County and into Baja California. The salt marsh bird's beak is found in coastal dunes and coastal salt marshes and swamps (CNPS 2014). It is threatened by loss of salt marsh habitat, invasion of non-native plants, and other types of development. This species has a high potential to occur along the western and northern boundaries of the study area, but a low potential to occur in the E Street Realignment area.

Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri)*

Coulter's goldfields is an annual herb in the Asteraceae family, and it has a CRPR of 1B.1. This species is found throughout Southern California south of San Luis Obispo and Kern Counties, with some scattered records from the Central Valley (Tehama, Tulare, and Yolo Counties). Coulter's goldfields is found in coastal salt marshes and swamps, playas, and vernal pools. This species is threatened by urbanization, agricultural development, road maintenance, foot traffic, and drought (CNPS 2014). This species has a high potential to occur along the western and northern boundaries of the study area, but a low potential to occur in the E Street Realignment area.

Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii)*

Robinson's pepper-grass is an annual herb in the Brassicaceae family. This species has a CRPR of 4.3, indicating that it has a limited distribution (Watch List (WL)) but is not very endangered in California. Robinson's pepper-grass is found in coastal counties south of Santa Barbara County and into Baja California, as well as in Riverside and San Bernardino Counties, and on Santa Cruz Island. Robinson's pepper-grass is found in chaparral and coastal scrub habitats, and is threatened by development and possibly by invasion of non-native plants (CNPS 2014). This species has a high potential to occur along the western and northern boundaries of the study area, but a moderate potential to occur in the E Street Realignment area.

Brand's phacelia (*Phacelia stellaris)*

Brand's phacelia is an annual herb in the Boraginaceae family, and it has a CRPR of 1B.1. It was previously listed as a candidate for federal listing, but has since been removed from candidacy. This species is found in Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties, as well as in Baja California, Mexico. This species is found in coastal dunes and coastal scrub habitats, and is known from approximately 10 occurrences. Threats to Brand's phacelia include development and invasion of non-native plants (CNPS 2014). This species has a high potential to occur along the western and northern boundaries of the study area, but a low potential to occur in the E Street Realignment area.

4.4 Wildlife

A total of 75 wildlife species, including coastal or oceanic species, grassland and upland species, and some urban-adapted species, were recorded within the site (Appendix C). Due to the diversity of habitat types on site, there is relatively high species diversity. Most species observed were birds, which reflect the extent of focused bird surveys that were conducted within the study area.

Focused surveys for coastal California gnatcatcher and burrowing owl were negative. Belding's savannah sparrow and northern harrier (foraging only) were found within the study area.

4.4.1 Special-Status Wildlife Species

Endangered, rare, or threatened wildlife species, as defined in CEQA Guidelines, Section 15380(b) (14 CCR 15000 et seq.), are referred to as "special-status wildlife species" and, as used in this report, include (1) endangered or threatened wildlife species recognized in the context of CESA and FESA (CDFW 2014d); (2) California Species of Special Concern (SSC) and WL species, as designated by the CDFG (2011); (3) mammals and birds that are fully protected (FP) species, as described in the California Fish and Game Code, Sections 4700 and 3511; (4) Birds of Conservation Concern (BCC), as designated by the USFWS (2008); and (5) wildlife species covered under the Chula Vista MSCP Subarea Plan (City of Chula Vista 2003).

Special-status wildlife species observed in the study area or with high potential to occur are presented in Appendix D1. Special-status wildlife species known to occur in the surrounding region but absent or with low to moderate potential to occur on site are presented in Appendix D2. For each species listed, a determination is made regarding the potential for the species to occur on site based on information gathered during the literature review and site visits, including the location of the site, vegetation communities or land covers present, current site conditions, and past and present land use.

Seven special-status wildlife species were detected within the project area: Belding's savannah sparrow, Cooper's hawk (*Accipiter cooperii*), osprey (*Pandion haliaetus*), northern harrier, Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), brown pelican (*Pelecanus occidentalis*), and double-crested cormorant (*Phalacrocorax auritus*). These species are described in further detail under Species Observed on Site; locations of special-status wildlife species observations are provided on Figures 3a and 3b.

There is no USFWS-designated critical habitat located within the study area. There is critical habitat for western snowy plover (*Charadrius alexandrines nivosus*) located north of the study area, within the Sweetwater Marsh Wildlife Refuge.

4.4.2 Species Observed on Site

Belding's savannah sparrow (*Passerculus sandwichensis beldingi*)

Belding's savannah sparrow is a state endangered, MSCP covered, and County Group 1 species found in coastal salt marshes dominated by pickleweed in coastal Southern California and northern Baja California. This subspecies is nonmigratory, and nests in dense marsh vegetation, including pickleweed, shoregrass (*Distichlis littoralis*), and turtleweed. Habitat loss and fragmentation are a serious threat to these species, as there is very little to no dispersal between populations separated by even 0.25 mile (Unitt 2004).

Within the project area, a total of three pairs and one individual Belding's savannah sparrow were observed during focused surveys for this species. Two of the pairs were observed with juveniles. All Belding's savannah sparrow locations were mapped within the Sweetwater District parcel (Figure 3a).

Brown pelican (*Pelecanus occidentalis californicus*)

Brown pelican is a federally and state delisted, CDFW fully protected, County Group 2, and MSCP covered species. This species occurs in estuarine, marine subtidal, and marine pelagic waters along coastal California. The brown pelican feeds primarily on fish, and will occasionally consume crustaceans, carrion, and young of conspecifics (Zeiner et al. 1990). This species nests on the ground, commonly on the Channel Islands. Roosting areas are chosen for inaccessibility, and include offshore or mainland rock outcrops, mudflats, beaches, wharfs, and jetties.

Brown pelicans were observed flying over the project site on several survey visits. However, no breeding or nesting was observed on site. This species is not included on Figure 3a or 3b.

California horned lark (*Eremophila alpestris actia*)

The California horned lark is a CDFW WL species, and is found in open arid habitats year-round in San Diego County. Common habitats include the coastal strand, arid grasslands, and sandy deserts where there is open ground for foraging for insects and seeds. This species' distribution in coastal San Diego County is patchy, due to the general lack of habitat and threats from urban-adapted predators. Horned larks nest on the ground, but dig a small depression such that the nest is slightly below ground level (Unitt 2004). This nonmigratory subspecies is generally concentrated throughout coastal San Diego County, in Warner Valley, and in the Anza Borrego desert.

Within the project area, two pairs were observed within the H-3 parcel (see Figure 3b). Individuals were observed during the breeding season for this species, and were exhibiting nesting behavior.

Cooper's hawk (*Accipiter cooperii*)

Cooper's hawk is a CDFW WL and County Group 1 species. This species is found throughout California in wooded areas. It inhabits live oak, riparian, deciduous, or other forest habitats near water. Nesting and foraging usually occur near open water or riparian vegetation. Nests are built in dense stands with moderate crown depths, usually in second-growth conifer or deciduous riparian areas. Cooper's hawks use patchy woodlands and edges with snags for perching while they are hunting for prey such as small birds, small mammals, reptiles, and amphibians within broken woodland and habitat edges (Zeiner et al. 1990).

One Cooper's hawk was observed foraging in the southwestern region of the Sweetwater District parcel (see Figure 3a). There are suitable nesting areas on site, including large eucalyptus trees.

Double-crested cormorant (*Phalacrocorax auritus*)

Double-crested cormorant is a CDFW WL species and County Group 2 species. This species can be found both in coastal and inland habitats, including along fresh, salt, and estuarine waters. It is most common in coastal California south of San Luis Obispo. This species feeds primarily on fish, and will roost near water on rocks, islands, steep cliffs, trees, wharfs, jetties, and transmission lines (Zeiner et al. 1990). Perches generally are lacking in vegetative cover. This species is a year-round resident of San Diego County.

Double-crested cormorant was observed flying over the project site on several survey visits. However, no breeding or nesting was observed on site. This species is not included on Figure 3a or 3b.

Osprey (*Pandion haliaetus*)

Osprey is a CDFW WL and County Group 1 species. This species suffered regional decline due to pesticide poisoning during the middle of the twentieth century, but it has since rebounded and nesting pairs are once again found within San Diego County. There are non-migratory residents, which breed in San Diego County, as well as migratory individuals that are found within the County during winter months. This species is found near large water bodies, including lakes, ocean, estuaries, rivers, and marsh habitats. Ospreys build large stick nests, often on man-made structures, often near water bodies. The primary source of food for this species is fish (Unitt 2004).

One breeding pair has maintained a nest located between the Sweetwater District and H-3 parcels (see Figure 3b). Individual ospreys were observed foraging along the coast of the project site on multiple survey visits.

Northern harrier (*Circus cyaneus*)

Northern harrier is a CDFW SSC, MSCP covered, and County Group 1 species. This species is widespread throughout North America, but is of regional concern in California and San Diego. Northern harriers use a wide variety of open habitats in California, including deserts, coastal sand dunes, pasturelands, croplands, dry plains, grasslands, estuaries, floodplains, and marshes. The species also forages over coastal sage scrub and other open scrub communities. Nesting areas are associated with marshes, pastures, grasslands, prairies, croplands, desert shrub-steppe, and riparian woodland (Smith et al. 2011).

Breeding generally occurs from March to May. Nests are located on the ground in patches of dense and tall vegetation, particularly wetlands and grasslands. Clutch size ranges from four to nine eggs that are incubated for 30 to 32 days (Cripe 2000; Davis and Niemela 2008; Smith et al. 2011). Chicks typically fledge at 4 to 5 weeks by making brief flights near the nest (Smith et al. 2011). Northern harrier is primarily threatened by extensive loss of habitat (Cripe 2000), including freshwater and estuarine wetland breeding habitat and grasslands (Smith et al. 2011).

One pair of northern harriers was observed foraging on site at different times and on different survey days. However, no breeding or nesting was observed on site. Because the species was observed using various parts of the site for foraging and was determined to not be nesting on site, this species is not included on Figure 3a or 3b.

Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)

Southern California rufous-crowned sparrow is a CDFW WL, County Group 1, and MSCP covered species. It is found in sparse, mixed chaparral and coastal scrub habitats in Southern California. Another subspecies is found in Northern California. The Northern California subspecies inhabits steep, often rocky hillsides with grass and forbs (Zeiner et al. 1990).

One Southern California rufous-crowned sparrow was observed in coastal sage scrub habitat in the southwestern region of the Sweetwater District parcel (Figure 3a).

4.4.3 Species with Potential to Occur on Site

4.4.3.1 Invertebrates

Senile tiger beetle (*Cicindela senilis frosti*)

Senile tiger beetle is a County Group 2 species. This species is found in coastal salt marshes, fresh and brackish lagoons, open patches of pickleweed, dried salt pans, and muddy alkali areas. There are few records of this species, but this species is found in Riverside, San Diego, Los Angeles, and Ventura Counties (CDFW 2014b). Populations were found at the San Dieguito River mouth in 1990, but it is unknown whether this population is extant (Kamoun 1996). This species has high potential to occur on site due to the presence of suitable salt marsh habitat, including open patches of pickleweed.

Wandering skipper (*Panoquina errans*)

Wandering skipper is a County Group 1 and MSCP covered species. Wandering skipper is exclusively coastal, and has been collected on ocean bluffs and other open areas near the ocean. The larval host plant is saltgrass (Orsak 1977). This species is found from Santa Barbara County south into Baja California and some parts of mainland Mexico (SBMNH n.d.).

This species has high potential to occur on site due to the presence of suitable salt marsh habitat, including the host plant saltgrass.

4.5 Jurisdictional Waters/Wetlands

Table 3 and Figure 3a present existing ACOE, RWQCB, and CCC-jurisdictional resources within the Sweetwater District and H-3 parcels. Due to changes in site conditions since jurisdictional delineations were performed for the FEIR (Dudek 2010), the jurisdictional resources within the study area have changed.

The results of the 2014 jurisdictional delineation, performed by Dudek, concluded that there are approximately 3.3 acres of jurisdictional wetlands and waters within the project site. This is composed of approximately 0.8 acre of ACOE, RWQCB, and CCC-jurisdictional wetlands; approximately 0.3 acre of ACOE, RWQCB, and CCC-jurisdictional waters; and 2.2 acres of wetlands under the jurisdiction of CCC only (see Table 3, Jurisdictional Wetland Delineation Summary). Since the project area is solely influenced by tides, with no lakes or streambeds running through the site, none of the wetlands or waters on site is under CDFW jurisdiction.

As described in Section 3.4, hydrology, vegetation, and soils were assessed at six data station locations (see Figure 3a) throughout the study area to determine the presence or absence of wetlands field indicators. Four soil mapping units were recorded within the project area; however, only one soil mapping unit is listed on the National Hydric Soils List for the San Diego County Area, California (USDA 2014): tidal flats.

Table 3
Jurisdictional Wetland Delineation Summary

Jurisdiction	Vegetation Community	Acreage
ACOE, RWQCB, CCC wetlands	Coastal salt marsh	0.8
	ACOE, RWQCB, CCC Subtotal	*0.8*
ACOE, RWQCB, CCC waters	Open water	0.3
	ACOE, RWQCB, CCC Subtotal	*0.3*
CCC only wetlands	Coastal salt marsh	2.0
	Mulefat scrub	0.2
	CCC Subtotal	*2.2*
	Total	**3.3**

Note: Total may not sum due to rounding.

Results from the six data stations (Table 4) document that only one data station exhibited all three wetland field indicators. The data collected at each data station are included in Appendix E, on the ACOE's Wetland Determination Data Forms for the Arid West Region.

Table 4
Data Station Point Summary

Data Station	Wetland Determination Field Indicators			Stream Association	Determination	Jurisdiction
	Vegetation	*Hydric Soils*	*Hydrology*			
1	✓	✓	✓	No	Wetland	ACOE, RWQCB, CCC
2	✓	None	None	No	Coastal wetland	CCC
3	✓	None	None	No	Coastal wetland	CCC

Table 4
Data Station Point Summary

Data Station	Wetland Determination Field Indicators			Stream Association	Determination	Jurisdiction
	Vegetation	*Hydric Soils*	*Hydrology*			
4	✓	None	None	No	Coastal wetland	CCC
5	✓	None	None	No	Coastal wetland	CCC
6	✓	None	None	No	Coastal wetland	CCC

Data Station 1 is located in a depressional salt flat, which contained evidence of wetland hydrology including salt crusts and surface soil cracks, and supported hydrophytic vegetation dominated by Parish's glasswort. Hydric soils, noted by the presence of a depleted matrix, were recorded. Based on the presence of all three hydrologic indicators, this area was mapped as a wetland under the jurisdiction of ACOE, RWQCB, and CCC. The depressional area is not associated with a lake, streambed, or other drainage course and is therefore not considered to be CDFW jurisdictional.

Data Stations 2, 3, and 4 are located in concentric rings of hydrophytic vegetation radiating outward from Data Station 1. Data Stations 2, 3, and 4 support hydrophytic vegetation: Data Station 2 supports chairmaker's bulrush (*Schoenoplectus americanus*), Data Station 3 supports saltgrass and Parish's glasswort, and Data Station 4 supports mulefat. However, neither wetland hydrology indicators nor hydric soils were recorded at these stations and therefore these areas are not ACOE/RWQCB wetlands. They are also not jurisdictional under CDFW regulations as they are not associated with a lake or stream channel. Therefore, the wetlands associated with Data Stations 2, 3, and 4 were mapped as wetlands under the jurisdiction of CCC only.

Data Stations 5 and 6 lack hydric soils and hydrology, but have hydrophytic vegetation present. Due to the lack of hydrology and hydric soils, these data points are not within an ACOE/RWQCB wetland or a water of the United States. They would not be jurisdictional under CDFW, as they are not associated with a lake or stream channel. Data Station 5 is located within mapped coastal salt marsh vegetation, and Data Station 6 is located within mulefat scrub; therefore, both are considered CCC wetland only.

Waters of the United States and wetlands are considered sensitive biological resources, and impacts to these resources are regulated by the ACOE, RWQCB, and CCC. In addition, wetlands within the City of Chula Vista's planning boundary are regulated under the City of Chula Vista's Wetlands Protection Program.

Hydrophytic Vegetation

Two vegetation communities within the study area support a predominance of hydrophytic vegetation: coastal salt marsh and mulefat scrub. These vegetation communities are described above.

Hydric Soils

Soil test pits were dug in association with data stations. Hydric soils were mapped in association with Data Station 1, and included redox features (chemical reactions in which atoms have their oxidation state changed).

Wetland Hydrology

A tidal channel is mapped adjacent to Marina Parkway at the southwestern edge of the Sweetwater District parcel. Waters flow in and out of the F and G Street Marsh and San Diego Bay. A salt pan, located in the middle of a coastal salt marsh vegetation community, exhibited wetland hydrology, including the presence of a salt crust and surface cracks.

Jurisdiction

ACOE Jurisdiction

As described earlier in this report, the ACOE has jurisdiction over waters of the United States including wetlands, as outlined in Section 404 of the Clean Water Act. The tidal channel located adjacent to Marina Parkway at the southwestern edge of the Sweetwater District parcel is classified as an ACOE-jurisdictional non-wetland water of the United States due to the presence of hydric soils and a defined channel, but lack of hydrophytic vegetation. Areas lower than the mean ordinary high tide line along the western edge of the project are considered waters of the United States (i.e., San Diego Bay). In addition, the coastal salt marsh associated with Data Station 1 is under the jurisdiction of the ACOE. ACOE-jurisdictional areas are shown on Figure 3a.

RWQCB Jurisdiction

The RWQCB's jurisdiction corresponds with wetland and non-wetland waters of the United States. The tidal channel is considered a federal non-wetland water, as it connects with navigable waters (San Diego Bay and the Pacific Ocean). In addition, the waters along the bay and the coastal salt marsh associated with Data Station 1 are under the jurisdiction of the RWQCB. RWQCB-jurisdictional areas are shown on Figure 3a.

CDFW Jurisdiction

The CDFW jurisdiction includes ephemeral, intermittent, and perennial watercourses (including dry washes) and lakes characterized by the presence of definable bed and banks and existing fish or wildlife resources. Due to the tidal nature of the study area and the lack of lakes or stream channels, there are no wetlands under the jurisdiction of CDFW within the study area.

CCC Jurisdiction

CCC-jurisdictional wetlands are defined by those areas that support at least one of the three wetland criteria. As such, all wetland vegetation communities (coastal salt marsh and mulefat scrub) are considered CCC-jurisdictional wetlands. In addition, the tidal channel (open water) and lands below the 4.5-foot contour along the bay are also considered CCC jurisdictional.

Chula Vista MSCP Subarea Plan Jurisdiction

In accordance with the Chula Vista MSCP Subarea Plan (City of Chula Vista 2003), impacts to wetlands must be avoided to the greatest extent practicable and minimized where impacts must occur. Wetlands mitigation ratios are provided in Table 5-6 of the MSCP Subarea Plan, and are proposed as mitigation for this project. For example, the mitigation ratio required for impacts to coastal salt marsh is 4:1.

4.6 Wildlife Corridors and Habitat Linkages

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation; they may be continuous habitat or discrete habitat islands that function as steppingstones for wildlife dispersal.

The E Street Realignment study area is an important habitat linkage in southern San Diego County. This parcel connects with the Sweetwater River and Sweetwater National Wildlife Refuge (just north of the study area) and the mouth of the Otay River (south of the study area). The study area serves as a steppingstone between these two different rivers.

5 CONSISTENCY ANALYSIS WITH CHULA VISTA BAYFRONT DEVELOPMENT POLICIES

This section is written to ensure that the results of biological resources surveys and analysis comply with all development policies identified for the CVBMP.

Table 5
Consistency with Chula Vista Bayfront Development Policies

Policy Number	Policy Text	Consistency
2.2	Wetlands shall be defined and delineated consistent with the Coastal Act and the Coastal Commission Regulations, 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. Any unmapped areas that meet these criteria are wetlands and shall be accorded all of the protections provided for wetlands in the PMP. Wetlands 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.	Wetlands delineations conducted for this report complied with Policy 2.2. For more information, refer to Section 4.6.
2.3	Where the required initial site inventory indicates the presence or potential for wetland species or other wetland indicators, the District 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.	The wetlands delineation performed on April 14, 2014, and results presented in Section 4.6 ensure compliance with Policy 2.3.
2.5	Where wetland fill or development impacts are permitted in wetlands in accordance with the Coastal Act and any applicable PMP policies, mitigation measures shall include creation 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. 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.	Mitigation measures for impacts to wetlands are not included in this report, as the extent of potential impacts is not currently known. However, compliance with required mitigation measures will be laid out in the subsequent biological resources letter report, as requested by the District, and will comply with Policy 2.5.

Table 5
Consistency with Chula Vista Bayfront Development Policies

Policy Number	Policy Text	Consistency
2.6	Wherever wetlands are identified, 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 shall be established. In some unusual 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 California Department of Fish and Game (CDFG) must be consulted and agree that a reduced buffer is appropriate and the District, 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.	Appropriate wetland and riparian buffers, which comply with Policy 2.6, will be implemented as part of the proposed development footprint. Compliance with this policy will be laid out in the subsequent biological resources letter report, as requested by the District.
5.2	Prohibit active recreation, construction of any road (whether paved or not), within No Touch Buffer Areas and "Transition Buffer Areas" as that term is defined and described in Exhibit 2, with the exception of existing or necessary access points for required maintenance.	The E Street Realignment Project will comply with this policy, and further information will be laid out in the subsequent biological resources letter report, as requested by the District.
5.9	"Environmentally sensitive habitat area" (ESHA) 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 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 (CNPS) as 1b (Rare or endangered in California and elsewhere), such as Nuttall's scrub oak or "2" (rare, threatened or endangered in California but more common elsewhere), such as wart-stemmed Ceanothus.	Designation of ESHA within the E Street Realignment study area will comply with Policy 5.9. Compliance with this policy will be laid out in the subsequent biological resources letter report, as requested by the District.
5.10	New development shall be sited and designed to avoid impacts to ESHA. ESHA shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. 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 those areas, and shall be compatible with the continuance of those habitat and recreation areas. These uses include enhancement/restoration work, passive recreational parks and public access or recreational facilities such as trails and bike paths integrated into the natural environment and sited and designed to preserve, and be compatible with, native habitat.	Realignment of E Street will be designed to avoid impacts to ESHA. Compliance with this will be outlined in the subsequent biological resources letter report, as requested by the District.

Table 5
Consistency with Chula Vista Bayfront Development Policies

Policy Number	Policy Text	Consistency
5.11	At the time of adoption of the Chula Vista Bayfront plan, the Coastal Sage Scrub on the berm in the S-1 and S-2 parcel areas and the non-native grasslands located in various locations within the Chula Vista Bayfront Master Plan were not identified as ESHA.	In accordance with Policy 5.11, the coastal sage scrub on the berm in the Sweetwater District parcel and the non-native grasslands will not be identified as ESHA.
5.12	In the 1-g parcel area, a pedestrian bridge is proposed to create a linkage over a tidal inlet associated with the F and G Street Marsh. Tidal habitats should be treated as ESHA and the bridge crossing must be designed to enhance the habitat values present and reduce erosion. This bridge span must be extended and the existing incised channel slope should be cut back, reducing the slope and then creating additional salt marsh habitat on the created floodplain. Site-specific studies to assess the extent and quality of natural resources at the site will be required at the time development is proposed.	Tidal habitats, including the tidal inlet, will be treated as ESHA, and the bridge crossing will be analyzed in further detail in the subsequent biological resources letter report, as requested by the District.
5.13	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 or designated species of special concern or fully protected species, and CNPS categories 1B and 2.	This survey report fulfills the requirement for a biological resources inventory for the proposed project area and lands adjacent to ESHA.
5.14	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.	Development will comply with this policy to minimize impacts to ESHA, and further information will be laid out in the subsequent biological resources letter report, as requested by the District.
5.15	All buffers around (non-wetland) ESHA shall be a minimum of 100 feet in width, or a lesser width may be approved by the District if findings are made that a lesser buffer would adequately protect the resource. However, in no case can the buffer size be reduced to less than 50 feet.	Development will comply with this policy to minimize impacts to ESHA, and further information will be laid out in the subsequent biological resources letter report, as requested by the District.
5.16	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.	Measures to protect ESHA will be laid out in the subsequent biological resources letter report, as requested by the District.

Table 5
Consistency with Chula Vista Bayfront Development Policies

Policy Number	Policy Text	Consistency
5.17	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.	Measures to protect ESHA will be laid out in the subsequent biological resources letter report, as requested by the District.
5.18	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.	Measures to protect ESHA will be laid out in the subsequent biological resources letter report, as requested by the District.
5.19	Impacts to native habitat that does not constitute ESHA that cannot be avoided through the implementation of siting 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 for impacts to native habitat shall be provided at a 3:1 ratio.	Mitigation for project impacts will be analyzed in the subsequent biological resources letter report, as requested by the District, and will comply with Policy 5.19.

6 POTENTIAL MITIGATION REQUIREMENTS FOR IMPACTS TO VEGETATION COMMUNITIES

Based on the mitigation ratios required for impacts to vegetation communities, as outlined in the MSCP, the mitigation requirements are summarized in Table 6. The vegetation communities that would require mitigation are also shown on Figures 4a and 4b. It should be noted that there are no sensitive vegetation communities that are present within the H-3 parcels, and thus, there is no mitigation required for impacts to the resources within these parcels.

Table 6
Mitigation Ratio

Vegetation Community/Land Cover	Holland Code	Based on Location of Mitigation as Inside Preserve/ Outside Preserve
Upland Vegetation Communities		
Diegan coastal sage scrub*	32510	1:1 / 1.5:1
Diegan coastal sage scrub: broom baccharis dominated*	32530	1:1 / 1.5:1
Disturbed Diegan coastal sage scrub*	32510	1:1 / 1.5:1
Disturbed Diegan coastal sage scrub: broom baccharis dominated*	32530	1:1 / 1.5:1

Table 6
Mitigation Ratio

Vegetation Community/Land Cover	Holland Code	Based on Location of Mitigation as Inside Preserve/ Outside Preserve
Diegan coastal sage scrub: Isocoma dominated (Menzies' goldenbush scrub)*	32510	1:1 / 1.5:1
Non-native grassland*	42200	0.5:1 / 1:1
Wetlands		
Coastal salt marsh*	52100	4:1
Mulefat scrub*	63310	3:1
Land Cover Types		
Beach	64400	None
Developed	12000	None
Disturbed land	11300	None
Eucalyptus woodland	79100	None
Ornamental	12000	None
Open water*	64110	1:1

* Signifies special-status vegetation community requiring mitigation per the Chula Vista MSCP Subarea Plan.

All impacts are outside the preserve area of the MSCP; therefore, the mitigation ratios that apply to impact areas inside the preserve are not provided in the Table 6. The mitigation ratios are per the Chula Vista MSCP Subarea Plan. The MMRP does not list mitigation ratios; thus, mitigation ratios would be considered consistent with the MSCP.

If you have any questions regarding the contents of this report, please contact me at 760.479.4241.

Sincerely,

Anita Haywworth

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Att.: Figures 1–4b
Appendices A–E

cc: Carey Fernandes, Dudek
Emily Wier, Dudek

7 REFERENCES

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

16 U.S.C. 668–668d. Bald and Golden Eagle Protection Act.

16 U.S.C. 703–712. Migratory Bird Treaty Act, as amended.

16 U.S.C. 1531–1544. Endangered Species Act, as amended.

33 CFR 328.1–328.5. Definition of Waters of the United States.

ACOE (U.S. Army Corps of Engineers). 1987. *Corps of Engineers Wetlands Delineation Manual.* Online ed. Wetlands Research Program Technical Report Y-87-1. Vicksburg, Mississippi: Environmental Laboratory, U.S. Army Corps of Engineers Waterways Experiment Station. January 1987. Accessed September 1, 2010. http://www.fedcenter.gov/Bookmarks/index.cfm?id=6403&pge_id=1606.

ACOE. 2008. *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region.* Wetlands Regulatory Assistance Program publication No. ERDC/EL TR-06-18. Vicksburg, Mississippi: Environmental Laboratory, U.S. Army Corps of Engineers, U.S. Army Engineer Research and Development Center. December 2006. http://acwc.sdp.sirsi.net/client/search/asset/1003134;jsessionid=BD1AF4EEC5E194678CCFD0647884A65E.enterprise-15000.

ACOE and EPA (U.S. Environmental Protection Agency). 2008. *Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in* Rapanos v. United States & Carabell v. United States. Washington, D.C.: EPA. December 2, 2008.

AOU. 2012. Check-List of North American Birds: List of the 2,078 Bird Species Known From the AOU Check-list Area. Accessed from http://www.aou.org/checklist/north/full.php

Bing Maps. 2014. http://www.bing.com/maps/

California Fish and Game Code, Section 1600–1616. Division 2: Department of Fish and Game, Chapter 6: Fish and Wildlife Protection and Conservation.

California Fish and Game Code, Sections 3500–3516. Division 4: Birds and Mammals, Part 2: Birds, Chapter 1: General Provisions.

California Fish and Game Code, Section 4700. Division 4: Birds and Mammals; Part 3: Mammals; Chapter 8: Fully Protected Mammals.

California Fish and Game Code, Section 5050. Division 5: Protected Reptiles and Amphibians; Chapter 2: Fully Protected Reptiles and Amphibians.

California Fish and Game Code, Section 5500–5522. Division 6: Fish; Chapter 1: Miscellaneous.

California Public Resources Code, Sections 30000–30900. California Coastal Act of 1976.

CDFG (California Department of Fish and Game). 2001. "California Department of Fish and Game (Department) Recommendations for Conducting Belding's Savannah Sparrow (*Passerculus sandwichensis beldingi*) Surveys." May 9, 2001.

CDFG. 2011. "Special Animals (898 taxa)." CDFG, Biogeographic Data Branch. January 2011. Accessed September 2013. http://www.dfg.ca.gov/biogeodata/cnddb/plants_and_animals.asp.

CDFG. 2012. *Staff Report on Burrowing Owl Mitigation*. March 7, 2012. http://www.dfg.ca.gov/wildlife/nongame/docs/BUOWStaffReport.pdf.

CDFW (California Department of Fish and Wildlife). 2014a. State and federally listed endangered, threatened, and rare plants of California. California Natural Diversity Database. CDFW, Biogeographic Data Branch. July 2014. Accessed July 2014. https://www.dfg.ca.gov/biogeodata/cnddb/pdfs/TEPlants.pdf

CDFW 2014b. Rarefind. Version 5. California Natural Diversity Database. Accessed April 2014.

CDFW. 2014c. *Special Vascular Plants, Bryophytes, and Lichens List*. California Natural Diversity Database. July 2014. Accessed July 2014. https://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPPlants.pdf.

CDFW. 2014d. State and Federally listed endangered and threatened animals of California. March 2014. https://www.dfg.ca.gov/biogeodata/cnddb/pdfs/TEAnimals.pdf.

City of Chula Vista. 2003. *City of Chula Vista MSCP Subarea Plan*. February 2003.

CNPS (California Native Plant Society). 2013. *Inventory of Rare and Endangered Plants* (online edition, v8-01a). Sacramento, California: California Native Plant Society. Accessed September 2013. http://cnps.site.aplus.net/cgi-bin/inv/inventory.cgi.

CNPS. 2014. Inventory of Rare and Endangered Plants (online edition, v8-01a). Sacramento, California: California Native Plant Society. Accessed April 28, 2014.

County of San Diego. 2010. *County of San Diego Report Format and Content Requirements: Biological Resources*. Fourth Revision. September 15, 2010.

Cripe, K. 2000. "Northern Harrier (*Circus cyaneus*)." CalPIF (California Partners in Flight), Grassland Bird Conservation Plan. Accessed August 14, 2012. http://www.prbo.org/calpif/htmldocs/species/grassland/nohaacct.html.

Crother, B.I. 2008. *Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in our Understanding*. 6th ed. Herpetological Circular No. 37, edited by J.J. Moriarty. Shoreview, Minnesota: Society for the Study of Amphibians and Reptiles.

Davis, J.N., and C.A. Niemela. 2008. "Northern Harrier (*Circus cyaneus*)." In *California Bird Species of Special Concern: A Ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California*, edited by W.D. Shuford and T. Gardali, 149–155. *Studies of Western Birds 1*.. Camarillo, California: Western Field Ornithologists and Sacramento, California: California Department of Fish and Game. February 4, 2008.

Dudek. 2010. *Final Environmental Impact Report for the Chula Vista Bayfront Master Plan*.

Gray, J. and D. Bramlet. 1992. *Habitat Classification System; Natural Resources Geographic Information System (GIS) Project*. Prepared for County of Orange Environmental Management Agency. May.

Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Nongame-Heritage Program, California Department of Fish and Game. October 1986.

Jepson Flora Project. 2013. *Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California*. Berkeley, California: University of California. Accessed September 18, 2013. http://ucjeps.berkeley.edu/interchange/I_status_1+2.html..

Kamoun, S. 1996. "Occurrence of the Threatened *Cicindela senilis frosti* Varas-Arangua in an Inland Salt Marsh in Riverside County, California (Coleoptera: Cicindelideae)." *Coleopterists Bulletin* 50(4): 369–371. Accessed July 17, 2014.

http://www.jstor.org/discover/10.2307/4009274?uid=3739560&uid=2129&uid=2&uid=70&uid=4&uid=3739256&sid=21103990923301.

Moyle, P.B. 2002. *Inland Fishes of California*. Berkeley and Los Angeles, California: University of California Press.

NABA (North American Butterfly Association). 2001. "Checklist of North American Butterflies Occurring North of Mexico." Adapted from North American Butterfly Association (NABA) Checklist & English Names of North American Butterflies, edited by B. Cassie, J. Glassberg, A. Swengel, and G. Tudor. 2nd ed. Morristown, New Jersey: NABA. Accessed May 2012. http://www.naba.org/pubs/enames2.html.

NOAA (National Oceanic and Atmospheric Administration). 2014. "Tides and Currents." San Diego, CA Station Id: 9410170. http://tidesandcurrents.noaa.gov/noaatidepredictions/NOAATidesFacade.jsp?Stationid=9410170.

Oberbauer, T., M. Kelly, and J. Buegge. 2008. *Draft Vegetation Communities of San Diego County.* Based on *Preliminary Descriptions of the Terrestrial Natural Communities of California*, prepared by Robert F. Holland, PhD, for the State of California, The Resources Agency, Department of Fish and Game, October 1986. March 2008.

Orsak, L.J. 1977. *The Butterflies of Orange County, California*. Center for Pathobiology Miscellaneous Publication No. 3. Irvine, California: University of California Press. Accessed July 18, 2014. http://nathistoc.bio.uci.edu/lepidopt/hesper/wanderin.htm

Port of San Diego (San Diego Unified Port District). 2012. *Chula Vista Bayfront Development Policies*. August 2012.

SBMNH (Santa Barbara Museum of Natural History). n.d. "Wandering Skipper *Panoquina errans.*" In *Santa Barbara Field Guides – Butterflies*. Accessed July 18, 2014. http://www.sbnature.org/collections/invert/entom/sbbutterflies/hespanerr.htm.

SDNHM (San Diego Natural History Museum). 2012. "Butterflies of San Diego County. Revised September 2002." Accessed May 2012 at http://www.sdnhm.org/archive/research/entomology/sdbutterflies.html.

Smith, K.G., S.R. Wittenberg, R.B. Macwhirter, and K.L. Bildstein. 2011. "Northern Harrier (*Circus cyaneus*)." In *The Birds of North America Online*, edited by A. Poole. Ithaca, New York: Cornell Lab of Ornithology. Accessed September 2012. http://bna.birds.cornell.edu/bna/species/210.

Unitt, P. 2004. *San Diego County Bird Atlas*. San Diego, California: San Diego Natural History Museum.

USDA (U.S. Department of Agriculture). 2013. "California." State PLANTS Checklist. Accessed September 18, 2013. http://plants.usda.gov/dl_state.html.

USDA. 2014. Natural Resources Conservation Service (NRCS). *Web Soil Survey* [web application]. http://websoilsurvey.nrcs.usda.gov/app/.

USFWS (U.S. Fish and Wildlife Service). 1997. *Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol, July 28, 1997*

USFWS. 2008. Birds of Conservation Concern 2008. United States Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, Virginia. 85 pp. [Online version available at <http://www.fws.gov/migratorybirds/>]

Wilson, D.E., and D.M. Reeder, eds. 2005. *Mammal Species of the World: A Taxonomic and Geographic Reference*. 3rd ed. Baltimore, Maryland: Johns Hopkins University Press.

Zeiner, D.C., W.F. Laudenslayer Jr., K.E. Mayer, and M. White, eds. 1990. *California's Wildlife: Volume II. Birds.* Sacramento, California: California Department of Fish and Game.

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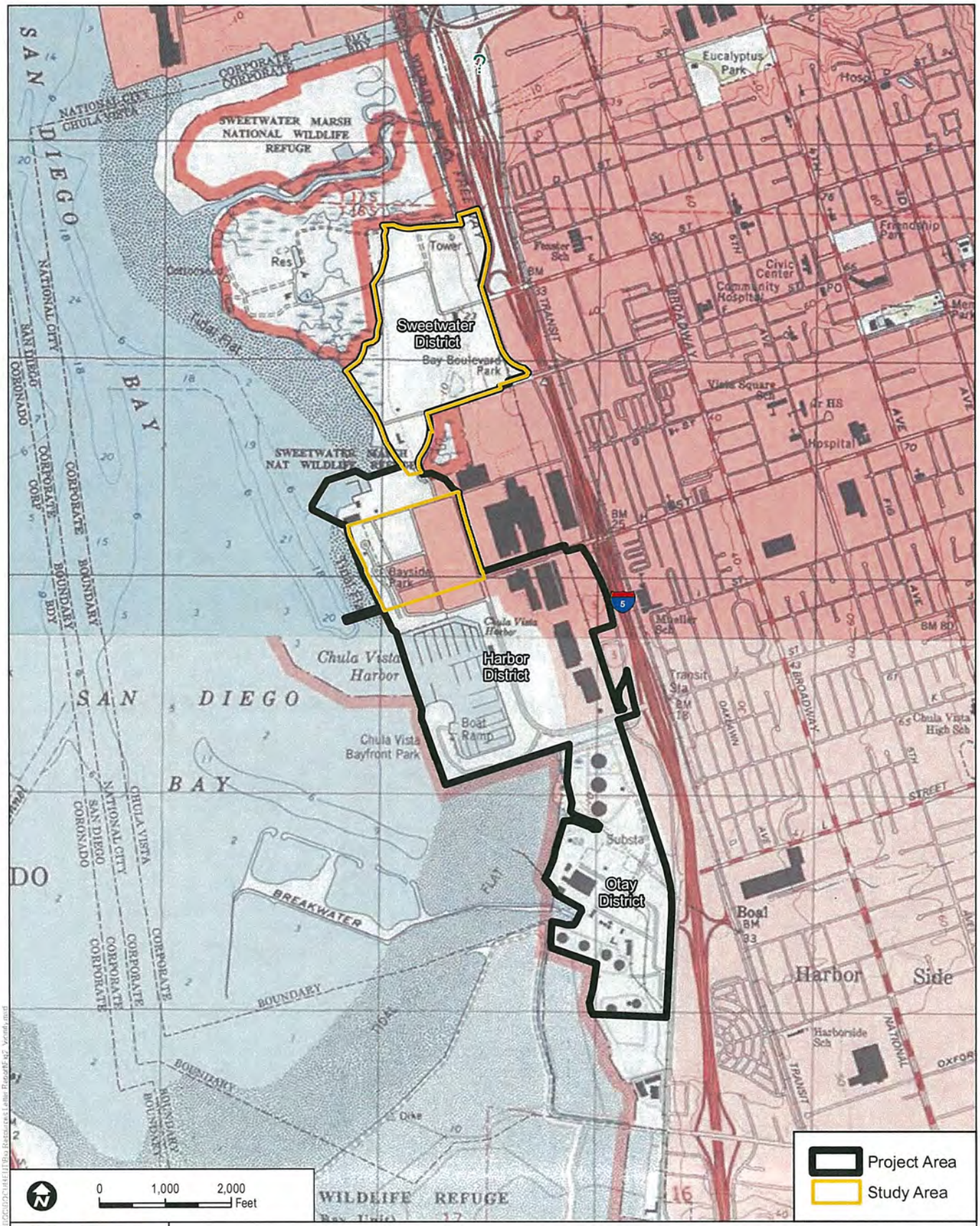
FIGURE 1
Regional Map

BIOLOGICAL RESOURCES SURVEY REPORT FOR THE E STREET REALIGNMENT



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SOURCE: USGS 7.5-Minute Series National City and Imperial Beach Quadrangle

FIGURE 2
Vicinity Map

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BIOLOGICAL RESOURCES SURVEY REPORT FOR THE E STREET REALIGNMENT

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SOURCE: ESRI 2014, RBF Consulting 2014

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FIGURE 3a
Biological Resources

BIOLOGICAL RESOURCES SURVEY REPORT FOR THE E STREET REALIGNMENT

DUDEK

SOURCE: ESRI 2014, RBF Consulting 2014

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FIGURE 3b
Biological Resources

BIOLOGICAL RESOURCES SURVEY REPORT FOR THE E STREET REALIGNMENT

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SOURCE: ESRI 2014, RBF Consulting 2014

FIGURE 4a

Biological Resources Requiring Mitigation

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BIOLOGICAL RESOURCES SURVEY REPORT FOR THE E STREET REALIGNMENT

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SOURCE: ESRI 2014; RBF Consulting 2014

FIGURE 4b

Biological Resources Requiring Mitigation

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BIOLOGICAL RESOURCES SURVEY REPORT FOR THE E STREET REALIGNMENT

APPENDIX A

Plant Compendium

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APPENDIX A
Plant Compendium

VASCULAR SPECIES

DICOTS

ADOXACEAE—MUSKROOT FAMILY

Sambucus nigra—black elderberry

AIZOACEAE—FIG-MARIGOLD FAMILY

* *Aptenia cordifolia*—heartleaf iceplant

* *Mesembryanthemum crystallinum*—common iceplant

* *Mesembryanthemum nodiflorum*—slenderleaf iceplant

Sesuvium verrucosum—verrucose seapurslane

AMARANTHACEAE—AMARANTH FAMILY

* *Amaranthus albus*—prostrate pigweed

ANACARDIACEAE—SUMAC OR CASHEW FAMILY

Malosma laurina—laurel sumac

Rhus integrifolia—lemonade sumac

* *Schinus terebinthifolius*—Brazilian peppertree

APIACEAE—CARROT FAMILY

Apiastrum angustifolium—mock parsley

* *Foeniculum vulgare*—sweet fennel

APOCYNACEAE—DOGBANE FAMILY

Asclepias fascicularis—Mexican whorled milkweed

ASTERACEAE—SUNFLOWER FAMILY

Ambrosia psilostachya—Cuman ragweed

Artemisia californica—coastal sagebrush

Baccharis pilularis—coyotebrush

Baccharis salicifolia—mulefat

Baccharis sarothroides—desertbroom

Bahiopsis laciniata—San Diego County viguiera

* *Centaurea melitensis*—Maltese star-thistle

Chaenactis macrantha—bighead dustymaiden

Encelia californica—California brittlebush

* *Glebionis coronaria*—crowndaisy

* *Hedypnois cretica*—Cretanweed

Isocoma menziesii var. *vernonioides*—Menzies' goldenbush
Jaumea carnosa—marsh jaumea
* *Lactuca serriola*—prickly lettuce
Pseudognaphalium canescens—Wright's cudweed
* *Silybum marianum*—blessed milkthistle
* *Sonchus asper* ssp. *asper*—spiny sowthistle
* *Sonchus oleraceus*—common sowthistle
Xanthium strumarium—rough cocklebur

BATACEAE—SALTWORT FAMILY
Batis maritima—turtleweed

BORAGINACEAE—BORAGE FAMILY
Heliotropium curassavicum—salt heliotrope

BRASSICACEAE—MUSTARD FAMILY
* *Brassica nigra*—black mustard
* *Cakile maritima*—European searocket
* *Hirschfeldia incana*—shortpod mustard
* *Raphanus sativus*—cultivated radish
* *Sisymbrium irio*—London rocket

CHENOPODIACEAE—GOOSEFOOT FAMILY
Arthrocnemum subterminale—Parish's glasswort
Atriplex canescens—fourwing saltbush
Atriplex lentiformis—big saltbush
* *Atriplex lindleyi*—Lindley's saltbush
* *Atriplex prostrata*—triangle orache
* *Atriplex semibaccata*—Australian saltbush
Atriplex watsonii—Watson's saltbush
* *Bassia hyssopifolia*—fivehorn smotherweed
* *Chenopodium album*—lambsquarters
* *Chenopodium murale*—nettleleaf goosefoot
Salicornia pacifica—Pacific swampfire
* *Salsola tragus*—prickly Russian thistle
Suaeda esteroa—estuary seablite
Suaeda nigra—Mojave seablite

CLEOMACEAE—CLEOME FAMILY
Isomeris arborea—bladderpod spiderflower

CONVOLVULACEAE—MORNING-GLORY FAMILY

Cressa truxillensis—spreading alkaliweed

CUCURBITACEAE—GOURD FAMILY

Cucurbita foetidissima—Missouri gourd

FABACEAE—LEGUME FAMILY

* *Acacia cyclops*—coastal wattle

* *Acacia redolens*—bank catclaw

Astragalus tricarinatus—triple-ribbed milk-vetch

* *Melilotus albus*—yellow sweetclover

FRANKENIACEAE—FRANKENIA FAMILY

Frankenia salina—alkali seaheath

GERANIACEAE—GERANIUM FAMILY

* *Erodium botrys*—longbeak stork's bill

* *Erodium cicutarium*—redstem stork's bill

LAMIACEAE—MINT FAMILY

* *Marrubium vulgare*—horehound

Salvia clevelandii—fragrant sage

Salvia mellifera—black sage

MALVACEAE—MALLOW FAMILY

Malacothamnus fasciculatus—Mendocino bushmallow

* *Malva neglecta*—common mallow

MYRTACEAE—MYRTLE FAMILY

* *Eucalyptus* sp.—eucalyptus

OLEACEAE—OLIVE FAMILY

* *Olea europaea*—olive

ONAGRACEAE—EVENING PRIMROSE FAMILY

Epilobium canum—hummingbird trumpet

PAPAVERACEAE—POPPY FAMILY

Canbya candida—white pygmy-poppy

PLUMBAGINACEAE—LEADWORT FAMILY

Limonium californicum—marsh rosemary

POLYGONACEAE—BUCKWHEAT FAMILY

Eriogonum fasciculatum—Eastern Mojave buckwheat

* *Polygonum aviculare* ssp. *depressum*—prostrate knotweed

* *Rumex crispus*—curly dock

ROSACEAE—ROSE FAMILY

Heteromeles arbutifolia—toyon

SALICACEAE—WILLOW FAMILY

Salix lasiolepis—arroyo willow

SIMMONDSIACEAE—JOJOBA FAMILY

Simmondsia chinensis—jojoba

SOLANACEAE—NIGHTSHADE FAMILY

Lycium andersonii—water jacket

Lycium californicum—California box-thorn

* *Nicotiana glauca*—tree tobacco

TAMARICACEAE—TAMARISK FAMILY

* *Tamarix aphylla*—Athel tamarisk

* *Tamarix ramosissima*—saltcedar

VERBENACEAE—VERVAIN FAMILY

Verbena lasiostachys—western vervain

GYMNOSPERMS AND GNETOPHYTES

PINACEAE—PINE FAMILY

* *Pinus* sp. —pine

MONOCOTS

AGAVACEAE—AGAVE FAMILY

Yucca gloriosa—Spanish dagger

ARECACEAE—PALM FAMILY

* *Phoenix canariensis*—Canary Island date palm

* *Washingtonia robusta*—Washington fan palm

ASPARAGACEAE—ASPARAGUS FAMILY

* *Asparagus asparagoides*—African asparagus fern

CYPERACEAE—SEDGE FAMILY

Schoenoplectus americanus—chairmaker's bulrush

POACEAE—GRASS FAMILY

* *Arundo donax*—giant reed
* *Avena barbata*—slender oat
* *Bromus diandrus*—ripgut brome
* *Bromus madritensis*—compact brome
* *Cortaderia selloana*—Uruguayan pampas grass
* *Cynodon dactylon*—Bermudagrass
Distichlis littoralis—shoregrass
Distichlis spicata—saltgrass
Elymus triticoides—beardless wildrye
* *Hordeum murinum*—mouse barley
* *Paspalum dilatatum*—dallisgrass
Stipa lepida—foothill needlegrass
* *Stipa miliacea* var. miliacea—smilograss

TYPHACEAE—CATTAIL FAMILY

Typha latifolia—broadleaf cattail

* Signifies non-native species

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APPENDIX B1

Sensitive Plant Species Detected or Potentially Occurring On the Project Site

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APPENDIX B1
Sensitive Plant Species Detected or Potentially Occurring On The Project Site

Scientific Name Common Name	Status Federal/ State/ Other	CRPR	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (ft amsl)	Observed on Site?	Determination	Status on Site or Potential to Occur
Acmispon prostratus Nuttall's acmispon	None/None / None	1B.1	Coastal dunes, coastal scrub; sandy/ annual herb/ March–June/ 0–30	No	High	Suitable coastal scrub habitat on site. Site is within this species' elevation range.
Astragalus tener var. *titi* Coastal dunes milk-vetch	FE/ SE/ MSCP	1B.1	Coastal bluff scrub, coastal dunes, coastal prairie; mesic, often vernallly mesic/ annual herb/ March–May/ < 170	No	High	Suitable coastal habitats on site and mesic conditions. Site is within this species' elevation range.
Atriplex pacifica South Coast Saltbush	None/None /None	1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, playas/ annual herb/ March–October/ < 500	No	High	Suitable coastal scrub habitats on site. Site is within this species' elevation range.
Bahiopsis laciniata San Diego County viguiera	None/None /None	4.2	Chaparral, coastal scrub/ shrub/ February–June/ 196–2,460	Yes	Present	A total of 25 individuals were mapped within the project area.
Chaenactis glabriuscula var. *orcuttiana* Orcutt's pincushion	None/None /None	1B.1	Coastal bluff scrub, coastal dunes/ annual herb/ January–August/ 10–330	No	High	Suitable coastal scrub habitat on site. Site is within species' elevation range.
Chloropyron maritimum ssp. *maritimum* Salt marsh bird's beak	FE/SE/ None	1B.2	Coastal dunes, marshes and swamps; coastal salt/ annual herb/ May–October/ 0–93	No	High	Suitable coastal salt marsh habitat on site. Site is within species' elevation range.
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	None/None /None	1B.1	Saltwater marsh and swamps, playas, vernal pools/ annual herb/ February–June/ <4,000	No	High	Suitable saltwater marsh habitat on site. Site is within species' elevation range.
Lepidium virginicum var. *robinsonii* Robinson's pepper-grass	None/None / None	4.3	Chaparral, coastal scrub/ annual herb/ January–July/ < 2,900	No	High	Suitable coastal scrub habitat on site. Site is within species' elevation range.
Lycium californicum California box-thorn	None/None / None	4.2	Coastal bluff scrub, coastal scrub/ shrub/March–August/ 15–450	Yes	Present	A total of 10 individuals were mapped within the project area.

Scientific Name Common Name	Status Federal/ State/ Other	CRPR	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (ft amsl)	Observed on Site?	Determination	Status on Site or Potential to Occur
Phacelia stellaris Brand's phacelia	None/None / None	1B.1	Coastal dunes, coastal scrub/ annual herb/ March–June/ <1,300	No	High	Suitable coastal scrub habitat on site. Site is within species' elevation range.
Suaeda esteroa Estuary seablite	None/None / None	1B.2	Coastal salt marshes and swamps/ perennial herb/ May–October (January)/ < 20	Yes	Present	A total of 85 individuals were mapped within the project area.

Source: List based on a search of all plant species found in the CNDDB and CNPS databases for the National City quadrangle and the seven surrounding U.S. Geological Service (USGS) quadrangles conducted in June 2013. All species are found within the Project sites bioregion or regions defined by the geographic subdivisions of California in the Jepson Flora Project (2013).The project site is located in the Peninsular Ranges within the California Floristic Province.

Notes: ft amsl = feet above mean sea level

Status Key

Federal:

FE: Federally listed as endangered
FT: Federally listed as threatened

State:

SE: State listed as endangered
ST: State listed as threatened
SR: State listed as rare

Other:

MSCP: MSCP covered species for the southwestern portion of San Diego County
CRPR: California Rare Plant Rank
1A (formerly List 1A): Plants Presumed Extinct in California
1B (formerly List 1B): Plants Rare, Threatened, or Endangered in California and Elsewhere
2 (formerly List 2): Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
3 (formerly List 3): Plants About Which We Need More Information – A Review List
4 (formerly List 4): Plants of Limited Distribution – A Watch List
0.1–Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
0.2–Fairly threatened in California (20–80% occurrences threatened/moderate degree and immediacy of threat)
0.3–Not very threatened in California (<20% of occurrences threatened /low degree and immediacy of threat or no current threats known).

APPENDIX B2

Sensitive Plant Species Not Expected to Occur on the Project Site

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APPENDIX B2
Sensitive Plant Species Not Expected to Occur on the Project Site

Scientific Name Common Name	Status Federal/ State/ Other	CRPR	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (ft amsl)	Observed on Site?	Determination	Status on Site or Potential to Occur
Acanthomintha ilicifolia San Diego thorn-mint	FT/ SE/ MSCP	1B.1	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; clay/ annual herb/ April–June/ 30–3,150	No	Not expected to occur	Suitable coastal scrub habitat on site but no suitable clay soils. Site is barely within this species' elevation range.
Adolphia californica California adolphia	None/None /None	2.1	Chaparral, coastal scrub, valley and foothill grassland; clay/ deciduous shrub/ December–May/ 150–2,430	No	Absent	Suitable coastal scrub habitat on site but no suitable clay soils. Site is below this species' elevation range. Would have been observed if present.
Agave shawii var. shawii Shaw's agave	None/None /MSCP	2.1	Coastal bluff scrub, coastal scrub/ leaf succulent/ September–May/ 30–250	No	Absent	Suitable coastal scrub habitat on site. Site is barely within this species' elevation range. Would have been observed if present.
Ambrosia chenopodiifolia San Diego bur-sage	None/ None None	2.1	Coastal scrub/ shrub/ April–June/ 180–500	No	Absent	Suitable coastal scrub habitat on site. Site is below this species' elevation range. Would have been observed if present.
Ambrosia monogyra Singlewhorl burrobrush	None/None / None	2.2	Chaparral, Sonoran desert scrub; sandy/ shrub/ August–November/ 30–1,650	No	Absent	No suitable chaparral habitat on site. Site is barely within this species' elevation range. Would have been observed if present.
Ambrosia pumila Dwarf burr ambrosia	FE/ None/ MSCP	1B.1	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; often disturbed, sometimes alkaline/ rhizomatous herb/ May–October/ 60–1,360	No	Low	Suitable coastal scrub habitat on site. Site is below species' elevation range.
Aphanisma blitoides Aphanisma	None/None /None	1B.2	Coastal bluff scrub, coastal dunes, coastal scrub; sandy/ annual herb/ March–June/ <1,000	No	Low	Suitable coastal scrub habitat on site but no sandy soils. Site is within this species' elevation range.
Arctostaphylos glandulosa ssp. *crassifolia* Del Mar manzanita	FE/ None/ MSCP	1B.1	Maritime chaparral; sandy/ evergreen shrub/ December–June/ < 1,200	No	Absent	No suitable maritime chaparral habitat or sandy soils. Site is within this species' elevation range. Would have been observed if present.
Arctostaphylos otayensis Otay manzanita	None/None /MSCP	1B.2	Chaparral, cismontane woodland; metavolcanic/ evergreen shrub/ January–March/ 900–5,600	No	Absent	No suitable chaparral habitat or metavolcanic soils on site. Site is below this species' elevation range. Would have been observed if present.

APPENDIX B2 (Continued)

Scientific Name Common Name	Status Federal/ State/ Other	CRPR	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (ft amsl)	Observed on Site?	Determination	Status on Site or Potential to Occur
Artemisia palmeri San Diego sagewort	None/None /None	4.2	Chaparral, coastal scrub, riparian forest, scrub, and woodland; sandy, mesic/ deciduous shrub/ May–September/ 50–3,000	No	Absent	Suitable coastal scrub habitat and mesic conditions found on site, but no sandy soils present. Site is below this species' elevation range. Would have been observed if present.
Astragalus deanei Dean's milk-vetch	None/None /None	1B.1	Chaparral, coastal scrub, riparian forest / perennial herb/ February–May/ 250–2,200	No	Low	Suitable coastal scrub habitat on site. Site is below this species' elevation range.
Atriplex coulteri Coulter's saltbush	None/None /None	1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland; alkaline or clay/ perennial herb/ March–October/ 10–1,500	No	Absent	Suitable coastal scrub habitats on site but no alkaline or clay soils present. Site is within this species' elevation range. Would have been observed if present.
Bergerocactus emoryi Golden-spined cereus	None/None /None	2.2	Closed-cone conifer forest, chaparral, coastal scrub; sandy/ shrub/ May–June/ 10–1,300	No	Absent	Suitable coastal scrub habitats on site but no sandy soils present. Site is within this species' elevation range. Would have been observed if present.
Bloomeria clevelandii San Diego goldenstar	None/None /MSCP	1B.1	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; clay/ perennial bulbiferous herb/ April–May/ 164–1,526	No	Low	Suitable coastal scrub habitat on site but no clay soils. Site is below this species' elevation range.
Brodiaea orcuttii Orcutt's brodiaea	None/None /MSCP	1B.1	Closed-cone conifer forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, vernal pools; mesic, clay, sometimes serpentine/ bulbiferous herb/ May–July/ 100–5,550	No	Absent	No suitable habitat on site and no suitable clay or serpentine soils present. Site is below this species' elevation range.
California (=Erodium) macrophylla Round-leaved filaree	None/None / None	1B.1	Cismontane woodland, valley and foothill grassland; clay / annual herb/ March–May/ 50–4,000	No	Low	No suitable woodland or grassland habitat on site and no suitable clay soils. Site is below this species' elevation range.
Calochortus dunnii Dunn's mariposa lily	None/ SR/ MSCP	1B.2	Closed-cone conifer forest, chaparral; gabbroic or metavolcanic/ bulbiferous herb/ April–June/ 1,250–6,000	No	Absent	No suitable forest or chaparral habitat on site and no suitable gabbroic or metavolcanic soils present. Site is below this species' elevation range.
Camissoniopsis [=Camissonia] lewisii Lewis's evening primrose	None/None / None	3	Coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland; sandy or clay/ annual herb/ March–May (June)/ <1,000	No	Moderate	Suitable coastal scrub habitat on site but no sandy or clay soils present. Site is within this species' elevation range.

APPENDIX B2 (Continued)

Scientific Name Common Name	Status Federal/ State/ Other	CRPR	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (ft amsl)	Observed on Site?	Determination	Status on Site or Potential to Occur
Ceanothus cyaneus Lakeside ceanothus	None/None /MSCP	1B.2	Closed-cone conifer forest, chaparral/ evergreen shrub/ April–June/ 770–2,500	No	Absent	No suitable forest or chaparral habitat on site. Site is below this species' elevation range. Would have been observed if present.
Ceanothus otayensis Otay Mountain ceanothus	None/None /None	1B.2	Chaparral; metavolcanic or gabbroic/ evergreen shrub / January–April/ 2,000–3,600	No	Absent	No suitable chaparral habitat on site. Site is below this species' elevation range. Would have been observed if present.
Ceanothus verrucosus Wart-stemmed ceanothus	None/None /MSCP	2.2	Chaparral/ evergreen shrub/ December–May/ < 1,250	No	Absent	No suitable chaparral habitat on site. Site is within this species' elevation range. Would have been observed if present.
Centromadia [=*Hemizonia*] *pungens* ssp. *laevis* Smooth tarplant	None/None /None	1B.1	Chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland; alkaline/ annual herb/ April–September/ <1,580	No	Moderate	Suitable playa habitat found on site but no alkaline soils. Site is within this species' elevation range.
Chorizanthe orcuttiana Orcutt's chorizanthe	FE/ SE/ None	1B.1	Maritime chaparral, closed-cone conifer forest, coastal scrub/ annual herb/ March–May/ < 400	No	Moderate	Suitable coastal scrub habitat on site. Site is within species' elevation range.
Chorizanthe polygonoides var. *longispina* Long-spined spineflower	None/None /None	1B.2	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland; often clay/ annual herb/ April–July/ 100–5,000	No	Low	Suitable coastal scrub habitat on site. Site is below species' elevation range
Clarkia delicata Delicate clarkia	None/None /None	1B.2	Chaparral, cismontane woodland/ annual herb/ April–June/ 770–3,300	No	Low	No suitable chaparral or woodland habitat on site. Site is below species' elevation range.
Clinopodium chandleri San Miguel savory	None/None /None	1B.2	Chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland; rocky, gabbroic or metavolcanic/ perennial shrub/ March–July/ 395–3,525	No	Absent	Suitable coastal scrub habitat on site but no suitable rocky, gabbroic or metavolcanic soils. Site is below species' elevation range. Would have been observed if present.
Comarostaphylis diversifolia ssp. *diversifolia* Summer-holly	None/None /None	1B.2	Chaparral, cismontane woodland/ evergreen shrub/ April–June/100–1,800	No	Absent	No suitable chaparral or woodland habitat on site. Site is below species' elevation range. Would have been observed if present.

APPENDIX B2 (Continued)

Scientific Name Common Name	Status Federal/ State/ Other	CRPR	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (ft amsl)	Observed on Site?	Determination	Status on Site or Potential to Occur
Corethrogyne filaginifolia var. *incana* San Diego sand aster	None/None /None	1B.1	Chaparral, coastal bluff scrub, coastal scrub/ perennial herb/ June–September/ 10–380	No	Moderate	Suitable coastal scrub habitat on site. Site is within species' elevation range. Would have been observed if present.
Corethrogyne filaginifolia var. *linifolia* Del Mar Mesa sand aster	None/None /MSCP	1B.1	Coastal bluff scrub, maritime chaparral (openings), coastal scrub; sandy/ perennial herb/ May–September/ 10–380	No	Moderate	Suitable coastal scrub habitat on site but no sandy soils present. Site is within species' elevation range.
Cylindropuntia californica var. californica Snake cholla	None/None /MSCP	1B.1	Chaparral, coastal scrub/ perennial stem succulent/ April–May/ 100–490	No	Absent	Suitable coastal scrub habitat on site. Site is below species' elevation range. Would have been observed if present.
Deinandra [=*Hemizonia*] *conjugens* Otay tarplant	FT/ SE/ MSCP	1B.1	Coastal scrub, valley and foothill grassland; clay/ annual herb/ May–June/ 80–1,000	No	Low	Suitable coastal scrub habitat on site but no clay soils. Site is below species' elevation range.
Dicranostegia orcuttiana Orcutt's bird's-beak	None/None /None	2B.1	Coastal scrub/ annual herb/ April–July/ 30–1,150	No	High	Suitable coastal scrub habitat on site. Site is barely within species' elevation range.
Dudleya attenuata ssp. *orcuttii* Orcutt's dudleya	None/None /None	2.1	Coastal bluff scrub, chaparral, coastal scrub; rocky or gravelly/ perennial herb/ May–July/ < 165	No	Moderate	Suitable coastal scrub habitat on site although no suitable rocky or gravelly soils are present. Site is within species' elevation range.
Dudleya blochmaniae spp. *blochmaniae* Blochman's dudleya	None/None /None	1B.1	Chaparral, coastal bluff scrub, coastal scrub, valley and foothill grassland, rocky; often clay or serpentinite/ perennial herb/ April–June/ 15–1,500	No	Low	Suitable coastal scrub habitat on site but no suitable clay/serpentinite soils on site. Site is within species' elevation range.
Dudleya brevifolia Short-leaved dudleya	None/ SE/ MSCP	1B.1	Maritime chaparral (openings), coastal scrub, Torrey sandstone/ perennial herb/ April/ 100–800	No	Low	Suitable coastal scrub on site but no sandstone soils. Site is below species' elevation range.
Dudleya variegata Variegated dudleya	None/None /MSCP	1B.2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools; clay/ perennial herb/ April–June/ < 1,900	No	Low	Suitable coastal scrub habitat on site but no clay soils. Site is within species' elevation range.

Scientific Name Common Name	Status Federal/ State/ Other	CRPR	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (ft amsl)	Observed on Site?	Determination	Status on Site or Potential to Occur
Dudleya viscida Sticky dudleya	None/None /MSCP	1B.2	Coastal bluff scrub, chaparral, coastal scrub; rocky/ perennial herb/ May–June/ 30–1,800	No	Low	Suitable coastal scrub habitat on site but no rocky soils. Site is barely within species' elevation range.
Ericameria palmeri ssp. *palmeri* Palmer's goldenbush	None/None /None	2.2	Chaparral, coastal scrub; mesic/ evergreen shrub/ (July) September–November/ 100–2,000	No	Absent	Suitable coastal scrub habitat on site and mesic conditions are often present. Site is below species' elevation range. Would have been observed if present.
Eryngium aristulatum var. *parishii* San Diego button-celery	FE/ SE/ MSCP	1B.1	Coastal scrub, valley and foothill grassland, vernal pools, mesic/annual-perennial herb/ April–June/ 60–2,000	No	Moderate	Suitable coastal scrub habitat on site and mesic conditions are often present. Site is below species' elevation range.
Euphorbia misera Cliff spurge	None/None /None	2.2	Coastal bluff scrub, coastal scrub, Mojavean desert scrub; rocky/ shrub/ December–August/ 30–1,650	No	Absent	Suitable coastal scrub habitat on site but no rocky soils present. Site is barely within species' elevation range. Would have been observed if present.
Ferocactus viridescens San Diego barrel cactus	None/None /MSCP	2.1	Chaparral, coastal scrub, valley and foothill grassland, vernal pools/ perennial stem succulent/ May–June/ < 1,500	No	Absent	Suitable coastal scrub habitat on site. Site is within species' elevation range. Would have been observed if present.
Frankenia palmeri Palmer's frankenia	None/None /None	2.1	Coastal dunes, coastal saltwater marsh and swamps, playas/ perennial herb/ May–July/ < 30	No	Moderate	Suitable coastal saltwater marsh habitat present. Site is within species' elevation range. Would have been observed if present.
Fremontodendron mexicanum Mexican flannelbush	FE/ SR/ None	1B.1	Closed-cone conifer forest, chaparral, cismontane woodland; gabbroic, metavolcanic, or serpentintite/ evergreen shrub/ March–June/ 30–2,400	No	Absent	No suitable forest/woodland or chaparral habitat and no suitable soils. Site is barely within species' elevation range. Would have been observed if present.
Galium proliferum Desert bedstraw	None/None /None	2B.2	Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland; rocky, carbonate/ annual herb/ March–June/ 3,900–5,350	No	Absent	No suitable habitat on site and no suitable rocky/carbonate soils. Site is below species' elevation range.
Geothallus tuberosus Campbell's liverwort	None/None /None	1B.1	Coastal scrub (mesic), vernal pools; soil/ ephemeral liverwort/ NA/ 30–2,000	No	Moderate	Suitable coastal scrub and mesic conditions present. Site is barely within species' elevation range.
Githopsis diffusa ssp. *filicaulis* Mission Canyon bluecup	None/None /None	3.1	Chaparral (mesic, disturbed areas)/ annual herb/ April–June/ 1,500–2,300	No	Low	No suitable chaparral habitat although mesic conditions present. Site is below species' elevation range.

Scientific Name Common Name	Status Federal/ State/ Other	CRPR	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (ft amsl)	Observed on Site?	Determination	Status on Site or Potential to Occur
Harpagonella palmeri Palmer's grapplinghook	None/None /None	4.2	Chaparral, coastal scrub, valley and foothill grassland; clay/ annual herb/ March–May/ 60–3,100	No	Moderate	Suitable coastal scrub habitats on site but no clay soils. Site is below species' elevation range.
Hesperocyparis [=*Cupressus*] *forbesii* Tecate cypress	None/None /None	1B.1	Closed-cone coniferous forest, chaparral; clay, gabbroic, or metavolcanic/ perennial evergreen tree/ 260–4,920	No	Absent	No suitable chaparral or forest habitats and no suitable soils. Site is below species' elevation range. Would have been observed if present.
Heterotheca sessiliflora ssp. *sessiliflora* Beach goldenaster	None/None /None	1B.1	Coastal dunes, coastal scrub, coastal chaparral/ annual herb/ July–November/ < 35	No	Moderate	Suitable coastal scrub habitat on site. Site is within species' elevation range. Would have been observed if present.
Horkelia truncata Ramona horkelia	None/None /None	1B.3	Chaparral, cismontane woodland, clay, gabbroic/ perennial herb/ May–June/ 1,300–4,300	No	Not expected to occur	No suitable habitat on site and no clay or gabbroic soils. Site is below species' elevation range.
Hosackia crassifolia var. *otayensis* Otay Mountain lotus	None/None /None	1B.1	Chaparral; metavolcanic, often in disturbed areas/ perennial herb/ May–August/ 1,250–3,300	No	Low	No suitable habitat or soils on site. Site is below species' elevation range.
Isocoma menziesii var. *decumbens* Decumbent goldenbush	None/None /None	1B.2	Chaparral, coastal scrub (sandy, often disturbed areas)/ shrub/ April–November/ 30–450	No	Absent	Suitable coastal scrub habitat on site but no sandy soils. Site is barely within species' elevation range. Would have been observed if present. Other common variety (vernonioides) present on site.
Iva hayesiana San Diego marsh-elder	None/None /None	2.2	Marshes and swamps, playas/ perennial herb/ April–November/ 30–1,650	No	Moderate	Suitable coastal marsh habitat on site. Site is barely within species' elevation range. Would have been observed if present.
Lepechinia ganderi Gander's pitcher sage	None/None /MSCP	1B.3	Closed-cone conifer forest, chaparral, coastal scrub, valley and foothill grassland; gabbroic or metvolcanic/ shrub/ June–July/ 1,000–3,300	No	Low	Suitable coastal scrub habitat on site but no suitable soils present. Site is below species' elevation range.
Leptosyne maritima Sea dahlia	None/None /None	2.B2	Coastal bluff scrub, coastal scrub/ perennial herb/ March–May/ 15–450	No	Moderate	Suitable coastal scrub habitat on site. Site is within species' elevation range. Would have been observed if present.
Mobergia calculiformis Light gray lichen	None/None /None	3	Coastal scrub; cobbles/ lichen/ NA/ 20	No	Moderate	Suitable coastal scrub habitat on site. Site is within species' elevation range. Would be expected in intact, undisturbed habitats.

Scientific Name Common Name	Status Federal/ State/ Other	CRPR	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (ft amsl)	Observed on Site?	Determination	Status on Site or Potential to Occur
Monardella hypoleuca ssp. *lanata* Felt-leaved monardella	None/None /MSCP	1B.2	Chaparral, cismontane woodland/ rhizomatous herb/ June–August/ 1,000–3,600	No	Low	No suitable habitat on site. Site is below species' elevation range.
Monardella stoneana Jennifer's monardella	None/None /None	1B.2	Closed-cone coniferous forest, chaparral, coastal scrub, riparian scrub; usually rocky intermittent streambeds/ perennial herb/ June–September/ 30–2,600	No	Low	Suitable coastal scrub habitat on site but no rocky intermittent streambeds. Site is barely within species' elevation range.
Monardella viminea Willowy monardella	FE/ SE/ MSCP	1B.1	Chaparral, coastal scrub, riparian forest, woodland, and scrub; alluvial ephemeral washes/ perennial herb/ June–August/ 160–750	No	Low	Suitable coastal scrub habitat on site, but no alluvial ephemeral washes. Site is below species' elevation range.
Myosurus minimus ssp. *apus* Little mousetail	None/None /None	3.1	Vernal pools, valley and foothill grassland; alkaline/ annual herb/ March–June/ 60–2,100	No	Low	No suitable habitat on site. Site is below species' elevation range.
Nama stenocarpum Mud nama	None/None /None	2.2	Marshes and swamps, lake margins, riverbanks/ annual–perennial herb/ January–July/ 15–1,650	No	Moderate	Suitable marsh habitat on site. Site is within species' elevation range.
Navarretia fossalis Spreading navarretia	FT/ None/ MSCP	1B.1	Chenopod scrub, shallow freshwater marshes and swamps, playas, vernal pools/ annual herb/ April–June/ 100–4,300	No	Low	Suitable marsh habitat on site, but no swamps, playas or vernal pools. Site is below species' elevation range.
Navarretia prostrata Prostrate navarretia	None/None /None	1B.1	Coastal scrub, meadows and seeps, valley and foothill grassland (alkaline), vernal pools; mesic/annual herb/ April–July/ 50–2,300	No	Low	Suitable coastal scrub habitat on site and mesic conditions are present, but no vernal pools. Site is below species' elevation range.
Nemacaulis denudata var. *denudata* Coast woolly-heads	None/None /None	1B.2	Coastal dunes/ annual herb/ April–September/ < 330	No	Moderate	No coastal dune habitat on site. Site is within species' elevation range.
Nemacaulis denudata var. *gracilis* Slender woolly-heads	None/None /None	2.2	Coastal dunes, desert dunes, Sonoran desert scrub/ annual herb/ (March)April–May/ 160–1,300	No	Low	No suitable habitat on site. Site is below species' elevation range.
Orcuttia californica California Orcutt grass	FE/ SE/ MSCP	1B.1	Vernal pools/ annual herb/ April–August/ 50–2,200	No	Low	No vernal pools on site. Site is below species' elevation range.

Scientific Name Common Name	Status Federal/ State/ Other	CRPR	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (ft amsl)	Observed on Site?	Determination	Status on Site or Potential to Occur
Ornithostaphylos oppositifolia Baja California birdbush	None/ SE/ None	2.1	Chaparral/ evergreen shrub/ January–April/180–2,600	No	Absent	No chaparral habitat on site. Site is below species' elevation range. Would have been observed if present.
Orobanche parishii ssp. *brachyloba* Short-lobed broom-rape	None/None /None	4.2	Coastal bluff scrub, coastal dunes, coastal scrub; sandy/ perennial herb parasitic/ April–October/ <1,000	No	Low	Suitable coastal scrub habitat on site but no sandy soils present. Site is within species' elevation range.
Pinus torreyana spp. *torreyana* Torrey pine	None/None /MSCP	1B.2	Closed-cone conifer forest, chaparral; sandstone/ evergreen tree/ NA/ 250–550	No	Absent	No suitable habitat on site. Site is below species' elevation range. Would have been observed if present.
Pogogyne abramsii San Diego mesa mint	FE/ SE/ MSCP	1B.1	Vernal pools/ annual herb/ May–July/ 300–650	No	Low	No vernal pools on site. Site is below species' elevation range.
Pogogyne nudiuscula Otay Mesa mint	FE/ SE/ MCSP	1B.1	Vernal pools/ annual herb/ May–July/ 300–620	No	Low	No vernal pools on site. Site is below species' elevation range.
Quercus dumosa Nuttall's scrub oak	None/None /None	1B.1	Chaparral, coastal scrub, closed-cone coniferous forest; sandy, clay loam/ evergreen shrub/ February–April/ 50–1,300	No	Absent	Suitable coastal scrub habitat on site. Site is below species' elevation range. Would have been observed if present.
Ribes viburnifolium Santa Catalina Island currant	None/None /None	1B.2	Chaparral, cismontane woodland/ evergreen shrub/ February–April/ 100–1,000	No	Absent	No suitable habitat on site. Site is below species' elevation range. Would have been observed if present.
Rosa minutifolia Small-leaved rose	None/ SE/ MCSP	2.1	Chaparral, coastal scrub/ deciduous shrub/ January–June/ 490–525	No	Absent	Suitable coastal scrub habitat on site. Site is below species' elevation range. Would have been observed if present.
Salvia munzii Munz's sage	None/None /None	2.2	Chaparral, coastal scrub/ evergreen shrub/ February–April/ 400–3,500	No	Absent	Suitable coastal scrub habitat on site. Site is below species' elevation range. Would have been observed if present.
Senecio aphanactis Chaparral ragwort	None/None /None	2.2	Chaparral, cismontane woodland, coastal scrub; sometimes alkaline/ annual herb/ January–April/ 50–2,630	No	Moderate	Suitable coastal scrub habitat on site. Site is below species' elevation range.
Sphaerocarpos drewei Bottle liverwort	None/None / None	1B.1	Chaparral, coastal scrub; openings, soil/ ephemeral liverwort/ NA/ 300–1,970	No	Low	Suitable coastal scrub habitat on site. Site is below species' elevation range.

Scientific Name Common Name	Status Federal/ State/ Other	CRPR	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (ft amsl)	Observed on Site?	Determination	Status on Site or Potential to Occur
Stemodia durantifolia Purple stemodia	None/None /None	2.1	Sonoran desert scrub; often mesic, sandy/ perennial herb / January–December/ 600–1,000	No	Low	No suitable scrub habitat on site although mesic conditions present. Site is below species' elevation range.
Stylocline citroleum Oil neststraw	None/None /None	1B.1	Chenopod scrub, coastal scrub, valley and foothill grassland; clay/ annual herb/ March–April / 165–1,300	No	Low	Suitable coastal scrub habitat on site. Site is within species' elevation range.
Suaeda californica California seablite	None/ SE/ None	1B.1	Coastal salt marshes and swamps/ perennial evergreen shrub/ July–October/ 0–45	No	Moderate	Suitable coastal salt marsh habitat on site. Site is within species' elevation range. Would have been observed if present.
Tetracoccus dioicus Parry's tetracoccus	None/None /MSCP	1B.2	Chaparral, coastal scrub/ deciduous shrub/ April–May/ 550–3,300	No	Low	Suitable coastal scrub habitat on site. Site is below species' elevation range. Would have been observed if present.
Texosporium sancti-jacobi Woven-spored lichen	None/None / None	3	Chaparral openings; on soil, small mammal pellets, dead twigs, and on *Selaginella*/ crustose lichen terrestrial/ 950–2,165	No	Low	No suitable chaparral habitat on site. Site is below species' elevation range.

Source: List based on a search of all plant species found in the CNDDB and CNPS databases for the National City quadrangle and the seven surrounding U.S. Geological Service (USGS) quadrangles conducted in June 2013. All species are found within the Project sites bioregion or regions defined by the geographic subdivisions of California in the Jepson Flora Project (2013).The project site is located in the Peninsular Ranges within the California Floristic Province.

Notes: ft amsl = feet above mean sea level; NA = not applicable

Status Key:

Federal:

FE: Federally listed as endangered
FT: Federally listed as threatened

State:

SE: State-listed as endangered
ST: State-listed as threatened
SR: State-listed as rare

Other:

MSCP: MSCP Plan covered species for the southwestern portion of San Diego County
CRPR: California Rare Plant Rank
1A (formerly List 1A): Plants Presumed Extinct in California
1B (formerly List 1B): Plants Rare, Threatened, or Endangered in California and Elsewhere
2 (formerly List 2): Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
3 (formerly List 3): Plants about Which We Need More Information – A Review List

4 (formerly List 4): Plants of Limited Distribution – A Watch List
0.1–Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
0.2–Fairly threatened in California (20%–80% occurrences threatened/moderate degree and immediacy of threat)
0.3–Not very threatened in California (<20% of occurrences threatened /low degree and immediacy of threat or no current threats known).

APPENDIX C

Wildlife Compendium

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APPENDIX C
Wildlife Compendium

BIRD

BLACKBIRDS, ORIOLES AND ALLIES

ICTERIDAE—BLACKBIRDS

Icterus bullockii—Bullock's oriole
Sturnella neglecta—Western meadowlark
Icterus cucullatus—Hooded oriole

BUSHTITS

AEGITHALIDAE—LONG-TAILED TITS AND BUSHTITS

Psaltriparus minimus—Bushtit

CORMORANTS

PHALACROCORACIDAE—CORMORANTS

Phalacrocorax auritus—Double-crested cormorant

EMBERIZINES

EMBERIZIDAE—EMBERIZIDS

Chondestes grammacus—Lark sparrow
Melospiza melodia—Song sparrow
Melozone crissalis—California towhee
Passerculus sandwichensis beldingi—Belding's savannah sparrow
Zonotrichia leucophrys—White-crowned sparrow
Aimophila ruficeps canescens—Southern California rufous-crowned sparrow

FALCONS

FALCONIDAE—CARACARAS AND FALCONS

Falco sparverius—American kestrel

FINCHES

FRINGILLIDAE—FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Carpodacus mexicanus—House finch
Spinus psaltria—Lesser goldfinch

FLYCATCHERS

TYRANNIDAE—TYRANT FLYCATCHERS

Sayornis nigricans—Black phoebe
Sayornis saya—Say's phoebe
Tyrannus verticalis—Western kingbird
Tyrannus vociferans—Cassin's kingbird

HAWKS

ACCIPITRIDAE—HAWKS, KITES, EAGLES, AND ALLIES

Accipiter cooperii—Cooper's hawk
Buteo jamaicensis—Red-tailed hawk
Buteo lineatus—Red-shouldered hawk
Circus cyaneus—Northern harrier
Pandion haliaetus—Osprey

HERONS AND BITTERNS

ARDEIDAE—HERONS, BITTERNS, AND ALLIES

Ardea alba—Great egret
Ardea herodias—Great blue heron
Egretta thula—Snowy egret

HUMMINGBIRDS

TROCHILIDAE—HUMMINGBIRDS

Calypte anna—Anna's hummingbird
Calypte costae—Costa's hummingbird

JAYS, MAGPIES AND CROWS

CORVIDAE—CROWS AND JAYS

Corvus brachyrhynchos—American crow
Corvus corax—Common raven

LARKS

ALAUDIDAE—LARKS

Eremophila alpestris—Horned lark

MOCKINGBIRDS AND THRASHERS

MIMIDAE—MOCKINGBIRDS AND THRASHERS

Mimus polyglottos—Northern mockingbird

PELICANS

PELECANIDAE—PELICANS

Pelecanus occidentalis—Brown pelican

PIGEONS AND DOVES

COLUMBIDAE—PIGEONS AND DOVES

Zenaida macroura—Mourning dove

* *Columba livia*—Rock pigeon (rock dove)

SHOREBIRDS

RECURVIROSTRIDAE—STILTS AND AVOCETS

Recurvirostra americana—American avocet

CHARADRIIDAE—LAPWINGS AND PLOVERS

Charadrius vociferus—Killdeer

SCOLOPACIDAE—SANDPIPERS, PHALAROPES, AND ALLIES

Calidris mauri—Western sandpiper

*Calidris minutil*la—Least sandpiper

Limnodromus scolopaceus—Long-billed dowitcher

Limosa fedoa—Marbled godwit

Numenius americanus—Long-billed curlew

Numenius phaeopus—Whimbrel

Tringa semipalmata—Willet

STARLINGS AND ALLIES

STURNIDAE—STARLINGS

* *Sturnus vulgaris*—European starling

SWALLOWS

HIRUNDINIDAE—SWALLOWS

Hirundo rustica—Barn swallow

Petrochelidon pyrrhonota—Cliff swallow
Stelgidopteryx serripennis—Northern rough-winged swallow

SWIFTS

APODIDAE—SWIFTS

Aeronautes saxatalis—White-throated swift

TERNS AND GULLS

LARIDAE—GULLS, TERNS, AND SKIMMERS

Larus sp.—Gull species
Larus californicus—California gull
Thalasseus elegans—Elegant tern
Hydroprogne caspia—Caspian tern

THRUSHES

TURDIDAE—THRUSHES

Sialia mexicana—Western bluebird

WATERFOWL

ANATIDAE—DUCKS, GEESE, AND SWANS

Anas americana—American wigeon
Anas platyrhynchos—Mallard
Branta bernicla—Brant
Oxyura jamaicensis—Ruddy duck

WOOD WARBLERS AND ALLIES

PARULIDAE—WOOD-WARBLERS

Geothlypis trichas—Common yellowthroat
Setophaga coronata—Yellow-rumped warbler

WRENS

TROGLODYTIDAE—WRENS

Cistothorus palustris—Marsh wren
Thryomanes bewickii—Bewick's wren

WRENTITS

TIMALIIDAE—BABBLERS

Chamaea fasciata—Wrentit

INVERTEBRATE

BUTTERFLIES

LYCAENIDAE—BLUES, HAIRSTREAKS, AND COPPERS

Strymon melinus—Gray hairstreak

Brephidium exile—Western pygmy-blue

NYMPHALIDAE—BRUSH-FOOTED BUTTERFLIES

Danaus gilippus—Queen

Vanessa annabella—West coast lady

PIERIDAE—WHITES AND SULFURS

Pieris rapae—Cabbage white

MAMMAL

CANIDS

CANIDAE—WOLVES AND FOXES

Canis latrans—Coyote

HARES AND RABBITS

LEPORIDAE—HARES AND RABBITS

Sylvilagus bachmani—Brush rabbit

POCKET GOPHERS

GEOMYIDAE—POCKET GOPHERS

Thomomys bottae—Botta's pocket gopher

RATS AND MICE

MURIDAE—RATS AND MICE

* *Rattus norvegicus*—Brown rat

SQUIRRELS

SCIURIDAE—SQUIRRELS

Spermophilus(Otospermophilus) beecheyi—California ground squirrel

REPTILE

LIZARDS

PHRYNOSOMATIDAE—IGUANID LIZARDS

Sceloporus occidentalis—Western fence lizard

Uta stansburiana—Common side-blotched lizard

* Signifies non-native species

APPENDIX D1

Special-Status Wildlife Species Observed in Project Area or with High Potential to Occur

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APPENDIX D1
Special-Status Wildlife Species Observed in Project Area or with High Potential to Occur

Scientific Name / Common Name	Status (Federal/ State/ Other)	Habitat Preferences / Requirements	Verified on Site (Direct/Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determinationa
		Birds			
Accipiter cooperii (nesting) Cooper's hawk	None/WL/ MSCP	Dense stands of live oak, riparian deciduous, forest habitats near water frequently used. Breeds in southern Sierra Nevada foothills, New York Mts., Owens Valley, other local areas in Southern California, 0–2,700 m amsl [2].	Yes	High (nesting); Present (non-breeding)	Species detected onsite, although breeding status could not be confirmed. Suitable trees located within eucalyptus woodland, tamarisk groves, and sycamores onsite for nesting. Suitable foraging habitat over non-native grassland and coastal sage scrub habitats. Species found in the vicinity. The nearest CNDDB record for this species is 6.2 miles southwest of the study area, within the Tijuana River Valley.
Aimophila ruficeps canescens Southern California rufous-crowned sparrow	None/WL/ MSCP	Sparse mixed chaparral and coastal scrub habitats (especially coastal sage) in Southern California on slopes of Transverse and Coastal ranges, north to Los Angeles County, and northwestern Baja California. Found on steep, rocky hillsides with grass and forb patches, and grassy slopes with low shrub cover, if rock outcrops are present [2, 4].	Yes	Present	Species detected within coastal scrub habitats in southern region of the northern parcel. Breeding could not be confirmed but would be presumed breeding due to detection during breeding bird season. Species found in the vicinity. The nearest CNDDB record for this species is 6.2 miles southeast of the study area.
Circus cyaneus (nesting) Northern harrier	None/SSC/ MSCP	Open wetlands (nesting), pasture, old fields, dry uplands, grasslands, rangelands, coastal sage scrub. Resident of northeastern plateau and coastal areas; less common resident in Central Valley. Breeds at marsh edge in shrubby vegetation in Central Valley and Sierra Nevada (0–1,700 m amsl), and northeastern California (up to 800 m amsl) [2].	Yes	Present (nesting and non-breeding)	Pair observed foraging over the site on almost every site visit. Species found in the vicinity. Was not detected breeding during this nesting season. It has been detected onsite in past surveys within the site and was assumed that it could be nesting. The nearest CNDDB record for this species is 6.2 miles southwest of the study area, within the Tijuana River Valley.

Scientific Name / Common Name	Status (Federal/ State/ Other)	Habitat Preferences / Requirements	Verified on Site (Direct/Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determinationa
Eremophila alpestris actia California horned lark	None/WL/None	Open habitats, grassland, rangeland, shortgrass prairie, montane meadows, coastal plains, fallow grain fields south of Humboldt County in Coast Ranges, in San Joaquin Valley except extreme southern end [2, 4].	Yes	Observed	Pairs observed nesting in the H-3 parcel. The species is relatively opportunistic for foraging. Species found in the vicinity. The nearest CNDDB record for this species is 8.9 miles northeast of the study area.
Pandion haliaetus (nesting; rarely breeds in San Diego) Osprey	None/ WL/None	Large waters (lakes, reservoirs, rivers) supporting fish; usually near forest habitats (primarily ponderosa pine through mixed conifer), but widely observed along the coast. Breeds from Cascade Ranges south to Lake Tahoe and along northwest coast. Uncommon breeder along southern Colorado River. Uncommon along coast of Southern California [2].	Yes	Present (nesting, non-breeding)	Osprey pair nesting at southeast corner of Sandpiper Way and G Street. This nesting location has been documented in the past, and is located in the top of a utility pole. Osprey individuals also observed foraging over the project area. Species found in the vicinity. The nearest CNDDB record for this species is 6.8 miles northwest of the study area in the San Diego Bay.
Passerculus sandwichensis beldingi Belding's savannah sparrow	None/SE/ MSCP	Scattered southern coastal wetlands in southwestern California [2].	Yes	Present (nesting and non-breeding)	Observed foraging and nesting within the site. Family groups were observed as well. Species found in the vicinity. The nearest CNDDB record for this species is located within the study area, within the Sweetwater District parcel.
Pelecanus occidentalis californicus (nesting colony and communal roosts) Brown pelican (California)	(FD)/(SD), FP/ MSCP	Open sea, large water bodies, coastal bays and harbors, estuarine, marine subtidal, and marine pelagic waters along coast and breeds o(n Channel Islands [2].	Yes	Low (nesting) Present (non-breeding)	Expected to forage within the San Diego Bay and to fly over the site. Not expected to nest within the study area. Species found in the vicinity. The nearest CNDDB record for this species is 7.5 miles northwest of the study area in the San Diego Bay.
Phalacrocorax auritus (nesting colony) Double-crested cormorant	None/WL/None	Lakes, rivers, reservoirs, estuaries, ocean; nests in tall trees, rock ledges on cliffs, rugged slopes. Resident along coast and inland waters. Common August to May at Salton Sea and Colorado River reservoirs, also found south of San Luis Obispo County and Central Valley [2].	Yes	Low (nesting) Present (non-breeding)	Expected to forage within the San Diego Bay and observed flying over the site. Not expected to nest within the study area. Species found in the vicinity. The nearest CNDDB record for this species is 8.9 miles northeast of the study area.

Scientific Name / Common Name	Status (Federal/ State/ Other)	Habitat Preferences / Requirements	Verified on Site (Direct/Indirect Evidence)	Potential to Occur on Site	Factual Basis for Determinationa
Invertebrates					
Cicindela senilis frosti Senile tiger beetle	None/None/None	Coastal salt marshes; fresh/brackish lagoons, open patches of Salicornia, dried salt pans, muddy alkali area. Records in Riverside, San Diego, Los Angeles, Ventura Counties [4, 6]	No	High	Suitable salt marsh habitat onsite including open patches of Salicornia. Species found in the vicinity. The nearest CNDDB record for this species is 6.9 miles southwest of the study area in the Tijuana River Valley.
Panoquina errans Wandering salt marsh skipper	None/None/ MSCP	Salt marsh from Los Angeles to Baja California, Mexico. Host plant Distichlis spicata in salt marshes or near beaches, mouths of rivers [4].	No	High	Suitable salt marsh habitat and host plant found onsite. Species found in the vicinity. The nearest CNDDB record for this species is 5.0 miles southwest of the study area along the coast.

Sources:

1. CaliforniaHerps.com. Accessed February 10, 2014. http://californiaherps.com/CWHR.
2. CWHR (California Wildlife Habitat Relationships System. Accessed February 10, 2014. http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx.
3. CDFW. 2011. *Special Animals (898 Taxa)*. July 2011. Accessed February 10, 2014. http://www.dfg.ca.gov/wildlife/nongame/list.htmlCNDDB.
4. NatureServe Explorer. Accessed February 10, 2014. http://www.natureserve.org/explorer/.
5. Sogge, M.K., D. Ahlers, and S.J. Sferra. 2010. *A Natural History Summary and Survey Protocol for the Southwestern Willow Flycatcher*. U.S. Geological Survey Techniques and Methods 2A-10.
6. CNDDB (California Natural Diversity Database). Accessed February 10, 2014.
7. Bolster, B.C., ed. 1998. *Terrestrial Mammal Species of Special Concern in California*. Draft Final Report prepared by P.V. Brylski, P.W. Collins, E.D. Pierson, W.E. Rainey and T.E. Kucera. Report submitted to California Department of Fish and Game Wildlife Management Division, Nongame Bird and Mammal Conservation Program for Contract No.FG3146WM. Accessed February 11, 2014. http://www.dfg.ca.gov/wildlife/nongame/ssc/1998mssc.html
8. Butterflies of America. 2006. Endangered Species Recovery Program, CSU Stanislaus. 2006. Accessed February 11, 2014. http://butterfliesofamerica.com/.
9. Proceedings of the Academy of Natural Sciences of Philadelphia, Vol 48. Pub 1896. Accessed February 11, 2014. http://books.google.com/books?id=ir5LAAAAYAAJ&pg=PA349&lpg=PA349&dq=Ariolimax+columbianus+stramineus&source=bl&ots=wAA6kBqLmN&sig=erEGVBBFC7ROz3ZMFEvV7I7Q73k&hl=en&ei=I_jXTurWLJTJsQKdy_HeDQ&sa=X&oi=book_result&ct=result&resnum=4&ved=0CDYQ6AEwAw#v=onepage&q=Ariolimax%20columbianus%20stramineus&f=false.
10. San Diego Bay National Wildlife Refuge Final Comprehensive Conservation Plan/EIS. Chapter 3. Accessed February 11, 2014. http://www.fws.gov/sandiegorefuges/new/ccp/ccp.htm.
11. City of Carlsbad. 2004. *Habitat Management Plan for Natural Communities in the City of Carlsbad, as Amended*. December 1999. Final Approval 2004. Accessed February 11, 2014. http://www.carlsbadca.gov/services/environmental/hmp/docs/Pages/hmp.aspx.
12. Endangered Species Recovery Program, CSU Stanislaus. 2006. Accessed February 11, 2014. http://esrp.csustan.edu/speciesprofiles/profile.php?sp=trsp.
13. Biodiversity Heritage Library. Accessed February 11, 2014. http://www.biodiversitylibrary.org/name/Phobetus%20robinsoni.
14. Vierling, K.T.,V.A. Saab, and B.W. Tobalske. 2013. "Lewis's Woodpecker (*Melanerpes lewis*)." In *The Birds of North America Online*, edited by A. Poole. Ithaca, New York: Cornell Lab of Ornithology. http://bna.birds.cornell.edu/bna/species/284.
15. Tarof, S., and C.R. Brown. 2013. "Purple Martin (*Progne subis*)." In *The Birds of North America Online*, edited by A. Poole. Ithaca, New York: Cornell Lab of Ornithology. http://bna.birds.cornell.edu/bna/species/287.

16. Butterflies and Moths of North America. 2014. "Attributes of *Papilio multicaudata*." Accessed February 13, 2014. http://www.butterfliesandmoths.org/species/Papilio-multicaudata.

Notes: m amsl = meters above mean sea level

Status Key:

Federal Designations:

(FD) Federally delisted; monitored for 5 years

State Designations:

SSC California Special Concern Species
FP California Department of Fish and Wildlife Fully Protected Species
WL California Department of Fish and Wildlife Watch List Species
SE State Listed as Endangered
(SD) State Delisted

Other Designations:

MSCP Covered under the Chula Vista MSCP Subarea Plan.

[a]For the purposes of determination of potential to occur on site, vicinity = within 9-quad search of National City quadrangle.

APPENDIX D2

Sensitive Wildlife Species Not Expected to Occur in Project Area

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APPENDIX D2
Sensitive Wildlife Species Not Expected to Occur in Project Area

Scientific Name / Common Name	Status (Federal/ State/ Other)	Habitat Preferences / Requirements	Verified on Site (Direct/Indirect Evidence)	Potential to Occur on Site	Factual Basis For Determination[a]
		Amphibians			
Anaxyrus californicus Arroyo toad	FE/SSC/ MSCP	Washes, arroyos, sandy riverbanks, riparian areas with willows, sycamores, oaks cottonwoods. Requires exposed sandy stream sides with stable terraces to burrow with scattered vegetation and calm pools with sandy/gravel bottoms for breeding. Found west of desert in coastal areas from upper Salinas River in San Luis Obispo Co. to northwestern Baja California; 0–900 m amsl [1].	No	Absent	No suitable creeks, streams or pools on site to support this species. Species found in the vicinity. The nearest CNDDB record for this species is 9.8 miles northeast of the study area.
Spea hammondii Western spadefoot	None/SSC/None	Sandy/gravelly soils within mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Breeds in rain pools that do not have bullfrogs, fish, or crayfish. Found throughout Great Valley and foothills south of Redding, throughout South Coast Ranges in Southern California south of Transverse Mountains and west of Peninsular Mountains; 0–1,365 m amsl [1].	No	Absent	No suitable creeks, streams or pools on site to support this species. Species found in the vicinity. The nearest CNDDB record for this species is 6.2 miles southwest of the study area.
		Reptiles			
Anniella pulchra (pulchra) Silvery legless lizard	None/SSC/None	Moist habitats. Loose soils with plant cover, beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, stream terraces with sycamores, cottonwoods, or oaks. Found under surface objects such as rocks, boards, driftwood, logs, leaf litter; 0–1,799 m amsl [1].	No	Low	Soils generally too compact and clayey for this species although beach habitat and corresponding sandy soils present. Species found in the vicinity. The nearest CNDDB record for this species is 86.0 miles south of the study area.

APPENDIX D2 (Continued)

Scientific Name / Common Name	Status (Federal/ State/ Other)	Habitat Preferences / Requirements	Verified on Site (Direct/Indirect Evidence)	Potential to Occur on Site	Factual Basis For Determination[a]
Aspidoscelis hyperythra beldingi Belding's orange-throated whiptail	None/SSC (for full species)/ MSCP	Coastal sage scrub, chamise–redshank chaparral, mixed chaparral, valley–foothill hardwood especially in areas with summer fog. Found from Santa Ana River (Orange County) and near Colton (San Bernardino County), west of Peninsular Ranges, south throughout Baja California; 0–610 m amsl [1, 2].	No	Low	Moderately suitable coastal sage scrub on site. However, the coastal sage scrub on site was part of a restoration project and is fairly limited in acreage. Species found in the vicinity. The nearest CNDDB record for this species is 2.5 miles northeast of the study area.
Aspidoscelis tigris stejnegeri Coastal western whiptail	None/None/None	Variety of habitats, primarily hot and dry open areas with sparse foliage – chaparral, woodland, riparian. Occurs in coastal Southern California, west of Peninsular Ranges and south of Transverse Ranges, north to Ventura County; 0–2,130 m amsl [1].	No	Low	Vegetation on site is generally too dense for this species. Moderately suitable coastal scrub habitat on site however it is limited in acreage. Species found in the vicinity. The nearest CNDDB record for this species is 6.6 miles northeast of the study area.
Chelonia mydas Green sea turtle	FT/None/None	Reefs, bays, inlets, other shallow waters with marine grass and algae. Open beaches required for nesting [4].	No	Low	High potential for this species to occur within San Diego Bay. However, would not be expected to nest within study area due to trash and concrete on beaches, and small amount of available beach habitat. Species found in the vicinity. The nearest CNDDB record for this species is within San Diego Bay, less than 0.5 miles from the study area.
Crotalus ruber ruber Northern red diamond rattlesnake	None/SSC/None	Arid scrub, coastal chaparral, oak and pine woodlands, rocky grassland, cultivated areas, rocky areas, dense vegetation. Occurs along coastal San Diego County to the eastern slopes of the mountains and north through western Riverside County into southernmost San Bernardino County; 0–900 m amsl [1,2].	No	Low	No suitable arid scrub habitats located within study area. Species found in the vicinity. The nearest CNDDB record for this species is 4.6 miles southeast of the study area.

Scientific Name / Common Name	Status (Federal/ State/ Other)	Habitat Preferences / Requirements	Verified on Site (Direct/Indirect Evidence)	Potential to Occur on Site	Factual Basis For Determination[a]
Diadophis punctatus similis San Diego ring-necked snake	None/None/None	Prefers moist habitats, including wet meadows, rocky hillsides, gardens, farmlands, grassland, chaparral, mixed coniferous forests, woodlands. Found mainly in San Diego County along the coast and into the Peninsular Range and into southwestern San Bernardino County [1].	No	Low	No suitable moist habitats on site. Site is generally too coastal to support this species. Species found in the vicinity. The nearest CNDDB record for this species is 7.4 miles northeast of the study area.
Lichanura trivirgata Rosy boa	None/None/None	Arid scrublands, semi-arid shrublands, rocky shrublands, rocky deserts, canyons, other rocky areas, riparian areas, desert and chaparral areas. Occurs throughout Southern California from the coast to the Mojave and Colorado Deserts. Prefer areas with moderate to dense vegetation and rocky cover [1, 2].	No	Low	No suitable arid habitats on site. Site is generally too coastal to support this species. Species found in the vicinity. The nearest CNDDB record for this species is 6.0 miles southeast of the study area.
Phrynosoma blainvillii Blainville's horned lizard	None/SSC/ MSCP	Areas of sandy soil and low vegetation in valleys, foothills, semiarid mountains, grasslands, chaparral, woodland, coniferous forest, sandy areas. Often found near ant hills and in lowlands along sandy washes with scattered shrubs and along dirt roads. Occurs along the Pacific coast from the Baja California border west of the deserts and the Sierra Nevada, north to the Bay Area, and inland to Shasta Reservoir; 0–2,483 m amsl [1].	No	Low	No suitable sandy soils within study area with exception of sandy beaches. Site is generally too coastal to support this species. Species found in the vicinity. The nearest CNDDB record for this species is 3.2 miles south of the study area.
Plestiodon skiltonianus interparietalis Coronado skink	None/SSC/None	Grassland, woodlands, pine forests, chaparral, especially open sunny areas (e.g., clearings, edges of creeks) and rocky areas near streams with lots of vegetation. Also found in areas away from water. Occurs in inland Southern California south through the north Pacific coast region of northern Baja California [1].	No	Low	No suitable habitat or streams on site for this species. Species found in the vicinity. The nearest CNDDB record for this species is 5.0 miles south of the study area.

Scientific Name / Common Name	Status (Federal/ State/ Other)	Habitat Preferences / Requirements	Verified on Site (Direct/Indirect Evidence)	Potential to Occur on Site	Factual Basis For Determination[a]
Salvadora hexalepis virgultea Coast patch-nosed snake	None/SSC/None	Semi-arid brushy areas and chaparral in canyons, rocky hillsides, plains from northern Carrizo Plains south through coastal zone, south and west of the deserts into coastal northern Baja California; below sea level to 2,130 m amsl [1].	No	Low	No suitable arid habitats or chaparral on site. Site is generally too coastal to support this species. Species found in the vicinity. The nearest CNDDB record for this species is 12.9 miles southeast of the study area.
Thamnophis hammondii Two-striped garter snake	None/SSC/ None	Associated with permanent or semi-permanent bodies of water in a variety of habitats: rocky areas, oak woodland, chaparral, brushland, coniferous forest. Found on Diablo Range, South Coast and Transverse Ranges, and Santa Catalina Island; 0–2,400 m amsl [1,2].	No	Low	No suitable water bodies located within the study area. One stream flows through site but has strong tidal influences that would exclude this species. Species found in the vicinity. The nearest CNDDB record for this species is 5.6 miles south of the study area.
		Birds			
Agelaius tricolor (colony) Tricolored Blackbird	BCC/SSC/ MSCP	Breeds in emergent wetland with tall, dense cattails or tules; willow, blackberry, tall herb thickets. Feeds in grassland and cropland habitats. Found throughout Central Valley and coastal areas south of Sonoma County [2].	No	Very low (nesting and non-breeding)	No suitable emergent wetland habitat found on site. Wetland habitat on site is dominated by *Atriplex* and *Distichilis*. Species found in the vicinity. The nearest CNDDB record for this species is 8.9 miles northeast of the study area.
Ammodramus savannarum (nesting) Grasshopper sparrow	None/SSC/None	Dry, dense grasslands, especially with a variety of grasses and tall forbs, scattered shrubs for singing perches. Summer resident and breeder in foothills and lowlands west of Cascade–Sierra Nevada crest from Mendocino and Trinity Counties south to San Diego County. In Southern California, occurs on hillsides and mesas in coastal areas, breeds up to 1,500 m amsl [2].	No	Low (nesting and non-breeding)	No suitable dense grasslands on site. Species found in the vicinity. The nearest CNDDB record for this species is 17.1 miles northeast of the study area.
Artemisiospiza belli Bell's sparrow (Includes nominate form of species [Amphispiza belli belli])	BCC/WL/None	Occurs in low, dense stands of shrubs; chaparral dominated by chamise, coastal scrub dominated by sage. Coast Ranges from Northern California to northwestern Baja California, western slope of Sierra Nevada [2]. Nominate form of species designated as special-status.	No	Moderate (nesting and non-breeding)	Limited amount of coastal scrub habitats found on site. Most habitat areas are very isolated and lack connectivity with larger habitat patches. Species found in the vicinity. The nearest CNDDB record for this species is 9.1 miles northeast of the study area.

Scientific Name / Common Name	Status (Federal/ State/ Other)	Habitat Preferences / Requirements	Verified on Site (Direct/Indirect Evidence)	Potential to Occur on Site	Factual Basis For Determination[a]
Athene cunicularia burrow sites and some wintering sites) Burrowing owl	BCC/SSC/ MSCP	Open, dry grassland and desert habitats; grass, forb and open shrub stages of pinyon–juniper and ponderosa pine habitats throughout the state, 0–1,600 m amsl [2].	No	Very low (burrowing sites or wintering sites)	Focused surveys per burrowing owl protocol were negative. Much of the site is dominated by non-native weedy species that limit burrowing and soils generally too clayey. Species found in the vicinity. Has been recorded in the southern portion of the Chula Vista Bayfront Master Plan area as an assumed breeding occurrence. The species has also been detected farther south as a wintering occurrence. The nearest CNDDB record for this species is 2.3 miles north of the study area.
Buteo swainsoni (nesting) Swainson's hawk	BCC/ST/ MCSP	Forages in grasslands or suitable grain or alfalfa fields or livestock pastures; breeds in stands with few trees in juniper–sage flats, riparian areas, and in oak savanna in Central Valley [2].	No	Absent (nesting); Moderate (non-breeding)	No suitable habitat on site for this species. Grasslands on site are quite limited. Species found in the vicinity. The nearest CNDDB record for this species is 6.6 miles northeast of the study area.
Campylorhynchus brunneicapillus sandiegensis Coastal cactus wren (San Diego & Orange Counties only)	BCC/SSC/ MSCP	Southern cactus scrub, maritime succulent scrub, cactus thickets in coastal sage scrub. In arid parts of westward-draining slopes of Southern California [2].	No	Low (nesting and non-breeding).	No suitable cactus patches found on site. Coastal sage scrub on site is generally limited. Species found in the vicinity. The nearest CNDDB record for this species is 2.8 miles east of the study area.
Charadrius alexandrinus nivosus (nesting) Western snowy plover	FT (Pacific coastal population), BCC (non-listed subspecies)/SSC (coastal and interior populations)/ MSCP	Sandy marine and estuarine shores. Nests on these habitats and salt pond levees. Nesting areas in Salton Sea, Mono Lake, shores of alkali lakes of northeastern California, Central Valley, and southeastern deserts [2].	No	Moderate (nesting and non-breeding)	Sandy beaches are present on site but are generally limited in width, and are covered in debris and concrete. Would be expected to nest elsewhere in the San Diego Bay. Species found in the vicinity. The nearest CNDDB record for this species is less than 0.5 miles from the study area, located in the Sweetwater Marsh.

Scientific Name / Common Name	Status (Federal/ State/ Other)	Habitat Preferences / Requirements	Verified on Site (Direct/Indirect Evidence)	Potential to Occur on Site	Factual Basis For Determination[a]
Coccyzus americanus occidentalis (nesting) Western yellow billed cuckoo	FC, BCC/SE/None	Dense, wide riparian woodlands and forest with well-developed understories. Valley foothill and desert riparian habitats scattered throughout California – Colorado River, Sacramento and Owens Valleys, South Fork of the Kern River, Santa Ana River, and Amargosa River [2].	No	Very low (nesting and non-breeding)	No suitable riparian woodlands/forest found on site. The nearest CNDDB record for this species is 4.4 miles east of the study area.
Empidonax traillii extimus (nesting) Southwestern willow flycatcher	FE/SE/ MSCP	Riparian obligate – Riparian woodlands along streams and rivers with mature, dense tree or shrub cover where surface water or soil moisture present; may nest in habitats variable in dominant plant species (both native and exotic). In California, breeding range includes southern California; from near sea level in California to more than 2,600 m amsl in Arizona/SW Colorado [5].	No	Very low (nesting and non-breeding)	No suitable riparian woodlands/forest found on site. Species found in the vicinity. The nearest CNDDB record for this species is 8.9 miles northeast of the study area.
Falco mexicanus (nesting) Prairie falcon	BCC/WL/None	Grassland, savannas, rangeland, agriculture, desert scrub, alpine meadows; nest on cliffs or bluffs. Southeastern deserts northwest through Central Valley and along inner Coast Ranges and Sierra Nevada [2].	No	Absent (nesting) Low (non-breeding)	Suitable open habitats and grassland habitat found on site. However, site may be too disturbed and urbanized to support this species. No suitable nesting substrates. Species found in the vicinity. The nearest CNDDB record for this species is 12.4 miles north of the study area.
Falco peregrinus anatum (nesting) American peregrine falcon	(FD), BCC/(SD), FP/ MSCP	Nests in woodland, forest, coastal habitats along coast north of Santa Barbara and in Sierra Nevada, and other mountains of Northern California. Winters in Central Valley, and is found in other riparian areas and coastal/inland wetlands [2].	No	Absent (nesting); Low (non-breeding)	No suitable nesting habitat found on site but may forage on site within open habitats and grassland habitat found on site. Species found in the vicinity. The nearest CNDDB record for this species is 6.7 miles northwest of the study area.

Scientific Name / Common Name	Status (Federal/ State/ Other)	Habitat Preferences / Requirements	Verified on Site (Direct/Indirect Evidence)	Potential to Occur on Site	Factual Basis For Determination[a]
Icteria virens (nesting) Yellow-breasted chat	None/SSC/None	Dense, relatively wide riparian woodlands and thickets of willows, vine tangles and dense brush. Coastal California, foothills of Sierra Nevada. Breeds locally on coast in Southern California and very locally inland, at elevations up to 1,450 m amsl in valley foothill riparian, and up to 2,050 m amsl east of Sierra Nevada in desert riparian habitats [2].	No	Very low (nesting and non-breeding)	No suitable riparian woodlands/forest found on site. Species found in the vicinity. The nearest CNDDB record for this species is 6.8 miles southeast of the study area.
Ixobrychus exilis (nesting) Least bittern	BCC/SSC/None	Dense emergent wetland vegetation, sometimes interspersed with woody vegetation and open water. Nests in emergent wetlands. Common summer resident at Salton Sea and Colorado River. Breeds locally in Owens Valley and Mojave Desert and uncommon in emergent wetlands of cattails and tules in San Diego County and Sacramento and San Joaquin Valleys [2].	No	Very low (nesting and non-breeding)	No suitable emergent wetland habitat found on site. Wetland habitat on site is dominated by *Atriplex* and *Distichilis*. Species found in the vicinity. The nearest CNDDB record for this species is 16.5 miles northeast of the study area.
Laterallus jamaicensis coturniculus California black rail	BC/ST, FP/None	Saline, brackish, and fresh emergent wetlands mostly in central coastal California [2].	No	Very low (nesting and non-breeding)	No suitable emergent wetland habitat found on site. Wetland habitat on site is dominated by *Atriplex* and *Distichilis*. Species found in the vicinity. The nearest CNDDB record for this species is less than 0.5 miles north of the study area in the Sweetwater Marsh.
Polioptila californica californica Coastal California gnatcatcher	FT/SSC/ MSCP	Coastal sage scrub, coastal sage scrub–chaparral mix, coastal sage scrub–grassland ecotone, riparian in late summer. Found from eastern Orange and southwestern Riverside Counties south through coastal foothills of San Diego County [2].	No	Very low (nesting and non-breeding)	Focused surveys for this species were negative. Moderately suitable coastal sage scrub on site although limited in size and relatively isolated. Species found in the vicinity. The nearest CNDDB record for this species is 4.0 miles east of the study area.

Scientific Name / Common Name	Status (Federal/ State/ Other)	Habitat Preferences / Requirements	Verified on Site (Direct/Indirect Evidence)	Potential to Occur on Site	Factual Basis For Determination[a]
Rallus longirostris levipes Light-footed clapper rail	FE/SE, FP/ MSCP	Coastal saline emergent wetlands along southern California from Santa Barbara County to San Diego County [2].	No	Very low (nesting and non-breeding)	No suitable emergent wetland habitat found on site. Wetland habitat on site is dominated by *Atriplex* and *Distichilis*. Species found in the vicinity. The species is known to occur within nearby areas where suitable habitat is present. The nearest CNDDB record for this species is within marsh habitat surrounding the Sweetwater District parcel to the north and south.
Setophaga petechia brewsteri [Aestiva group] (nesting) Yellow warbler (California)	BCC/SSC/None	Nests in lowland and foothill riparian woodlands; montane chaparral, open ponderosa pine, mixed conifer habitats up to 2,500 m amsl; winters in a variety of habitats. Breeds from coast range in Del Norte County, east to Modoc Plateau, south to Santa Barbara and Ventura Counties, western slope of Sierra Nevada south to Kern County; also breeds in ranges in San Diego County [2].	No	Very low (nesting and non-breeding)	No suitable riparian woodlands/forest found on site. Species found in the vicinity. The nearest CNDDB record for this species is 8.9 miles northeast of the study area.
Sternula antillarum browni (nesting colony) California least tern	FE/SE, FP/ MSCP	Breeding colonies located in marine and estuarine shores in southern California, and in San Francisco Bay in abandoned salt ponds and estuarine shores. Feeds in nearby waters. Are migratory to California [2].	No	Moderate (nesting and non-breeding)	Sandy beaches on site but are generally limited in width, and are covered in debris and concrete. Would be expected to nest elsewhere in the San Diego Bay. Species found in the vicinity. The nearest CNDDB record for this species is less than 0.5 miles north of the Sweetwater District parcel in the Sweetwater Marsh. Additional CNDDB records are from the Salt Works south of the site.

Scientific Name / Common Name	Status (Federal/ State/ Other)	Habitat Preferences / Requirements	Verified on Site (Direct/Indirect Evidence)	Potential to Occur on Site	Factual Basis For Determination[a]
Vireo bellii pusillus (nesting) Least Bell's vireo	FE/SE/, MSCP	Willows and low, dense valley foothill riparian habitat and lower portions of canyons; along western edge of deserts in desert riparian habitat, 0–600 m amsl. Found in San Benito and Monterey Counties and coastal Southern California from Santa Barbara County south [2].	No	Very low (nesting and non-breeding)	No suitable riparian woodlands/forest found on site. Species found in the vicinity. One individual male was heard calling outside of the project area, in the northwestern comer near Sweetwater Marsh. The nearest CNDDB record for this species is 1.8 miles northeast of the study area.
		Mammals			
Antrozous pallidus Pallid bat	None/SSC/ WBWG:H	Grasslands, shrublands, woodlands, forests; most common in open dry habitats with rocky outcrops for roosting. Found throughout low elevations of California, except for high Sierra Nevada and northwestern corner of the state south to Mendocino County [2].	No	No roosting potential; Moderate foraging potential	Moderately suitable open habitats for foraging. No suitable roosting areas identified on site. Species found in the vicinity. The nearest CNDDB record for this species is 1.5 miles east of the study area.
Chaetodipus californicus femoralis Dulzura pocket mouse	None/SSC/None	Occurs in a variety of habitats including coastal scrub, chaparral, and grasslands. Micro habitat includes grass–chaparral edges [6].	No	Very low	Limited coastal scrub habitat on site. Species found in the vicinity. The nearest CNDDB record for this species is 13.8 miles north of the study area.
Chaetodipus fallax fallax Northwestern San Diego pocket mouse	None/SSC (full species)/None	Occurs in coastal scrub, chaparral, grasslands, sagebrush, and similar habitats in western San Diego County. Micro habitat includes sandy, herbaceous areas, usually in association with rocks or coarse gravel [6].	No	Very low	Limited coastal scrub habitat on site. Soil generally too clayey to support fossorial species. Species found in the vicinity. The nearest CNDDB record for this species is 4.6 miles south of the study area.
Choeronycteris mexicana Mexican long-tongued bat	None/SSC/ WBWG:M	Desert and montane riparian, desert succulent scrub, desert scrub, and pinyon—uniper woodland. Roosts in caves, mines, and buildings. Summer resident in San Diego County [2].	No	No roosting potential; Very low foraging potential	No suitable desert habitats on site. No suitable roosting areas identified on site. Species found in the vicinity. The nearest CNDDB record for this species is 1.8 miles west of the study area near Silver Strand.

Scientific Name / Common Name	Status (Federal/ State/ Other)	Habitat Preferences / Requirements	Verified on Site (Direct/Indirect Evidence)	Potential to Occur on Site	Factual Basis For Determination[a]
Corynorhinus townsendii pallescens Townsend's big-eared bat	None/SSC/ WBWG:H	Mesic habitats, gleans from brush or trees or feeds along habitat edges. Found in all habitats but subalpine and alpine throughout California [2].	No	No roosting potential; Moderate foraging potential	Moderately suitable open mesic habitats for foraging. No suitable roosting areas identified on site. Species found in the vicinity. The nearest CNDDB record for this species is 11.1 miles northeast of the study area.
Euderma maculatum Spotted bat	None/SSC/ WBWG:H	Foothills, mountains, desert regions of Southern California including arid deserts, grasslands, mixed conifer forests. Roosts in rock crevices, cliffs. Feeds over water and along washes [2].	No	No roosting potential; No foraging potential	No suitable habitat on site. No suitable roosting areas identified on site. Species found in the vicinity. The nearest CNDDB record for this species is 18.2 miles northwest of the study area.
Eumops perotis californicus Greater western mastiff bat	None/SSC/ WBWG:H	Occurs in many open, semi-arid to arid habitats including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, and more. Roosts in crevices in cliff faces, high buildings, trees, and tunnels [6].	No	No roosting potential; Moderate foraging potential	Moderately suitable open habitats for foraging. No suitable roosting areas identified on site. Species found in the vicinity. The nearest CNDDB record for this species is 3.5 miles south of the study area.
Lasionycteris noctivagans Silver haired bat	None/None/ WBWG:M	Coastal and montane coniferous forests, valley foothill woodland, pinyon–juniper woodland, and valley foothill and montane riparian habitat below 2,750 m amsl (9,000 ft amsl) [2].	No	No roosting potential; No foraging potential	No suitable forest or riparian habitat on site. No suitable roosting areas identified on site. Species found in the vicinity. The nearest CNDDB record for this species is 6.2 miles north of the study area.
Lasiurus blossevillii Western red bat	None/SSC/ WBWG:H	Prefers edges with trees for roosting and open areas for foraging. Roosts in woodlands and forests. Forages over grasslands, shrublands, woodlands, forests, and croplands. Found south of Shasta County to Mexican border, and west of the Sierra Nevada/Cascade crest. In winter, occupies coastal regions and lowlands south of San Francisco Bay [2].	No	No roosting potential; Moderate foraging potential	Moderately suitable open habitats for foraging. No suitable roosting areas identified on site. Species found in the vicinity. The nearest CNDDB record for this species is 8.1 miles northwest of the study area.
Lasiurus cinereus Hoary bat	None/SSC/ WBWG:M	Winters along coast and in Southern California, and breeds inland and north of winter range. Found in woodland and forest habitats with medium to large trees and dense foliage [2].	No	No roosting potential; No foraging potential	No suitable forest or woodland habitat on site. No suitable roosting areas identified on site. Species found in the vicinity. The nearest CNDDB record for this species is 3.8 miles south of the study area.

Scientific Name / Common Name	Status (Federal/ State/ Other)	Habitat Preferences / Requirements	Verified on Site (Direct/Indirect Evidence)	Potential to Occur on Site	Factual Basis For Determination[a]
Lasiurus xanthinus Western yellow bat	None/SSC/ WBWG:H	Valley foothill riparian, desert riparian, desert wash, and palm oasis habitats south of Los Angeles and San Bernardino Counties [2].	No	No roosting potential; No foraging potential	No suitable riparian or desert habitat found on site. No suitable roosting areas identified on site. Species found in the vicinity. The nearest CNDDB record for this species is 7.0 miles north of the study area.
Lepus californicus bennettii San Diego black-tailed jackrabbit	None/SSC/None	Arid habitats with open ground; grasslands, coastal sage scrub, agriculture, disturbed areas, rangelands in Southern California [2, 4].	No	Low	No suitable open arid habitats on site. Grassland habitat is limited on site. Is known to occur within areas as the south end of the South Bay. Species found in the vicinity. The nearest CNDDB record for this species is 5.6 miles northeast of the study area.
Myotis ciliolabrum Western small-footed myotis	None/None/ WBWG:M	Occurs in a wide variety of habitats, primarily in arid wooded and brushy uplands near water. In coastal California it occurs from Contra Costa County south to the Mexican border; occurs in the Sierra Nevada and Great Basin and desert habitats from Modoc to Kern and San Bernardino Counties. Found from sea level to at least 2,700 m amsl [2].	No	No roosting potential; Low foraging potential	No suitable arid wooded or scrub upland habitats on site. No suitable roosting areas identified on site. Species found in the vicinity. The nearest CNDDB record for this species is 10.5 miles southeast of the study area.
Myotis evotis Long-eared myotis	None/None/ WBWG:M	Roosts in buildings, crevices, under bark, and snags. Caves used as night roosts. Feeds along habitat edges, in open habitats, and over water. Occurs primarily along entire coast and in Sierra Nevada, Cascades, and Great Basin; at 0–2,700 m amsl [2].	No	No roosting potential; Low foraging potential	Suitable open habitats on site but no freshwater habitats for foraging. No suitable roosting areas identified on site. Species found in the vicinity. The nearest CNDDB record for this species is 10.5 miles northeast of the study area.
Myotis yumanensis Yuma myotis	None /None/ WBWG:LM	Closely tied to open water which is used for foraging; open forests and woodlands are optimal habitat throughout California, 0–3,300 m amsl [2].	No	No roosting potential; Low foraging potential	No freshwater habitats, or open forests/woodlands on site for foraging. No suitable roosting areas identified on site. Species found in the vicinity. The nearest CNDDB record for this species is 5.3 miles northeast of the study area.

Scientific Name / Common Name	Status (Federal/ State/ Other)	Habitat Preferences / Requirements	Verified on Site (Direct/Indirect Evidence)	Potential to Occur on Site	Factual Basis For Determination[a]
Neotoma lepida intermedia San Diego desert woodrat	None/SSC/None	Joshua tree, pinyon–juniper, mixed and chamise–redshank chaparral, sagebrush, and most desert habitats. Found south of San Luis Obispo County to San Diego County and San Bernardino and Riverside Counties, 0–2,600 m amsl [2, 4].	No	Absent	No suitable habitat on site. Site generally too coastal for this species. Species found in the vicinity. The nearest CNDDB record for this species is 6.9 miles southeast of the study area.
Nyctinomops femorosaccus Pocketed free-tailed bat	None/SSC/ WBWG:M	Rocky desert areas with high cliffs or rock outcrops. Pinyon–juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, palm oasis in Riverside, San Diego, Imperial Counties [2].	No	No roosting potential; No foraging potential	No suitable desert habitat on site for this species. No suitable roosting areas identified on site. Species found in the vicinity. The nearest CNDDB record for this species is 1.2 miles east of the study area.
Nyctinomops macrotis Big free-tailed bat	None/SSC/ WBWG:MH	Rugged, rocky canyons in Riverside, Los Angeles, and San Diego Counties, but scattered records across California to Oakland [2, 6].	No	No roosting potential; No foraging potential	No suitable canyon habitat on site for this species. No suitable roosting areas identified on site. Species found in the vicinity. The nearest CNDDB record for this species is 6.8 miles north of the study area.
Perognathus longimembris pacificus Pacific pocket mouse	FE/SSC/None	Coastal dunes, river alluvium, coastal sage scrub with firm sandy soils; along immediate coast in San Diego, Orange, and Los Angeles Counties [4, 6].	No	Absent	Beach habitat on site is limited and likely does not provide firm sandy soils needed. Species found in the vicinity. The nearest CNDDB record for this species is 5.6 miles southwest of the study area.
Taxidea taxus American badger	None/SSC/ MSCP	Dry, open treeless areas, grasslands, coastal sage scrub, especially with friable soils throughout California [2].	No	Low	No suitable habitat on site for this species. Soils are generally not friable. Species found in the vicinity. The nearest CNDDB record for this species is 6.5 miles southeast of the study area.
Invertebrates					
Branchinecta sandiegonensis San Diego fairy shrimp	FE/None/ MSCP	Small, shallow vernal pools, occasionally ditches and road ruts in coastal mesa system of Southern California and Baja California [4].	No	Absent	No vernal pools found on site. Species found in the vicinity. The nearest CNDDB record for this species is 3.5 miles southwest of the study area.

Scientific Name / Common Name	Status (Federal/ State/ Other)	Habitat Preferences / Requirements	Verified on Site (Direct/Indirect Evidence)	Potential to Occur on Site	Factual Basis For Determination[a]
Callophrys [=Mitoura] thornei Thorne's hairstreak butterfly	None/None/ MSCP	Tecate cypress on chaparral-covered dry rocky slopes, Otay Mountain [4].	No	Absent	No suitable habitat or host plant found on site. Species found in the vicinity. The nearest CNDDB record for this species is 10.0 miles northeast of the study area.
Cicindela gabbii Western tidal flat tiger beetle	None/None/None	Estuaries and mudflats; generally on dark-colored mud; occasional on dry saline flats of estuaries or mouth of river, Orange and San Diego Counties [6].	No	Absent	No estuary or mudflat habitat found on site. Species found in the vicinity. The nearest CNDDB record for this species is 4.0 miles north of the study area.
Cicindela hirticollis gravida Hairy-necked tiger beetle	None/None/None	Clean, dry, light-colored sand in upper zone of the beach dunes, close to non-brackish water along coastal California [6].	No	Low	Suitable beach habitat on site but no dunes. Beach is covered with debris and concrete which would likely exclude this species. Species found in the vicinity. The nearest CNDDB record for this species is 2.2 miles west of the study area.
Cicindela latesignata latesignata Sandy beach tiger beetle	None/None/None	Inhabited the Southern California coastline, from La Jolla north to the Orange County line. Occupied saline mudflats and moist sandy spots in estuaries of small streams in the lower zone. Has not been observed in 20 years [4].	No	Absent	Site is south of species' known range. No saline mudflats within the study area. Species found in the vicinity. The nearest CNDDB record for this species is 2.6miles north of the study area.
Coelus globosus Globose dune beetle	None/None/None	Fore dunes, sand hummocks, back dunes along immediate coast. Larvae, adults spend time under vegetation or debris from Santa Cruz south to Ventura County. Possibly extirpated in San Diego and other coastal counties [4].	No	Low	Suitable beach habitat on site but no dunes. Beach is covered with debris and concrete which would likely exclude this species. Species found in the vicinity. The nearest CNDDB record for this species is 4.2 miles northwest of the study area.
Danaus plexippus Monarch butterfly	None/None/None	Overwinters in eucalyptus groves from San Francisco south to northern Baja California [4].	No	Moderate	Suitable eucalyptus woodland located in southwestern are of site although site has not been identified as a known overwintering location for monarch. Species found in the vicinity. The nearest CNDDB record for this species is 1.1 miles northeast of the study area.

APPENDIX D2 (Continued)

Scientific Name / Common Name	Status (Federal/ State/ Other)	Habitat Preferences / Requirements	Verified on Site (Direct/Indirect Evidence)	Potential to Occur on Site	Factual Basis For Determination[a]
Euphydryas editha quino Quino checkerspot butterfly	FE/None/ MSCP (Chula Vista Subarea)/XERCES:CI	Sparsely vegetated hilltops, ridgelines, occasionally rocky outcrops; host plant *Plantago erecta* and nectar plants must be present, San Diego and Riverside Counties [4].	No	Absent	No suitable habitat for this species on site. Host plant not observed. Species found in the vicinity. The nearest CNDDB record for this species is 9.0 miles southeast of the study area.
Helminthoglypta traskii coelata (Helminthoglypta coelata) Peninsular Range shoulderband snail (Mesa shoulderband snail)	None/ None/None	Coastal San Diego County [6].	No	Moderate	Site is located within range of this species. Not much is known about this species' habitat preferences. Species found in the vicinity. The nearest CNDDB record for this species is 14.1 miles northwest of the study area.
Lycaena hermes Hermes copper	FC/None/None	Coastal sage scrub, southern mixed chaparral supporting at least 5% cover of host plant *Rhamnus crocea*. Adults visit *Eriogonum fasciculatum* and *Helianthus gracilentus*. On well-drained hillsides and canyon bottoms, coastal San Diego County south to Santo Tomas, Baja California [4].	No	Absent	Although host plant *Eriogonum fasciculatum* is found on site, no larval host plant *Rhamnus crocea* is found within coastal sage scrub habitat on site. The nearest CNDDB record for this species is 9.1 miles northeast of the study area.
Melitta californica A melittid bee	None/None/None	Desert regions of SW Arizona, SE California, and Baja California, Mexico. Also collected from Torrey Pines, San Diego County [6].	No	Low	Site is outside of species' known range. Species found in the vicinity. The nearest CNDDB record for this species is 5.5 miles northwest of the study area.
Streptocephalus woottoni Riverside fairy shrimp	FE/None/ MSCP	Deep, long-lived vernal pools, vernal pool-like seasonal ponds, stock ponds; warm water pools that have low to moderate dissolved solids; in patches of grassland or agriculture interspersed in coastal sage scrub vegetation in Southern California [4].	No	Absent	No suitable vernal pools on site. Species found in the vicinity. The nearest CNDDB record for this species is 6.7 miles southeast of the study area.

Scientific Name / Common Name	Status (Federal/ State/ Other)	Habitat Preferences / Requirements	Verified on Site (Direct/Indirect Evidence)	Potential to Occur on Site	Factual Basis For Determination[a]
Tryonia imitator *(Mimic tryonia)* California brackishwater snail	None/None/None	Coastal lagoons, herbaceous wetlands, brackish salt marshes; distributed among semi-continuous estuarine habitats along coast [4].	No	Moderate	Suitable salt marsh habitat on site although water is likely ephemeral which may exclude this species. Species found in the vicinity. The nearest CNDDB record for this species is 5.8 miles southwest of the study area.

References

1. CaliforniaHerps.com. Accessed February 10, 2014. http://californiaherps.com/CWHR.
2. California Wildlife Habitat Relationships System (CWHR). Accessed February 10, 2014. http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx.
3. CDFG (California Department of Fish and Game). 2011. Special Animals (898 Taxa). July 2011. Accessed February 10, 2014. http://www.dfg.ca.gov/wildlife/nongame/list.htmlCNDDB.
4. NatureServe Explorer. Accessed February 10. 2014. http://www.natureserve.org/explorer/.
5. Sogge, M.K., D. Ahlers, and S.J. Sferra. 2010. *A Natural History Summary and Survey Protocol for the Southwestern Willow Flycatcher.* U.S. Geological Survey Techniques and Methods 2A-10.
6. CNDDB (California Natural Diversity Database). Accessed February 10, 2014.
7. Bolster, B.C. (ed.). 1998. *Terrestrial Mammal Species of Special Concern in California.* Draft Final Report prepared by P.V. Brylski, P.W. Collins, E.D. Pierson, W.E. Rainey, and T.E. Kucera. Report submitted to California Department of Fish and Game Wildlife Management Division, Nongame Bird and Mammal Conservation Program for Contract No.FG3146WM. Accessed February 11, 2014. http://www.dfg.ca.gov/wildlife/nongame/ssc/1998mssc.html.
8. Butterflies of America. Accessed February 11, 2014. http://butterfliesofamerica.com/.
9. Proceedings of the Academy of Natural Sciences, Vol 48. Pub 1896. Accessed online February 11, 2014. http://books.google.com/books?id=ir5LAAAAYAAJ&pg=PA349&lpg=PA349&dq=Ariolimax+columbianus+stramineus&source=bl&ots=wAA6kBqLmN&sig=erEGVBBFC7ROz3ZMFEvV7I7Q73k&hl=en&ei=I_jXTurWLJTJsQKdy_HeDQ&sa=X&oi=book_result&ct=result&resnum=4&ved=0CDYQ6AEwAw#v=onepage&q=Ariolimax%20columbianus%20stramineus&f=false
10. *San Diego Bay National Wildlife Refuge Final Comprehensive Conservation Plan/EIS*, Chapter 3. Accessed February 11, 2014. http://www.fws.gov/sandiegorefuges/new/ccp/ccp.htm.
11. City of Carlsbad. 2004. *Habitat Management Plan for Natural Communities in the City of Carlsbad, As Amended.* December 1999. Final Approval 2004. Accessed February 11, 2014. http://www.carlsbadca.gov/services/environmental/hmp/docs/Pages/hmp.aspx.
12. Endangered Species Recovery Program, CSU Stanislaus. 2006. Accessed February 11, 2014. http://esrp.csustan.edu/speciesprofiles/profile.php?sp=trsp.
13. Biodiversity Heritage Library. Accessed February 11, 2014. http://www.biodiversitylibrary.org/name/Phobetus%20robinsoni.
14. Vierling, K.T., V.A. Saab, and B.W. Tobalske. 2013. "Lewis"s Woodpecker (*Melanerpes lewis*)." In *The Birds of North America Online*, edited by A. Poole. Ithaca, New York: Cornell Lab of Ornithology. http://bna.birds.cornell.edu/bna/species/284.
15. Tarof, S., and C.R. Brown. 2013. "Purple Martin (*Progne subis*)." In *The Birds of North America Online*, edited by A. Poole. Ithaca, New York: Cornell Lab of Ornithology. http://bna.birds.cornell.edu/bna/species/287.
16. Butterflies and Moths of North America. 2014. "Attributes of *Papilio multicaudata.*" Accessed February 13, 2014. http://www.butterfliesandmoths.org/species/Papilio-multicaudata.

Notes: m amsl = meters above mean sea level; ft amsl = feet above mean sea level

Status Key:

Federal Designations:

- BCC U.S. Fish and Wildlife Service: Birds of Conservation Concern
- FC Candidate for federal listing as threatened or endangered
- (FD) Federally delisted; monitored for 5 years
- FE Federally listed endangered
- FT Federally listed as threatened

FPT Federally proposed threatened

State Designations:

SSC California Special Concern Species
FP California Department of Fish and Wildlife Fully Protected Species
WL California Department of Fish and Wildlife Watch List Species
SE State listed as endangered
ST State listed as threatened
(SD) State delisted

Other Designations:

WBWG:H Western Bat Working Group: High Priority
WBWG:M Western Bat Working Group: Medium Priority
WBWG:MH Western Bat Working Group: Medium-High Priority
XERCES:CI Xerces Society – Critically Endangered
MSCP Covered under the Chula Vista MSCP Subarea Plan.

For the purposes of determination of potential to occur on site, vicinity = within 9-quad search of National City quadrangle.

APPENDIX E

Wetland Determination Data Form

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WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Chula Vista Bayfront Master Plan | City/County: Chula Vista | Sampling Date: 4-14-14

Applicant/Owner: Port of San Diego | State: CA | Sampling Point: DS-1

Investigator(s): Vipul R. Joshi, Emily A. Wier | Section, Township, Range: Section 5, Township 18 South, Range 2 West

Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Convex | Slope (%): 1%

Subregion (LRR): C - Mediterranean California | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (●) No ( ) (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

Are Vegetation [ ] Soil [ ] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes (●)	No ( )	
Hydric Soil Present?	Yes (●)	No ( )	**Is the Sampled Area within a Wetland?** Yes (●) No ( )
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks: Data Station located within a depressional area surrounded by concentric rings of hydrophytic vegetation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *Arthrocnemum subterminale*	70	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	70 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 30 % | % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species	70	x 2 =	140
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	70 (A)		140 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

- [X] Dominance Test is >50%
- [X] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes (●) No ( )

Remarks: Data station located in monotypic stand of Arthrocnemum subterminale near edge of salt pans.

SOIL

Sampling Point: DS-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-10"	7.5YR 3/2	100					Clay loam	
10-18"	7.5YR 3/3	100					Silty clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[4]:

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ◉ No ○

Remarks: Depleted matrix present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☒ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☒ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches):

Wetland Hydrology Present? Yes ◉ No ○

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No water present, but salt crust and surface soil cracks present.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Chula Vista Bayfront Master Plan City/County: Chula Vista Sampling Date: 4-14-14

Applicant/Owner: Port of San Diego State: CA Sampling Point: DS-2

Investigator(s): Vipul R. Joshi, Emily A. Wier Section, Township, Range: Section 5, Township 18 South, Range 2 West

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Convex Slope (%): <10%

Subregion (LRR): C - Mediterranean California Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (•) No ( ) (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (•) No ( )

Are Vegetation [ ] Soil [ ] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes (•)	No ( )	
Hydric Soil Present?	Yes ( )	No (•)	**Is the Sampled Area within a Wetland?** Yes ( ) No (•)
Wetland Hydrology Present?	Yes ( )	No (•)	

Remarks: Data Station located within a depressional area surrounded by concentric rings of hydrophytic vegetation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1. *Schoenoplectus americanus*	90	Yes	OBL
2.			
3.			
4.			
5.			
Total Cover:	90 %		
Herb Stratum			
1. *Heliotropium curassavicum*	1	No	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	1 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum % % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	90	x 1 =	90
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species	1	x 4 =	4
UPL species		x 5 =	0
Column Totals:	91 (A)		94 (B)

Prevalence Index = B/A = 1.03

Hydrophytic Vegetation Indicators:

- [X] Dominance Test is >50%
- [X] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes (•) No ( )

Remarks: Data station located adjacent to Arthrocnemum subterminale and Atriplex canescens.

SOIL

Sampling Point: DS-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture[3]	Remarks
0-18"	10YR 4/3	100					Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[4]:

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks: No hydric soils present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches):

Wetland Hydrology Present? Yes ○ No ◉

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Data station located on margin of salt flat within a depressional basin. Adjacent areas have cracked soils and salt crusts.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Chula Vista Bayfront Master Plan | City/County: Chula Vista | Sampling Date: 4-14-14

Applicant/Owner: Port of San Diego | State: CA | Sampling Point: DS-3

Investigator(s): Vipul R. Joshi, Emily A. Wier | Section, Township, Range: Section 5, Township 18 South, Range 2 West

Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): None | Slope (%): 0%

Subregion (LRR): C - Mediterranean California | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (●) No ( ) (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

Are Vegetation [ ] Soil [ ] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes (●)	No ( )	
Hydric Soil Present?	Yes ( )	No (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes ( )	No (●)	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *Distichilis spicata*	85	Yes	OBL
2. *Arthrocnemum subterminale*	15	Yes	FACW
3. *Foenicium vulgare*	2	No	
4. *Sonchus asper*	1	No	
5. *Xanthium strumarium*	1	No	
6.			
7.			
8.			
Total Cover:	104%		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum % | % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	85	x 1 =	85
FACW species	15	x 2 =	30
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	100 (A)		115 (B)

Prevalence Index = B/A = 1.15

Hydrophytic Vegetation Indicators:

- [X] Dominance Test is >50%
- [X] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes (●) No ( )

Remarks:

SOIL

Sampling Point: DS-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture[3]	Remarks
0-12"	7.5YR 4/3	100					Sandy clay loam	
12-18"	5YR 3/4	100					Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.
[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[4]:

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks: No hydric soils present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches):

Wetland Hydrology Present? Yes ○ No ◉

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No wetland hydrology indicators present. Data station is located adjacent to, and at higher elevation (approx 6-12 inches) than the salt flats (DS -1 and -2).

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Chula Vista Bayfront Master Plan | City/County: Chula Vista | Sampling Date: 4-14-14

Applicant/Owner: Port of San Diego | State: CA | Sampling Point: DS-4

Investigator(s): Vipul R. Joshi, Emily A. Wier | Section, Township, Range: Section 5, Township 18 South, Range 2 West

Landform (hillslope, terrace, etc.): Margin of depression | Local relief (concave, convex, none): Flat | Slope (%): 1-2%

Subregion (LRR): C - Mediterranean California | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (•) No ( ) (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (•) No ( )

Are Vegetation [ ] Soil [ ] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes (•)	No ( )	
Hydric Soil Present?	Yes ( )	No (•)	**Is the Sampled Area within a Wetland?** Yes ( ) No (•)
Wetland Hydrology Present?	Yes ( )	No (•)	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1. *Baccharis salicifolia*	100	Yes	FAC
2. *Foenicium vulgare*	10	No	
3. *Baccharis pilularis*	1	No	
4.			
5.			
Total Cover:	111 %		
Herb Stratum			
1. *Heliotropium curassavicum*	1	No	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	1 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum % | % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species	100	x 3 =	300
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	100 (A)		300 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

- [X] Dominance Test is >50%
- [X] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes (•) No ( )

Remarks:

SOIL

Sampling Point: DS-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-12"	7.5YR 4/3	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[4]:

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks: No hydric soils present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches):

Wetland Hydrology Present? Yes ○ No ◉

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Upper margin of salt marsh (DS-1, -2, and -3) adjacent to open field with gentle slope toward the mulefat polygon.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Chula Vista Bayfront Master Plan | City/County: Chula Vista | Sampling Date: 4-14-14

Applicant/Owner: Port of San Diego | State: CA | Sampling Point: DS-5

Investigator(s): Vipul R. Joshi, Emily A. Wier | Section, Township, Range: Section 5, Township 18 South, Range 2 West

Landform (hillslope, terrace, etc.): Slope | Local relief (concave, convex, none): Concave | Slope (%): <10%

Subregion (LRR): C - Mediterranean California | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (●) No ( ) (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

Are Vegetation [ ] Soil [ ] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes (●)	No ( )	
Hydric Soil Present?	Yes ( )	No (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes ( )	No (●)	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *Arthrocnemum subterminale*	50	Yes	FACW
2. *Jaumea carnosa*	50	Yes	OBL
3. *Batis maritima*	20		
4. *Chenopodium murale*	3		
5.			
6.			
7.			
8.			
Total Cover:	123 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum % | % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	50	x 1 =	50
FACW species	50	x 2 =	100
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	100 (A)		150 (B)

Prevalence Index = B/A = 1.50

Hydrophytic Vegetation Indicators:

- [X] Dominance Test is >50%
- [X] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes (●) No ( )

Remarks:

SOIL

Sampling Point: DS-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-16"	10 YR 3/3	50					Sandy loam	
	10 YR 4/3	50					Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[4]:

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ○ No ●

Remarks: Trash located within soil profile, most likely trash from bay, indicating that the data station is located within the boundary of the ordinary mean high tide.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ○ No ● Depth (inches):

Water Table Present? Yes ○ No ● Depth (inches):

Saturation Present? (includes capillary fringe) Yes ○ No ● Depth (inches):

Wetland Hydrology Present? Yes ○ No ●

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Data station located approximately 2 feet above sea level in pickleweed (Arthrocnemum subterminale).

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Chula Vista Bayfront Master Plan | City/County: Chula Vista | Sampling Date: 4-14-14

Applicant/Owner: Port of San Diego | State: CA | Sampling Point: DS-6

Investigator(s): Vipul R. Joshi, Emily A. Wier | Section, Township, Range: Section 5, Township 18 South, Range 2 West

Landform (hillslope, terrace, etc.): Downslope from parking lot | Local relief (concave, convex, none): Concave | Slope (%): 1%

Subregion (LRR): C - Mediterranean California | Lat: | Long: | Datum:

Soil Map Unit Name: | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (●) No ( ) (If no, explain in Remarks.)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes (●) No ( )

Are Vegetation [ ] Soil [ ] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes (●)	No ( )	
Hydric Soil Present?	Yes ( )	No (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes ( )	No (●)	

Remarks: Mulefat scrub located adjacent to a paved parking lot. Site likely fed by runoff from parking lot.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1. *Baccharis salicifolia*	100	Yes	FAC
2. *Baccharis pilularis*	20	No	
3.			
4.			
5.			
Total Cover:	120 %		
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	%		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum % | % Cover of Biotic Crust %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species	100	x 3 =	300
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	100 (A)		300 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

- [X] Dominance Test is >50%
- [X] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes (●) No ( )

Remarks:

SOIL

Sampling Point: DS-6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture[3]	Remarks
0-12"	10 YR 3/3	95					Silty clay loam	
	10 YR 5/1	5					Silty clay loam	Found within 10-12" layer

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[4]:

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks: Not sufficient percentage of redox features to be considered F8 (Redox Depressions)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches):

Wetland Hydrology Present? Yes ○ No ◉

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No wetland hydrology indicators present.

APPENDIX E

2018 Traffic Memo

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RICK
ENGINEERING COMPANY
Traffic Division

March 12, 2018

Ms. Linda Scott
San Diego Unified Port District
3165 Pacific Highway
San Diego, California 92112

SUBJECT: CHULA VISTA BAYFRONT MASTER PLAN TRAFFIC ANALYSIS – COSTA VISTA RV RESORT
(RICK ENGINEERING COMPANY JOB NUMBER 15939-N)

Dear Ms. Scott:

Rick Engineering Company prepared an updated traffic analysis for the Costa Vista RV Resort within the Sweetwater District for the increase of 18 RV stalls (from 237 to 255), and to determine potential impacts of constructing a portion of the improvements for Phase I development of specific parcels within the district. The following summarizes our findings.

COSTA VISTA RV RESORT

Description
The updated analysis for the Costa Vista RV Resort within the Sweetwater District assumes that Parcel S-1 will be developed as an RV Park with 255 stalls, Parcel S-2 will be developed as an 18 acre Signature Park, and Parcel SP-3 will provide relocated parking for the existing Discovery Center. Access will be provided by the construction of E Street, from Bay Boulevard to proposed Gunpowder Point Drive/ relocated parking lot. Existing traffic volumes were obtained from the Traffic Impact Analysis for the Chula Vista Bayfront Master Plan (CVBMP), prepared by Kimley-Horn and Associates, Inc. dated March 2008. The existing traffic volumes were adjusted by a 1% growth rate per year, to year 2020 (opening year), to account for any background or cumulative development. See Attachment 1 for the traffic volume exhibits.

Trip Generation
The trips generated by Parcels S-1, S-2, and SP-3 are as follows: 219 AM peak hour trips (90 inbound/129 outbound), 221 PM peak hour trips (125 inbound/96 outbound), and 2,175 daily trips. See Attachment 2 for the trip generation.

Analysis
The Synchro software was utilized for the capacity analysis, to determine peak hour levels of service (LOS) for existing traffic conditions and for opening year traffic conditions. Table 1 shows the results of the capacity analysis (see Attachment 3 for the capacity analysis printouts). For the existing + background + project conditions, the intersection of E Street at I-5 SB

Ramps/Bay Boulevard is anticipated to operate at LOS E for the PM peak hour. The intersection can be improved to LOS D by rephasing the traffic signal from the current east-west split phasing to permissive phasing with a protected left in the westbound direction. This rephasing can be accommodated with the widening of E Street, west of Bay Boulevard to a 2 lane Class III Collector (Mitigation Measure 4.2-1).

Potential Impacts

With the construction of E Street, west of Bay Boulevard as a 2 lane Class III Collector, and a traffic signal modification at the intersection of E Street at I-5 SB Ramps/Bay Boulevard as described above, the studied intersections are anticipated to operate at an acceptable capacity level for the Costa Vista RV Resort phase of development.

Conclusion

Parcel S-1 was analyzed as a Phase IV project in the CVBMP Traffic Impact Analysis. Mitigation Measures 4.2-24, 4.2-25, 4.2-26, 4.2-27, 4.2-28, 4.2-29, and 4.2-30 are written to apply to Phase IV projects (see Attachment 4 for the mitigation measures). However, now that Parcel S-1 is proposed to be developed in Phase I, and based on the findings of this analysis, the proposed development of the Costa Vista RV Park on Parcel S-1 does not trigger the corresponding impacts identified in the Final Environmental Impact Report as 4.2-39, 4.2-40, 4.2-41, 4.2-42, 4.2-43, 4.2-44, and 4.2-45. Therefore, Mitigation Measures 4.2-24, 4.2-25, 4.2-26, 4.2-27, 4.2-28, 4.2-29, and 4.2-30 are not triggered by the development of the Costa Vista RV Park and Phase I improvements in the Sweetwater District.

Should you have any questions or require additional information, please don't hesitate to contact me at (619) 291-0707, or bstephenson@rickengineering.com.

Sincerely,

RICK ENGINEERING COMPANY

Brian R. Stephenson, P.E., T.E., P.T.O.E.
Associate

K:\Files\15939\text\15939n.002.docx

Attachments

cc: Mr. Kevin Gibson, Rick Engineering Company

Attachment 1

Exhibits

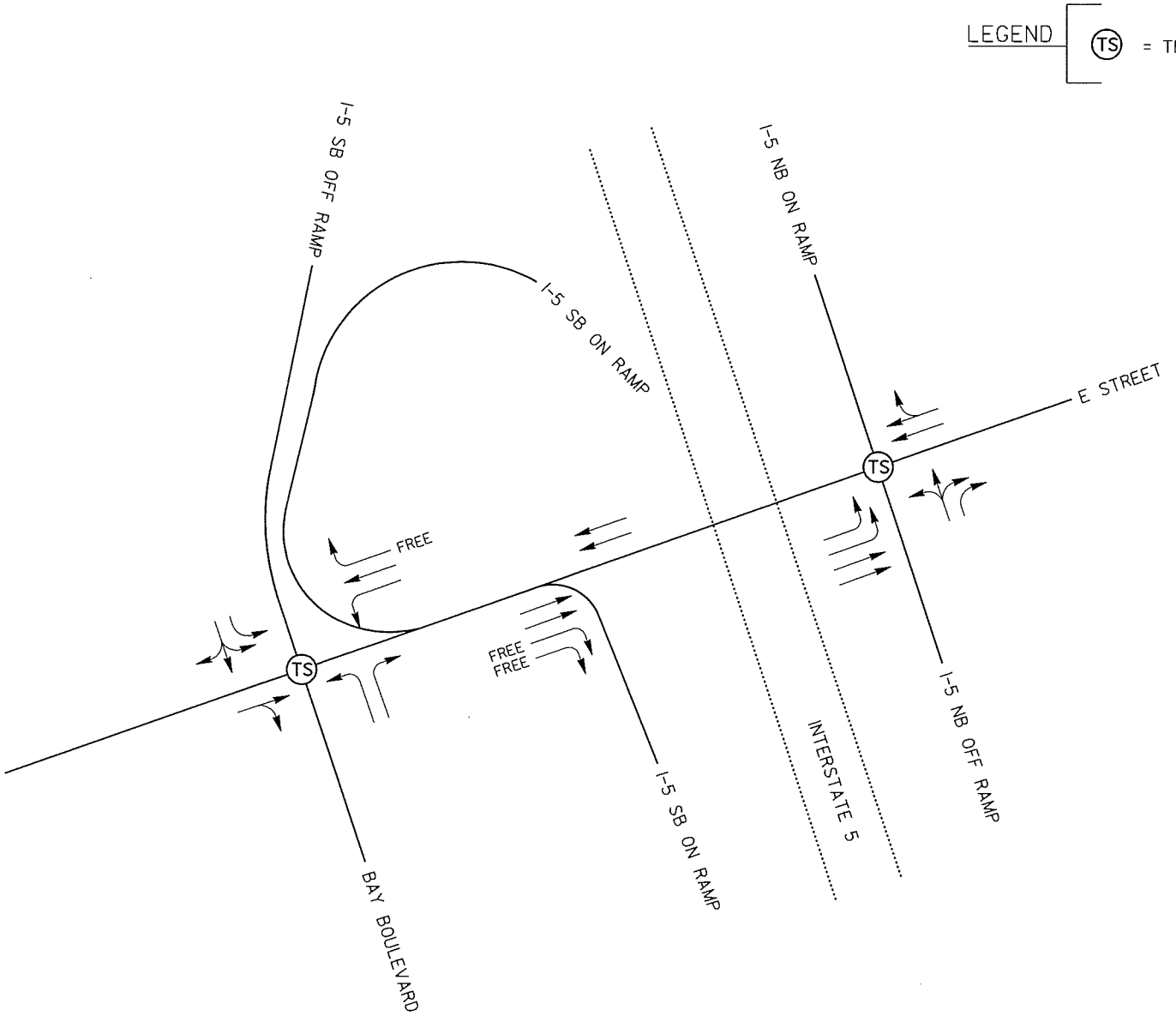

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EXHIBIT 1
COSTA VISTA RV RESORT
EXISTING CONDITIONS

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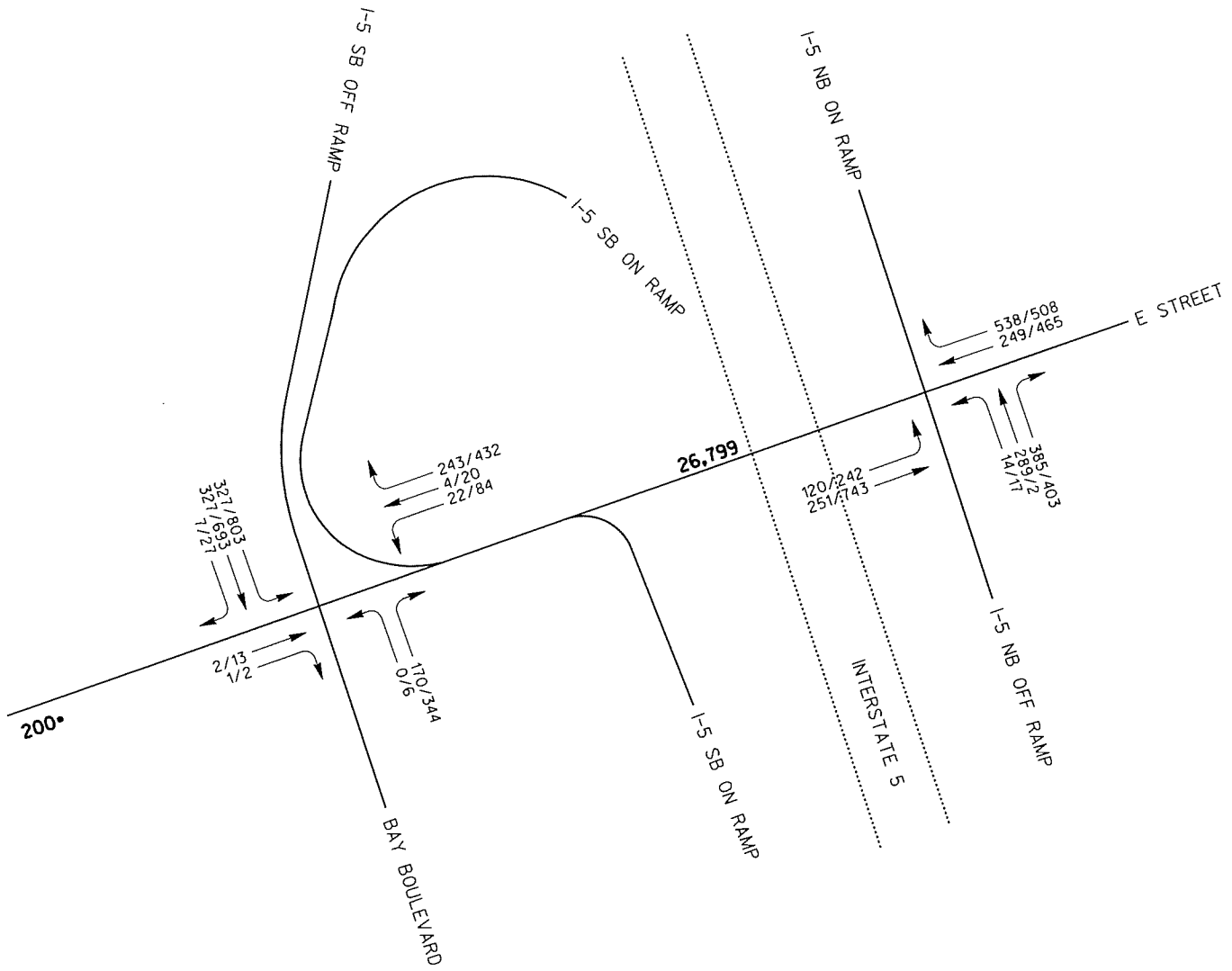

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EXHIBIT 2
COSTA VISTA RV RESORT
EXISTING TRAFFIC VOLUME

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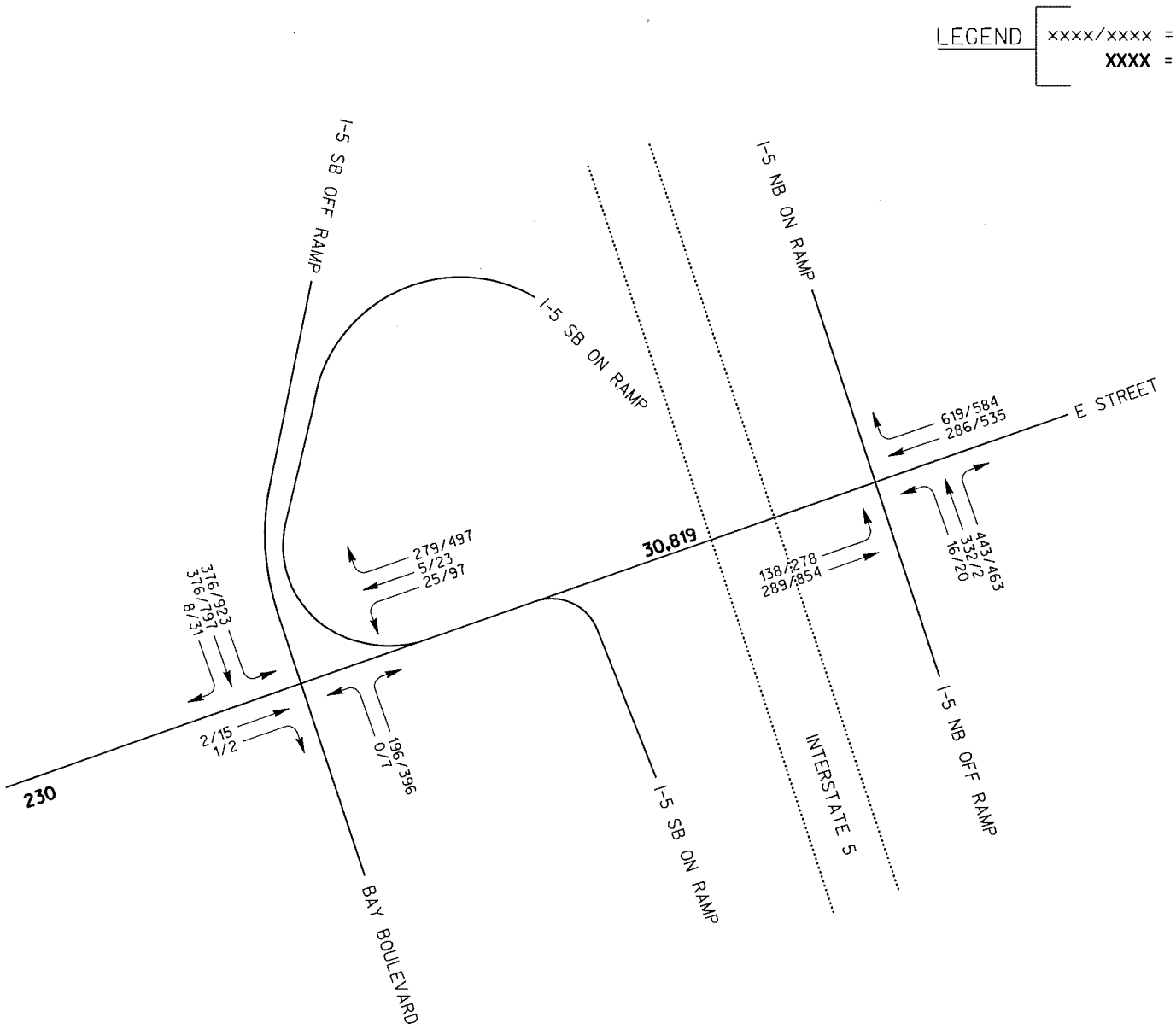

EXHIBIT 3
COSTA VISTA RV RESORT
EXISTING + BACKGROUND
TRAFFIC VOLUME

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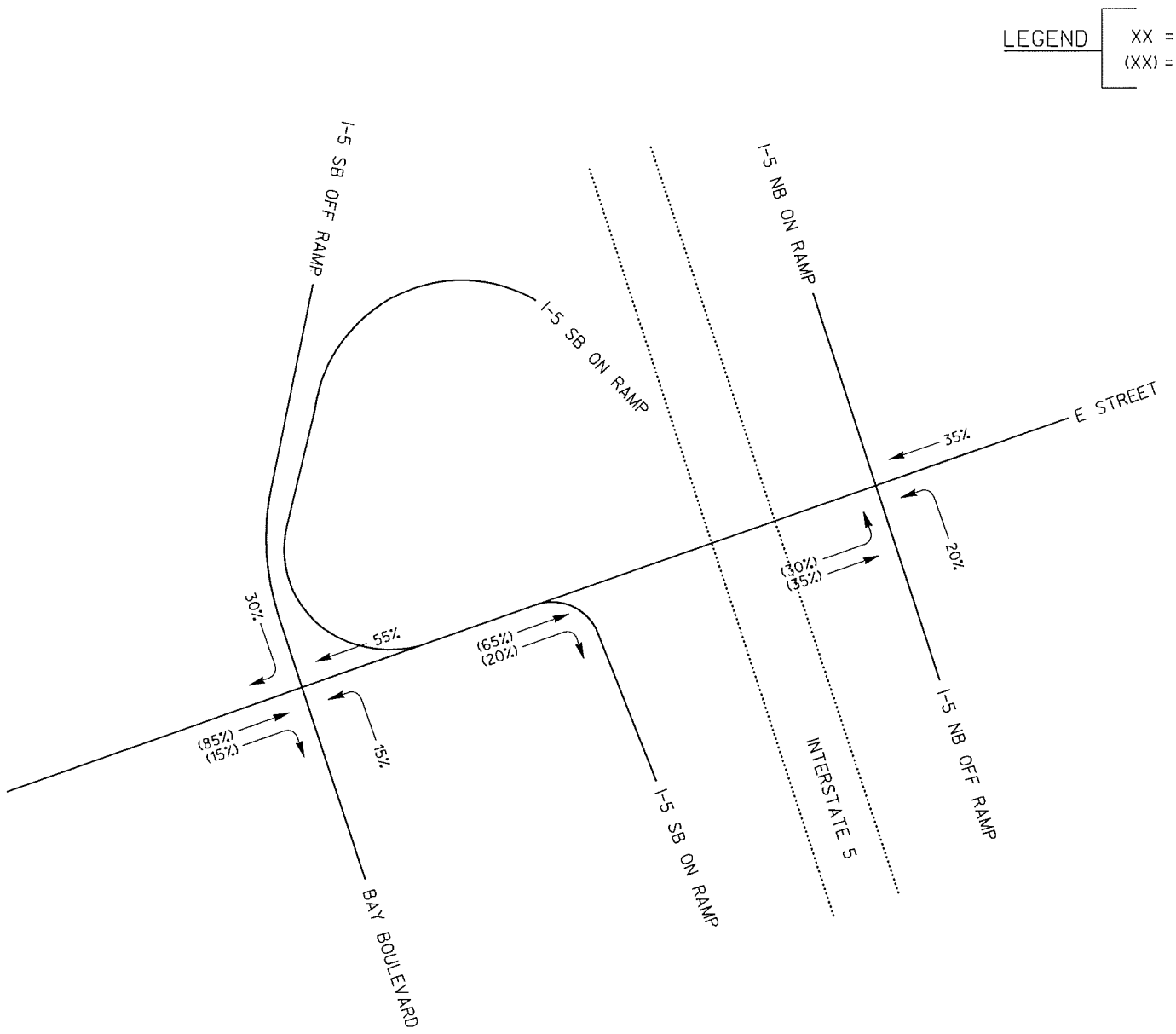

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EXHIBIT 4
COSTA VISTA RV RESORT
TRIP DISTRIBUTION

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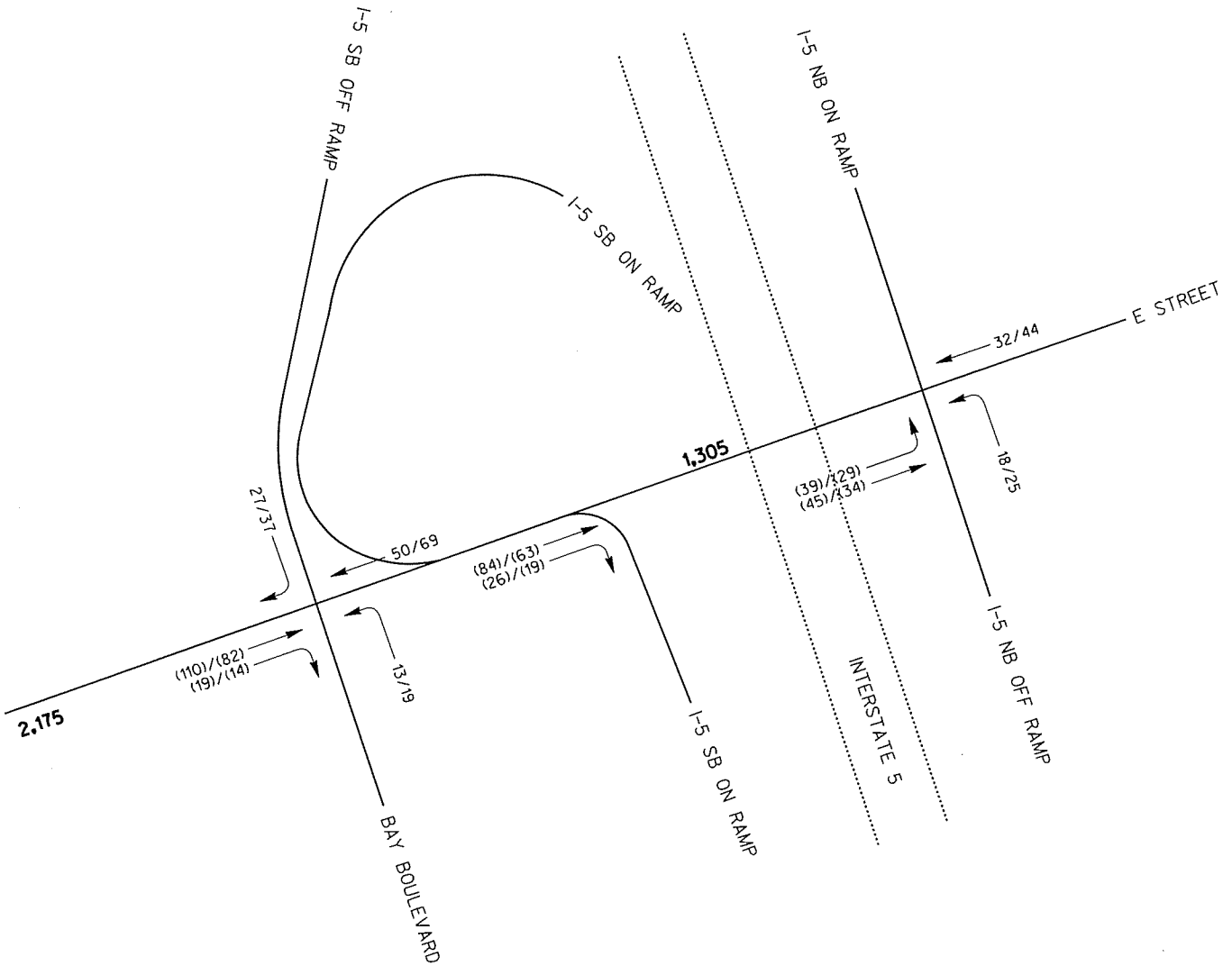

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EXHIBIT 5
COSTA VISTA RV RESORT
PROJECT TRIPS

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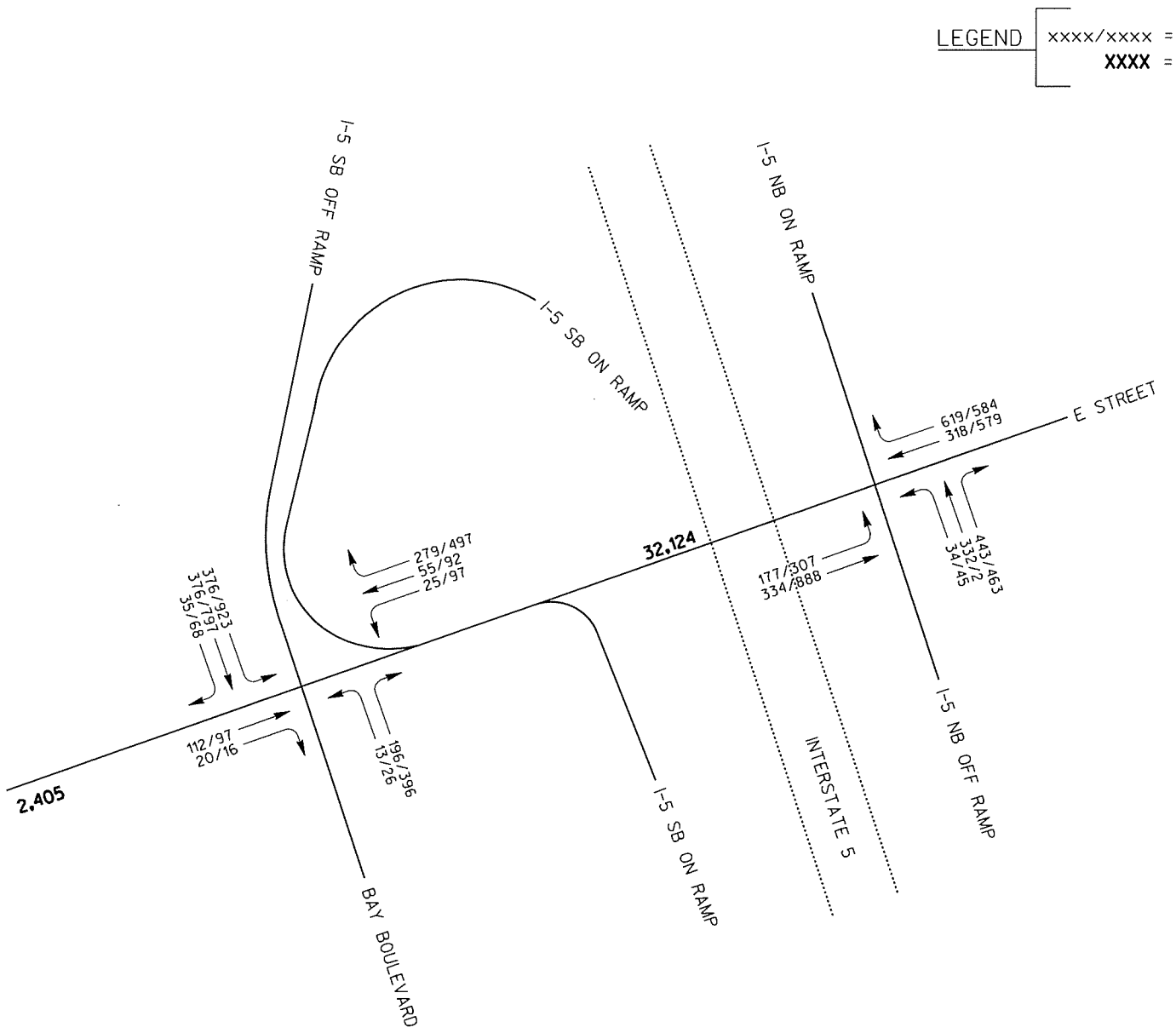

EXHIBIT 6
COSTA VISTA RV RESORT
EXISTING + BACKGROUND + PROJECT TRAFFIC VOLUME

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Attachment 2

Trip Generation

RICK ENGINEERING COMPANY™
5620 Friars Road
San Diego, CA 92110-2596
Tel: (619) 291-0707
Fax: (619) 291-4165

Date 2/26/18
Job No. 15939-Q
Page 1 of 1
Done By BRS
Checked By

Trip Generation

Parcel	Use	Independent Variable	ADT	AM In	AM Out	AM Total	PM In	PM Out	PM Total
S-1	RV Park	255 stalls	1,275	31	71	102	84	56	140
S-2	Signature Park	18 ac	900	59	58	117	41	40	81
SP-3	Existing parking for Discovery Center - to be relocated								
	Total:		2,175	90	129	219	125	96	221

Note: Trip Generation calculated based on SANDAG's (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region. "Mobile Home" use utilized for RV Park, and "City Park" use utilized for Signature Park, which is consistent with the trip generation methodology used in the Chula Vista Bayfront Master Plan Traffic Impact Analysis, prepared by Kimley-Horn and Associates, Inc. in March 2008.

(NOT SO)

BRIEF GUIDE OF VEHICULAR TRAFFIC GENERATION RATES FOR THE SAN DIEGO REGION

APRIL 2002

SANDAG
401 B Street, Suite 800
San Diego, California 92101
(619) 699-1900 • Fax (619) 699-1950

NOTE: This listing only represents a *guide* of average, or estimated, traffic generation "driveway" rates and some very general trip data for land uses (emphasis on acreage and building square footage) in the San Diego region. These rates (both local and national) are subject to change as future documentation becomes available, or as regional sources are updated. For more specific information regarding traffic data and trip rates, please refer to the San Diego Traffic Generators manual. *Always check with local jurisdictions for their preferred or applicable rates.*

LAND USE	TRIP CATEGORIES [PRIMARY:DIVERTED:PASS-BY][7]	ESTIMATED WEEKDAY VEHICLE TRIP GENERATION RATE (DRIVEWAY)	HIGHEST PEAK HOUR % (plus IN:OUT ratio) Between 6:00-9:30 A.M.	Between 3:00-6:30 P.M.	TRIP LENGTH (Miles)[4]
AGRICULTURE (Open Space)	[80:18:2]	2/acre**			10.8
AIRPORT	[78:20:2]				12.5
Commercial		60/acre, 100/flight, 70/1000 sq. ft.* **	5% (6:4)	6% (5:5)	
General Aviation		6/acre, 2/flight, 6/based aircraft* **	9% (7:3)	15% (5:5)	
Heliports		100/acre**			
AUTOMOBILE[5]					
Car Wash					
Automatic		900/site, 600/acre**	4% (5:5)	9% (5:5)	
Self-serve		100/wash stall**	4% (5:5)	8% (5:5)	
Gasoline	[21:51:28]				2.8
with/Food Mart		160/vehicle fueling space**	7% (5:5)	8% (5:5)	
with/Food Mart & Car Wash		155/vehicle fueling space**	8% (5:5)	9% (5:5)	
Older Service Station Design		150/vehicle fueling space, 900/station**	7% (5:5)	9% (5:5)	
Sales (Dealer & Repair)		50/1000 sq. ft., 300/acre, 60/service stall* **	5% (7:3)	8% (4:6)	
Auto Repair Center		20/1000 sq. ft., 400/acre, 20/service stall*	8% (7:3)	11% (4:6)	
Auto Parts Sales		60/1000 sq. ft.**	4%	10%	
Quick Lube		40/service stall**	7% (6:4)	10% (5:5)	
Tire Store		25/1000 sq. ft., 30/service stall**	7% (6:4)	11% (5:5)	
CEMETERY		5/acre*			
CHURCH (or Synagogue)	[64:25:11]	9/1000 sq. ft., 30/acre** (quadruple rates for Sunday, or days of assembly)	5% (6:4)	8% (5:5)	5.1
COMMERCIAL/RETAIL[5]					
Super Regional Shopping Center (More than 80 acres, more than 800,000 sq. ft., w/usually 3+ major stores)		35/1000 sq. ft., 400/acre*	4% (7:3)	10% (5:5)	
Regional Shopping Center (40-80acres, 400,000-800,000 sq. ft., w/usually 2+ major stores)	[54:35:11]	50/1000 sq. ft., 500/acre*	4% (7:3)	9% (5:5)	5.2
Community Shopping Center (15-40 acres, 125,000-400,000 sq. ft., w/usually 1 major store, detached restaurant(s), grocery and drugstore)	[47:31:22]	80/1000 sq. ft., 700/acre* **	4% (6:4)	10% (5:5)	3.6
Neighborhood Shopping Center (Less than 15 acres, less than 125,000 sq. ft., w/usually grocery & drugstore, cleaners, beauty & barber shop, & fast food services)		120/1000 sq. ft., 1200/acre* **	4% (6:4)	10% (5:5)	
Commercial Shops	[45:40:15]				
Specialty Retail/Strip Commercial		40/1000 sq. ft., 400/acre*	3% (6:4)	9% (5:5)	4.3
Electronics Superstore		50/1000 sq. ft**		10% (5:5)	
Factory Outlet		40/1000 sq. ft **	3% (7:3)	9% (5:5)	
Supermarket		150/1000 sq. ft., 2000/acre* **	4% (7:3)	10% (5:5)	
Drugstore		90/1000 sq. ft.**	4% (6:4)	10% (5:5)	
Convenience Market (15-16 hours)		500/1000 sq. ft.**	8% (5:5)	8% (5:5)	
Convenience Market (24 hours)		700/1000 sq. ft **	9% (5:5)	7% (5:5)	
Convenience Market (w/gasoline pumps)		850/1000 sq. ft., 550/vehicle fueling space**	6% (5:5)	7% (5:5)	
Discount Club		60/1000 sq. ft., 600/acre* **	1% (7:3)	9% (5:5)	
Discount Store		60/1000 sq. ft., 600/acre**	3% (6:4)	8% (5:5)	
Furniture Store		6/1000 sq. ft., 100/acre**	4% (7:3)	9% (5:5)	
Lumber Store		30/1000 sq. ft., 150/acre**	7% (6:4)	9% (5:5)	
Home Improvement Superstore		40/1000 sq. ft.**	5% (6:4)	8% (5:5)	
Hardware/Paint Store		60/1000 sq. ft., 600/acre**	2% (6:4)	9% (5:5)	
Garden Nursery		40/1000 sq. ft., 90/acre**	3% (6:4)	10% (5:5)	
Mixed Use: Commercial (w/supermarket)/Residential		110/1000 sq. ft., 2000/acre* (commercial only) 5/dwelling unit, 200/acre* (residential only)	3% (6:4) 9% (3:7)	9% (5:5) 13% (6:4)	
EDUCATION					
University (4 years)	[91:9:0]	2.4/student, 100 acre*	10% (8:2)	9% (3:7)	8.9
Junior College (2 years)	[92:7:1]	1.2/student, 24/1000 sq. ft., 120/acre* **	12% (8:2)	9% (6:4)	9.0
High School	[75:19:6]	1.3/student, 15/1000 sq. ft., 60/acre* **	20% (7:3)	10% (4:6)	4.8
Middle/Junior High	[63:25:12]	1.4/student, 12/1000 sq. ft. 50/acre**	30% (6:4)	9% (4:6)	5.0
Elementary	[57:25:10]	1.6/student, 14/1000 sq. ft., 90/acre* **	32% (6:4)	9% (4:6)	3.4
Day Care	[28:58:14]	5/child, 80/1000 sq. ft.**	17% (5:5)	18% (5:5)	3.7
FINANCIAL[5]	[35:42:23]				3.4
Bank (Walk-In only)		150/1000 sq. ft., 1000/acre* **	4% (7:3)	8% (4:6)	
with Drive-Through		200/1000 sq. ft., 1500/acre*	5% (6:4)	10% (5:5)	
Drive-Through only		250 (125 one-way)/lane*	3% (5:5)	13% (5:5)	
Savings & Loan		60/1000 sq. ft., 600/acre**	2%	9%	
Drive-Through only		100 (50 one-way)/lane**	4%	15%	
HOSPITAL	[73:25:2]				8.3
General		20/bed, 25/1000 sq. ft., 250/acre*	8% (7:3)	10% (4:6)	
Convalescent/Nursing		3/bed**	7% (6:4)	7% (4:6)	
INDUSTRIAL					
Industrial/Business Park (commercial included)	[79:19:2]	16/1000 sq. ft., 200/acre* **	12% (8:2)	12% (2:8)	9.0
Industrial Park (no commercial)		8/1000 sq. ft., 90/acre**	11% (9:1)	12% (2:8)	
Industrial Plant (multiple shifts)	[92:5:3]	10/1000 sq. ft., 120/acre*	14% (8:2)	15% (3:7)	11.7
Manufacturing/Assembly		4/1000 sq. ft., 50/acre**	19% (9:1)	20% (2:8)	
Warehousing		5/1000 sq. ft., 60/acre**	13% (7:3)	15% (4:6)	
Storage		2/1000 sq. ft., 0.2/vault, 30/acre*	6% (5:5)	9% (5:5)	
Science Research & Development		8/1000 sq. ft., 80/acre*	16% (9:1)	14% (1:9)	
Landfill & Recycling Center		6/acre	11% (5:5)	10% (4:6)	

(OVER)

LAND USE	TRIP CATEGORIES (PRIMARY:DIVERTED:PASS-BY)*	ESTIMATED WEEKDAY VEHICLE TRIP GENERATION RATE (DRIVEWAY)	HIGHEST PEAK HOUR % (plus IN:OUT ratio) Between 6:00-9:30 A.M.		Between 3:00-6:30 P.M.		TRIP LENGTH (Miles)†
LIBRARY	[44:44:12]	50/1000 sq. ft., 400/acre**	2%	(7:3)	10%	(5:5)	3.9
LODGING	[58:38:4]						7.6
Hotel (w/convention facilities/restaurant)		10/occupied room, 300/acre	6%	(6:4)	8%	(6:4)	
Motel		9/occupied room, 200/acre*	8%	(4:6)	9%	(6:4)	
Resort Hotel		8/occupied room, 100/acre*	5%	(6:4)	7%	(4:6)	
Business Hotel		7/occupied room**	8%	(4:6)	9%	(6:4)	
MILITARY	[82:16:2]	2.5/military & civilian personnel*	9%	(9:1)	10%	(2:8)	11.2
OFFICE							
Standard Commercial Office (less than 100,000 sq. ft.)	[77:19:4]	20/1000 sq. ft.,[a] 300/acre*	14%	(9:1)	13%	(2:8)	8.8
Large (High-Rise) Commercial Office (more than 100,000 sq. ft. 6+ stories)	[82:15:3]	17/1000 sq. ft.,[a] 600/acre*	13%	(9:1)	14%	(2:8)	10.0
Office Park (400,000+ sq. ft.)		12/1000 sq.ft., 200/acre* **	13%	(9:1)	13%	(2:8)	
Single Tenant Office		14/1000 sq. ft., 180/acre*	15%	(9:1)	15%	(2:8)	8.8
Corporate Headquarters		7/1000 sq. ft., 110/acre*	17%	(9:1)	16%	(1:9)	
Government (Civic Center)	[50:34:16]	30/1000 sq. ft.**	9%	(9:1)	12%	(3:7)	6.0
Post Office							
Central/Walk-In Only		90/1000 sq. ft.**	5%		7%		
Community (not including mail drop lane)		200/1000 sq. ft., 1300/acre*	6%	(6:4)	9%	(5:5)	
Community (w/mail drop lane)		300/1000 sq. ft., 2000/acre*	7%	(5:5)	10%	(5:5)	
Mail Drop Lane only		1500 (750 one-way)/lane*	7%	(5:5)	12%	(5:5)	
Department of Motor Vehicles		180/1000 sq. ft., 900/acre**	6%	(6:4)	10%	(4:6)	
Medical-Dental	[60:30:10]	50/1000 sq. ft., 500/acre*	6%	(8:2)	11%	(3:7)	6.4
PARKS	[66:28:6]		4%		8%		5.4
City (developed w/meeting rooms and sports facilities)		50/acre*	13%	(5:5)	9%	(5:5)	
Regional (developed)		20/acre*					
Neighborhood/County (undeveloped)		5/acre (add for specific sport uses), 6/picnic site* **					
State (average 1000 acres)		1/acre, 10/picnic site**					
Amusement (Theme)		80/acre, 130/acre (summer only)**			6%	(6:4)	
San Diego Zoo		115/acre*					
Sea World		80/acre*					
RECREATION							
Beach, Ocean or Bay	[52:39:9]	600/1000 ft. shoreline, 60/acre*					6.3
Beach, Lake (fresh water)		50/1000 ft. shoreline, 5/acre*					
Bowling Center		30/1000 sq. ft., 300/acre, 30/lane**	7%	(7:3)	11%	(4:6)	
Campground		4/campsite**	4%		8%		
Golf Course		7/acre, 40/hole, 700/course* **	7%	(8:2)	9%	(3:7)	
Driving Range only		70/acre, 14/tee box*	3%	(7:3)	9%	(5:5)	
Marinas		4/berth, 20/acre* **	3%	(3:7)	7%	(6:4)	
Multi-purpose (miniature golf, video arcade, batting cage, etc.)		90/acre	2%		6%		
Racquetball/Health Club		30/1000 sq. ft., 300/acre, 40/court*	4%	(6:4)	9%	(6:4)	
Tennis Courts		16/acre, 30/court**	5%		11%	(5:5)	
Sports Facilities							
Outdoor Stadium		50/acre, 0.2/seat*					
Indoor Arena		30/acre, 0.1/seat*					
Racetrack		40/acre, 0.6 seat*					
Theaters (multiplex w/matinee)	[66:17:17]	80/1000 sq. ft., 1.8/seat, 360/screen*	10%		8%	(6:4)	6.1
RESIDENTIAL	[86:11:3]						7.9
Estate, Urban or Rural (average 1-2 DU/acre)		12/dwelling unit*[d]	8%	(3:7)	10%	(7:3)	
Single Family Detached (average 3-6 DU/acre)		10/dwelling unit*[d]	8%	(3:7)	10%	(7:3)	
Condominium (or any multi-family 6-20 DU/acre)		8/dwelling unit*[d]	8%	(2:8)	10%	(7:3)	
Apartment (or any multi-family units more than 20 DU/acre)		6/dwelling unit*[d]	8%	(2:8)	9%	(7:3)	
Military Housing (off-base, multi-family)							
(less than 6 DU/acre)		8/dwelling unit	7%	(3:7)	9%	(6:4)	
(6-20 DU/acre)		6/dwelling unit	7%	(3:7)	9%	(6:4)	
Mobile Home							
Family		5/dwelling unit, 40/acre*	8%	(3:7)	11%	(6:4)	
Adults Only		3/dwelling unit, 20/acre*	9%	(3:7)	10%	(6:4)	
Retirement Community		4/dwelling unit**	5%	(4:6)	7%	(6:4)	
Congregate Care Facility		2.5/dwelling unit**	4%	(6:4)	8%	(5:5)	
RESTAURANT[h]	[51:37:12]						4.7
Quality		100/1000 sq. ft., 3/seat, 500/acre* **	7%	(6:4)	8%	(7:3)	
Sit-down, high turnover		160/1000 sq. ft., 6/seat, 1000/acre* **	8%	(5:5)	8%	(6:4)	
Fast Food (w/drive-through)		650/1000 sq. ft., 20/seat, 3000/acre* **	7%	(5:5)	7%	(5:5)	
Fast Food (without drive-through)		700/1000 sq. ft.**	5%	(6:4)	7%	(5:5)	
Delicatessen (7am-4pm)		150/1000 sq. ft., 11/seat*	9%	(6:4)	3%	(3:7)	
TRANSPORTATION							
Bus Depot		25/1000 sq. ft.**					
Truck Terminal		10/1000 sq. ft., 7/bay, 80/acre**	9%	(4:6)	8%	(5:5)	
Waterport/Marine Terminal		170/berth, 12/acre**					
Transit Station (Light Rail w/parking)		300/acre, 2[i]/parking space (4/occupied)**	14%	(7:3)	15%	(3:7)	
Park & Ride Lots		400/acre (600/paved acre), 5/parking space (8/occupied)* **	14%	(7:3)	15%	(3:7)	

* Primary source: *San Diego Traffic Generators*.

** Other sources: *ITE Trip Generation Report (6th Edition)*, Trip Generation Rates (other agencies and publications), various SANDAG & CALTRANS studies, reports and estimates.

*** Trip category percentage ratios are daily from local household surveys, often cannot be applied to very specific land uses, and do not include non-resident drivers (draft SANDAG *Analysis of Trip Diversion*, revised November, 1990)
PRIMARY - one trip directly between origin and primary destination
DIVERTED - linked trip (having one or more stops along the way to a primary destination) whose distance compared to direct distance ≥ 1 mile
PASS-BY - undiverted or diverted < 1 mile

† Trip lengths are average weighted for all trips to and from general land use site. (All trips system-wide average length = 6.9 miles).

‡ Fitted curve equation: $Ln(T) = 0.502\ Ln(x) + 6.945$ } T = total trips, x = 1,000 sq. ft
Fitted curve equation: $Ln(T) = 0.756\ Ln(x) + 3.950$ }

§ Fitted curve equation: $T = -2.169\ Ln(d) + 12.85$ T = trips/DU, d = density (DU/acre), DU = dwelling unit

¶ Suggested PASS-BY (undiverted or diverted < 1 mile) percentages for trip rate reductions only during P.M. peak period (based on combination of local data/review and Other sources* **).

COMMERCIAL/RETAIL	
Regional Shopping Center	20%
Community	30%
Neighborhood	40%
Specialty Retail/Strip Commercial (other)	10%
Supermarket	40%
Convenience Market	50%
Discount Club/Store	30%
FINANCIAL	
Bank	25%
AUTOMOBILE	
Gasoline Station	50%
RESTAURANT	
Quality	10%
Sit-down high turnover	20%
Fast Food	40%

‖ Trip Reductions - In order to help promote regional "smart growth" policies and acknowledge San Diego's expanding mass transit system, consider vehicle trip rate reductions (with proper documentation and necessary adjustments for peak periods). The following are some examples:

[1] A 5% daily trip reduction for land uses with transit access or near transit stations accessible within 1/4 mile.

[2] Up to 10% daily trip reduction for mixed-use developments where residential and commercial retail are combined (demonstrate mode split of walking trips to replace vehicular trips).

Attachment 3

Capacity Analysis

RICK ENGINEERING COMPANY
Traffic Division

Table 1
Capacity Analysis Results

Intersection	Scenario															
	Existing				Existing + Background				Existing + Background + Project				Existing + Background + Project (mitigated)			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
E Street at I-5 SB Ramps/Bay Boulevard	C	26.5	C	25.8	C	24.5	D	46.1	C	26.3	**E**	61.6	C	23.5	D	49.8
E Street at I-5 NB Ramps	C	21	B	15.7	C	22.7	B	17.1	C	24.6	C	27.3	C	24.5	C	27.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	2	1	22	4	243	0	0	170	327	327	7
Future Volume (vph)	0	2	1	22	4	243	0	0	170	327	327	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0			4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00	1.00			1.00	0.95	0.95	
Frt		0.95		1.00	1.00	0.85			0.85	1.00	1.00	
Flt Protected		1.00		0.95	1.00	1.00			1.00	0.95	1.00	
Satd. Flow (prot)		1779		1770	1863	1583			1583	1681	1756	
Flt Permitted		1.00		0.95	1.00	1.00			1.00	0.95	1.00	
Satd. Flow (perm)		1779		1770	1863	1583			1583	1681	1756	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2	1	24	4	264	0	0	185	355	355	8
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	174	0	1	0
Lane Group Flow (vph)	0	2	0	24	4	264	0	0	11	319	398	0
Turn Type		NA		Split	NA	Free	Perm		Perm	Split	NA	
Protected Phases		5		6	6					4	4	
Permitted Phases						Free	3		3			
Actuated Green, G (s)		1.2		40.6	40.6	90.0			5.5	26.7	26.7	
Effective Green, g (s)		1.2		40.6	40.6	90.0			5.5	26.7	26.7	
Actuated g/C Ratio		0.01		0.45	0.45	1.00			0.06	0.30	0.30	
Clearance Time (s)		4.0		4.0	4.0				4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0				3.0	3.0	3.0	
Lane Grp Cap (vph)		23		798	840	1583			96	498	520	
v/s Ratio Prot		0.00		0.01	0.00					0.19	c0.23	
v/s Ratio Perm						c0.17			0.01			
v/c Ratio		0.09		0.03	0.00	0.17			0.12	0.64	0.77	
Uniform Delay, d1		43.9		13.7	13.6	0.0			40.0	27.5	28.8	
Progression Factor		1.00		0.66	0.70	1.00			1.00	1.00	1.00	
Incremental Delay, d2		1.6		0.1	0.0	0.2			0.5	2.8	6.6	
Delay (s)		45.5		9.1	9.5	0.2			40.5	30.3	35.5	
Level of Service		D		A	A	A			D	C	D	
Approach Delay (s)		45.5			1.1			40.5			33.2	
Approach LOS		D			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	26.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	251	0	0	249	538	14	289	385	0	0	0
Future Volume (vph)	120	251	0	0	249	538	14	289	385	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.3			5.3			4.0	4.0			
Lane Util. Factor	0.97	0.95			0.95			0.95	0.95			
Frt	1.00	1.00			0.90			0.97	0.85			
Flt Protected	0.95	1.00			1.00			1.00	1.00			
Satd. Flow (prot)	3433	3539			3176			1721	1504			
Flt Permitted	0.95	1.00			1.00			1.00	1.00			
Satd. Flow (perm)	3433	3539			3176			1721	1504			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	130	273	0	0	271	585	15	314	418	0	0	0
RTOR Reduction (vph)	0	0	0	0	181	0	0	9	247	0	0	0
Lane Group Flow (vph)	130	273	0	0	675	0	0	387	104	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)	7.9	54.0			42.1			26.7	26.7			
Effective Green, g (s)	7.9	54.0			42.1			26.7	26.7			
Actuated g/C Ratio	0.09	0.60			0.47			0.30	0.30			
Clearance Time (s)	4.0	5.3			5.3			4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	301	2123			1485			510	446			
v/s Ratio Prot	c0.04	0.08			c0.21							
v/s Ratio Perm								0.22	0.07			
v/c Ratio	0.43	0.13			0.45			0.76	0.23			
Uniform Delay, d1	38.9	7.8			16.2			28.7	23.9			
Progression Factor	0.73	0.54			1.00			1.00	1.00			
Incremental Delay, d2	0.9	0.1			1.0			6.4	0.3			
Delay (s)	29.2	4.3			17.2			35.1	24.2			
Level of Service	C	A			B			D	C			
Approach Delay (s)		12.3			17.2			30.0			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	21.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	13	2	84	20	432	6	0	344	803	693	27
Future Volume (vph)	0	13	2	84	20	432	6	0	344	803	693	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00	1.00	1.00		1.00	0.95	0.95	
Frt		0.98		1.00	1.00	0.85	1.00		0.85	1.00	0.99	
Flt Protected		1.00		0.95	1.00	1.00	0.95		1.00	0.95	1.00	
Satd. Flow (prot)		1831		1770	1863	1583	1770		1583	1681	1752	
Flt Permitted		1.00		0.95	1.00	1.00	0.45		1.00	0.95	1.00	
Satd. Flow (perm)		1831		1770	1863	1583	837		1583	1681	1752	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	14	2	91	22	470	7	0	374	873	753	29
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	337	0	1	0
Lane Group Flow (vph)	0	14	0	91	22	470	7	0	37	786	868	0
Turn Type		NA		Split	NA	Free	Perm		Perm	Split	NA	
Protected Phases		5		6	6					4	4	
Permitted Phases						Free	3		3			
Actuated Green, G (s)		2.9		13.6	13.6	90.0	8.9		8.9	48.6	48.6	
Effective Green, g (s)		2.9		13.6	13.6	90.0	8.9		8.9	48.6	48.6	
Actuated g/C Ratio		0.03		0.15	0.15	1.00	0.10		0.10	0.54	0.54	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		58		267	281	1583	82		156	907	946	
v/s Ratio Prot		0.01		0.05	0.01					0.47	c0.50	
v/s Ratio Perm						c0.30	0.01		0.02			
v/c Ratio		0.24		0.34	0.08	0.30	0.09		0.24	0.87	0.92	
Uniform Delay, d1		42.5		34.2	32.8	0.0	36.9		37.4	17.9	18.9	
Progression Factor		1.00		0.88	0.89	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.2		3.2	0.5	0.4	0.5		0.8	8.7	13.3	
Delay (s)		44.7		33.1	29.6	0.4	37.3		38.2	26.6	32.2	
Level of Service		D		C	C	A	D		D	C	C	
Approach Delay (s)		44.7			6.6			38.2			29.6	
Approach LOS		D			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	25.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	242	743	0	0	465	508	17	2	403	0	0	0
Future Volume (vph)	242	743	0	0	465	508	17	2	403	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.3			5.3			4.0	4.0			
Lane Util. Factor	0.97	0.95			0.95			0.95	0.95			
Frt	1.00	1.00			0.92			0.86	0.85			
Flt Protected	0.95	1.00			1.00			1.00	1.00			
Satd. Flow (prot)	3433	3539			3262			1521	1504			
Flt Permitted	0.95	1.00			1.00			1.00	1.00			
Satd. Flow (perm)	3433	3539			3262			1521	1504			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	263	808	0	0	505	552	18	2	438	0	0	0
RTOR Reduction (vph)	0	0	0	0	163	0	0	189	205	0	0	0
Lane Group Flow (vph)	263	808	0	0	894	0	0	41	23	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)	12.1	71.6			55.5			9.1	9.1			
Effective Green, g (s)	12.1	71.6			55.5			9.1	9.1			
Actuated g/C Ratio	0.13	0.80			0.62			0.10	0.10			
Clearance Time (s)	4.0	5.3			5.3			4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	461	2815			2011			153	152			
v/s Ratio Prot	c0.08	0.23			c0.27							
v/s Ratio Perm								0.03	0.02			
v/c Ratio	0.57	0.29			0.44			0.27	0.15			
Uniform Delay, d1	36.5	2.4			9.1			37.4	36.9			
Progression Factor	1.24	0.32			1.00			1.00	1.00			
Incremental Delay, d2	1.0	0.2			0.7			1.0	0.5			
Delay (s)	46.2	0.9			9.8			38.3	37.4			
Level of Service	D	A			A			D	D			
Approach Delay (s)		12.1			9.8			37.9			0.0	
Approach LOS		B			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	2	1	25	5	279	0	0	196	376	376	8
Future Volume (vph)	0	2	1	25	5	279	0	0	196	376	376	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0			4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00	1.00			1.00	0.95	0.95	
Frt		0.95		1.00	1.00	0.85			0.85	1.00	1.00	
Flt Protected		1.00		0.95	1.00	1.00			1.00	0.95	1.00	
Satd. Flow (prot)		1779		1770	1863	1583			1583	1681	1757	
Flt Permitted		1.00		0.95	1.00	1.00			1.00	0.95	1.00	
Satd. Flow (perm)		1779		1770	1863	1583			1583	1681	1757	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2	1	27	5	303	0	0	213	409	409	9
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	200	0	1	0
Lane Group Flow (vph)	0	2	0	27	5	303	0	0	13	368	458	0
Turn Type		NA		Split	NA	Free	Perm		Perm	Split	NA	
Protected Phases		5		6	6					4	4	
Permitted Phases						Free	3		3			
Actuated Green, G (s)		1.2		36.3	36.3	90.0			5.5	31.0	31.0	
Effective Green, g (s)		1.2		36.3	36.3	90.0			5.5	31.0	31.0	
Actuated g/C Ratio		0.01		0.40	0.40	1.00			0.06	0.34	0.34	
Clearance Time (s)		4.0		4.0	4.0				4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0				3.0	3.0	3.0	
Lane Grp Cap (vph)		23		713	751	1583			96	579	605	
v/s Ratio Prot		0.00		0.02	0.00					0.22	c0.26	
v/s Ratio Perm						c0.19			0.01			
v/c Ratio		0.09		0.04	0.01	0.19			0.14	0.64	0.76	
Uniform Delay, d1		43.9		16.3	16.1	0.0			40.0	24.8	26.2	
Progression Factor		1.00		0.76	0.81	1.00			1.00	1.00	1.00	
Incremental Delay, d2		1.6		0.1	0.0	0.2			0.6	2.3	5.4	
Delay (s)		45.5		12.4	13.1	0.2			40.6	27.0	31.6	
Level of Service		D		B	B	A			D	C	C	
Approach Delay (s)		45.5			1.4			40.6			29.6	
Approach LOS		D			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	138	289	0	0	286	619	16	332	443	0	0	0
Future Volume (vph)	138	289	0	0	286	619	16	332	443	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.3			5.3			4.0	4.0			
Lane Util. Factor	0.97	0.95			0.95			0.95	0.95			
Frt	1.00	1.00			0.90			0.97	0.85			
Flt Protected	0.95	1.00			1.00			1.00	1.00			
Satd. Flow (prot)	3433	3539			3176			1719	1504			
Flt Permitted	0.95	1.00			1.00			1.00	1.00			
Satd. Flow (perm)	3433	3539			3176			1719	1504			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	150	314	0	0	311	673	17	361	482	0	0	0
RTOR Reduction (vph)	0	0	0	0	162	0	0	9	268	0	0	0
Lane Group Flow (vph)	150	314	0	0	822	0	0	451	132	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)	7.7	51.0			39.3			29.7	29.7			
Effective Green, g (s)	7.7	51.0			39.3			29.7	29.7			
Actuated g/C Ratio	0.09	0.57			0.44			0.33	0.33			
Clearance Time (s)	4.0	5.3			5.3			4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	293	2005			1386			567	496			
v/s Ratio Prot	c0.04	0.09			c0.26							
v/s Ratio Perm								0.26	0.09			
v/c Ratio	0.51	0.16			0.59			0.79	0.27			
Uniform Delay, d1	39.4	9.3			19.3			27.4	22.1			
Progression Factor	0.75	0.61			1.00			1.00	1.00			
Incremental Delay, d2	1.3	0.1			1.9			7.6	0.3			
Delay (s)	30.9	5.8			21.1			34.9	22.4			
Level of Service	C	A			C			C	C			
Approach Delay (s)		13.9			21.1			29.1			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	22.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
03/01/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	15	2	97	23	497	7	0	396	923	797	31
Future Volume (vph)	0	15	2	97	23	497	7	0	396	923	797	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00	1.00	1.00		1.00	0.95	0.95	
Frt		0.98		1.00	1.00	0.85	1.00		0.85	1.00	0.99	
Flt Protected		1.00		0.95	1.00	1.00	0.95		1.00	0.95	1.00	
Satd. Flow (prot)		1835		1770	1863	1583	1770		1583	1681	1752	
Flt Permitted		1.00		0.95	1.00	1.00	0.43		1.00	0.95	1.00	
Satd. Flow (perm)		1835		1770	1863	1583	801		1583	1681	1752	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	16	2	105	25	540	8	0	430	1003	866	34
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	386	0	1	0
Lane Group Flow (vph)	0	16	0	105	25	540	8	0	44	903	999	0
Turn Type		NA		Split	NA	Free	Perm		Perm	Split	NA	
Protected Phases		5		6	6					4	4	
Permitted Phases						Free	3		3			
Actuated Green, G (s)		2.9		13.7	13.7	90.0	9.3		9.3	48.1	48.1	
Effective Green, g (s)		2.9		13.7	13.7	90.0	9.3		9.3	48.1	48.1	
Actuated g/C Ratio		0.03		0.15	0.15	1.00	0.10		0.10	0.53	0.53	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		59		269	283	1583	82		163	898	936	
v/s Ratio Prot		0.01		0.06	0.01					0.54	c0.57	
v/s Ratio Perm						c0.34	0.01		0.03			
v/c Ratio		0.27		0.39	0.09	0.34	0.10		0.27	1.01	1.07	
Uniform Delay, d1		42.5		34.4	32.8	0.0	36.5		37.2	20.9	20.9	
Progression Factor		1.00		0.91	0.95	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.5		3.6	0.5	0.5	0.5		0.9	31.4	49.1	
Delay (s)		45.0		35.1	31.6	0.5	37.1		38.1	52.3	70.1	
Level of Service		D		D	C	A	D		D	D	E	
Approach Delay (s)		45.0			7.1			38.1			61.7	
Approach LOS		D			A			D			E	

Intersection Summary			
HCM 2000 Control Delay	46.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	278	854	0	0	535	584	20	2	463	0	0	0
Future Volume (vph)	278	854	0	0	535	584	20	2	463	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.3			5.3			4.0	4.0			
Lane Util. Factor	0.97	0.95			0.95			0.95	0.95			
Frt	1.00	1.00			0.92			0.86	0.85			
Flt Protected	0.95	1.00			1.00			1.00	1.00			
Satd. Flow (prot)	3433	3539			3262			1522	1504			
Flt Permitted	0.95	1.00			1.00			1.00	1.00			
Satd. Flow (perm)	3433	3539			3262			1522	1504			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	302	928	0	0	582	635	22	2	503	0	0	0
RTOR Reduction (vph)	0	0	0	0	178	0	0	161	161	0	0	0
Lane Group Flow (vph)	302	928	0	0	1039	0	0	104	101	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)	12.6	68.9			52.3			11.8	11.8			
Effective Green, g (s)	12.6	68.9			52.3			11.8	11.8			
Actuated g/C Ratio	0.14	0.77			0.58			0.13	0.13			
Clearance Time (s)	4.0	5.3			5.3			4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	480	2709			1895			199	197			
v/s Ratio Prot	c0.09	0.26			c0.32							
v/s Ratio Perm								0.07	0.07			
v/c Ratio	0.63	0.34			0.55			0.52	0.51			
Uniform Delay, d1	36.5	3.4			11.6			36.5	36.4			
Progression Factor	1.21	0.35			1.00			1.00	1.00			
Incremental Delay, d2	1.1	0.1			1.1			2.5	2.3			
Delay (s)	45.2	1.3			12.7			39.0	38.7			
Level of Service	D	A			B			D	D			
Approach Delay (s)		12.1			12.7			38.8			0.0	
Approach LOS		B			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
03/01/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	112	20	25	55	279	13	0	196	376	376	35
Future Volume (vph)	0	112	20	25	55	279	13	0	196	376	376	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00	1.00	1.00		1.00	0.95	0.95	
Frt		0.98		1.00	1.00	0.85	1.00		0.85	1.00	0.99	
Flt Protected		1.00		0.95	1.00	1.00	0.95		1.00	0.95	1.00	
Satd. Flow (prot)		1824		1770	1863	1583	1770		1583	1681	1742	
Flt Permitted		1.00		0.95	1.00	1.00	0.46		1.00	0.95	1.00	
Satd. Flow (perm)		1824		1770	1863	1583	856		1583	1681	1742	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	122	22	27	60	303	14	0	213	409	409	38
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	192	0	3	0
Lane Group Flow (vph)	0	136	0	27	60	303	14	0	21	368	485	0
Turn Type		NA		Split	NA	Free	Perm		Perm	Split	NA	
Protected Phases		5		6	6					4	4	
Permitted Phases						Free	3		3			
Actuated Green, G (s)		11.8		22.4	22.4	90.0	8.7		8.7	31.1	31.1	
Effective Green, g (s)		11.8		22.4	22.4	90.0	8.7		8.7	31.1	31.1	
Actuated g/C Ratio		0.13		0.25	0.25	1.00	0.10		0.10	0.35	0.35	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		239		440	463	1583	82		153	580	601	
v/s Ratio Prot		c0.07		0.02	0.03					0.22	c0.28	
v/s Ratio Perm						c0.19	0.02		0.01			
v/c Ratio		0.57		0.06	0.13	0.19	0.17		0.13	0.63	0.81	
Uniform Delay, d1		36.7		25.8	26.2	0.0	37.3		37.2	24.7	26.7	
Progression Factor		1.00		0.59	0.59	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2		3.1		0.2	0.4	0.2	1.0		0.4	2.3	7.8	
Delay (s)		39.8		15.5	16.0	0.2	38.3		37.6	27.0	34.5	
Level of Service		D		B	B	A	D		D	C	C	
Approach Delay (s)		39.8			3.7			37.7			31.3	
Approach LOS		D			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	26.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	177	334	0	0	318	619	34	332	443	0	0	0
Future Volume (vph)	177	334	0	0	318	619	34	332	443	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.3			5.3			4.0	4.0			
Lane Util. Factor	0.97	0.95			0.95			0.95	0.95			
Frt	1.00	1.00			0.90			0.98	0.85			
Flt Protected	0.95	1.00			1.00			1.00	1.00			
Satd. Flow (prot)	3433	3539			3189			1722	1504			
Flt Permitted	0.95	1.00			1.00			1.00	1.00			
Satd. Flow (perm)	3433	3539			3189			1722	1504			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	192	363	0	0	346	673	37	361	482	0	0	0
RTOR Reduction (vph)	0	0	0	0	160	0	0	8	273	0	0	0
Lane Group Flow (vph)	192	363	0	0	859	0	0	462	137	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)	8.3	50.7			38.4			30.0	30.0			
Effective Green, g (s)	8.3	50.7			38.4			30.0	30.0			
Actuated g/C Ratio	0.09	0.56			0.43			0.33	0.33			
Clearance Time (s)	4.0	5.3			5.3			4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	316	1993			1360			574	501			
v/s Ratio Prot	c0.06	0.10			c0.27							
v/s Ratio Perm								0.27	0.09			
v/c Ratio	0.61	0.18			0.63			0.80	0.27			
Uniform Delay, d1	39.3	9.6			20.2			27.3	22.0			
Progression Factor	1.25	0.45			1.00			1.00	1.00			
Incremental Delay, d2	2.8	0.2			2.2			8.1	0.3			
Delay (s)	51.9	4.5			22.5			35.4	22.3			
Level of Service	D	A			C			D	C			
Approach Delay (s)		20.9			22.5			29.3			0.0	
Approach LOS		C			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	24.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	97	16	97	92	497	26	0	396	923	797	68
Future Volume (vph)	0	97	16	97	92	497	26	0	396	923	797	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00	1.00	1.00		1.00	0.95	0.95	
Frt		0.98		1.00	1.00	0.85	1.00		0.85	1.00	0.99	
Flt Protected		1.00		0.95	1.00	1.00	0.95		1.00	0.95	1.00	
Satd. Flow (prot)		1828		1770	1863	1583	1770		1583	1681	1742	
Flt Permitted		1.00		0.95	1.00	1.00	0.20		1.00	0.95	1.00	
Satd. Flow (perm)		1828		1770	1863	1583	369		1583	1681	1742	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	105	17	105	100	540	28	0	430	1003	866	74
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	230	0	2	0
Lane Group Flow (vph)	0	118	0	105	100	540	28	0	200	903	1038	0
Turn Type		NA		Split	NA	Free	Perm		Perm	Split	NA	
Protected Phases		5		6	6					4	4	
Permitted Phases						Free	3		3			
Actuated Green, G (s)		13.8		16.0	16.0	150.0	20.2		20.2	84.0	84.0	
Effective Green, g (s)		13.8		16.0	16.0	150.0	20.2		20.2	84.0	84.0	
Actuated g/C Ratio		0.09		0.11	0.11	1.00	0.13		0.13	0.56	0.56	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		168		188	198	1583	49		213	941	975	
v/s Ratio Prot		c0.06		c0.06	0.05					0.54	c0.60	
v/s Ratio Perm						0.34	0.08		c0.13			
v/c Ratio		0.70		0.56	0.51	0.34	0.57		0.94	0.96	1.06	
Uniform Delay, d1		66.1		63.6	63.3	0.0	60.8		64.3	31.4	33.0	
Progression Factor		1.00		0.83	0.83	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2		12.6		9.9	7.7	0.5	15.1		44.1	19.9	47.7	
Delay (s)		78.7		62.6	60.1	0.5	75.9		108.3	51.3	80.7	
Level of Service		E		E	E	A	E		F	D	F	
Approach Delay (s)		78.7			17.3			106.4			67.1	
Approach LOS		E			B			F			E	

Intersection Summary			
HCM 2000 Control Delay	61.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	307	888	0	0	579	584	45	2	463	0	0	0
Future Volume (vph)	307	888	0	0	579	584	45	2	463	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.3			5.3			4.0	4.0			
Lane Util. Factor	0.97	0.95			0.95			0.95	0.95			
Frt	1.00	1.00			0.92			0.88	0.85			
Flt Protected	0.95	1.00			1.00			0.99	1.00			
Satd. Flow (prot)	3433	3539			3273			1539	1504			
Flt Permitted	0.95	1.00			1.00			0.99	1.00			
Satd. Flow (perm)	3433	3539			3273			1539	1504			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	334	965	0	0	629	635	49	2	503	0	0	0
RTOR Reduction (vph)	0	0	0	0	89	0	0	122	151	0	0	0
Lane Group Flow (vph)	334	965	0	0	1175	0	0	155	126	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)	19.8	120.0			96.2			20.7	20.7			
Effective Green, g (s)	19.8	120.0			96.2			20.7	20.7			
Actuated g/C Ratio	0.13	0.80			0.64			0.14	0.14			
Clearance Time (s)	4.0	5.3			5.3			4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	453	2831			2099			212	207			
v/s Ratio Prot	c0.10	0.27			c0.36							
v/s Ratio Perm								0.10	0.08			
v/c Ratio	0.74	0.34			0.56			0.73	0.61			
Uniform Delay, d1	62.6	4.1			15.0			62.0	60.8			
Progression Factor	1.15	0.24			1.00			1.00	1.00			
Incremental Delay, d2	2.1	0.1			1.1			12.3	5.0			
Delay (s)	74.2	1.1			16.1			74.3	65.9			
Level of Service	E	A			B			E	E			
Approach Delay (s)		19.9			16.1			70.1			0.0	
Approach LOS		B			B			E			A	

Intersection Summary			
HCM 2000 Control Delay	27.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	112	20	25	55	279	13	0	196	376	376	35
Future Volume (vph)	0	112	20	25	55	279	13	0	196	376	376	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00	1.00	1.00		1.00	0.95	0.95	
Frt		0.98		1.00	1.00	0.85	1.00		0.85	1.00	0.99	
Flt Protected		1.00		0.95	1.00	1.00	0.95		1.00	0.95	1.00	
Satd. Flow (prot)		1824		1770	1863	1583	1770		1583	1681	1742	
Flt Permitted		1.00		0.95	1.00	1.00	1.00		1.00	0.95	1.00	
Satd. Flow (perm)		1824		1770	1863	1583	1863		1583	1681	1742	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	122	22	27	60	303	14	0	213	409	409	38
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	149	0	3	0
Lane Group Flow (vph)	0	136	0	27	60	303	14	0	64	368	485	0
Turn Type		NA		Prot	NA	Free	Perm		Over	Split	NA	
Protected Phases		2		1	6				1	4	4	
Permitted Phases						Free	3					
Actuated Green, G (s)		12.8		27.1	43.9	90.0	2.7		27.1	31.4	31.4	
Effective Green, g (s)		12.8		27.1	43.9	90.0	2.7		27.1	31.4	31.4	
Actuated g/C Ratio		0.14		0.30	0.49	1.00	0.03		0.30	0.35	0.35	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		259		532	908	1583	55		476	586	607	
v/s Ratio Prot		c0.07		0.02	0.03				0.04	0.22	c0.28	
v/s Ratio Perm						c0.19	0.01					
v/c Ratio		0.53		0.05	0.07	0.19	0.25		0.13	0.63	0.80	
Uniform Delay, d1		35.8		22.3	12.2	0.0	42.7		22.9	24.4	26.4	
Progression Factor		1.00		0.58	0.48	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2		1.9		0.1	0.1	0.2	2.4		0.6	2.1	7.3	
Delay (s)		37.7		13.2	6.0	0.2	45.1		23.5	26.5	33.7	
Level of Service		D		B	A	A	D		C	C	C	
Approach Delay (s)		37.7			2.0			24.8			30.6	
Approach LOS		D			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	23.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	177	334	0	0	318	619	34	332	443	0	0	0
Future Volume (vph)	177	334	0	0	318	619	34	332	443	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.3			5.3			4.0	4.0			
Lane Util. Factor	0.97	0.95			0.95			0.95	0.95			
Frt	1.00	1.00			0.90			0.98	0.85			
Flt Protected	0.95	1.00			1.00			1.00	1.00			
Satd. Flow (prot)	3433	3539			3189			1722	1504			
Flt Permitted	0.95	1.00			1.00			1.00	1.00			
Satd. Flow (perm)	3433	3539			3189			1722	1504			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	192	363	0	0	346	673	37	361	482	0	0	0
RTOR Reduction (vph)	0	0	0	0	160	0	0	8	273	0	0	0
Lane Group Flow (vph)	192	363	0	0	859	0	0	462	137	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)	8.3	50.7			38.4			30.0	30.0			
Effective Green, g (s)	8.3	50.7			38.4			30.0	30.0			
Actuated g/C Ratio	0.09	0.56			0.43			0.33	0.33			
Clearance Time (s)	4.0	5.3			5.3			4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	316	1993			1360			574	501			
v/s Ratio Prot	c0.06	0.10			c0.27							
v/s Ratio Perm								0.27	0.09			
v/c Ratio	0.61	0.18			0.63			0.80	0.27			
Uniform Delay, d1	39.3	9.6			20.2			27.3	22.0			
Progression Factor	1.16	0.56			1.00			1.00	1.00			
Incremental Delay, d2	2.8	0.2			2.2			8.1	0.3			
Delay (s)	48.6	5.5			22.5			35.4	22.3			
Level of Service	D	A			C			D	C			
Approach Delay (s)		20.4			22.5			29.3			0.0	
Approach LOS		C			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
03/01/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	97	16	97	92	497	26	0	396	923	797	68
Future Volume (vph)	0	97	16	97	92	497	26	0	396	923	797	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0	4.0		4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00	1.00	1.00		1.00	0.95	0.95	
Frt		0.98		1.00	1.00	0.85	1.00		0.85	1.00	0.99	
Flt Protected		1.00		0.95	1.00	1.00	0.95		1.00	0.95	1.00	
Satd. Flow (prot)		1828		1770	1863	1583	1770		1583	1681	1742	
Flt Permitted		1.00		0.95	1.00	1.00	0.42		1.00	0.95	1.00	
Satd. Flow (perm)		1828		1770	1863	1583	784		1583	1681	1742	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	105	17	105	100	540	28	0	430	1003	866	74
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	233	0	2	0
Lane Group Flow (vph)	0	118	0	105	100	540	28	0	197	903	1038	0
Turn Type		NA		Prot	NA	Free	Perm		Over	Split	NA	
Protected Phases		2		1	6				1	4	4	
Permitted Phases						Free	3					
Actuated Green, G (s)		14.4		18.8	37.2	150.0	9.5		18.8	91.3	91.3	
Effective Green, g (s)		14.4		18.8	37.2	150.0	9.5		18.8	91.3	91.3	
Actuated g/C Ratio		0.10		0.13	0.25	1.00	0.06		0.13	0.61	0.61	
Clearance Time (s)		4.0		4.0	4.0		4.0		4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)		175		221	462	1583	49		198	1023	1060	
v/s Ratio Prot		c0.06		0.06	0.05				c0.12	0.54	c0.60	
v/s Ratio Perm						0.34	c0.04					
v/c Ratio		0.68		0.48	0.22	0.34	0.57		1.00	0.88	0.98	
Uniform Delay, d1		65.5		61.0	44.8	0.0	68.3		65.6	24.8	28.4	
Progression Factor		1.00		1.12	0.92	1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2		9.9		6.2	0.9	0.5	15.1		63.1	9.1	22.5	
Delay (s)		75.5		74.7	42.3	0.5	83.4		128.7	33.9	51.0	
Level of Service		E		E	D	A	F		F	C	D	
Approach Delay (s)		75.5			16.6			125.9			43.1	
Approach LOS		E			B			F			D	

Intersection Summary			
HCM 2000 Control Delay	49.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	307	888	0	0	579	584	45	2	463	0	0	0
Future Volume (vph)	307	888	0	0	579	584	45	2	463	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.3			5.3			4.0	4.0			
Lane Util. Factor	0.97	0.95			0.95			0.95	0.95			
Frt	1.00	1.00			0.92			0.88	0.85			
Flt Protected	0.95	1.00			1.00			0.99	1.00			
Satd. Flow (prot)	3433	3539			3273			1539	1504			
Flt Permitted	0.95	1.00			1.00			0.99	1.00			
Satd. Flow (perm)	3433	3539			3273			1539	1504			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	334	965	0	0	629	635	49	2	503	0	0	0
RTOR Reduction (vph)	0	0	0	0	89	0	0	122	151	0	0	0
Lane Group Flow (vph)	334	965	0	0	1175	0	0	155	126	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)	19.8	120.0			96.2			20.7	20.7			
Effective Green, g (s)	19.8	120.0			96.2			20.7	20.7			
Actuated g/C Ratio	0.13	0.80			0.64			0.14	0.14			
Clearance Time (s)	4.0	5.3			5.3			4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	453	2831			2099			212	207			
v/s Ratio Prot	c0.10	0.27			c0.36							
v/s Ratio Perm								0.10	0.08			
v/c Ratio	0.74	0.34			0.56			0.73	0.61			
Uniform Delay, d1	62.6	4.1			15.0			62.0	60.8			
Progression Factor	0.92	1.63			1.00			1.00	1.00			
Incremental Delay, d2	2.6	0.1			1.1			12.3	5.0			
Delay (s)	59.9	6.8			16.1			74.3	65.9			
Level of Service	E	A			B			E	E			
Approach Delay (s)		20.5			16.1			70.1			0.0	
Approach LOS		C			B			E			A	

Intersection Summary			
HCM 2000 Control Delay	27.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	13.3
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Attachment 4

FEIR Mitigation Measures

TABLE 1-9 (Cont.)

Impact	Mitigation	Significance After Mitigation
4.2: Traffic and Circulation		
Significant Impact 4.2-1: Development of the project components without adequate access and frontage would result in a significant impact related to roadway design.	**Mitigation Measure 4.2-1** Prior to the issuance of any certificates of occupancy for any development on H-3 in Phase I, the Port or Port tenant, as appropriate, shall: • Construct H Street west of Marina Parkway as a 2-lane Class III Collector • Construct E Street as a ~~two~~2-lane Class III Collector along Parcel H-3. This would provide a connection to Lagoon Drive via Marina Parkway. • Construct a traffic signal at H Street and ~~Gaylord~~ RCC Truck Driveway. Prior to the issuance of building permits for any development on H-13 or H-14 in Phase I, the applicant shall: • Rebuild that portion of Marina Parkway fronting H-13 and H-14 between ~~E Street~~Sandpiper Way and J Street as a ~~three~~3-lane Class II Collector with excess ROW used for pedestrian facilities, or secure such construction to the satisfaction to the City engineer. Frontage improvements for the remaining segments of Marina Parkway J Street and Sandpiper Way will be constructed in conjunction with the development of the adjacent parcels to these frontages in subsequent phases. • Construct Street A north of J Street would be constructed as a ~~two~~2-lane Class III Collector, or secure such construction to the satisfaction of the City Engineer.~~.~~	Less than significant
Significant Impact 4.2-2: The Phase I roadway segment of Lagoon Drive/F Street (Marina Parkway to Bay Boulevard) will experience congested LOS F conditions and will require mitigation.	**Mitigation Measure 4.2-2** Prior to the issuance of any certificates of occupancy for any development on H-3 in Phase I, Port or Port tenants, as appropriate, shall construct H Street from I-5 to Marina Parkway as a four-lane Major Street. This mitigation is provided in lieu of widening of F Street due to environmental constraints associated with the widening of F Street in the vicinity of the F&G Street Marsh. At the completion of the H Street extension, the Port or Port tenants, as appropriate, shall also restrict access along the segment of Lagoon Drive/F Street (between Parcel H-3 and the BF Goodrich access on F Street) to emergency vehicle access only. This mitigation would reduce Significant Impact 4.2-2, 4.2-4, 4.2-6, 4.2-7, and 4.2-11 to below a level of significance.	Less than significant

TABLE 1-9 (Cont.)

Impact	Mitigation	Significance After Mitigation
Significant Impact 4.2-3: The Phase I roadway segment of H Street (west of Marina Parkway) will experience congested LOS F conditions and will require mitigation.	**Mitigation Measure 4.2-3** Prior to the issuance of any certificates of occupancy for any development on H-3 in Phase I, Port or Port tenants, as appropriate, shall widen H Street west of Marina Parkway from a 2two-lane Class III Collector to a 3three-lane Class II Collector. This mitigation would reduce Significant Impact 4.2-3 to below a level of significance.	Less than significant
Significant Impact 4.2-4: The Phase I roadway segment of Marina Parkway (Lagoon Drive to G Street) will experience congested LOS F conditions and will require mitigation.	**See Mitigation Measure 4.2-2 above.**	Less than significant
Significant Impact 4.2-5: The Phase I roadway segment of Bay Boulevard (E Street to F Street) will experience congested LOS F conditions and will require mitigation.	**Mitigation Measure 4.2-4** Prior to the issuance of certificates of occupancy for development on H-3 and building permits for any development on H-13 or H-14 in Phase I, the Port, Port tenants, or applicant, as appropriate, shall widen Bay Boulevard between E Street and F Street from a two2-lane Class III Collector to a two2-lane Class II Collector, or secure such widening to the satisfaction of the City Engineer. The additional roadway capacity would facilitate the flow of project traffic. This mitigation would reduce Significant Impact 4.2-5 to below a level of significance.	Less than significant
Significant Impact 4.2-6: The intersection of E Street and I-5 Southbound off-ramps will be characterized by LOS F conditions during PM peak hours under Phase I Baseline Plus Project conditions, resulting in direct project impacts that would require mitigation.	**See Mitigation Measure 4.2-2 above.**	Less than significant
Significant Impact 4.2-7: The intersection of F Street and Bay Boulevard will be characterized by LOS F conditions during PM peak hours under Phase I Baseline Plus Project conditions, resulting in direct project impacts that would require mitigation.	**See Mitigation Measure 4.2-2 above.**	Less than significant

TABLE 1-9 (Cont.)

Impact	Mitigation	Significance After Mitigation
Significant Impact 4.2-8: The intersection of J Street and Bay Boulevard will be characterized by LOS F conditions during both AM and PM peak hours under Phase I Baseline Plus Project conditions, resulting in direct project impacts that would require mitigation.	**Mitigation Measure 4.2-5** Prior to the issuance of building permits for any development on H-13 or H-14 in Phase I, the applicant shall construct a traffic signal at the intersection of J Street and Bay Boulevard, or secure such construction to the satisfaction of the City Engineer. The traffic signal shall be constructed and operate to the satisfaction of the City Engineer. This mitigation would reduce Significant Impact 4.2-8 and 4.2-14 to below a level of significance.	Less than significant
Significant Impact 4.2-9: The intersection of L Street and Bay Boulevard will be characterized by LOS F conditions during both AM and PM peak hours under Phase I Baseline Plus Project conditions, resulting in direct project impacts that would require mitigation.	**Mitigation Measure 4.2-6** Prior to the issuance of certificates of occupancy for development on H-3 or building permits for any development on H-13 or H-14 ~~for any development~~ in Phase I, the Port, Port tenant~~s~~, or applicants, as appropriate, shall construct a traffic signal at the intersection of L Street and Bay Boulevard, or secure such construction to the satisfaction of the City Engineer. The traffic signal shall be constructed and operate to the satisfaction of the City Engineer. This mitigation would reduce Significant Impact 4.2-9 and 4.2-15 to below a level of significance.	Less than significant
Significant Impact 4.2-10: The intersection of I-5 southbound ramps and Bay Boulevard will be characterized by LOS F conditions during PM peak hours under Phase I Baseline Plus Project conditions, resulting in direct project impacts that would require mitigation.	**Mitigation Measure 4.2-7** Prior to the issuance of certificates of occupancy for development on H-3 or building permits on H-13 or H-14 ~~for any development~~ in Phase I, the Port, Port tenants, or applicants, as appropriate, shall construct a traffic signal at the intersection of I-5 southbound ramps and Bay Boulevard, or secure such construction to the satisfaction of the City Engineer. The traffic signal shall be constructed and operate to the satisfaction of the City Engineer. This mitigation would reduce Significant Impact 4.2-10 and 4.2-16 to below a level of significance.	Less than significant
Significant Impact 4.2-11: The intersection of J Street and Marina Parkway will be characterized by LOS E conditions during PM peak hours under Phase I Baseline Plus Project conditions, resulting in direct project impacts that would require mitigation.	**See Mitigation Measure 4.2-2 above.**	Less than significant
Significant Impact 4.2-12: The addition of Phase I traffic would result in a direct project impact to the freeway segment of I-5 between SR-54 and E Street, resulting in LOS F during both AM and PM peak hours and would require mitigation.	**Mitigation Measure 4.2-8** The following mitigation measure would reduce, but not eliminate, project impacts on Interstate 5, as identified in ~~(Implementation of Mitigation Measure 4.2-11 would mitigate~~ Significant Impacts 4.2-12, 4.2-17, 4.2-18, 4.2-29, 4.2-30, 4.2-35 through~~,~~ 4.2-37, and 4.2-46 through~~,~~ 4.2-50~~,~~, but not to below a level of significance.~~)~~	Significant and unmitigated

TABLE 1-9 (Cont.)

Impact	Mitigation	Significance After Mitigation
	The Port and the City shall participate in a multi-jurisdictional effort conducted by Caltrans and SANDAG to assist in developing a detailed I-5 corridor level study that will identify transportation improvements along with funding, including federal, state, regional, and local funding sources and phasing that would reduce congestion ~~management~~ with Caltrans standards on the I-5 South corridor from the SR-54 interchange to the Otay River (the "I-5 South Corridor") (hereafter referred to as the "Plan"). Local funding sources identified in the Plan shall include fair share contributions related to private and/or public development based on nexus as well as other mechanisms. The Plan required by this mitigation shall include the following: a) The responsible entities (the Entities) included in this effort will include, but may not be limited to, the City, other cities along I-5, the Port, SANDAG, and Caltrans. Other entities will be included upon the concurrence of the foregoing Entities. b) The Plan will identify physical and operational improvements to I-5 adjacent to the project area, relevant arterial roads and transit facilities (the Improvements), that are focused on regional impacts and specific transportation impacts from the project, and will also identify the fair share responsibilities of each Entity for the construction and financing for each Improvement. The Plan will include an implementation element that includes each Entity's responsibilities and commitment to mitigate the impacts created by Phases I, II, III and IVall phases of the Proposed Project. c) The Plan will set forth a timeline and other agreed upon relevant criteria for implementation of each Improvement. d) The Plan will identify the total estimated design and construction cost for each Improvement and the responsibility of each Entity for both implementation and funding of such costs. e) The Plan will include the parameters for any agreed upon fair-share funding to be implemented, that would require private and/or public developers to contribute to the costs, in a manner that will comply with applicable law. f) In developing the Plan, the Entities shall also consider ways in which the Improvements can be coordinated with existing local and regional transportation and facilities financing plans and programs, in order to avoid duplication of effort and expenditure; however, the existence of such other plans and programs shall not relieve the Entities of their collective obligation to develop and implement the Plan as set forth in this mitigation measure. Nothing in the Plan shall be construed as relieving any Entity (or any other entity) from its independent responsibility (if any) for the implementation of any transportation improvement.	

TABLE 1-9 (Cont.)

Impact	Mitigation	Significance After Mitigation
	g) The Port shall seek adoption of the Plan before the Port Board of Commissioners and the City shall seek adoption of the Plan before the City Council upon the completion of the multijurisdictional effort to develop the Plan. The Port and the City shall report, to their respective governing bodies regarding the progress made to develop the Plan within six 6 months of the first meeting of the entities. Thereafter, the Port and the City shall report at least annually regarding the progress of the Plan, for a period of not less than five years, which may be extended at the request of the City Council and/or Board of Commissioners. h) The Plan shall also expressly include each Entity's pledge that it will cooperate with each other in implementing the Plan. i) Prior to issuance of certificates of occupancy or building permits for any development of individual projects within the Chula Vista Bayfront Master Plan, the Port and the City shall require project applicants to make their fair share contribution toward mitigation of cumulative freeway impacts within the City's portion of the I-5 South Corridor by participating in the City's Western Traffic Development Impact Fee or equivalent funding program. The failure or refusal of any Entity other than the Port or the City to cooperate in the implementation of this mitigation measure shall not constitute failure of the Port or the City to implement this mitigation measure; however, the Port and the City shall each use its best efforts to obtain the cooperation of all responsible Entities to fully participate, in order to achieve the goals of mitigation measure. However, because implementation of the physical improvements needed to reduce significant impact to the affected freeway segments is within the jurisdiction and control of Caltrans and not the Port or the City, the Port and the City cannot ensure that the necessary improvements will be constructed as needed. Accordingly, the Proposed Project's impacts to freeway segments are considered significant and unmitigated.	
Significant Impact 4.2-13: The intersection of H Street and ~~Gaylord~~ RCC Driveway will be characterized by LOS E conditions during the PM peak hours as a result of Phase I conditions with closure of F Street, extension of H Street, and partial extension of E Street, and will require mitigation.	**Mitigation Measure 4.2-9** Prior to the issuance of certificates of occupancy for any development on H-3 in Phase I, the Port or Port tenant, as appropriate, shall construct a westbound lane along H Street/RCC~~Gaylord~~ Driveway, which would result in widening H Street west of Marina Parkway to a three-lane Class II Collector. This mitigation would reduce Significant Impact 4.2-13 to below a level of significance.	Less than significant

TABLE 1-9 (Cont.)

Impact	Mitigation	Significance After Mitigation
Significant Impact 4.2-14: The intersection of J Street and Bay Boulevard will be characterized by LOS F conditions during the PM peak hours as a result of Phase I conditions with closure of F Street, extension of H Street and partial extension of E Street, and will require mitigation.	**See Mitigation Measure 4.2-5 above.**	Less than significant
Significant Impact 4.2-15: The intersection of L Street and Bay Boulevard will be characterized by LOS F conditions during both the AM and PM peak hours as a result of Phase I conditions with closure of F Street, extension of H Street and partial extension of E Street, and will require mitigation.	**See Mitigation Measure 4.2-6 above.**	Less than significant
Significant Impact 4.2-16: The intersection of the I-5 southbound ramps and Bay Boulevard will be characterized by LOS F conditions during the PM peak hours as a result of Phase I conditions with closure of F Street, extension of H Street and partial extension of E Street, and will require mitigation.	**See Mitigation Measure 4.2-7 above.**	Less than significant
Significant Impact 4.2-17: The addition of Phase I traffic with the closure of F Street, extension of H Street, and partial extension of E Street would result in a direct project impact to the freeway segment of I-5 from SR-54 to E Street, resulting in LOS F during AM peak hours northbound with the project and PM peak hours southbound, with or without the project, and would require mitigation.	**See Mitigation Measure 4.2-8 above.**	Significant and unmitigated

TABLE 1-9 (Cont.)

Impact	Mitigation	Significance After Mitigation
Significant Impact 4.2-18: The addition of Phase I traffic with the closure of F Street, extension of H Street, and partial extension of E Street would result in a direct project impact to the freeway segment of I-5 from E Street to H Street, resulting in LOS F during both AM and PM peak hours in both directions, with or without the project. This impact would require mitigation.	**See Mitigation Measure 4.2-8 above.**	Significant and unmitigated
Significant Impact 4.2-19: The E Street and H Street intersections affected by an at-grade trolley crossing would experience additional delay along the arterial and at adjacent intersections from between 17 and 40 seconds per vehicle (depending on the direction and time of day), causing a deterioration in the LOS by at least one level.	**Mitigation Measure 4.2-10** The following mitigation measure would reduce, but not eliminate impacts at intersections of E Street and H Street associated with trolley delays, as identified in Significant Impact 4.2-19. Prior to issuance of certificates of occupancy for Parcel H-3 or building permits for any development within the City, the Port and the City shall require project applicants to make their fair share contribution toward mitigation of intersection impacts at H Street and E Street within the City's jurisdiction by participating in the City's Western Traffic Development Impact Fee or equivalent funding program. The failure or refusal of any Entity other than the Port or the City to cooperate in the implementation of this mitigation measure shall not constitute failure of the Port or the City to implement this mitigation measure; however, the Port and the City shall each use its best efforts to obtain the cooperation of all responsible Entities to fully participate, in order to achieve the goals of mitigation measure. However, because implementation of the physical improvements needed to reduce the significant impacts to the affected intersections will require funding from other sources in addition to the WTDIF, such as local, state and federal funds, and such funding is not certain or under the control of the Port or the City, the Port and the City cannot ensure that the necessary improvements will be constructed as needed or that they will be constructed within any known time schedule. Accordingly, the Proposed Project's impacts to the E Street and H Street intersections affected by an at-grade trolley crossing are considered significant and unmitigated.	Significant and unmitigated

TABLE 1-9 (Cont.)

Impact	Mitigation	Significance After Mitigation
Significant Impact 4.2-20: Development of Phase II components without adequate roadway access and frontage would result in a significant impact.	**Mitigation Measure 4.2-11** Prior to the issuance of certificates of occupancy for development on Parcel H-23 in Phase I, the Port, or Port tenant, ~~or applicant,~~ as appropriate, shall construct Street A between H Street to Street C as a two-lane Class III Collector, and shall construct Street C between Marina Parkway and Street A as a two-lane Class II Collector. Implementation of this mitigation measure would reduce Significant Impact 4.2-20 to below a level of significance.	Less than significant
Significant Impact 4.2-21: The Phase II roadway segment of H Street (Street A to I-5 ramps) will experience congested LOS F conditions and will require mitigation.	**Mitigation Measure 4.2-12** Prior to the issuance of certificates of occupancy for any development in Phase II, the Port, Port tenant, or applicant, as appropriate, shall widen H Street between Street A and I-5 Ramps to a five~~5~~-lane Major Street, or secure such construction to the satisfaction of the City Engineer The additional roadway capacity would facilitate the flow of project traffic. This mitigation would reduce Significant Impact 4.2-21 to below a level of significance.	Less than significant
Significant Impact 4.2-22: The Phase II roadway segment of J Street (Street A to Bay Boulevard to I-5 ramps) would experience congested LOS D conditions and would require mitigation.	**Mitigation Measure 4.2-13** Prior to the issuance of certificates of occupancy for any development in Phase II, the Port, Port tenant, or applicant, as appropriate, shall widen J Street between Street A to I-5 Ramps to a six~~6~~-lane Major Street, or secure such construction to the satisfaction of the City Engineer The additional roadway capacity would facilitate the flow of project traffic. This mitigation would reduce Significant Impact 4.2-22 to below a level of significance.	Less than significant
Significant Impact 4.2-23: The Phase II roadway segment of Street A (Street C to J Street) would experience congested LOS F conditions and would require mitigation.	**Mitigation Measure 4.2-14** Prior to the issuance of certificates of occupancy for any development in Phase II ~~of the development~~, the Port, Port tenant, or applicant, as appropriate, shall widen Street A between Street C and J Street to a four~~4~~-lane Class I Collector, or secure such construction to the satisfaction of the City Engineer. The additional roadway capacity would facilitate the flow of project traffic. This mitigation would reduce Significant Impact 4.2-23 to below a level of significance.	Less than significant

TABLE 1-9 (Cont.)

Impact	Mitigation	Significance After Mitigation
Significant Impact 4.2-24: As a result of Phase II conditions, the intersection of H Street and Gaylord Drive would be characterized by LOS E conditions during PM peak hours and would require mitigation.	**Mitigation Measure 4.2-15** Prior to the issuance of certificates of occupancy for any development in Phase II ~~of the development~~, the Port, Port tenant, or applicant, as appropriate, shall construct a traffic signal and add an exclusive left-turn lane at each approach at the intersection of H Street and RCC~~Gaylord~~ Driveway, or secure such construction to the satisfaction of the City Engineer. The traffic signal and left-turn lanes shall be built to the satisfaction of the City Engineer. This mitigation would reduce Significant Impact 4.2-24 to below a level of significance.	Less than significant
Significant Impact 4.2-25: As a result of Phase II conditions, the intersection of J Street and Bay Boulevard would be characterized by LOS E conditions during PM peak hours and would require mitigation.	**Mitigation Measure 4.2-16** Prior to the issuance of certificates of occupancy for any development in Phase II of the development, the Port, Port tenant, or applicant, as appropriate, shall construct a westbound and eastbound through lane along J Street at the intersection of J Street and Bay Boulevard, or secure such construction to the satisfaction of the City Engineer. The lanes shall be constructed to the satisfaction of the City Engineer. This mitigation would reduce Significant Impact 4.2-25 to below a level of significance.	Less than significant
Significant Impact 4.2-26: As a result of Phase II conditions, the intersection of H Street and Street A would be characterized by LOS F conditions during PM peak hours and would require mitigation.	**Mitigation Measure 4.2-17** Prior to the issuance of certificates of occupancy for any development in Phase II of the development, the Port, Port tenant, or applicant, as appropriate, shall construct a traffic signal at the intersection of H Street and Street A, or secure such construction to the satisfaction of the City Engineer. The traffic signal shall be constructed and operate to the satisfaction of the City Engineer. This mitigation would reduce Significant Impact 4.2-26 to below a level of significance.	Less than significant
Significant Impact 4.2-27: As a result of Phase II conditions, the intersection of J Street and Marina Parkway would be characterized by LOS F conditions during PM peak hours and would require mitigation.	**Mitigation Measure 4.2-18** Prior to the issuance of certificates of occupancy for any development in Phase II of the development, the Port, ~~Port tenant, or applicant, as appropriate,~~ the developer shall construct a traffic signal at the intersection of J Street and Marina Parkway, or secure such construction to the satisfaction of the City Engineer. The traffic signal shall be constructed and operate to the satisfaction of the City Engineer. This mitigation would reduce Significant Impact 4.2-27 to below a level of significance.	Less than significant

TABLE 1-9 (Cont.)

Impact	Mitigation	Significance After Mitigation
Significant Impact 4.2-28: As a result of Phase II conditions, the intersection of J Street and Street A would be characterized by LOS F conditions during both AM and PM peak hours and would require mitigation.	**Mitigation Measure 4.2-19** Prior to the issuance of certificates of occupancy for any development in Phase II ~~of the development~~, the Port, Port tenant, or applicant, as appropriate, shall construct a traffic signal at the intersection of J Street and Street A and add an exclusive westbound right-turn lane along J Street and an exclusive southbound right-turn lane along Street A, or secure such construction to the satisfaction of the City Engineer. The traffic signal and turning lanes shall operate and be constructed to the satisfaction of the City Engineer. This mitigation would reduce Significant Impact 4.2-28 to below a level of significance.	Less than significant
Significant Impact 4.2-29: The addition of Phase II traffic would result in a direct project impact to the freeway segment of I-5 from SR-54 to E Street, resulting in LOS F during both AM and PM peak hours in both directions, with or without the project. This impact would require mitigation.	**See Mitigation Measure 4.2-8 above.**	Significant and unmitigated
Significant Impact 4.2-30: The addition of Phase II traffic would result in a direct project impact to the freeway segment of I-5 from E Street to F Street, resulting in LOS F during both AM and PM peak hours in both directions, with or without the project. This impact would require mitigation.	**See Mitigation Measure 4.2-8 above.**	Significant and unmitigated
Significant Impact 4.2-31: Development of Phase III components without adequate roadway access and frontage would result in a significant impact.	**Mitigation Measure 4.2-20** Prior to the issuance of certificates of occupancy for any development in Phase III, the Port, Port tenants, or applicant, as appropriate shall construct the segment of Street A that would continue south from J Street, connecting to the proposed Street B in the Otay District, as a two-lane Class III Collector. In addition, prior to the issuance of certificates of occupancy for any development in Phase III, the Port, Port tenants, as appropriate shall construct the segment of Street B that would connect to the proposed Street A, bridge over the Telegraph Canyon Creek Channel, and continue south to Bay Boulevard, as a 2-lane Class III Collector. This mitigation would reduce Significant Impact 4.2-31 to below a level of significance	

TABLE 1-9 (Cont.)

Impact	Mitigation	Significance After Mitigation
Significant Impact 4.2-32: As a result of Phase III conditions, the Street A roadway segment from H Street to Street C would experience congested LOS D conditions and would require mitigation.	**Mitigation Measure 4.2-21** Prior to the issuance of certificates of occupancy for any development in Phase III ~~of the development~~, the Port, Port tenants, or applicant, as appropriate, shall widen Street A between H Street and Street C to a four4-lane Class I Collector, or secure such construction to the satisfaction of the City Engineer. The additional roadway capacity would facilitate the flow of project traffic. This mitigation would reduce Significant Impact 4.2-32 to below a level of significance.	Less than significant
Significant Impact 4.2-33: As a result of Phase III conditions, the intersection of J Street and Bay Boulevard would be characterized by LOS E conditions during PM peak hours and would require mitigation.	**Mitigation Measure 4.2-22** Prior to the issuance of certificates of occupancy for any development in Phase III ~~of the development~~, the Port, Port tenants, or applicant, as appropriate, shall construct an exclusive eastbound right-turn lane along J Street at the intersection of J Street and Bay Boulevard, or secure such construction to the satisfaction of the City Engineer. The turning lane shall be built to the satisfaction of the City Engineer. This mitigation would reduce Significant Impact 4.2-33 to below a level of significance.	Less than significant
Significant Impact 4.2-34: As a result of Phase III conditions, the intersection of J Street and I-5 northbound ramps would be characterized by LOS E conditions during PM peak hours and would require mitigation.	**Mitigation Measure 4.2-23** Prior to the issuance of certificates of occupancy for any development in Phase III of the development, the Port, Port tenant, or applicant, as appropriate, shall construct an exclusive westbound right-turn lane along J Street at the intersection of J Street and I-5 ~~northbound~~ NB ramps, or secure such construction to the satisfaction of the City Engineer. The turning lane shall be built to the satisfaction of the City Engineer. This mitigation would reduce Significant Impact 4.2-34 to below a level of significance.	Less than significant
Significant Impact 4.2-35: The addition of Phase III traffic would result in a direct project impact to the freeway segment of I-5 from SR-54 to E Street, resulting in LOS F in both directions, with or without the project. This impact would require mitigation.	**See Mitigation Measure 4.2-8 above.**	Significant and unmitigated
Significant Impact 4.2-36: The addition of Phase III traffic would result in a direct project impact to the freeway segment of I-5 from E Street to H Street, resulting in LOS F in both directions, with or without the project. This impact would require mitigation.	**See Mitigation Measure 4.2-8 above.**	Significant and unmitigated

TABLE 1-9 (Cont.)

Impact	Mitigation	Significance After Mitigation
Significant Impact 4.2-37: The addition of Phase III traffic would result in a direct project impact to the freeway segment of I-5 from H Street to J Street, resulting in LOS F in both directions, with or without the project. This impact would require mitigation.	**See Mitigation Measure 4.2-8 above.**	Significant and unmitigated
Significant Impact 4.2-38: Without additional improvements to H Street, conditions on H Street from Street A to I-5 would degrade to LOS F.	**Mitigation Measure 4.2-24** Prior to the issuance of certificates of occupancy for any development in Phase III, the Port, Port tenants, or applicant, as appropriate, shall construct E Street from the RCC~~Gaylord~~ Driveway to Bay Boulevard as a two-lane Class III Collector. This mitigation would reduce Significant Impact 4.2-38 to below a level of significance	Less than significant
Significant Impact 4.2-39: Development of Phase IV components without adequate roadway access and frontage would result in a significant impact.	**Mitigation Measure 4.2-25** Prior to the issuance of certificates of occupancy for any development in Phase IV, the Port, Port tenant, or applicant, as appropriate, shall construct a new F Street segment between the proposed terminus of the existing F Street and the proposed E Street extension, ending at the SP-3 Chula Vista Nature Center parking lot, as a two-lane Class III collector street, which shall also contain a Class II bike lane on both sides of the street. This mitigation would reduce Significant Impact 4.2-39 to below a level of significance.	Less than significant
Significant Impact 4.2-40: As a result of Phase IV conditions, the E Street roadway segment from F Street to Bay Boulevard would experience congested LOS F conditions and would require mitigation.	**Mitigation Measure 4.2-26** (Implementation of Mitigation Measure 4.2-~~30~~26 would reduce Significant Impacts 4.2-40 and 4.2-41 to below a level of significance.) Prior to the issuance of certificates of occupancy for any development in Phase IV of the development, the Port, Port tenant, or applicant, as appropriate, shall widen E Street between F Street and Bay Boulevard to a 4four-lane Class I Collector, or secure such construction to the satisfaction of the City Engineer. The additional roadway capacity would facilitate the flow of project traffic. Also, the widening of this segment of E Street would facilitate the flow of project traffic on Bay Boulevard between E Street to F Street.	Less than significant
Significant Impact 4.2-41: As a result of Phase IV conditions, the Bay Boulevard roadway segment from E Street to F Street would experience congested LOS D conditions and would require mitigation.	**See Mitigation Measure 4.2-26 above.**	Less than Significant

TABLE 1-9 (Cont.)

Impact	Mitigation	Significance After Mitigation
Significant Impact 4.2-42: As a result of Phase IV conditions, the H Street segment from I-5 to Broadway will experience congested LOS F conditions and would require mitigation.	**Mitigation Measure 4.2-27** Prior to the issuance of certificates of occupancy for any development in Phase IV, the Port, Port tenant, or applicant, as appropriate, shall widen H Street between I-5 Ramps and Broadway to a 6-lane Gateway Street. The additional roadway capacity would facilitate the flow of project traffic. This mitigation would reduce Significant Impact 4.2-42 to below a level of significance. The off-site traffic improvements described in this mitigation measure for direct traffic impacts would create secondary traffic impacts. Improvements associated with these secondary impacts would be required as a result of cumulative and growth-related traffic overall, of which the Proposed Project would be a component. The Western Chula Vista TDIF identifies these improvements in a cumulative context and attributes fair share contributions according to the impact. Therefore, the Proposed Project would be responsible for a fair share contribution and would not be solely responsible for implementation of necessary secondary impact improvements	Less than significant
Significant Impact 4.2-43: Under Phase IV Plus Project conditions, the intersection of E Street and Bay Boulevard would be characterized by LOS F conditions during PM peak hours and would require mitigation.	**Mitigation Measure 4.2-28** Prior to the issuance of certificates of occupancy for any development in Phase IV ~~of the development~~, the Port, Port tenant, or applicant, as appropriate, shall construct an eastbound through lane and an exclusive eastbound right-turn lane along E Street at the intersection of E Street and Bay Boulevard, or secure such construction to the satisfaction of the City Engineer. The lanes shall be constructed to the satisfaction of the City Engineer. This mitigation would reduce Significant Impact 4.2-43~~39~~ to below a level of significance.	Less than significant
Significant Impact 4.2-44: Under Phase IV Plus Project conditions, the intersection of J Street and Bay Boulevard would be characterized by LOS E conditions during PM peak hours and would require mitigation.	**Mitigation Measure 4.2-29** Prior to the issuance of certificates of occupancy for any development in Phase IV ~~of the development~~, the Port, Port tenant, or applicant, as appropriate, shall construct an exclusive southbound right-turn lane along Bay Boulevard at the intersection of J Street and Bay Boulevard, or secure such construction to the satisfaction of the City Engineer. The lane shall be constructed to the satisfaction of the City Engineer. This mitigation would reduce Significant Impact 4.2-404 to below a level of significance.	Less than significant
Significant Impact 4.2-45: Under Phase IV Plus Project conditions, the intersection of J Street and Street A would be characterized by LOS F conditions during PM peak hours and would require mitigation.	**Mitigation Measure 4.2-30** Prior to the issuance of certificates of occupancy for any development in Phase IV ~~of the development~~, the Port, Port tenant, or applicant, as appropriate, shall construct a dual southbound left-turn lane along Street A, or secure such construction to the satisfaction of the City Engineer. The lane shall be constructed to the satisfaction of the City Engineer. This mitigation would reduce Significant Impact 4.2-415 to below a level of significance.	Less than significant

TABLE 1-9 (Cont.)

Impact	Mitigation	Significance After Mitigation
Significant Impact 4.2-46: The addition of Phase IV traffic would result in a direct project impact to the freeway segment of I-5 from SR-54 to E Street, resulting in LOS F in both directions during both AM and PM peak hours, with or without the project. This impact would require mitigation.	**See Mitigation Measure 4.2-8 above.**	Significant and unmitigated
Significant Impact 4.2-47: The addition of Phase IV traffic would result in a direct project impact to the freeway segment of I-5 from E Street to H Street, resulting in LOS F in both directions during both AM and PM peak hours, with or without the project. This impact would require mitigation.	**See Mitigation Measure 4.2-8 above.**	Significant and unmitigated
Significant Impact 4.2-48: The addition of Phase IV traffic would result in a direct project impact to the freeway segment of I-5 from H Street to J Street, resulting in LOS F in both directions during both AM and PM peak hours, with or without the project. This impact would require mitigation.	**See Mitigation Measure 4.2-8 above.**	Significant and unmitigated
Significant Impact 4.2-49: The addition of Phase IV traffic would result in a direct project impact to the freeway segment of I-5 from J Street to L Street, resulting in LOS F in both directions during both AM and PM peak hours, with or without the project. This impact would require mitigation.	**See Mitigation Measure 4.2-8 above.**	Significant and unmitigated
Significant Impact 4.2-50: The addition of Phase IV traffic would result in a direct project impact to the freeway segment of I-5 from L Street to Palomar Street, resulting in LOS F in both directions during both AM and PM peak hours, with or without the project. This impact would require mitigation.	**See Mitigation Measure 4.2-8 above.**	Significant and unmitigated

TABLE 1-9 (Cont.)

Impact	Mitigation	Significance After Mitigation
4.3: Parking		
There were no significant impacts to parking identified for the Proposed Project.	**No mitigation is required.**	N/A
4.4 AESTHETICS/VISUAL QUALITY		
Significant Impact 4.4-1: The Pacifica Residential and Retail project will change the scale and character of the waterfront as the proposed buildings exceed the scale of the existing waterfront development. A moderate impact to the character of the view scene would result and would be considered significant under CEQA guidelines.	No feasible mitigation beyond redesign of the project as identified as a project alternative would reduce this impact to view quality. See *Chapter 5, Alternatives*, for a discussion of design options that would allow for an overall reduction in height and bulk of the proposed towers.	Significant and unmitigated
Significant Impact 4.4-2: The amount of blockage caused by the Pacifica project would be substantial, especially at the south end where views of the water exist. The Pacifica development will result in a moderate impact to view quality, which would be considered significant under CEQA guidelines.	No feasible mitigation beyond redesign of the project as identified as a project alternative would reduce this impact to view quality. See *Chapter 5, Alternatives*, for a discussion of design options that would allow for an overall reduction in height and bulk of the proposed towers.	Significant and unmitigated
Significant Impact 4.4-3: The Proposed Project would affect the view of the western tideland's/water's edge from the Sweetwater Marsh NWR, which is a regionally important public viewing scene. This would be a significant impact on view quality.	**Mitigation Measure 4.4-1** (Mitigation Measure 4.4-1 would mitigate Significant Impacts 4.4-3, 4.4-4, 4.4-5, 4.4-7, and 4.4-8 to below a level of significance.) **Port:** **A.** ***View Protection:*** As a condition for issuance of Coastal Development Permits, buildings fronting ~~on~~ H Street shall be designed to step away from the street. More specifically, design plans shall protect open views down the H Street Corridor by ensuring that an approximate 100-foot ROW width (curb–curb, building setbacks, and pedestrian plaza/walkway zone) remains clear of buildings, structures, or major landscaping. Visual elements above ~~six~~6 feet in height shall be prohibited in this zone if the feature would reduce visibility by more than 10 percent. Placement of trees should take into account potential view blockage. This mitigation should not be interpreted to not allow tree masses; however, trees should be spaced in order to ensure "windows" through the landscaping. Trees should also be considered to help frame the views and they should be pruned ~~up~~ to increase the views from pedestrians and vehicles, underneath the tree canopy. In order to reduce the potential for buildings to encroach into view corridors, and to address the scale and massing impact, buildings shall	Less than significant