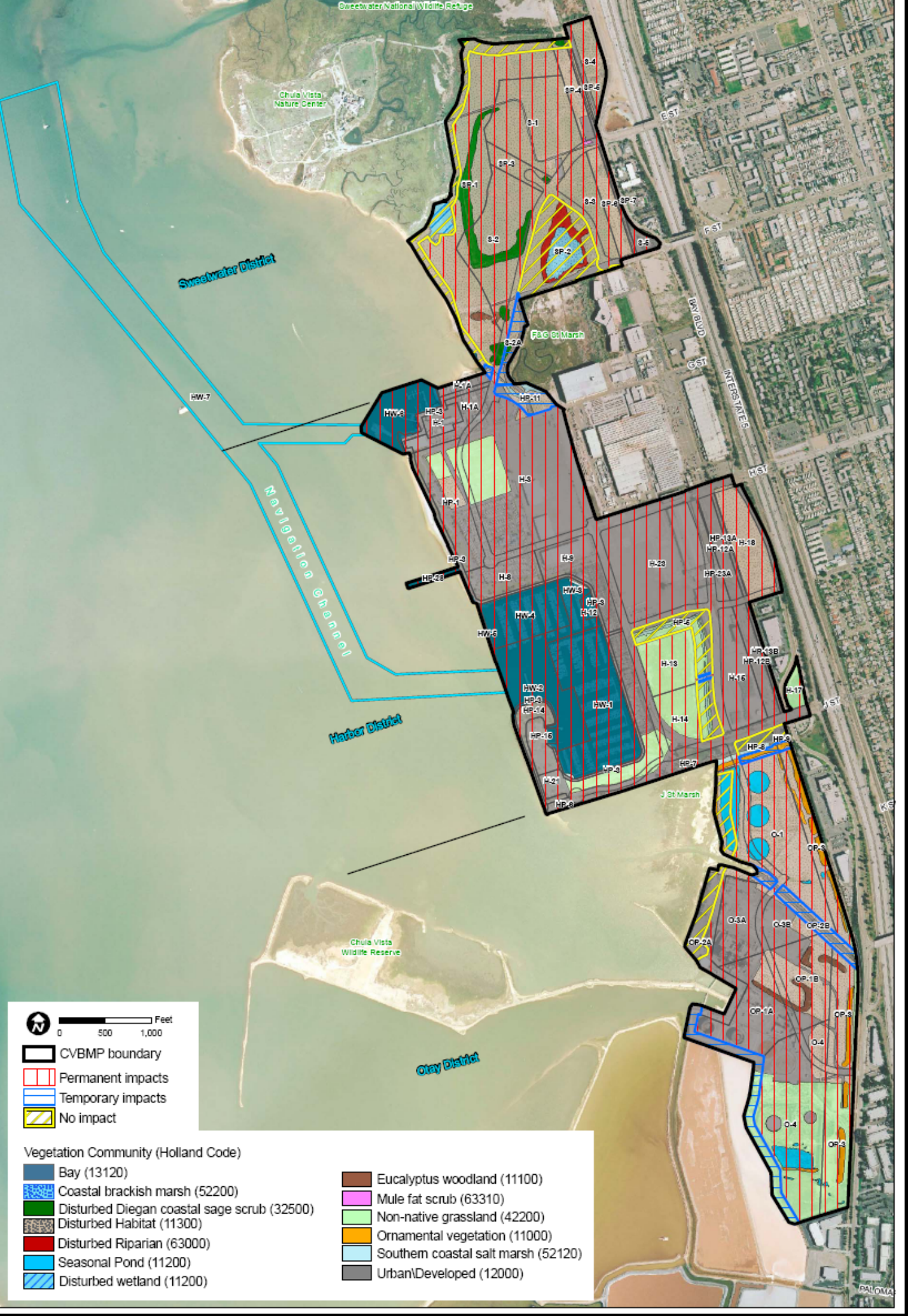
Sweetwater National Wildlife Refuge
Chula Vista Nature Center
Sweetwater District
Navigation Channel
Harbor District
Otay District
Chula Vista Wildlife Reserve
F&G St Marsh
J St Marsh
E ST
F ST
G ST
H ST
J ST
K ST
BAY BLVD
INTERSTATE 5
PALOMA
Feet
0
500
1,000
CVBMP boundary
Permanent impacts
Temporary impacts
No impact
Vegetation Community (Holland Code)
Bay (13120)
Coastal brackish marsh (52200)
Disturbed Diegan coastal sage scrub (32500)
Disturbed Habitat (11300)
Disturbed Riparian (63000)
Seasonal Pond (11200)
Disturbed wetland (11200)
Eucalyptus woodland (11100)
Mule fat scrub (63310)
Non-native grassland (42200)
Ornamental vegetation (11000)
Southern coastal salt marsh (52120)
Urban\Developed (12000)

TABLE 4.8-3A

Proposed Impacts to Vegetation Communities and Land Cover Types by Jurisdiction

Vegetation Community/ Land Cover Types (Holland)	Port					Port Total	City				City Total	GRAND TOTAL
	Project-Level (Phase I)		Program-Level				Project-Level (Phase I)		Program-Level			
	Harbor District	Sweetwater District	Harbor District	Otay District	Sweetwater District		Harbor District	Sweetwater District	Harbor District	Sweetwater District		
Bay (13120)*	0.53		61.33	0.14	0.26	62.26						62.26
Coastal brackish marsh (52200)					3.40	3.40						3.40
Disturbed Diegan coastal sage scrub (32500)		4.23			3.41	7.64				0.25	0.25	7.89
Disturbed habitat (11300)	11.09	24.05	2.32	47.23	65.95	150.64				12.99	12.99	163.64
Disturbed riparian (63000)					3.09	3.09						3.09
Disturbed seasonal Pond (11200)				9.13		9.13						9.13
Disturbed wetland (11200)					2.00	2.00						2.00
Eucalyptus woodland (11100)		0.09		2.23	0.36	2.68						2.68
Mulefat scrub (63310)		0.07				0.08				0.03	0.03	0.11
Nav channel HW-7			86.84			86.84						86.84
Non-native grassland (42200)	11.88		3.82	30.62		46.31	17.42				17.42	63.73
Ornamental vegetation (11000)			0.99	5.60		6.59						6.59
Southern coastal salt marsh (52120)		0.03	1.44		0.08	1.56	0.03				0,03	1.59
Urban/developed (12000)	84.65	1.08	71.49	49.39	3.55	210.16	4.87	0.01	9.14	4.54	18.56	228.72
TOTAL	**108.15**	**29.55**	**228.23**	**144.34**	**82.11**	**592.38**	**22.32**	**0.01**	**9.14**	**17.80**	**50.32**	**463.60**

*All Bay impacts are addressed in *Section 4.9, Marine Biological Resources.*


0
500
1,000
PALOMA

Sweetwater National Wildlife Refuge
Chula Vista Nature Center
Sweetwater District
Harbor District
Otay District
Chula Vista Wildlife Reserve
F&G St Marsh
J St Marsh
Navigation Channel
E ST
F ST
G ST
H ST
J ST
BAY BLVD
INTERSTATE 5
S-1
S-2
S-2A
S-3
S-4
S-5
SP-1
SP-2
SP-3
SP-4
SP-5
SP-6
SP-7
HW-1
HW-2
HW-3
HW-4
HW-5
HW-6
HW-7
H-1
H-1A
H-3
H-8
H-9
H-12
H-13
H-14
H-15
H-17
H-18
H-21
H-23
HP-1
HP-3
HP-5
HP-6
HP-7
HP-8
HP-9
HP-11
HP-12A
HP-12B
HP-13A
HP-13B
HP-14
HP-15
HP-23A
HP-28
O-1
O-3A
O-3B
O-4
OP-1A
OP-1B
OP-2A
OP-2B
OP-3
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
CVBMP boundary
CCC Wetlands
Former Industrial Areas in Process of Remediation
Potential CCC Wetlands
Soil test pits
Culverts
Permanent impacts
Temporary impacts
No impact
Feet
0
500
1,000

TABLE 4.8-4

Proposed Impacts to Jurisdictional Wetland Resources

(acres)

	Harbor District	Otay District	Sweetwater District	Total
USACE*				
Non-wetland waters of the U.S.	61.96*	1.10	0,03	63.09
Wetlands	1.16	—	0.09	1.25
USACE TOTAL	63.12	1.10	0.12	64.34
Isolated wetland – USACE exempt**	—	6.96	0.11	7.08
CDFG TOTAL	0.14	0.95	0.03	1.13
CCC				
CCC	1.55	0.49	0.23	2.26
Potential CCC**	—	7.43	—	7.43
CCC TOTAL	1.55	7.92	0.23	9.69

*Includes Bay Impacts

**CCC will make final determination of the jurisdiction of the potential wetlands and the resources within the area formerly occupied by an industrial facility that are potentially exempt from CCC jurisdiction.

TABLE 4.8-7

Mitigation Required for Significant Impacts to Vegetation Communities and Land Cover Types — City Lands

(acres)

Vegetation Community/ Land Cover Type (Holland Code)	Mitigation Ratio for Permanent Impacts	Mitigation Ratio for Temporary Impacts	Project Level					Program Level					Total Project Mitigation Required for Port Lands
			Permanent Impacts	Mitigation for Permanent Impacts	Temporary Impacts	Mitigation for Temporary Impacts	Project-Level Mitigation	Permanent Impacts	Mitigation for Permanent Impacts	Temporary Impacts	Mitigation for Temporary Impacts	Program-Level Mitigation	
Disturbed Diegan coastal sage scrub (32500)	**1.5:1**	**1:1**	0	0	0	0	**0**	0	0	0	0	**0**	**0**
Southern coastal salt marsh (52120)	**4:1**	**1:1**	0.03	0.12	0.01	0.01	**0.13**	0	0	0	0	**0**	**0.13**
Mulefat scrub (63310)	**2:1**	**1:1**	0	0	0	0	**0**	0.03	0.06	0	0	**0.06**	**0.06**
Disturbed seasonal pond (11200)	**1:1**	**1:1**	0	0	0	0	**0**	0	0	0	0	**0**	**0**
Non-native grassland (42200)	**0.5:1**	**0.5:1**	12.89	6.45	0.03	0.02	**6.47**	0	0	0	0	**0**	**6.47**
TOTAL			**12.92**	**6.57**	**0.04**	**0.03**	**6.60**	**0.03**	**0.06**	**0**	**0**	**0.06**	**6.66**

*Mitigation ratios based on the mitigation ratios in the City of Chula Vista's MSCP Subarea Plan.

TABLE 4.8-6
Mitigation Required for Significant Impacts to Vegetation Communities and Land Cover Types — Port Lands
(acres)

Vegetation Community/ Land Cover Type (Holland Code)	Mitigation Ratio for Permanent Impacts	Mitigation Ratio for Temporary Impacts	Project Level					Program Level					Total Project Mitigation Required for Port Lands
			Permanent Impacts	Mitigation for Permanent Impacts	Temporary Impacts	Mitigation for Temporary Impacts	Project-Level Mitigation	Permanent Impacts	Mitigation for Permanent Impacts	Temporary Impacts	Mitigation for Temporary Impacts	Program-Level Mitigation	
Disturbed Diegan coastal sage scrub (32500)	**1.5:1**	**1:1**	4.23	6.35	0	0	**6.35**	2.90	4.35	0.27	0.27	**4.62**	**10.97**
Southern coastal salt marsh (52120)	**4:1**	**1:1**	0.03	0.12	0	0	**0.12**	0.50	2.00	0.62	0.62	**2.62**	**2.74**
Mulefat scrub (63310)	**2:1**	**1:1**	0.07	0.14	0	0	**0.14**	0.00	0	0	0	**0**	**0.14**
Disturbed seasonal pond (11200)	**1:1**	**1:1**	0	0	0	0	**0**	6.97	6.97	0	0	**6.97**	**6.97**
Non-native grassland (42200)	**0.5:1**	**0.5:1**	11.88	5.94	0	0	**5.94**	30.17	15.09	4.27	2.14	**17.23**	**23.17**
TOTAL			**16.21**	**12.55**	**0.00**	**0.00**	**12.55**	**40.54**	**28.41**	**5.16**	**3.03**	**31.44**	**43.99**

TABLE 4.8-8
Mitigation Requirements for Proposed Impacts to Jurisdictional Wetland Resources — Port Lands
(acres)

	Permanent Impact					Temporary Impact Mitigation (1:1 ratio)	Mitigation Requirement Total
	Project-Level (Phase I)	Program-Level	Impact Total	Mitigation Ratio	Mitigation		
USACE							
USACE Waters of the U.S.		1.17	1.17	1:1	1.17	0.87	2.04
USACE Waters of the U.S. — Bay/Marina	0.30	61.66	61.96	*	*	0	*
USACE Wetlands (southern coastal salt marsh)	0.25	0.42	0.67	4:1	2.68		2.68
USACE TOTAL	*0.55*	*63.55*	*64.10*			*0.87*	*4.72*
CDFG							
CDFG Streambed	0.00	0.90	0.90	2:1	1.80	0.23	2.03
CDFG TOTAL	0.00	0.90	0.90	–	1.80	0.23	*2.03*
CCC							
CCC	0.08	0.93	1.01	2:1	2.02	0.05	2.07
Potential CCC**	0.00	0.74	0.74	2:1	1.48	0.04	1.52
Former Industrial Areas –areas of questionable jurisdiction**	*0.00*	*2.50*	*2.50*	2:1	*5.00*	*1.50*	*6.50*
CCC TOTAL	*0.14*	*4.17*	*4.25*		*8.50*	*1.59*	*10.09*

*Mitigation for impacts from the development of the Bay and Marina will need to be negotiated with USACE and will be dependent upon the final design and type of impacts (e.g., shading, riprap, bulkhead).

**CCC will make final determination of the jurisdiction of the potential wetlands and the resources within the area formerly occupied by an industrial facility that are potentially exempt from CCC jurisdiction.

TABLE 4.8-9
Mitigation Requirements for Proposed Impacts to Jurisdictional Wetland Resources — City Lands
(acres)

	Permanent Impact-Project-Level (Phase I)	Permanent Impact-Program-Level	Permanent Impact Total	Mitigation Ratio	Permanent Impact Mitigation	Temporary Impact Mitigation (1:1 ratio)	Mitigation Requirement Total
USACE Jurisdictional Waters							
USACE waters of the U.S.	0.00	0.00	0.00	1:1	0.00	0.00	0.00
USACE wetlands (southern coastal salt marsh)	0.02	0.00	0.02	4:1	0.08	0.01	0.09
USACE Total	**0.02**	**0.00**	**0.02**		**0.08**	**0.01**	**0.09**
CCC Jurisdictional Resources							
CCC wetlands	0.06	0.00	0.06	2:1	0.12	0.00	0.12
CCC Total	**0.03**	**0.00**	**0.06**		**0.12**	**0.00**	**0.12**

**CCC will make final determination of the jurisdiction of the potential wetlands and the resources within the area formerly occupied by an industrial facility that are potentially exempt from CCC jurisdiction.

IAL SOURCE: NAVFAC, San Diego Bay 2004 Eelgrass Survey

Revised Draft Environmental Impact Report (EIR) for the Chula Vista Bayfront Master Plan

South Bay Eelgrass and Navation Channel Alighment

FIGURE 4.9-2

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
	• Construction vehicles accessing the site shall be required to use the shortest possible route to and from I-5 provided the route does not expose additional receptors to noise. • Construction equipment shall be selected as those capable of performing the necessary tasks with the lowest sound level and the lowest acoustic height possible to perform the required construction operation. • Construction equipment shall be operated and maintained to minimize noise generation. Equipment shall be kept in good repair and fitted with "manufacturer-recommended" mufflers.	
Significant Impact 4.7-11: The construction activities in the Sweetwater District would occur between an area as far away from the Sweetwater Marsh National Wildlife Refuge as 1,320 feet to a location adjacent to the refuge. The projected noise levels at the edge of the refuge could be as high as 77 dB. During the breading season, this would be a significant impact.	Mitigation Measure 4.7-9 Port/City: Construction-related noise shall be limited during the typical breeding season of January 15 to August 31 adjacent to the Sweetwater Marsh NWR and F&G Street Marsh. The current accepted noise threshold is 60 dB(A) L_{eq}; thus construction activity shall not exceed this level, or ambient noise levels if higher than 60 dB(A) during the breeding season. If construction does occur within the breeding season or adjacent to the marshes, the project developer shall prepare and submit an acoustical analysis to the Port and/or City that shall determine whether noise barriers would be required to reduce the expected noise levels below the threshold. If noise barriers, construction activities, or other methods are unable to result in a level of noise below the threshold, construction in these areas shall be delayed until the end of the breeding season.	Less than significant
4.8 TERRESTRIAL BIOLOGICAL RESOURCES		
Significant Impact 4.8-1: There is potential for raptors to nest on site during the nesting season of January 15 to July 31 within all districts during all phases of construction. All active raptor nests, regardless of state or federal listing status, are protected under the California Fish and Game Code Section 3503.5. Direct impacts to nesting raptors due to the removal of an active nest would be significant.	Mitigation Measure 4.8-1 Port/City: Prior to construction in any areas with suitable nesting locations for raptors (such as trees, utility poles, or other suitable structures), and if grading or construction occurs during the breeding season for nesting raptors (January 15 through July 31), the project developer(s) within the Port's or City's jurisdiction shall retain a qualified, Port or City-approved biologist, as appropriate, who shall conduct a pre-construction survey for active raptor nests. The pre-construction survey must be conducted no more than 10 calendar days prior to the start of construction, the results of which must be submitted to the Port or City, as appropriate, for review and approval. If an active nest is found, an appropriate setback distance will be determined in consultation with the applicant, Port or City, USFWS, and CDFG. The construction setback shall be implemented until the young are completely independent of the nest, or, the nest is	Less than significant

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
	relocated with the approval of the USFWS and CDFG. A bio-monitor shall be present on site during initial grubbing and clearing of vegetation to ensure that perimeter construction fencing is being maintained. A bio-monitor shall also perform periodic inspections of the construction site during all major grading to ensure that impacts to sensitive plants and wildlife are minimized. Depending on the sensitivity of the resources, the City and/or Port shall define the frequency of field inspections. The bio-monitor shall send a monthly monitoring letter report to the City and/or Port detailing observations made during field inspections. The bio-monitor shall also notify the City and/or Port immediately if clearing is done outside of the permitted project footprint.	
Significant Impact 4.8-2: Impacts to the western burrowing owl or any burrowing owl burrows may occur during implementation of program-level components in the Otay District on parcels in both the Port's and City's jurisdiction. The impacts would consist of the loss of burrowing owls and/or their nests, which may result from grading and construction activities during development of the Otay District. The potential loss of western burrowing owls and/or their nests would be a significant impact.	Mitigation Measure 4.8-2 Port/City: Prior to construction in any areas with suitable nesting habitat for burrowing owl, and if grading or construction occurs during the breeding season for the burrowing owl (April 15 through July 15), the project developer(s) within the Port's or City's jurisdiction, as appropriate, shall retain a qualified biologist, who shall be approved by the Port or City, respectively, to conduct a pre-construction survey within all suitable habitat prior to any grading activities. The pre-construction survey must be conducted no more than 10 calendar days prior to the start of construction, the results of which must be submitted to the Port or City, as appropriate, for review and approval. If an active burrow is detected during the breeding season of April 15 to July 15 construction setbacks of 300 feet from occupied burrows shall be implemented until the young are completely independent of the nest. If an active burrow is found outside of the breeding season, or after an active nest is determined to no longer be active by a qualified biologist, the burrowing owl would be passively relocated according to the guidelines provided by CDFG (1995) and in coordination with CDFG. A bio-monitor shall be present on site during initial grubbing and clearing of vegetation to ensure that perimeter construction fencing is being maintained. A bio-monitor shall also perform periodic inspections of the construction site during all major grading to ensure that impacts to sensitive plants and wildlife are minimized. Depending on the sensitivity of the resources, the City and/or Port shall define the frequency of field inspections. The bio-monitor shall send a monthly monitoring letter report to the City and/or Port detailing observations made during field inspections. The bio-monitor shall also notify the City and/or Port immediately if clearing is done outside of the permitted project footprint.	Less than significant
Significant Impact 4.8-3: There is a potential for a number of birds protected by the MBTA to nest within the open space and	Mitigation Measure 4.8-3	Less than significant

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
trees in the Port's and City's jurisdiction. Destruction or removal of active nests during the breeding season could occur during construction or grading activities. These impacts would be significant.	Port/City: If grading or construction occurs during the breeding season for migratory birds (January 15 through July 31), the project developer(s) shall retain a qualified biologist, approved by the Port/City depending on the jurisdiction, to conduct a pre-construction survey for nesting migratory birds. The pre-construction survey must be conducted no more than 10 calendar days prior to the start of construction, the results of which must be submitted to the Port or City, as appropriate, for review and approval. If active nests are present, the Port will consult with USFWS and CDFG to determine the appropriate construction setback distance. Construction setbacks shall be implemented until the young are completely independent of the nest, or, relocated with the approval of the USFWS and CDFG. A bio-monitor shall be present on site during initial grubbing and clearing of vegetation to ensure that perimeter construction fencing is being maintained. A bio-monitor shall also perform periodic inspections of the construction site during all major grading to ensure that impacts to sensitive plants and wildlife are minimized. Depending on the sensitivity of the resources, the City and/or Port shall define the frequency of field inspections. The bio-monitor shall send a monthly monitoring letter report to the City and/or Port detailing observations made during field inspections. The bio-monitor shall also notify the City and/or Port immediately if clearing is done outside of the permitted project footprint.	
Significant Impact 4.8-4: During Phase I of the Proposed Project, impacts would occur to the inlet of the F & G Street Marsh as a result of the construction of the extension of E Street and development of Sweetwater Park. Direct impacts to the light-footed clapper rail and loss of foraging habitat for the species could occur. Construction activity within the inlet would potentially impact clapper rails directly if circumstances prevented the birds from escaping back to the protected marsh habitat during construction. Impacts to the inlet would reduce the amount of available foraging habitat and could directly impact the light-footed clapper rail.	Mitigation Measure 4.8-4 Port/City: Prior to construction in any areas of suitable nesting or foraging habitat for light-footed clapper rail, and if grading or construction within these areas occurs during the breeding season for light-footed clapper rail (February 15 through July 31), the project developer(s) shall retain a qualified biological monitor who shall be approved by the Port or City, as appropriate, and shall be present during removal of southern coastal salt marsh vegetation within the inlet to the F & G Street Marsh to ensure that there are no direct impacts to foraging light-footed clapper rails. If a light-footed clapper rail is encountered, construction will be temporarily halted until the bird leaves the area of construction. A bio-monitor shall be present on site during initial grubbing and clearing of vegetation to ensure that perimeter construction fencing is being maintained. A bio-monitor shall also perform periodic inspections of the construction site during all major grading to ensure that impacts to sensitive plants and wildlife are minimized. Depending on the sensitivity of the resources, the City and/or Port shall define the frequency of field inspections. The bio-monitor shall send a monthly monitoring letter report to the City and/or Port detailing observations made	Less than significant

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
	during field inspections. The bio-monitor shall also notify the City and/or Port immediately if clearing is done outside of the permitted project footprint.	
Significant Impact 4.8-5: Project construction could potentially impact the following MSCP-covered species within the City's jurisdiction during all phases of development: salt marsh skipper, orange-throated whiptail, northern harrier, Cooper's hawk, peregrine falcon, light-footed clapper rail, long-billed curlew, western burrowing owl, and Belding's savannah sparrow. Of these species, only the northern harrier, Cooper's hawk, and western burrowing owl were observed on or directly adjacent to City jurisdiction during the current surveys; therefore, impacts to northern harrier, Cooper's hawk, and western burrowing owl would be significant.	Mitigation Measure 4.8-5 City: Prior to issuance of any clearing and grubbing, or grading permits within the jurisdiction of the City, the project applicant within the City's jurisdiction shall be required to obtain a HLIT Permit pursuant to Section 17.35 of the Chula Vista Municipal Code for impacts to Covered Species and Vegetation Communities protected under the City's MSCP Subarea Plan. In addition, the MSCP requires additional protective measures for the western burrowing owl, as identified in Mitigation Measure 4.8-2 above.	Less than significant
Significant Impact 4.8-6: Because of the proximity of the proposed project to the F & G Street Marsh and the Sweetwater Marsh National Wildlife Refuge, there is a potential for impacts to special status bird species including California least tern, light-footed clapper rail, and western snowy plover. Impacts could result from the increased predation on special status bird species as a result of the creation of perch sites in areas that do not naturally contain such vantage points. Indirect effects would be significant because they would potentially result in increased predation, abandonment of nests or degradation of nesting and foraging habitat for the light-footed clapper rail, Belding's savannah sparrow, all raptor species, and migratory birds, which can ultimately cause a drop in population numbers of these species.	Mitigation Measure 4.8-6 Port/City: A. Construction-related noise shall be limited adjacent to the F & G Street Marsh, and the J Street Marsh during the typical breeding season of January 15 to August 31. Construction activity adjacent to these sensitive areas must not exceed 60 dB(A) L_{eq}, or ambient noise levels if higher than 60 dB(A), during the breeding season. The project developer(s) shall prepare and submit to the Port/City for review and approval an acoustical analysis and nesting bird survey to demonstrate that the 60 dB(A) L_{eq} noise level is maintained at the location of any active nest within the marsh. If the noise threshold is anticipated to be exceeded at the nest location, the project developer(s) shall construct noise barriers to maintain construction noise levels below the threshold. Because potential construction noise levels above 60 dB(A) L_{eq} have been identified at the F & G Street Marsh, specific noise attenuation measures have been identified and are addressed in *Section 4.7, Noise,* of the EIR. B. The following design criteria shall be incorporated into all building and landscape plans within 500 feet of the preserves to reduce the potential for raptors to perch and prey on sensitive bird species: • Light posts shall have anti-perching spike strips along any portions that would be accessible to raptors.	Less than significant

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
	• The top edge of buildings shall be rounded with sufficient radius to reduce the amount of suitable perching building edges. • If building tops are hard corners, spike strips shall be used to discourage raptors from perching and building nests. • Decorative eaves, ledges, or other protrusions shall be designed to discourage perching by raptors. C. Prior to the issuance of a Coastal Development Permit, the project developer shall prepare a raptor nest management plan to be implemented once the project is built. A biologist retained by the project developer and approved by the Port and/or City shall be responsible for monitoring the buildings and associated landscaping to determine if raptor nests have been established on Port or City lands within 500 feet of the Preserves. If a nest is discovered, the nest would be removed in consultation with USFWS, CDFG, and the Port/City outside of the raptor breeding season of January 15 to July 31. D. Lighting. The following mitigation measure is required during all phases of development to ensure that outdoor lighting throughout the project area is minimized upon any of the habitat buffers, Preserve areas, habitats, or open water. Prior to issuance of a building permit, each applicant within the Port's or City's jurisdiction shall prepare a lighting design plan, including a photometric analysis, to be reviewed by the Port or City, as appropriate. Each plan shall include the following features, as appropriate to the specific locations: • All exterior lighting shall be directed away from the habitat buffers, Preserve Areas, habitats, or open water, wherever feasible and consistent with public safety. Where necessary, lighting of all developed areas adjacent to the habitat buffers, Preserve Areas, habitats, or open water shall provide adequate shielding with non-invasive plant materials (preferably native), berming, and/or other methods to protect the habitat buffers, Preserve Areas, habitats, or open water and sensitive species from night lighting. The light structure themselves shall have shielding (and incorporate anti-raptor perching criteria); but the placement of the light structures shall also provide shielding from wildlife habitats and shall be placed in such a way as to minimize the amount of light reaching adjacent habitat buffers, Preserve Areas, habitats, or open water.	

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
	This includes street lights, pedestrian and bicycle path lighting, and any recreational lighting. • All exterior lighting immediately adjacent to habitat buffers, Preserve Areas, habitats, or open water shall be low pressure sodium lighting or other approved equivalent. • No sports field lights shall be planned on the recreation fields near the J Street Marsh or the Sweetwater Marsh. E. Noise. *Construction Noise.* Mitigation Measure 4.8-6, and the measures outlined in *Section 4.7, Noise,* shall be implemented in order to reduce potential indirect construction-noise impacts to sensitive species within the F & G Street Marsh, and J Street Marsh. In order to further reduce construction noise, equipment staging areas shall be centered away from the edges of the project and construction equipment shall be maintained regularly and muffled appropriately. *Operational Noise.* Noise levels from loading and unloading areas, rooftop heating, ventilation, and air conditioning facilities, and other noise generating operational equipment shall not exceed 60 dBA Leq at the boundaries of the F & G Street Marsh, and the J Street Marsh during the typical breeding season of January 15 to August 31. F. Invasives. All exterior landscaping plans shall be submitted to the Port or City, as appropriate, for review and approval to ensure that no plants listed on the California Invasive Plan Council (Cal-IPC) List of Exotic Pest Plants of Greatest Ecological Concern in California or the list included in Appendix N of the City's MSCP Subarea Plan shall be planted throughout the plan area during project construction and operation. The Cal-IPC list is contained in *Appendix 4.8-11* of this report. G. Toxic Substances and Drainage. Implementation of general water quality measures outlined in Mitigation Measures 4.5-2 through 4.5-4 identified *in Section 4.5, Hydrology/Water Quality* would reduce impacts associated with the release of toxins, chemicals, petroleum products and other elements that might degrade or harm the natural environment to below a level that is significant, and would provide benefits to wetland habitats. As a reference, these mitigation measures are repeated below and apply to the Port and City:	

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
	• If contaminated groundwater is encountered, the project developer shall treat and/or dispose of the contaminated groundwater (at the developer's expense) in accordance with NPDES permitting requirements, which includes obtaining a permit from the Industrial Wastewater Control Program to the satisfaction of the RWQCB. The project developer(s) shall demonstrate satisfaction of all permit requirements prior to issuance of a grading permit. • Prior to the discharge of contaminated groundwater for all construction activities, should flammables, corrosives, hazardous wastes, poisonous substances, greases and oils and other pollutants exist on site, a pretreatment system shall be installed to pre-treat the water to the satisfaction of the RWQCB before it can be discharged into the sewer system. • Prior to the issuance of a grading, excavation, dredge/fill, or building permit for any parcel, the applicant shall submit a Spill Prevention/Contingency Plan for approval by the Port or City as appropriate. The plan shall: i. Ensure that hazardous or potentially hazardous materials (e.g., cement, lubricants, solvents, fuels, other refined petroleum hydrocarbon products, wash water, raw sewage) that are used or generated during the construction and operation of any project as part of the Proposed Project shall be handled, stored, used, and disposed of in accordance with NPDES permitting requirements and applicable federal, state, and local policies; ii. Include material safety data sheets; iii. Require 40 hours of worker training and education as required by the Occupational Safety and Health Administration; iv. Minimize the volume of hazardous or potentially hazardous materials stored at the site at any one time; v. Provide secured storage areas for compatible materials, with adequate spill contaminant; vi. Maintain all required records, manifest and other tracking information in an up-to-date and accessible form or location for review by the Port or City; and vii. Shall demonstrate compliance with all local, state, and federal regulations regarding hazardous materials and emergency response. • Prior to issuance of a permit by USACE for dredge and/or fill operations in the Bay or Chula Vista Harbor, the applicant shall conduct a focused sediment investigation and submit it to USACE, EPA, and RWQCB for review and approval. The applicant shall then determine the amount of bay sediment that requires remediation and develop a specific work plan to	

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
	remediate bay sediments in accordance with permitting requirements of the RWQCB. The work plan shall include but not be limited to: dredging the sediment, analyzing the nature and extent of any contamination, and allowing it to drain. Pending the outcome of the analytical results, the RWQCB and the Port shall prescribe the appropriate method for disposition of any contaminated sediment. • Prior to issuance of a grading permit for marina redevelopment on HW-1 and HW-4, the developer shall submit a work plan for approval by the RWQCB and Port/City that requires the implementation of BMPs, including the use of silt curtains during in-water construction to minimize sediment disturbances and confine potentially contaminated sediment if contaminated sediment exists. If a silt curtain should be necessary, the silt curtain shall be anchored along the ocean floor with weights (i.e., a chain) and anchored to the top with a floating chain of buoys. The curtain shall wrap around the area of disturbance to prevent turbidity for traveling outside the immediate project area. Once the impacted region resettles the curtains shall be removed. If the sediment would be suitable for ocean disposal, no silt curtain shall be required. However, if contaminants are actually present, the applicant would be required to provide to the RWQCB and Port/City an evaluation showing that the sediment would be suitable for ocean disposal. H. Public Access. In addition to site-specific measures designed to prevent or minimize the impact to adjacent open space preserve areas from humans and domestic animals, the following would prevent or minimize the impact to adjacent open space preserve areas from humans and domestic animals. *Buffers:* All buffers shall be established and maintained by the Port/City. Appropriate signage will be provided at the boundary and within the buffer area to restrict public access. Within the western 200-foot-width of SP-1, a portion of the buffer areas would be re-contoured and restored to provide habitat consistent with the native vegetation communities in the adjacent open space preserve areas and to provide mitigation opportunities for project impacts. *Appendix 4.8-12* provides more specific detail of the mitigation opportunities available within the buffer area included within the Proposed Project. *Table 4.8-5* provides a breakdown of the available maximum mitigation acreage that is available within the buffer. *Figure 4.8-23* depicts the conceptual mitigation opportunities within the Sweetwater District. *Figures 4.8-24* and *4.8-25* display the cross section of the buffer	

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
	zones in the Sweetwater District indicated on the conceptual illustration. *Figure 4.8-26* depicts the conceptual mitigation opportunities within the Otay District. The proposed restoration includes creating and restoring coastal salt marsh and creating riparian scrub vegetation communities. In addition, the coastal brackish marsh, disturbed riparian habitat, and wetland would be enhanced. Impacts to disturbed coastal sage scrub would be mitigated by the restoration of a coastal sage scrub/native grassland habitat also within this buffer. There is the potential to provide a maximum of 20.71 acres of mitigation credit for impacts to wetland habitats and 22.21 acres for impacts to upland habitats. This would exceed the required mitigation needed for impacts within the Port's and City's jurisdiction. A detailed coastal sage scrub (CSS) and maritime succulent scrub (MSS) restoration plan that describes the vegetation to be planted shall be prepared by a Port or City-approved biologist and approved by the Port or City, as appropriate. The City or Port shall develop guidelines for restoration in consultation with USFWS and CDFG.	
Significant Impact 4.8-7: The Proposed Project would result in potential indirect impacts on preserve areas adjacent to the project site from lighting, noise, invasives, toxic substances and public access. These impacts would be significant.	See Mitigation Measure 4.8-6 above.	Less than significant
Significant Impact 4.8-8: Within the Port's jurisdiction, the construction of the H Street Pier could reduce surface water foraging habitat in the Bay by approximately 36,000 square feet, or 0.8 acre, which would result in the reduction of foraging area for birds. This impact would be significant based on the USFWS policy of no-net-loss of habitat.	Mitigation Measure 4.8-7 Port: Prior to construction of the H Street Pier, the Port shall create 0.96 acre of eelgrass habitat to mitigate for the loss of surface water foraging habitat in accordance with the Southern California Eelgrass Mitigation Policy. The creation of eelgrass habitat shall be conducted in accordance with Mitigation Measures 4.9-1 and 4.9-2 in *Section 4.9, Marine Biological Resources*.	Less than significant

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
Significant Impact 4.8-9: Detailed plans are not available for program-level components such as reconfiguration of the marinas, or for dredging and filling of the navigation channels. Removal of some existing facilities and construction of new facilities would result in changes to existing surface water habitat, which would impact surface water foraging habitat. The above impacts from program-level components would result in a total net loss of approximately 1.61 acre of surface water foraging habitat and would be significant based on the USFWS policy of no-net-loss.	Mitigation Measure 4.8-8 Port: A. Prior to completion in harbor work in Phase IV, the Port shall create 1.93 acres of eelgrass habitat. The creation of eelgrass habitat shall be conducted in accordance with Mitigation Measure 4.9-2 in *Section 4.9, Marine Biological Resources*. B. When project specific designs are proposed for the remaining project components affecting 1.61 acres of surface water foraging habitat and intertidal mudflats, the mitigation of impacts shall be re-evaluated by the Port during subsequent environmental review pursuant to State CEQA Guidelines Section 15168 to determine accurate net loss and mitigation for the loss of foraging habitat.	Less than significant
Significant Impact 4.8-10: The grading for project-level, Phase I elements within the Port's jurisdiction would impact disturbed coastal sage, non-native grassland, mulefat scrub/riparian scrub, and southern coastal salt marsh. These impacts are significant.	Mitigation Measure 4.8-9 Port: A. Prior to the commencement of grading for development in each phase that impacts riparian habitat or sensitive vegetation communities, the Port or Port tenants, as appropriate, shall prepare and initiate implementation of a restoration plan for impacts to riparian habitat and sensitive vegetation communities in accordance with the mitigation requirements presented in *Table 4.8-6*. Prior to the commencement of Phase I grading that impacts riparian habitat or sensitive vegetation communities, the Port shall coordinate with the wildlife agencies for the preparation and approval of a detailed restoration plan within the Port's jurisdiction. The restoration plan shall be prepared by a qualified biologist and the Plan shall be approved by the Port. The guidelines for this plan will be developed in consultation with the regulatory agencies. The plan shall summarize the approach taken to avoid and minimize impacts to sensitive habitats, detail the target functions and values, and address the approach to restoring those functions and values. Typically, the restoration plan shall detail the site selection process and propose site preparation techniques, planting palettes, implementation procedures, monitoring and maintenance practices, and establish a performance criteria for each mitigation site. Typical success criteria may include percent canopy cover, percent of plant survival, and percent of native/non-native canopy cover. A minimum five-year maintenance	Less than significant

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
	and monitoring period would be implemented following installation to ensure each area is successful. The restoration plan shall address monitoring requirements and specify when annual reports are to be prepared and what they shall entail. Qualitative and quantitative assessments of the site conditions shall be included. If the mitigation standards have not been met in a particular year, contingency measures shall be identified in the annual report and remediation will occur within three months or start of the growing season. The Port shall be responsible for ensuring that all of the success criteria are met to the satisfaction of the Port in consultation with the regulatory agencies. B. Prior to initiating any construction activities in each phase that would affect riparian habitat or sensitive vegetation communities, including clearing and grubbing associated with program-level phases, an updated project level assessment of potential impacts shall be made based on a specific project design. The Port, or project developer(s) as appropriate, shall retain a qualified, Port-approved biologist to update appropriate surveys, identify the existing conditions, quantify impacts, and provide adequate mitigation measures to reduce impacts to below a level of significance. This updated assessment shall be submitted to the Port for review and approval.	
Significant Impact 4.8-11: Grading for program-level elements within the Port's jurisdiction would impact disturbed coastal sage scrub, non-native grassland, disturbed riparian, and disturbed seasonal pond. These impacts are significant.	See Mitigation Measure 4.8-9 above.	Less than significant
Significant Impact 4.8-12: Approximately 1.52 acre of southern coastal salt marsh in the Port's jurisdiction would be impacted during program-level activities. These impacts are significant.	See Mitigation Measure 4.8-9 above.	Less than significant
Significant Impact 4.8-13: Approximately 17.42 acres of non-native grassland in the City's jurisdiction would be impacted in the Harbor District during Phase I. These impacts are significant.	Mitigation Measure 4.8-10 City: A. Prior to issuance of any clearing and grubbing or grading permits within the City's jurisdiction that would affect riparian habitat or sensitive vegetation communities, the project developer(s) shall acquire mitigation credits or prepare and initiate implementation of a restoration plan for impacts to riparian habitats and sensitive vegetation communities in accordance with the acreages identified in *Table 4.8-7.*	Less than significant

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
	Mitigation credits shall be secured in a City-approved mitigation bank or land acquisition shall be provided at an approved location. Verification of mitigation credits or an approved restoration plan shall be provided to the City for review and approval prior to issuance of any clearing and grubbing or grading permits. The project developer(s) shall prepare and implement a detailed restoration plan to the satisfaction of the City and the regulatory agencies. The guidelines for this plan will be developed in consultation with the regulatory agencies. The plan shall summarize the approach taken to avoid and minimize impacts to sensitive habitats, detail the target functions and values, and address the approach to restoring those functions and values. Typically, the restoration plan shall detail the site selection process and propose site preparation techniques, planting palettes, implementation procedures, monitoring and maintenance practices, and establish a performance criteria for each mitigation site. Typical success criteria may include percent canopy cover, percent of plant survival, and percent of native/non-native canopy cover. A minimum five-year maintenance and monitoring period would be implemented following installation to ensure each area is successful. The restoration plan shall address monitoring requirements and specify when annual reports are to be prepared and what they shall entail. Qualitative and quantitative assessments of the site conditions shall be included. If the mitigation standards have not been met in a particular year, contingency measures shall be identified in the annual report and remediation will occur within three months or the start of the growing season. B. Prior to issuance any clearing and grubbing or grading permits within the City's jurisdiction that affects riparian habitat or sensitive vegetation communities associated with the program-level development phases, an updated assessment of potential impacts shall be made based on a specific project design. The project developer(s) shall retain a City-approved biologist to update appropriate surveys, identify the existing conditions, quantify impacts, and provide adequate mitigation consistent with the City's MSCP Subarea Plan. This updated assessment shall be submitted to the City for review and approval. C. Prior to issuance of any clearing and grubbing or grading permits within the City's jurisdiction that affects riparian habitat or sensitive vegetation communities, the project applicant within the City's jurisdiction shall be required to obtain an HLIT Permit pursuant to Section 17.35 of the Chula Vista	

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
	Municipal Code for impacts to Covered Species and Vegetation Communities protected under the City's MSCP Subarea Plan.	
Significant Impact 4.8-14: Approximately 0.03 acre of southern coastal salt marsh in the City's jurisdiction would be permanently impacted within the Sweetwater District during project-level activities.	See Mitigation Measure 4.8-10 above.	Less than significant
Significant Impact 4.8-15: Approximately 0.03 acre of mulefat scrub/riparian scrub in the City's jurisdiction would be permanently impacted within the Sweetwater District during program-level activities. The Proposed Project would permanently impact a total of 0.25 acre of disturbed coastal sage scrub (Tier II – uncommon uplands) in program-level activities of the Sweetwater District. Grading and construction activities during development of the Proposed Project will directly remove these sensitive vegetation communities. Impacts to mulefat/riparian scrub and disturbed coastal sage scrub would be significant.	See Mitigation Measure 4.8-10 above.	Less than significant
Significant Impact 4.8-16: The circulation roads and bridges proposed within the Port's jurisdiction in the Sweetwater and Harbor Districts would permanently impact 0.55 acre of USACE wetlands and non-wetland waters of the U.S. Impacts would be significant.	Mitigation Measure 4.8-11 Port: A. The Port or Port tenants, as appropriate, shall mitigate for permanent and temporary impacts to USACE jurisdictional waters at the following ratios: 1:1 for permanent impacts to non-wetland waters of the U.S.; 4:1 for impacts to wetlands; and 1:1 for all temporary impacts. A minimum of 1:1 mitigation must be created in order to achieve the no-net-loss requirement of the CWA. *Table 4.8-8* provides a breakdown of the required mitigation acreages for all USACE impacts within the Port's jurisdiction, which totals 2.12 acres. Mitigation for impacts from the Bay and Marina components of the proposed project will be established through USACE regulations once final designs for this work in Phases II through IV are finalized. Prior to the commencement of grading activities for any projects that impact USACE jurisdictional waters, the Port or Port tenants, as appropriate, shall prepare and initiate implementation of a restoration plan detailing the measures needed to achieve the necessary mitigation. The guidelines	Less than significant

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
	for this plan will be developed in consultation with the regulatory agencies. The plan shall summarize the approach taken to avoid and minimize impacts to sensitive habitats, detail the target functions and values, and address the approach to restoring those functions and values. Typically, the restoration plan shall detail the site selection process and propose site preparation techniques, planting palettes, implementation procedures, monitoring and maintenance practices, and establish a performance criteria for each mitigation site. Typical success criteria may include percent canopy cover, percent of plant survival, and percent of native/non-native canopy cover. A minimum five-year maintenance and monitoring period would be implemented following installation to ensure each area is successful. The restoration plan shall address monitoring requirements and specify when annual reports are to be prepared and what they shall entail. Qualitative and quantitative assessments of the site conditions shall be included. If the mitigation standards have not been met in a particular year, contingency measures shall be identified in the annual report and remediation will occur within three months or the start of the growing season. The Port shall be responsible for ensuring that all of the success criteria are met to the satisfaction of the Port in consultation with the regulatory agencies. City: B. Prior to the issuance of the first clearing and grubbing or grading permit for activities that impacts USACE jurisdictional waters, the project developer(s) within the City's jurisdiction shall prepare a restoration plan to detailing the measures needed to create/restore impacts to USACE jurisdictional waters within the City's jurisdiction in accordance with the acreage identified in *Table 4.8-9*. The guidelines for this plan will be developed in consultation with the regulatory agencies. The plan shall summarize the approach taken to avoid and minimize impacts to sensitive habitats, detail the target functions and values, and address the approach to restoring those functions and values. Typically, the restoration plan shall detail the site selection process and propose site preparation techniques, planting palettes, implementation procedures, monitoring and maintenance practices, and establish a performance criteria for each mitigation site. Typical success criteria may include percent canopy cover, percent of plant survival, and percent of native/non-native canopy cover. A minimum five-year maintenance and monitoring period would be implemented following installation to ensure each area is successful. The restoration plan shall address monitoring requirements and specify when annual reports are to be prepared and what they shall entail. Qualitative and quantitative assessments of the site conditions shall be included. If the mitigation standards have not been met	

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
	in a particular year, contingency measures shall be identified in the annual report and remediation will occur within three months or the start of the growing season. The project developer(s) shall be required to implement the restoration plan subject to the oversight and approval of the City. Port/City C. Prior to issuance of the first clearing and grubbing or grading permit for activities that impacts USACE jurisdictional waters, the Port or Port tenants, as appropriate, and project developer(s) within the City's jurisdiction shall obtain a Section 404 permit from USACE. The permit application process would also entail approval of the restoration plan from the USACE as described above, in regards to areas that fall under the jurisdiction of USACE.	
Significant Impact 4.8-17: Program-level development within the Port's jurisdiction would disturb a total of 1.24 acre of non-wetland waters of the U.S. and 0.42 acre of impacts to USACE wetlands. These impacts would be significant.	See Mitigation Measure 4.8-11 above.	Less than significant
Significant Impact 4.8-18: The establishment of an ecological buffer on Parcel OP-2A would result in temporary impacts to 0.03 acre of non-wetland waters of the U.S. through restoration activities.	See Mitigation Measure 4.8-11 above.	Less than significant
Significant Impact 4.8-19: The reconfiguration of the harbor and marina could impact an additional 61.96 acres of USACE jurisdictional waters within the Harbor District during program-level activities. This impact would be significant.	See Mitigation Measure 4.8-11 above.	Less than significant
Significant Impact 4.8-20: The bridges proposed on Parcel HP-5 in the Harbor District would permanently impact 0.02 acre of USACE wetland within the City's jurisdiction. This impact would be significant.	See Mitigation Measure 4.8-11 above.	Less than significant
Significant Impact 4.8-21: The Proposed Project would disturb a total of 1.1 acres of CDFG streambed and associated riparian habitat during program-level activities in the Harbor and Otay Districts within the Port's jurisdiction. This includes	Mitigation Measure 4.8-12	Less than significant

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
permanent impacts to 0.14 acre within the Harbor District and permanent (0.72 acre) and temporary (0.23 acre) impacts in the Otay District. Permanent and temporary removal of riparian habitat is a significant impact.	Port: The Port or Port tenants, as appropriate, shall mitigate for permanent and temporary impacts to CDFG jurisdictional areas at a 2:1. *Table 4.8-8* provides a breakdown of the required mitigation acreages for all CDFG impacts within the Port's jurisdiction. Prior to the issuance of the first grading permit that may impact CDFG jurisdictional areas, the Port or Port tenants, as appropriate, shall prepare and initiate implementation of a restoration plan detailing the measures needed to achieve the necessary mitigation. The plan shall outline the timeline and procedures for restoring/enhancing the potential enhancement/mitigation sites, which include the native buffer areas and the F & G Street Marsh. The guidelines for this plan will be developed in consultation with the regulatory agencies. The plan shall summarize the approach taken to avoid and minimize impacts to sensitive habitats, detail the target functions and values, and address the approach to restoring those functions and values. Typically, the restoration plan shall detail the site selection process and propose site preparation techniques, planting palettes, implementation procedures, monitoring and maintenance practices, and establish a performance criteria for each mitigation site. Typical success criteria may include percent canopy cover, percent of plant survival, and percent of native/non-native canopy cover. A minimum five-year maintenance and monitoring period would be implemented following installation to ensure each area is successful. The restoration plan shall address monitoring requirements and specify when annual reports are to be prepared and what they shall entail. Qualitative and quantitative assessments of the site conditions shall be included. If the mitigation standards have not been met in a particular year, contingency measures shall be identified in the annual report and remediation will occur within three months or the start of the growing season. The Port shall be responsible for ensuring that all of the success criteria are met to the satisfaction of the Port in consultation with the regulatory agencies, including CDFG. Prior to issuance of the first grading permit that may impact CDFG jurisdictional areas, the Port, or Port tenants, as appropriate, shall obtain permits from CDFG. The permit application process would also entail approval of the restoration plan as described above, in regards to areas that fall under the jurisdiction of CDFG. Pursuant to Fish and Game Code 1602, the Port and other applicants are required to obtain a Streambed Alteration Agreement for impacts to streambeds and associated riparian habitat that fall within CDFG's jurisdiction.	

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
Significant Impact 4.8-22: The E Street road improvements proposed in the Sweetwater District would directly and permanently impact 0.07 acre of CCC wetland located within the road easement and Parcel S-1 adjacent to the roadway at Bay Boulevard and E Street (near Soil Test Pits 22 and 23). This wetland is composed of mulefat scrub. Development at this location would result in a significant impact.	Mitigation Measure 4.8-13 Port: A. Mitigation for permanent direct and indirect (from bridge shading) impacts would be at a 2:1 ratio as detailed in *Table 4.8-8.* Prior to the commencement of grading activities for projects that impact CCC jurisdictional areas, the Port or Port tenants, as appropriate, shall prepare a restoration plan detailing the measures needed to create/restore CCC wetlands. The guidelines for this plan will be developed in consultation with the regulatory agencies. The plan shall summarize the approach taken to avoid and minimize impacts to sensitive habitats, detail the target functions and values, and address the approach to restoring those functions and values. Typically, the restoration plan shall detail the site selection process and propose site preparation techniques, planting palettes, implementation procedures, monitoring and maintenance practices, and establish a performance criteria for each mitigation site. Typical success criteria may include percent canopy cover, percent of plant survival, and percent of native/non-native canopy cover. A minimum five-year maintenance and monitoring period would be implemented following installation to ensure each area is successful. The restoration plan shall address monitoring requirements and specify when annual reports are to be prepared and what they shall entail. Qualitative and quantitative assessments of the site conditions shall be included. If the mitigation standards have not been met in a particular year, contingency measures shall be identified in the annual report and remediation will occur within three months or the start of the growing season. The Port shall be responsible for ensuring that all of the success criteria are met to the satisfaction of the Port in consultation with the regulatory agencies, including the CCC. City: B. Mitigation for permanent direct and indirect (from bridge shading) impacts would be at a 2:1 ratio as detailed in *Table 4.8-9.* Prior to the issuance of the first grading permit for projects that impact CCC jurisdictional areas, the project applicants within the City's jurisdiction shall prepare a restoration plan detailing the measures needed to create/restore CCC wetlands. The guidelines for this plan will be developed in	Less than significant

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
	consultation with the regulatory agencies. The plan shall summarize the approach taken to avoid and minimize impacts to sensitive habitats, detail the target functions and values, and address the approach to restoring those functions and values. Typically, the restoration plan shall detail the site selection process and propose site preparation techniques, planting palettes, implementation procedures, monitoring and maintenance practices, and establish a performance criteria for each mitigation site. Typical success criteria may include percent canopy cover, percent of plant survival, and percent of native/non-native canopy cover. A minimum five-year maintenance and monitoring period would be implemented following installation to ensure each area is successful. The restoration plan shall address monitoring requirements and specify when annual reports are to be prepared and what they shall entail. Qualitative and quantitative assessments of the site conditions shall be included. If the mitigation standards have not been met in a particular year, contingency measures shall be identified in the annual report and remediation will occur within three months or the start of the growing season. The City shall be responsible for ensuring that all of the success criteria are met to the satisfaction of the City in consultation with the regulatory agencies, including the CCC.	
Significant Impact 4.8-23: The Port would also construct a bridge on E Street over the inlet to the F & G Street Marsh as part of the circulation element. The bridge would span the wetland and would indirectly impact approximately 0.01 acre of CCC wetland through shading. This impact would be significant.	See Mitigation Measure 4.8-13 above.	Less than significant
Significant Impact 4.8-24: During implementation of program-level components, the Port/City would construct two additional bridges in the Otay District. This includes the Street A Bridge over the J Street Channel and the Street B Bridge over the Telegraph Canyon Channel. These bridges would result in indirect permanent impacts from shading to 0.05 acre of CCC wetland. These impacts would be significant.	Mitigation Measure 4.8-14 Port: Mitigation for permanent direct and indirect (from bridge shading) impacts from circulation road construction/improvements and the riprap removal and bulkhead replacement totaling 0.51 acre, would be at a 2:1 ratio as detailed in *Table 4.8-8*. This would require a total mitigation of 1.02 acres. Mitigation for temporary impacts within Parcel OP-2B from the re-channelization of the Telegraph Canyon Channel would require mitigation at a ratio of 1:1 as detailed on *Table 4.8-8* for a total of 0.16 acre. Prior to the commencement of grading activities, the Port or Port tenants, as appropriate, shall prepare a restoration plan detailing the measures needed to create/restore CCC wetlands. The guidelines for this	Less than significant

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
	plan will be developed in consultation with the regulatory agencies. The plan shall summarize the approach taken to avoid and minimize impacts to sensitive habitats, detail the target functions and values, and address the approach to restoring those functions and values. Typically, the restoration plan shall detail the site selection process and propose site preparation techniques, planting palettes, implementation procedures, monitoring and maintenance practices, and establish a performance criteria for each mitigation site. Typical success criteria may include percent canopy cover, percent of plant survival, and percent of native/non-native canopy cover. A minimum five-year maintenance and monitoring period would be implemented following installation to ensure each area is successful. The restoration plan shall address monitoring requirements and specify when annual reports are to be prepared and what they shall entail. Qualitative and quantitative assessments of the site conditions shall be included. If the mitigation standards have not been met in a particular year, contingency measures shall be identified in the annual report and remediation will occur within three months or the start of the growing season. The Port shall be responsible for ensuring that all of the success criteria are met to the satisfaction of the Port in consultation with the regulatory agencies, including the CCC. Prior to approval of grading permits for projects impacting CCC wetlands, the Port or Port tenants, as appropriate, shall obtain permits and/or approvals from CCC.	
Significant Impact 4.8-25: The riprap removal and bulkhead placement proposed as a component to the Chula Vista Marina improvements, would permanently impact approximately 0.46 acre of CCC wetlands on Parcels HW-1, HW-3, and H-12 within the Harbor District. Impacting CCC wetlands for the purpose of improving navigation and harbor access would be consistent with the Coastal Act; however, the biological impacts would be significant.	See Mitigation Measure 4.8-14 above.	Less than significant
Significant Impact 4.8-26: The Telegraph Canyon Channel in the Otay District would be re-channelized within the program-level phases of development. This would temporarily impact 0.16 acre of CCC wetland. This would be significant. This temporary impact to re-contour a pre-existing channelized drainage would be allowed under the Coastal Act.	See Mitigation Measure 4.8-14 above.	Less than significant

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
Significant Impact 4.8-27: The establishment of an ecological buffer on Parcel OP-2A would result in temporary impacts to 0.05 acre of CCC wetland, 0.04 acre of potential CCC wetlands, and 1.50 acres of former industrial areas in the process of remediation. Impacts to the 0.05 acre of CCC wetlands would be significant. The impacts to the 1.54 acres of areas of former industrial areas in the process of remediation would only be significant if the CCC asserts jurisdiction. Impacts for restoration purposes are allowed under the Coastal Act.	Mitigation Measure 4.8-15 Port: Mitigation for temporary impacts from the restoration of the ecological buffer would require mitigation at a ratio of 1:1 as detailed on *Table 4.8-8*. The ecological buffer area supports 0.05 acre that has been mapped as a CCC wetland and will require 0.05 acre of mitigation. There is an additional 0.04 acre that is mapped as a potential CCC wetland and 1.50 acres that are former industrial areas in the process of remediation. The Port or Port tenants, as appropriate, will need to confer with CCC in order to determine whether the areas of potential jurisdiction, totaling 1.54 acres actually fall under CCC jurisdiction. If these areas are not subject to CCC jurisdiction, no additional mitigation would be required. If CCC does assert jurisdiction over these areas, the restoration will need to include the creation/enhancement of an additional 1.54 acres of CCC wetlands. Prior to the issuance of the first grading permit for activities that impact CCC jurisdictional areas, the Port or Port tenants, as appropriate, shall prepare a restoration plan to detailing the measures needed to create/restore CCC wetlands. The guidelines for this plan will be developed in consultation with the regulatory agencies. The plan shall summarize the approach taken to avoid and minimize impacts to sensitive habitats, detail the target functions and values, and address the approach to restoring those functions and values. Typically, the restoration plan shall detail the site selection process and propose site preparation techniques, planting palettes, implementation procedures, monitoring and maintenance practices, and establish a performance criteria for each mitigation site. Typical success criteria may include percent canopy cover, percent of plant survival, and percent of native/non-native canopy cover. A minimum five-year maintenance and monitoring period would be implemented following installation to ensure each area is successful. The restoration plan shall address monitoring requirements and specify when annual reports are to be prepared and what they shall entail. Qualitative and quantitative assessments of the site conditions shall be included. If the mitigation standards have not been met in a particular year, contingency measures shall be identified in the annual report and remediation will occur within three months or the start of the growing season. The Port shall be responsible for ensuring that all of the success criteria are met to the satisfaction of the Port in consultation with the regulatory agencies, including the CCC.	Less than significant
Significant Impact 4.8-28: Additional road extensions are proposed in the Otay District. This includes Street A	Mitigation Measure 4.8-16	Less than significant

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
improvements, which would permanently impact 0.55 acre of the former industrial site in the process of remediation, and Street B improvements, which would impact 0.03 acre of potential CCC wetland. If CCC claims jurisdiction over these two areas, impacts would be significant. If CCC does not assert jurisdiction over these areas, these impacts would not be significant.	Port: The Port or Port tenants, as appropriate, shall confer with CCC in order to determine whether the 0.58 acre of areas fall under CCC jurisdiction. If these areas are not subject to CCC jurisdiction, no additional mitigation would be required. If CCC does assert jurisdiction over these areas, the Port will need to mitigate the impacts at a ratio of 2:1 as detailed in *Table 4.8-8* for a total mitigation of 1.16 acres. Prior to the issuance of the first grading permit for projects that impact CCC jurisdictional areas, the Port or Port tenants, as appropriate, shall prepare a restoration plan to detailing the measures needed to create/restore CCC wetlands. The guidelines for this plan will be developed in consultation with the regulatory agencies. The plan shall summarize the approach taken to avoid and minimize impacts to sensitive habitats, detail the target functions and values, and address the approach to restoring those functions and values. Typically, the restoration plan shall detail the site selection process and propose site preparation techniques, planting palettes, implementation procedures, monitoring and maintenance practices, and establish a performance criteria for each mitigation site. Typical success criteria may include percent canopy cover, percent of plant survival, and percent of native/non-native canopy cover. A minimum five-year maintenance and monitoring period would be implemented following installation to ensure each area is successful. The restoration plan shall address monitoring requirements and specify when annual reports are to be prepared and what they shall entail. Qualitative and quantitative assessments of the site conditions shall be included. If the mitigation standards have not been met in a particular year, contingency measures shall be identified in the annual report and remediation will occur within three months or the start of the growing season. The Port shall be responsible for ensuring that all of the success criteria are met to the satisfaction of the Port in consultation with the regulatory agencies, including the CCC.	
Significant Impact 4.8-29: The Port could impact CCC wetland on HP-13B and CCC wetland on HP-7. These impacts would be significant.	Mitigation Measure 4.8-17 Port: Prior to the issuance of the first grading permit for activities that impact CCC jurisdictional areas, the Port or Port tenants, as appropriate, shall prepare a restoration plan to detailing the measures needed to create/restore CCC wetlands to provide 0.32 acre of mitigation for the 0.16 acre impact to CCC wetlands on Parcels HP-13B and HP-7. The guidelines for this plan will be developed in consultation with the regulatory agencies. The plan shall summarize the approach taken to avoid and minimize impacts to	Less than significant

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
	sensitive habitats, detail the target functions and values, and address the approach to restoring those functions and values. Typically, the restoration plan shall detail the site selection process and propose site preparation techniques, planting palettes, implementation procedures, monitoring and maintenance practices, and establish a performance criteria for each mitigation site. Typical success criteria may include percent canopy cover, percent of plant survival, and percent of native/non-native canopy cover. A minimum five-year maintenance and monitoring period would be implemented following installation to ensure each area is successful. The restoration plan shall address monitoring requirements and specify when annual reports are to be prepared and what they shall entail. Qualitative and quantitative assessments of the site conditions shall be included. If the mitigation standards have not been met in a particular year, contingency measures shall be identified in the annual report and remediation will occur within three months or the start of the growing season. The Port shall be responsible for ensuring that all of the success criteria are met to the satisfaction of the Port in consultation with the regulatory agencies, including the CCC.	
Significant Impact 4.8-30: The development of a park on Parcel OP-1B would impact 0.16 acre of a drainage that has been mapped as a CCC potential wetland site. If the Coastal Commission asserts jurisdiction, the development proposed on Parcel OP-1B in the Otay District would be significant.	Mitigation Measure 4.8-18 Port: The Port or Port tenants, as appropriate, shall confer with CCC in order to determine whether the 0.16 acre of areas identified as potentially CCC jurisdictional areas actually fall under CCC jurisdiction. If these areas are not subject to CCC jurisdiction, no additional mitigation would be required. If CCC does assert jurisdiction over these areas, the Port will need to mitigate the impacts at a ratio of 2:1 as detailed in *Table 4.8-8* for a total mitigation of 0.32 acres. Prior to the issuance of the first grading permit for projects that impact CCC jurisdictional areas, the Port or Port tenants, as appropriate, shall prepare a restoration plan to detailing the measures needed to create/restore CCC wetlands. The guidelines for this plan will be developed in consultation with the regulatory agencies. The plan shall summarize the approach taken to avoid and minimize impacts to sensitive habitats, detail the target functions and values, and address the approach to restoring those functions and values. Typically, the restoration plan shall detail the site selection process and propose site preparation techniques, planting palettes, implementation procedures, monitoring and maintenance practices, and establish a performance criteria for each mitigation site. Typical success criteria may include percent canopy cover, percent of plant survival, and percent of native/non-native canopy cover.	Less than significant

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
	A minimum five-year maintenance and monitoring period would be implemented following installation to ensure each area is successful. The restoration plan shall address monitoring requirements and specify when annual reports are to be prepared and what they shall entail. Qualitative and quantitative assessments of the site conditions shall be included. If the mitigation standards have not been met in a particular year, contingency measures shall be identified in the annual report and remediation will occur within three months or the start of the growing season. The Port shall be responsible for ensuring that all of the success criteria are met to the satisfaction of the Port in consultation with the regulatory agencies, including the CCC.	
Significant Impact 4.8-31: Program component development on Parcel O-4 could result in significant impacts to the 0.10-acre pond, and 2.37 acres of potential CCC wetland. Impacts to the potential CCC wetland would only be significant if CCC asserts jurisdiction.	Mitigation Measure 4.8-19 Port: The Port or Port tenants, as appropriate, will need to mitigate impacts to the 0.10-acre seasonal pond, mapped as a CCC wetland at a 2:1 ratio. The Port or Port tenants, as appropriate, shall confer with CCC in order to determine whether the 2.37 acre depressed area that exists where the LNG plant was formerly located, mapped as a potential CCC wetland, falls under CCC jurisdiction. If this area is not subject to CCC jurisdiction, no additional mitigation would be required. If CCC does assert jurisdiction over these areas, the final Phase II design of this parcel must mitigate impacts the 2.37-acre depressed area at a 2:1 ratio. Prior to the issuance of the first grading permit for projects that impact CCC jurisdictional areas, the Port or Port tenants, as appropriate, shall prepare a restoration plan to detailing the measures needed to create/restore CCC wetlands. The guidelines for this plan will be developed in consultation with the regulatory agencies. The plan shall summarize the approach taken to avoid and minimize impacts to sensitive habitats, detail the target functions and values, and address the approach to restoring those functions and values. Typically, the restoration plan shall detail the site selection process and propose site preparation techniques, planting palettes, implementation procedures, monitoring and maintenance practices, and establish a performance criteria for each mitigation site. Typical success criteria may include percent canopy cover, percent of plant survival, and percent of native/non-native canopy cover. A minimum five-year maintenance and monitoring period would be implemented following installation to ensure each area is successful. The restoration plan shall address monitoring requirements and specify when annual reports are to be prepared and what they shall entail. Qualitative and quantitative	Less than significant

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
	assessments of the site conditions shall be included. If the mitigation standards have not been met in a particular year, contingency measures shall be identified in the annual report and remediation will occur within three months or the start of the growing season. The Port shall be responsible for ensuring that all of the success criteria are met to the satisfaction of the Port in consultation with the regulatory agencies, including the CCC.	
Significant Impact 4.8-32: There would be 0.03 acre of permanent impact in the Sweetwater District during Phase I from improvements to the existing E Street along the road easement and SP-4. These impacts would be significant.	See Mitigation Measure 4.8-13 above.	Less than significant
Significant Impact 4.8-33: A bridge is proposed to cross the HP-5 drainage ditch in the Harbor District. This development would result in a permanent indirect impact from bridge shading to 0.03 acre within the City's jurisdiction. This impact would be significant.	See Mitigation Measure 4.8-13 above.	Less than significant
Significant Impact 4.8-34: RWQCB has jurisdiction over all waters of the U.S and isolated waters of the state as mandated by both the federal CWA and the California Porter-Cologne Water Quality Control Act. RWQCB will verify the extent of area under their jurisdiction as part of the permitting process. Impacts to waters under the jurisdiction of RWQCB are significant.	Mitigation Measure 4.8-20 Port: A. Prior to the commencement of grading activities for project components impacting RWQCB jurisdictional waters, the Port or Port tenants, as appropriate, shall prepare and implement a restoration plan detailing the measures needed to create/restore RWQCB jurisdictional waters in accordance with the acreage identified in *Table 4.8-8.* City: B. Prior to the issuance of the first grading permit for project components impacting RWQCB jurisdictional waters, the project developer(s) within the City's jurisdiction shall prepare and implement a restoration plan detailing the measures needed to create/restore RWQCB jurisdictional waters in accordance with the acreage identified in *Table 4.8-8* to the satisfaction of the City. The guidelines for this plan will be developed in consultation with the regulatory agencies. Port/City: C. Prior to the commencement of grading activities for project components impacting RWQCB jurisdictional waters, the Port or Port tenants, as appropriate, and applicants within the City's	Less than significant

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
	jurisdiction shall obtain permits from RWQCB. The permit application process would also entail approval of the restoration plan as described above. Pursuant to the CWA, the Port and other applicants are required to obtain a Section 401 Water Quality Certification permit from RWQCB. Port/City: D. Prior to the commencement of grading activities for project components impacting RWQCB jurisdictional waters, including clearing and grubbing, the Port or Port tenants, as appropriate, and the project developer(s) within the City's jurisdiction shall consult with the RWQCB to determine if Waste Discharge Requirements from the RWQCB shall be required for impacts to isolated waters of the State.	
Significant Impact 4.8-35: The bridge proposed to cross the HP-5 drainage ditch in the Harbor District would result in 0.03 acre of permanent indirect impact to southern coastal salt marsh. This impact would be significant. There would be 0.11 acre of permanent impact in the Sweetwater District during Phase I from improvements to the existing E Street. This consists of impact to 0.06 acre of mulefat/riparian scrub and 0.02 acre of southern coastal salt marsh from development within the road easement and 0.02 acre of mulefat/riparian scrub on Parcel SP-4. These impacts would be significant.	Mitigation Measure 4.8-21 City: A. Prior to issuance of any clearing and grubbing or grading permits for projects that impact City of Chula Vista designated wetlands, the project developer(s) shall acquire mitigation credits or prepare and initiate implementation of a restoration plan for Phase I impacts to mulefat scrub/riparian scrub at a ratio of 2:1 and southern coastal salt marsh at a ratio of 4:1. Mitigation credits shall be secured in a City-approved mitigation bank or other approved location. Verification of mitigation credits or an approved restoration plan shall be provided to the City prior to issuance of any clearing and grubbing or grading permits. Alternatively, completion of Mitigation Measure 4.8-11 will satisfy this mitigation measure as well. The project developer(s) shall prepare and implement a detailed restoration and enhancement plan to the satisfaction of the City for impacts to wetland resources protected under the City's MSCP Subarea Plan. The guidelines for this plan will be developed in consultation with the regulatory agencies. The plan shall summarize the approach taken to avoid and minimize impacts to sensitive habitats, detail the target functions and values, and address the approach to restoring those functions and values. Typically, the restoration plan shall detail the site selection process and propose site preparation techniques, planting palettes, implementation procedures, monitoring and maintenance practices, and establish a performance criteria for each mitigation site. Typical success criteria may include percent canopy cover, percent of plant survival, and percent of native/non-native canopy cover. A minimum five-year maintenance and monitoring period would be	Less than significant

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
	implemented following installation to ensure each area is successful. The restoration plan shall address monitoring requirements and specify when annual reports are to be prepared and what they shall entail. Qualitative and quantitative assessments of the site conditions shall be included. If the mitigation standards have not been met in a particular year, contingency measures shall be identified in the annual report and remediation will occur within three months or the start of the growing season. The City shall be responsible for ensuring that all of the success criteria are met to the satisfaction of the City in consultation with the regulatory agencies. B. Prior to issuance of any clearing and grubbing or grading permits for areas that impact jurisdictional waters, the project developer(s) shall provide evidence to the City that all required regulatory permits, such as those required under Section 1602 of the California Fish and Game Code and the California Water Code Section 13260, have been obtained.	
Significant Impact 4.8-36: the following project components in both Port and City jurisdiction could potentially impact avian flight patterns and habitat use along the project frontage: construction of the RCC on H-3, construction of residential development on H-13 and H-14, construction of a hotel up to 300 feet in height on H-23, and construction of buildings between 90 and 130 feet high on Parcel H-15. Although there are no studies in which it has been identified specific to the West Coast in regards to bird strike impacts, studies conducted in other areas indicate that construction of buildings over 100-feet in height on a project of this size may result in a potentially significant increase in bird strikes within the project area. This impact to both Port and City jurisdiction is significant.	Mitigation Measure 4.8-22 Port/City: Prior to issuance of any building permits, building plans shall be reviewed by a qualified biologist retained by the developer and approved by the Port or the City, to verify that the proposed building has incorporated specific design features to avoid or to reduce the potential for bird strikes, including but not limited to the following: Lighting • No solid red or pulsating red lights shall be installed on or near the building unless required by the Federal Aviation Administration (FAA). • Where lighting must be used for safety reasons (FAA 2000 Advisory Circular), minimum intensity, maximum off-phased (3-second between flashes) white strobes shall be used. • No solid spot lights or intense bright lights shall be used during bird migration periods in the spring (March–May) and fall (August–October). All event lighting shall be directed downward and shielded unless directed downward or shielded to minimize light spill beyond the area for which illumination is required.	Less than significant

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
	• Exterior lighting shall be limited to that necessary and appropriate to ensure general public safety and way finding, including signage for building identification and way finding. • 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. • 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 in unoccupied. • Office space, residential unit 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. Glass and Reflection • Reflective glass or the application of reflective coatings shall not be used on any glass surface, except as may be required for low emittance (low e) coating for energy efficiency under Title 24 of the California Code of Regulations. • Buildings shall incorporate measures to the satisfaction of the Port or the City to indicate to birds that the glass surface is solid by creating visual markers and muting reflection. These measures may include but are not limited to the following: • Glass surfaces that are non-reflective • Glass surfaces that are tilted at a downward angle • Glass surfaces that use fritted or patterned glass • Glass surfaces that use vertical or horizontal mullions or other fenestration patterns • Glass surfaces that are fitted with screening, decorative grills or louvers • Glass surfaces that use awnings, overhangs, bris sole or other exterior sun shading devices • Glass surfaces that use external films or coatings perceivable by birds • Artwork, drapery, banners, and wall coverings that counter the reflection of glass surfaces or block “see-through” pathways. Building Articulation • Design features that reduce or avoid the potential for bird strikes, such as stepped-back building design, protruding balconies, recessed windows, and mullioned glazing systems shall	

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
	be incorporated to the extent feasible. • 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 to the extent feasible. Landscaping • 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. • In small exterior courtyards and recessed areas, the building's edge shall be clearly defined with opaque materials and non-reflective glass. • Interior plants shall be located a minimum of ten feet away from glass surfaces to avoid or reduce the potential for attracting birds. Public Education • The owner or operator of each building shall implement an on-going procedure to the satisfaction of the Port 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. • The owner or operator of each building shall enroll in the Fatal Light Awareness Program's "Bird-Friendly Building Program" and shall implement on-going tenant, resident and guest education strategies, to the satisfaction of the Port 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. Monitoring • For Phase I projects, the project applicant shall retain a qualified biologist to design a protocol and schedule, in consultation with the U.S. Department of Fish and Wildlife and subject to the approval of the Port or City, as appropriate depending on jurisdiction, to monitor bird strikes that may occur during the first twelve months after the completion of construction. Within sixty days after completion of the monitoring period, the qualified biologist shall submit a written report to the Port 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 Port or the	

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
	City, as appropriate depending on jurisdiction, in coordination with the U.S. Department of Fish and Wildlife, will evaluate whether further action is required, which may include further monitoring.	
Significant Impact 4.8-37: Construction of buildings between 100 and 200 feet high within the program-level phases of development, could potentially impact avian flight patterns and habitat use along the project frontage, as well as result in a potential significant increase in the number of bird strikes within the project area. These impacts would be significant.	See Mitigation Measure 4.8-22 above.	Less than significant
4.9 MARINE BIOLOGICAL RESOURCES		
Significant Impact 4.9-1: Construction of the H Street Pier project (in Phase II) would impact 0.4 acre of eelgrass habitat in South Bay from the driving of piles for pier support into shallow subtidal benthic habitat where eelgrass is known to occur, as well as the increased shading that would possibly result in a loss of eelgrass habitat in the area. Impacts to eelgrass are significant and would require mitigation at a ratio of 1.2:1 to reduce impacts to below a level of significance. The project impacts to eelgrass would also conflict with the INRMP and SCEM.	Mitigation Measure 4.9-1 (Mitigation Measure 4.9-1 would mitigate Significant Impacts 4.9-1, 4.9-2 and 4.9-4.) Port: A. Prior to construction of the H Street Pier during Phases II and IV or work within Parcel HW-4, a pre-construction eelgrass survey shall be conducted by a qualified marine biologist to confirm the exact amount of eelgrass to be affected at the time of pile driving operations. The pre-construction survey must be conducted during the period of March through October and would be valid for a period of no more than 60 days, with the exception that surveys conducted in August through October would be valid until the following March 1st. B. Prior to construction of the H Street Pier during Phases II and IV or work within Parcel HW-4, the Port shall establish and implement a plan to create new eelgrass habitat. The loss of eelgrass habitat must be mitigated at a 1.2:1 ratio as described in the SCEMP (NMFS 1991, Revision 11). Impacts to approximately 0.4 acre of eelgrass shall require the creation of approximately 0.48 acre of eelgrass to mitigate losses caused by construction of the H Street Pier.	Less than significant

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
	C. Prior to or concurrent with the completion of the H Street Pier or within Parcel HW-4, the Port shall create new eelgrass habitat at a ratio of 1.2:1 for the actual amount of impacts. This shall be done by removing the existing eelgrass currently located at the proposed H Street Pier site and transplanting it at an appropriate location within the filled area of the existing navigation channel, to the satisfaction of a qualified marine biologist. D. Subsequent to construction of the H Street Pier during Phases II and IV or Parcel HW-4, a post-construction eelgrass survey shall be conducted by a qualified biologist. The post-construction survey shall be conducted within 30 days of the cessation of construction activities to confirm the exact amount of eelgrass affected. The difference between the pre-construction and post-construction eelgrass surveys shall determine the amount of required mitigation. In addition, the Port shall: • Conduct transplant reports following construction (Initial Report). • Conduct monitoring reports at 6, 12, 24, 36, 48, and 60 months post-transplant. Specific milestones and criteria for success are directed in the SCEMP along with guidelines for remedial actions if the success criteria are not met, which would require (based on the absence of other mitigating environmental considerations) a Supplementary Transplant Area to be constructed and monitored for an additional five years. • Initiate mitigation within 135 days of project inception; projects requiring more than 135 days to complete would result in additional mitigation.	
Significant Impact 4.9-2: Construction of the H Street Pier is planned for completion in Phase IV. Although design plans have not been completed, the additional work would result in an increase of 18,000 square feet, or an additional 0.4 acre, of eelgrass impacts if constructed as currently planned. This increased impact to 0.4 acre of eelgrass during Phase IV would be significant. The project impacts to eelgrass would also conflict with the INRMP and SCEM.	See Mitigation Measure 4.9-1 above.	Less than significant
Significant Impact 4.9-3: As part of the navigation channel realignment in Phase IV, channel dredging and filling would temporarily affect approximately 62 acres of soft subtidal	Mitigation Measure 4.9-2	Less than significant

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
habitat, resulting in the loss of 45.9 acres of eelgrass and shallow-water habitat. This loss of eelgrass and shallow-water habitat would be significant and would require mitigation at a ratio of 1.2:1 for eelgrass and 1:1 for shallow-water habitat to reduce impacts to below a level of significance. The project impacts to eelgrass would also conflict with the INRMP and SCEM.	Port: A. An estimated 83 acres of the existing navigation channel shall be filled to -3 to -5.5 feet MLLW. The fill would modify deep and moderately deep open-water habitat to create approximately 83 acres of shallow-water habitat. This area would provide enough transplantable habitat at a depth ideal for eelgrass in this section of the Bay to mitigate for the loss of eelgrass from the channel realignment and completion of the H Street Pier. B. A mitigation plan with an implementation schedule shall be prepared 30 days prior to any construction or dredge activities. The loss of eelgrass habitat shall be mitigated at a 1.2:1 ratio as described in the SCEMP (NMFS 1991, Revision 11). Based on this formula, impacts to 45.9 acres of eelgrass would require approximately 55.1 acres of eelgrass restoration. C. Prior to the commencement of in-water work on the channel realignment, a pre-construction eelgrass survey shall be conducted to confirm the exact area of impact at the time of dredging and fill operations. The pre-construction survey shall be conducted during the period of March through October and would be valid for a period of no more than 60 days, with the exception that surveys conducted in August through October would be valid until the following March 1. D. Subsequent to dredge and fill operations a post-construction eelgrass survey shall be conduced by a qualified biologist. The post-construction survey shall be conducted within 30 days of the cessation of construction activities to confirm the exact area of eelgrass affected. The difference between the pre-construction and post-construction eelgrass surveys shall determine the amount of required mitigation. In addition, the Port shall: • Conduct transplant reports following construction (Initial Report). • Conduct monitoring reports at 6, 12, 24, 36, 48, and 60 months post-transplant. Specific milestones and criteria for success are directed in the SCEMP along with guidelines for remedial actions if the success criteria are not met, which would require (based on the absence of other mitigating environmental considerations) a Supplementary Transplant Area to be constructed and monitored for an additional five years. • Initiate mitigation within 135 days of project inception; projects requiring more than 135 days to complete would result in additional mitigation.	

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
Significant Impact 4.9-4: Reconfiguration of the Chula Vista Harbor in Phase IV would result in a potential loss of up to 775 square feet, or approximately 0.02 acre, of eelgrass during construction of the harbor on Parcel HW-4. Impacts to eelgrass are significant and would require mitigation at a minimum ratio of 1.2:1 to reduce impacts to below a level of significance. The project impacts to eelgrass would also conflict with the INRMP and SCEM.	See Mitigation Measure 4.9-1 above.	Less than significant
Significant Impact 4.9-5: Reconfiguration of the Chula Vista Harbor in Phase IV would involve bulkhead placement on Parcel HW-3 and would result in the loss of about 1,200 square feet (0.03 acre) of intertidal mudflat inside the Marina. In addition, bulkhead placement on the northern side of the Chula Vista Marina would impact approximately 53.82 square feet (less than 0.001 acre) of the existing pickleweed. The project impacts to approximately 0.001 acre of pickleweed, specifically from reconfiguration of the Chula Vista Harbor, would also conflict with the INRMP.	Mitigation Measure 4.9-3 Port: A. Prior to the commencement of harbor improvements on Parcel HW-3, which includes the placement of bulkheads, the Port or Port tenants, as appropriate, shall prepare and initiate implementation of a plan to create new habitat at a ratio of 2:1. Impacts to approximately 0.03 acre of intertidal mudflat shall require the creation of approximately 0.06 acre and less than .001 acre of pickleweed shall require creation of approximately .002 acre of comparable habitat. B. Restoration shall occur in accordance with *Appendix 4.8-12*. At the time project specific designs are proposed for the Phase IV harbor reconfiguration, the mitigation for impacts to intertidal mudflat and pickleweed shall be re-evaluated by the Port during subsequent environmental review pursuant to State CEQA Guidelines Section 15168 to identify the total impact area and required mitigation for the loss of intertidal mudflat and pickleweed. C. Restoration shall occur in accordance with Mitigation Opportunities, *Appendix 4.8-12* to this report, which includes the creation of additional mudflat through the removal of riprap on the Bay shore in the Sweetwater District. As detailed in Mitigation Opportunities, this created habitat would be dominated by pickleweed (*Salicornia virginica*) with subdominants including saltwort (*Batis maritime*), fleshy Jaumea (*Jaumea carnosa*), alkali heath (*Frankenia salina*), and others as list in *Table 4* of *Appendix 4.8-12*. Currently, the mitigation opportunities detailed in *Appendix 4.8-12* are anticipated to be implemented during Phase I. The Port shall verify that the creation of intertidal mudflat satisfies the required mitigation once the final impacts are verified.	Less than significant

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
Significant Impact 4.9-6: Construction of phased improvements for the H Street Pier, the existing South Bay Boatyard Marina, Chula Vista Marina, and the realignment of the navigation channel could increase turbidity by disturbing sediments, which may be contaminated. Increased turbidity and unintentional release of contaminated material can result in temporary direct impacts to water quality and marine resources. Impacts from these construction activities would also conflict with the INRMP and indirectly with the SCEM.	Mitigation Measure 4.9-4 Port: A. Prior to issuance of a permit by USACE for dredge and/or fill operations in the Bay or Chula Vista Harbor, the applicant shall conduct a focused sediment investigation and submit it to USACE and RWQCB for review and approval. The applicant shall then determine the amount of bay sediment that requires remediation and develop a specific work plan to remediate bay sediments in accordance with permitting requirements of the RWQCB. The work plan shall include but not be limited to: dredging the sediment, allowing it to drain, and analyzing the nature and extent of any contamination. Pending the outcome of the analytical results, a decision by RWQCB shall prescribe the requirements for disposition of any contaminated sediment. B. Prior to issuance of a grading permit for marina redevelopment on HW-1 and HW-4, the developer shall submit a work plan for approval by the RWQCB and Port/City that requires the implementation of BMPs, including the use of silt curtains during in-water construction to minimize sediment disturbances and confine potentially contaminated sediment if contaminated sediment exists. If a silt curtain should be necessary, the silt curtain shall be anchored along the ocean floor with weights (i.e., a chain) and anchored to the top with a floating chain of buoys. The curtain shall wrap around the area of disturbance to prevent turbidity for traveling outside the immediate project area. Once the impacted region resettles the curtains shall be removed. If the sediment would be suitable for ocean disposal, no silt curtain shall be required. However, if contaminants are actually present, the applicant would be required to provide to the RWQCB and Port/City an evaluation showing that the sediment would be suitable for ocean disposal.	Less than significant
Significant Impact 4.9-7: Construction of the South Bay Boatyard Marina (at Parcel HW-6) during Phase IV, harbor reconfiguration and marina access navigation channel realignment would require dredging of material that may contain contaminants necessitating storage to enable testing and potential alternative disposal. No storage area for the dredged material, if contaminated, has been identified. This impact would be significant.	Mitigation Measure 4.9-5 Port: For the in-water construction components to be completed in Phase IV, the amount of dredging shall be determined during final design of the marinas and harbor reconfiguration. Prior to any dredging, the Port shall develop and implement a plan for the dredging and storage of material to the satisfaction of responsible resource agencies, including USACE. The storage and/or landside disposal of dredge material shall be performed in accordance with the provisions of Mitigation Measure 4.6-6 and all applicable federal, state, and local regulations.	Less than significant

TABLE 1-9
Summary of Impacts and Mitigation

Impact	Mitigation	Significance After Mitigation
Significant Impact 4.9-8: Construction and operation of the proposed marinas would result in increased artificial lighting compared to existing conditions. The increase in lighting over water areas is considered a significant indirect impact to marine resources, including sensitive species such as eelgrass and turtles within the Bay. This would also conflict with the INRMP and indirectly with the SCEM.	Mitigation Measure 4.9-6 Port: Prior to issuance of Coastal Development Permits, applicants shall submit a lighting plan and photometric analysis to the Port for review and approval. Lighting of all developed areas adjacent to open water shall be directed away from the water, wherever feasible and consistent with public safety. Lighting fixtures shall provide adequate shielding to protect the aquatic habitat and marine life from night lighting. The lighting plan shall illustrate the location of the proposed lighting standards and type of shielding measures. Low-pressure sodium lighting or the equivalent shall be used if feasible and shall be subject to the approval of the Port.	Less than significant
4.10 CULTURAL RESOURCES		
There were no significant impacts to cultural resources identified for the Proposed Project.	No mitigation is required.	N/A
4.11 PALEONTOLOGICAL RESOURCES		
There were no significant impacts to paleontological resources identified for the Proposed Project.	No mitigation is required.	N/A
4.12 HAZARDS AND HAZARDOUS MATERIALS/PUBLIC SAFETY		
Significant Impact 4.12-1: During excavation, construction and demolition activities associated with the Proposed Project, hazardous materials may be encountered within or adjacent to the boundaries of the site in the vicinity of several on-site areas of concern and three off-site areas of concern. Although excavation, demolition, and construction activities are short-term, the potential to encounter contamination during such activities associated with the proposed project is considered a significant impact.	Mitigation Measure 4.12-1 (Implementation of Mitigation Measure 4.12-1 would reduce Significant Impacts 4.12-1, 4.12-3, 4.12-7, 4.12-12, 4.12-13, 4.12-17, and 4.12-18 to below a level of significance.) Port/City: Prior to the issuance of any permit for excavation, demolition, grading, or construction activities in the area described in the relevant permit based on the planned future use, the following shall occur: A. The applicant shall contact the lead regulatory agency (RWQCB/DEH/DTSC) to discuss the appropriate course of action for the area of concern described in the permit based on the planned future site use. Remediation of contaminated soil and/or groundwater in these areas shall meet cleanup requirements established by the local regulatory agency based on the planned future use of the area and shall be protective of human health with regard to future occupants of these areas. The	Less than significant