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Th16d

6-20-0160 (Caltrans/SANDAG)

NOVEMBER 5, 2020

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San Dieguito Restoration Project

SANDAG/JPA/SCE

Memorandum of Understanding (MOU) Basic Terms and Framework

- 1. Recital/Intent/Project Background
 - The San Dieguito River Valley Regional Open Space Park Joint Powers Authority (JPA) and the San Diego Association of Governments (SANDAG) are working together to implement the San Dieguito W-19 lagoon restoration project, which would establish wetland habitat within a specific portion of the lagoon system (W-19) as mitigation for projects identified in the I-5 North Coast Corridor, as well as, the City of San Diego El Camino Real Bridge Widening Project. The W-19 project will also supplement the lagoon restoration project conducted by Southern California Edison (SCE). Long-term land management would be funded through the establishment of an endowment under the agreement between SANDAG and the JPA.
 - SCE is required as a condition of Coastal Development Permit (CDP) 6-81-330, as amended, to substantially restore or create 150 acres of coastal wetlands as part of the mitigation for the San Onofre Nuclear Generating Station Units 2 and 3 (SONGS). SCE is required to restore the aquatic functions of the lagoon through wetland habitat creation and restoration and inlet maintenance. SCE constructed the restoration project in 2012 and is working with the California Coastal Commission (CCC) to meet their mitigation obligations required by CDP 6-81-330.
 - The collective activities of SCE, JPA and SANDAG in the San Dieguito lagoon have been the subject of past Memoranda of Understandings (MOUs) and other agreements by and between some of the parties. The parties acknowledge that this MOU should be consistent with these prior agreements and MOUs.
 - The W-19 project requires a Coastal Development Permit from the CCC.
 - The parties want to coordinate an approach with the CCC that would address tidal muting impacts that the W-19 project may have on SCE's ongoing efforts, as well as address other cooperative efforts.
- 2. SANDAG will design, construct, and provide SCE with 3.9 acres of vegetated marsh habitat within properties commonly known as W-6a and W-6b (collectively W-6) as mitigation for forecast impacts related to tidal muting from the San Dieguito W-19 restoration project and construction of wetlands at W-6. The actual tidal muting impacts on SCE's restoration project from the W-19 restoration project shall be monitored for 5 years following the completion of that project. If the acreage of actual impact exceeds 3.9 acres, then the acreage to be provided to SCE hereunder will include additional area restored at W-6 as set forth in Paragraph 4 below. Monitoring will be conducted by SANDAG in a manner that can be shared with SCE to measure tidal inundation and water surface elevations within SCE wetland modules W-4/W-16 and confirm muting effects. Methodology to assess acreage of actual tidal muting impacts is set forth in the attached

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"Methodology to Address MOU Terms" ("MOU Methodology"), and which is incorporated as part of the MOU.

3. Within the W-6 restoration area, a total of 13.5 acres will be restored, including 7.7 acres of vegetated marsh (see table below). SANDAG will construct the site to compensate SCE in two different ways: for predicted tidal muting within the W4/W16 modules of the San Dieguito Lagoon Restoration Project area and as compensation for any future restoration rights SCE may have within the W-19 project limits.

<u>Muting</u> - As noted above, up to 3.9 acres of vegetated marsh habitat is anticipated to be required to compensate for tidal muting impacts within W-4/W-16. If actual muting impacts exceed the predicted 3.9 acres, SANDAG may use up to an additional 1.0 acre of vegetated marsh habitat as compensation, for a total commitment of 3.9-4.9 of the 7.7 acres of vegetated salt marsh dedicated to potential compensation for tidal muting with the W-4/W-16 wetland area.

Future Restoration Rights - Remaining acreage (4.5-5.5 acres of various wetland habitat types, as well as 4.1 acres of transitional/upland) will be accepted by SCE as compensation for any future restoration rights it may have within the W-19 site. SANDAG will design and construct the restoration area in addition to securing all necessary access rights.

SCE will have reasonable rights of review and approval regarding the final design of the W-6 restoration project. In addition to the habitat acreages to be provided to SCE under this and the previous paragraph, SCE shall also be provided with adequate rights of access across other adjacent or nearby areas (including but not limited to SCE access rights for future channel maintenance) upon completion of construction, required to assure continued future tidal flow to the SCE acreage.

W-6 Habitat Type	Restoration Acreage	SCE Compensation Type	Acreage f Compen	for SCE isation
Vegetated Wetlands	7.7	Potential Tidal Muting Effects	3.9-4	4.9
-		Available to	2.8-3.8	
Remaining Wetlands (mudflat/subtidal)	1.7	Compensate for Future Restoration Rights	1.7	4.5- 5.5 ¹
Transitional/Upland	4.1		4.1	
Total	13.5	Total	13.	5

¹This acreage is subject to change depending on actual tidal muting impacts; it shall be deemed adequate compensation for SCE future restoration rights if it continues to exceed 4.5 acres.

4. Upon completion of construction of W-6, and SCE's approval of the constructed wetlands, which shall not be unreasonably withheld or delayed beyond the two-year period described below, SCE will relinquish any restoration rights it may have now or in the future to W-19 and assume full responsibility for all monitoring, management and maintenance of the W-6 wetlands. SCE shall have a period of two years following completion of the W-6 construction work to monitor and assess the W-6 wetlands to assure their proper

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functioning and adequate survival of vegetation, during which SANDAG will continue to maintain the site. Monitoring will be conducted by SANDAG in a manner that can be shared with SCE to measure tidal inundation and vegetation establishment within W-6, in accordance with the MOU Methodology. If after two years the W-6 site does not meet the interim standards as outlined in the MOU Methodology, SANDAG will coordinate with SCE on identifying remedial actions needed to reach those standards. SANDAG would be responsible for maintenance and monitoring until the W-6 site meets those interim standards. Any disagreement would be resolved following provisions outlined under paragraph 13 (Dispute Resolution) below.

- 5. The JPA will support restoration of W-6b as consistent with the January 18, 2007 Open Space Conservation Easement Deed between the JPA and 22nd District Agricultural Association ("DAA") to the extent necessary, in which case the parties will jointly cooperate in the attainment of formal authorization of W-6b from the DAA and Coastal Commission. Furthermore, the parties acknowledge that permission from the State Lands Commission may be necessary before any construction occurs within W-6a.
- 6. Caltrans will procure a Construction Manager/General Contractor (CMGC) to construct the San Dieguito W-19 Lagoon Restoration Project, including restoration efforts within the W-6 site.
- 7. After performance measure requirements are met by SCE for the W-6 site, long-term management of W-6 will be performed by the JPA with SCE providing funding in the form of a non-wasting endowment in an amount to be determined in a manner that is consistent with the remainder of the SCE San Dieguito Restoration Project.
- 8. To mitigate for the loss of sand from the coastal sediment budget due to the increased entrainment of material in the San Dieguito inlet, the W-19 project will deepen the sand trap created and maintained by SCE in the river channel bottom. The sand trap will be deepened between Camino Del Mar and the railroad within Area 1 of the designated dredge area for SCE. The sand trap will be dredged on a periodic basis and approximately 4,200 cubic yards of material will be removed from the river channel and placed on the beach within the vicinity of the San Dieguito River inlet. This work will be performed by SCE concurrent with the inlet maintenance that is covered under SCE's existing permits.
- 9. The parties anticipate the SCE's inlet maintenance will occur on a schedule that averages once every two years. Accordingly, SANDAG will provide SCE a lump sum payment, in the form of a non-wasting endowment that the parties agree is sufficient to generate \$125,000 every two years to be available to cover the cost of the additional sand trap dredging as described above. This lump sum payment shall be negotiated in good faith by SANDAG and SCE. SCE shall provide an accounting of the actual costs incurred to complete sand trap dredging each year to SANDAG and the JPA. Once every 5 years, the parties shall assess whether the endowment funds are sufficient to cover actual costs. If a review shows that the endowment is not adequate, the parties shall negotiate an endowment adjustment to adequately cover costs. If any unforeseen or catastrophic event occurs within the 5-year period, the parties agree to review the endowment prior to that 5-year timeframe. The obligation to assess the endowment amount shall cease at the time the JPA assumes responsibility for maintenance of the SCE Restoration Project including W-6. Transfer of



these maintenance and monitoring responsibilities are outlined in accordance with the terms of the 1991 Memorandum of Agreement (MOA) between SCE and the JPA as amended August 1, 2005.

- 10. SANDAG agrees to work with the City of San Diego and SCE to transfer permit responsibilities for Disposal Site (DS 36) and associated haul route.
- 11. All parties agree to collaborate on monitoring and share data, including modeling data for W-6.
- 12. All parties agree to collaborate on obtaining permits including continued coordination with the California Coastal Commission in obtaining the W-19 Coastal Development Permit (CDP) and SCE's CDP amendment.
- 13. Dispute Resolution

a. Technical Disputes. To the extent of any dispute with respect to any technical element of the MOU, including disputes with regard to Paragraphs 2 and 4 of this MOU, or implementation of the MOU Methodology, the following procedure shall apply:

- i. Informal Resolution: Within fourteen days of the date a party in writing notifies the other parties of a dispute, staff designated by each party shall meet and confer and attempt to resolve the dispute.
- ii. Scientific Advisory Committee: If within fourteen days after staff meet and confer, or longer period as may be agreed to by all parties, the dispute has not been resolved, the dispute shall be referred to the I-5 North Coast Corridor Scientific Advisory Committee ("NCCSAC") and San Dieguito Project's Scientific Advisory Panel (SAP) for resolution. Procedures for dispute resolution by the NCCSAC and SAP shall be agreed to in good faith by the parties in coordination with the Resource Enhancement Mitigation Program (REMP) and NCCSAC.
- iii. A consensus decision by the NCCSAC and SAP shall be binding and is not subject to review or appeal.
- iv. In the event the NCCSAC and SAC are unable to reach consensus, the parties shall jointly refer the technical dispute to an independent expert qualified as a wetland expert with specific knowledge and experience with regard to saltmarsh habitat. The parties shall meet and confer in good faith to select such expert. In the event the parties are unable to reach an agreement as to the selection of the independent expert, the NCCSAC and SAP shall jointly select a qualified independent expert. The decision of the independent expert. The decision of the independent expert shall be binding and is not subject to review. The fees and costs charged by the independent expert shall be shared equally by the parties.

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b. Non-Technical Disputes: For any dispute that is not a dispute concerning a technical element of the MOU, the following procedures shall apply:

- i. Meet and Confer: Within fourteen days of the date a party in writing notifies the other parties of a dispute, the parties shall meet and confer and attempt to resolve the dispute.
- ii. If the dispute is not resolved by staff within fourteen days after staff meet and confer, or longer period as may be agreed to by the disputing parties, the dispute shall be elevated to the management level of each disputing party.
- iii. Mediation: If within fourteen days after the dispute is elevated to management level, or longer period as may be agreed to by the parties.
- iv. Legal/Administrative Action: If the parties are unable to reach an agreement through mediation, then any party may seek any available administrative remedy, or remedy at law or equity.

14. General Provisions

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Methodology to address MOU Terms

Updated: September 29, 2020

The MOU dated _______between SANDAG, the JPA, and SCE identifies monitoring obligations to confirm muting effects of the San Dieguito Lagoon W-19 Restoration Project and to ensure the W-6 site is designed and constructed in a manner that will lead to successful restoration per existing SCE permit conditions. MOU terms 3 and 5 include required monitoring, with methodologies to be agreed upon by SCE and SANDAG prior to project implementation. Proposed methodologies for those two terms are detailed below for review and confirmation by SCE.

3. Tidal Muting monitoring will be conducted by SANDAG in a manner that can be shared with SCE to measure tidal inundation and water surface elevations within W4/W16 and determine muting effects (5-year period).

SANDAG will conduct continuous water level monitoring to directly assess tidal muting impacts within W-4/W-16 throughout the pre- and post-construction monitoring period. The tide gauge (RBR Pressure Sensor) currently deployed in W-4 will remain and be used in combination with one additional RBR Pressure Sensor to be deployed near either the North County Transit District (NCTD) Railroad Bridge or Jimmy Durante Boulevard, depending on field conditions and required permissions. The feasibility of shifting the gauge further from the W-4 inlet will be assessed, but placement requires a location approximately 1 foot deep at the lowest tide condition to enable accurate measurement, including measurement of the lowest tide condition. Modeling shows that differences between the W-4 and W-16 site are anticipated to be negligible and well within the sensitivity of the sensor. If feasible, an additional gauge will be placed for a period of up to 2 weeks prior to construction further in the W-16 site to confirm these results. Deployed gauges will capture tidal conditions pre-project, during construction, and the 5-year post-construction monitoring period. The monitoring data will be downloaded from the gauge bi-monthly and shared with SCE.

Monitoring will be continuous during the pre- and post-construction periods. A subset of data will be selected to assess actual muting impacts attributable to the San Dieguito Lagoon W-19 Restoration Project based on the following methodology:

- 1. Pre-construction Baseline Establishment
 - a. In order to establish a pre-construction baseline from the larger continuous dataset, the team will compare ocean tides recorded by NOAA during the pre-construction (W-19 construction) monitoring period and post-construction monitoring period; and select a comparison period that includes a minimum of 2-weeks during which the ocean tidal series are similar between the pre- and post-construction periods. (This step establishes a similar ocean tidal condition, as the tidal series are never exactly the same). This comparison period must have similar tidal elevations but may occur at different times due to tidal series changing over years (e.g., if the pre-construction tidal monitoring occurred in February to capture a spring tide series it may occur at an earlier or later time in subsequent years). While the comparison period may be longer depending on the availability of data with enough similarity,

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the selection of a 2-week comparison period is a minimum to be used and is representative of a long-term complete tidal epoch of 19 years. The selected comparison period shall be submitted to the Coastal Commission for approval. The Coastal Commission shall provide approval no more than one month from submittal.

- b. Determine the tidal muting at W-4 during the selected pre-construction period. This step determines the pre-project muting within W-4/W-16 due to the existing lagoon conditions. The pre-construction inundation frequency curve over the identified period will be plotted for comparison after construction to assess impacts within the W-4/W-16 modules.
- c. Track water elevations at/near Railroad/Jimmy Durante Bridge using an additional gauge to ensure river inlet conditions can be accounted for during pre-/post-construction comparison.
- 2. Post-Construction Condition Assessment
 - a. The post-construction period will begin after grading within the W-19 Project site (including W-6 restoration) is complete and the inlets open to tidal circulation.
 - b. While data will continue to be collected continuously, the data will be analyzed annually to confirm tidal muting effects of the project within the SCE W-4/W-16 modules.
 - c. The ocean tides being recorded by NOAA during the same post-construction period will be analyzed to identify a period during which similar tides occur with a similar average spring neap tidal series as that used for the pre-construction period. Similar river inlet conditions will also be a part of this selection process. While a minimum of a 2-week period is identified as necessary to capture sufficient tidal data, if a longer period can be identified during which similar tide and river inlet conditions occur, it may be extended to capture additional tide cycles. The subset of data being recorded continuously in W-4 from the selected comparison period will be used to represent the post-construction conditions. The selected comparison period shall be submitted to the Coastal Commission for approval. The Coastal Commission shall provide approval no more than one month from submittal.
 - d. The W-4 inundation frequency curve over the identified comparison period will be plotted and compared with the pre-construction inundation curve to assess impacts within the W-4/W-16 modules.
 - e. Since the ocean inlet is highly dynamic, sedimentation or flood shoal conditions as well as maintenance dredging volume and frequency could also impact the tidal range in the San Dieguito hydraulic system. Hence, tides recorded at/near the Railroad/Jimmy Durante Bridge gauge for both pre- and post- construction periods will be analyzed and compared to help assess whether the additional muting is due to the sedimentation in the ocean inlet, lack of inlet maintenance, etc.
 - f. Ocean tidal series over time are never exactly the same, even at the same location. If it is difficult to identify an adequate comparison period with tidal series similar to the W-19 modeled tidal series, then the following procedure will occur in #3 below.

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- 3. Identify Differences and Impacts
 - a. This step will compare tidal range and tidal inundation frequency in W-4 during the comparison period defined above (between the pre- and post-construction conditions) to determine whether the additional muting in W-4 is within the range predicted in the W-19 study. The difference in the tidal inundation frequency between the pre- and post-construction comparison period will represent the absolute tidal muting associated with construction of the W-19 restoration project. To assess the acreage of lost vegetated marsh associated with that muting, SANDAG will utilize the 4.5 NGVD isopleth survey data from SCE, and conduct a similar survey at a lower elevation determined by the absolute calculated muting (e.g. if muting is calculated to be 0.2 feet within W4/W16, a survey of the 4.3 NGVD isopleth will be conducted). The difference along the slope within W4/W16 between the two surveys will represent the acreage of muting to be compensated through construction of W6.
 - b. If the difference is within the range of the predicted impacts, no additional action is required. As noted above, topographic surveys within the W-4/W-16 modules will establish the difference in area along the slopes that are affected by implementation of W-19. A graphic will be provided to illustrate the areas subject to muting within the W-4/W-16 SCE restoration area.
 - c. If the difference exceeds the predicted impacts, data recorded at/near the Railroad or Jimmy Durante Bridge will be reviewed and analyzed to rule out that the additional muting is not result of the inlet maintenance or other factors.
- 4. Annual Report
 - a. An annual impact assessment report will be prepared by SANDAG to document recorded data, data analyses, and impact assessment results and be shared with SCE. The report will also be submitted to the CCC Executive Director.
- 5. SCE shall have a period of two years following completion of the W-6 construction work to assess the W-6 wetlands to assure proper functioning and adequate survival of vegetation, during which SANDAG will continue to maintain the site. Monitoring will be conducted by SANDAG in a manner that can be shared with SCE to measure tidal inundation and vegetation establishment within W-6 (2-year period).

SANDAG will conduct quantitative monitoring within restored salt marsh areas of W-6 after construction to confirm as-built elevations are correct and to establish vegetated marsh habitat as designed. Vegetation establishment will also be confirmed using interim standards, as detailed below. Biological and physical parameters to be monitored include the following:

- a) Vegetative Cover
- b) Tidal Inundation

Tables 1 and 2 detail the interim standards that must be met for W-6 to satisfy project requirements prior to acceptance by SCE for long term maintenance and monitoring.



Salt Marsh Vegetation Performance Standard	Measurement	Plant Establishment Period (Year 1)	Year 2
Native Cover (Low, Mid, and High Marsh) (Absolute)	Visual Assessment (Aerial Imagery)	N/A	Each 10 x 10 m grid at least 10% cover and mean cover of at least 20% for all grids
Nonnative Cover (Low, Mid, and High Marsh) (Absolute)	Releve	<5% overall, <1% target invasive species onsite	<5% overall, <1% target invasive species onsite
Container Plant Survival (Absolute)	Estimation of Living Plants	90%	70%

Table 1Salt Marsh Vegetative Cover Standard

Table 2Salt Marsh Function Standard

Salt Marsh Function Performance Standard	Measurement	Years 1 and 2
	Time-lapse photography	W-6 inlet/outlet remains open, no
	taken over a 1-month	substantial erosion or aggradation
Tidal Inundation	period during the	observed, tertiary channels continue to
I luar munuation	summer; tidal elevation	develop, photographic evidence of
	data for two months (tidal	complete tidal cycle/elevation to support
	gauge)	habitat within planned breaks*

*Assumes the San Dieguito River inlet continues to be maintained by SCE to prevent substantial shoaling within the lagoon, which could affect tidal inundation within the W-6 Restoration Site

a) Vegetative Cover

Native Cover

Salt Marsh Vegetation

A visual assessment of coverage in proposed vegetated marsh areas will be completed. The site will be segmented into a series of modified 10 meter by 10 meter grid squares within vegetated marsh area. Portions of each grid not proposed to be vegetated marsh will be removed from the total area being used to estimate cover (e.g. open water, mudflat, transitional, upland). Assessment of coverage within the site will be conducted using high resolution aerial mapping, with focused ground verification as needed. At the time of transfer, the area is not anticipated to meet existing SCE required permitted success criteria, rather that it is on a trajectory that will result in meeting those success criteria after transfer. If visual assessment of cover within each grid (10 x 10 meters) achieves at least 10% cover and an average for all grids of at least 20% cover at the end of Year 2, vegetation will be considered to be establishing successfully. If vegetation cover as defined above is not met at the end of Year 2, remedial measures will occur to provide adequate coverage prior to transfer (i.e., supplemental planting, decompaction, hand dug channels, etc.).



In addition, a species inventory for the vegetated marsh areas will be conducted within each habitat band (low, mid, and high marsh) to identify native and nonnative species and assesses survival of individual species. An assessment of native and non-native cover will be performed using the Releve method.

Transitional

Within the transitional planting areas, point intercept and quadrat monitoring will be used to assess native cover, nonnative cover, and species richness. Four 50-meter-long transects will be established in transitional habitats. In addition to collecting point-intercept data, 0.5-meter-squared quadrats will be sampled every 5 meters, alternating sides, along each transect, for a total of 10 quadrats per transect. Species and density (count) of each species encountered will be recorded for each quadrat.

The native cover performance standards for Years 1 and 2 are 15% and 25% respectively. No further interim performance criteria have been included specific to SCE.

Upland

Within the planted CSS areas point intercept and quadrat monitoring will be used to assess the progress of native cover, nonnative cover, and species richness. Four 50-meter-long transects will be established in the CSS habitats onsite. In addition to collecting point-intercept data, 0.5-meter-squared quadrats will be sampled every 5 meters, alternating sides, along each transect, for a total of 10 quadrats per transect. Species and the density (count) of each species encountered will be recorded for each quadrat.

The same methodology will be used to collect data from a nearby CSS reference site (La Costa Preservation Site) and data will be collected within the same timeframe and by the project restoration ecologist. The La Costa Preservation Site is proposed as a reference site due to local proximity, high-quality CSS habitat, and ease of access.

The native cover performance standards for Years 1 and 2 are 35% and 45% of the reference site, respectively. No further interim performance criteria have been included for SCE.

Nonnative Plant Species – All Habitats

Control of nonnative species cover will be managed to avoid affecting habitat function within the mitigation site. Vegetation will be considered adequate for transfer to SCE when no more than 1 percent coverage is achieved for perennial invasive species, and no more than a total of 5 percent coverage for annual invasive species occurs.

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Container Plants

Within the restoration site, monitoring will include annual container plant survival estimates for the first 2 years and shall be performed in the summer (at the same time that vegetative cover is assessed), to allow for sufficient time to allow for appropriate replacement planting. At the end of year 2, if container plant survival is at the levels identified below for each planted habitat, the site will be considered to be performing.

- Salt Marsh 70% of the number of container plants of the original installation
- Transitional/Upland 95% of the number of container plants of the original installation

b) Tidal Inundation

Tidal influence will be monitored through time-lapse photography of vegetated wetland areas as well as tidal elevation monitoring. Time lapse photography will be used to confirm slopes planted as vegetated marsh are inundated at appropriate frequencies and with specific tide conditions. Photography will occur over a month-long period each year during the summer months with extreme spring tides (spring tides occur when the sun, earth, and moon align, and are not tied to the spring season). Photos will be taken every 30 minutes from 4 vantage points on the surrounding berm over a month period. Additionally, tidal hydrology will be monitored during quarterly monitoring visits and evidence of regular tidal exchange (i.e., accumulation of wrack) will be recorded.

Tidal elevation monitoring will be conducted through a tide gauge installed under or adjacent to the access road within the main channel of W-6. Tide information will be collected consistent with MOU Term 2 above to confirm design elevations for vegetated marsh areas (see below), but will be analyzed over a period of 2 months. The site will be considered to be properly functioning if the W-6 inlet/outlet remains open (in the absence of extreme storm events, defined as a 25-year storm event or large), no substantial erosion or aggradation is observed affecting the inundation of vegetated marsh areas, and photographic and tidal elevation evidence confirms complete tidal cycles, dependent on the tidal prism measured at/near the railroad bridge.

Proposed habitat areas will be constructed within predicted habitat elevation breaks based on modeling conducted for the W-19 project. Table 3 identifies predicted habitat elevation bands for habitat types.

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Habitat Type	Lower Habitat Elevation Break (ft. NGVD29)	Upper Habitat Elevation Break (ft. NGVD29)
Open Water	-2.0	0.1
Mudflat	0.1	1.5
Low Salt Marsh	1.5	2.1
Mid Salt Marsh	2.1	2.9
High Salt Marsh	2.9	3.3
Transitional	3.3	9.0
Upland	9.0	N/A

Table 3Planned Habitat Elevation Range within W6

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500 250 0 500 Feet Scale: 1:6,000 1 Inch = 500 feet

W-6 Addendum, San Dieguito Lagoon W-19 Restoration Project EIR Path: Pt. (6057/60578595, SDW19, TO5, P3900-CAD-GIS920 GISmap, docs/mxd/Reports/W6 Addendum/Utilities.mxd, 5/1/2020, paul.moreno







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