

APPENDIX C

PLANT ESTABLISHMENT PERIOD MEMORANDUM

Memorandum

Prepared by Nature Collective,
Moffatt & Nichol, AECOM, Merkel & Associates,
and Nordby Biological Consulting

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| To | Tim Stillinger, Nature Collective |
| Subject | San Elijo Lagoon Restoration Project Plant Establishment Period Memorandum |
| From | Cindy Kinkade, AECOM |
| Date | July 2021 |

Introduction

The San Elijo Lagoon Restoration Project has been implemented by Nature Collective, San Diego Association of Governments, and California Department of Transportation District 11 to enhance and restore the physical and biological functions and services of San Elijo Lagoon. These efforts included increasing hydraulic efficiency in the lagoon, improving pre-construction water quality impairments, and halting ongoing conversion of unvegetated wetland habitats (mudflat) to vegetated salt marsh with the goal of restoring a more connected gradient of balanced habitat types. Success of the restoration effort is being measured through the implementation of a monitoring program developed in coordination with various permitting and approval agencies, including the California Coastal Commission, the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the California Regional Water Quality Control Board. This report documents the results of the 240-workday plant establishment period (PEP) for the San Elijo Lagoon Restoration Project per contract requirements.

Approach

After restoration installation and planting were completed in June 2020, the 240-workday PEP began. During the 240-workday PEP, the restoration contractor provided regular maintenance of the restoration site. In the late fall of 2020 and prior to the end of the 240-workday PEP, installed container plants were assessed to determine the number of container plants that had died or required replacement.

Results

The 240-workday PEP was completed in June 2021. The number and species of plants installed in each habitat type are presented in Table 1-1; this includes the number of plants initially installed and the number of plants that were installed as replacement plants.

Table 1-1 Container Plants Replanted in Early 2021

| Mid-Marsh Replacement Planting | | | | |
|---|-----------------------|-----------------------|---------------------|---------------------------|
| Scientific Name | Common Name | Container Size | Original Qty | Replacement Plants |
| <i>Batis maritima</i> | saltwort | rosepot | 2,296 | 700 |
| <i>Jaumea carnosa</i> | salty Susan | rosepot | 3,444 | 1,000 |
| <i>Limonium californicum</i> | sea lavender | rosepot | 1,722 | 1,000 |
| <i>Salicornia pacifica</i> | pickleweed | gallon | 0 | 1,500 |
| <i>Suaeda esteroa</i> | estuary sea blight | rosepot | 1,557 | 0 |
| <i>Suaeda esteroa</i> | estuary sea blight | gallon | 0 | 250 |
| Total | | | 9,019 | 4,450 |
| High Marsh Replacement Planting | | | | |
| Scientific Name | Common Name | Container Size | Original Qty | Replacement Plants |
| <i>Arthrocnemum subterminale</i> | Parish's pickleweed | rosepot | 3,416 | 0 |
| <i>Arthrocnemum subterminale</i> | Parish's pickleweed | gallon | 0 | 900 |
| <i>Cressa truxillensis</i> | alkali weed | rosepot | 257 | 0 |
| <i>Distichlis spicata</i> | salt grass | rosepot | 2,135 | 350 |
| <i>Distichlis littoralis</i> | shoregrass | rosepot | 1,667 | 275 |
| <i>Frankenia salina</i> | alkali heath | rosepot | 5,125 | 0 |
| <i>Frankenia salina</i> | alkali heath | gallon | 0 | 2,000 |
| <i>Juncus acutus</i> ssp. <i>leopoldii</i> | spiny rush | gallon | 145 | 0 |
| <i>Limonium californicum</i> | sea lavender | gallon | 426 | 200 |
| <i>Suaeda taxifolia</i> | woolly sea blight | rosepot | 257 | 0 |
| Total | | | 13,428 | 3,725 |
| Upland Transitional Replacement Planting | | | | |
| Scientific Name | Common Name | Container Size | Original Qty | Replacement Plants |
| <i>Adolphia californica</i> | adolphia | gallon | 67 | 0 |
| <i>Leptosyne maritima</i> | sea dahlia | gallon | 135 | 350 |
| <i>Distichlis spicata</i> | salt grass | rosepot | 2,689 | 175 |
| <i>Distichlis littoralis</i> | shoregrass | rosepot | 1,543 | 150 |
| <i>Encelia californica</i> | bush sunflower | gallon | 270 | 0 |
| <i>Frankenia salina</i> | alkali heath | gallon | 3,026 | 0 |
| <i>Isocoma menziesii</i> | goldenbush | gallon | 384 | 50 |
| <i>Iva hayesiana</i> | San Diego marsh elder | gallon | 472 | 353 |
| <i>Lycium californicum</i> | coast desert thorn | gallon | 270 | 150 |
| <i>Peritoma arborea</i> | bladderpod | gallon | 202 | 222 |
| Total | | | 9,058 | 1,450 |

Notes: Cordgrass was not included in this assessment because the survival of transplanted cordgrass cannot be determined until approximately 1 year after installation as this species frequently dies back above ground, but rhizomes continue to grow below ground.

Discussion

After the fall 2020 assessment, it was determined that approximately 50% of the 22,447 container plants installed in the mid- and high salt marsh were dead or missing, and in the transitional habitat areas approximately 26% of the 9,058 container plants were dead or missing. Within planted salt marsh, many of the plants identified as dead may have actually been dormant and only appeared dead or highly stressed. In all areas, it was difficult to determine if missing plants were actually missing, or were alive but hidden within areas of extensive natural recruitment or under accumulations of wrack. Due to the potential natural dormancy and extensive natural recruitment, the restoration team agreed that only bare and open areas would need to have container plants replaced. A total of 4,450 container plants were installed in mid-marsh, 3,725 container plants were installed in high marsh, and 1,450 container plants were installed in transitional areas. After replacement planting, a final assessment was conducted. The 240-working day PEP was approved as complete in June 2021.

