### DRAFT INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

## Ponto Sewer Manhole Rehabilitation Project

PROJECT NO. SDP2024-0014, CDP2024-0019, HMP2024-0007 (PUB2022-0007)



LEAD AGENCY:

#### City of Carlsbad

1635 Faraday Avenue Carlsbad, California 92008 *Contact: Eric Lardy* 442.339.2712

#### TABLE OF CONTENTS

1.	PROJ	PROJECT NAME:1							
2.	PROJECT NO:1								
3.	LEAD	LEAD AGENCY:							
4.	PROJ	ECT APPLICANT:	1						
5.	LEAD	AGENCY CONTACT PERSON:	1						
6.	PROJ	ECT LOCATION:							
7	GENE	ERAL PLAN LAND LISE DESIGNATION:	1						
·.			⊥						
8.	ZONI	NG:	1						
9.	PROJ	ECT DESCRIPTION:	1						
10.	ENVI	RONMENTAL SETTING/SURROUNDING LAND USES:	3						
11.	OTHE	R REQUIRED AGENCY APPROVALS	4						
12.	CALIF	FORNIA NATIVE AMERICAN TRIBES CONSULTATION:	4						
13.	PREV	IOUS ENVIRONMENTAL DOCUMENTATION:	5						
14.	SUMI	MARY OF ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:	5						
15.	PREP	ARATION:	5						
16.	DETE	RMINATION:	6						
17.	ENVI	RONMENTAL DETERMINATION:	6						
18.	APPL	ICANT CONCURRENCE WITH MITIGATION MEASURES:	6						
19.	EVAL	UATION OF ENVIRONMENTAL IMPACTS:	7						
	Ι.	AESTHETICS							
	١١.	AGRICULTURAL AND FORESTRY RESOURCES*							
	III.	AIR QUALITY*							
	IV.	BIOLOGICAL RESOURCES							
	۷.	CULTURAL RESOURCES							
	VI.	ENERGY							
	VII.	GEOLOGY AND SOILS	80						
	VIII.	GREENHOUSE GAS EMISSIONS							
	IX.	HAZARDS AND HAZARDOUS MATERIALS							
	Х.	HYDROLOGY AND WATER QUALITY							
	XI.	LAND USE AND PLANNING							
	XII.	MINERAL RESOURCES							
	XIII.	NOISE							

21	EARLI	ER ANALYSIS USED AND SUPPORTING INFORMATION SOURCES	
20.	LIST O	F MITIGATION MEASURES	
	XXI.	MANDATORY FINDINGS OF SIGNIFICANCE	
	XX.	WILDFIRE	
	XIX.	UTILITIES AND SERVICE SYSTEMS	
	XVIII.	TRIBAL CULTURAL RESOURCES	
	XVII.	TRANSPORTATION	
	XVI.	RECREATION	
	XV.	PUBLIC SERVICES	
	XIV.	POPULATION AND HOUSING	

#### APPENDICES

- A Air Quality and Greenhouse Gas Emissions Analysis from Nicholas Lorenzen, Air Resource Specialist, Dudek, dated March 11, 2024
- B Memorandum Regarding Biological Resources Report for the Ponto Sewer Manhole Rehabilitation Project from Rosanne Humphrey, Senior Program Manager, Habitat Management Division, City of Carlsbad, dated September 18, 2024
- C Cultural Resources Survey Report from Makayla Murillo, Keshia Montifolca, Brad Comeau, and Micah Hale, Archeologist, Dudek, dated November 21, 2023
- D Construction Noise and Vibration Assessment from Connor Burke, Environmental Acoustician, Dudek, dated July 10, 2023

#### FIGURES

1	Project Location	9
2a	Project Site Jurisdictional Boundaries	. 10
2b	Project Site	. 11
3	Manhole Rehabilitation – Typical Section and Detail	. 12
4	Manhole Frame and Cover Typical Sections	. 13
5	Existing Easements	. 14
6	Poinsettia Station Vernal Pool Preserve	. 15
7	California Coastal Commission Appeal and Permit Jurisdiction	. 16
8a	Vegetation Communities	. 35
8b	Vegetation Communities	. 36
9a	Vernal Pool Species 2023	. 38
9b	Vernal Pool Species 2023	. 39
10a	Impacts to Aquatic Resources	. 41
10b	Impacts to Aquatic Resources	. 42
10c	Impacts to Aquatic Resources	. 43

11a	Biological Resources Impacts	. 54
11b	Biological Resources Impacts	. 55
11c	Biological Resources Impacts	. 56
11d	Biological Resources Impacts	. 57
11e	Biological Resources Impacts	. 58
11f	Biological Resources Impacts	. 59
11g	Biological Resources Impacts	. 60
11h	Biological Resources Impacts	. 61

#### TABLES

1	Construction Scenario Assumptions	27
2	Estimated Maximum Daily Construction Criteria Air Pollutant Emissions	27
3	Vegetation Communities within the Project Site (Acres)	34
4	Special Status Species Identified within the Project Site	37
5	Summary of Potentially Jurisdictional Aquatic Resources Occurring within the Biological Study Area	40
6	Special Status Plant Species within the Project Site	49
7	Special-Status Wildlife Species within the Project Site	50
8	Temporary Impacts to Sensitive Vegetation Communities	53
9	Estimated Annual Construction Greenhouse Gas Emissions	86
10	Measured Baseline Outdoor Ambient Noise Levels	105
11	Typical Construction Equipment Maximum Noise Levels	107
12	Estimated Distances between Construction Activities and the Nearest Noise- Sensitive Receptors	107
13	Predicted Construction Noise Levels per Activity Phase	108



- 1. PROJECT NAME: Ponto Sewer Manhole Rehabilitation Project
- 2. PROJECT NO: SDP2024-0014, CDP2024-0019, HMP2024-0007 (PUB2022-0007)
- 3. LEAD AGENCY:

City of Carlsbad 1635 Faraday Avenue Carlsbad, California 92008

#### 4. PROJECT APPLICANT:

City of Carlsbad, Public Works Utilities Department 5950 El Camino Real Carlsbad, California 92008

- 5. LEAD AGENCY CONTACT PERSON: Eric Lardy, City Planner, 442.339.2600, eric.lardy@carlsbadca.gov
- 6. PROJECT LOCATION: The (Project) site is located within the North County Transit District (NCTD) right-of-way and Waters End Homeowners Association (HOA) conservation easement located between Avenida Encinas and Poinsettia Lane in the City of Carlsbad (city) (Assessor's Parcel Numbers [APNs] 214-150-08, 214-150-11, 214-150-12, and 214-610-58) (Figure 1, Project Location, and Figure 2a, Project Site Jurisdictional Boundaries). The Project site, defined by the Project boundary shown in Figure 2b, encompasses a total area of 11.71 acres. Within the Project site, the area of direct impact, consisting of nine manholes and access areas, covers a total area of 0.13 acres, while the review area, which includes the area of direct impact plus a 50-foot surrounding buffer, covers a 3.29-acre area (Figure 2b, Project Site).
- **7. GENERAL PLAN LAND USE DESIGNATION:** Residential, 15–23 units/acre (R-23), Public (P), Transportation Corridor (TC), Open Space (OS)
- **8. ZONING:** Residential Density-Multiple, Qualified Development Overlay Zone (RD-M-Q), Transportation Corridor (T-C), Transportation Corridor/Open Space (T-C/OS), Open Space (OS)
- 9. PROJECT DESCRIPTION: The Project consists of cleaning and rehabilitating nine sewer manholes. These below-grade manholes, which are approximately 50 years old and are experiencing significant corrosion, are spaced at approximately 400-foot intervals along the North Ponto Sewer, a 27-inch-diameter vitrified clay pipe (VCP) gravity sewer pipeline. To address potential leaks and structural failure, the proposed rehabilitation involves pressure washing the interior of the manholes, repairing internal cracks and wall surfaces, and installing liners inside the manholes per city sewer rehabilitation standards (Figure 3, Manhole Rehabilitation Typical Section and Detail). Additionally, the Project includes minimal external work, including the replacement of all manhole locations, and new installation of the concrete pads at the other five manhole locations that currently do not have pads (Figure 4, Manhole Frame and Cover Typical Sections).

Maintenance and rehabilitation activities are scheduled during the dry season (August 15 to October 15) to minimize ecological disruption. Maintenance and rehabilitation activities would require the use of pressure-washing equipment, portable generator(s), and spray lining equipment; the use of heavy machinery would be prohibited. Any minor excavation will be

completed using hand tools or small equipment including a portable concrete mixer, wheelbarrows for hauling materials, and/or a jackhammer for removing concrete pads. During the work, impacts to the vernal pool habitat will be avoided as much as feasible. Rather than access the manholes one by one, moving from north to south within the vernal pools, each manhole will be accessed individually by creating a temporary access pathway perpendicular to the adjacent sidewalk on the north end and the public trail on the south end. This will require trimming back the vegetation in a direct path to the manholes (41C-55, 41C-5, 41C-4, 41C-3, and 41A-7); however, this alternative would temporarily impact coastal sage scrub for the most part, rather than vernal pools. Coastal sage scrub grows back quickly and impacts to sensitive species could be avoided (see Section IV for more details).

Vegetation within the temporary access routes would require trimming of the entire aboveground portion, leaving only the stumps and the belowground roots. To minimize impacts to sensitive habitat, the width of the access pathways will be restricted to no more than 8 feet wide, for equipment and personnel access. Clean plywood would be placed along access routes to protect the trimmed vegetation and soil from trampling. After this work is completed, the contractor would remove the plywood from each manhole worker/vehicle access area, and all temporarily affected areas would be restored in place to pre-construction conditions by allowing the trimmed vegetation and cut stumps to resprout. To facilitate this recovery, the temporary access routes would be seeded with a coastal sage scrub seed mix to help those areas recover faster, along with a weed control program to control weed invasion while the vegetation recovers.

After of the rehabilitation Project is complete, as part of the city's ongoing systemwide sewer maintenance program, minimal routine maintenance, including inspections and cleanings as needed, would continue throughout the lifetime of the sewer improvements annually or once every 2 years, depending on condition of the manholes. Condition assessment includes evaluating the age of the manhole, its internal condition, and the amount and type of wastewater flowing through the sewer system. City staff would utilize existing easements to conduct routine maintenance; the use of heavy equipment would be prohibited. The temporary access routes established during the construction of the Project would not be needed or used for routine maintenance.

#### CONSTRUCTION PHASING AND METHODS

The Project would occur over multiple phases, beginning with an initial inspection and CCTV video of the existing sewer manholes' conditions. Subsequent phases would involve the systematic cleaning and rehabilitation of the manholes, including pressure washing; concrete grouting; repair of internal cracks, wall surfaces, and bottom ("bench") of the manholes; and spray liner installations. External work would include removal and replacement of 3-foot-diameter frames and covers on top of the underground manholes, removal of aging concrete pads, and subsequent installation of a 1-foot concrete pad surrounding the manhole frame (5-foot square). The construction timeline is structured to be completed within 6 to 8 weeks. Construction activities would occur during the dry season (August 15 through October 15). All activities would be monitored and inspected daily by the city and vernal pool biologist to ensure compliance with the city's regulations and standards protecting the health and safety of workers, the community, Poinsettia Station Vernal Pool Preserve, and the environment.

Temporary access to the manholes would be provided via existing sewer easements within NCTD property and the adjacent pedestrian trail. The city is coordinating with NCTD Real Estate Administration and has received preliminary approval for direct manhole access and temporary staging area via a formal submitted project workplan to NCTD through their right-of-way. NCTD requires city and contractor to obtain NCTD's Right of Entry permit once a contractor has been awarded and detailed construction calendar provided to NCTD approximately 2 months prior to work activity.

The existing 8-ft wide, unpaved pedestrian trail along the eastern side of the Project would be utilized to access 5 southern manholes. This trail is located on the east side of the railroad tracks trail and does not lead to beach access. The city is coordinating with the Water End Homeowners Association property management company for access and use of the trail. The HOA has presented this request to their Board of Directors and similarly provided approval upon contractor selection and construction calendar being provided. The city and HOA signed a formal authorization through a Right of Entry Authorization letter agreement.

Construction activity and temporary trail closure notification will be provided by the city to trail users via the city's website and onsite signage posted two weeks in advance of work activity. The existing trail along the eastern boundary of the Project will be temporarily closed during construction hours on weekdays. However, construction equipment will be removed from the site daily. This closure is necessary because construction worker, equipment and vehicles will need to access manholes directly from the trail, potentially leaving insufficient space for pedestrian passage. The trail will remain open during regularly scheduled maintenance inspections that occur after the rehabilitation project.

Contractor parking and daily/temporary equipment staging is proposed in a small area (approximately two parking stalls) in the NCTD parking lot at the north end of the project area. Daily/Temporary parking and staging may also occur at the City of Carlsbad Sand Shell sewer lift station located at the southern end of the project at 613 Sand Shell Ave (APN No. 214-611-530-00). Staging is expected to consist of daily material and equipment to be removed at the end of the construction day. Should overnight storage of and material or equipment be necessary, the city's Sand Shell Lift Station with fencing and locked gate could be provided to the contractor. Further specifics of staging and storage would be included in the project contract documents, including requirement for removal of all materials and cleanup of the area upon project completion.

**10.** ENVIRONMENTAL SETTING/SURROUNDING LAND USES: The 11.71-acre Project site, which includes the entire area within the Project boundary, is located within the NCTD's railroad right-of-way and Waters End HOA conservation easement located between Avenida Encinas and Poinsettia Lane in the City of Carlsbad (APNs 214-150-08, 214-150-11, 214-150-12, and 214-610-58) (Figures 1 and 2a). The Project site is bounded to the north by Avenida Encinas, to the south by Poinsettia Lane, to the west by the NCTD railway and Carlsbad Poinsettia Transit Station platforms, and to the east by residential development, a walking trail, and transit station restrooms and parking. The Project is located within and adjacent to the Poinsettia Station Vernal Pool Preserve (Poinsettia Preserve).

The North Ponto Sewer Interceptor and manholes are within a 15-foot-wide sewer easement (No. 63802) established in 1973 within the NCTD right-of-way (Recorded Doc. 73-240995). An

additional 20-foot-wide sewer and 8-foot-wide access easements (No. 40146 and No. 40145) are located at the southern end of the Project site for access to the facilities. In addition to these utility easements, San Diego Gas & Electric Company also has an underground high-pressure gas line located within an easement in this NCTD right-of-way (Figure 5, Existing Easements). The pipeline is located approximately 80 to 100 feet east of the railroad tracks and generally parallels the tracks for approximately 2,825 linear feet from Poinsettia Lane to Avenida Encinas. The Project manholes are spaced along the sewer pipeline at approximate 400-foot intervals (Figure 2b). The facilities are located at depths ranging from 7 to 15 feet below grade.

A conservation easement to protect vegetation and wildlife species in this area was established in 1994 over 2.8 acres of habitat within the NCTD-owned land known as the Poinsettia Preserve (Figure 6, Poinsettia Station Vernal Pool Preserve). Poinsettia Preserve was resurveyed in 2017 and the boundary adjusted to include 4.6 acres. In 2004, the developer for the Waters End residential development located adjacent to Poinsettia Station, was required to restore a 3.3-acre area adjacent to the NCTD-owned vernal pool area to protect a portion of the vernal pool watershed. The combined 7.9 acres is protected under the city's Habitat Management Plan (HMP) specifically to preserve and protect the vegetative and wildlife species identified in the Poinsettia Preserve. A thin strip of land vegetated with coastal sage scrub along an adjacent HOA-maintained public trail was not included in this conservation easement to allow for trail maintenance and access to the existing sewer line manholes.

Additionally, APN 214-610-58 (see Figure 2a) is located within the Poinsettia Properties Specific Plan, SP 210(A). The Project site contains existing sewer easements; the sewer line is located within a designated Existing Hardline, and subject to the city's HMP (please refer to Section IV under Evaluation of Environmental Impacts). All projects within the Coastal Zone are required to comply with HMP Coastal Zone Standards 7-1 through 7-14 (HMP Section D). Further, the Project site is located within the Coastal Zone, approximately 1 mile north of the Batiquitos Lagoon and approximately 0.25 miles east of the Pacific Ocean, and is subject to the Mello II Segment of the city's Local Coastal Program (LCP). The city's LCP outlines regulations to address resources such as public access to the coast, environmentally sensitive habitat, water quality, and coastal hazards (City of Carlsbad 2019). Portions of the Project site are located within the appeal jurisdiction of the California Coastal Commission (CCC) (Figure 7, California Coastal Commission Appeal and Permit Jurisdiction); therefore, the city's decision on the Project's Coastal Development Permit (CDP) can be appealed to the CCC.

**11. OTHER REQUIRED AGENCY APPROVALS (e.g., permits, financing approval or participation agreements):** The Project would require a CDP, a Site Development Permit (SDP), and an HMP Permit from the city.

#### **12. CALIFORNIA NATIVE AMERICAN TRIBES CONSULTATION:**

**a.** Have California Native American Tribes traditionally and culturally affiliated with the project area requested consultation pursuant to public resources code section 21080.3.1?

 $\boxtimes$  Yes  $\Box$  No

**b.** If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

 $\boxtimes$  Yes  $\Box$  No

#### **13. PREVIOUS ENVIRONMENTAL DOCUMENTATION: N/A**

**14. SUMMARY OF ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:** The summary of environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact," or "Less Than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

	Aesthetics	□ Em	Greenhouse Gas issions		Public Services
□ Res	Agriculture & Forestry ources	□ Ma	Hazards/Hazardous terials		Recreation
	Air Quality		Hydrology/Water Quality		Transportation
$\boxtimes$	<b>Biological Resources</b>		Land Use & Planning	$\boxtimes$	Tribal Cultural Resources
$\boxtimes$	Cultural Resources		Mineral Resources		Utilities/Service Systems
	Energy		Noise		Wildfire
	Geology/Soils		Population & Housing	⊠ Sig	Mandatory Findings of nificance

**15. PREPARATION:** The Initial Study for the subject project was prepared by:

Vanessa Scheidel, Project Manager, Dudek

Date

**16. DETERMINATION:** (to be completed by Lead Agency)

On the basis of this initial evaluation:

- □ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- □ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described herein have been added to the project. A MITIGATED NEGATIVE DECLARATION will be prepared.
- □ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- □ I find that the proposed project MAY have a "potentially significant impact(s)" on the environment, but at least one potentially significant impact 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described herein. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- □ I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project. Therefore, nothing further is required.
- **17. ENVIRONMENTAL DETERMINATION:** The initial study for this project has been reviewed and the environmental determination, indicated above, is hereby approved.

Eric Lardy,	City	Planner
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Date

**18. APPLICANT CONCURRENCE WITH MITIGATION MEASURES:** This is to certify that I have reviewed the mitigation measures in the Initial Study and concur with the addition of these measures to the project.

Signature

Date

Print Name

#### **19. EVALUATION OF ENVIRONMENTAL IMPACTS:**

- 1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4. "Less than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
- 5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
  - a. Earlier Analysis Used. Identify and state where they are available for review.
  - b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
  - c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

- 8. The explanation of each issue should identify:
  - a. The significance criteria or threshold, if any, used to evaluate each question; and
  - b. The mitigation measure identified, if any, to reduce the impact to less than significant.
- 9. Tribal consultation, if requested as provided in Public Resources Code Section 21080.3.1, must begin prior to release of a negative declaration, mitigated negative declaration, or environmental impact report for a project. Information provided through tribal consultation may inform the lead agency's assessment as to whether tribal cultural resources are present, and the significance of any potential impacts to such resources. Prior to beginning consultation, lead agencies may request information from the Native American Heritage Commission regarding its Sacred Lands File, per Public Resources Code sections 5097.9 and 5097.94, as well as the California Historical Resources Information System administered by the California Office of Historic Preservation.



SOURCE: USGS 7.5-Minute Series Encinitias Quadrangles

1,000

2,000 \_\_\_\_ Feet

DUDEK 🜢 느

FIGURE 1 Project Location Poinsettia Manhole Repair Project



SOURCE: City of Carlsbad





SOURCE: SANGIS 2023, 2024



250

500 Beet FIGURE 2b Project Site Poinsettia Manhole Repair Project



DUDEK

Manhole Rehabilitation - Typical Section and Detail Poinsettia Manhole Repair Project



SOURCE: City of Carlsbad, 04-29-2022



Manhole Frame and Cover Typical Sections Poinsettia Manhole Repair Project

FIGURE 4





DUDEK



Poinsettia Station Vernal Pool Preserve Poinsettia Manhole Repair Project

#### DUDEK



SOURCE: Michael Baker International, 2016; City of Carlsbad, 2019; SANGIS 2023, 2024

0.25

0.5 Miles

DUDEK 💩 🗅

#### FIGURE 7 California Coastal Commission Appeal and Permit Jurisdiction

Poinsettia Manhole Repair Project

1.	Exc	AESTHETICS cept as provided in Public Resources Code Section 21099, would the oject:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	a)	Have a substantial adverse effect on a scenic vista?				$\boxtimes$
	b)	Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				$\boxtimes$
	c)	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?				
	d)	Create a new source of substantial light and glare, which would adversely affect day or nighttime views in the area?				$\boxtimes$

#### **REGULATORY SETTING**

#### California Public Resources Code Section 20199

California Public Resources Code Section 20199 (d)(1) stipulates that "aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment." The project does not propose a residential use, mixed-use residential, or an employment center on an infill site.

#### California Scenic Highway Program

The California State Legislature created the California Scenic Highway Program in 1963 with the intent "to protect and enhance the natural scenic beauty of California highways and adjacent corridors, through special conservation treatment." The state laws that govern the Scenic Highway Program are Sections 260 through 263 of the Streets and Highways Code. A highway may be designated scenic based on the natural landscape visible by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the views of the highway. The Scenic Highway Program includes both officially designated scenic highways and highways that are eligible for designation. A highway may be designated as scenic based on aesthetic quality of viewable landscape, extent of views upon the natural landscape, and the degree to which development impedes these views.

#### California Coastal Act/Coastal Zone

The proposed Project site is within the Coastal Zone as designated by the California Coastal Commission (CCC), with the state lands subject to the California Coastal Act (CCA) of 1976. The CCA of 1976 tasked the

agency with protection of coastal resources through the issuance of Coastal Development Permits (CDPs). Under the CCA, local governments are encouraged to adopt LCPs, which consist of a land use plan with goals and regulatory policies as well as a set of implementing ordinances. Development in the Coastal Zone may not commence until a CDP has been issued by the CCC or a local government that has a CCC-certified LCP. The City of Carlsbad has an adopted LCP, as described further below (City of Carlsbad 2019), and proposed Project activities would be located in the approved City of Carlsbad LCP jurisdiction (Mello II segment) with a large portion of the Project within the appeal jurisdiction of the CCC. Actions proposed within the Coastal Zone must be consistent with Chapter 3 of the CCA. The CCA (California Public Resources Code Section 30000 et seq.) authorizes the State of California to regulate development within the Coastal Zone. Although scenic resources are not specifically mentioned, California Public Resources Code Section 30001.5 calls to "protect, maintain, and, where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and artificial resources."

#### City of Carlsbad General Plan

#### Mobility Element

The Mobility Element of the city's General Plan includes goals and policies applicable to the Project and, specifically, related to scenic transportation corridors, as follows (City of Carlsbad 2015a):

- **Goal 3-G.6:** Protect and enhance the visual, environmental and historical characteristics of Carlsbad through sensitive planning and design of scenic transportation corridors.
  - **Policy 3-P.23:** Maintain the city's scenic transportation corridors as identified in the Carlsbad Scenic Corridor Guidelines.

#### *Open Space, Conservation, and Recreation Element*

The Open Space, Conservation, and Recreation Element of the city's General Plan classifies open space into four categories as listed below (City of Carlsbad 2015b). Only Category 1 is applicable to the Project site.

- Category 1: Open Space for Preservation of Natural Resources (plant and animal habitat; nature preserves; beaches and bluffs; wetland and riparian areas; canyons and hillsides; water features such as lagoons and streams).
- **Category 2**: Open Space for Managed Production of Resources (forestry; agriculture; aquaculture; water management; commercial fisheries; and major mineral resources).
- **Category 3**: Open Space for Outdoor Recreation (school recreation areas; public parks and recreation areas; greenways; trails; campgrounds; golf courses; and equestrian facilities).
- Category 4: Open Space for Aesthetic, Cultural, and Educational Purposes (lands with scenic, historical, and cultural value; land use buffers; open space that marks entries to the city from surrounding communities and to major developments and neighborhoods within the city; greenbelts providing separation from surrounding communities; and museums, arboreta, zoos, and botanical gardens)

#### City of Carlsbad Local Coastal Program

Developed in conformance with the Coastal Act, the city's LCP outlines policies to "Protect, maintain, and where feasible, enhance and restore the overall quality of the Coastal Zone environment and its natural and man-made resources." The specific policy related to Visual/Land Resources includes the implementation of the Scenic Preservation Overlay Zone (see below), and the preservation of natural vegetation on steep slopes. Within the Mello II Segment of the LCP, Land Use Policy 7-13, Visual Access states, "Visual access over more than 80% of the Carlsbad coastline is unobstructed because of public ownership. No future public improvements which would obstruct this visual access shall be permitted" (City of Carlsbad 2019).

The city's LCP regulates development in the state-designated Coastal Zone within portions of the city. The city's LCP consists of six geographic segments: the Agua Hedionda Lagoon LCP segment, composed of approximately 1,100 acres; the Carlsbad Mello I segment, with approximately 2,000 acres; the Carlsbad Mello I segment, with approximately 2,000 acres; the Carlsbad Mello II segment, with approximately 200 acres; the East Batiquitos Lagoon/Sammis Properties segment, with approximately 200 acres; the East Batiquitos Lagoon/Hunt Properties segment, with approximately 1,000 acres; and the Village–Barrio segment, with approximately 150 acres. The city's LCP implements the CCA at a local level by addressing land use, zoning ordinances, and zoning district maps in sensitive coastal resource areas by providing implementing actions, provisions, and policies required within the Coastal Zone. The Project site is located within the Mello II Segment of the LCP.

#### City of Carlsbad Municipal Code

The City Carlsbad Municipal Code (CMC) is a collection of city laws that have been adopted by the City Council. The CMC Chapter 21, Zoning, includes an official Zoning Map that establishes the appropriate zone boundaries and regulations for each zone within the Zoning Map, as applicable. According to the CMC, Project site is zoned Residential Density-Multiple, Qualified Development Overlay Zone (RD-M-Q), Transportation Corridor (T-C), Transportation Corridor/Open Space (T-C/OS), Open Space (OS).

#### City of Carlsbad Scenic Corridor Guidelines

The city's Scenic Corridor Guidelines, adopted by City Council on March 7, 1989, identify scenic corridors in Carlsbad and suggest ways to preserve and enhance their character. The scenic corridors are primarily major streets, such as El Camino Real and Carlsbad Boulevard, but they also include the railroad corridor. The guidelines identify the Atchison, Topeka and Santa Fe Railroad as a "special condition" corridor to be addressed separately from other corridors. Guidelines are included for development primarily adjacent to but also within the NCTD railroad right-of-way. The city's Scenic Corridor Guidelines require any development within the NCTD railroad right-of-way to comply with setback requirements and development standards of the Transportation Corridor (T-C) zone. The Project site is located within the NCTD railroad right-of-way and the Transportation Corridor (T-C) zone

#### PROJECT IMPACTS

#### a) Would the project have a substantial adverse effect on a scenic vista?

**No Impact:** Scenic vistas are typically associated with natural landforms such as mountains, foothills, ridgelines, and coastlines. Scenic vistas in the city consist of the scenic corridors and views to and from the coastline, open spaces, and hillsides (City of Carlsbad 2015c). A substantial adverse effect to a scenic vista is one that degrades the view from a designated viewing location. A substantial adverse effect to

scenic vistas could occur if the proposed Project were to introduce physical features that obstruct an identified public scenic vista, impair scenic views from other properties, or has a substantial change to the natural landscape. The Project site is located within the Coastal Zone (Carlsbad Mello II segment), approximately 1 mile north of Batiquitos Lagoon and approximately 0.25 miles east of the Pacific Ocean. There is no direct access to the ocean or lagoon from the Project area. The city's LCP states that the viewshed to lagoon shorelines are important resources, and scenic and visual qualities of the lagoon should be retained through established LCP requirements related to setbacks, preservation of slope areas, preservation of lagoon and riparian habitats, enhancement of the lagoon environments, and controlled grading. According to the LCP there are no designated vista points of the lagoon within the Project site; therefore, vista points would not be impacted by the Project.

The Project vicinity is composed of a mix of residential, commercial, transit, open space, and recreational development. The viewshed from the Project site is primarily characterized by two- to three-story residential buildings and their associated landscaping, as well as views of the adjacent rail line.

Construction of the Project would take place within the city's easement in the NCTD railroad right-of-way and the Waters End HOA conservation easement. Temporary access to the manholes would occur through the NCTD ROW and Waters End HOA easement. Contractor parking and daily/temporary equipment staging is proposed in a small area (approximately two parking stalls) in the NCTD parking lot at the north end of the project area and/or at the City of Carlsbad Sand Shell sewer lift station located at 613 Sand Shell Ave (APN 214-611-530-00) at the southern end of the project. Upon completion of the project all contractor equipment and materials will be removed from both locations. Due to existing surrounding vegetation, views from the Project site to the Pacific Ocean and Batiquitos Lagoon are obscured. As such, during construction of the Project, the temporary use and staging of materials and small equipment for maintenance and rehabilitation activities, including pressure-washing equipment, portable generator(s), and truck-mounted spray liner equipment; hand tools; a portable concrete mixer; wheelbarrows; and/or jackhammers, would not obscure or substantially interrupt any scenic vista. Upon completion of the Project, the proposed rehabilitation of nine sewer manholes would not involve erecting structures that would permanently impact any scenic vista. The Project does not involve the construction of built vertical components; all Project construction would be at or below grade. Considering the nature and location of the Project, the Project would not have a substantial adverse effect on scenic vistas. As such, no impact would occur.

### *b)* Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

**No Impact**: The Project site is located within a predominantly urbanized area. The closest designated highway is a portion of Interstate 5, located approximately 0.30 miles east of the Project site, which is an eligible State Scenic Highway (Caltrans 2022). However, no highways in the city are included on the California Department of Transportation (Caltrans) list of officially designated or eligible scenic highways (Caltrans 2022). Therefore, no impacts would occur.

# c) In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less than Significant Impact: The Project site is located within a predominantly urbanized area of the city. The Project would rehabilitate nine sewer manholes within the NCTD right-of-way, spaced at approximately 400-foot intervals, located between Avenida Encinas and Poinsettia Lane. As analyzed in Sections III(a) and III(b), the proposed sewer manhole improvements would not degrade the existing visual character or quality of the Project site or permanently impair existing views for surrounding residents or other viewer groups. The city's General Plan Open Space classification Category 1 would apply to the Project site as it is located within and adjacent to the Poinsettia Preserve. The Project's potential impacts have been evaluated throughout this Initial Study and would not significantly impact any such resources and mitigation measures would be implemented to avoid impacts to open spaces for natural resources. Moreover, once Project construction is complete, the Project site would be returned to existing conditions. As such, none of the Project's proposed changes would degrade the existing visual character or quality of the site and its surroundings.

The Project would comply with the applicable development regulations in the City of Carlsbad Zoning Ordinance specifically the height requirements of the Project site's zoning designations: Residential Density-Multiple, Qualified Development Overlay Zone (RD-M-Q), Transportation Corridor (T-C), Transportation Corridor/Open Space (T-C/OS) and Open Space (OS). The Project involves the rehabilitation of nine existing manholes, including minimal external work for the replacement and new installation of concrete pads above grade that would not include buildings or structures exceeding 25 feet in height, which is the height standard of the OS Zone, the most restrictive of the site's zoning designations. The existing manholes will not be extended or relocated and the proposed Project does not include any activities that would impact NCTD operations.

The Project does not conflict with the city's Scenic Corridor Guidelines as it complies with regulations of the Transportation Corridor (T-C) zone (City of Carlsbad Zoning Ordinance Chapter 21.100). Given the Project is not a development project but rather a maintenance project that proposes minimal external work for the rehabilitation of the existing manholes within the NCTD right-of-way, most of the railroad corridor policies in the city's Scenic Corridor Guidelines, such as those regarding landscaping and buildings, would not apply. The only applicable Scenic Corridor Guidelines policy is that the proposed project would conform to is the development standards of the T-C Zone. As discussed above, the project meets the development standards of the T-C zone. Overall, the Project would be required to comply with applicable regulations required by the CCA, City of Carlsbad Zoning Ordinance, and the city's LCP. Because implementation of the proposed Project would not conflict with applicable zoning or other regulations governing scenic quality, impacts would be less than significant.

## *d)* Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

**No Impact:** The proposed Project would not require nighttime lighting usage because construction would occur during daytime construction hours as permitted by the city. According to the City of Carlsbad Municipal Code, Title 8, Chapter 8.48.010, Construction Hours Limitations, construction is not allowed after 6:00 p.m. on any day, or before 7:00 a.m., Monday through Friday, or before 8:00 a.m. on Saturday. Construction is prohibited on Sunday. There would be no new sources of light or glare associated with the Project once construction is complete. Therefore, no impact associated with light and glare would occur.

II. W	AGRICULTURAL AND FORESTRY RESOURCES*	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?				$\boxtimes$
c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), or timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d)	Result in the loss of forest land or conversion of forest land to non-forest use?				$\boxtimes$
e)	Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?				$\boxtimes$

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model-1997 (LESA) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. There are no lands present in Carlsbad that meet the state's definition of forest land (Public Resources Code Section 12220(g)), timberland (Public Resources Code Section 4526), or production (Government Code 51104(g)). Therefore, questions related to forestry resources will have no impacts.

#### a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

**No Impact:** The Project site and surrounding area are designated as urban and built-up land, pursuant to the Farmland Mapping and Monitoring Program developed by the California Department of Conservation (DOC 2022). "Urban and built-up land" generally includes land uses such as residential, commercial, industrial, institutional facilities, and other urban land uses. The Project site is not mapped as, nor does it meet the criteria for, Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, and the Project site has not previously been used for agricultural purposes. Therefore, the proposed Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use, and no impact would occur.

#### b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

**No Impact:** There are currently no properties or areas within the city subject to Williamson Act contracts. According to the City of Carlsbad Zoning Map, the Project site is not zoned for agriculture uses (City of

Carlsbad 2021). Therefore, the proposed Project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and no impact would occur.

## c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

**No Impact:** The city is devoid of any lands that meet the definition of forest land, timberland, or timberland production zone. Therefore, no impacts would occur as a result of the Project.

#### d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

**No Impact:** The city is devoid of any lands that meet the definition of forest land, timberland, or timberland production zone. Therefore, no impacts would occur as a result of the Project.

## e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

**No Impact:** The Project area and surrounding properties do not contain farmland or timberland. The construction and operation of the proposed Project would not cause any on-site or off-site conversion of farmland or forest land to non-agriculture uses or non-forest uses. Therefore, no impacts would occur as a result of the Project.

III. w	AIR QUALITY*	otentially Significant npact	ess than Significant ith Mitigation icorporated	ess Than Significant npact	o Impact
vv		24	ч s г	ы п	Ž
a)	Conflict with or obstruct implementation of the applicable air quality plan?			$\boxtimes$	
b)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?			$\boxtimes$	
c)	Expose sensitive receptors to substantial pollutant concentrations?			$\boxtimes$	
d)	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

\* Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the determinations in this section.

The following analysis is based on an *Air Quality and Greenhouse Gas Emissions Analysis* and is presented in Appendix A.

#### **REGULATORY SETTING**

#### San Diego Air Pollution Control District

The Project site is located within the San Diego Air Basin (SDAB) and is within the jurisdictional boundaries of the San Diego Air Pollution Control District (SDAPCD), which has jurisdiction over the County of San Diego where the Project is located. The SDAB lies in the southwestern corner of California, which includes the entire San Diego region and covers approximately 4,260 square miles. The California Air Resources Board (CARB) is responsible for the regulation of mobile emissions sources within the state, whereas local air quality management districts and air pollution control districts are responsible for enforcing air quality standards and regulating stationary sources. SDAPCD is the regional agency responsible for the regulation and enforcement of federal and state regulations.

"Criteria air pollutants" are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. Criteria air pollutants that are evaluated include volatile organic compounds (VOCs); also referred to as reactive organic gases [ROGs]), nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), sulfur oxides (SO<sub>x</sub>), particulate matter with an aerodynamic diameter less than or equal to 10 microns in size (coarse particulate matter, or  $PM_{10}$ ), and particulate matter with an aerodynamic diameter less than or equal to 2.5 microns in size (fine particulate matter, or  $PM_{2.5}$ ). VOCs and NO<sub>x</sub> are important because they are precursors to ozone (O<sub>3</sub>).

Regarding National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) attainment status,<sup>1</sup> the SDAB is designated as a nonattainment area for federal  $O_3$  standards, and state  $O_3$ ,  $PM_{10}$ , and  $PM_{2.5}$  standards (SDAPCD 2022). The SDAB is designated as an attainment or unclassified area for all other criteria air pollutants.

#### San Diego Association of Governments

The San Diego Association of Governments (SANDAG) is the regional planning agency for the County and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. SANDAG serves as the federally designated metropolitan planning organization for the County. With respect to air quality planning and other regional issues, SANDAG has prepared San Diego Forward: The Regional Plan (Regional Plan) for the San Diego region combines the big-picture vision for how the region will grow over the next 35 years with an implementation program to help make that vision a reality. The Regional Plan, including its Sustainable Communities Strategy, is built on an integrated set of public policies, strategies, and investments to maintain, manage, and improve the transportation system so that it meets the diverse needs of the San Diego region through 2050. The Regional Plan was updated in 2021, which was the result of years of planning, data analysis, and community engagement to reimagine the San Diego region with a transformative transportation system, a sustainable pattern of growth and development, and innovative demand and management strategies. The 2021 Regional Plan includes a Sustainable Communities Strategy, which describes coordinated transportation and land use

<sup>&</sup>lt;sup>1</sup> An area is designated as in attainment when it is in compliance with the NAAQS and/or the CAAQS. These standards are set by the U.S. Environmental Protection Agency (EPA) and CARB, respectively, for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or the public welfare. Attainment = meets the standards; attainment/maintenance = achieve the standards after a nonattainment designation; nonattainment = does not meet the standards.

planning that exceeds the state's target for reducing per-capita greenhouse gas emissions set by CARB. The state-mandated target is a 19% reduction—compared with 2005—in per-capita greenhouse gas emissions from cars and light-duty trucks by 2035. The 2021 Regional Plan achieves a 20% reduction by then. The 2021 Regional Plan also puts forth a forecasted development pattern that is driven by regional goals for sustainability, mobility, housing affordability, and economic prosperity.

#### **PROJECT IMPACTS**

#### a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant Impact: SDAPCD and SANDAG are responsible for developing and implementing the clean air plans for attainment and maintenance of the ambient air quality standards in the basin— specifically, the California State Implementation Plan (SIP) and Regional Air Quality Strategy (RAQS). The federal O<sub>3</sub> maintenance plan, which is part of the SIP, was adopted in 2012. The most recent O<sub>3</sub> attainment plan was adopted in 2021. The SIP includes a demonstration that current strategies and tactics will maintain acceptable air quality in the basin based on the NAAQS. The RAQS was initially adopted in 1991 and is updated every 3 years (most recently in 2022). The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for O<sub>3</sub> (SDAPCD 2022). The SIP and RAQS rely on information from CARB and SANDAG, including mobile and area source emissions as well as information regarding projected growth in the County as a whole and the cities in the County, to project future emissions and determine the strategies necessary for the reduction of emissions through regulatory controls. CARB's mobile source emission projections and SANDAG's growth projections are based on population, vehicle trends, and land use plans developed by the County and the cities in the County as part of the development of their general plans.

If a project involves development that is greater than that anticipated in the local plan and SANDAG's growth projections, the project might be in conflict with the SIP and RAQS and may contribute to a potentially significant cumulative impact on air quality.

The proposed Project would involve rehabilitation of nine sewer manholes, each approximately 50 years old and experiencing significant corrosion. The rehabilitation and repairs of the sewer manholes would not require a change of land use designation or zoning update and once the repair work is complete the Project site would be returned similar to its existing conditions. Furthermore, as detailed in Section III(b), the proposed Project would not result in a significant air quality impact with respect to construction-related emissions of O<sub>3</sub> precursors or criteria air pollutants. The Project would also comply with all existing and new rules and regulations as they are implemented by SDAPCD, CARB, and/or the U.S. Environmental Protection Agency (EPA) related to emissions generated during construction.

Therefore, the Project would comply with the applicable SDAPCD rules and regulations that would apply to construction and operation of the Project. Additionally, the Project would have no Project-specific significant effects related to conflicts or obstruction of the implementation of the SDAPCD RAQS, which is the air quality plan applicable to the proposed Project site. For these reasons, impacts would be less than significant.

## b) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

**Less than Significant Impact:** Past, present, and future development projects may contribute to the SDAB's adverse air quality impacts on a cumulative basis. By its nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and SDAPCD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are used in the determination of whether a project's individual emissions would have a cumulatively considerable contribution on air quality. If a project's emissions would exceed the applied significance thresholds, it would have a cumulatively considerable contribution. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.

Construction of the Project would result in emissions of criteria air pollutants, which may result in a cumulatively considerable net increase in emissions of criteria air pollutants for which the SDAB is designated as nonattainment under the NAAQS or CAAQS. The SDAB has been designated as a federal nonattainment area for  $O_3$  and a state nonattainment area for  $O_3$ ,  $PM_{10}$ , and  $PM_{2.5}$ . The following discussion quantitatively evaluates potential short-term construction and qualitatively addresses long-term operational impacts that would result from implementation of the proposed Project.

#### CONSTRUCTION EMISSIONS

Proposed construction activities would result in the temporary addition of pollutants to the local airshed caused by on-site sources (e.g., off-road construction equipment, soil disturbance, and VOC off-gassing) and off-site sources (e.g., on-road vendor trucks, haul trucks, and worker vehicle trips). Construction emissions can vary substantially from day to day depending on the level of activity; the specific type of operation; and, for particulate matter, the prevailing weather conditions. Therefore, such emission levels can only be estimated.

The California Emissions Estimator Model (CalEEMod) Version 2022.1 was used to estimate emissions from construction of the Project. Internal combustion engines used by construction equipment, trucks, and worker vehicles would result in emissions of VOCs, NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. PM<sub>10</sub> and PM<sub>2.5</sub> emissions would also be generated by entrained dust, which results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil. The Project would be required to comply with SDAPCD Rule 55 (Fugitive Dust Control) to control dust emissions generated during any dust-generating activities.

Emissions from the construction phase of the Project were estimated using CalEEMod default values. Construction was modeled beginning in August 2025 and conclude in October 2025, lasting approximately 3 months. The analysis contained herein is based on the following schedule assumptions (duration of phases is approximate):

- Site Preparation: 1–2 days per manhole location (August 2025)
- Manhole Repair: 4–5 days per manhole location (August 2025–October 2025)

The anticipated construction scenario assumptions, including phase type and duration, vehicle trips, and equipment mix, used for estimating the construction emissions of the Project are based on information

provided by the applicant, known construction practices, and CalEEMod defaults. Detailed construction equipment and vehicle modeling assumptions are provided in Table 1 (Appendix A).

Vehicle Trips Equipment						
Construction Phase (Duration)	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Total Haul Truck Trips	Equipment Type	Quantity	Usage Hours
Site Preparation	10	4	4	Pickup with plywood	1	8
				Jackhammer to remove concrete pads	1	8
Manhole Repair	10	4	4	Cleaning/Liner Air compressors	3	8
				Cement and mortar truck	1	8
				Generator set	1	8

**Table 1: Construction Scenario Assumptions** 

Source: Appendix A.

For the analysis, it was assumed that construction equipment would be operating 5 days per week (22 days per month) during Project construction. Construction worker trip information was based on CalEEMod defaults. Vendor trucks reflect either water trucks for fugitive dust control or material delivery. Trip length distances were based on CalEEMod defaults.

Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in  $PM_{10}$  and  $PM_{2.5}$  emissions. Construction of Project components would be subject to SDAPCD Rule 55 – Fugitive Dust Control. Compliance with Rule 55 would limit fugitive dust ( $PM_{10}$  and  $PM_{2.5}$ ) that may be generated during construction activities. Standard construction practices that would be employed to reduce fugitive dust emissions include watering of the active sites two times per day, depending on weather conditions; this practice was included in the emission estimates.

Table 2 presents the estimated maximum daily emissions generated during construction of the Project.

Table 2: Estimated Maximum Daily Cor	nstruction Criteria Air Pollutant Emissions
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	voc	NOx	со	SOx	<b>PM</b> <sub>10</sub>	PM <sub>2.5</sub>		
Construction Year	Pounds per Day							
2024	0.08	0.05	0.59	0.70	0.19	0.05		
Threshold	137	250	550	250	100	55		
Threshold exceeded?	No	No	No	No	No	No		

Source: Appendix A.

**Notes:** VOC = volatile organic compound; NO<sub>x</sub> = nitrogen oxides; CO = carbon monoxide; SO<sub>x</sub> = sulfur oxides;  $PM_{10}$  = coarse particulate matter;  $PM_{2.5}$  = fine particulate matter.

Compliance with SDAPCD Rule 55 is assumed.

See Appendix A for complete results.

As shown in Table 2, daily construction emissions for the Project would not exceed the SDACPD's significance thresholds. Therefore, the Project would have a less than significant impact related to emissions of criteria air pollutant emissions during construction.

#### OPERATION

Once Project construction is complete, operational activities associated with the proposed Project would be minimal. No routine daily equipment operation or vehicle trips would be required. While periodic maintenance, repair, and inspections would be conducted (approximately every 1 to 4 years for visual and/or internal video inspections), these activities would not represent a substantial change in city operations relative to existing conditions and would not require additional vehicle trips or workers. Because the Project would result in minimal long-term operational activities, impacts associated with criteria air pollutant emissions would be nominal.

#### CUMULATIVE ANALYSIS

The SDAB has been designated as a federal nonattainment area for  $O_3$  and a state nonattainment area for  $O_3$ , PM<sub>10</sub>, and PM<sub>2.5</sub>. The poor air quality in the SDAB is the result of cumulative emissions from motor vehicles, off-road equipment, commercial and industrial facilities, and other emission sources. Projects that emit these pollutants or their precursors (i.e., VOCs and NO<sub>x</sub> for  $O_3$ ) potentially contribute to poor air quality. In analyzing cumulative impacts from a project, the analysis must specifically evaluate the project's contribution to the cumulative increase in pollutants for which the SDAB is designated as nonattainment for the CAAQS and NAAQS. If a project does not exceed thresholds and is determined to have less-than-significant project-specific impacts, it may still contribute to a significant cumulative impact on air quality if the emissions from the project, in combination with the emissions from other proposed or reasonably foreseeable future projects, are in excess of established thresholds. However, a project would only be considered to have a significant cumulative impact if the project's contribution accounts for a significant proportion of the cumulative total emissions (i.e., it represents a "cumulatively considerable contribution" to the cumulative air quality impact).

Regarding short-term construction impacts, the SDAPCD thresholds of significance are used to determine whether the Project may have a short-term cumulative impact. As shown in Table 2, the Project would not exceed any criteria air pollutant during construction. Therefore, the Project would have a less than significant cumulative impact during construction.

Additionally, for the SDAB, the RAQS serves as the long-term regional air quality planning document for the purpose of assessing cumulative operational emissions in the basin to ensure the SDAB continues to make progress toward NAAQS and CAAQS attainment status. As such, cumulative projects located in the San Diego region would have the potential to result in a cumulative impact to air quality if, in combination, they would conflict with or obstruct implementation of the RAQS. Similarly, individual projects that are inconsistent with the regional planning documents upon which the RAQS is based would have the potential to result in they represent development and population increases beyond regional projections.

Regarding long-term cumulative operational emissions in relation to consistency with local air quality plans, the SIP and RAQS serve as the primary air quality planning documents for the state and SDAB, respectively. The SIP and RAQS rely on SANDAG growth projections based on population, vehicle trends, and land use plans developed by the cities and the County as part of the development of their general

plans. Therefore, projects that propose development that is consistent with the growth anticipated by local plans would be consistent with the SIP and RAQS and would not be considered to result in cumulatively considerable impacts from operational emissions. As stated previously, the Project would not result in significant regional growth that is not accounted for within the RAQS. As a result, the Project would not result in a cumulatively considerable contribution to pollutant emissions. Cumulative impacts would be less than significant during construction and operation.

Overall, the Project would not exceed the applied thresholds of significance during construction or operation for any criteria air pollutant, resulting in less than significant project-level and cumulative impacts.

#### c) Would the project expose sensitive receptors to substantial pollutant concentrations?

**Less than Significant Impact:** Construction and operation of the Project would not result in emissions that exceed County of San Diego's emission thresholds for any criteria air pollutants. The SDAPCD thresholds are based on the SDAB complying with the NAAQS and CAAQS, which are protective of public health; therefore, no adverse effects to human health would result from the Project. The following provides a general discussion of criteria air pollutants and their health effects.

Regarding VOCs, some VOCs would be associated with motor vehicles and construction equipment, while others are associated with asphalt off-gassing, the emissions of which would not result in exceedances of County thresholds.

In addition, VOCs and NO<sub>x</sub> are precursors to O<sub>3</sub>, for which the SDAB is designated as nonattainment with respect to the NAAQS and CAAQS (the SDAB is designated by EPA as an attainment area for the 1-hour O<sub>3</sub> NAAQS standard). The health effects associated with O<sub>3</sub> are generally associated with reduced lung function. The contribution of VOCs and NO<sub>x</sub> to regional ambient O<sub>3</sub> concentrations is the result of complex photochemistry. The increases in O<sub>3</sub> concentrations in the SDAB due to O<sub>3</sub> precursor emissions tend to be found downwind from the source location to allow time for the photochemical reactions to occur. However, the potential for exacerbating excessive O<sub>3</sub> concentrations would also depend on the time of year that the VOC emissions would occur because exceedances of the O<sub>3</sub> NAAQS and CAAQS tend to occur between April and October when solar radiation is highest. The holistic effect of a single project's emissions of O<sub>3</sub> precursors is speculative due to the lack of quantitative methods to assess this impact. Nonetheless, the VOC and NO<sub>x</sub> emissions associated with Project construction could minimally contribute to regional O<sub>3</sub> concentrations and the associated health impacts. Due to the minimal contribution during construction and operation, health impacts would be considered less than significant.

Health effects that result from nitrogen dioxide (NO<sub>2</sub>) and NO<sub>x</sub> include respiratory irritation. Although construction of the Project may generate NO<sub>x</sub> emissions, it is not anticipated to contribute to exceedances of the NAAQS and CAAQS for NO<sub>2</sub> because the SCAB is designated as in attainment of the NAAQS and CAAQS for NO<sub>2</sub> and the existing NO<sub>2</sub> concentrations in the area are well below the NAAQS and CAAQS standards. As noted above, the Project would not exceed the applicable SCAQMD NO<sub>x</sub> thresholds during construction and operation.

Health effects associated with  $PM_{10}$  or  $PM_{2.5}$ , depending on short- or long-term exposure, include premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, restricted activity days, and reduced lung function and growth in children. Construction of the Project would not exceed thresholds for  $PM_{10}$  or  $PM_{2.5}$  and would not contribute to exceedances of the NAAQS and CAAQS for particulate matter. Furthermore, the Project would be required to comply with SDAPCD's Rule 55 – Fugitive Dust Control, which would minimize dust emissions from track-out.

Based on the preceding considerations, health impacts to sensitive receptors from Project-related criteria air pollutant emissions would be considered less than significant.

#### TOXIC AIR CONTAMINANTS

In addition to impacts from criteria pollutants, Project impacts may include emissions of pollutants identified by the state and federal government as toxic air contaminants (TACs) or hazardous air pollutants. A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute (immediate) and/or chronic (cumulative) non-cancer health effects. A toxic substance released into the air is considered a TAC. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

TACs are identified by federal and state agencies based on a review of available scientific evidence. In the State of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act (Assembly Bill [AB] 2588) was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere.

Examples of TACs include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources, such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources, such as automobiles; and area sources, such as landfills. Project construction would result in emissions of diesel particulate matter (DPM) from construction equipment and trucks accessing the site. DPM is characterized as a TAC by the State of California.

State law has established the framework for California's TAC identification and control program, which is generally more stringent than the federal program and aimed at TACs that are a problem in California. The state has formally identified more than 200 substances as TACs, including the federal hazardous air pollutants, and has adopted appropriate control measures for sources of these TACs. The following measures are required by state law to reduce DPM emissions:

- Fleet owners of mobile construction equipment are subject to the CARB Regulation for In-use Offroad Diesel Vehicles (13 CCR 2449), the purpose of which is to reduce DPM and criteria pollutant emissions from in-use (existing) off-road diesel-fueled vehicles.
- All commercial diesel vehicles are subject to Title 13, Section 2485 of the California Code of Regulations, limiting engine idling time. Idling of diesel construction equipment and trucks during loading and unloading shall be limited to 5 minutes; electric auxiliary power units should be used whenever possible.

TACs that would potentially be emitted during construction activities would be DPM emitted from construction equipment and trucks. Construction equipment and diesel trucks are subject to CARB Air

Toxic Control Measures to reduce DPM emissions. The Office of Environmental Health Hazard Assessment has identified carcinogenic and chronic noncarcinogenic effects from long-term exposure but has not identified health effects due to short-term exposure to diesel exhaust. According to the Office of Environmental Health Hazard Assessment, health risk assessments should be based on a 30-year exposure duration based on typical residency period; however, such assessments should be limited to the period/duration of activities associated with the Project (OEHHA 2015).

The duration of proposed construction activities would constitute only a small percentage of the total long-term exposure period and would not result in exposure of proximate sensitive receptors to substantial TACs. After proposed construction is completed, there would be no long-term source of TAC emissions during operation. In addition, the Project would not require the extensive operation of diesel construction equipment, which is subject to a CARB Airborne Toxics Control Measure for in-use diesel construction equipment to reduce DPM emissions, and would not involve extensive use of diesel trucks, which are also subject to a CARB Airborne Toxics Control Measure. Furthermore, as shown in Table 2, maximum daily particulate matter (i.e., PM<sub>10</sub> or PM<sub>2.5</sub>) emissions generated by construction equipment operation and haul-truck trips during construction (exhaust particulate matter or DPM), combined with fugitive dust generated by equipment operation and vehicle travel, would be minimal.

The closest sensitive receptors to the Project are single-family and multifamily residences to the east and west of the Project site, and the Community Montessori charter school east of the northern end of the Project site. Emissions during construction would not be concentrated in one area of the site but would be spread over the entirety of the site. Emissions would not be continuous and would cease once construction is complete. Therefore, the Project would not expose sensitive receptors to substantial quantities of TACs during construction. Impacts would be less than significant.

No residual TAC emissions and corresponding health risk are anticipated after construction, and no longterm sources of TAC emissions are anticipated during operation of the Project. CARB has published the Air Quality and Land Use Handbook: A Community Health Perspective (CARB 2005), which identifies certain types of facilities or sources that may emit substantial quantities of TACs and therefore could conflict with sensitive land uses, such as "schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities." The Air Quality and Land Use Handbook is a guide for siting of new sensitive land uses, and CARB recommends that sensitive receptors not be located downwind or in proximity to such sources to avoid potential health hazards. Note that the Project is not considered an air quality sensitive receptor. The enumerated facilities or sources include the following: high-traffic freeways and roads, distribution centers, railyards, ports, refineries, chrome plating facilities, dry cleaners, and large gas-dispensing facilities. The Project would not include any of the abovelisted land uses associated with generation of TAC emissions. The Project may emit DPM emissions during operation if diesel vehicles are used during periodic maintenance activities. However, the activities would be periodic, not regular, and would consist of very few vehicles at a time, and the vehicles would not emit substantial quantities of TACs while on site. Potential impacts associated with exposure of sensitive receptors to TACs would be less than significant.

It is expected that operation of the Project would not result in any non-permitted direct emissions (e.g., those from a point source such as diesel generators) that could be a TAC source and as discussed previously, is anticipated to result in irregular and minimal operational activity, including diesel vehicle travel. Therefore, the Project would not result in exposure of sensitive receptors in the vicinity of the Project site to substantial TAC concentrations due to either construction or operation and impacts would be less than significant.

To conclude, the Project would result in a less than significant impact regarding the potential to expose sensitive receptors to substantial pollutant concentrations (for both criteria air pollutants and TACs).

### *d)* Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

**Less than Significant Impact:** Based on available information, the Project is not anticipated to result in other emissions that have not been addressed in Sections III(a) through III(c). As such, this analysis focuses on the potential for the Project to generate odors.

The occurrence and severity of potential odor impacts depend on numerous factors. The nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying, cause distress among the public, and generate citizen complaints.

#### CONSTRUCTION EMISSIONS

During Project construction, exhaust from equipment may produce discernible odors typical of most construction sites. Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment. However, such odors would disperse rapidly from the Project site and generally occur at magnitudes that would not affect substantial numbers of people. Therefore, impacts associated with odors during construction would be less than significant. A potential for sewer odors exists but is minimal. Flow-through plugs will be used to allow sewage to continue to flow at the bottom of the manholes while work being done, which will minimize odor. Work to be done during late morning to early afternoon hours, typically corresponding to lower flow. Manhole covers would be opened only as needed to do work. Ventilation is required during confined space worker access.

#### **OPERATIONAL EMISSIONS**

Examples of land uses and industrial operations that are commonly associated with odor complaints include agricultural uses, wastewater treatment plants, food processing facilities, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding facilities. The Project includes improvements to existing sewer manholes, which would not create new sources of odor during operation. Therefore, Project operations would result in an odor impact that is less than significant.

IV.	BIOLOGICAL RESOURCES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by California Department of Fish and Game or U.S. Fish and Wildlife Service?				
IV.	BIOLOGICAL RESOURCES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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b)	Have a substantial adverse effect on any riparian, aquatic or wetland habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by California Department of Fish and Game or U.S. Fish and Wildlife Service?				
c)	Have a substantial adverse effect on state or federally protected wetlands (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		$\boxtimes$		
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				

The following analysis is based on a *Biological Resources Report* that is presented in Appendix B. Note that Appendix B refers to the Project site as the "Project Area," the review area as the "Biological Survey Area," and the direct area of impact as the "Temporary Access Impact Area." The Review Area consists of a 50-foot survey buffer around each direct area of impact (manhole work area plus access) where more focused biological surveys were conducted.

#### **EXISTING SETTING**

#### **Vegetation Communities**

The Project site supports vegetation communities totaling 11.71 acres (Table 3), including 3.29 acres within the review area. Vegetation communities identified during the general biological resources survey include vernal pool/nonnative grassland, freshwater marsh, ponded water, coastal sage scrub, baccharis-dominated coastal sage scrub, nonnative grassland, disturbed habitat, bare ground, ornamental vegetation, and developed land. Figure 8 displays the vegetation communities within the Project site on an aerial photograph. The vegetation communities observed within the Project site are described in Appendix B.

Vegetation Community	HMP Habitat Group	Project Site (Acres)	Review Area (Acres)
Vernal Pool/Nonnative Grassland	А	3.25	1.00
Freshwater Marsh	А	0.04	0.0
Southern Willow Scrub	А	0.14	0.08
Ponded Water	А	0.49	0.12
Coastal Sage Scrub, occupied by gnatcatcher	С	2.18	0.63
Coastal Sage Scrub, Baccharis-Dominated; occupied	С	1.30	0.36
Nonnative Grassland	E	0.60	0.09
Disturbed Habitat	F	0.50	0.01
Bare Ground	N/A	0.47	0.15
Ornamental Vegetation	N/A	0.61	0.15
Developed	N/A	2.14	0.70
	TOTAL	11.71	3.29

#### Table 3: Vegetation Communities within the Project Site (Acres)

Source: Appendix B

Notes: The totals may not equal sum due to rounding.



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#### Special-Status Species

The discussion in this section is based on the results of biological surveys conducted by LSA (2020) and vernal pool indicator species surveys performed by Dudek (2023) throughout the Project site (Appendix B).

Vernal pool surveys in 2023 resulted in the observation of 16 vernal pool indicator plant species in the Project area, a relatively high number for a single vernal pool complex. Of the 16 vernal pool indicator plant species, four are recognized as special-status species by the USFWS and CDFW, and/or considered a Narrow Endemic under the HMP (Table 4, Figure 9a-b). All four of these special-status species are covered by the HMP. An additional special-status plant species, San Diego marsh elder (*Iva hayesiana*), a California Species of Special Concern, was observed onsite by LSA in 2020. San Diego march elder is not a vernal pool species, but a small, evergreen subshrub.

Vernal Pool Species	Common Name	State Status	Federal Status	НМР
Brodiaea orcuttii	Orcutt's brodiaea	CRPR 1B.1	None	Covered; Narrow Endemic
Eryngium aristulatum var. parishii	San Diego button celery	Endangered	Endangered	Covered; Narrow Endemic
Navarretia fossalis	Spreading navarretia	CRPR 1B.1	Threatened	Covered; Narrow Endemic
Orcuttia californica	California Orcutt grass	Endangered	Endangered	Covered; Narrow Endemic
Branchinecta sandiegonensis	San Diego fairy shrimp	Species of Special Concern	Endangered	Covered; Narrow Endemic
Streptocephalus woottoni	Riverside fairy shrimp	Species of Special Concern	Endangered	Covered; Narrow Endemic
Polioptila californica californica	Coastal California gnatcatcher	Species of Special Concern	Threatened	Covered

#### Table 4: Special Status Species Identified within the Project Site

Source: Appendix B

**Notes:** CRPR = California Rare Plant Rank. A rank of 2B.1 signifies a species that is Rare or Endangered in California, but more common elsewhere.

A total of three special-status wildlife species were observed onsite, as shown in Figure 8b and Figure 9ab, including San Diego fairy shrimp, Riverside fairy shrimp and coastal California gnatcatcher. The fairy shrimp are vernal pool species that require ponding for a sufficient amount of time (7 to 21 days at the appropriate water temperature) to hatch after the rains begin. During the dry season, fairy shrimp persist as dried cysts in the soil. Hatching usually occurs January to March. Coastal California gnatcatcher occurs within the coastal sage scrub in the Project area. Although USFWS protocol-level surveys were not conducted for this species, the city considers the coastal sage scrub onsite to be "occupied" (HMP Habitat Group C).



SOURCE: SANGIS 2023, 2024

160 Beet FIGURE 9a Vernal Pool Species 2023 Ponto Sewer Manhole Rehabilitation Project



SOURCE: SANGIS 2023, 2024

160 Beet FIGURE 9b Vernal Pool Species 2023 Ponto Sewer Manhole Rehabilitation Project

#### **Jurisdictional Waters**

An Aquatic Resources Delineation Report was prepared in accordance with the U.S. Army Corps of Engineers (USACE) Minimum Standards for Acceptance of Aquatic Resources Delineation Reports by Dudek (2024) (Appendix B). The delineation was conducted within the review area to identify and map existing aquatic resources potentially subject to the regulatory jurisdiction of the USACE pursuant to Section 404 of the Clean Water Act (33 USC 1344), waters of the State potentially subject to the regulatory jurisdiction of the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act, stream and riparian habitats potentially subject to the jurisdiction of CDFW pursuant to Section 1602 of the California Fish and Game Code, and wetlands and Environmentally Sensitive Habitat Areas potentially subject to the jurisdiction of the CCC.

Data collected during the field delineation performed by Dudek in 2023 indicated that approximately 1.203 acres of aquatic resources occur in the review area (Table 5) (Appendix B). These results are preliminary until verified by the aquatic resources agencies. The aquatic resources observed within the review area are described in Appendix B and depicted in Figure 10a-c. A request for an Approved Jurisdictional Determination confirming the absence of waters of the United States from the review area is currently being finalized with the USACE (Appendix B).

Jurisdictional Aquatic Resource	Regulatory Authority	Total within Review Area (acres)
Non-wetland Waters	CCC, CDFW, and RWQCB	0.123
Scrub-Shrub Wetlands	CCC, CDFW, and RWQCB	0.032
Vernal Pools	CCC and RWQCB	1.006
Riparian	CCC and CDFW	0.042
	Total Jurisdictional Aquatic Resources	1.203

## Table 5: Summary of Potentially Jurisdictional Aquatic Resources Occurring within the Biological Study Area

Source: Appendix B

Notes: These results are preliminary until verified by the aquatic resources agencies.



SOURCE: SanGIS 2020

DUDEK

50

100 H Feet

### FIGURE 10a Impacts to Aquatic Resources

Poinsettia Station Vernal Pool Preserve Sewer Manhole Rehabilitation Project



SOURCE: SanGIS 2020

100 Beet FIGURE 10b Impacts to Aquatic Resources Poinsettia Station Vernal Pool Preserve Sewer Manhole Rehabilitation Project



SOURCE: SanGIS 2020

#### 

100 Beet

### FIGURE 10c Impacts to Aquatic Resources

Poinsettia Station Vernal Pool Preserve Sewer Manhole Rehabilitation Project

#### Wildlife Corridors

The Project site does not provide a significant movement corridor for wildlife. The Project site is completely surrounded by development, and the only opportunity for movement north or south of the site is within the railway right-of-way. Any such movement would also be deterred by a number of busy east-west roadways beyond the Project site that would have to be crossed at grade.

#### **REGULATORY SETTING**

#### Federal Endangered Species Act

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

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

#### Clean Water Act

Pursuant to Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (ACOE) regulates the discharge of dredged and/or fill material into waters of the United States. The term "wetlands" (a subset of waters) is defined in 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." In the absence of wetlands, the limits of ACOE jurisdiction in non-tidal waters, such as intermittent streams, extend to the ordinary high water mark, as defined in 33 CFR 328.3(e). Pursuant to Section 10 of the Rivers and Harbors Appropriation Act of 1899, the ACOE regulates any potential obstruction or alteration of any navigable water of the United States.

#### Migratory Bird Treaty Act

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

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

#### California Endangered Species Act

The California Department of Fish and Wildlife (CDFW, formerly California Department of Fish and Game) administers the California Endangered Species Act (CESA; California Fish and Game Code, Section 2050 et seq.), which prohibits the take of plant and animal species designated by the California Fish and Game Commission as endangered or threatened in the State of California. Under CESA Section 86, "take" is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA Section 2053 stipulates that state agencies may not approve projects that will "jeopardize the continued existence of any endangered species or threatened species, or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy."

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

#### California Fish and Game Code

Sections 2081(b) and 2081(c) of the California Fish and Game Code authorizes take of endangered, threatened, or candidate species if take is incidental to otherwise lawful activity and if specific criteria are met. These provisions also require CDFW to coordinate consultations with USFWS for actions involving federally listed species that are also state- listed species. In certain circumstances, Section 2080.1 of CESA allows CDFW to adopt a federal incidental take statement or a 10(a) permit as its own, based on its findings that the federal permit adequately protects the species and is consistent with state law. A Section 2081(b) permit may not authorize the take of "fully protected" species and "specified birds" (California Fish and Game Code, Sections 3505, 3511, 4700, 5050, 5515, and 5517). If a project is planned in an area where a fully protected species or a specified bird occurs, an applicant must design the project to avoid take.

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

#### Project Name: Ponto Sewer Manhole Rehabilitation Project Project No: SDP2024-0014, CDP2024-0019, HMP2024-0007

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

#### California Coastal Act

Under the California Coastal Act (CCA) (California Public Resources Code, Section 30000 et seq.), the California Coastal Commission regulates impacts to wetlands in the "coastal zone" and requires a coastal development permit for almost all development within this zone. From 3 miles seaward, the coastal zone generally extends approximately 1,000 yards inland. In less developed areas, it can extend up to 5 miles inland from the mean high tide line, but can also be considerably less than 1,000 yards inland in developed areas.

The CCA also protects designated sensitive coastal areas by providing additional review and approvals for proposed actions in these areas. Section 30121 of the CCA defines wetlands as "lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, swamps, mudflats, and fens." The CCA allows disking, filling, or dredging of wetlands for certain uses, such as restoration. The CCA also directs each city or county within the coastal zone to prepare a Local Coastal Program for California Coastal Commission certification (California Public Resources Code, Section 30000 et seq.).

In contrast to ACOE, which uses a three-parameter definition to delineate wetlands, the California Coastal Commission essentially uses the Cowardin method of wetlands classification, which defines wetland boundaries by a single parameter (i.e., hydric soils, hydrophytic vegetation, or hydrology) (Cowardin et al. 1979).

#### California Environmental Quality Act

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

#### Special-Status Species

The CEQA Guidelines (14 CCR 15000 et seq.) define endangered animals or plants as species or subspecies whose "survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors" (14 CCR 15380(b)(1)). A rare animal or plant is defined in CEQA Guideline 15380(b)(2) as a species that, although not currently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or...[t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act." Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing, as defined further in CEQA Guideline 15380(c).

#### Project Name: Ponto Sewer Manhole Rehabilitation Project Project No: SDP2024-0014, CDP2024-0019, HMP2024-0007

For purposes of this impact analysis, species are considered sensitive if they are (1) listed or proposed for listing by state or federal agencies as threatened or endangered; (2) plant species with a California Rare Plant Rank (CRPR) (formerly California Native Plant Society (CNPS) List) 1 through 4; (3) covered under the Carlsbad HMP; or (4) considered California Species of Special Concern or California Fully Protected Species or Birds of Conservation Concern (USFWS 2008).

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

#### Special-Status Vegetation Communities

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) requires an evaluation of impacts to "any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game1 or the U.S. Fish and Wildlife Service." For the purposes of this analysis, native vegetation communities identified as requiring mitigation under the Carlsbad HMP are considered special status due to having been identified in a local and regional conservation plan.

#### North County Multiple Habitat Conservation Program

The North County Multiple Habitat Conservation Program (MHCP) is a long-term regional conservation plan established to protect sensitive species and habitats in northern San Diego County. The MHCP is divided into seven subarea plans—one for each jurisdiction within the MHCP—that are permitted and implemented separately from one another. The City of Carlsbad is the only city under the MHCP that has an approved and permitted subarea plan (i.e., the Carlsbad HMP) (City of Carlsbad 2004).

The MHCP sets forth general and subarea conditions of coverage that must be met for each covered species in order for the Cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista to obtain take authorization. These conditions can be found in Appendix C of the Carlsbad HMP.

#### Carlsbad Habitat Management Plan

The Carlsbad HMP was adopted by the city in December 1999, and the final approvals from USFWS and CDFW, including implementing agreement and terms and conditions, were granted in November 2004. The purpose of the Carlsbad HMP is to guide the design, management, monitoring, and public use of the preserve system. The Carlsbad HMP calls for 6,478 acres of natural habitat to be preserved within the city, as well as an additional 308 acres of habitat for the coastal California gnatcatcher (Polioptila californica californica) within the designated MHCP gnatcatcher core area. The Carlsbad HMP identifies LMFZs, which were developed based on the distribution of existing vegetation communities and sensitive species. The zones were further broken down into Carlsbad HMP cores, linkages, and special resource areas.

The Project temporary impact areas are within an HMP Existing Hardline Area (permanently protected for habitat conservation). In addition, the Project area is within the coastal zone; as such, the Project must comply with HMP Coastal Zone Standards 7-1 through 7-14 (HMP Section D).

#### City of Carlsbad Local Coastal Program

The City of Carlsbad has an adopted Local Coastal Program (LCP). Developed in conformance with the California Coastal Act, the city's LCP outlines policies to "Protect, maintain, and where feasible, enhance and restore the overall quality of the Coastal Zone environment and its natural and man-made resources." The city's LCP implements the California Coastal Act at a local level by addressing land use, zoning ordinances, and zoning district maps in sensitive coastal resource areas by providing implementing actions, provisions, and policies required within the Coastal Zone.

The city's LCP regulates development in the state-designated Coastal Zone within portions of the city. The city's LCP consists of six geographic segments: the Agua Hedionda Lagoon LCP segment, composed of approximately 1,100 acres; the Carlsbad Mello I segment, with approximately 2,000 acres; the Carlsbad Mello II segment, with approximately 5,250 acres; the West Batiquitos Lagoon/Sammis Properties segment, with approximately 200 acres; the East Batiquitos Lagoon/Hunt Properties segment, with approximately 1,000 acres; and the Village–Barrio segment, with approximately 150 acres. The Project site is located within the Mello II Segment of the LCP. The proposed Project activities are located in the approved City of Carlsbad LCP jurisdiction (Mello II segment) with a large portion of the Project within the appeal jurisdiction of the CCC.

#### **PROJECT IMPACTS**

All potential impacts discussed below are temporary. There are no permanent Project-related impacts to biological resources. Potential direct and indirect project impacts are discussed below.

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

#### Less than Significant Impact with Mitigation Incorporated:

#### Plant Species

A total of five special-status plant species have been observed onsite (Table 6, Figure 9a-b); however, only three have the potential to be affected by the Project. San Deigo button celery is the species with the greatest potential to be impacted due to its extensive distribution. This Endangered species occurs throughout almost the entire Project area, and it may be the single largest occurrence within the United States (Dudek 2023). California Orcutt grass, also an Endangered species, has a fairly extensive distribution in the southern portion of the site, and it may be close enough to manholes 41C-5, 41C-55 to be affected by the Project (See Figure 2b for manhole numbers). Spreading navarretia, a Threatened species, has been documented close to manhole 41A-7. All three species are considered Narrow Endemic by the HMP, and are covered by the HMP.

The location of San Diego marsh elder was not documented, but this species was included in the list of plant species observed by LSA (Appendix B). This species is not listed by state or federal agencies as Threatened or Endangered, but it has a California Rare Plant Rank (CRPR) of 2B.2, which means that it is considered rare or endangered in California, but more common elsewhere. This species is presumed absent from the temporary impact areas because San Diego marsh elder is an evergreen shrubby species that is easily observed when present at any time of the year, and it would have been documented by Dudek during the most recent surveys within the review area.

Vernal Pool Species	Common Name	State Status <sup>1</sup>	Federal Status	НМР	Potential Impacts? (Manhole #)
Brodiaea orcuttii	Orcutt's brodiaea	CRPR 1B.1	None	Covered; Narrow Endemic	No
Eryngium aristulatum var. parishii	San Diego button celery	Endangered	Endangered	Covered; Narrow Endemic	Yes; 41A-5, 41A-6, 41A-7, 41C-2, 41C-4, 41C-5, 41C-55, 41C-6
Navarretia fossalis	Spreading navarretia	CRPR 1B.1	Threatened	Covered; Narrow Endemic	Yes; 41A-7
Orcuttia californica	California Orcutt grass	Endangered	Endangered	Covered; Narrow Endemic	Yes; 41C-5, 41C-55
Iva hayesiana	San Diego marsh elder	CRPR 2B.2	None	Not Covered	No

Table 6: Potential Im	pacts to Specia	l Status Plant Spe	cies within the	Proiect Site
	pucts to specia	i Status i lant Spe		i i oject olte

Source: Appendix B

**Notes:** CRPR = California Rare Plant Rank. A rank of 1B signifies that a species is rare or endangered in California and elsewhere; 2B signifies that a species is rare or endangered in California, but more common elsewhere.

#### Direct Impacts to Special-Status Plant Species (Temporary)

Because there were too many plants to document individually, and because the location of vernal pool plants can vary significantly from year to year, the rare plant species were documented as polygons representing the outer extent of the population at the time of the 2023 survey. Therefore, it is unknown if an individual San Diego button celery, California Orcutt grass or Spreading navarretia will be present within the temporary impact area at the time of Project implementation. Potential temporary direct impacts could occur to these species from vegetation removal for the manhole access pathways or external manhole rehabilitation activities, such as the replacement or installation of 5-foot-square concrete pads around the manholes. Other impacts could occur along the pathways from trampling or bringing equipment back and forth between the trail/sidewalk and the manhole.

Mitigation Measure **BIO-1** requires that a vernal pool biologist be present onsite when the access pathways and work areas are established (e.g., vegetation removal and siting of pathways), and the pathways will be slightly revised as necessary according to these onsite conditions to avoid impacts to these sensitive species. No vernal pool species will be trimmed or removed. In addition, because the work will be done during the dry season when soils are completely dry, most of the vernal pool plants are expected to have senesced or significantly contracted during the Project implementation. Placement of clean boards along the pathway and manhole work area will protect the plants from trampling and other soil disturbance, and the boards will be removed when the work is complete. Mitigation Measure **BIO-5** requires that a qualified vernal pool biologist oversee implementation of **BIO-1c, 1d and 1g**.

With implementation of Mitigation Measures **BIO-1** and **BIO-5**, potential direct impacts to special-status plant species from the proposed Project would be a less than significant impact with mitigation incorporated.

#### Indirect Impacts to Special-Status Plant Species (Temporary)

Temporary indirect impacts could be caused by dumping cut vegetation onsite. Although some minor brush piles can provide hiding space for wildlife, there will be a large amount of material that could smother sensitive vernal pool plants and potentially serve as tinder for wildfire. Implementation of Mitigation Measure **BIO-2** will prevent negative effects from the cut vegetation by requiring it to be properly disposed of or mulched and dispersed onsite at the discretion of the Project vernal pool biologist.

Temporary indirect impacts to the vernal pool plants could also occur if unauthorized persons enter the site during Project activities, or before the restoration of temporary impact areas is complete. The impacts could be caused by trampling, bringing in contaminants, damage from encampments, etc. For the most part, the vernal pools and other portions of the Project area are protected along the eastern edge from unauthorized access by a thick wall of mature coastal sage scrub adjacent to the trail, and a chain link fence, located approximately 20 feet beyond the coastal sage scrub. However, there will be easy access for unauthorized persons and dogs once the vegetation is removed to establish the pathways to the manholes. Currently, there have been many direct and indirect observations of trail users and dog walkers entering the site through an opening in the coastal sage scrub at the location of the proposed pathway for manhole 41C-2. This leads directly to a vernal pool behind the wall of coastal sage scrub, although the area is blocked from further incursion by the chain link fence. The nine new access pathways will provide access beyond the chain link fence into the main vernal pool area. Implementation of Mitigation Measure **BIO-2** would require that access into the Preserve along the pathways be blocked during and after Project implementation, until the habitat grows back, and that temporary signage be installed during the habitat restoration period.

In addition, the vernal pool plants could be indirectly impacted by any contaminants brought in by Project personnel and their equipment, including weed seeds, pests, pathogens and other toxic materials. Mitigation Measure **BIO-2** requires that all Project-related personnel decontaminate their clothes, boots and equipment every day before entering the site.

With implementation of Mitigation Measure **BIO-2**, potential indirect impacts to special-status plant species from the proposed Project would be less than significant impact with mitigation incorporated.

#### Wildlife Species

Three special-status wildlife species occur onsite (Table 7). The two species of fairy shrimp (San Diego and Riverside fairy shrimp) are both Endangered (federal listing), State Species of Special Concern, and Narrow Endemic under the HMP (Figure 9a-b). The coastal California gnatcatcher, a Threatened species (federal listing) and State Species of Special Concern, has been documented onsite and is presumed to occupy all coastal sage scrub in the Project area (Figure 8b). All three of these species are covered by the HMP.

Vernal Pool Species	Common Name	State Status <sup>1</sup>	Federal Status	НМР	Potential Impacts? (Manhole #)
Branchinecta sandiegonensis	San Diego fairy shrimp	Species of Special Concern	Endangered	Covered; Narrow Endemic	Yes; 41A-7

Table 7: Potential Impacts to Special-Status Wildlife Species within the Project Site

Vernal Pool Species	Common Name	State Status <sup>1</sup>	Federal Status	НМР	Potential Impacts? (Manhole #)
Streptocephalus woottoni	Riverside fairy shrimp	Species of Special Concern	Endangered	Covered; Narrow Endemic	No
Polioptila californica californica	Coastal California gnatcatcher	Species of Special Concern	Threatened	Covered	Yes; during the breeding season

#### Table 7: Potential Impacts to Special-Status Wildlife Species within the Project Site

Source: Appendix B

San Diego fairy shrimp has been observed close to manhole Biological Study Area 41A-7 (see Figure 9a-b) and could be temporarily impacted by the Project. Riverside fairy shrimp is outside of the temporary impact and review area and is not expected to be impacted. Direct and indirect Project impacts to San Diego fairy shrimp are similar to the impacts described above for vernal pool plant species. Coastal California gnatcatcher could be temporarily impacted by the Project as described below.

#### San Diego Fairy Shrimp

#### Direct Impacts to San Diego Fairy Shrimp (Temporary)

Temporary direct impacts to San Diego fairy shrimp could occur if the Project is implemented when there is ponding or wet soils, or if the access pathways are not protected. Even when soils are dry, the fairy shrimp may persist in the soil as cysts, which will hatch during the next rain.

Mitigation measure **BIO-1** requires that a vernal pool biologist be present onsite when the access pathways and work areas are established (e.g., vegetation removal and siting of pathways), and the pathways will be slightly revised as necessary according to these onsite conditions to avoid impacts to fairy shrimp. Placement of clean boards along the pathway and manhole work area will protect the trampling of fairy shrimp cysts and prevent soil disturbance. The boards will be cleaned and removed when the work is complete to ensure that no fairy shrimp cysts are taken offsite.

With implementation of mitigation measure **BIO-1**, impacts to San Diego fairy shrimp from the proposed Project would be a less than significant impact with mitigation incorporated.

#### Indirect Impacts to San Diego Fairy Shrimp (Temporary)

As described for vernal pool plants, temporary indirect impacts to the San Diego fairy shrimp could occur if unauthorized persons enter the site during Project activities, or before the restoration of temporary impact areas is complete. The impacts could be caused by trampling, bringing in contaminants, soil disturbance from encampments, etc. The nine new access pathways will provide access beyond the chain link fence into the main vernal pool area. Implementation of mitigation measure **BIO-2** would require that access into the Preserve along the pathways be blocked during and after Project implementation, until the coastal sage scrub grows back over the temporary pathways, and that temporary signage be installed during the habitat restoration period.

In addition, the San Diego fairy shrimp could be indirectly impacted by any contaminants brought in by Project personnel and their equipment, including weed seeds, pests, pathogens and other toxic materials. Mitigation measure **BIO-2** requires that all Project-related personnel decontaminate their clothes, boots and equipment every day before entering the site.

With implementation of mitigation measure **BIO-2**, impacts to San Diego fairy shrimp from the proposed Project would be a less than significant impact with mitigation incorporated.

#### Coastal California Gnatcatcher, Raptors and Migratory birds

The coastal California gnatcatcher could be directly impacted if the coastal sage scrub onsite is removed during the breeding season. Pursuant to HMP requirements, mitigation measure **BIO-4** prohibits removal of gnatcatcher habitat (coastal sage scrub) between March 15 and August 15, and includes impact avoidance measures if the remainder of the breeding season cannot be avoided. This mitigation measure would also protect other bird species that may nest in the coastal sage scrub habitat. Raptors are not expected to be impacted, as no trees will be removed for this Project. No other impacts to gnatcatchers, raptors or migratory birds are expected, as the activities will be performed with hand tools only (no heavy equipment) and noise levels are not expected to exceed required thresholds.

With implementation of mitigation measure **BIO-4**, impacts to the coastal California gnatcatcher, raptors and migratory birds from the proposed Project would be a less than significant impact with mitigation incorporated.

b) Would the Project have a substantial adverse effect on any riparian, aquatic or wetland habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by California Department of Fish and Game or U.S. Fish and Wildlife

#### Less than Significant Impact with Mitigation Incorporated:

#### Direct Impacts to Sensitive Habitat (Temporary)

A total of 0.072 acre of coastal sage scrub will be temporarily impacted by removal of the vegetation to create access pathways to each manhole (Table 8, Figure 11). Vegetation within the temporary access routes would require trimming and removal of the entire aboveground portion of the woody shrubs, leaving only the stumps and the belowground roots. Implementation of mitigation measure **BIO-1** will minimize these impacts, by requiring that the Project biologist monitor vegetation removal to ensure that the width of the access pathways does not exceed eight feet wide (the minimum required to bring the tools and equipment to the manholes). Restoration of the temporary impacts to coastal sage scrub at a 1:1 ratio will be accomplished through implementation of Conceptual Restoration Plan required in mitigation measure **BIO-3**. This plan must be approved by the city's Habitat Management Division prior to Project initiation.

Although Table 8 shows an impact of 0.033 acre of "vernal pool/non-native grassland," no vegetation removal other than weedy non-natives will occur within the impact areas, and the dry vernal pool areas (including any vernal pool plants that may be present) will be protected by boards placed along the pathways. Table 8 also shows an impact of 0.001 acre to southern willow scrub; however, this is from the canopy overhead, which will not be trimmed or removed. Therefore, there are no impacts to this habitat

type. The remaining 0.020 acre of impacts are within disturbed habitat, bare ground and developed, none of which are sensitive vegetation types.

Vegetation Community	Total
Vernal Pool/Non-Native Grassland	0.033 <sup>1</sup>
Freshwater Marsh	-
Southern Willow Scrub	0.001 <sup>2</sup>
Ponded Water	_
Coastal Sage Scrub	0.042
Coastal Sage Scrub, Baccharis-Dominated	0.030
Nonnative Grassland	-
Disturbed Habitat	0.008
Bare Ground	0.011
Ornamental	_
Developed	0.001
Total	0.127

#### **Table 8: Temporary Impacts to Sensitive Vegetation Communities**

Source: Attachment B

Notes:

With implementation of Mitigation Measures **BIO-1** and **BIO-3**, temporary direct impacts to 0.072 acre of coastal sage scrub from the proposed Project would be less than significant impact with mitigation incorporated.

<sup>&</sup>lt;sup>1</sup> Although impacts to "vernal pool/non-native grassland" shows in the table, no vegetation removal other than weedy nonnatives will occur, and the dry vernal pools will be protected with boards placed on the ground.

<sup>&</sup>lt;sup>2</sup> The 0.001 acre impact to southern willow scrub is from the canopy overhead, which will not be trimmed or removed; therefore, there are no impacts to this habitat type.



Biological Study Area (50' Buffer)
 Temporary Access Impact Area
 Poinsettia Station Preserve
 San Diego Button Celery
 Vegetation Communities/Land Covers
 Baccharis-dominated Coastal Sage Scrub
 Nonnative Vegetation/Vernal Pool
 Ornamental
 Disturbed

Developed



SOURCE: LSA 2021; SANGIS 2023, 2024

FIGURE 11a Biological Resources Impacts Ponto Sewer Manhole Rehabilitation Project



 Biological Study Area (50' Buffer) Temporary Access Impact Area Poinsettia Station Preserve San Diego Button Celery Vegetation Communities/Land Covers Baccharis-dominated Coastal Sage Scrub

- Coastal Sage Scrub
- Nonnative Vegetation/Vernal Pool
   Southern Willow Scrub





SOURCE: LSA 2021; SANGIS 2023, 2024

FIGURE 11b Biological Resources Impacts Ponto Sewer Manhole Rehabilitation Project



SOURCE: LSA 2021; SANGIS 2023, 2024

FIGURE 11c Biological Resources Impacts Ponto Sewer Manhole Rehabilitation Project



Biological Study Area (50' Buffer)
 Temporary Access Impact Area
 Poinsettia Station Preserve
 San Diego Button Celery
 Vegetation Communities/Land Covers

- Baccharis-dominated Coastal Sage Scrub
- Barren Ground
- Coastal Sage Scrub
- Nonnative Vegetation/Vernal Pool
- Ornamental
- Disturbed
- Developed



SOURCE: LSA 2021; SANGIS 2023, 2024



FIGURE 11d Biological Resources Impacts Ponto Sewer Manhole Rehabilitation Project



SOURCE: LSA 2021; SANGIS 2023, 2024

FIGURE 11e Biological Resources Impacts Ponto Sewer Manhole Rehabilitation Project



SOURCE: LSA 2021; SANGIS 2023, 2024

FIGURE 11f Biological Resources Impacts Ponto Sewer Manhole Rehabilitation Project



FIGURE 11g Biological Resources Impacts Ponto Sewer Manhole Rehabilitation Project

SOURCE: LSA 2021; SANGIS 2023, 2024





Biological Study Area (50' Buffer)
 Temporary Access Impact Area
 Poinsettia Station Preserve
 San Diego Button Celery

- C Riverside Fairy Shrimp
- Callifornia Orcutts Grass

Vegetation Communities/Land Covers

- Barren Ground
- Coastal Sage Scrub
- Nonnative Grassland
- Nonnative Vegetation/Vernal Pool
- Ornamental
   Ponded Water
- Ponded wat
- Developed



SOURCE: LSA 2021; SANGIS 2023, 2024



FIGURE 11h Biological Resources Impacts Ponto Sewer Manhole Rehabilitation Project

#### Indirect Impacts to Sensitive Habitat (Temporary)

#### Vernal Pool Habitat

Potential indirect impacts to vernal pool habitat are described above in the discussion about vernal pool plants and fairy shrimp. With implementation of mitigation measure **BIO-2**, indirect impacts to vernal pool habitat from the proposed Project would be less than significant impact with mitigation incorporated.

#### Coastal Sage Scrub Habitat

Temporary indirect impacts to coastal sage scrub could be caused by dumping cut vegetation onsite, which could be flammable and potentially serve as tinder for wildfire. Implementation of mitigation measure **BIO-2** will prevent negative effects from the cut vegetation by requiring that it be properly disposed of or mulched and dispersed onsite at the discretion of the Project vernal pool biologist.

Unauthorized trespass is unlikely to cause many impacts to the habitat itself because the coastal sage scrub is mature and too dense to walk through; however, encampments could result in ignition of a fire that could burn the coastal sage scrub. One small encampment was identified in 2023 right next to the access path for the 41C-6 manhole just outside of the Project area on the southern boundary. Implementation of mitigation measure **BIO-2** would require that access into the Preserve along the pathways be blocked during and after Project implementation, until the habitat grows back, and that temporary signage be installed during the habitat restoration period.

Weed seeds could be brought in by the Project personnel or trespassers, which could impact the coastal sage scrub habitat over time. Mitigation measure **BIO-2** requires that all Project-related personnel decontaminate their clothes, boots and equipment every day before entering the site and that access trespassers be blocked.

With implementation of mitigation measure **BIO-2**, impacts to sensitive habitat from the proposed Project would be less than significant impact with mitigation incorporated.

# c) Will the Project have a substantial adverse effect on state or federally protected wetlands (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less than Significant Impact: As discussed above, there are no direct impacts to freshwater marsh, southern willow scrub or ponded water. A total of 0.033 acre of land cover identified as "vernal pool/non-native grasslands" under the jurisdiction of the RWQCB and CCC occurs within the temporary impact area. However, the Project does not include any activities that would result in "direct removal, filling, hydrological interruption, or other means." All activities would be conducted during the dry season and all power washing would occur completely inside the sewer manholes and pipeline areas and not adversely affect protected wetlands, including vernal pools. Additionally, plywood would be placed along access routes to protect the trimmed vegetation and soil from trampling. Therefore, the Project would have a less than significant impact on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means.

# d) Will the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

**Less than Significant Impact:** The Project site does not provide a significant movement corridor for wildlife. The Project area is completely surrounded by development, and the only opportunity for movement north or south of the site is within the railway right-of-way. Any such movement would also be deterred by a number of busy east-west roadways that would have to be crossed at-grade. Therefore, the Project would have a less than significant impact on wildlife movement or use of native wildlife nursery sites.

## *e)* Will the Project conflict with any Local Policies or Ordinances Protecting Biological Resources, such as a tree preservation policy or ordinance?

Less than Significant with Mitigation Incorporated: The Project site is within the Mello II segment of the city's Local Coastal Plan (LCP). The city's LCP contains policies to protect environmentally sensitive habitat areas including those provided in the city's HMP. However, because this Project would be a maintenance project rather than a development project, some of policies in the city's LCP would not apply.. Further, the Project would comply with applicable requirements described in the City's LCP Policy 3-4, Grading and Landscaping because, as discussed in Section X, Hydrology and Water Quality, of this Initial Study, all Project activity would be subject to the typical restrictions, including BMPs and requirements that address erosion and runoff, including the federal CWA; NPDES and MS4 Permits issued by the San Diego RWQCB; City of Carlsbad Engineering Standards; the city's Master Drainage Plan, Grading Ordinance, Storm Water Ordinance, BMP Design Manual, and Jurisdictional Runoff Management Plan; and the Project-specific SWPPP. Project construction and maintenance activities, which would occur on the 0.13-acre area of direct impact within the Project site, would not substantially increase the rate of surface runoff. The scope of work involved in the rehabilitation process would not require any significant excavation or disturbance of the surrounding soil. Although minor soil disturbance may occur during access for the rehabilitation work, which could increase the risk of soil erosion in the immediate vicinity of the manhole, plywood would be placed along access routes to protect the trimmed vegetation and soil from trampling. Furthermore, once the rehabilitation work is complete the Project site would be returned to its existing conditions. With implementation of Mitigation Measures BIO-1, BIO-2, BIO-3, BIO-4, and BIO-5, the Project would not conflict with any local policies or ordinances protecting biological resources. Therefore, potential impacts would be less than significant impact with mitigation incorporated.

#### f) Will the Project Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

**Less than Significant with Mitigation Incorporated:** San Diego button celery, spreading navarretia, California Orcutt grass, San Diego fairy shrimp and Riverside fairy shrimp and coastal California gnatcatcher are all "covered species" under the HMP. As discussed above, implementation of Mitigation Measures **BIO-1**, **BIO-2**, **BIO-4** and **BIO-5** would reduce potential direct and indirect impacts to these species to a level below significant.

In addition, all projects within the Coastal Zone are required to comply with HMP Coastal Zone Standards 7-1 through 7-14 (HMP Section D). Because the Project is a maintenance project, rather than a

development project, many of the policies are not applicable. Compliance with these standards is described below.

- **7-1 Environmentally Sensitive Habitat Areas (ESHA).** Coastal sage scrub is considered ESHA by the Coastal Commission. In addition, although not specifically mentioned in the Coastal Zone standards, vernal pools are also considered to be ESHA due to their rarity and value.
- 7-2 Coastal Sage Scrub. Conservation of a minimum of 67 percent of the coastal sage scrub and 75 percent of the coastal California gnatcatchers onsite is required. The Project is expected to temporarily affect 0.072 acre of coastal sage scrub, and no coastal California gnatcatchers are expected to be affected by Project-related activities. Implementation of Mitigation Measures BIO-1, BIO-2, BIO-3, BIO-4 and BIO-5 would reduce potential impacts to a level below significant.
- **7-3 Oak Woodland.** No oak woodland is present within the temporary impact area.
- **7-4 Streams.** No streams are present within the temporary impact area.
- **7-5 Ephemeral Drainages and Ephemeral Streams.** No ephemeral drainages or ephemeral streams are present within the temporary impact area.
- **7-6** Wetlands. A total of 0.033 acre of vernal pools/non-native grassland occur within the temporary impact area. Vernal pools are considered to be a CCC wetland. Implementation of mitigation measure **BIO-1** will reduce potential direct impacts to a level below significant.
- **7-7** Wetland Mitigation Requirements. Implementation of mitigation measure BIO-1 will reduce potential direct impacts to CCC wetlands (vernal pools) to a level below significant.
- **7-8** No Net Loss of Habitat. The Project will not result in a net loss of coastal sage scrub habitat within the Coastal Zone. Temporary impacts to coastal sage scrub will be mitigated through restoration to pre-project conditions (**BIO-3**).
- **7-9** Upland Habitat Mitigation Requirements. Temporary impacts to coastal sage scrub will be mitigated through restoration to pre-project conditions (BIO-3).
- **7-10 Highly Constrained Properties.** The Project site is not a "highly constrained property" as defined by this standard (greater than 80% cover of coastal sage scrub on the property).
- **7-11 Upland and Wetland Buffers.** This Project is a maintenance project, rather than a development project. In addition, there will be no permanent impacts to habitat onsite.
- 7-12 Grading and Landscaping Requirements. No grading or landscaping are proposed for this Project.
- **7-13 City-Owned Lands Adjacent to Macario Canyon and Veterans Memorial Park.** These standards are not applicable to this Project.
- 7-14 **Parcel-Specific Standards**. These standards are not applicable to this Project.

With implementation of Mitigation Measures **BIO-1**, **BIO-2**, **BIO-3**, **BIO-4**, and **BIO-5**, the Project would not conflict with any local policies or ordinances protecting biological resources or the city's adopted HMP. Therefore, potential impacts would be less than significant impact with mitigation incorporated.

#### MITIGATION MEASURES

#### BIO-1 Measures to avoid *direct* impacts to vernal pool species and sensitive vegetation

The following mitigation measures will be implemented to avoid impacts to vernal pool species (plants and fairy shrimp) and sensitive vegetation from direct temporary impacts caused by vegetation removal, trampling, etc.

- a. No work shall be conducted during the rainy season, when soils are wet, or ponding is present.
- b. The use of heavy machinery for this Project is prohibited. Heavy machinery could damage vernal pool species and delicate soils.
- c. A rare plant survey shall be conducted by a qualified vernal pool biologist immediately before work areas are established and impacts to any species observed shall be avoided.
- d. The vernal pool biologist shall be onsite during vegetation trimming, establishment of the pathways, placement of boards and removal of boards. The biologist will ensure that the access pathways are no wider than eight feet, and will assist with slight modifications of pathways if necessary to avoid impacts to vernal pool species.
- e. The biologist will be present to ensure that, prior to placement, all boards used onsite along the pathways and work areas are clean of all debris, plant material (seeds, leaves, etc), pests or other contaminants that could negatively affect the vernal pool species.
- f. When the work is complete, the boards will be thoroughly cleaned before removal to ensure that they do not pick up any fairy shrimp cysts, vernal pool plant seeds or other material that should stay onsite.
- g. To avoid any other inadvertent impacts to the sensitive species, habitats or Preserve area, the biological monitor will be onsite daily to monitor Project activities.

#### BIO-2 Measures to avoid *indirect* impacts to vernal pools and sensitive vegetation

The following mitigation measures will be implemented to avoid impacts to vernal pool plants and sensitive vegetation from indirect temporary impacts caused by dumping cut vegetation onsite, unauthorized access and potential contamination from Project-related personnel and equipment.

- a. All Project staging and equipment storage shall occur outside of the Preserve on developed or unvegetated areas.
- b. All cut vegetation must be properly disposed of offsite at an appropriate facility, or mulched into small pieces (approximately one to three inches) and disbursed onsite as directed by the Project vernal pool biologist. If acceptable to the HOA, the mulch could be spread along the edge of the trail to suppress weed growth.
- c. During the Project, access along the temporary pathways by unauthorized persons (after hours, and after all maintenance on a manhole has been completed) will be blocked by orange construction fencing or other appropriate method (temporary measure).
- d. Upon completion of the Project, to avoid ongoing indirect impacts from unauthorized access into the sensitive areas from trail users, dog walkers, and other unauthorized persons the

following measures will be implemented until the coastal sage scrub grows back enough to block access:

- i. Fencing and gates and any other holes in the chain link fence will be fully repaired;
- ii. Temporary barriers that can withstand vandalism (e.g., three wire or post and cable fencing) will be placed perpendicularly to block the access path. The barrier shall be placed at the entrance closes to the trail. Where necessary, informative signs (e.g., "Habitat Restoration in Progress") will be placed on these sections to inform trail users to stay out.
- e. To protect the Preserve from contamination (weed seeds, pests, or other contaminants), anyone entering the site will be required to clean off their equipment, clothing and boots prior to entering the site each day. The Project biologist will monitor compliance and may inspect boots and/or equipment. Decontamination methods include:
  - i. Carry appropriate equipment to remove soil, seeds, dried mud and plant parts (e.g., wire brushes, boot brushes, backpack sprayer or spray bottle with water, soap, hoof picks or small screwdriver, etc.).
  - ii. Remove all material from boots (including all crevices on top and bottom of boots), clothing and equipment in the staging area located on hardscape prior to entering the site.
  - iii. Properly dispose of all material that is cleaned off.

#### BIO-3 Conceptual Restoration Plan for revegetation within temporary impact areas

The Project would temporarily impact 0.072 acre of coastal sage scrub. After this work is completed, the contractor would remove the plywood from each manhole worker/vehicle access area, and all temporarily affected areas would be restored in place to pre-construction conditions (1:1 mitigation ratio) by allowing the trimmed vegetation and cut stumps to resprout. To facilitate this recovery, the temporary access routes would be seeded with a coastal sage scrub seed mix to help those areas recover faster, and a weed control program would be implemented to control weed invasion while the vegetation recovers. A conceptual restoration plan for the restoration of the temporary impact areas shall be prepared and approved by the city's Habitat Management Division prior to the initiation of the Project as described below.

- a. The plan shall be consistent with the city's Components of a Conceptual Restoration/Mitigation Plan (2022) and Guidelines for Habitat Creation and Restoration (2009).
- b. The plan will include a 3 to 5 year maintenance plan, which will consist of passive regrowth of the coastal sage scrub species, seeding with coastal sage scrub species, weed control, and site monitoring to evaluate signs of unauthorized trespass.
- c. The restoration plan shall also include installation of temporary barriers and signage as described in mitigation measure BIO-2c.
- d. Annual monitoring and annual reporting will be required. The restoration must meet performance standards (included in the plan) prior to sign off by the city's Habitat Management Division.

## BIO-4 Measures to avoid impacts to the Coastal California gnatcatcher, raptors, and migratory birds during the breeding season

To avoid impacts to the coastal California gnatcatcher, raptors, and migratory birds, vegetation removal and other Project activities should be avoided during the bird breeding season (January 15 – August 15). If the breeding season cannot be avoided, following mitigation measures shall be implemented:

- a. No clearing of coastal sage scrub shall occur between March 15 and August 15.
- b. The breeding season for coastal California gnatcatcher and other potentially occurring bird species (other than raptors) is February 15 August 31. If vegetation clearing cannot avoid the breeding season outside of the prohibited time frame listed above (i.e. if clearing is to occur February 15 March 14 or August 16 August 31), then pre-construction nest clearance surveys must be conducted by a qualified biologist no more than three days prior to initiation of the vegetation removal.
- c. Nest clearance surveys shall be conducted within 500 feet of the vegetation removal areas in coastal sage scrub habitat.
- d. If active nests are located, a no-work buffer shall be established around the nest until the nest is no longer active. The no-work buffer for the coastal California gnatcatcher is 500 feet. The appropriate width of the buffer for other species is to be determined by a qualified biologist and the city based on the species. All vegetation removal activity shall be prohibited within the protective buffer until all nestlings have successfully fledged.
- e. Once the vegetation has been removed, if an active nest is located, the need for a no-work buffer will be determined by the Project biologist in coordination with the city depending on the species and the specific type of work anticipated to occur near the nest.

#### **BIO-5** Project biologist qualifications

A qualified Project biologist will be required to oversee the implementation of the biological mitigation measures. Because vernal pool species can be difficult to identify and vernal pool ecology is unique, the Project biologist must be approved by the city by demonstrating proficiency in working with vernal pools in the San Diego region (e.g., provide resume upon request). Specific monitoring requirements are described in each mitigation measure. Some work may be performed by other biological personnel under the direction of the Project biologist; however, the Project biologist will be responsible, and in some cases a vernal pool biologist must be the one performing the monitoring whenever identification of vernal pool habitat or species is required. Mitigation Measure BIO-5 requires that a qualified vernal pool biologist oversee implementation of BIO-1c, 1d and 1g.

v.	W	CULTURAL RESOURCES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	a)	Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?				$\boxtimes$
	b)	Cause a substantial adverse change in the significance of an archeological resource pursuant to §15064.5?		$\boxtimes$		
	c)	Disturb any human remains, including those interred outside of dedicated cemeteries?		$\boxtimes$		

The following analysis is based on a *Cultural Resources Survey Report* that is presented in Appendix C.

#### **EXISTING SETTING**

#### **Records Search**

The South Coastal Information Center records search also revealed that 20 previously recorded cultural resources have been identified within the Project area and the 1-mile search buffer (Appendix C). Of these 20 previously recorded resources, one resource, a historic railroad, the San Diego Northern Railway (CA-SDI-016385H), intersects the Project area. The remaining resources include 17 prehistoric resources, 1 multicomponent resource, and 1 missing site record. The results of the records search and all California Department of Parks and Recreation (DPR) site forms are provided in Confidential Appendix C.

#### San Diego Northern Railway (CA-SDI-016385H)

CA-SDI-016385H was originally recorded in 2002 by CRM Tech (Appendix C) and consists of the Atchison, Topeka and Santa Fe Railroad. The segment that intersects the current proposed Project was evaluated by R. McLean in 2012 for the Poinsettia Station Improvement Project (Appendix C). The historic structure consists of a 4,600-foot segment of the Los Angeles–San Diego–San Luis Obispo (LOSSAN) Rail Corridor, also known as the San Diego Northern Railway. This segment of the railway runs north–south and roughly follows the coastline from Palomar Airport to Poinsettia Lane in Carlsbad, California.

The San Diego Northern Railway began construction in 1881. The railway has experienced improvements since 1939 including maintenance, replacement of lines, and expansion from a single line to double line (McLean 2012). The San Diego Northern Railway is eligible for listing in the National Register of Historic Places (NRHP) under Criterion A due to its contribution to the development and economy of San Diego. However, all aspects of the original, historic railway in this segment have been replaced and upgraded as it has continually been in use. Due to the ongoing maintenance and improvements, all the original materials have been replaced. The rail lines were replaced in 1939 and in 1943 additional track improvements began (McLean 2012). In 1971, Amtrak acquired the railroad which also led to additional maintenance and upgrades. The Poinsettia Station was constructed in the 1990s, and the existing railroad in the Project vicinity now consists of a double line (McLean 2012). While the railroad is associated with the development of San Diego, this segment of the railroad has poor integrity, no longer maintains this
association, and is recommended ineligible for the NRHP (McLean 2012). Dudek concurs with the previous recommendation. The resource has not been evaluated for eligibility for listing in the California Register of Historical Resources (CRHR); however, the proposed Project would rehabilitate nine existing sewer manholes within the NCTD right-of-way located east of the railroad and would avoid impacts to the resource.

### Field Survey

Dudek archaeologist Makayla Murillo conducted an intensive-level pedestrian survey of the proposed Project area on March 17, 2023. Native American Monitor Geo Ventura (Saving Sacred Sites) participated in the pedestrian survey.

The Project area is composed of the NCTD railroad right-of-way located at the Poinsettia Carlsbad Transit Station. The Project area is relatively flat. Ground visibility in the vacant land of the northern portion of the Project area was fair (25%–50%) in areas where the ground surface was obscured by vegetation and imported gravel. Ground visibility in the southern portion of the Project area was poor (0%–25%) in areas where the ground surface was poor (0%–25%) in areas where the ground surface was inaccessible due to current flooded conditions from previous rain and heavy vegetation cover (Appendix C). A very light amount of modern debris (e.g., plastic food wrappers) was observed throughout this area. The soils appeared to be a wet moderate brown sand and clay mixture. The vegetation consisted of low-lying grasses, shrubs, trees, and succulents. A segment of the San Diego Northern Railway (CA-SDI-016385H) was observed within the western boundary of the Project area and was in the same condition as described in the DPR site form. No prehistoric archaeological resources were identified within the Project area. Photographs documenting field conditions are presented in Appendix C.

# **REGULATORY SETTING**

# California Environmental Quality Act

Under the California Environmental Quality Act (CEQA), a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (California Public Resources Code Section 21084.1; CEQA Guidelines Section 15064.5[b]). If a site is either listed or eligible for listing in the CRHR, or if it is included in a local register of historic resources, or identified as significant in a historical resources survey (meeting the requirements of California Public Resources Code Section 5024.1[q]), it is a historical resource and is presumed to be historically or culturally significant for purposes of CEQA (California Public Resources Code Section 21084.1; CEQA Guidelines Section 15064.5[a]). The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption (California Public Resources Code Section 21084.1; CEQA Guidelines Section 15064.5[a]).

A "substantial adverse change in the significance of an historical resource" reflecting a significant effect under CEQA means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (CEQA Guidelines Section 15064.5[b][1]; California Public Resources Code Section 5020.1[q]). In turn, the significance of a historical resource is materially impaired when a project:

- 1. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or
- 2. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- 3. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

# California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. As described below, these procedures are detailed in California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.98.

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the County coroner has examined the remains (California Health and Safety Code Section 7050.5[b]). If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the Native American Heritage Commission (NAHC) within 24 hours (California Health and Safety Code Section 5097.98(a), the NAHC will notify the most likely descendant (MLD). With the permission of the landowner, the MLD may inspect the site of discovery. Within 48 hours of being granted access to the site, the MLD may recommend means of treatment or disposition, with appropriate dignity, of the human remains and associated grave goods.

# City of Carlsbad General Plan

The City of Carlsbad General Plan affords consideration for the preservation of cultural resources (2015d). The city's Vision Statement Core Values for their General Plan note examples of the historical resources within the city including the Rancho Carrillo, the Marron Adobe, the Barrio neighborhood, the Magee House, and the Village (City of Carlsbad 2017). The General Plan includes guidelines to help revitalize the historic Barrio and Village neighborhoods. The General Plan also states the goal of enhancing education about the area's Native American history.

# Arts, History, Culture, and Education Element

Following are relevant goals and policies of the Arts, History, Culture, and Education Element of the city's General Plan, paraphrased (City of Carlsbad 2015d):

- **Goal 7-G-1:** Recognize, protect, preserve, and enhance the city's diverse heritage.
  - **Policy 7-P.1:** Prepare an updated inventory of historic resources in Carlsbad with recommendations for specific properties and districts to be designated in national, state, and local registries, if determined appropriate and with agreement of the property owners.
  - **Policy 7-P.2:** Encourage the use of regional, state and federal programs that promote cultural preservation to upgrade and redevelop properties with historic or cultural value.
  - **Policy 7-P.5:** Encourage the rehabilitation of qualified historic structures through application of the California Historical Building Code.
  - **Policy 7-P.6:** Ensure compliance with the City of Carlsbad Cultural Resources Guidelines to avoid or substantially reduce impacts to historic structures listed or eligible to be listed in the National Register of Historic Places or the California Register of Historical Resources.
  - **Policy 7-P.7:** Implement the City of Carlsbad Cultural Resources Guidelines to avoid or substantially reduce impacts to archaeological and paleontological resources.
  - Policy 7-P.8: During construction of specific development projects, require monitoring of grading, ground-disturbing, and other major earth-moving activities in previously undisturbed areas or in areas with known archaeological or paleontological resources by a qualified professional, as well as a tribal monitor during activities in areas with cultural resources of interest to local Native American tribes. Both the qualified professional and tribal monitor shall observe grading, ground-disturbing, and other earth-moving activities.
  - Policy 7-P.9: Ensure that treatment of any cultural resources discovered during site grading complies with the City of Carlsbad Cultural Resources Guidelines. Determination of the significance of the cultural resource(s) and development and implementation of any data recovery program shall be conducted in consultation with interested Native American tribes. All Native American human remains and associated grave goods shall be returned to their most likely descendant and repatriated.
  - **Policy 7-P.10:** Require consultation with the appropriate organizations and individuals, Information Centers of the California Historical Resources Information Systems [CHRIS], the Native American Heritage Commission [NAHC], and Native American groups and individuals) to minimize potential impacts to cultural resources that may occur as a result of a proposed project.
  - **Policy 7-P.11:** Prior to occupancy of any buildings, a cultural resource monitoring report identifying all materials recovered shall be submitted to the City Planner.
- **Goal 7-G-2:** Make Carlsbad's history more visible and accessible to residents and visitors.
  - **Policy 7-P.3:** Formalize a program of historical markers/plaques at resources in state and national registers or of local importance.
  - **Policy 7-P.4:** Promote community education of historic resources, integration and celebration of such resources as part of community events.

### Open Space, Conservation, and Recreation Element

The General Plan includes designating Special Resource Areas that help preserve natural and cultural features. The following policy is from the Open Space, Conservation, and Recreation Element of the city's General Plan, paraphrased (City of Carlsbad 2015b):

- **Policy 4-P.32:** Where appropriate, designate an open space for those areas that preserve historic, cultural, archaeological, paleontological and education resources.

#### Carlsbad Tribal, Cultural, and Paleontological Resources Guidelines

The City of Carlsbad developed guidelines for the treatment of tribal, cultural, and paleontological resources (City of Carlsbad 2017). The tribal, cultural, and paleontological resources guidelines were developed in consultation with the San Luis Rey Band of Mission Indians, cultural and paleontological resources professionals, city staff, and the public (City of Carlsbad 2017). The city developed an archaeological sensitivity model of the city and categorizes them as Low, Moderate, and High.

- High Sensitivity: these represent those areas that are situated in landforms that typically contain archaeological sites, or for which signatures of cultural resources are visible from aerial photography, or for which there is a higher concentration of previously recorded cultural resources.
- Moderate Sensitivity: these represent those areas that can be classified neither as high nor low, because they have not been surveyed for cultural resources or do not otherwise fall into either the high or low categories.
- Low Sensitivity: these areas represent areas that are either reflected in the files at CHRIS for having been previously surveyed, and/or have lower frequencies of previously recorded sites, or have recently been fully developed (as determined from historic through modern aerials), or have no visible indication of cultural resources on aerial photographs, or are set back from major water courses, such that the potential for cultural resources is relatively low. This includes heavily developed areas and areas built after 1983.

Due to developed and disturbed nature of the Project area from grading operations for the railroad and existing sewer line, the Project area would be categorized as Low Sensitivity by the City of Carlsbad Standards.

The city's tribal, cultural, and paleontological resources guidelines provide thresholds on whether a historical resource under CEQA will be significantly affected by a project (City of Carlsbad 2017). A significant impact under CEQA, occurs when a project may alter, directly or indirectly, any of the characteristics of a resource that negatively affect its significance.

Examples of adverse effects include, but are not limited to: physical destruction or damage to all or part of the property; alteration, restoration, rehabilitation, repair, maintenance, stabilization, or remediation; removal of the property from its historic location; change of the character or physical features; introduction of visual, atmospheric, or audible elements; neglect; or transfer, lease, or sale out of federal ownership (36 CFR 800.5[a][2] et seq.). In addition, impacts to a Historical Resource (as defined by CEQA) are significant if the resource is demolished or destroyed or if the characteristics that made the resource eligible are materially impaired (14 CCR 15064.5[a]).

In general, the city's tribal, cultural, and paleontological resources guidelines build on federal and state cultural resources laws and guidelines in an attempt to streamline the process of considering impacts to tribal, cultural, and paleontological resources within the city's jurisdiction. The Principal Investigator, in consultation with the city, the project applicant, and, if applicable, the San Luis Rey Band of Mission Indians or California Native American Tribes, shall determine whether the project will have a significant impact on a cultural resource.

### City of Carlsbad Council Policy No. 83

Effective March 1, 2016, the City Council passed Policy No. 83, Tribal Consultation and Treatment and Protection of Tribal Cultural Resources (City of Carlsbad 2017). The purpose of the policy was to recognize the city's "responsibility to protect with improved certainty the important historical and cultural values of current Tribal Cultural Resources within the city limits and to establish an improved framework for the city's consultation with Native American Tribes that are traditionally and culturally affiliated with the City of Carlsbad, including the San Luis Rey Band of Mission Indians" (City of Carlsbad 2017).

This policy arose out of focused consultation with San Luis Rey Band of Mission Indians and, to the extent allowed under the authority of the city, urges city and private projects under the jurisdiction of the city to be designed to avoid or substantially reduce impacts to Tribal Cultural Resources, as defined in CEQA (City of Carlsbad 2017).

# City of Carlsbad Municipal Code – Historic Preservation

According to Chapter 22.06 of the City of Carlsbad Municipal Code, a historic resource may be considered and approved by the City Council for inclusion in the city's historic resources inventory based on one or more of the following (City of Carlsbad 2024):

- It exemplifies or reflects special elements of the city's cultural, social, economic, political, aesthetic, engineering, or architectural history;
- It is identified with persons or events significant in local, state, or national history;
- It embodies distinctive characteristics of a style, type, period, or method of construction, is a
  valuable example of the use of indigenous materials or craftsmanship, or is representative of a
  notable work of an acclaimed builder, designer, or architect;
- It is an archaeological, paleontological, botanical, geological, topographical, ecological, or geographical site which has the potential of yielding information of scientific value;
- It is a geographically definable area with a concentration of buildings, structures, improvements, or objects linked historically through location, design, setting, materials, workmanship, feeling, and/or association, in which the collective value of the improvements may be greater than the value of each individual improvement.

### **PROJECT IMPACTS**

# a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

**No Impact:** Pursuant to CEQA Guidelines Section 15064.5(a)(3), a resource may be considered "historically significant" by the lead agency if the resource meets the criteria for listing. A resource is eligible for listing in the CRHR if the State Historical Resources Commission determines that it is a significant resource and that it meets any of the following NRHP criteria (California Public Resources Code, Section 5024.1[c]):

- 1. Associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- 2. Associated with the lives of persons important in our past.
- 3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- 4. Has yielded, or may be likely to yield, information important in prehistory or history.

Resources less than 50 years are not considered for listing in the CRHR, but they may be considered if it can be demonstrated that sufficient time has passed to understand the historical importance of the resource (see 14 CCR 4852[d][2]).

On March 17, 2023, a comprehensive records search was conducted at the South Coastal Information Center to gather information about the Project site. The search yielded records of previous surveys, archaeological sites, subsurface investigations, and historical resources older than 45 years within a 1-mile radius of the Project site. Additionally, site records and investigations included archaeological sites documented within the same search radius, examined through the analysis of historic maps, aerial photographs, and inventories such as the NRHP, CRHR, California Historical Landmarks, California Historic Properties Directory, and California Points of Historical Interest.

To further assess cultural resources, a field survey was carried out on the same date. The methodologies and results of this survey are documented in Appendix C, Cultural Resources Survey Report. The survey involved a thorough examination of the Project site utilizing standard archaeological procedures and techniques. Archaeologists conducted pedestrian surveys, examining accessible sections including the railroad right-of-way. The surveyors scrutinized the ground surface for prehistoric artifacts, soil discoloration, structural features, and historical artifacts. Detailed documentation was made using notes, photography, GPS receivers, iPads with field maps, and aerial photographs. No prehistoric archaeological resources were identified on the Project site during the survey.

However, it was discovered that a cultural resource known as CA-SDI-016385H, the San Diego Northern Railway, intersects the westernmost boundary of the Project site but lies outside the Archaeological District Inventory (ADI). This resource has been previously evaluated and determined as ineligible for the NRHP due to significant replacements and upgrades that have compromised its original historic integrity. The development and changes to the Project site over time were analyzed using historical topographic maps and aerial photographs. These sources revealed the construction of the railroad and highway, grading activities, and the development of manufactured homes, tract homes, and transit stations in the vicinity. The current condition of the Project site was found to match the 2009 aerial imagery. The historic topographic maps indicated the presence of the Southern California Railroad (later the Atchison, Topeka, and Santa Fe Railroad), but no other significant structures were depicted.

### Project Name: Ponto Sewer Manhole Rehabilitation Project Project No: SDP2024-0014, CDP2024-0019, HMP2024-0007

The scope of work involved in the Project rehabilitation process would not require any significant excavation or ground disturbance. Minor ground disturbance may occur during access for the rehabilitation work and during the addition or replacement of concrete pads at the nine manholes, which could potentially increase the risk of potential impacts in the immediate vicinity of the manhole. Despite this, the Project would not cause a substantial adverse change in the significance of a historical resource pursuant to in Section 15064.5 because no historic resources eligible for the NRHP are within the Project site. No impact would occur.

# *b)* Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

**Less than Significant with Mitigation Incorporated**. The Cultural Resources Survey Report (Appendix C) conducted for the Project included several measures to assess potential archaeological resources. A records search was conducted at the South Coastal Information Center, which revealed a total of 95 cultural resource studies conducted within the Project site and a 1-mile buffer zone. Out of these studies, 11 intersected with the proposed Project site. These studies involved various assessments, surveys, reports, and consultations related to cultural resources, such as Section 106 (historic properties) consultations, cultural resource surveys, historic preservation studies, and archaeological surveys.

As described in Section V(a), the pedestrian survey conducted within the Project site did not identify any prehistoric resources.

As part of the Cultural Resources Survey Report, a Phase I cultural resources investigation was conducted that found low sensitivity for intact subsurface archaeological deposits within the Project site. The report notes that one cultural resource (CA-SDI-016385H), which consists of a segment of the San Diego Northern Railway, intersected with the Project site. However, this resource was previously evaluated and deemed not eligible for the NRHP due to the replacement and upgrading of its original aspects, resulting in poor integrity.

The development and changes to the Project site over time were analyzed using historic topographic maps and aerial photographs. These sources revealed the construction of the railroad and highway, grading activities, and the development of manufactured homes, tract homes, and transit stations in the vicinity. The current condition of the Project site was found to match the 2009 aerial imagery. The historic topographic maps indicated the presence of the Southern California Railroad (later the Atchison, Topeka, and Santa Fe Railroad), but no other significant structures were depicted.

The scope of work involved in the rehabilitation process would not require any significant excavation or ground disturbance. Minor ground disturbance may occur during access and staging for the rehabilitation work and during the addition or replacement of concrete pads at the nine manholes, which could potentially increase the risk of potential impacts in the immediate vicinity of the manhole.

Based on the information gathered and the absence of intact archaeological resources, the potential to encounter archaeological resources would be low. However, because cultural resources are known to occur within the vicinity of the Project area, there is some potential for unknown archaeological resources to be present. Additionally, NAHC indicated the presence of Native American resources in the vicinity without specifying whether they were directly within the Project site. To avoid potential impacts to unknown archaeological resources, a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, would be retained prior to earth disturbing activities resulting from this Project. In the event archaeological resources are encountered, all construction work occurring within

100 feet of the find shall immediately stop until the qualified archaeologist can evaluate the significance of the find and determine whether additional study is warranted. The qualified archaeologist and city's Project Manager would consult with appropriate Luiseño Native American representatives in determining treatment for prehistoric or Native American resources. With the implementation of Mitigation Measures CR-1 and CR-2, potential adverse impacts to unknown archaeological resources would be less than significant.

#### Mitigation Measures:

- **CR-1:** Prior to the commencement of any ground disturbing activities, the applicant shall:
  - a. Retain the services of a qualified archaeologist, defined as one meeting the Secretary of the Interior's 1997 Professional Qualification Standards for Archeology, or working under the supervision of the qualified archaeologist, who shall be on-site during ground-disturbing activities of the Project site. In the event cultural material is encountered, the archaeologist is empowered to temporarily divert or halt grading to allow for coordination with the Luiseño Native American monitor, or other Traditionally and Culturally Affiliated Luiseño tribe ("TCA Tribe"), and to determine the significance of the discovery. The archaeologist shall follow all standard procedures for cultural materials that are not tribal cultural resources.
  - b. A Luiseño Native American monitor shall be present during all ground-disturbing activities. Ground disturbing activities may include, but are not limited to archaeological studies, geotechnical investigations, clearing, and/or excavation.
  - c. Prior to completion of the project construction, a monitoring report and/or evaluation report, if appropriate, which describes the results, analysis, and conclusions of the monitoring program shall be submitted by the Project Archaeologist, along with the Luiseño Native American monitor's notes and comments, to the City of Carlsbad for approval, and shall be submitted to the South Coastal Information Center. Said report shall be subject to confidentiality as an exception to the Public Records Act and will not be available for public distribution.
  - d. Any and all uncovered artifacts of Luiseño Native American cultural importance shall be returned to the San Luis Rey Band of Mission Indians, and/or the Most Likely Descendant for later reburial on project site, if applicable, and not be curated, unless ordered to do so by a federal agency or a court of competent jurisdiction.
  - e. The Luiseño Native American monitor shall be present at the Project's pre-construction meeting to consult with contractors concerning excavation schedules and safety issues, as well as to consult with the archaeologist PI (principal investigator) concerning the proposed archaeologist techniques and/or strategies for the Project.
  - f. Luiseño Native American monitors and archaeological monitors shall have joint authority to temporarily divert and/or halt construction activities. If tribal cultural resources are discovered during construction, all earth-moving activity within and around the immediate discovery area must be diverted until the Luiseño Native American monitor and the archaeologist can assess the nature and significance of the find.

- g. If a significant tribal cultural resource(s) and/or unique archaeological resource(s) are discovered during ground-disturbing activities for this project, the San Luis Rey Band of Mission Indians shall be notified and consulted regarding the respectful and dignified treatment of those resources. Pursuant to California Public Resources Code Section 21083.2(b) avoidance is the preferred method of preservation for archaeological and tribal cultural resources. If, however, the Applicant is able to demonstrate that avoidance of a significant and/or unique cultural resource is infeasible and a data recovery plan is authorized by the City of Carlsbad as the lead agency, the San Luis Rey Band of Mission Indians shall be consulted regarding the drafting and finalization of any such recovery plan.
- h. In the event that fill material is imported into the project area, the fill shall be clean of tribal cultural resources and documented as such. Commercial sources of fill material are already permitted as appropriate and will be culturally sterile. If fill material is to be utilized and/or exported from areas within the project site, then that fill material shall be analyzed and confirmed by an archaeologist and Luiseño Native American monitor that such fill material does not contain tribal cultural resources.
- i. No testing, invasive or non-invasive, shall be permitted on any recovered tribal cultural resources without the written permission of the San Luis Rey Band of Mission Indians.
- **CR-2:** Prior to the commencement of any ground-disturbing activities, the applicant shall enter into a Pre-Excavation Agreement, otherwise known as a Tribal Cultural Resources Treatment and Tribal Monitoring Agreement, with a TCA affiliated consulting tribe, that meets all standard requirements of the tribe for such agreements, in accordance with applicable laws and regulations including but not limited to the City of Carlsbad's 2017 Tribal, Cultural and Paleontological Resources Guidelines. This agreement will address provision of a Luiseño Native American monitor and contain provisions to address the proper treatment of any Tribal Cultural Resources and/or Luiseño Native American human remains inadvertently discovered during the course of the Project. The agreement will outline the roles and powers of the Luiseño Native American monitors and the archaeologist and may include the provisions outlined in CR-1.

# c) Would the project disturb any human remains, including those interred outside of formal cemeteries?

**Less than Significant with Mitigation Incorporated** Based on the information provided in Sections V(a) and V(b), it is unlikely that the proposed Project would disturb any human remains, including those interred outside of formal cemeteries. The proposed rehabilitation activities of the Project would only disturb the 0.13-acre area of direct impact and would not require any significant excavation or ground disturbance.

The pedestrian survey conducted on the Project site did not identify any human remains or prehistoric resources. The presence of Native American resources was indicated by NAHC, but it was not specified whether these resources were directly within the Project site. The review of historic aerial photographs indicates that the entire Project site has undergone ground-disturbing activities in the past due to grading operations for the railroad and existing sewer line. Any intact archaeological resources that may have been previously located in the area were likely disturbed by these past construction activities.

In the unlikely event that human remains are encountered during construction activities, CEQA Guidelines Section 15064.5, California Health and Safety Code Section 7050.5, and California Public Resources Code Section 5097.94 and Section 5097.98 must be followed. A qualified archaeological monitor is recommended to be present during all ground disturbance related to this Project, as these specialist monitors are qualified to identify buried cultural materials (Mitigation Measures CR-1 and CR-2). With the implementation of Mitigation Measure CR-3, potential impacts to human remains would be less than significant.

### Mitigation Measure:

**CR-3:** If suspected Native American human remains are encountered, California Health and Safety Code Section 7050.5(b) states that no further disturbance shall occur until the San Diego County Medical Examiner has made the necessary findings as to origin. Further, pursuant to California Public Resource Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. Suspected Native American remains shall be present during the examination of the remains. If the San Diego County Medical Examiner determines the remains to be Native American, the NAHC must be contacted by the Medical Examiner within 24 hours. The NAHC must then immediately notify the "Most Likely Descendant" about the discovery. The Most Likely Descendant shall then make recommendations within 48 hours and engage in consultation concerning treatment of remains as provided in Public Resource Code 5097.98.

VI.	ENERGY ould the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?			$\boxtimes$	
b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			$\boxtimes$	

# a) Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

**Less than Significant Impact:** Energy use during construction would include fuel or other forms of energy used by equipment to conduct construction activities, as well as light duty cars and trucks utilized during construction activities for the movement of equipment, materials, and workers to and from the Project site. Project construction is anticipated to last 6 to 8 weeks. Project construction would not involve the use of heavy equipment that could consume substantial amounts of fuel or other forms of energy. Electricity demand from electronic equipment would be temporary and would cease upon completion of construction; therefore, the Project would not result in the wasteful, inefficient, or unnecessary consumption of electricity. Natural gas would not be used during construction. Consistent with state requirements, all construction equipment would meet CARB Tier 3 In-Use Off-Road Diesel Engine Standards. Engines are required to meet certain emission standards, and groups of standards are referred to as Tiers. A Tier 0 engine is unregulated with no emission controls, and each progression of standard level (i.e., Tier 1, Tier 2, Tier 3, etc.) generates lower emissions, uses less energy, and is more advanced

### Project Name: Ponto Sewer Manhole Rehabilitation Project Project No: SDP2024-0014, CDP2024-0019, HMP2024-0007

technologically than the previous tier. CARB's Tier 3 In-Use Off-Road Diesel Engine Standards requires that construction equipment fleets become cleaner and use less energy over time. There are no known conditions in the Project area that would require nonstandard equipment or construction practices that would increase fuel-energy consumption above typical equipment fuel consumption rates. Therefore, Project construction would not result in the wasteful, inefficient, or unnecessary consumption of energy resources, and impacts would be less than significant.

Regarding long-term operations, maintenance of the manholes would likely be on an annual or biennial maintenance schedule including visual and video inspection, as well as potential cleaning, which would require electronic equipment. Therefore, maintenance operations would be periodic and would not require the continuous use of energy. Further, the Project would not require electronic equipment for maintenance activities that could consume substantial amounts of fuel or other forms of energy. In addition, during operation, energy use would also be associated with transportation-related fuel use (gasoline, diesel fuel, and electric vehicles) to conduct maintenance. Project fuel consumption would decline over time beyond initial operational year of the Project as a result of continued implementation of increased federal and state vehicle efficiency standards. There is no component of the Project that would result in unusually high electricity use or vehicle fuel use during operation. Additionally, maintenance operations would be periodic and would not require the continuous use of energy. Therefore, Project operations would not result in the wasteful, inefficient, or unnecessary consumption of energy resources, and impacts would be less than significant.

# b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

**Less than Significant Impact:** In September 2015 the city adopted its Climate Action Plan (CAP), which was then revised in May 2020 (City of Carlsbad 2015e, 2020). Section 5.0 of the CAP addresses implementation and monitoring measures, including how individual projects should be evaluated for CEQA consistency. The California Air Pollution Control Officers Association published various screening thresholds to guide lead agencies in determining which projects require greenhouse gas (GHG) analysis and mitigation for significant impacts related to climate change. Utilizing this guidance, the city has determined that new development Projects emitting less than 900 million tons carbon dioxide equivalent (MTCO<sub>2</sub>e) annual GHG would not contribute considerably to cumulative climate change impacts and therefore do not need to demonstrate consistency with the CAP. Emissions associated with the proposed Project reflect the construction phase, and the annual emissions from construction are estimated to be approximately 15 MTCO<sub>2</sub>e (Appendix A). This is less than the 900 MTCO<sub>2</sub>e annual threshold. As such, potential impacts associated if the Project would conflict with or obstruct a state or local plan for renewable energy or energy efficiency would be less than significant.

VII.	GEOLOGY AND SOILS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:				
	i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			$\boxtimes$	
	ii. Strong seismic ground shaking?			$\boxtimes$	
	iii. Seismic-related ground failure, including liquefaction?			$\boxtimes$	
	iv. Landslides?				$\mathbf{X}$
b)	Result in substantial soil erosion or the loss of topsoil?			$\boxtimes$	
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?				X
d)	Be located on expansive soils, as defined in Section 1803.5.3 of the California Building Code (2016), creating substantial direct or indirect risks to life or property?			$\boxtimes$	
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				$\boxtimes$
f)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			$\boxtimes$	

#### **REGULATORY SETTING**

#### Carlsbad Tribal, Cultural, and Paleontological Resources Guidelines

The City of Carlsbad developed guidelines for the treatment of tribal, cultural, and paleontological resources (City of Carlsbad 2017). The tribal, cultural, and paleontological resources guidelines were developed in consultation with the San Luis Rey Band of Mission Indians, cultural and paleontological resources professionals, city staff, and the public (City of Carlsbad 2017). The city developed an archaeological sensitivity model of the city and categorizes them as Low, Moderate, and High.

 High Sensitivity: these represent those areas that are situated in landforms that typically contain archaeological sites, or for which signatures of cultural resources are visible from aerial photography, or for which there is a higher concentration of previously recorded cultural resources.

- Moderate Sensitivity: these represent those areas that can be classified neither as high nor low, because they have not been surveyed for cultural resources or do not otherwise fall into either the high or low categories.
- Low Sensitivity: these areas represent areas that are either reflected in the files at CHRIS for having been previously surveyed, and/or have lower frequencies of previously recorded sites, or have recently been fully developed (as determined from historic through modern aerials), or have no visible indication of cultural resources on aerial photographs, or are set back from major water courses, such that the potential for cultural resources is relatively low. This includes heavily developed areas and areas built after 1983.

Due to developed and disturbed nature of the Project area from grading operations for the railroad and existing sewer line, the Project area would be categorized as Low Sensitivity pursuant to the City of Carlsbad Tribal, Cultural, and Paleontological Resources Guidelines.

The city's tribal, cultural, and paleontological resources guidelines provide thresholds on whether a historical resource under CEQA will be significantly affected by a project (City of Carlsbad 2017). A significant impact under CEQA, occurs when a project may alter, directly or indirectly, any of the characteristics of a resource that negatively affect its significance.

Examples of adverse effects include, but are not limited to: physical destruction or damage to all or part of the property; alteration, restoration, rehabilitation, repair, maintenance, stabilization, or remediation; removal of the property from its historic location; change of the character or physical features; introduction of visual, atmospheric, or audible elements; neglect; or transfer, lease, or sale out of federal ownership (36 CFR 800.5[a][2] et seq.).

In addition, impacts to a Historical Resource (as defined by CEQA) are significant if the resource is demolished or destroyed or if the characteristics that made the resource eligible are materially impaired (14 CCR 15064.5[a]).

In general, the city's tribal, cultural, and paleontological resources guidelines build on federal and state cultural resources laws and guidelines in an attempt to streamline the process of considering impacts to tribal, cultural, and paleontological resources within the city's jurisdiction. The Principal Investigator, in consultation with the city, the project applicant, and, if applicable, the San Luis Rey Band of Mission Indians or California Native American Tribes, shall determine whether the project will have a significant impact on a cultural resource.

# PROJECT IMPACTS

a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

*i)* Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. **Less than Significant Impact:** There are no active faults that run directly through Carlsbad (City of Carlsbad 2015f). Additionally, as shown on the California Department of Conservation California Earthquake Hazards Zone Application (EQZApp), the city is not identified as being within a fault zone, nor are any fault traces identified within the city (DOC 2021). The Newport–Inglewood–Rose Canyon Fault is the closest known active fault, located approximately 4 miles offshore of the city's coastline. Because the Project site is not located within an Alquist–Priolo Earthquake Fault Zone, is not underlain by an active or potentially active fault, and does not include any facilities that could be affected by rupture of a known earthquake fault, impacts would be less than significant.

# *ii)* Strong seismic ground shaking?

**Less than Significant Impact:** The Project site is located in seismically active Southern California and could be subject to strong ground shaking, lurching, and/or ground cracking in the event of a large earthquake on any of the active or potentially active faults in the greater Southern California region, including the Newport–Inglewood–Rose Canyon Fault located approximately 4 miles offshore of the city's coastline, as well as the Coronado Bank, La Nacion, Elsinore, Agua Caliente, and San Jacinto fault zones. However, the Project does not include any structures or other components that could directly or indirectly cause the risk of loss, injury, or death; the Project's proposed infrastructure improvements would also conform to applicable state and local design standards safeguarding these risks. Considering the Project does not propose any structures on site and taking into account Project compliance with applicable regulations related to infrastructure improvements, impacts associated with strong seismic ground shaking would be less than significant.

# *iii)* Seismic-related ground failure, including liquefaction?

**Less than Significant Impact:** Liquefaction is the phenomenon that occurs during severe ground shaking whereby soils reduce greatly in strength and temporarily behave similarly to a fluid rather than a solid. Liquefaction is restricted to certain geologic and hydrologic environments, primarily recently deposited sand and silt in areas with high groundwater levels. The Project site is composed of Huerhuero loam and Marina loamy coarse sand. The Project site is not located within a potential liquefaction zone. Additionally, as shown on the California Department of Conservation's EQZApp, the city is not identified as being within a liquefaction zone (DOC 2021). Furthermore, the Project does not propose any habitable structures that could be potentially impacted by liquefaction on site. Compliance with applicable state and local design standards would ensure that Project impacts related to liquefaction would be less than significant.

# iv) Landslides?

**No Impact:** Some of the natural causes of landslides are earthquakes, streams, and heavy rainfall. In addition, certain human activities tend to make earthen materials less stable and increase the chance of ground failure. Given the proposed development and limited operations of the Project and the city's low risk of landslides, no impact would occur from seismically induced landslides.

# b) Would the project result in substantial soil erosion or the loss of topsoil?

**Less than Significant Impact:** It is not anticipated that the proposed Project, involving the rehabilitation of nine sewer manholes across a 0.13-acre area of direct impact, would result in substantial soil erosion or the loss of topsoil. The scope of work involved in the rehabilitation process would not require any significant excavation or disturbance of the surrounding soil. Minor soil disturbance may occur during

access for the rehabilitation work, and during the addition or replacement of concrete pads at the nine manholes, which could increase the risk of soil erosion in the immediate vicinity of the manhole. Despite this, any soil disturbance would be minimal and localized and would not result in any significant impact on the overall soil quality or lead to the loss of topsoil. Furthermore, once the rehabilitation work is complete the Project site would be returned to its existing conditions. Therefore, impacts would be less than significant.

# c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

**No Impact:** As previously analyzed in Sections VII(a)(iii) and VII(a)(iv), the city does not have any areas identified as being susceptible to landslides (City of Carlsbad 2015f). Therefore, given the nature of the Project and the city's low risk for landslides, the potential for seismically induced landslides is low. As shown in Figure 6-7 of the city's General Plan (City of Carlsbad 2015f), the Project site is not located within a potential liquefaction zone. Additionally, as shown on the California Department of Conservation's EQZApp, the city is not identified as being within a liquefaction zone (DOC 2021).

Land subsidence is the sinking of a large area of ground surface with little or no horizontal movement. Subsidence areas typically occur where groundwater or natural gas is extracted. Soils in San Diego County are generally granitic and there have been no documented incidents of subsidence in San Diego County, including in the city (City of Carlsbad 2015f).

As described in Section VII(b), the purpose of the proposed Project is to rehabilitate nine sewer manholes within the NCTD right-of-way spaced at approximately 400-foot intervals between Avenida Encinas and Poinsettia Lane in the city. The Project does not propose any habitable structures that could be impacted by landslides, lateral spreading, subsidence, or liquefaction. Compliance with applicable state and local design standards would ensure that any potential impacts during construction would not be substantial. Therefore, no impact would occur.

# d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

**Less than Significant Impact:** Certain types of soil are inherently expansive, meaning they can expand and contract as the water content fluctuates within the soil. This expansion and contraction, also called "shrink-swell," can damage structures that are not appropriately engineered for this activity. The U.S. Department of Agriculture analyzes the shrink-swell potential of each soil type and categorizes it as "low," "moderate," "high," or "very high." Where the shrink-swell classification is moderate to very high, shrinking and swelling can damage buildings, roads, and other structures.

Implementation of the Project would result in cleaning and rehabilitation of nine sewer manholes. The Project would be required to comply with the city's Grading Ordinance and General Plan policies, which would reduce potential impacts associated with expansive soils to a less than significant level (see the Soil Resource Report provided in Appendix D of this Initial Study). Also, as discussed in Section VII(a), the Project does not include any structures or other components that could directly or indirectly relate to potential risk to life or property, because the Project site would not be inhabited. Considering the Project does not include any habitable structures on site and taking into account Project compliance with

applicable regulations related to infrastructure improvements, impacts associated with strong seismic ground shaking would be less than significant.

# e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

**No Impact:** No septic tank systems are proposed as part of the Project. The Project would not include any new structures or uses that would require the use of a septic tank or alternative wastewater disposal system. Therefore, no impact would occur.

# *f)* Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

**Less than Significant Impact:** Paleontological resources are the remains or traces of plants and animals that are preserved in Earth's crust, and per the Society of Vertebrate Paleontology's guidelines (SVP 2010), are older than written history or older than approximately 5,500 years. They are limited, nonrenewable resources of scientific and educational value and are afforded protection under state laws and regulations.

Based on the surficial geological mapping of Kennedy et al. (2007), the Project site is underlain by Quaternary old paralic deposits (map unit Qop6-7). These Pleistocene age terrace deposits are broadly correlative with the Bay Point Formation (approximately 120,000 to 413,000 years old) (SDNHM 2023; Kennedy 1975). The Eocene age Santiago Formation (map unit Tsa) underlies Pleistocene age deposits in this area of northwestern San Diego County and is approximately 40 to 49 million years old (SDNHM 2023). Pleistocene age (or "Ice Age") terrace deposits and the Santiago Formation have high paleontological sensitivity in San Diego County.

According to the records search results received from the San Diego Natural History Museum, although no fossils are recorded from within the Project site itself, they are documented within 1 mile of the Project site. The Bay Point Formation has been known to produce diverse and well-preserved fossil specimens of marine invertebrates and vertebrates, as well as terrestrial vertebrates in western San Diego County (SDNHM 2023). Within a mile of the Project site, two localities from marine deposits within the upper member "C" of the Santiago Formation yielded marine invertebrates and vertebrates and terrestrial vertebrates fossilized remains (SDNHM 2023).

Project-related impacts are limited to an area of direct impact of 0.13 acres for the cleaning and rehabilitation of nine manholes, including minimal external work for the replacement and new installation of concrete pads above grade. It is not anticipated that native geological units or formations or paleontological resources will be encountered during planned construction. Therefore, impacts would be less than significant.

VIII.	GREENHOUSE GAS EMISSIONS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			$\boxtimes$	
b)	Conflict with an applicable plan, policy or regulation adopted for the purposes of reducing the emissions of greenhouse gases?			$\boxtimes$	

Global climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind patterns, lasting for an extended period of time (decades or longer). The Earth's temperature depends on the balance between energy entering and leaving the planet's system, and many factors (natural and human) can cause changes in Earth's energy balance. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature. Global climate change concerns are focused on whether human activities are leading to an enhancement of the greenhouse effect. GHGs are gases that absorb infrared radiation in the atmosphere. Principal GHGs include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), O<sub>3</sub>, and water vapor (H<sub>2</sub>O). If the atmospheric concentrations of GHGs rise, the average temperature of the lower atmosphere will gradually increase. Globally, climate change has the potential to impact numerous environmental resources though uncertain impacts related to future air temperatures and precipitation patterns.

The effect each GHG has on climate change is measured as a combination of the mass of its emissions and the potential of a gas or aerosol to trap heat in the atmosphere, known as its global warming potential (GWP), which varies among GHGs. Total GHG emissions are expressed as a function of how much warming would be caused by the same mass of CO<sub>2</sub>. Thus, GHG emissions are typically measured in terms of metric tons of CO<sub>2</sub> equivalent (MTCO<sub>2</sub>e). The CO<sub>2</sub>e for a gas is derived by multiplying the mass of the gas by the associated GWP, such that MT of CO<sub>2</sub>e = (MT of a GHG) × (GWP of the GHG). CalEEMod assumes that the GWP for CH<sub>4</sub> is 25, which means that emissions of 1 MT of CH<sub>4</sub> are equivalent to emissions of 25 MTCO<sub>2</sub>, and the GWP for N<sub>2</sub>O is 298, based on the Intergovernmental Panel on Climate Change's Fourth Assessment Report (IPCC 2007).

# **REGULATORY SETTING**

# City of Carlsbad 2020 Climate Action Plan (CAP)

In September 2015 the city adopted a CAP, which was updated in May 2020. The 2020 CAP is designed to reduce the city's GHG emissions and streamline environmental review of development projects in accordance with CEQA Guidelines Section 15183.5. The 2020 CAP updates the 2015 CAP's GHG emissions inventory, reduction targets, and reduction measures. The 2020 CAP utilizes a multistep approach to determine the significance of impacts of GHG emissions for projects. The first step is to evaluate a proposed project against a screening threshold of 900 MTCO<sub>2</sub>e. If the project is determined to result in GHG emissions below the 900 MTCO<sub>2</sub>e screening threshold, then the project would be considered to be less than significant under the 2020 CAP and no further analysis would be required. If a project were to

exceed the 900  $MTCO_2e$  screening threshold, then the project would be required to complete the 2020 CAP consistency checklist.

### PROJECT IMPACTS

# a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

#### CONSTRUCTION GHG EMISSIONS

**Less than significant Impact.** Construction of the Project would result in GHG emissions that are primarily associated with the use of off-road construction equipment, on-road haul and vendor trucks, and worker vehicles. The SCAQMD Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold (SCAQMD 2008) recommends that "construction emissions be amortized over a 30-year Project lifetime, so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies." Thus, the total construction GHG emissions were calculated, amortized over 30 years.

CalEEMod was used to calculate the annual GHG emissions based on the construction scenario described in Section II, Air Quality, of this Initial Study. Construction of the Project is anticipated to commence in August 2025, lasting a total of 3 months and reaching completion in October 2025. On-site sources of GHG emissions include off-road equipment and off-site sources include haul trucks, vendor trucks, and worker vehicles. Table 9 presents construction GHG emissions for the Project from on-site and off-site emission sources.

	CO <sub>2</sub>	CH₄	N <sub>2</sub> O	CO <sub>2</sub> e			
Year	Metric Tons per Year						
2025	14.37	<0.01	<0.01	14.98			
		Amortized Em	issions (over 30 years)	0.50			

#### Table 9: Estimated Annual Construction Greenhouse Gas Emissions

Source: Appendix A.

**Notes:**  $CO_2$  = carbon dioxide;  $CH_4$  = methane;  $N_2O$  = nitrous oxide;  $CO_2e$  = carbon dioxide equivalent.

As shown in Table 9, the estimated total GHG emissions during construction of the Project would be approximately 15 MTCO<sub>2</sub>e. Estimated Project-generated construction emissions amortized over 30 years would be approximately 0.50 MTCO<sub>2</sub>e per year. As with Project-generated construction air quality pollutant emissions, GHG emissions generated during construction of the Project would be short-term in nature, lasting only for the duration of the construction period, and would not represent a long-term source of GHG emissions. As discussed previously the city's 2020 CAP utilizes a 900 MTCO<sub>2</sub>e screening threshold to evaluate GHG emissions from projects. As shown in Table 5, the proposed Project's emissions would not exceed the 900 MTCO<sub>2</sub>e screening threshold. Therefore, construction impacts from GHG emissions would be less than significant.

#### OPERATIONAL GHG EMISSIONS

**Less than Significant Impact.** Once Project construction is complete, operational activities associated with the proposed Project would be minimal. No routine daily equipment operation or vehicle trips would be

required. While periodic maintenance, repair, and inspections would be conducted, these activities would not represent a substantial change in city operations relative to existing conditions and would not require additional vehicle trips or workers. Because the Project would result in minimal long-term operational activities, GHG impacts associated with GHG emissions would be nominal. Therefore, operational impacts from GHG emissions would be less than significant.

# b) Would the project generate conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

**Less than Significant Impact:** As discussed above, the city's adopted 2020 CAP is designed to reduce the city's GHG emissions and streamline environmental review of development projects in accordance with CEQA Guidelines Section 15183.5. The CAP demonstrates that with implementation of applicable General Plan goals and policies, coupled with state and federal actions, and execution of CAP measures and actions, the city would reduce GHG emissions in alignment with state goals established by AB 32 and Senate Bill 32, and maintain a trajectory to meet its proportional share of the 2050 state target identified in Executive Order S-3-0. In Section VIII(a), it was determined that the proposed Project would not exceed the CAP screening threshold of 900 MTCO2e per year. As such, the proposed Project would not conflict with any applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of GHGs and impacts would be less than significant.

IX.	HAZARDS AND HAZARDOUS MATERIALS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			$\boxtimes$	
b)	Create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			$\boxtimes$	
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			$\boxtimes$	
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or environment?				X
e)	For a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				X
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				$\boxtimes$

IX.	HAZARDS AND HAZARDOUS MATERIALS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
g)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				$\boxtimes$

#### **REGULATORY SETTING**

#### Hazardous Waste Control Act

The Hazardous Waste Control Act is implemented by regulations contained in California Code of Regulations Title 26 that describe requirements for the proper management of hazardous wastes. The act created the state hazardous waste management program, which is similar to but more stringent than the federal RCRA program. The Hazardous Waste Control Act and Title 26 regulations list more than 800 potentially hazardous materials and establish criteria for identifying, packaging, transporting, and disposing of such wastes. Under these regulations, the generator of hazardous waste material must complete a manifest that accompanies the material from the point of generation to transportation to the ultimate disposal location, with copies of the manifest filed with the Department of Toxic Substance Control.

#### **PROJECT IMPACTS**

# a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than Significant Impact: Title 22 of the CCR, Division 4.5, Chapter 11, Article 3 classifies hazardous materials into the following four categories based on their properties: toxic (causes human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials), and reactive (causes explosions or generates toxic gases). Hazardous materials have been and are commonly used in commercial, agricultural, and industrial applications as well as in residential areas to a limited extent. Hazardous wastes are hazardous materials that no longer have practical use, such as substances that have been discarded, discharged, spilled, contaminated, or are being stored prior to proper disposal. The health impacts of hazardous materials exposure are based on the frequency of exposure, the exposure pathway, and individual susceptibility.

Limited transport, use, and disposal of hazardous materials including epoxy lining material may occur during rehabilitation of the nine sewer manholes. The transportation of hazardous materials through the city would be required to comply with state and federal laws and regulations involving the transportation of hazardous materials. Additionally, construction associated with the proposed Project would involve the handling of incidental amounts of hazardous materials such as fuels, oils, and solvents. The use of these materials during construction would be short-term and would occur in accordance with standard construction practices, as well as with applicable federal, state, and local regulations. Potentially hazardous materials would be contained, stored, and used in accordance with manufacturers' instructions and handled in compliance with applicable standards and regulations. Examples of such activities include

fueling and servicing construction equipment as well as storing sealed containers of epoxy lining material per Material Safety Data Sheet (MSDS) storage requirements within the designated secured Sand Shell lift station area.

The County of San Diego Department of Environmental Health and Quality, Hazardous Materials Division, is the designated Certified Unified Program Agency (CUPA) for San Diego County and is required to implement the unified hazardous waste and hazardous materials management and regulatory program for the County, with the help of other local agencies such as the city. The city will continue to maintain permitting requirements, as administered by the County's Department of Environmental Health and Quality requirements, for all land uses that handle, store, or generate hazardous waste. Construction would be temporary, and on-site activities would be regulated through implementation of CUPA programs and conformance with other applicable federal, state, and local regulations, including applicable General Plan policies outlined in the city's General Plan EIR (City of Carlsbad 2015g). Operation of the Project would not involve the routine use, transport, or disposal of hazardous materials; therefore, no long-term operational impacts related to hazardous materials are anticipated. For the reasons stated above, the impact of potential use, transport, and disposal of hazardous materials associated with implementation of the Project would be less than significant.

# b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

**Less than Significant Impact:** Limited transport, use, and disposal of hazardous materials may occur during rehabilitation of the nine sewer manholes. Although the risk of upset and accident conditions involving the release of hazardous materials into the environment is not anticipated, there is the chance it could occur during construction activities. The level of risk associated with the accidental release of hazardous substances would not be considered significant due to the small volume and low concentration of hazardous materials that would be utilized during construction. Further, with proper implementation of CUPA programs as described above, in conjunction with other state and federal regulations and applicable General Plan policies, the impact of reasonably foreseeable accidents and/or upset conditions involving the release of hazardous materials associated with implementation of the Project would be less than significant.

# c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

**Less than Significant Impact:** Limited transport, use, and disposal of hazardous materials may occur during the maintenance and rehabilitation of the nine sewer manholes (e.g., the use of fuels, solvents, and lubricating fluids for the fueling and servicing of construction equipment). While the Project site is located approximately 0.11 miles west of a Community Montessori charter school, construction would be short term, and the handling of any hazardous materials would be regulated through implementation of CUPA programs, as well as conformance with other applicable federal, state, and local regulations. Operation of the Project would not involve the routine use, transport, or disposal of hazardous materials; therefore, no long-term operational impacts related to hazardous materials are anticipated. Therefore, impacts would be less than significant. Hazardous air quality and GHG emissions are addressed in detail in Section III, Air Quality, and Section VIII, Greenhouse Gas Emissions, of this Initial Study.

# d) Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

**No impact:** The proposed Project site is not included on any lists compiled pursuant to Section 65962.5 or on the California Department of Toxic Substances Control (EnviroStor) and State Water Resources Control Board (GeoTracker) databases for contaminated sites (DTSC 2023; SWRCB 2023).

According to a search of the online databases that provide information on Cortese List sites on November 17, 2023, the Project site was not identified in the noted databases. According to a search of the EnviroStor online database on November 17, 2023, no active sites were identified within 0.5 miles of the Project site. Therefore, because the Project would not be located on a site that is included on a list of hazardous materials sites, it would not create a significant hazard to the public or environment, and no impact would occur.

# e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

**No Impact:** The McClellan–Palomar Airport is located approximately 2.1 miles northeast of the Project site. As shown in Figure 5-3 (Future Noise Contours) and Figure 5-4 (Airport Noise Compatibility Policy, which also indicates airport safety zones) in the city's General Plan Noise Element (City of Carlsbad 2015h), the Project site is not located within any airport safety zones or noise contours. The Project does not include structures or any uses that involve people living on or working at the Project site. For these reasons, the Project would result in no impact relating to safety hazard or excessive noise for people residing or working in the area.

# *f)* Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact: The city's Emergency Operations Plan defines the scope of the city's emergency preparedness and incident response activities. The Emergency Operations Plan establishes emergency organization, assigns tasks, specifies policies and general procedures, and provides for coordination of planning efforts of the various emergency staff and service elements using the Standardized Emergency Management System (published by the California Office of Emergency Services) and the National Incident Management System (published by the Federal Emergency Management Agency). The Emergency Operations Plan identifies the city's Emergency Operations Center as the location from which centralized emergency management would be performed during a major emergency or disaster, including receiving and disseminating information, maintaining contact with other Emergency Operations Centers, and providing instructions to the public. Implementation of the proposed Project would not result in new development or population growth that could increase the demand for emergency services and affect implementation of adopted emergency response and evacuation plans. Construction of the Project would take place within the NCTD railroad right-of-way and the Waters End HOA conservation easement, the latter of which is in place to preserve habitat. The Project involves the maintenance and rehabilitation of nine sewer manholes; it does not propose alterations to the existing roads or construction of new transportation facilities. Further, Project construction would not require the closure of any public or private roadways. Considering the Project's location and purpose and the short-term duration of construction, construction and long-term operation of the proposed Project would not include any features that would impair access to identified evacuation routes in the city or otherwise conflict with an emergency response plan or emergency evacuation plan. Therefore, no impact would occur.

# g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

**No Impact:** The California Department of Forestry and Fire Protection (CAL FIRE) has mapped fire threat potential throughout California and ranked fire threat based on the availability of fuel and the likelihood of an area burning (based on topography, fire history, and climate). As shown on Figure 6-12, Fire Hazard Severity Zones, in the Public Safety Element of the city's General Plan, the Project site is not in or near a VHFHSZ (City of Carlsbad 2015f). While the Project site is within the HMP hardline, it is surrounded by developed/urbanized areas on both sides and the existing vegetation within the Project boundary is characterized as low-lying non-native vegetation/vernal pools and scrub/shrubs of varying densities, which do not pose a significant risk of ignition. Hand tools, rather than mechanical tools, would be utilized for Project does not propose any habitable structures or structures that could cause a fire threat to surrounding residences during operation. Therefore, the Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires and no impact would occur.

х.	We	HYDR build the	OLOGY AND WATER QUALITY project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	a)	Violate require water c	any water quality standards or waste discharge ments or otherwise substantially degrade surface or ground Juality?			$\boxtimes$	
	b)	Substar substar may im	ntially decrease groundwater supplies or interfere ntially with ground water recharge such that the project pede sustainable groundwater management of the basin?			$\boxtimes$	
	c)	Substar includir or thro would:	ntially alter the existing drainage pattern of the site or area, ng through the alteration of the course of a stream or river ugh the addition of impervious surfaces, in a manner, which				
		i.	Result in substantial erosion or siltation on- or offsite;			$\boxtimes$	
		ii.	Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite			X	
		iii.	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			$\boxtimes$	
		iv.	Impede or redirect flood flows?			X	

х.	W	HYDROLOGY AND WATER QUALITY	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			$\boxtimes$	
	e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			$\boxtimes$	

# **REGULATORY SETTING**

### Federal Clean Water Act

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1977.

Under the CWA, the U.S. Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater discharge standards for industry. The EPA has also set water quality standards for contaminants in surface waters. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters unless a permit was obtained.

Under Section 303(d) of the CWA, states are required to develop lists of water bodies that would not attain water quality objectives after implementation of required levels of treatment by point-source dischargers (municipalities and industries). Section 303(d) requires that the state develop a total maximum daily load (TMDL) for each of the listed pollutants. The TMDL is the amount of loading that the water body can receive and still be in compliance with water quality objectives. The TMDL can also act as a plan to reduce loading of a specific pollutant from various sources to achieve compliance with water quality objectives. The TMDL prepared by the state must include an allocation of allowable loadings to point and nonpoint sources, with consideration of background loading reductions and the attainment of water quality objectives. The EPA must either approve a TMDL prepared by the state or, if it disapproves the state's TMDL, issue its own. National Pollutant Discharge Elimination System permit limits for listed pollutants must be consistent with the waste load allocation prescribed in the TMDL. After implementation of the TMDL, it is anticipated that the problems that led to placement of a given pollutant on the Section 303(d) list would be remediated.

#### National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit system was established in the federal CWA to regulate municipal and industrial discharges to surface waters of the United States. Sections 401

and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that the federal EPA must consider in setting effluent limits for priority pollutants.

Nonpoint sources are diffuse and originate from a wide area rather than from a definable point. Nonpoint pollution often enters receiving waters in the form of surface runoff but is not conveyed by way of pipelines or discrete conveyances. As defined in the federal regulations, such nonpoint sources are generally exempt from federal NPDES permit program requirements. However, three types of nonpoint source discharges are controlled by the NPDES program: nonpoint source discharge caused by general construction activities, the general quality of storm water in municipal storm water systems, and discharges associated with industrial operations. The 1987 amendments to the CWA directed the federal EPA to implement the stormwater program in two phases. Phase I addressed discharges from large (population 250,000 or above) and medium (population 100,000 to 250,000) municipalities and certain industrial activities. Phase II addresses all other discharges defined by the EPA that are not included in Phase I.

In accordance with NPDES regulations, in order to minimize the potential effects of construction runoff on receiving water quality, the State requires that any construction activity that disturbs 1 acre or more must obtain a General Construction Activity Stormwater Permit. Permit applicants are required to prepare a Stormwater Pollution Prevention Plan (SWPPP) and implement best management practices (BMPs), such as erosion and sediment control and non-stormwater management measures, to reduce construction effects on receiving water quality.

Examples of typical BMPs implemented in SWPPPs include using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; installing traps, filters, or other devices at drop inlets to prevent contaminants from entering storm drains; and using barriers, such as straw bales or plastic, to minimize the amount of uncontrolled runoff that could enter drains or surface water.

The project would be subject to permit requirements and would develop and implement a project-specific SWPPP to minimize construction activity impacts.

# California Water Code Division 7 (Porter-Cologne Act)

The California Water Code contains provisions regulating water and its use. Division 7 establishes a program to protect water quality and beneficial uses of the state water resources including groundwater and surface water. The SWRCB and RWQCBs administer the program and are responsible for control and water quality. They establish waste discharge requirements, oversee water quality control planning and monitoring, enforce discharge permits, and establish ground and surface water quality objectives.

# State Water Resources Control Board

In California, the SWRCB has broad authority over water-quality control issues for the State. The SWRCB is responsible for developing statewide water quality policy and exercises the powers delegated to the state by the federal government under the CWA. Other State agencies with jurisdiction over water quality regulation in California include California Department of Public Health (for drinking water regulations), the California Department of Pesticide Regulation, the California Department of Fish and Wildlife, and the Office of Environmental Health and Hazard Assessment.

### **Construction General Permit**

Owners and operators of construction activities who disturb 1 or more acres of soil, or less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres, are required to obtain coverage under the SWRCB's Order 2009-0009-DWQ (as amended by 2010-0014-DWQ and 2012-0006-DWQ), the Construction General Permit. Construction and demolition activities subject to this permit include clearing, grading, grubbing, and excavation or any other activity that results in a land disturbance equal to or greater than 1 acre. Applicants are required to submit a Notice of Intent to the SWRCB and prepare a SWPPP. The SWPPP must identify BMPs that are to be implemented to reduce construction impacts on receiving water quality based on potential pollutants. The SWPPP also must include descriptions of the BMPs to reduce pollutants in storm water discharges after construction phases are completed at a site (post-construction BMPs).

### Carlsbad Watershed Management Area Water Quality Improvement Plan

On May 8, 2013, the San Diego RWQCB adopted Order R9-2013-0001, an NPDES MS4 Permit, regulating discharges from Phase I MS4s in the San Diego Region (SWRCB 2015). Provision B of the Permit requires Responsible Agencies, in each of the region's Watershed Management Areas to develop Water Quality Improvement Plans (WQIPs) that identify water quality conditions and strategies to improve water quality within the watershed. Through the WQIP approach, Highest Priority Water Quality Conditions within the Watershed Management Area are identified, and strategies are implemented through the Responsible Agencies' Jurisdictional Runoff Management Programs to progressively improve water quality. The plans contain an adaptive planning and management process and a public participation component. The Carlsbad Management Area Water WQIP was prepared in June 2016 for the Carlsbad Watershed Management Area Responsible Agencies, which include the Cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista, and the County of San Diego. The 2021 update of the WQIP was submitted to the Regional Board in September 2021 and was accepted by the Regional Board in December 2021 (Carlsbad Watershed Management Area Responsible Agencies 2021).

#### City of Carlsbad Municipal Code

The CMC is a collection of city laws that have been adopted by the City Council. CMC Chapter 15.20, Stormwater Management and Discharge Control, designates guidelines to protect and enhance the water quality of the City of Carlsbad receiving waters and wetlands in a manner pursuant to and consistent with the Clean Water Act (CWA) and municipal permit.

Section 402 of the CWA established the National Pollutant Discharge Elimination System (NPDES) to control water pollution by regulating point sources that discharge pollutants into waters of the United States. In the State of California, the EPA has authorized the State Water Resources Board to be the permitting authority to implement the NPDES Program. The State Water Resources Board issues two baseline general permits, one for industrial discharges and one for construction activities (Construction General Permit). Additionally, the NPDES Program includes the long-term regulation of stormwater discharges from medium and large cities through the Municipal Separate Storm Sewer System (MS4) Permit Program.

#### Short-Term Stormwater Management

The San Diego RWQCB would be responsible for regulating stormwater discharges within the Project area. Stormwater discharges from construction sites with a disturbed area of 1 acre or more are required to either obtain individual NPDES permits for stormwater discharges or be covered by the Construction General Permit. Coverage under the Construction General Permit requires filing a Notice of Intent with the State Water Resources Control Board and preparation of a stormwater pollution prevention plan (SWPPP). Each applicant under the Construction General Permit must ensure that a SWPPP would be prepared prior to grading and implemented during construction. The primary objective of the SWPPP is to identify, construct, implement, and maintain best management practices (BMPs) to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the construction site during construction. BMPs include programs, technologies, processes, practices, and devices that control, prevent, remove, or reduce pollution.

### Long-Term Storm Water Management

The stormwater management regulatory requirements for the site include water quality requirements per the San Diego RWQCB MS4 Permit. New and redevelopment projects that would result in the disturbance of 1 acre or more of land or would create more than 5,000 square feet of impervious surfaces are subject to the post-construction priority development project requirements in the Carlsbad Storm Water Standards Manual. Almost all projects must meet minimum standard stormwater requirements, including the following light impact development (LID) requirements:

- Drain a portion of impervious areas into pervious areas.
- Design and construct pervious areas, if any, to effectively receive and infiltrate runoff from impervious areas, taking into account soil conditions, slope, and other pertinent factors.
- Construct a portion of paved areas with low traffic and appropriate soil conditions with permeable surfaces.

# PROJECT IMPACTS

# a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

**Less than Significant Impact:** The Project's primary objective is to clean and rehabilitate nine sewer manholes. The Project emphasizes the rehabilitation of existing infrastructure to prevent potential sewage leaks and structural failure in the sewer manholes resulting in sewer spills. The measures outlined, such as pressure washing the inside of the manholes and installing liners, are focused on maintaining and improving the functionality of the sewer system.

It is assumed that potential indirect impacts resulting from short-term construction activities would include dust, noise, and general human presence that may temporarily disrupt species and habitat vitality, and construction-related soil erosion and runoff. However, with respect to these potential indirect impacts, all Project activity would be subject to the typical restrictions, including BMPs and requirements that address erosion and runoff, including the federal CWA; NPDES and MS4 Permits issued by the San Diego RWQCB; City of Carlsbad Engineering Standards; the city's Master Drainage Plan, Grading Ordinance, Storm Water Ordinance, BMP Design Manual, and Jurisdictional Runoff Management Plan; and the Project-specific SWPPP.

The Project is proposing the maintenance and rehabilitation of nine existing sewer manholes to prevent adverse water quality conditions described above and therefore result in a beneficial impact. Compliance with applicable federal, state, and local regulations, including applicable General Plan policies, would ensure that the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water or groundwater quality. For these reasons, impacts would be less than significant.

# b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

**Less than Significant Impact:** Groundwater consists of water within underground aquifers that are recharged from the land surface. The rate of groundwater recharge is affected by the permeability of the ground surface. The proposed Project improvements are not anticipated to reduce groundwater recharge, because the majority of improvements do not consist of impervious surfaces. Any water used for construction purposes would be trucked in and no groundwater use is proposed. Considering the nature of the Project, impacts would be less than significant.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

# *i)* Result in substantial erosion or siltation on- or off-site?

Less than Significant Impact: The proposed construction and maintenance activities, which include pressure washing and installing liners, would not lead to substantial erosion or siltation. The purpose of these activities is to prevent corrosion and structural failure of the existing sewer manholes. The scope of work involved in the rehabilitation process would not require any significant excavation or disturbance of the surrounding soil. Minor soil disturbance may occur during access for the rehabilitation work, which could increase the risk of soil erosion in the immediate vicinity of the manhole. Despite this, any soil disturbance would be minimal and localized. Furthermore, once the rehabilitation work is complete the Project site would be returned to close to its existing conditions. Therefore, impacts would be less than significant.

# *ii)* Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

**Less than Significant Impact:** Project construction and maintenance activities, which would occur on the 0.13-acre area of direct impact within the Project site, would not substantially increase the rate of surface runoff. The inclusion of erosion control measures such as using plywood boards along access routes indicate would minimize impacts to vegetation and soil. Furthermore, once the rehabilitation work is complete the Project site would be returned to its existing conditions. Therefore, impacts would be less than significant.

# *iii)* Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

**Less than Significant Impact:** The Project does not propose development of significant amounts of impervious surface. After Project construction and maintenance, the Project site would be returned to its existing conditions. The Project also would implement measures to avoid excessive runoff, including the use of erosion control measures and compliance with stormwater management regulations. Therefore, the activities are not expected to create runoff water that exceeds the capacity of existing or planned stormwater drainage systems. Therefore, impacts would be less than significant.

# *iv)* Impede or redirect flood flows?

**Less than Significant Impact:** The Project is focused on cleaning and rehabilitating nine sewer manholes and is not designed to impede or redirect flood flows. The activities would not have significant effects on the natural flow of floodwaters. Also, as discussed above, the Project site would be returned to its existing conditions after construction and maintenance activities are performed. Therefore, impacts would be less than significant.

# d) In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

**Less than Significant Impact:** The Project site is not subject to flood hazard, dam inundation, tsunami, or seiche zones, as shown in Figures 6-1, 6-2, and 6-4 of the city's General Plan Public Safety Element (City of Carlsbad 2015f). The proposed Project improvements would not include any infrastructure on site that would result in the risk of release of pollutants due to Project inundation. Therefore, impacts would be less than significant.

# e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

**Less than Significant Impact:** The Project would be subject to the typical restrictions, including BMPs and requirements that address erosion and runoff, including the federal CWA; NPDES and MS4 Permits issued by the San Diego RWQCB; City of Carlsbad Engineering Standards; the city's Master Drainage Plan, Grading Ordinance, Storm Water Ordinance, BMP Design Manual, and Jurisdictional Runoff Management Plan; and the Project-specific SWPPP. The Project would be required to comply with the city's Municipal Code Section 15.12, Stormwater Management and Discharge Control, which would ensure consistency with the requirements of the federal CWA, applicable implementing regulations, and municipal permit. Under these regulations, the Project would implement applicable measures to avoid excessive runoff, including the use of erosion control measures and compliance with stormwater management regulations. The Project would not conflict with or obstruct implementation of a water quality control plan and is not subject to an applicable groundwater management plan within the city. Therefore, impacts would be less than significant.

XI.	W	LAND USE AND PLANNING	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	a)	Physically divide an established community?				$\boxtimes$
	b)	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				

# **REGULATORY SETTING**

# California Coastal Act/Coastal Zone

The proposed Project site is within the Coastal Zone as designated by the CCC, and subject to the CCA of 1976. The CCA tasked the agency with protection of coastal resources through the issuance of CDPs. Under the CCA, local governments are encouraged to adopt LCPs, which consist of a land use plan with goals and regulatory policies as well as a set of implementing ordinances. Development in the Coastal Zone may not commence until a CDP has been issued by the CCC or a local government that has a CCC-certified LCP. The City of Carlsbad has an adopted LCP, as described further below (City of Carlsbad 2019), and proposed Project activities would be located in the approved city LCP jurisdiction (Mello II segment), with a large portion of the Project site being within the CCC's appeal jurisdiction. Actions proposed within the Coastal Zone must be consistent with Chapter 3 of the CCA. The CCA authorizes the State of California to regulate development within the State Coastal Zone (California Public Resources Code Section 30000 et seq.). California Public Resources Code Section 30001.5 calls for the state to "protect, maintain, and, where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and artificial resources."

# SANDAG Multiple Habitat Conservation Program

The Multiple Habitat Conservation Program (MHCP) is a comprehensive conservation planning process that addresses the needs of multiple plant and animal species in northwestern San Diego County. The MHCP encompasses the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista. Its goal is to conserve approximately 19,000 acres of habitat, of which roughly 8,800 acres (46%) are already in public ownership and contribute toward the habitat preserve system for the protection of more than 80 rare, threatened, or endangered species. The city's HMP, discussed below, is a Subarea Plan within the MHCP.

# City of Carlsbad Local Coastal Program

The City of Carlsbad LCP regulates development in the state-designated Coastal Zone in portions of the city boundary. The City of Carlsbad LCP consists of six geographic segments: the Agua Hedionda Lagoon LCP segment, which is composed of approximately 1,100 acres; the Carlsbad Mello I segment, with approximately 2,000 acres; the Carlsbad Mello II segment, with approximately 5,250 acres; the West

Batiquitos Lagoon/Sammis Properties segment, with approximately 200 acres; the East Batiquitos Lagoon/Hunt Properties segment, with approximately 1,000 acres; and the Village–Barrio segment, with approximately 150 acres. The city's LCP implements the CCA at a local level through land use and zoning and relevant implementing actions, provisions, and policies. The Project site is located within the Mello II Segment of the LCP.

#### City of Carlsbad General Plan

#### Land Use and Community Design Element

The General Plan Land Use and Community Design Element includes the following applicable policy (City of Carlsbad 2015c):

- **Policy 2-P.40:** Establish development standards that will preserve natural features and characteristics, especially those within coastal, hillside and natural habitat areas.

### *Open Space, Conservation, and Recreation Element*

The General Plan Open Space, Conservation, and Recreation Element includes the following open space framework classifications (City of Carlsbad 2015b):

- Category 1: Open Space for Preservation of Natural Resources (plant and animal habitat; nature preserves; beaches and bluffs; wetland and riparian areas; canyons and hillsides; water features such as lagoons and streams).
- **Category 2**: Open Space for Managed Production of Resources (forestry; agriculture; aquaculture; water management; commercial fisheries; and major mineral resources).
- **Category 3**: Open Space for Outdoor Recreation (school recreation areas; public parks and recreation areas; greenways; trails; campgrounds; golf courses; and equestrian facilities).
- Category 4: Open Space for Aesthetic, Cultural, and Educational Purposes (lands with scenic, historical, and cultural value; land use buffers; open space that marks entries to the city from surrounding communities and to major developments and neighborhoods within the city; greenbelts providing separation from surrounding communities; and museums, arboreta, zoos, and botanical gardens)

#### Mobility Element

The Mobility Element of the city's General Plan includes goals and policies applicable to the Project and, specifically, related to scenic transportation corridors, as follows (City of Carlsbad 2015a):

 Goal 3-G.6: Protect and enhance the visual, environmental and historical characteristics of Carlsbad through sensitive planning and design of scenic transportation corridors

- **Policy 3-P.23**: Maintain the city's scenic transportation corridors as identified in the Carlsbad Scenic Corridor Guidelines.

### **Scenic Corridor Guidelines**

The city's Scenic Corridor Guidelines referenced in the General Plan Mobility Element identify the Atchison, Topeka and Santa Fe Railroad as a "special condition" corridor to be addressed separately from the street corridors identified in the guidelines. Guidelines are included for development primarily adjacent to but also within the NCTD railroad right-of-way. The city's Scenic Corridor Guidelines requires any development within the NCTD railroad right-of-way to comply with setback requirements and development standards of the Transportation Corridor (T-C) zone. The Project site is located within the NCTD railroad right-of-way and the Transportation Corridor (T-C) zone.

#### Carlsbad Municipal Code

The CMC is a collection of city laws that have been adopted by the City Council. The CMC as part of Title 21, the Zoning Ordinance, includes an official Zoning Map that establishes appropriate zone boundaries as applicable. The Project site is zoned Residential Density-Multiple, Qualified Development Overlay Zone (RD-M-Q), Transportation Corridor (T-C), Transportation Corridor/Open Space (T-C/OS), and Open Space (OS). The Project is subject to the standards of the zones and would require compliance with designated CMC regulations for development of these zoning areas (City of Carlsbad 2021).

### City of Carlsbad Habitat Management Plan

The city's HMP proposes a comprehensive, citywide program to identify how the city, in cooperation with federal and state wildlife agencies, can preserve the diversity of habitat and protect sensitive biological resources within the city while allowing for additional development consistent with the city's General Plan and its Growth Management Plan. In so doing, the HMP is intended to lead to citywide permits and authorization for the incidental take of sensitive species in conjunction with private development projects, public projects, and other activities that are consistent with the HMP. These permits would be issued under the U.S. Endangered Species Act, the California Endangered Species Act, and the California Natural Community Conservation Planning Act. The HMP also is designed to serve the following additional functions (City of Carlsbad 2004):

- 1. Preserve wildlife and habitats as part of the city's permanent open space system and thereby be a component of the Open Space and Conservation Element of the city's General Plan;
- 2. Allow the city to construct public facility and infrastructure Projects dictated by the city's Growth Management Plan;
- 3. Define the city's contribution to regional efforts to conserve coastal sage scrub (CSS) habitat and species under California's Natural Community Conservation Planning (NCCP) program. The Plan constitutes an Ongoing Multi-Species Plan (OMSP) that is consistent with NCCP guidelines;
- 4. Allow projects in the city to fulfill their federal and state Endangered Species Act (ESA) requirements for certain species through compliance with the HMP;
- 5. Constitute a habitat conservation plan (HCP), as described in Section 10(a)(1)B of the Endangered Species Act and Section 2835 of the California Endangered Species Act related to the NCCP Program, submitted with the city's application to the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG) for authorization to take certain listed species; and

6. Constitute Carlsbad's Subarea plan within the North County Multiple Habitat Conservation Plan (MHCP).

The Project site is protected under the provisions of the City of Carlsbad HMP. This HMP is dedicated to protecting native plants, animals, and habitats throughout the city's open space preserve system. The Project site has plant and animal species, as well as sensitive vernal pool habitat that is covered by this HMP. The city's HMP provides measures that allow for Project impacts as long as those impacts are considered insignificant and temporary and are mitigated for as part of Project implementation.

### Poinsettia Properties Specific Plan

The Project site contains APN 214-610-58, which is located within Planning Areas 2 and 4 of the Poinsettia Properties Specific Plan, SP 210(A) (City of Carlsbad 1997). The overall goals of the Specific Plan as well as the Development Standards and Design Criteria of the individual Planning Areas have been prepared in accordance with Section 30252 of the CCA. The Poinsettia Properties Specific Plan has been written using the following goals which represent the transit-oriented development principles within the setting of other city policies and ordinances. Development and other entitlements within the Specific Plan area shall conform to these goals:

- 1. Join all of the neighborhoods and associated land uses within the Specific Plan by the use of a pedestrian parkway/trail system. By design, encourage visitors and residents easy access to the Poinsettia Transit Station via this trail system, especially within a quarter-mile radius.
- 2. Design streets and adjacent buildings at a scale which will encourage pedestrian use and discourage automobile use.
- 3. Increase residential density within the Specific Plan to bring more residents closer to the Poinsettia Transit Station. Densities should be increased, using TOD [transit-oriented development] principles, based upon the distance from the Poinsettia Transit Station. Within 500 feet of the transit station there should be a mixture of commercial and higher density residential uses at a density of 20 du/ac, which should gradually transition to a lower number of units per acre as one moves further from the transit center.
- 4. Provide for mixed-use areas with land uses including retail, office and recreational near the Poinsettia Transit Station to eliminate additional automobile trips for transit users and residents.
- 5. Eliminate artificial barriers which discourage pedestrian access to the most frequently used facilities and attractions such as the beach, adjacent shopping, the mixed-use area and the Poinsettia Transit Station.
- 6. Create focal community spaces which encourage pedestrian transition between land uses.
- 7. Ensure that public facilities and services that serve the Specific Plan area meet the applicable city standards as called for in the Carlsbad Growth Management Plan.
- 8. Conform to all aspects of Carlsbad's General Plan, Amended Zone 22 Local Facilities Management Plan and all applicable ordinances, regulations and policies.

### **PROJECT IMPACTS**

#### a) Would the project physically divide an established community?

**No Impact:** The Project would not divide an established community or substantially change the land use around the proposed Project site, because it involves the rehabilitation and maintenance of nine sewer manholes located between Avenida Encinas and Poinsettia Lane. The Project site does not include residential or commercial development; therefore, it does not represent an established community. Construction of the Project would be short term and is not expected to permanently impact surrounding residences. The Project site would not divide an established community, and no impact would occur as a result of Project implementation.

# *b)* Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

**Less than Significant Impact:** The relevant planning programs associated with the proposed Project would be the city's General Plan, Scenic Corridor Guidelines, Zoning Ordinance, LCP, HMP, and the Poinsettia Properties Specific Plan.

The General Plan Land Use and Community Design Element includes relevant Policy 2-P.40: Establish development standards that will preserve natural features and characteristics, especially those within coastal, hillside and natural habitat areas. The Project site is protected under the provisions of the city's HMP. The Project site has sensitive vernal pool habitat that is covered by this HMP. As discussed in Section III. (f), the Project, as mitigated, would not conflict with the city's Habitat Management Plan.

The General Plan Mobility Element includes relevant Policy 3-P.23: Maintain the city's scenic transportation corridors as identified in the Carlsbad Scenic Corridor Guidelines. The Project complies with the guidelines as detailed in Section I. (c).

The Project site has a General Plan Land Use designation of Residential, 15-23 units/ acre (R-23), Public (P), Transportation Corridor (TC), Open Space (OS) and is zoned Residential Density-Multiple, Qualified Development Overlay Zone (RD-M-Q), Transportation Corridor (T-C), and Open Space (OS). The Project site, which is mostly undeveloped, currently functions as open space and as a rail and utility corridor; these uses, which would not change under the proposed Project, are consistent with the Project's General Plan Land Use and the Zoning designations. Once the repair work is complete the Project site would be returned to its existing conditions. As such, the rehabilitation and repairs of the sewer manholes would not require a change of land use designation or zoning.

The Project site is located within the Coastal Zone and is subject to the Mello II Segment of the city's LCP. The LCP guides development in the city's coastal zone in a manner that protects and enhances coastal resources in accordance with the policies and provisions outlined in the CCA. The city's LCP implements the CCA at a local level by addressing land use through implementing actions, provisions, and policies required within the Coastal Zone and as found in various city land use documents, such as the policies of the Mello II Segment, the Municipal Code, and the Habitat Management Plan. Construction activity and temporary trail closure notification will be provided by the city to trail users via the city's website and onsite signage posted two weeks in advance of work activity. The existing trail along the eastern boundary of the Project will be temporarily closed during construction hours on weekdays. However, construction equipment will be removed from the site daily. This closure is necessary because construction worker, equipment and vehicles will need to access manholes directly from the trail, potentially leaving insufficient

space for pedestrian passage. The trail will remain open during regularly scheduled maintenance inspections that occur after the rehabilitation project. The Project is designed to comply with the regulations of the City of Carlsbad LCP such as public views and access, habitat preservation, and stormwater protection as demonstrated in the Project Description and in Sections I., IV., and X.

In addition, the Poinsettia Properties Specific Plan establishes specific development standards that constitute the zoning regulations for properties within the specific plan. A portion of the Project site is within Planning Areas 2 and 4 of the Poinsettia Properties Specific Plan. While the Poinsettia Properties Specific Plan does not contain standards specific to the Project, it does recognize the Project area as a "railroad pedestrian/open space corridor" for purposes of open space, trail and utility uses and for protection of sensitive habitat. The project does not conflict with these purposes as demonstrated in the Project Description and in Section IV. and this Section XI.

The Project would be required to comply with applicable regulations in the city's Zoning Ordinance (CMC Title 21). Following compliance with the city's Zoning Ordinance and given that the city would review Project design for compliance with regulations governing scenic quality during the design review process, the Project would not conflict with the city's General Plan or LCP or the Poinsettia Properties Specific Plan that would result in a significant impact to the environment. For these reasons, the Project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, and impacts would be less than significant.

XII.	MINERAL RESOURCES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the State?				$\boxtimes$
b)	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				$\boxtimes$

# a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

**No Impact:** The city is devoid of any non-renewable mineral resources of economic value to the region and the residents of the state. Mineral resources within the city are no longer being used and extracted as exploitable natural resources (City of Carlsbad 2015g). Therefore, no impacts would occur to mineral resources as a result of the proposed Project.

# b) Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

**No Impact:** The City of Carlsbad is devoid of any non-renewable mineral resources of economic value to the region and the residents of the state. Mineral resources within the city are no longer being used and extracted as exploitable natural resources (City of Carlsbad 2015g). Therefore, no impacts would occur to mineral resources as a result of the proposed Project.

XIII.	NOISE ould the project result in:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?			$\boxtimes$	
b)	Generation of excessive groundborne vibration or groundborne noise levels?			$\boxtimes$	
c)	For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X

The following analysis is based on a *Construction Noise and Vibration Assessment* prepared for the proposed Project and presented in Appendix D.

# EXISTING SETTING

Sound pressure level measurements at representative positions were recorded near the proposed Project alignment on March 17, 2023, to quantify and characterize the existing outdoor ambient sound environment and establish a quantified baseline for a noise assessment. Table 10 provides the location, date, and time at which these noise level measurements were performed.

Three short-term (ST) noise level measurement locations were selected along the Carlsbad Poinsettia Station's western boundary as well as the dirt walking path to the south to represent outdoor ambient sound environmental conditions considered comparable to those of existing off-site noise-sensitive receivers in the Project vicinity. These surveyed locations, referred to as ST1, ST2, and ST3, are displayed in figures provided in Appendix D, Construction Noise and Vibration Assessment, and described in Table 6. The measured noise levels, expressed as both equivalent continuous sound level ( $L_{eq}$ ) and maximum sound level during the measurement interval ( $L_{max}$ ), are presented in Table 6. The primary noise source measured and perceived at the sites was distant traffic and rail noise. As shown in Table 10, the measured sound pressure level at the three sampled locations ranged from approximately 49.0 A-weighted decibels (dBA)  $L_{eq}$  at ST3 to 53.1 dBA  $L_{eq}$  at ST1.
Site	Location/Address	Date and Time (24-hour clock)	L <sub>eq</sub> (dBA)	L <sub>max</sub> (dBA)
ST1	Approximately 70 feet east of Poinsettia Station boarding platform	2023/03/17, 12:40 to 12:50	53.1	61.6
ST2	Approximately 40 west of Seaward Avenue cul-de-sac	2023/03/17, 12:55 to 13:05	49.8	51.8
ST3	Approximately 40 west of Red Coral Avenue cul-de-sac	2023/03/17, 13:10 to 13:20	49	61.4

### Table 10: Measured Baseline Outdoor Ambient Noise Levels

Source: Appendix D.

**Notes:** L<sub>eq</sub> = equivalent continuous sound level (time-averaged sound level); dBA = A-weighted decibels; L<sub>max</sub> = maximum sound level during the measurement interval.

### **REGULATORY SETTING**

#### Federal Transit Administration Guidance

In its Transit Noise and Vibration Impact Assessment guidance manual (DOT 2006), the Federal Transit Administration (FTA) offers guidance on the estimation of construction noise levels from a construction project site. It also provides suggested thresholds that include no more than 80 dBA  $L_{eq}$  over an 8-hour period ( $L_{eq8h}$ ) as received at a residential land use. In the absence of such a quantified limit provided by the city, this analysis adopts 80 dBA  $L_{eq8h}$  for quantitative construction noise impact assessment.

#### California Noise Control Act of 1973

Sections 46000 through 46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973, declares that excessive noise is a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also identifies a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the State to provide an environment for all Californians free from noise that jeopardizes their health or welfare. The California Noise Control Act seeks to provide assistance to local agencies in preparation of ordinances to control and abate noise.

#### California Code of Regulations

California Government Code Section 65302(f) mandates that the legislative body of each county and city adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines established by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of "normally acceptable," "conditionally acceptable," "normally unacceptable," and "clearly unacceptable" noise levels for various land use types. Single-family homes are "normally acceptable" in exterior noise environments up to 60 dBA CNEL and "conditionally acceptable" up to 70 dBA CNEL. Multiple-family residential uses are "normally acceptable" up to dBA 65 CNEL and "conditionally acceptable" up to dBA 70 CNEL. Schools, libraries, and churches are "normally acceptable" up to 70 dBA CNEL, as are office buildings and business, commercial, and professional uses.

### California Department of Transportation

In its Transportation and Construction Vibration Guidance Manual, Caltrans recommends a vibration velocity threshold of 0.2 ips PPV (Caltrans 2020) for assessing "annoying" vibration impacts to occupants of residential structures. Although this Caltrans guidance is not a regulation, it can serve as a quantified standard in the absence of such limits at the local jurisdictional level. Similarly, thresholds to assess building damage risk due to construction vibration vary with the type of structure and its fragility, but tend to range between 0.2 ips and 0.3 ips PPV for typical residential structures (Caltrans 2020).

For office building occupants, the same Caltrans guidance manual refers to International Organization of Standardization (ISO) 2631 that indicates 0.016 ips RMS (80 VdB) would be an appropriate threshold in the context of "detection or discomfort." Converted to PPV using the FTA-recommended crest factor of 4 (FTA 2018), this value translates to 0.04 ips. A building with workshops (or similar interior uses) would have a recommended vibration criteria of 0.08 ips PPV per the same guidance based on ISO 2631, or an RMS value of 0.032 ips (86 VdB). The Caltrans guidance manual also refers to the aforementioned FTA impact criteria for Category 3 land uses that ranges between 75 VdB and 83 VdB depending on frequency of vibration occurrence (Caltrans 2020).

#### **City of Carlsbad Municipal Code**

CMC Chapter 8.48 outlines regulations for limitation of hours for construction (i.e., the erection, demolition, alteration, or repair of any building or structure or the grading or excavation of land) that creates disturbing, excessive, or offensive noise. Construction can occur Monday through Friday from 7:00 a.m. to 6:00 p.m., and Saturday 8:00 a.m. to 6:00 p.m.; no work can be conducted on Sundays or on federal holidays. CMC Chapter 8.48 also outlines exceptions that may be granted by the city for circumstances such as emergency repairs required to protect the health and safety of the community (City of Carlsbad 2024).

#### **PROJECT IMPACTS**

### a) Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than Significant Impact: The Project would generate construction noise that would be received by residences and businesses in the vicinity of the Project work areas and laydown areas. Construction noise and vibration are temporary phenomena, with emission levels varying from hour to hour and day to day, depending on the equipment in use, the operations performed, and the distance between the source and receptor. Equipment that would be in use during construction would include, in part, concrete saws, jackhammers, generators, pressure washers, and various hand tools. The typical maximum noise levels at a distance of 50 feet from various pieces of construction equipment and activities anticipated for use on the proposed Project site are presented in Table 11. Note that the equipment noise levels presented in Table 11 are maximum noise levels. Usually, construction equipment operates in alternating cycles of full power and low power, producing average noise levels over time that are less than the maximum noise level. The average sound level of construction activity also depends on the amount of time that the equipment operates and the intensity of construction activities during that time.

Noise from light duty cars and trucks utilized during construction activities for the movement of equipment, materials, and workers to and from the Project site would be consistent with the existing noise from motor vehicles received by residences and businesses in the Project site's vicinity

Equipment Type	Typical Equipment (L <sub>max</sub> , dBA at 50 Feet)
Concrete saw	90
Concrete mixer	72
Generator	72
Jackhammer	85

### Table 11: Typical Construction Equipment Maximum Noise Levels

Source: DOT 2006.

**Note:** L<sub>max</sub> = maximum sound level; dBA = A-weighted decibels.

Aggregate noise emission from proposed Project construction activities, broken down by sequential phase, was predicted to the nearest existing noise-sensitive receptor. The various manhole locations all have a similar distance from the nearest residential receivers to the east. Table 12 summarizes these distances to the apparent closest noise-sensitive receptor for each of the three sequential construction phases. At the site boundary, this analysis assumes that all equipment of each listed type per phase will be involved in the construction activity for the full 8-hour period.

### Table 12: Estimated Distances between Construction Activities and the Nearest Noise-Sensitive Receptors

Construction Phase (And Equipment Types Involved)	Distance from Nearest Noise-Sensitive Receptor to Construction Site Boundary (feet)
Demolish concrete pads around manholes (concrete saw, jackhammer)	60
Clean manhole inside walls (generator, pressure washer)	25
Repair manhole (concrete mixer)	25

A Microsoft Excel-based noise prediction model emulating and using reference data from the Federal Highway Administration's Roadway Construction Noise Model (FHWA 2008) was used to estimate construction noise levels at the nearest occupied noise-sensitive land use. Note that although the Roadway Construction Noise Model was funded and promulgated by the Federal Highway Administration, it is often used for non-roadway projects, because the same types of construction equipment used for roadway projects are often used for other types of construction. Input variables for the predictive modeling consist of the equipment type and number of each (e.g., two graders, a loader, a tractor), the duty cycle for each piece of equipment (e.g., percentage of time within a specific time period, such as an hour, when the equipment is expected to operate at full power or capacity and thus make noise at a level comparable to what is presented in Table 12), and the distance from the noise-sensitive receiver. The predictive model also considers how many hours that equipment may be on site and operating (or idling) within an established work shift. It also includes the 6-foot-tall solid masonry wall on the western property line of the residential properties. The Roadway Construction Noise Model has default duty-cycle values

### Project Name: **Ponto Sewer Manhole Rehabilitation Project** Project No: **SDP2024-0014, CDP2024-0019, HMP2024-0007**

for the various pieces of equipment, which were derived from an extensive study of typical construction activity patterns. Those default duty-cycle values were used for this noise analysis, which is detailed in Appendix D, and produce the predicted results displayed in Table 13.

Construction Phase (and Equipment Types Involved)	8-Hour L <sub>eq</sub> at Nearest Noise-Sensitive Receptor to Construction Site Boundary (dBA)
Demolish Concrete Pads Around Manholes (concrete saw, jackhammer)	70.8
Clean Manhole Inside Walls (generator, pressure washer)	62.1
Repair Manhole (concrete mixer)	68.1

### Table 13: Predicted Construction Noise Levels per Activity Phase

**Notes:**  $L_{eq}$  = equivalent continuous sound level; dBA = A-weighted decibels.

As presented in Table 9, the highest estimated construction noise levels are predicted to stay below 71 dBA  $L_{eq}$  over an 8-hour period at the nearest existing residences on east of the manhole repairs (as close as 25 feet away) when construction activities take place near the eastern Project boundaries. Short-term construction noise remains well below the FTA guidance level of 80 dBA  $L_{eq8h}$ .

The proposed Project's construction would occur during daytime construction hours on weekdays only as permitted by the city. CMC Chapter 8.48 requires construction activities to only occur between the hours of 7:00 a.m. to 6:00 p.m. on weekdays, and between the hours of 8:00 a.m. to 6:00 p.m. on Saturdays; and does not allow construction work on Sundays or on federal holidays. CMC Chapter 8.48 also outlines exceptions that may be granted by the city for circumstances such as emergency repairs required to protect the health and safety of the community (City of Carlsbad 2024). Therefore, following compliance with CMC Chapter 8.48, Project construction activities would result in a less than significant noise impact, and no mitigation is required.

### b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

**Less than Significant Impact:** Construction activities may expose persons to excessive groundborne vibration, causing a potentially significant impact. Information from Caltrans indicates that continuous vibrations with a peak particle velocity (PPV) of approximately 0.2 inches per second (ips) is considered "annoying." For context, typical construction equipment, such as a jackhammer, that may be expected on the Project site would have a PPV of approximately 0.035 ips or less at a reference distance of 25 feet (DOT 2006).

Groundborne vibration attenuates rapidly, even over short distances. The attenuation of groundborne vibration as it propagates from source to receptor through intervening soils and rock strata can be estimated with expressions found in FTA and Caltrans guidance. By way of example, for a jackhammer operating on site at the nearest manhole (i.e., 60 feet from the nearest occupied property) the estimated vibration velocity level would be 0.013 ips per the following equation (DOT 2006):

$$PPV_{rcvr} = PPV_{ref} * (25/D)^{1.5} = 0.013 = 0.035 * (25/60)^{1.5}$$

In the above equation,  $PPV_{rcvr}$  is the predicted vibration velocity at the receiver position,  $PPV_{ref}$  is the reference value at 25 feet from the vibration source (the jackhammer), and D is the actual horizontal distance to the receiver. Therefore, at this predicted PPV, the impact of vibration-induced annoyance to occupants of nearby existing homes would be less than significant.

Construction vibration at sufficiently high levels can also present a building damage risk. However, anticipated construction vibration associated with the proposed Project would yield levels of 0.003 ips, which do not surpass the guidance limit of 0.2 to 0.3 ips PPV for preventing damage to residential structures (Caltrans 2020). Because the predicted vibration level at 60 feet is less than this guidance limit, the risk of vibration damage to nearby structures is considered less than significant.

### c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

**No Impact:** The nearest airport is McClellan–Palomar Airport, located approximately 2.1 miles northeast of the Project site. Based on the McClellan–Palomar Airport Master Plan (County of San Diego 2018), the Project site is located outside the airport's 60 dBA community noise equivalent level (CNEL) noise contour. As such, no impacts from airport/aircraft noise would occur, and no noise mitigation is required.

xıv. w	POPULATION AND HOUSING	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Induce substantial unplanned population growth in an area either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				$\boxtimes$
b)	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				$\boxtimes$

## a) Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

**No Impact:** The proposed Project would involve the rehabilitation of nine sewer manholes located between Avenida Encinas and Poinsettia Lane. The Project would not involve construction of new homes or businesses, or introduce any new structures on site, nor would any surrounding roads or other infrastructure be expanded or extended as a result of the Project. Because implementation of the Project would not induce growth or result in displacement of existing people or housing, no impact would occur.

### b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

**No Impact:** The proposed Project would involve the rehabilitation of nine sewer manholes located between Avenida Encinas and Poinsettia Lane. The Project would not involve construction of new homes or businesses, or introduce any new structures on site, nor would any surrounding roads or other infrastructure be expanded or extended as a result of the Project. Because implementation of the Project would not induce growth or result in displacement of existing people or housing, no impact would occur.

XV. PUBLIC SERVICES Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, a need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Fire protection?				$\boxtimes$
b) Police protection?				$\boxtimes$
c) Schools?				X
d) Parks?				$\boxtimes$
e) Other public facilities?				$\boxtimes$

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

### a) Fire protection?

**No Impact:** The proposed Project would not induce population growth or new structures that could result in the addition of housing, schools, or other community facilities that might require fire protection or result in an increase in need for fire protection. Rehabilitation of the nine sewer manholes would not change local fire protection response times or affect demand for fire protection services. Therefore, no impact to fire protection services would occur.

### b) Police protection?

**No Impact:** As described above, the proposed Project would not induce population growth or result in the addition of housing, schools, or other community facilities that might require police protection or result in an increased need for police protection. Rehabilitation of the nine sewer manholes would not change local police protection response times or affect demand for police protection services. Therefore, no impact to police protection services would occur.

### c) Schools?

**No Impact:** The proposed Project would not involve a housing component that would result in population growth or increased demands on existing schools within the area. Therefore, no impact to schools would occur.

### d) Parks?

**No Impact:** The proposed Project would not involve a residential component or increase employment that would result in population growth. The Project would not impact existing park facilities. Therefore, additional demands on existing public parks would not occur as a result of Project implementation, and no impact would occur.

#### e) Other public facilities?

**No Impact:** The proposed Project would not involve a housing component or increase employment that would result in population growth in the city. Therefore, additional demands on other public facilities, such as libraries or health care services, would not occur as a result of Project implementation. No impact would occur.

XVI.	RECREATION	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				$\boxtimes$
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?				$\boxtimes$

## a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

**No Impact:** The proposed Project would not involve a housing component or substantially increase employment opportunities within the city because construction would be short term and temporary, and construction workers are anticipated to come from the surrounding area. The proposed Project would involve the rehabilitation of nine sewer manholes located between Avenida Encinas and Poinsettia Lane, and implementation of the Project has no relation to increased use of recreational facilities within the area. Therefore, the proposed Project would not result in substantial physical deterioration of neighborhood or regional parks or other recreational facilities, and no impacts would occur.

### b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

**No Impact:** The proposed Project would involve the rehabilitation of nine sewer manholes located between Avenida Encinas and Poinsettia Lane. The proposed Project would not involve construction of a recreational facility that could have an adverse effect on the environment. In addition, the proposed Project would not induce population growth such that the expansion of existing recreational facilities would be required. Therefore, no impacts associated with the construction or expansion of recreational facilities would occur.

XVII. wa	TRANSPORTATION	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			$\boxtimes$	
b)	Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?			$\boxtimes$	
c)	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			$\boxtimes$	
d)	Result in inadequate emergency access?			X	

The General Plan Mobility Element promotes a livable streets strategy for mobility within the city (City of Carlsbad 2015a). The objective of this strategy is to create a multi-modal street network that balances the mobility needs of pedestrians, bicyclists, transit users, and vehicles. For each street in the city, the Mobility Element identifies the travel modes for which service levels should be maintained per the multi-modal level of service (MMLOS) standard.

### a) Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less than Significant Impact: Pursuant to SB 743 and CEQA Guidelines Section 15064.3 subdivision (b), VMT is the program for measuring and addressing vehicular circulation system facilities under CEQA. Analysis of Level of Service (LOS) as provided in a Project Transportation Impact Study (TIS) is no longer the metric for determining transportation environmental impacts. City of Carlsbad's VMT Guidelines (May 2023), evaluate transportation impacts as they relate to the core values outlined in the city's General Plan. These core values include: (1) walking, biking, public transportation, and connectivity/mobility; (2) sustainability; and (3) neighborhood revitalization, community design, and livability. VMT is often measured using various travel demand modeling tools, trip generation surveys or trip generation rate data published by the Institute of Transportation Engineers. However, the proposed Project is exempt from a VMT Analysis as it meets the exemption criteria outlined in the VMT Guidelines as well as state guidance.

VMT is addressed in subsection b below. The Project does not involve improvements to adjacent streets or transit facilities, and any impacts to access along the adjacent trail would be temporary and limited to normal construction hours. Therefore, the Project would not reduce or impede any pedestrian, bicycle, or transit facility and no conflicts with the General Plan Mobility Element or other city plans addressing circulation would occur.

### b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

**Less than Significant Impact:** CEQA Guidelines Section 15064.3(b) focuses on assessing transportation impacts using vehicle miles traveled (VMT). The California Governor's Office of Planning and Research does not require quantitative assessment of temporary construction traffic. Regarding long-term operation, maintenance of the manholes would likely be on an annual or biennial maintenance schedule including visual and video inspection, as well as potential cleaning. As such, long-term operation associated with the Project is anticipated to generate fewer than 110 average daily trips. Therefore, no VMT assessment is required for Project operation. Furthermore, the Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA states that projects that generate fewer than 110 trips per day may generally be assumed to cause a less than significant transportation impact (OPR 2018). Based on the Technical Advisory, the City of Carlsbad's VMT Analysis Guidelines (May 2023) also presume small projects generating less than 110 trips per day have a less than significant impact.

As such, the Project would not conflict or be inconsistent with CEQA Guidelines Sections 15064.3(b)(1) and 15064.3(b)(3). Impacts would be less than significant.

### c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

**Less than Significant Impact:** The Project involves the maintenance and rehabilitation of nine sewer manholes; it does not propose alterations to the existing roads or construction of new transportation facilities. Moreover, the cleaning and rehabilitation of these manholes would not introduce any design hazards, such as sharp curves or dangerous intersections, to the existing roadways. Construction of the Project would take place within the NCTD railroad right-of-way and the Waters End HOA conservation easement. All temporary work activities are subject to requirements of NCTD right of entry and approved workplan procedures. After the construction is complete, all equipment will be removed from the Project site. Thus, the implementation of the Project will not lead to a significant increase in hazards resulting from design features or incompatible uses. As a result, the impact of the Project would be less than significant.

### d) Would the project result in inadequate emergency access?

Less than Significant Impact: Implementation of the proposed Project would not result in new development or population growth that could increase the demand for emergency services and/or affect emergency access. Construction of the Project would take place within the NCTD railroad right-of-way and the Waters End HOA conservation easement. The Project involves the maintenance and rehabilitation of nine sewer manholes; it does not propose alterations to the existing roads or construction of new transportation facilities. Therefore, there will be no permanent road closures or delays during the rehabilitation process. Considering the Project's location and purpose, and the short-term construction duration, construction and long-term operation of the proposed Project would not include any features that would impair access to evacuation routes identified. As such, Project construction would be

temporary and is not expected to interfere with emergency access for surrounding residences. Therefore, impacts would be less than significant.

XVIII. Wa sig Co th lar Na	TRIBAL CULTURAL RESOURCES ould the project cause a substantial adverse change in the gnificance of a tribal cultural resource, defined in Public Resources ode section 21074 as either a site, feature, place, cultural landscape at is geographically defined in terms of the size and scope of the ndscape, sacred place, or object with cultural value to a California ative American tribe, and that is:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or		$\boxtimes$		
b)	A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.				

### **REGULATORY SETTING**

#### Assembly Bill 52

Effective July 1, 2015, CEQA was revised to include early consultation with California Native American tribes and consideration of tribal cultural resources (TCRs). These changes were enacted through Assembly Bill (AB) 52. By including TCRs early in the CEQA process, AB 52 intends to ensure that local and tribal governments, public agencies, and project proponents would have information available, early in the project planning process, to identify and address potential adverse impacts to TCRs. CEQA now establishes that a "project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resources is a project that may have a significant effect on the environment" (California Public Resources Code Section 21084.2).

To help determine whether a project may have such an adverse effect, the California Public Resources Code requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. The consultation must take place prior to the determination of whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project (California Public Resources Code Section 21080.3.1). Consultation must consist of the lead agency providing formal notification, in writing, to the tribes that have requested notification or proposed projects within their traditionally and culturally affiliated area. AB 52 stipulates that NAHC shall assist the lead agency in identifying the California Native American tribes that are traditionally and culturally affiliated with the proposed project

### Project Name: Ponto Sewer Manhole Rehabilitation Project Project No: SDP2024-0014, CDP2024-0019, HMP2024-0007

area. If a tribe wishes to engage in consultation on the proposed project, the tribe must respond to the lead agency within 30 days of receipt of the formal notification. Once the lead agency receives the tribe's request to consult, the lead agency must then begin the consultation process within 30 days. If a lead agency determines that a project may cause a substantial adverse change to tribal cultural resources, the lead agency must consider measures to mitigate that impact. Consultation concludes when (1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a TCR or (2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (California Public Resources Code Section 21080.3.2). Under existing law, environmental documents must not include information about the locations of an archaeological site or sacred lands or other information that is exempt from public disclosure pursuant to the Public Records Act. TCRs are exempt from disclosure.

The term "tribal cultural resources" refers to sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are any of the following:

- Included or determined to be eligible for inclusion in the California Register of Historic Resources
- Included in a local register of historical resources as defined in subdivision (k) of California Public Resources Code Section 5020.1

A resource determined by a California lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of California Public Resources Code Section 5024.1.

The city initiated the tribal consultant process for the purposes of AB52 for the proposed Project on June 26, 2024. Those tribes that have requested to be listed on the City's notification list for the purposes of AB52 were notified in writing via mail and email. As part of this process, the city has provided notification to each of these listed tribes the opportunity to consult with the city regarding the proposed Project. The following individuals/tribes were sent email letters:

- 1. San Luis Rey Band of Mission Indians
- 2. Rincon Band of Luiseño Indians
- 3. La Jolla Band of Luiseno Indians
- 4. Torres Martinez Desert Cahuilla Indians

The Rincon Band of Luiseno ("Rincon Band") and San Luis Rey Band of Mission Indians ("San Luis Rey Band") tribes responded within 30 days and requested consultation. A finalized version of the Project was presented to both tribes on August 29, 2024. Since this meeting, multiple correspondences have occurred. The draft mitigation measures were emailed to both San Luis Rey Band of Mission Indians and Rincon Band of Luiseno on December 23, 2024. The San Luis Rey Band did not request any changes to the draft mitigation measures as proposed and AB 52 consultation with Band concluded on January 13, 2025. The Rincon Band submitted the San Luis Rey recommended revisions to the city on December 26, 2024. City staff met with the Rincon Band on January 7, 2025, to discuss the revisions and were unable to come to an agreement at this meeting. As of the publication of this document, AB 52 consultation with Rincon Band has not yet concluded. The proposed rehabilitation activities of the Project would only disturb the 0.13-acre area of direct impact and would not require any significant excavation or ground disturbance. However, in the event that TCRs are encountered, Mitigation Measures CR-1, CR-2, and CR-3 (see Sections V[b] and V[c]) would be implemented and potential adverse impacts to unknown TCRs would be less than significant.

#### California Native American Graves Protection and Repatriation Act

The California Native American Graves Protection and Repatriation Act (California Repatriation Act), enacted in 2001, required all state agencies and museums that receive state funding and that have possession or control over collections of human remains or cultural items, as defined, to complete an inventory and summary of these remains and items on or before January 1, 2003, with certain exceptions. The California Repatriation Act also provides a process for the identification and repatriation of these items to the appropriate tribes.

### Native American Historic Cultural Sites (California Public Resources Code 5097 et seq.)

State law addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the NRHC to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resource Protection Act makes it a misdemeanor punishable by up to 1 year in jail to deface or destroy an Indian historic or cultural site that is listed or may be eligible for listing in the CRHR.

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in California Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

### a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in California Public Resources Code Section 5020.1(k)?

**Less than Significant Impact with Mitigation Incorporated:** As described in Section V(a), the cultural resource investigation (Appendix C) consisted of a records search, initiation of correspondence with the NAHC and Native American representatives, and an intensive pedestrian survey of the Project area. The cultural resource investigation conducted for the proposed Project site did not identify cultural resources eligible for listing in the CRHR, or in a local register of historical resources as defined in Public Resource Code Section 5020.1(k).

While the presence of Native American resources was indicated by NAHC after records searches, it was not specified whether these resources were directly within the Project site. The review of historical aerial photographs and maps revealed that the entire Project site has undergone ground-disturbing activities in the past due to grading operations for the railroad and existing sewer line. Any intact archaeological resources or TCRs that may have been previously located in the area were likely disturbed by these past construction activities. Based on the information gathered and the absence of intact TCRs, the Cultural Resource Survey Report determined that it is unlikely that TCRs would be encountered during Project construction. Further, the proposed rehabilitation activities of the Project would disturb only the 0.13-acre area of direct impact and would not require any significant excavation or ground disturbance. Notwithstanding, the potential exists for the discovery of archaeological resources or TCRs during the proposed rehabilitation activities of the Project. Therefore, Mitigation Measures CR-1, CR-2, and CR-3 (see Section V[b-c] of this Initial Study) are incorporated to reduce this impact to a level less than significant.

### b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?

### In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less than Significant Impact with Mitigation Incorporated: The Project is subject to compliance with California Assembly Bill 52 (AB 52) (California Public Resources Code Section 21074). AB 52 established a formal consultation process for California tribes within the CEQA process. AB 52 specifies that any project that may affect or cause a substantial adverse change in the significance of a tribal cultural resource would require a lead agency to "begin consultation with a California Native American tribe that is traditional and culturally affiliated with the geographic area of the proposed project." Section 21074 of AB52 also defines a new category of resources under CEQA called "tribal cultural resources." Tribal cultural resources are defined as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and is either listed on or eligible for the CRHR or a local historic register, or if the lead agency chooses to treat the resource as a tribal cultural resource. Because AB 52 is a government-to-government process, all records of correspondence related to AB 52 notification and any subsequent consultation are on file with the city.

In accordance with the requirements outlined California Public Resources Code Section 5024.1(c), the lead agency has initiated steps to determine the significance of a resource at its discretion and with substantial evidence. Dudek, on behalf of the Project, requested a search of the Sacred Lands File from NAHC specifically for the Project site on March 10, 2023. The NAHC replied via email on March 22, 2023, stating that the Sacred Lands File search was completed and attached a contact list containing 32 Native American individuals and/or tribal organizations who may have direct knowledge of cultural resources in or near the Project site. Outreach letters with a map and description of the planned Project were mailed to these individuals and organizations on November 21, 2023, requesting if any tribes would like to receive additional information of the project. Additionally, the city's Planning Division notified the San Luis Rey Band Band of Mission Indians, Rincon Band of Luiseño Indians, the La Jolla Band of Luiseno Indians, and the Torres Martinez Desert Cahuilla Indians as part of the city's AB52 consultation requirements, which are traditionally and culturally affiliated with the California Native American tribes that have requested notice of proposed Project. Therefore, mitigation measures CR-1, CR-2, and CR-3 (see Section V[b-c] of this Initial Study) are incorporated to reduce this impact to a level less than significant.

XIX.	UTILITIES AND SERVICE SYSTEMS	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which would cause significant environmental effects?				
b)	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			$\boxtimes$	

XIX. w	UTILITIES AND SERVICE SYSTEMS ould the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
d)	Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			$\boxtimes$	
e)	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			$\boxtimes$	

### **REGULATORY SETTING**

### **Clean Water Act**

The federal Clean Water Act establishes regulatory requirements for potable water supplies including raw and treated water quality criteria. The city is required to monitor water quality and conform to regulatory requirements of the Clean Water Act.

#### Assembly Bill 939 and 341

In 1989, Assembly Bill 939, known as the Integrated Waste Management Act (California Public Resources Code, Section 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board, which oversees a disposal reporting system. Assembly Bill 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25% by 1995 and 50% by the year 2000.

Assembly Bill 341 (2011) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75% of solid waste generated be source-reduced, recycled, or composted by 2020, and annually thereafter. In addition, Assembly Bill 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the state's policy goal. CalRecycle has conducted multiple workshops and published documents that identify priority strategies that CalRecycle believes would assist the state in reaching the 75% goal by 2020.

#### San Diego County Integrated Waste Management Plan

Pursuant to the Integrated Waste Management Act, the Countywide Integrated Waste Management Plan for San Diego County describes the goals, policies, and objectives of the county for coordinating efforts to divert, market, and dispose of solid waste during the planning period through the year 2017. Countywide policies for reducing waste and implementing the programs are identified in the individual jurisdiction Source Reduction and Recycling Elements and Household Hazardous Waste Elements and are intended to reduce costs, streamline administration of programs, and encourage a coordinated and planned approach to integrated waste management.

To avoid duplication of effort, all of the jurisdictions in the county participate in the San Diego County Integrated Waste Management Local Task Force. The Local Task Force coordinates mandated planning, oversees implementation of new or countywide integrated waste management programs, and carries out an active legislative program. Regulatory reform, changes to state diversion requirements, and reduction of the costs of compliance are considered by the Local Task Force, as well as other solid waste issues of regional or countywide concerns.

### PROJECT IMPACTS

## a) Would the project require or result in the relocation or construction of new or expanded water, waste water treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

**No Impact:** The Project proposes the rehabilitation and maintenance of nine sewer manholes. No habitable structures or growth-inducing facilities are proposed that would result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities. As such, no impact would occur.

### b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

**Less than Significant Impact:** As previously described, the Project proposes the maintenance and rehabilitation of nine sewer manholes. Implementation of the proposed Project would not increase water demands above the current level of demand or result in any changes to approved land uses that affect long-term water projections and associated water demands. Minimal water use would be required during Project construction and routine maintenance. The selected Contractor would be responsible for supplying water to clean the manholes and coordinate the method to have the temporary supply onsite. Possible contractor means and methods would include water tank truck, water trailer and/or metered connection to a city's fire hydrant. Water supplied by the city would be quantified and documented.

The city's ongoing maintenance of sewer pipeline and manholes is often completed using pressure washing equipment. Use of pressure washing equipment minimizes water volume to complete the internal cleaning process. For the proposed Project, pressure washing would occur during routine maintenance annually or every 2 years.

Consistent with these maintenance practices, construction of the proposed Project would clean the inside of the manhole walls prior to crack repair and liner installation, which would require pressurized water. A truck-mounted water tank will provide water supply for cleaning. Therefore, impacts related to water supply would be less than significant.

## c) Would the project result in a determination by the waste water treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

**No Impact:** As previously described, the Project proposes the maintenance and rehabilitation of nine sewer manholes. No habitable structures or facilities are proposed on site that would generate wastewater or require wastewater service. Therefore, implementation of the Project would not exceed wastewater treatment facility capacity, and no impact would occur.

### d) Would the project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less than Significant Impact: The County of San Diego has indicated that, given each existing landfill's estimated remaining capacity and assuming the planned expansion of the Sycamore Landfill is implemented, the County would have enough daily landfill capacity to accommodate its solid waste disposal needs for the next 18 years. Solid waste associated with implementation of the Project would be generated by construction activities. This waste would primarily consist of concrete material that would be disposed of at Miramar Landfill. Considering the size of the area of direct impact (0.13 acres) and the temporary nature of construction, the amount of solid waste construction debris would be expected to be below the maximum allowed or remaining capacity at the landfill (CalRecycle 2024). The Project would be required to comply with all applicable federal, state, and local regulations related to solid waste. Once construction is complete, no solid waste would be generated from the Project site. Because construction of the Project is not expected to generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals, impacts would be less than significant.

### e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

**Less than Significant Impact:** As stated above, the Project would be required to comply with all applicable federal, state, and local statutes and regulations related to solid waste disposal during construction. Once operational, the Project would generate no solid waste. Therefore, impacts would be less than significant.

XX. If I hig	WILDFIRE ocated in or near state responsibility areas or lands classified as very sh fire hazard severity zones, would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?				$\boxtimes$
b)	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				X
c)	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines				$\boxtimes$

XX. If	WILDFIRE located in or near state responsibility areas or lands classified as very gh fire hazard severity zones, would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				
d)	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				$\boxtimes$

CAL FIRE has mapped fire threat potential throughout California and ranked fire threat based on the availability of fuel and the likelihood of an area burning (based on topography, fire history, and climate). The rankings are little or no fire threat, moderate, high, and very high fire threat. According to CAL FIRE's Fire Hazard Severity Zone Viewer, the Project site is not located within or near a state responsibility area (CAL FIRE 2024). Currently, only VHFHSZs are identified in local government jurisdictions. Accordingly, as shown on Figure 6-12, Fire Hazard Severity Zones, in the Public Safety Element of the city's General Plan, the Project site is not in or near a VHFHSZ (City of Carlsbad 2015f).

### a) Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

**No Impact:** The Project site is not located within or near a state responsibility area or within a very high fire hazard severity zone (CAL FIRE 2024) (City of Carlsbad 2015f). Further, Project construction would not require the closure of any public or private roadways. Construction of the Project including equipment staging, would take place within the NCTD railroad right-of-way and the Waters End HOA conservation easement. The Project involves the maintenance and rehabilitation of nine sewer manholes; it does not propose alterations to the existing roads or construction of new transportation facilities. Considering the Project's location and purpose, and the short-term duration of construction, the construction and long-term operation of the proposed Project would not impede use of emergency routes identified for emergencies or access for emergency response vehicles. Therefore, implementation of the Project would not impair or interfere with an adopted emergency response plan or evacuation plan. No impact would occur, and no mitigation is required.

## b) Due to slope, prevailing winds, and other factors, would the project exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

**No Impact:** The Project site is not located within or near a state responsibility area or within a very high fire hazard severity zone (CAL FIRE 2024) (City of Carlsbad 2015f). Proposed improvements on site are not expected to exacerbate wildfire risk, and no habitable structures exist or are proposed on site. As such, no impact would occur.

## c) Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

**No Impact:** The Project site is not located within or near a state responsibility area or within a very high fire hazard severity zone (CAL FIRE 2024) (City of Carlsbad 2015f). Implementation of the Project would not require installation or maintenance of associated infrastructure such as roads, fuel breaks, emergency water sources, power lines, or other utilities that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. Therefore, no impact would occur.

### d) Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

**No Impact:** The Project site is not located within or near a state responsibility area or within a very high fire hazard severity zone (CAL FIRE 2024) (City of Carlsbad 2015f). The purpose of the proposed Project is to rehabilitate nine sewer manholes. The city does not identify any areas on the Project site as being susceptible to landslides. Additionally, no habitable structures exist or are proposed on site that would be at risk of post-wildfire impacts. Therefore, no impact would occur.

XXI.	MANDATORY FINDINGS OF SIGNIFICANCE	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			$\boxtimes$	
c)	Does the project have environmental effects, which will cause the substantial adverse effects on human beings, either directly or indirectly?		$\boxtimes$		

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

**Less than Significant Impact with Mitigation Incorporated:** As discussed in Section IV, the proposed Project would not degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal. Impacts to biological resources are determined to be less than significant with mitigation incorporated (BIO-1 through BIO-5).

As discussed in Section V, Cultural Resources, the Project would have a less than significant impact on historic resources as there are no historic structures on site. Additionally, impacts to cultural resources including archaeological resources were determined to be less than significant with mitigation incorporated (CR-1, CR-2, and CR-3). Furthermore, as outlined in Section XVIII, Tribal Cultural Resources, impacts related to tribal cultural resources were determined to be less than significant with mitigation incorporated (CR-1, CR-2, CR-3). With incorporation of the mitigation measures identified above, the Project would result in less than significant impacts related to this threshold.

# b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

**Less than Significant Impact:** The Project would not have adverse environmental impacts at a significant level. All potential significant impacts would be addressed with mitigation measures. Cumulatively, the proposed Project would not result in any significant impacts that would substantially combine with impacts of other current or probable future impacts. There are no related maintenance projects or other possible development in the area determined as having the potential to interact with the proposed Project to the extent that a significant cumulative effect may occur. As such, no significant cumulative effects are anticipated because no resources would be adversely affected by the Project, or the Project effects would be localized and of limited extent. Therefore, a less than significant impact would occur in relation to cumulatively considerable effect.

### c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

**Less than Significant Impact with Mitigation Incorporated:** As demonstrated in Section I through XX, the proposed Project, as mitigated, would not have environmental effects that would have a substantial adverse effect on human beings, either directly or indirectly. Therefore, impacts are considered less than significant with mitigation incorporated (see Section 20, List of Mitigation Measures).

### 20. LIST OF MITIGATION MEASURES

#### **BIOLOGICAL RESOURCES**

#### BIO-1 Measures to avoid *direct* impacts to vernal pool species and sensitive vegetation

The following mitigation measures will be implemented to avoid impacts to vernal pool species (plants and fairy shrimp) and sensitive vegetation from direct temporary impacts caused by vegetation removal, trampling, etc.

- a. No work shall be conducted during the rainy season, when soils are wet, or ponding is present.
- b. The use of heavy machinery for this Project is prohibited. Heavy machinery could damage vernal pool species and delicate soils.
- c. A rare plant survey shall be conducted by a qualified vernal pool biologist immediately before work areas are established and impacts to any species observed shall be avoided.
- d. The vernal pool biologist shall be onsite during vegetation trimming, establishment of the pathways, placement of boards and removal of boards. The biologist will ensure that the access pathways are no wider than eight feet, and will assist with slight modifications of pathways if necessary to avoid impacts to vernal pool species.
- e. The biologist will be present to ensure that, prior to placement, all boards used onsite along the pathways and work areas are clean of all debris, plant material (seeds, leaves, etc.), pests or other contaminants that could negatively affect the vernal pool species.
- f. When the work is complete, the boards will be thoroughly cleaned before removal to ensure that they do not pick up any fairy shrimp cysts, vernal pool plant seeds or other material that should stay onsite.
- g. To avoid any other inadvertent impacts to the sensitive species, habitats or Preserve area, the biological monitor will be onsite daily to monitor Project activities.

#### BIO-2 Measures to avoid *indirect* impacts to vernal pools and sensitive vegetation

The following mitigation measures will be implemented to avoid impacts to vernal pool plants and sensitive vegetation from indirect temporary impacts caused by dumping cut vegetation onsite, unauthorized access and potential contamination from Project-related personnel and equipment.

- a. All Project staging and equipment storage shall occur outside of the Preserve on developed or unvegetated areas.
- b. All cut vegetation must be properly disposed of offsite at an appropriate facility, or mulched into small pieces (approximately one to three inches) and disbursed onsite as directed by the Project vernal pool biologist. If acceptable to the HOA, the mulch could be spread along the edge of the trail to suppress weed growth.
- c. During the Project, access along the temporary pathways by unauthorized persons (after hours, and after all maintenance on a manhole has been completed) will be blocked by orange construction fencing or other appropriate method (temporary measure).
- d. Upon completion of the Project, to avoid ongoing indirect impacts from unauthorized access into the sensitive areas from trail users, dog walkers, and other unauthorized persons the following measures will be implemented until the coastal sage scrub grows back enough to block access:

- i. Fencing and gates and any other holes in the chain link fence will be fully repaired;
- ii. Temporary barriers that can withstand vandalism (e.g., three wire or post and cable fencing) will be placed perpendicularly to block the access path. The barrier shall be placed at the entrance closes to the trail. Where necessary, informative signs (e.g., "Habitat Restoration in Progress") will be placed on these sections to inform trail users to stay out.
- e. To protect the Preserve from contamination (weed seeds, pests, or other contaminants), anyone entering the site will be required to clean off their equipment, clothing and boots prior to entering the site each day. The Project biologist will monitor compliance and may inspect boots and/or equipment. Decontamination methods include:
  - i. Carry appropriate equipment to remove soil, seeds, dried mud and plant parts (e.g., wire brushes, boot brushes, backpack sprayer or spray bottle with water, soap, hoof picks or small screwdriver, etc.).
  - ii. Remove all material from boots (including all crevices on top and bottom of boots), clothing and equipment in the staging area located on hardscape prior to entering the site.
  - iii. Properly dispose of all material that is cleaned off.

### BIO-3 Conceptual Restoration Plan for revegetation within temporary impact areas

The Project would temporarily impact 0.072 acre of coastal sage scrub. After this work is completed, the contractor would remove the plywood from each manhole worker/vehicle access area, and all temporarily affected areas would be restored in place to pre-construction conditions (1:1 mitigation ratio) by allowing the trimmed vegetation and cut stumps to resprout. To facilitate this recovery, the temporary access routes would be seeded with a coastal sage scrub seed mix to help those areas recover faster, and a weed control program would be implemented to control weed invasion while the vegetation recovers. A conceptual restoration plan for the restoration of the temporary impact areas shall be prepared and approved by the city's Habitat Management Division prior to the initiation of the Project as described below.

- a. The plan shall be consistent with the city's Components of a Conceptual Restoration/Mitigation Plan (2022) and Guidelines for Habitat Creation and Restoration (2009).
- b. The plan will include a 3-to-5-year maintenance plan, which will consist of passive regrowth of the coastal sage scrub species, seeding with coastal sage scrub species, weed control, and site monitoring to evaluate signs of unauthorized trespass.
- c. The restoration plan shall also include installation of temporary barriers and signage as described in mitigation measure BIO-2c.
- d. Annual monitoring and annual reporting will be required. The restoration must meet performance standards (included in the plan) prior to sign off by the city's Habitat Management Division.

### BIO-4 Measures to avoid impacts to the Coastal California gnatcatcher, raptors, and migratory birds during the breeding season

To avoid impacts to the coastal California gnatcatcher, raptors, and migratory birds, vegetation removal and other Project activities should be avoided during the bird breeding season (January 15 – August 15). If the breeding season cannot be avoided, following mitigation measures shall be implemented:

- a. No clearing of coastal sage scrub shall occur between March 15 and August 15.
- b. The breeding season for coastal California gnatcatcher and other potentially occurring bird species (other than raptors) is February 15 August 31. If vegetation clearing cannot avoid the breeding season outside of the prohibited time frame listed above (i.e. if clearing is to occur February 15 March 14 or August 16 August 31), then pre-construction nest clearance surveys must be conducted by a qualified biologist no more than three days prior to initiation of the vegetation removal.
- c. Nest clearance surveys shall be conducted within 500 feet of the vegetation removal areas in coastal sage scrub habitat.
- d. If active nests are located, a no-work buffer shall be established around the nest until the nest is no longer active. The no-work buffer for the coastal California gnatcatcher is 500 feet. The appropriate width of the buffer for other species is to be determined by a qualified biologist and the city based on the species. All vegetation removal activity shall be prohibited within the protective buffer until all nestlings have successfully fledged.
- e. Once the vegetation has been removed, if an active nest is located, the need for a no-work buffer will be determined by the Project biologist in coordination with the city depending on the species and the specific type of work anticipated to occur near the nest.

### BIO-5 Project biologist qualifications

A qualified Project biologist will be required to oversee the implementation of the biological mitigation measures. Because vernal pool species can be difficult to identify and vernal pool ecology is unique, the Project biologist must be approved by the city by demonstrating proficiency in working with vernal pools in the San Diego region (e.g., provide resume upon request). Specific monitoring requirements are described in each mitigation measure. Some work may be performed by other biological personnel under the direction of the Project biologist; however, the Project biologist will be responsible, and in some cases a vernal pool biologist must be the one performing the monitoring whenever identification of vernal pool habitat or species is required.

### CULTURAL RESOURCES

- **CR-1:** Prior to the commencement of any ground disturbing activities, the applicant shall:
  - a. Retain the services of a qualified archaeologist, defined as one meeting the Secretary of the Interior's 1997 Professional Qualification Standards for Archeology, or working under the supervision of the qualified archaeologist, who shall be on-site during ground-disturbing activities of the Project site. In the event cultural material is encountered, the archaeologist is empowered to temporarily divert or halt grading to allow for coordination with the Luiseño Native American monitor, or other Traditionally and Culturally Affiliated Luiseño tribe ("TCA

Tribe"), and to determine the significance of the discovery. The archaeologist shall follow all standard procedures for cultural materials that are not tribal cultural resources.

- b. A Luiseño Native American monitor shall be present during all ground-disturbing activities. Ground disturbing activities may include, but are not limited to archaeological studies, geotechnical investigations, clearing and/or excavation.
- c. Prior to completion of the project construction, a monitoring report and/or evaluation report, if appropriate, which describes the results, analysis, and conclusions of the monitoring program shall be submitted by the Project Archaeologist, along with the Luiseño Native American monitor's notes and comments, to the City of Carlsbad for approval, and shall be submitted to the South Coastal Information Center. Said report shall be subject to confidentiality as an exception to the Public Records Act and will not be available for public distribution.
- d. Any and all uncovered artifacts of Luiseño Native American cultural importance shall be returned to the San Luis Rey Band of Mission Indians, and/or the Most Likely Descendant for later reburial on project site, if applicable, and not be curated, unless ordered to do so by a federal agency or a court of competent jurisdiction.
- e. The Luiseño Native American monitor shall be present at the Project's pre-construction meeting to consult with contractors concerning excavation schedules and safety issues, as well as to consult with the archaeologist PI (principal investigator) concerning the proposed archaeologist techniques and/or strategies for the Project.
- f. Luiseño Native American monitors and archaeological monitors shall have joint authority to temporarily divert and/or halt construction activities. If tribal cultural resources are discovered during construction, all earth-moving activity within and around the immediate discovery area must be diverted until the Luiseño Native American monitor and the archaeologist can assess the nature and significance of the find.
- g. If a significant tribal cultural resource(s) and/or unique archaeological resource(s) are discovered during ground-disturbing activities for this project, the San Luis Rey Band of Mission Indians shall be notified and consulted regarding the respectful and dignified treatment of those resources. Pursuant to California Public Resources Code Section 21083.2(b) avoidance is the preferred method of preservation for archaeological and tribal cultural resources. If, however, the Applicant is able to demonstrate that avoidance of a significant and/or unique cultural resource is infeasible and a data recovery plan is authorized by the City of Carlsbad as the lead agency, the San Luis Rey Band of Mission Indians shall be consulted regarding the drafting and finalization of any such recovery plan.
- h. In the event that fill material is imported into the project area, the fill shall be clean of tribal cultural resources and documented as such. Commercial sources of fill material are already permitted as appropriate and will be culturally sterile. If fill material is to be utilized and/or exported from areas within the project site, then that fill material shall be analyzed and confirmed by an archaeologist and Luiseño Native American monitor that such fill material does not contain tribal cultural resources.

- i. No testing, invasive or non-invasive, shall be permitted on any recovered tribal cultural resources without the written permission of the San Luis Rey Band of Mission Indians.
- **CR-2:** Prior to the commencement of any ground-disturbing activities, the applicant shall enter into a Pre-Excavation Agreement, otherwise known as a Tribal Cultural Resources Treatment and Tribal Monitoring Agreement, with a TCA affiliated consulting tribe, that meets all standard requirements of the tribe for such agreements, in accordance with applicable laws and regulations including but not limited to the City of Carlsbad's 2017 Tribal, Cultural and Paleontological Resources Guidelines. This agreement will address provision of a Luiseño Native American monitor and contain provisions to address the proper treatment of any Tribal Cultural Resources and/or Luiseño Native American human remains inadvertently discovered during the course of the Project. The agreement will outline the roles and powers of the Luiseño Native American monitors and the archaeologist and may include the provisions outlined in CR-1.
- **CR-3:** If suspected Native American human remains are encountered, California Health and Safety Code Section 7050.5(b) states that no further disturbance shall occur until the San Diego County Medical Examiner has made the necessary findings as to origin. Further, pursuant to California Public Resource Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. Suspected Native American remains shall be examined in the field and kept in a secure location at the site. A Luiseño Native American monitor shall be present during the examination of the remains. If the San Diego County Medical Examiner determines the remains to be Native American, the NAHC must be contacted by the Medical Examiner within 24 hours. The NAHC must then immediately notify the "Most Likely Descendant" about the discovery. The Most Likely Descendant shall then make recommendations within 48 hours and engage in consultation concerning treatment of remains as provided in Public Resource Code 5097.98.

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### Appendix A

Air Quality and Greenhouse Gas Emissions Analysis from Nicholas Lorenzen, Air Resource Specialist, Dudek, dated March 11, 2024

### Poinsettia Manhole Repair Detailed Report

### Table of Contents

- 1. Basic Project Information
  - 1.1. Basic Project Information
  - 1.2. Land Use Types
  - 1.3. User-Selected Emission Reduction Measures by Emissions Sector
- 2. Emissions Summary
  - 2.1. Construction Emissions Compared Against Thresholds
  - 2.2. Construction Emissions by Year, Unmitigated
  - 2.4. Operations Emissions Compared Against Thresholds
  - 2.5. Operations Emissions by Sector, Unmitigated
- 3. Construction Emissions Details
  - 3.1. Site Preparation (2024) Unmitigated
  - 3.3. Manhole Repair (2024) Unmitigated
- 4. Operations Emissions Details
  - 4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

### 4.2. Energy

- 4.2.1. Electricity Emissions By Land Use Unmitigated
- 4.2.3. Natural Gas Emissions By Land Use Unmitigated
- 4.3. Area Emissions by Source
  - 4.3.1. Unmitigated
- 4.4. Water Emissions by Land Use
  - 4.4.1. Unmitigated
- 4.5. Waste Emissions by Land Use
  - 4.5.1. Unmitigated
- 4.6. Refrigerant Emissions by Land Use
  - 4.6.1. Unmitigated
- 4.7. Offroad Emissions By Equipment Type
  - 4.7.1. Unmitigated
- 4.8. Stationary Emissions By Equipment Type
  - 4.8.1. Unmitigated
- 4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

- 4.10. Soil Carbon Accumulation By Vegetation Type
  - 4.10.1. Soil Carbon Accumulation By Vegetation Type Unmitigated
  - 4.10.2. Above and Belowground Carbon Accumulation by Land Use Type Unmitigated
  - 4.10.3. Avoided and Sequestered Emissions by Species Unmitigated

### 5. Activity Data

- 5.1. Construction Schedule
- 5.2. Off-Road Equipment
  - 5.2.1. Unmitigated
- 5.3. Construction Vehicles
  - 5.3.1. Unmitigated
- 5.4. Vehicles
  - 5.4.1. Construction Vehicle Control Strategies
- 5.5. Architectural Coatings
- 5.6. Dust Mitigation
  - 5.6.1. Construction Earthmoving Activities
  - 5.6.2. Construction Earthmoving Control Strategies

- 5.7. Construction Paving
- 5.8. Construction Electricity Consumption and Emissions Factors
- 5.9. Operational Mobile Sources
  - 5.9.1. Unmitigated
- 5.10. Operational Area Sources
  - 5.10.1. Hearths
    - 5.10.1.1. Unmitigated
  - 5.10.2. Architectural Coatings
  - 5.10.3. Landscape Equipment
- 5.11. Operational Energy Consumption
  - 5.11.1. Unmitigated
- 5.12. Operational Water and Wastewater Consumption
  - 5.12.1. Unmitigated
- 5.13. Operational Waste Generation
  - 5.13.1. Unmitigated
- 5.14. Operational Refrigeration and Air Conditioning Equipment
  - 5.14.1. Unmitigated

### 5.15. Operational Off-Road Equipment

### 5.15.1. Unmitigated

### 5.16. Stationary Sources

- 5.16.1. Emergency Generators and Fire Pumps
- 5.16.2. Process Boilers

### 5.17. User Defined

### 5.18. Vegetation

5.18.1. Land Use Change

### 5.18.1.1. Unmitigated

### 5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

### 5.18.2. Sequestration

### 5.18.2.1. Unmitigated

### 6. Climate Risk Detailed Report

- 6.1. Climate Risk Summary
- 6.2. Initial Climate Risk Scores
- 6.3. Adjusted Climate Risk Scores

- 6.4. Climate Risk Reduction Measures
- 7. Health and Equity Details
  - 7.1. CalEnviroScreen 4.0 Scores
  - 7.2. Healthy Places Index Scores
  - 7.3. Overall Health & Equity Scores
  - 7.4. Health & Equity Measures
  - 7.5. Evaluation Scorecard
  - 7.6. Health & Equity Custom Measures
- 8. User Changes to Default Data

### 1. Basic Project Information

### 1.1. Basic Project Information

Data Field	Value
Project Name	Poinsettia Manhole Repair
Construction Start Date	7/2/2024
Operational Year	2024
Lead Agency	
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	22.4
Location	33.1067266980326, -117.31821344888274
County	San Diego
City	Carlsbad
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6223
EDFZ	12
Electric Utility	San Diego Gas & Electric
Gas Utility	San Diego Gas & Electric
App Version	2022.1.1.22

### 1.2. Land Use Types

	Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
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Other Non-Asphalt	0.13	Acre	0.13	0.13	_	_	_	_
Surfaces								

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

### 2. Emissions Summary

### 2.1. Construction Emissions Compared Against Thresholds

### Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	_	_	—	_	_	_	-	_	_	—	_	_	_	—	—	_	—
Unmit.	0.08	0.05	0.57	0.70	< 0.005	0.01	0.18	0.19	0.01	0.05	0.05	—	492	492	0.02	0.06	1.28	513
Daily, Winter (Max)	_	-	-	-	-	-	-	-	-	-	—	_	-	_	_	-	-	-
Unmit.	0.08	0.05	0.59	0.64	< 0.005	0.01	0.18	0.19	0.01	0.05	0.05	_	487	487	0.03	0.06	0.03	507
Average Daily (Max)	_	-	-	-	-	-	-	-	-	-	—	_	-	_	_	-	-	-
Unmit.	0.01	0.01	0.11	0.11	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	_	86.8	86.8	< 0.005	0.01	0.10	90.5
Annual (Max)	_	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	_	14.4	14.4	< 0.005	< 0.005	0.02	15.0

### 2.2. Construction Emissions by Year, Unmitigated

### Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e	
----------	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------	
Daily - Summer (Max)	—	—	_	—	—	—	—	—	—	—	—	—	—	_	—	—	—	—
----------------------------	---------	---------	------	------	---------	---------	------	------	---------	---------	---------	---	------	------	---------	---------	------	------
2024	0.08	0.05	0.57	0.70	< 0.005	0.01	0.18	0.19	0.01	0.05	0.05	_	492	492	0.02	0.06	1.28	513
Daily - Winter (Max)		_	—	_		_		_	—	—	_		—	—	—	_	—	_
2024	0.08	0.05	0.59	0.64	< 0.005	0.01	0.18	0.19	0.01	0.05	0.05	_	487	487	0.03	0.06	0.03	507
Average Daily	—	_	_	—	_	—	_	—	—		—	—	—	_	—	—	—	_
2024	0.01	0.01	0.11	0.11	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	_	86.8	86.8	< 0.005	0.01	0.10	90.5
Annual	_	—	—	_	—	—	—	_	_	—	_	_	—	—	—	_	_	_
2024	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	_	14.4	14.4	< 0.005	< 0.005	0.02	15.0

# 2.4. Operations Emissions Compared Against Thresholds

Un/Mit.	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	—	-	-	-	-	-	—	-	_		—	—	-	—
Unmit.	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005
Daily, Winter (Max)	_	_	_	-	-	-	_	-	_	-	_	-	_	—	_	—	_	_
Unmit.	0.00	< 0.005	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily (Max)	_	—	—	—	—	_	—	_	_	_	—	—	_	—	_	_	—	_
Unmit.	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005
Annual (Max)	—	-	-	-	-	_	-	_	_	_	-	-	-	_	-	_	-	_
Unmit.	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005

# 2.5. Operations Emissions by Sector, Unmitigated

Sector	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	-	—	—	—	—	-	-	-	-	—	_	_	_	—	_	-
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Area	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	_	< 0.005	—	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	_	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005
Daily, Winter (Max)	-	-	-	-	_	_	-	-	-	-	-	-	-	-	_	-	-	-
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	_	—	—	—	—	-	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	_	—	—	—	—	-	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	< 0.005	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	-	-	-	-	-	—	-	-	-	-	-	-	—	-	-	-	—	-
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Area	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	_	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	_	-	-	-	-	-	_	-	_	-	-	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005

Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	_	0.00
Water	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Waste	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005

# 3. Construction Emissions Details

# 3.1. Site Preparation (2024) - Unmitigated

Location	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	_	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	-	—	-	-	-	_	—	_	—	_	-				—	—	—
Dust From Material Movemen		_	_	_	_	_	0.00	0.00	_	0.00	0.00	_	_	_		_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	-	-	-	-	-	-	-	-	-	-	-	_	_		-	-	-
Average Daily	_	-	-	—	_	—	-	_	-	-	-	—	_	_	_	_	—	-
Dust From Material Movemen		_		_	_	_	0.00	0.00		0.00	0.00	_						

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	_	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movemen			_				0.00	0.00		0.00	0.00	—	_			—		_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	-	—	—	—	—	—	—	—	—	—	_	_	_	_	_	_	_
Daily, Summer (Max)	_	-	-	_	_	—	_	_	_	_	_	_	_	_	—	—	—	—
Worker	0.05	0.04	0.03	0.49	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	96.8	96.8	< 0.005	< 0.005	0.39	98.3
Vendor	0.01	< 0.005	0.14	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	102	102	< 0.005	0.01	0.26	106
Hauling	0.02	0.01	0.40	0.14	< 0.005	0.01	0.07	0.08	0.01	0.02	0.03	_	293	293	0.02	0.05	0.63	308
Daily, Winter (Max)		—	—									—				_		—
Average Daily		—	—	—	—	—	—	—	—	—	_	—	—	—	—	_	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	_	2.53	2.53	< 0.005	< 0.005	< 0.005	2.56
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.79	2.79	< 0.005	< 0.005	< 0.005	2.91
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.04	8.04	< 0.005	< 0.005	0.01	8.44
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.42	0.42	< 0.005	< 0.005	< 0.005	0.42
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.48
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.33	1.33	< 0.005	< 0.005	< 0.005	1.40

# 3.3. Manhole Repair (2024) - Unmitigated

Location	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)			_	_	_	_		_				—						—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)		_	_	—	—	—		—		_						_	—	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	-	—	_	—	—	_	—	—	—	—	_	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	-	-	-	-	_	-	_	_	—	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)			-	—	-	—		—		_						_		_
Worker	0.05	0.04	0.03	0.49	0.00	0.00	0.08	0.08	0.00	0.02	0.02	_	96.8	96.8	< 0.005	< 0.005	0.39	98.3
Vendor	0.01	< 0.005	0.14	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	_	102	102	< 0.005	0.01	0.26	106
Hauling	0.02	0.01	0.40	0.14	< 0.005	0.01	0.07	0.08	0.01	0.02	0.03	_	293	293	0.02	0.05	0.63	308
Daily, Winter (Max)	_	_	-	-	-	-	_	-	_		—	_	_	_	_		_	_
Worker	0.05	0.04	0.04	0.43	0.00	0.00	0.08	0.08	0.00	0.02	0.02	_	91.3	91.3	< 0.005	< 0.005	0.01	92.5
Vendor	0.01	< 0.005	0.15	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	_	102	102	< 0.005	0.01	0.01	106
Hauling	0.02	0.01	0.41	0.14	< 0.005	0.01	0.07	0.08	0.01	0.02	0.03	_	294	294	0.02	0.05	0.02	308

Average Daily	—	—	—	—	—	—	—	—	—	—	_	—	—	_	—	_	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.9	13.9	< 0.005	< 0.005	0.03	14.1
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	15.4	15.4	< 0.005	< 0.005	0.02	16.0
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.2	44.2	< 0.005	0.01	0.04	46.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.30	2.30	< 0.005	< 0.005	< 0.005	2.33
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.54	2.54	< 0.005	< 0.005	< 0.005	2.65
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	7.32	7.32	< 0.005	< 0.005	0.01	7.69

# 4. Operations Emissions Details

# 4.1. Mobile Emissions by Land Use

# 4.1.1. Unmitigated

Land Use	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	—	—	—	—	—	—	—	—	—	_	—	—	—	—	—	—	—
Other Non-Asph Surfaces	0.00 alt	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—		—	—	—	—	—	—			_	—	—		_		—	—
Other Non-Asph Surfaces	0.00 alt	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	_	—	—
Other Non-Asph Surfaces	0.00 alt	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

# 4.2. Energy

# 4.2.1. Electricity Emissions By Land Use - Unmitigated

		· · ·	·	<u>,                                     </u>			· · · · · · · · · · · · · · · · · · ·				/							
Land Use	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	-	-	-	—	_	—	_		_	—	_	_	-	_	—
Other Non-Asph Surfaces	 alt	_	_	_	_	_	—	_	—	_		_	0.00	0.00	0.00	0.00	_	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	_	_	-	-	-	-		_	_	_		-	_	-	_	-	_	—
Other Non-Asph Surfaces	 alt	-	-	-	-	-	—	-	—	-	—	-	0.00	0.00	0.00	0.00	-	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asph Surfaces	 alt	_	_	-	_	_	—	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	-	-	_	_	-	_	_	-	0.00	0.00	0.00	0.00	_	0.00

## 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

#### Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	СО2Т	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	-	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	_
Other Non-Asph Surfaces	0.00 alt	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	—	0.00	0.00	0.00	0.00	_	0.00
Daily, Winter (Max)	—	-	-	-	-	-	—	—	_	—	-	-	-	_	-	-	_	—
Other Non-Asph Surfaces	0.00 alt	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	—	0.00	-	0.00	0.00	0.00	0.00		0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Other Non-Asph Surfaces	0.00 alt	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00		0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00

# 4.3. Area Emissions by Source

4.3.1. Unmitigated

Source	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer	-	-	_	_	_	—	_	-	-	_	-	-	_	-	-	—	_	—
(Max)																		

Consum Products	—	< 0.005	—	—	-	—	—	-	-	—	—	-	—	—	-	—	—	—
Architect ural Coatings		< 0.005	_	-	—	-	-	—	_	—	-	—	-	-	_	_	-	—
Landsca pe Equipme nt	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	—	< 0.005	< 0.005	< 0.005	< 0.005	_	< 0.005
Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	-	< 0.005	< 0.005	_	< 0.005	_	< 0.005	< 0.005	< 0.005	< 0.005	-	< 0.005
Daily, Winter (Max)	_	_	_	-	_	-	-	_	_	-	-	-	-	-	_	_	-	_
Consum er Products		< 0.005	-	-		-	-	_	_	—	-	_	-	-	_	-	-	_
Architect ural Coatings		< 0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	_	< 0.005	-	-	_	-	_	_	_	_	-	_	_	-	_	-	-	_
Annual	—	_	-	-	—	-	-	—	—	_	-	—	-	-	—	-	-	—
Consum er Products		< 0.005	-	-	-	-	-	-	-	_	-	-	-	-	-	-	-	-
Architect ural Coatings		< 0.005	-	-	-	-	-	-	-	_	-	-	-	-	-	-	-	-
Landsca pe Equipme nt	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	< 0.005	< 0.005	-	< 0.005	-	< 0.005	< 0.005	< 0.005	< 0.005	_	< 0.005
Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	< 0.005	< 0.005	< 0.005	< 0.005	_	< 0.005

# 4.4. Water Emissions by Land Use

## 4.4.1. Unmitigated

### Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	—	-	-	-		—	—	_	—	—	_	_	_	—	-	—
Other Non-Asph Surfaces	 alt	_	_	_	_	_		_	_	_		0.00	0.00	0.00	0.00	0.00	_	0.00
Total	—	-	-	-	—	_	_	-	-	_	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	-	-	-	-	-	_	-	-	-	_	-	-	_	-	-	-	_
Other Non-Asph Surfaces	 alt	_	—	-	-	-		—	—	-	—	0.00	0.00	0.00	0.00	0.00	-	0.00
Total	—	-	—	—	—	—	—	—	-	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	—
Other Non-Asph Surfaces	 alt	_	_	_	—	_	_	_	—		_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00

# 4.5. Waste Emissions by Land Use

#### 4.5.1. Unmitigated

Land	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Use																		

Daily, Summer (Max)	_	—	—	—		—	_	—	—	_	—	—	—	—	—	—	—	—
Other Non-Asph Surfaces	 alt	_				_						0.00	0.00	0.00	0.00	0.00		0.00
Total	_	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)		_				_					—		_		_			—
Other Non-Asph Surfaces	 alt					_						0.00	0.00	0.00	0.00	0.00		0.00
Total	_	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	_	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asph Surfaces	 alt	_				—					—	0.00	0.00	0.00	0.00	0.00		0.00
Total		_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00

# 4.6. Refrigerant Emissions by Land Use

## 4.6.1. Unmitigated

Land Use	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	СО2Т	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	-	_	—	-	_	_	—	_	—	_	_	_	—	_	—	—	—
Total	_	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	_
Daily, Winter (Max)	_	_	_	_	-	_	_	_	_		_	_	_	_	_			

#### Poinsettia Manhole Repair Detailed Report, 3/11/2024

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	_	—	_	_	_
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	_	_	_
Total	—	—	—	—	—	—	—	—	—	—	—	—	_	_	—	_	_	—

# 4.7. Offroad Emissions By Equipment Type

#### 4.7.1. Unmitigated

#### Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipme nt Type	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	_	_	_	-	_	_	—	_	_	—	—	_	_	_	_	_	—	—
Daily, Winter (Max)	_	_		-		_				—		_	_		_	_	—	
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_		_	_	_	_	_	_	_	_	_	_	
Total	_	_	_	_	_	_		_	_	_	_	_	_	_	_	_	_	

# 4.8. Stationary Emissions By Equipment Type

#### 4.8.1. Unmitigated

Equipme	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
nt																		
Туре																		

Daily, Summer (Max)	_			_		—		—	—		—	—				—	_	_
Total	_	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	_	_
Daily, Winter (Max)	—			_		_		—	_		—					_	_	—
Total	—	—	_	—	—	—	—	—	—	—	—	—	—	—	—	—	_	—
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_		_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

# 4.9. User Defined Emissions By Equipment Type

#### 4.9.1. Unmitigated

		· ·	/			,	,			-								
Equipme nt Type	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	_	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)					-		—								-		—	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	
Annual	_	_	_	_	_	_	_	_	_	_	_	_		_	_	_	_	
Total	_	_	_	_	-	_	_	—	_	—	_	_	_	_	-	_	_	

## Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

4.10. Soil Carbon Accumulation By Vegetation Type

## 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Vegetatio n	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—					—	—	—	_	—	—		—	_	—	—	—	—
Total	—	—	—	—	—	_	—	_	_	—	—	_	—	_	—	—	—	—
Daily, Winter (Max)									—		—			—				_
Total	—	_	_	_	_	_	—	_	_	—	_	_	_	_	—	—	—	—
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

#### Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

#### 4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Land Use	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	-	—	-	-	—	-	—	—	-	—	-	-	—	_	-	—	—
Total	—	-	—	-	-	—	—	—	-	—	—	_	-	-	—	—	—	—
Daily, Winter (Max)	-	-	—	-	-	-	-	-	-	-	—	-	-	-	-	-	-	_
Total	_	-	_	-	-	_	_	_	_	_	_	_	-	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

### 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Species	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	-	-	-	-	-	—	—	—	—		—	—	_	-	_	—	—
Avoided	_	-	-	-	-	-	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	-	-	_	-	_	_	_	_	_	_	_	_	_	_	_	_
Sequest ered	_	—	_	_	_	_	_	_	_	-	_	-	_	-	_	_	_	_
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	-	—	_	—	—	—
Remove d	_			_			—	—	—	-	_	-	—	_	-	-	—	—
Subtotal	_	—	—	_	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	-	—	—	—	—	—	—	_	—	—	—
Daily, Winter (Max)		-	-	_	-	_	_	_	_	_		_	_	_	_	_	—	_
Avoided	_	—	—	—	_	—	—	_	_	_	_	_	_	_	_	_	_	—
Subtotal	_	_	_	-	_	-	_	_	_	_	_	_	_	_	_	_	_	_
Sequest ered	_	_	_	_	_	_	_	_	—	_	_	—	_	—	_	_	_	_
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	_			_			—	—	—	-	_	-	—	-	-	-	—	—
Subtotal	_	—	—	—	—	—	—	—	_	—	_	—	—	—	_	—	—	—
—	—	—	—	—	—	—	—	-	-	—	—	—	-	—	—	—	—	—
Annual	_	_	_	_	_	_	-	_	_	_	_	_	-	_	_	_	-	-
Avoided	—	_	-	-	-	-	-	-	-	—	—	_	-	_	-	—	-	-
Subtotal	_	—	—	—	—	—	-	-	-	—	_	—	-	—	—	—	-	-

## Poinsettia Manhole Repair Detailed Report, 3/11/2024

Sequest	_	—	_	_	_	_	_	—	_	_	_	_	_	_	—	_	_	_
Subtotal	_	—	_	_	—	—	_	—	—	—	_	—	—	_	—	_		_
Remove d	—		—	—		—	—		—	—	—	—	—	—	—	—		_
Subtotal	_	—	_	_	—	—	_	—	—	_	_	—	_	_	_	_	_	_
_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

# 5. Activity Data

# 5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	8/2/2024	8/15/2024	5.00	10.0	—
Manhole Repair	Building Construction	8/16/2024	10/31/2024	5.00	55.0	—

# 5.2. Off-Road Equipment

## 5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Site Preparation	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Manhole Repair	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Manhole Repair	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Manhole Repair	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48

# 5.3. Construction Vehicles

#### 5.3.1. Unmitigated

Phase Name	Тгір Туре	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	_	_	—	—
Site Preparation	Worker	10.0	12.0	LDA,LDT1,LDT2
Site Preparation	Vendor	4.00	7.63	HHDT,MHDT
Site Preparation	Hauling	4.00	20.0	HHDT
Site Preparation	Onsite truck	_	—	HHDT
Manhole Repair	_	_	—	—
Manhole Repair	Worker	10.0	12.0	LDA,LDT1,LDT2
Manhole Repair	Vendor	4.00	7.63	HHDT,MHDT
Manhole Repair	Hauling	4.00	20.0	HHDT
Manhole Repair	Onsite truck	—	_	HHDT

## 5.4. Vehicles

#### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated	Residential Exterior Area Coated	Non-Residential Interior Area	Non-Residential Exterior Area	Parking Area Coated (sq ft)
	(sq ft)	(sq ft)	Coated (sq ft)	Coated (sq ft)	

# 5.6. Dust Mitigation

#### 5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	_	_	0.00	0.00	_

#### 5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

## 5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Non-Asphalt Surfaces	0.13	0%

## 5.8. Construction Electricity Consumption and Emissions Factors

#### kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	589	0.03	< 0.005

## 5.9. Operational Mobile Sources

#### 5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

# 5.10. Operational Area Sources

## 5.10.1. Hearths

#### 5.10.1.1. Unmitigated

#### 5.10.2. Architectural Coatings

	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
--	--	--	---	---	-----------------------------

0 0.00 0.00 332	0	0.00	0.00	0.00	332
-----------------	---	------	------	------	-----

#### 5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

## 5.11. Operational Energy Consumption

#### 5.11.1. Unmitigated

### Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Other Non-Asphalt Surfaces	0.00	589	0.0330	0.0040	0.00

## 5.12. Operational Water and Wastewater Consumption

## 5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Other Non-Asphalt Surfaces	0.00	0.00

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Other Non-Asphalt Surfaces	0.00	_

# 5.14. Operational Refrigeration and Air Conditioning Equipment

## 5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

# 5.15. Operational Off-Road Equipment

## 5.15.1. Unmitigated

Equipment Type Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor	
--------------------------	-------------	----------------	---------------	------------	-------------	--

# 5.16. Stationary Sources

### 5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
5.16.2. Process Boiler	S					

Equipment Type Fu	uel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
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# 5.17. User Defined

Equipment Type	Fuel Type
—	_

# 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
5.18.1. Biomass Cover Type			
5.18.1.1. Unmitigated			
Biomass Cover Type	Initial Acres	Final Acres	
5.18.2. Sequestration			
5.18.2.1. Unmitigated			
Тгее Туре	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

# 6. Climate Risk Detailed Report

## 6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	8.54	annual days of extreme heat
Extreme Precipitation	2.35	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi. Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about <sup>3</sup>/<sub>4</sub> an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

# 6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

## 6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	1	1	1	2
Drought	N/A	N/A	N/A	N/A

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

## 6.4. Climate Risk Reduction Measures

# 7. Health and Equity Details

# 7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	
AQ-Ozone	32.1
AQ-PM	47.3
AQ-DPM	83.3
Drinking Water	10.4
Lead Risk Housing	7.96
Pesticides	95.4
Toxic Releases	18.4
Traffic	86.6
Effect Indicators	
CleanUp Sites	51.3
Groundwater	79.7
Haz Waste Facilities/Generators	95.1
Impaired Water Bodies	23.9

Solid Waste	35.7
Sensitive Population	
Asthma	3.80
Cardio-vascular	11.1
Low Birth Weights	3.19
Socioeconomic Factor Indicators	
Education	8.42
Housing	50.3
Linguistic	15.6
Poverty	26.7
Unemployment	18.3

# 7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	_
Above Poverty	78.53201591
Employed	67.86860003
Median HI	76.92801232
Education	_
Bachelor's or higher	87.95072501
High school enrollment	100
Preschool enrollment	81.94533556
Transportation	_
Auto Access	46.0284871
Active commuting	64.1088156
Social	-

2-parent households	35.55755165
Voting	92.82689593
Neighborhood	
Alcohol availability	76.88951623
Park access	81.35506224
Retail density	66.61106121
Supermarket access	50.9816502
Tree canopy	18.78609008
Housing	
Homeownership	85.58963172
Housing habitability	71.97484922
Low-inc homeowner severe housing cost burden	26.76761196
Low-inc renter severe housing cost burden	39.2403439
Uncrowded housing	96.93314513
Health Outcomes	
Insured adults	97.11279353
Arthritis	5.1
Asthma ER Admissions	93.4
High Blood Pressure	10.7
Cancer (excluding skin)	3.1
Asthma	72.9
Coronary Heart Disease	9.8
Chronic Obstructive Pulmonary Disease	37.6
Diagnosed Diabetes	55.5
Life Expectancy at Birth	82.6
Cognitively Disabled	93.6
Physically Disabled	84.3

Heart Attack ER Admissions	80.9
Mental Health Not Good	83.6
Chronic Kidney Disease	14.8
Obesity	74.1
Pedestrian Injuries	19.6
Physical Health Not Good	69.2
Stroke	29.9
Health Risk Behaviors	_
Binge Drinking	54.2
Current Smoker	87.7
No Leisure Time for Physical Activity	79.7
Climate Change Exposures	
Wildfire Risk	0.0
SLR Inundation Area	66.0
Children	73.7
Elderly	9.9
English Speaking	83.6
Foreign-born	20.2
Outdoor Workers	75.8
Climate Change Adaptive Capacity	
Impervious Surface Cover	20.1
Traffic Density	91.2
Traffic Access	23.0
Other Indices	
Hardship	11.0
Other Decision Support	
2016 Voting	96.7

# 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	12.0
Healthy Places Index Score for Project Location (b)	85.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

## 7.4. Health & Equity Measures

No Health & Equity Measures selected.

#### 7.5. Evaluation Scorecard

#### Health & Equity Evaluation Scorecard not completed. 7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

# 8. User Changes to Default Data

Screen	Justification
Land Use	Site Plan
Construction: Construction Phases	Non default values provided by the project applicant.
Construction: Off-Road Equipment	Modified based on information provided by the project applicant.
Construction: Trips and VMT	mod

# Appendix B

Memorandum Regarding Biological Resources Report for the Ponto Sewer Manhole Rehabilitation Project from Rosanne Humphrey, Senior Program Manager, Habitat Management Division, City of Carlsbad, dated September 18, 2024

# Memorandum



September 18, 2024

То:	Keri Martinez, Senior Engineer, Public Works
From:	Rosanne Humphrey, Senior Program Manager, Habitat Management Division
Re:	Biological Resources Report for the Ponto Sewer Manhole Rehabilitation Project
Cc:	Izzak Mireles, Associate Planner, Planning Division

The purpose of this biological studies memo report is to summarize the biological information for the Ponto Sewer Manhole Rehabilitation Project (Project) into a single document. Biological information for this Project has been received from several individual reports and documents. This memo report provides the most current information from each source. The information has been copied verbatim or lightly edited and cited as necessary, and appropriate figures from each report are included. The sources of information used for this memo report are listed below and available upon request. Additional resources cited in this report are included in the References section.

- 1. **LSA 2020**. North Ponto Interceptor Manhole Rehabilitation Project Biological Resources Summary Letter. Memo Report, July 9, 2020.
- 2. **City of Carlsbad 2022**. Preserve Management Plan for the Poinsettia Station Vernal Pool Preserve. Prepared by the City of Carlsbad December 2018; updated August 2022.
- 3. **Dudek 2021.** PDF maps showing the access locations and vegetation (zoomed in) and Excel spreadsheet with calculated temporary vegetation impacts for each manhole; December 21, 2021.
- 4. **Dudek 2023**. Aquatic Resources Delineation Report, Memorandum for Monitoring and Habitat Management Conducted on the Poinsettia Station Vernal Pool Preserve in 2023, City of Carlsbad, California. Includes vernal pool specie surveys and plant population assessments.
- 5. **Dudek 2024a**. Aquatic Resources Delineation Report, Poinsettia Station Vernal Pool Preserve Sewer Manhole Rehabilitation Project. Prepared January 2024.
- 6. **Dudek 2024b.** Draft ISMND Rev.2, 2024. Prepared by Dudek with city comments incorporated, second project review cycle, September 5, 2024.

#### **1.0 PROJECT LOCATION**

#### Source: LSA 2020, Dudek 2024b

The 11.71-acre Project area includes the entire Poinsettia Station Vernal Pool Preserve (Preserve), located adjacent to Poinsettia Station in the City of Carlsbad, San Diego County. Specifically, the Project area is in Section 29, Township 12 South, Range 4 West of the *Encinitas, California* U.S. Geological Survey (USGS) 7.5-minute Topographic Quadrangle (**Figure 1**). The Project area is surrounded by railway and residential development to the west, residential development and train station/parking lot to the east, Poinsettia Lane to the south, and Avenida Encinas to the north. Three pedestrian bridges span across the northern end of the Preserve from the parking lot to the train platform. A public trail runs parallel to the Preserve on the east side. Photographs of the Project area are included in **Attachment A**.

The Project area is located within the Coastal Zone. The Project area west of the trail is an Existing Hardline Area (permanently protected for habitat conservation) within the City of Carlsbad (city) Habitat Management Plan (HMP). Landownership consists of North County Transit District (NCTD), which owns

the railway right-of-way, and Waters End Homeowners Association (HOA), which owns the land east of the right-of-way (**Figure 2**). Project Assessor's Parcel Numbers [APNs] are 214-150-08, 214-150-11, 214-150-12, and 214-610-58. The Project area, which includes the entire Preserve, encompasses a total area of 11.71 acres. Within the Project area, there are nine areas of direct, temporary impact (*temporary impact areas*, 0.13 acre), consisting of nine manholes and the associated access pathways that extend from the adjacent trail or sidewalk. *Biological Study Area*, (3.29 acres) were established as 50-foot buffers around each manhole/pathway to more closely evaluate sensitive biological resources (**Figure 3**).

#### **2.0 PROJECT DESCRIPTION**

Source: Dudek 2024b

The Project consists of cleaning and rehabilitating nine sewer manholes that are approximately 50 years old and are experiencing significant corrosion. These below-grade manholes are spaced at approximately 400-foot intervals along the North Ponto Sewer, a 27-inch-diameter vitrified clay pipe (VCP) gravity sewer pipeline. To address potential leaks and structural failure, the proposed rehabilitation involves pressure washing the interior of the manholes, repairing internal cracks and wall surfaces, and installing liners inside the manholes per city sewer rehabilitation standards. Additionally, the Project includes minimal external work, including the replacement of all manhole frames and covers, replacement of 5-foot-square concrete pads at four of the manhole locations, and installation of the new concrete pads at the other five manhole locations that are currently not framed.

Maintenance and rehabilitation activities are scheduled during the dry season (August 15 to October 15) to minimize ecological disruption. Maintenance and rehabilitation activities would require the use of pressure-washing equipment, portable generator(s), and spray lining equipment; the use of heavy machinery would be prohibited. Any minor excavation will be completed using hand tools or small equipment including a portable concrete mixer, wheelbarrows for hauling materials, and/or a jackhammer for removing concrete pads. During the work, impacts to the vernal pool habitat will be avoided as much as feasible. Rather than access the manholes one by one, moving from north to south within the vernal pools, each manhole will be accessed individually by creating a temporary access pathway perpendicular to the adjacent sidewalk on the north end and the public trail on the south end. This will require trimming back the vegetation in a direct path to five of the manholes (41C-55, 41C-5, 41C-4, 41C-3, and 41A-7). This alternative would temporarily impact coastal sage scrub for the most part, rather than vernal pools. Coastal sage scrub grows back quickly and impacts to sensitive species could be avoided (see Section 7 for more details).

Vegetation within the temporary access routes would require trimming of the entire aboveground portion, leaving only the stumps and the belowground roots. To minimize impacts to sensitive habitat, the width of the access pathways will be restricted to no more than eight feet wide, the minimum width necessary for equipment and personnel access. Clean plywood would be placed along access routes to protect the trimmed vegetation and soil from trampling. After this work is completed, the contractor would remove the plywood from each manhole/pathway, and all temporarily impacted areas would be restored in place to pre-construction conditions by allowing the trimmed vegetation and cut stumps to resprout. To facilitate this recovery, the temporary access routes would be seeded with a coastal sage scrub seed mix to help those areas recover faster, along with a weed control program to control weed invasion while the vegetation recovers.

After the Project is complete, as part of the city's ongoing systemwide sewer maintenance program, minimal routine maintenance, including inspections and cleanings as needed, would continue throughout the lifetime of the sewer improvements annually or once every 2 years, depending on condition of the manholes. Condition assessments include evaluating the age of the manhole, its

#### Environmental Sustainability Department Habitat Management Division | 1635 Faraday Ave | Carlsbad, CA 92008 | Rosanne.Humphrey@carlsbadca.gov

internal condition, and the amount and type of wastewater flowing through the sewer system. City staff would utilize existing easements to conduct routine maintenance; the use of heavy equipment would be prohibited. The temporary access routes established during the construction of the Project would not be needed or used for routine maintenance during Project operations.

#### **Construction and Phasing**

The Project would occur over multiple phases, beginning with an initial inspection and CCTV video of the existing sewer manholes' conditions. Subsequent phases would involve the systematic cleaning and rehabilitation of the manholes, including pressure washing; concrete grouting; repair of internal cracks, wall surfaces, and bottom "bench" of the manholes; and spray liner installation. External work would include removal and replacement of 3-foot-diameter frames and covers on top of the underground manholes, removal of aging concrete pads, and subsequent installation of a 1-foot concrete pad surrounding the manhole frame (5-foot square). The construction timeline is structured to be completed within 6 to 8 weeks. Construction activities would occur during the dry season (August 15 through October 15). All activities would be monitored and inspected daily by the city and vernal pool biologist to ensure compliance with the city's regulations and standards of protecting the health and safety of workers, the community, Poinsettia Station Vernal Pool Preserve, and the environment.

Temporary access to the manholes will be via existing sewer easements and with (1) approval by NCTD via Request for Access and workplan and (2) a letter of permission from Waters End HOA. Advanced notification to trail users will be provided. Parking and daily/temporary equipment staging is proposed in a small area in the NCTD parking lot for northern work and at the City of Carlsbad sewer lift station during southern work. No long-term staging will be permitted. The existing trail along the eastern boundary of the Project will be temporarily closed during construction hours on weekdays. However, construction equipment will be removed from the site daily. This closure is necessary because construction equipment and vehicles will need to access manholes directly from the trail, leaving insufficient space for pedestrian passage. The trail will remain open during maintenance inspections.

#### **3.0 EXISTING EASEMENTS**

Source: City of Carlsbad 2020; Dudek 2024b

#### **3.1 Conservation Easements**

**NCTD-owned portion of the Preserve**: Conservation easements are shown on Figure 2. In 1994, a conservation easement was established in over 2.8 acres of habitat within the NCTD-owned portion of the Preserve (Figure 2). Two easement documents were prepared to grant the easement rights, one for California Department of Fish and Wildlife (CDFW) and one for the California Coastal Commission (CCC). In 2014, it was discovered that the easement boundary was incorrect, as it covered a portion of the station platform, but did not cover all of the vernal pool habitat. The parcel was re-surveyed in 2017. Although CDFW and CCC agreed with the new boundaries, it was determined that the only way to correct the conservation easements was to issue new easement documents for both agencies. As of September 2023, the NCTD was still working with CCC and CDFW to finalize the new conservation easement documents. The current status of these documents is unknown.

**Waters End HOA portion of the Preserve:** The Waters End HOA portion of the Preserve serves as a buffer for the vernal pools, and consists of coastal sage scrub habitat. A Restrictive Covenant protecting a portion of the Waters End HOA Preserve area was recorded in 2019 (Figure 2). A thin strip of coastal sage scrub that runs along the adjacent trail was not included in this conservation easement to allow for trail maintenance and access to the existing sewer line manholes.

#### **3.2 Maintenance Easements**

Pre-existing public utility easements are shown on **Figure 4**. Two utility access easements run longitudinally along the length of the Preserve. The North Ponto Sewer Interceptor and manholes are within a 15-foot-wide city sewer easement established in 1973 within the NCTD right-of-way. San Diego Gas & Electric Company (SDG&E) also has an underground high-pressure gas line located within an easement in this NCTD right-of-way. The pipeline is located approximately 80 to 100 feet east of the railroad tracks and generally runs parallels to the tracks for approximately 2,825 linear feet from Poinsettia Lane to Avenida Encinas. In addition to these north-south easements, there are several easements running east-west at the very southern end of the NCTD-owned portion of the Preserve, including sewer, drainage, and access.

#### **4.0 REGULATORY FRAMEWORK**

This section describes the regulatory framework relevant for this project.

#### **4.1 Federal Regulations**

#### 4.1.1 Federal Endangered Species Act

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

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

#### 4.1.2 Clean Water Act

Pursuant to Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (ACOE) regulates the discharge of dredged and/or fill material into waters of the United States. The term "wetlands" (a subset of waters) is defined in 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." In the absence of wetlands, the limits of ACOE jurisdiction in non-tidal waters, such as intermittent streams, extend to the ordinary high water mark, as defined in 33 CFR 328.3(e). Pursuant to Section 10 of the Rivers and Harbors Appropriation Act of 1899, the ACOE regulates any potential obstruction or alteration of any navigable water of the United States.

#### 4.1.3 Migratory Bird Treaty Act

The Migratory Bird Treaty Act was originally passed in 1918 as four bilateral treaties, or conventions, for the protection of a shared migratory bird resource. The primary motivation for the international negotiations was to stop the "indiscriminate slaughter" of migratory birds by market hunters and others (16 U.S.C. 703 et seq.). Each of the treaties protects selected species of birds and provides for closed and open seasons for hunting game birds. The Migratory Bird Treaty Act protects over 800 species of birds. Two species of eagles that are native to the United States, the bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*), were granted additional protection within the United States under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.) to prevent the species from becoming extinct.

#### 4.2 State Regulations

#### 4.2.1 California Endangered Species Act

The California Department of Fish and Wildlife (CDFW, formerly California Department of Fish and Game) administers the California Endangered Species Act (CESA; California Fish and Game Code, Section 2050 et seq.), which prohibits the take of plant and animal species designated by the California Fish and Game Commission as endangered or threatened in the State of California. Under CESA Section 86, "take" is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA Section 2053 stipulates that state agencies may not approve projects that will "jeopardize the continued existence of any endangered species or threatened species, or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy."

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

#### 4.2.2 California Fish and Game Code

Sections 2081(b) and 2081(c) of the California Fish and Game Code authorizes take of endangered, threatened, or candidate species if take is incidental to otherwise lawful activity and if specific criteria are met. These provisions also require CDFW to coordinate consultations with USFWS for actions involving federally listed species that are also state- listed species. In certain circumstances, Section 2080.1 of CESA allows CDFW to adopt a federal incidental take statement or a 10(a) permit as its own, based on its findings that the federal permit adequately protects the species and is consistent with state law. A Section 2081(b) permit may not authorize the take of "fully protected" species and "specified birds" (California Fish and Game Code, Sections 3505, 3511, 4700, 5050, 5515, and 5517). If a project is

planned in an area where a fully protected species or a specified bird occurs, an applicant must design the project to avoid take.

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

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

#### 4.2.3 California Coastal Act

Under the California Coastal Act (CCA) (California Public Resources Code, Section 30000 et seq.), the California Coastal Commission regulates impacts to wetlands in the "coastal zone" and requires a coastal development permit for almost all development within this zone. From 3 miles seaward, the coastal zone generally extends approximately 1,000 yards inland. In less developed areas, it can extend up to 5 miles inland from the mean high tide line, but can also be considerably less than 1,000 yards inland in developed areas.

The CCA also protects designated sensitive coastal areas by providing additional review and approvals for proposed actions in these areas. Section 30121 of the CCA defines wetlands as "lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, swamps, mudflats, and fens." The CCA allows disking, filling, or dredging of wetlands for certain uses, such as restoration. The CCA also directs each city or county within the coastal zone to prepare a Local Coastal Program for California Coastal Commission certification (California Public Resources Code, Section 30000 et seq.).

In contrast to ACOE, which uses a three-parameter definition to delineate wetlands, the California Coastal Commission essentially uses the Cowardin method of wetlands classification, which defines wetland boundaries by a single parameter (i.e., hydric soils, hydrophytic vegetation, or hydrology) (Cowardin et al. 1979).

#### 4.2.4 California Environmental Quality Act

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

#### **Special-Status Species**

The CEQA Guidelines (14 CCR 15000 et seq.) define endangered animals or plants as species or subspecies whose "survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors" (14 CCR 15380(b)(1)). A rare animal or plant is defined in CEQA Guideline 15380(b)(2) as a species that, although not currently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment

worsens; or...[t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act." Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing, as defined further in CEQA Guideline 15380(c).

For purposes of this impact analysis, species are considered sensitive if they are (1) listed or proposed for listing by state or federal agencies as threatened or endangered; (2) plant species with a California Rare Plant Rank (CRPR) (formerly California Native Plant Society (CNPS) List) 1 through 4; (3) covered under the Carlsbad HMP; or (4) considered California Species of Special Concern or California Fully Protected Species or Birds of Conservation Concern (USFWS 2008).

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

#### **Special-Status Vegetation Communities**

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) requires an evaluation of impacts to "any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game1 or the U.S. Fish and Wildlife Service." For the purposes of this analysis, native vegetation communities identified as requiring mitigation under the Carlsbad HMP are considered special status due to having been identified in a local and regional conservation plan.

#### **4.3 Local Regulations**

#### 4.3.1 North County Multiple Habitat Conservation Program

The North County Multiple Habitat Conservation Program (MHCP) is a long-term regional conservation plan established to protect sensitive species and habitats in northern San Diego County. The MHCP is divided into seven subarea plans—one for each jurisdiction within the MHCP—that are permitted and implemented separately from one another. The City of Carlsbad is the only city under the MHCP that has an approved and permitted subarea plan (i.e., the Carlsbad HMP) (City of Carlsbad 2004).

The MHCP sets forth general and subarea conditions of coverage that must be met for each covered species in order for the Cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista to obtain take authorization. These conditions can be found in Appendix C of the Carlsbad HMP.

#### 4.3.2 Carlsbad Habitat Management Plan

The Carlsbad HMP was adopted by the city in December 1999, and the final approvals from USFWS and CDFW, including implementing agreement and terms and conditions, were granted in November 2004. The purpose of the Carlsbad HMP is to guide the design, management, monitoring, and public use of the preserve system. The Carlsbad HMP calls for 6,478 acres of natural habitat to be preserved within the city, as well as an additional 308 acres of habitat for the coastal California gnatcatcher (Polioptila californica californica) within the designated MHCP gnatcatcher core area. The Carlsbad HMP identifies LMFZs, which were developed based on the distribution of existing vegetation communities and

sensitive species. The zones were further broken down into Carlsbad HMP cores, linkages, and special resource areas.

The Project temporary impact areas are within an HMP Existing Hardline Area (permanently protected for habitat conservation). In addition, the Project area is within the coastal zone; as such, the Project must comply with HMP Coastal Zone Standards 7-1 through 7-14 (HMP Section D).

#### 4.3.3 City of Carlsbad Local Coastal Program

The City of Carlsbad has an adopted Local Coastal Program (LCP). Developed in conformance with the California Coastal Act, the city's LCP outlines policies to "Protect, maintain, and where feasible, enhance and restore the overall quality of the Coastal Zone environment and its natural and man-made resources." The city's LCP implements the California Coastal Act at a local level by addressing land use, zoning ordinances, and zoning district maps in sensitive coastal resource areas by providing implementing actions, provisions, and policies required within the Coastal Zone.

The city's LCP regulates development in the state-designated Coastal Zone within portions of the city. The city's LCP consists of six geographic segments: the Agua Hedionda Lagoon LCP segment, composed of approximately 1,100 acres; the Carlsbad Mello I segment, with approximately 2,000 acres; the Carlsbad Mello I segment, with approximately 2,000 acres; the Carlsbad Mello II segment, with approximately 5,250 acres; the West Batiquitos Lagoon/Sammis Properties segment, with approximately 200 acres; the East Batiquitos Lagoon/Hunt Properties segment, with approximately 1,000 acres; and the Village–Barrio segment, with approximately 150 acres. The Project site is located within the Mello II Segment of the LCP. The proposed Project activities are located in the approved City of Carlsbad LCP jurisdiction (Mello II segment) with a large portion of the Project within the appeal jurisdiction of the CCC.

#### **5.0 BIOLOGICAL SURVEY METHODS**

Source: LSA 2020, Dudek 2021, Dudek 2023, Dudek 2024a

#### 5.1 Literature and Database Review

Prior to conducting field surveys, LSA reviewed the most recent records of the CDFW California Natural Diversity Database (CNDDB 2020) and the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2020) within a 1.5-mile radius of the Project area. The CNDDB contains records of reported occurrences of federal- and/or State-listed species, proposed endangered or threatened species, California Species of Special Concern (SSC), or other special-status species and habitats that may occur within or in the vicinity of the Project area. Additionally, LSA reviewed the following reports and exhibits provided by the city:

- Preserve Management Plan for the Poinsettia Station Vernal Pool Preserve (City of Carlsbad 2019).
- Memorandum for Baseline Surveys for Poinsettia Station Vernal Pools, City of Carlsbad, California (Dudek 2019).
- Vegetation Communities within the Biological Study Area Poinsettia Station Improvements Project (Merkel & Associates, Inc. 2016).

#### **5.2 General Biological Resources Survey**

LSA Senior Biologist Jaime Morales conducted a general biological resources survey on March 2, 2020. The assessment included the following elements:

• Mapping of habitat types;
- A directed search for special-status plant and animal species with potential to occur within the Project area;
- A general inventory of plant and wildlife species;
- Evaluation of suitability of habitat for special-status resources identified during the literature search; and
- Notes on other pertinent features or conditions of the site and adjacent lands.

LSA documented all plant species observed within the Project area (see **Attachment B**) and mapped vegetation communities within the on an aerial photograph. Vegetation communities were determined in accordance with the categories described in Holland (1986), Oberbauer (2008), and the Preserve Management Plan for the Poinsettia Station Vernal Pool Preserve (City of Carlsbad 2022). Plant nomenclature follows that of The Jepson Manual: Higher Plants of California (Hickman 1993). Special-status plant species with a potential to occur within the Project area were also evaluated.

All wildlife observed and wildlife sign detected within the Project area, including tracks, scat, carcasses, burrows, excavations, and vocalizations, were recorded (see **Attachment C**). Notes were made on the general habitat types, species observed, and the conditions of the site. Special-status wildlife species with a potential to occur within the Project area were also evaluated.

# **5.3 Rare Plants and Vernal Pool Indicator Species Surveys**

The city is responsible for implementing basic land management for the Preserve, pursuant to the conservation easements and Preserve Management Plan for the Poinsettia Station Vernal Pool Preserve (City of Carlsbad 2022). This is accomplished through a contract with Dudek. Scott McMillan (vernal pool biologist) serves as the Preserve Manager for this Preserve. During the spring of 2019, when long-term management was initiated, Mr. McMillan conducted baseline biological surveys for the Preserve, which included an evaluation of pool hydrology, non-protocol survey for fairy shrimp and a rare plant survey. Additional surveys were conducted in the spring of 2023. These surveys concentrated on vernal pool indicator species (flora and fairy shrimp), and included an assessment of population extent and size for any special-status vernal pool plant species detected. The list of vernal pool indicator plant species that were targeted comes from Bauder and McMillan, 1998.

Non-protocol fairy shrimp surveys were conducted when the pools were full long enough to hatch and sustain fairy shrimp. Each ponded area was surveyed, and identification was done using non-lethal means by visual identification. For each visit, the number of specimens and maturity (presence of gravid females, immature fairy shrimp, and/or mature males) was documented by estimation. Other vernal pool invertebrate species observed were also recorded.

Mr. McMillan conducted vernal pool plant surveys by walking meandering transects across the Preserve, and visually accessed presence, estimated population size, and mapped population extent. Rainfall was much higher than average in Carlsbad during the 2022-2023 season, and it was reflected in onsite conditions. The entire Preserve was green throughout, with multiple areas of extended ponding at both the north and south ends of the Preserve (see photographs in Attachment A). Populations of the sensitive vernal pool plant species were exceptional in 2023.

#### **5.4 Wildlife Species Surveys**

USFWS protocol-level focused species surveys were not conducted; however, based on observations during the vernal pool indicator species surveys and general biological surveys conducted by LSA (2020), the site is presumed to be occupied by the San Diego fairy shrimp (*Branchinecta sandiegonensis*; federally Endangered), Riverside fairy shrimp (*Streptocephalus woottoni*; federally Endangered), and coastal California gnatcatcher (*Polioptila californica californica*; federally Threatened).

# **5.5 Aquatic Resources Delineation**

An Aquatic Resources Delineation Report was prepared by Dudek in January, 2024 in accordance with the Minimum Standards for Acceptance of Aquatic Resources Delineation Reports (USACE 2017). This report provides the 20 items listed in the Minimum Standards for Acceptance of Aquatic Resources Delineation Reports. The delineation was conducted within the 3.29-acre Biological Study Area (50-foot buffer around each manhole/temporary pathway) to identify and map existing aquatic resources potentially subject to the regulatory jurisdiction of the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act (33 USC 1344), waters of the State potentially subject to the regulatory jurisdiction of CDFW pursuant to Section 1602 of the California Fish and Game Code, and wetlands and Environmentally Sensitive Habitat Areas potentially subject to the jurisdiction of the CCC (collectively defined as jurisdictional aquatic resources).

The jurisdictional delineation was conducted by Dudek biologists Anna Touchstone and Dylan Ayers on April 5, 2023. Prior to conducting the jurisdictional delineation, U.S. Fish and Wildlife Service's National Wetland Inventory data (USFWS 2023) was reviewed to determine if the Biological Study Area contained any features mapped by the USFWS. Site-specific topographical data was reviewed in conjunction with aerials, both current and historical, to determine the potential presence of non-wetland waters. Current vegetation mapping was reviewed to assess whether the Biological Study Area supported hydrophytic vegetation and potential wetlands; several areas supporting hydrophytic vegetation were also assessed for the presence of wetland hydrology and hydric soils to determine whether they were threeparameter wetlands. Digging is not permitted in the Preserve due to the presence of vernal pools and special-status species; therefore, soils were assumed to be hydric when the other two wetland indicators (i.e., hydrophytic vegetation and hydrology) were present. Aquatic resource boundaries were mapped in the field using ESRI Collector on a mobile device. Remote sensing was not used for this delineation.

The resulting Aquatic Resources Delineation Report (Dudek 2024a) presents Dudek's best effort to quantify the extent of aquatic resources potentially regulated by USACE, RWQCB, and CDFW (i.e., regulatory agencies) within the identified Biological Study Area using the current regulations, written policies, and guidance from these regulatory agencies. The potential jurisdictional boundaries described in the report are subject to verification by the regulatory agencies. Only the regulatory agencies can make a final determination on whether the features present are subject to USACE, RWQCB, CDFW, and/or CCC regulation.

# **6.0 EXISTING CONDITIONS**

# 6.1 Geology and Hydrology

#### Source: LSA 2020, Dudek 2024a

The Project area occurs in the northern half of the Loma Alta Creek-Frontal Gulf of Santa Catalina Subwatershed (Hydrologic Unit Code [HUC] 180703030504) within the San Luis Rey-Escondido Subbasin (HUC 8070303). The San Luis Rey-Escondido Subbasin comprises approximately 186 square miles (119,500 acres) and contains Loma Alta Creek, Buena Vista Creek, Agua Hedionda Creek, and San Marcos Creek. The latter three of these collect in lagoons before entering the Pacific Ocean.

The United States Department of Agriculture Natural Resources Conservation Services identifies the soils onsite as Marina loamy coarse sand, 2 to 9 percent slopes. However, soils with a clay component occur within and around the vernal pools. Vernal pools and seasonally wet depressional wetlands occur in

areas with hard soils, such as those with high clay components, which inhibits water percolation and allows them to pond for extended durations.

# 6.2 Vegetation Communities and Plant Species

Source: LSA 2020

# 6.2.1 Vegetation Communities

The Project area supports vegetation communities totaling 11.71 acres (**Table 1**). Vegetation communities identified during the general biological resources survey include vernal pool/nonnative grassland, freshwater marsh, ponded water, coastal sage scrub, baccharis-dominated coastal sage scrub, nonnative grassland, disturbed habitat, bare ground, ornamental vegetation, and developed land. **Figure 5** displays the vegetation communities within the Project area on an aerial photograph. The vegetation communities observed within the Project area are described below.

Vegetation Community	HMP Habitat Group	Project Area (Acres) <sup>1</sup>	Biological Study Area (Acres) <sup>2</sup>
Vernal Pool/Nonnative Grassland	А	3.25	1.00
Freshwater Marsh	А	0.04	0.0
Southern Willow Scrub	А	0.14	0.08
Ponded Water	А	0.49	0.12
Coastal Sage Scrub, occupied by gnatcatcher	С	2.18	0.63
Coastal Sage Scrub, Baccharis-Dominated; occupied	С	1.30	0.36
Nonnative Grassland	E	0.60	0.09
Disturbed Habitat	F	0.50	0.01
Bare Ground	N/A	0.47	0.15
Ornamental Vegetation	N/A	0.61	0.15
Developed	N/A	2.14	0.70
TOTAL		11.71	3.29

#### Table 1. Vegetation Communities within the Project Area (Acres)

<sup>1</sup> The total may not equal sum due to rounding.

<sup>2</sup> The Biological Study Area is the survey area buffer of 50 feet around each manhole/access path N/A = Not Applicable

# Vernal Pool/Nonnative Grassland

When not ponded, these vernal pool areas appear as non-native grassland. This vegetation community was present throughout the Project area and consisted of mostly nonnative annual herbs and weedy native herbs within and surrounding vernal pools. Dominant plant species included fascicled tarweed (*Deinandra fasciculata*), tocalote (*Centaurea melitensis*), black mustard (*Brassica nigra*), ripgut brome (*Bromus diandrus*), and to a lesser extent, bristly ox-tongue (*Helminthotheca echioides*), San Diego button-celery (*Eryngium aristulatum* var. *parishii*), hyssop loosestrife (*Lythrum hyssopifolium*), cocklebur (*Xanthium* strumarium), scarlet pimpernel (*Lysimachia arvensis*), alkali mallow (*Malvella leprosa*), curly dock (*Rumex crispus*), toad rush (*Juncus bufonius*), and American pillwort (*Pilularia americana*). California Orcutt grass (*Orcuttia californica*) was observed near the southern end of the Project area.

#### Freshwater Marsh

A small patch of freshwater marsh was observed near the Poinsettia Station. This vegetation community was dominated by needle spikerush (*Eleocharis acicularis*), curly dock, chaffweed (*Lysimachia minima*), and San Diego button-celery.

#### Southern Willow Scrub

A small patch of southern willow scrub was observed near the southwestern corner of the Poinsettia Station parking lot. This vegetation community dominated by arroyo willow (*Salix lasiolepis*) and California sycamore (*Platanus racemosa*) trees.

#### Ponded Water

Although not composed of vegetation, ponded water is listed here, as it occupied a large area at the southern end of the Project area. During the time of this survey, this area was entirely submerged under approximately 6 inches of water and displayed no vegetation growth.

#### Coastal Sage Scrub

This vegetation community was present throughout the Project area, primarily west of and adjacent to the public trail maintained by the Waters End HOA. This vegetation community was dominated by California encelia (*Encelia californica*), coyote brush (*Baccharis pilularis*), California sagebrush (*Artemisia californica*), coastal goldenbush (*Isocoma menziesii*), black sage (*Salvia mellifera*), deerweed (*Acmispon glaber*), lemonadeberry (*Rhus integrifolia*), and California buckwheat (*Eriogonum fasciculatum*). Coastal California gnatcatcher, a federally Threatened species, was observed during the survey (Figure 5). Because this species was observed during the survey, and it is known to occur in this area, the city considers this coastal sage scrub habitat to be occupied (HMP Habitat Group C).

#### Coastal Sage Scrub, Baccharis-Dominated

This vegetation community was present throughout the NCTD-owned portion of the Project area and adjacent to the railway. This vegetation community consisted mostly of coyote brush. Due to the dense growing nature of this species, few other plant species were present in this community. Although not observed in this vegetation community during the survey, coastal California gnatcatcher has the potential to forage and nest in this habitat. Due to the proximity of the individual observed during the survey to this vegetation community, and because it is known to occur in this area, the city considers this coastal sage scrub habitat to be occupied (HMP Habitat Group C).

#### Nonnative Grassland

This vegetation community was present at the northern and southern ends of the Project area and consisted of mostly nonnative annual herbs and weedy native herbs outside of vernal pools. Dominant plant species included crown daisy (*Glebionis coronaria*), fascicled tarweed, tocalote, black mustard, ripgut brome, and red brome (*Bromus madritensis*).

#### Disturbed Habitat

Areas designated as disturbed habitat have been physically disturbed by previous human activity and are no longer recognizable as a native or naturalized vegetation association, but continue to retain a soil substrate. Disturbed habitat was observed at the northern end of the Project area, in an active construction area, and at a small patch south of the Poinsettia Station.

#### Bare Ground

The public trail maintained by the Waters End HOA is composed entirely of bare ground consisting of decomposed granite.

### Ornamental

This designation applies to routinely-maintained landscaping and is composed primarily of nonnative perennial shrub and tree species. A long swath of ornamental vegetation was present east of the public trail, outside of the Project area.

# Developed

Within the Project area, this designation applies to unvegetated hardscape areas, such as concrete walkways, platforms, ballast rock, buildings, and rail-related appurtenances.

# 6.2.2 Plant Species

A total of 81 plant species were observed by LSA during the 2020 biological surveys (Attachment B). As described above, this list represents species typical of native uplands (coastal sage scrub, baccharis-dominated coastal sage scrub, and non-native grasslands) and wetland areas (vernal pools, freshwater marsh, and southern willow scrub.

# 6.2.3 Wildlife Species

One lizard, 18 bird species, and two mammal species were observed by LSA during the 2020 biological surveys (Attachment C). All but one of these (coastal California gnatcatcher) are common, especially in urban areas.

# **6.3 Special-Status Species**

The following discussion is based on the evaluation conducted by LSA (2020) and the results of vernal pool indicator species surveys performed by Dudek (2023).

#### 6.3.1 Special-Status Plants

Source: Dudek 2023

Vernal pool surveys in 2023 resulted in the observation of 16 vernal pool indicator plant species in the Project area (**Table 2, Figure 6**), a relatively high number for a single vernal pool complex. Of the 16 vernal pool indicator plant species, four are recognized as special-status species by the USFWS and CDFW, and/or considered a Narrow Endemic under the HMP. An additional special -status plant species, San Diego marsh elder (*Iva hayesiana*), a California Species of Special Concern, was observed onsite by LSA in 2020.

Vernal Pool Species	Vernal Pool Species Common Name		Federal Status	НМР	
Anagallis minima	Chaffweed	None	None	N/A	
Bergia texana	Texas bergia	None	None	N/A	
Brodiaea orcuttii Orcutt's brodiaea		CRPR 1B.1	None	Covered; Narrow Endemic	
Callitriche marginata	Winged water startwort	None	None	N/A	
Crassula aquatica	Aquatic pygmy weed	None	None	N/A	
Elatine brachysperma	Short seed waterwort	None	None	N/A	

Table 1. Ve	ernal Pool Indicato	or Species Identifie	d by Dudek in 2023
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#### **Environmental Sustainability Department**

Habitat Management Division | 1635 Faraday Ave | Carlsbad, CA 92008 | Rosanne.Humphrey@carlsbadca.gov

Eleocharis acicularis	Needle spikerush	None	None	N/A	
Eryngium aristulatum var. parishii	San Diego button celery	Endangered	Endangered	Covered; Narrow Endemic	
Juncus bufonius	Common toad rush	None	None	N/A	
Navarretia fossalis	Spreading navarretia	CRPR 1B.1	Threatened	Covered; Narrow Endemic	
Orcuttia californica	California Orcutt grass	Endangered	Endangered	Covered; Narrow Endemic	
Pilularia americana	Pillwort	None	None	N/A	
Psilocarphus brevissimus	Woolly marbles	None	None	N/A	
Malvella leprosa	Alkali mallow	None	None	N/A	
Marsilea vestita	Hairy Water Clover	None	None	N/A	
Nitella sp.	Green algae	None	None	N/A	

<sup>1</sup> CRPR = California Rare Plant Rank. A rank of 2B.1 signifies a species that is Rare or Endangered in California, but more common elsewhere.

#### San Diego Button Celery (Eryngium aristulatum var. parishii)

San Diego button celery is both federally and state listed as Endangered, is considered a Narrow Endemic under the HMP, and is covered by the HMP. San Diego button celery was found throughout almost the entire Project area. In many areas, it provides almost 100% cover of the ground. The population was conservatively estimated at well over 500,000 individuals in 2023, similar to what has been seen in previous surveys. The population at the Project area is likely the single largest known occurrence for this species anywhere in the United States (See Figure 6, and photos in Attachment A).

#### Spreading Navarretia (Navarretia fossalis)

Spreading navarretia is federally listed as Threatened, is considered a Narrow Endemic under the HMP, and is covered by the HMP. As in previous surveys, spreading navarretia was found in both of the two known populations in 2023 and was estimated to have a total population size of over 2,000 plants (See Figure 6, and photo in Attachment A).

#### California Orcutt Grass (Orcuttia californica)

California Orcutt grass is federally, and state listed as Endangered, is considered a Narrow Endemic under the HMP, and is covered by the HMP. California Orcutt grass depends on greater rainfall amounts and longer inundation periods which were present in 2023, resulting in successful germination and flowering of this species. Observation of California Orcutt grass were more extensive in the Preserve area than in any previous year, with numbers higher than ever recorded, estimated to be over 2,000 plants in 2023 (See Figure 6b, and photo in Attachment A)

#### Orcutt's Brodiaea (Brodiaea orcuttii)

Orcutt's brodiaea is not federally or state listed, but is considered a Narrow Endemic under the HMP, and is covered by the HMP. Orcutt's brodiaea was observed in 2023 in one location in the southern end of the Project area, with six plants observed (Figure 6b).

#### San Diego Marsh Elder (Iva hayesiana)

In addition to the vernal pool species discussed above, the only other special-status plant species observed onsite is San Diego marsh elder (*Iva hayesiana*), a small, evergreen subshrub that occurs in wetlands or transitional areas. This species is not federally or state listed, is not considered a Narrow Endemic under the HMP, and is not covered by the HMP; however, San Diego marsh elder has a California Rare Plant Rank of 2B.2 (Rare or Endangered in California, but more common elsewhere).

#### 6.3.2 Special-Status Wildlife

Source: Dudek 2023, LSA 2020

Three special-status wildlife species have been observed onsite, as described below and shown in Figure 5 and Figure 6.

#### San Diego Fairy Shrimp (Branchinecta sandiegonensis)

San Diego fairy shrimp is federally listed as Endangered, a California Species of Special Concern, is considered a Narrow Endemic under the HMP, and is covered by the HMP. While full USFWS protocol surveys were not conducted in 2023, observations during monitoring found San Diego fairy shrimp in two locations at the northern end of the Project area (Figure 6a). The population of San Diego fairy shrimp in the Project area was estimated to be about 500 individuals in 2023.

#### Riverside Fairy Shrimp (Streptocephalus woottoni)

Riverside fairy shrimp is federally listed as Endangered, a California Species of Special Concern, is considered a Narrow Endemic under the HMP, and is covered by the HMP. While full USFWS protocol surveys were not conducted in 2023, observatoins during monitoring found Riverside fairy shrimp in one location at the southern end of the Project area (Figure 6b). The population of Riverside fairy shrimp in the Project area was estimated to be about 1,000 individuals in 2023.

#### Coastal California Gnatcatcher (Polioptila californica californica)

Coastal California gnatcatcher is federally listed as Threatened, a California Species of Special Concern, and is covered by the HMP. This species was observed within coastal sage scrub at the southern half of the Project area during LSA's 2020 general biological resources survey (shown on Figure 5).

#### 6.4 U.S. Fish and Wildlife Service Critical Habitat Areas

Source: LSA 2020

USFWS-designated critical habitat polygons for spreading navarretia and San Diego fairy shrimp cover the entire Project area portion of the Project area.

#### **6.5 Jurisdictional Aquatic Resources**

Dudek 2024a

Four aquatic resource types were documented in the Biological Study Area and are described in further detail below: freshwater pond, scrub-shrub wetland, vernal pool, and riparian area. **Figure 7**, Aquatic Resources, visually depicts aquatic resources mapped in the Biological Study Area. The complete report is included in **Attachment D**.

#### 6.5.1 Non-Wetland Waters

#### **Freshwater Pond**

There is one (1) freshwater pond (Pond-1a and Pond-1b) comprised of 0.123 acre (170 linear feet [LF]) in Areas 7 and 8 of the Biological Study Area. Freshwater ponds occur in closed landscape depressions. The pond had standing water up to approximately 12 inches in depth at the time of the field delineation, but is small enough in size that it is likely to have intermittent hydrology that dries up completely for part of the year. Evidence of an ordinary high water mark within the pond included destruction of terrestrial vegetation, and change in plant community and/or cover. Inundation was visible on aerial imagery (Google Earth 2023). The pond was predominantly barren of vegetation but did support sparse pale spikerush (*Eleocharis macrostachya*) and curly dock outside of the Biological Study Area and wetland

sampling point locations. The pond was adjoined to the east by Vernal Pool-3 (described in more detail below).

# 6.5.2 Wetlands

#### Scrub-Shrub Wetland

There is one (1) scrub-shrub wetland comprised of 0.032 acres (52 LF) in Area 3 of the Biological Study Area. Scrub-shrub wetlands are three-parameter wetlands with woody plants less than 20 feet in height as the dominant life form. The scrub-shrub wetland supports a tree canopy of Goodding's willow (*Salix gooddingii*), shrub canopy of arroyo willow and coyote brush, and sparse understory of annual tall willowherb (*Epilobium brachycarpum*). Wetland hydrology was confirmed by the presence of standing water and water- stained leaves. The wetland had standing water up to approximately 4 inches in depth at the time of the field delineation. Soils were assumed to be hydric due to the presence of hydric vegetation and wetland hydrology.

#### Vernal Pool

There are three (3) vernal pools, comprised of 1.006 acres (1,183 LF), in the Biological Study Area. Vernal Pool-1 occurs in Area 1, Vernal Pool-2 occurs in Area 2, and Vernal Pool-3a through -3f are all associated with the same hydrologically connected feature occurring in Areas 3 through 8. Vernal pools are three-parameter wetlands with a hardpan or restrictive soil layer that supports shallow seasonal inundation and habitat for distinctive plant and animal species. The vernal pools were dominated by fascicled tarweed, hyssop loosestrife, and San Diego button-celery. Wetland hydrology was confirmed by the presence of surface soil cracks and biotic crust. Areas of standing water up to approximately 6 inches in depth were present at the time of the field delineation. Soils were assumed to be hydric due to the presence of hydric vegetation and wetland hydrology.

#### 6.5.3 Riparian

There are two (2) riparian areas comprised of 0.042 acres (66 LF) in Areas 2 and 3 of the Biological Study Area. Riparian-1 consists of a single arroyo willow shrub surrounded by coyote brush that adjoins Vernal Pool-2 to the east. Riparian-2 consists of a single California sycamore tree that is rooted outside of the Biological Study Area, with a drip line that extends over upland scrub habitat within the Biological Study Area. Riparian areas did not exhibit evidence of wetland hydrology.

#### 6.5.4 Aquatic Resources Data Summary

Results from observable field indicators at ten (10) wetland sampling points indicate that approximately 1.203 acres (1,471 linear feet) of aquatic resources occur in the Biological Study Area. The data collected at each wetland sampling point are included in the full Aquatic Resources Delineation Report (Attachment D) and summarized in **Table 3** below. Photos of the potential aquatic features delineated within the Biological Study Area, as well as additional areas reviewed for the presence of these resources, are also provided in Attachment D.

Sampling Point ID	Wetland Vegetation	Wetland Soils*	Wetland Hydrology	Determination
WSP-1a	Yes	Yes	Yes	Vernal Pool
WSP-1b	No	No	No	Upland
WSP-2	No	No	No	Riparian
WSP-3a	Yes	Yes	Yes	Scrub-shrub wetland

#### **Table 3. Wetland Sampling Point Data Summaries**

#### **Environmental Sustainability Department**

Habitat Management Division | 1635 Faraday Ave | Carlsbad, CA 92008 | Rosanne.Humphrey@carlsbadca.gov

WSP-3b	No	No	No	Upland
WSP-4a	Yes	Yes	Yes	Vernal Pool
WSP-4b	No	No	No	Upland
WSP-5a	No	No	Yes	Freshwater Pond
WSP-5b	Yes	Yes	Yes	Vernal Pool
WSP-5c	No	No	No	Upland

\* Digging is not permitted in the Preserve; therefore, soils were assumed to be hydric when wetland hydrology and vegetation indicators were present. Soils were not assumed to be hydric when either hydrophytic vegetation or wetland hydrology was absent.

Based on the data collected during the field delineation, Dudek determined that approximately 1.203 acres of aquatic resources occur in the Biological Study Area (**Table 4**). These results are preliminary until verified by the aquatic resources agencies.

# Table 4. Summary of Potentially Jurisdictional Aquatic Resources Occurring within the Biological StudyArea

Type of Jurisdictional Aquatic Resources	Regulatory Authority	Total within Biological Study Area (acres)
Non-wetland Waters	CCC, CDFW, and RWQCB	0.123
Scrub-Shrub Wetlands	CCC, CDFW, and RWQCB	0.032
Vernal Pools	CCC and RWQCB	1.006
Riparian	CCC and CDFW	0.042
Grand Total Jurisdictional Aquatic Resources		1.203

# Waters of the United States (ACOE)

The vernal pools, scrub-shrub wetland, and freshwater pond (non-wetland waters) are isolated in nature and lack a direct, continuous surface connection to a traditional navigable waterbody (i.e. Pacific Ocean or a tributary to the Pacific Ocean). In accordance with the Revised Definition of 'Waters of the United States'; Conforming" 88 FR 61964 (September 8, 2023), neither of these features meet the current definition of waters of the United States. A request for an Approved Jurisdictional Determination confirming the absence of waters of the United States from the Biological Study Area is currently being finalized with the ACOE.

#### Waters of the State (RWQCB)

One (1) freshwater pond comprising approximately 0.123 acres of non-wetland waters, three (3) vernal pools and one (1) scrub-shrub wetland comprising 1.038 acres of wetlands are anticipated to meet the criteria for jurisdictional waters of the state. Contrary to the USACE, the RWQCB asserts jurisdiction over isolated surface waters under the Porter-Cologne Water Quality Control Act.

#### **CDFW** Jurisdiction

All aquatic resources comprising described in Section 6.2 are anticipated to also be subject to CDFW regulation. These include 0.123 (170 linear feet) acres of non-wetland waters and 1.038 acres (1,235 linear feet) of wetlands, The riparian areas are not associated with a lake or streambed and are therefore not anticipated to be subject to CDFW regulation.

#### **California Coastal Commission Jurisdiction**

All aquatic resources described in Section 4 are anticipated to be subject to CCC regulation, as they constitute habitat for listed species and/or are at least single-parameter wetlands (i.e., positive wetland hydrology, hydrophytic vegetation, or hydric soils). These include 0.123 acres (170 linear feet) of non-wetland waters, 1.038 acres (1,235 linear feet) of wetlands, and 0.042 acres (66 linear feet) acres of riparian areas.

# 6.5.5 National Wetland Inventory

The National Wetland inventory shows a linear pattern of a freshwater palustrine emergent wetland through the separate Biological Study Area (USFWS 2023; see Figure 4 in Attachment D). These mapped patterns are consistent with and overlap the delineated vernal pool complex.

# 6.6 Wildlife Movement Corridors

The Project area does not provide a significant movement corridor for wildlife. The Project area is completely surrounded by development, and the only opportunity for movement north or south of the site is within the railway right-of-way. Any such movement would also be deterred by a number of busy east-west roadways beyond the project site that would have to be crossed at grade.

# **7.0 PROJECT IMPACTS**

# 7.1 Significance Thresholds

The following significance thresholds, pursuant to the California Environmental Quality Act (CEQA), were used to evaluate Project impacts to biological resources.

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by California Department of Fish and Game or U.S. Fish and Wildlife Service?
- b) Have a substantial adverse effect on any riparian, aquatic or wetland habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by California Department of Fish and Game or U.S. Fish and Wildlife Service?
- c) Have a substantial adverse effect on state or federally protected wetlands (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

# 7.2 Biological Impact Analysis

All potential impacts discussed below are temporary. There are no permanent Project-related impacts to biological resources. Potential direct and indirect project impacts are discussed below as well as the mitigation measures that would reduce the impacts to a less than significant level.

### a) Special-Status Species

#### **1. Special-Status Plant Species**

A total of five special-status plant species have been observed onsite (**Table 5**, Figure 6); however, only three have the potential to be affected by the Project. San Deigo button celery is the species with the greatest potential to be impacted due to its extensive distribution. As discussed above, this Endangered species (state and federal listing) occurs throughout almost the entire Project area, and it may be the single largest occurrence within the United States (Dudek, 2023). California Orcutt grass, also an Endangered species (state and federal listing), has a fairly extensive distribution in the southern portion of the site, and it may be close enough to manholes 41C-5, 41C-55 to be affected by the Project (See Figure 3 for manhole numbers). Spreading navarretia, a Threatened (federal) species has been documented close to manhole 41A-7. All three species are considered Narrow Endemic by the HMP, and are covered by the HMP.

The location of San Diego marsh elder was not documented, but this species was included in the list of plant species observed by LSA (LSA 2020). This species is not listed by state or federal agencies as Threatened or Endangered, but it has a California Rare Plant Rank (CRPR) of 2B.2, which means that it is considered rare or endangered in California, but more common elsewhere. This species is presumed absent from the temporary impact areas and 50-foot survey buffers because this is an evergreen shrubby species that is easily observed when present at any time of the year, and it would have been documented by Dudek during the most recent surveys within the Biological Study Area.

Vernal Pool Species	Common Name	State Status <sup>1</sup>	Federal Status	НМР	Potential Impacts? (Manhole #)
Brodiaea orcuttii	Orcutt's brodiaea	CRPR 1B.1	None	Covered; Narrow Endemic	No
Eryngium aristulatum	San Diego button celery	Endangered	Endangered	Covered;	Yes; 41A-5, 41A-6, 41A-7, 41C-
var. parishii				Narrow Endemic	2, 41C-4, 41C-5, 41C-55, 41C-6
Navarretia fossalis	Spreading navarretia	CRPR 1B.1	Threatened	Covered;	Yes; 41A-7
				Narrow Endemic	
Orcuttia californica	California Orcutt grass	Endangered	Endangered	Covered;	Yes; 41C-5, 41C-55
				Narrow Endemic	
Iva hayesiana	San Diego marsh elder	CRPR 2B.2	None	Not Covered	No

Table 5.	<b>Special-status</b>	<b>Plant Species</b>	within the	<b>Project Area</b>

<sup>1</sup> CRPR = California Rare Plant Rank. A rank of 1B signifies that a species is rare or endangered in California and elsewhere; 2B signifies that a species is rare or endangered in California, but more common elsewhere.

#### **Direct Impacts (Temporary)**

Because there were too many plants to document individually, and because the location of vernal pool plants can vary significantly from year to year, the rare plant species were documented as polygons representing the outer extent of the population at the time of the 2023 survey. Therefore, it is unknown if an individual San Diego button celery, California Orcutt grass or spreading navarretia will be present within the temporary impact area at the time of Project implementation. Potential temporary direct impacts could occur to these species from vegetation removal for the manhole access pathways or external manhole rehabilitation activities, such as the replacement or installation of 5-foot-square concrete pads around the manholes. Other impacts could occur along the pathways from trampling or bringing equipment back and forth between the trail/sidewalk and the manhole.

Mitigation measure **BIO-1** requires that a vernal pool biologist be present onsite when the access pathways and work areas are established (e.g., vegetation removal and siting of pathways), and the pathways will be slightly revised as necessary according to these onsite conditions to avoid impacts to these sensitive species. No vernal pool species will be trimmed or removed. In addition, because the work will be done during the dry season when soils are completely dry, most of the vernal pool plants are expected to have senesced or significantly contracted during the Project implementation. Placement of clean boards along the pathway and manhole work area will protect the plants from trampling and other soil disturbance, and the boards will be removed when the work is complete. Mitigation measure **BIO-5** requires that a qualified vernal pool biologist oversee implementation of **BIO-1c**, **1d and 1g**.

With implementation of mitigation measures **BIO-1** and **BIO-5**, impacts to special-status plant species from the proposed Project would be a **Less than Significant Impact with Mitigation Incorporated**.

# Indirect Impacts (Temporary)

Temporary indirect impacts could be caused by dumping cut vegetation onsite. Although some minor brush piles can provide hiding space for wildlife, there will be a large amount of material that could smother sensitive vernal pool plants and potentially serve as tinder for wildfire. Implementation of mitigation measure **BIO-2** will prevent negative effects from the cut vegetation by requiring it to be properly disposed of or mulched and dispersed onsite at the discretion of the Project vernal pool biologist.

Temporary indirect impacts to the vernal pool plants could also occur if unauthorized persons enter the site during Project activities, or before the restoration of temporary impact areas is complete. The impacts could be caused by trampling, bringing in contaminants, damage from encampments, etc. For the most part, the vernal pools and other portions of the Project area are protected along the eastern edge from unauthorized access by a thick wall of mature coastal sage scrub adjacent to the trail, and a chain link fence, located approximately 20 feet beyond the coastal sage scrub. However, there will be easy access for unauthorized persons and dogs once the vegetation is removed to establish the pathways to the manholes. Currently, there have been many direct and indirect observations of trail users and dog walkers entering the site through an opening in the coastal sage scrub at the location of the proposed pathway for manhole 41C-2. This leads directly to a vernal pool behind the wall of coastal sage scrub, although the area is blocked from further incursion by the chain link fence. The nine new access pathways will provide access beyond the chain link fence into the main vernal pool area. Implementation of mitigation measure **BIO-2** would require that access into the Preserve along the pathways be blocked during and after Project implementation, until the habitat grows back, and that temporary signage be installed during the habitat restoration period.

In addition, the vernal pool plants could be indirectly impacted by any contaminants brought in by Project personnel and their equipment, including weed seeds, pests, pathogens and other toxic materials. Mitigation measure **BIO-2** requires that all Project-related personnel decontaminate their clothes, boots and equipment every day before entering the site.

With implementation of mitigation measure **BIO-2**, impacts to special-status plant species from the proposed Project would be **Less than Significant Impact with Mitigation Incorporated**.

# 2. Special-Status Wildlife Species

Three special-status wildlife species occur onsite (**Table 6**, Figure 5 and Figure 6). The two species of fairy shrimp (San Diego and Riverside fairy shrimp) are both Endangered (federal listing), State Species of Special Concern, and Narrow Endemic under the HMP. The coastal California gnatcatcher, a Threatened species (federal listing) and State Species of Special Concern, has been documented onsite and is presumed to occupy all coastal sage scrub in the Project area (Figure 5). All three of these species are covered by the HMP.

Vernal Pool Species	Common Name	State Status	Federal Status HMP		Status Federal Status HMP		Potential Impacts? (Manhole #)
Branchinecta	San Diego fairy	Species of	Endangered	Covered;	Yes; 41A-7		
sandiegonensis	shrimp	Special Concern		Narrow Endemic			
Streptocephalus	Riverside fairy	Species of	Endangered	Covered;	No		
woottoni	shrimp	Special Concern		Narrow Endemic			
Polioptila californica	Coastal California	Species of Special	Threatened	Covered	Yes;		
californica	gnatcatcher	Concern			during the breeding season		

# Table 5. Special-Status Wildlife Species within the Project Area

San Diego fairy shrimp has been observed close to manhole Biological Study Area 41A-7 (see Figure 6) and could be temporarily impacted by the Project. Riverside fairy shrimp is outside of the temporary impact and 50-foot Biological Study Area and is not expected to be impacted. Direct and indirect Project impacts to San Diego fairy shrimp are similar to the impacts described above for vernal pool plant species. Coastal California gnatcatcher could be temporarily impacted by the Project as described below.

#### San Diego Fairy Shrimp

# Direct Impacts (Temporary)

Temporary direct impacts to San Diego fairy shrimp could occur if the Project is implemented when there is ponding or wet soils, or if the access pathways are not protected. Even when soils are dry, the fairy shrimp may persist in the soil as cysts, which will hatch during the next rain.

Mitigation measure **BIO-1** requires that a vernal pool biologist be present onsite when the access pathways and work areas are established (e.g., vegetation removal and siting of pathways), and the pathways will be slightly revised as necessary according to these onsite conditions to avoid impacts to fairy shrimp. Placement of clean boards along the pathway and manhole work area will protect the trampling of fairy shrimp cysts and prevent soil disturbance. The boards will be cleaned and removed when the work is complete to ensure that no fairy shrimp cysts are taken offsite.

With implementation of mitigation measure **BIO-1**, impacts to San Diego fairy shrimp from the proposed Project would be a **Less than Significant Impact with Mitigation Incorporated**.

#### Indirect Impacts (Temporary)

As described for vernal pool plants, temporary indirect impacts to the San Diego fairy shrimp could occur if unauthorized persons enter the site during Project activities, or before the restoration of temporary impact areas is complete. The impacts could be caused by trampling, bringing in contaminants, soil disturbance from encampments, etc. The nine new access pathways will provide access beyond the chain link fence into the main vernal pool area. Implementation of mitigation measure **BIO-2** would require that access into the Preserve along the pathways be blocked during and

after Project implementation, until the coastal sage scrub grows back over the temporary pathways, and that temporary signage be installed during the habitat restoration period.

In addition, the San Diego fairy shrimp could be indirectly impacted by any contaminants brought in by Project personnel and their equipment, including weed seeds, pests, pathogens and other toxic materials. Mitigation measure **BIO-2** requires that all Project-related personnel decontaminate their clothes, boots and equipment every day before entering the site.

With implementation of mitigation measure **BIO-2**, impacts to San Diego fairy shrimp from the proposed Project would be **Less than Significant Impact with Mitigation Incorporated**.

#### Coastal California Gnatcatcher, Raptors and Migratory birds

The coastal California gnatcatcher could be directly impacted if the coastal sage scrub onsite is removed during the breeding season. Pursuant to HMP requirements, mitigation measure **BIO-4** prohibits removal of gnatcatcher habitat (coastal sage scrub) between March 15 and August 15, and includes impact avoidance measures if the remainder of the breeding season cannot be avoided. This mitigation measure would also protect other bird species that may nest in the coastal sage scrub habitat. Raptors are not expected to be impacted, as no trees will be removed for this Project. No other impacts to gnatcatchers, raptors or migratory birds are expected, as the activities will be performed with hand tools only (no heavy equipment) and noise levels are not expected to exceed required thresholds.

With implementation of mitigation measure **BIO-4**, impacts to the coastal California gnatcatcher, raptors and migratory birds from the proposed Project would be **Less than Significant Impact with Mitigation Incorporated**.

# b) Sensitive Habitat

# Direct Impacts (Temporary)

A total of 0.072 acre of **coastal sage scrub** will be temporarily impacted by removal of the vegetation to create access pathways to each manhole (**Table 8, Figure 8**). Vegetation within the temporary access routes would require trimming and removal of the entire aboveground portion of the woody shrubs, leaving only the stumps and the belowground roots. Implementation of mitigation measure **BIO-1** will minimize these impacts, by requiring that the Project biologist monitor vegetation removal to ensure that the width of the access pathways does not exceed eight feet wide (the minimum required to bring the tools and equipment to the manholes). Restoration of the temporary impacts to coastal sage scrub at a 1:1 ratio will be accomplished through implementation of Conceptual Restoration Plan required in mitigation measure **BIO-3**. This plan must be approved by the city's Habitat Management Division prior to Project initiation.

Although Table 8 shows an impact of 0.033 acre of "vernal pool/non-native grassland," no vegetation removal other than weedy non-natives will occur within the impact areas, and the dry vernal pool areas (including any vernal pool plants that may be present) will be protected by boards placed along the pathways. Table 8 also shows an impact of 0.001 acre to southern willow scrub; however, this is from the canopy overhead, which will not be trimmed or removed. Therefore, there are no impacts to this habitat type. The remaining 0.020 acre of impacts are within disturbed habitat, bare ground and developed, none of which are sensitive vegetation types.

	Temporary Impacts by Individual Manhole (Acres) <sup>2, 3</sup>								
Vegetation Community <sup>1</sup>	41A-5	41A-6	41A-7	41C-2	41C-3	41C-4	41C-5	41C-55, 41C-6	TOTAL
Vernal Pool/NNG	0.000		0.006	0.004	0.002	0.004	0.010	0.007	0.033 <sup>4</sup>
Freshwater Marsh									
Southern Willow Scrub		0.000	0.001						0.001 <sup>4</sup>
Ponded Water									
Coastal Sage Scrub			0.004	0.000	0.008	0.006	0.018	0.006	0.042
CSS, Baccharis-Dominated	0.013	0.010	0.008						0.030
Nonnative Grassland									
Disturbed Habitat				0.008					0.008
Bare Ground				0.000					0.011
Ornamental									
Developed								0.001	0.001
TOTAL <sup>2</sup>	0.013	0.010	0.018	0.012	0.010	0.010	0.030	0.024	0.127

Table 8. Temporary Impacts to Sensitive Vegetation Communities by Manhole

1 NNG = non-native grassland; CSS = Coastal Sage Scrub

2 The totals may not equal sum due to rounding.

3 The southernmost two manholes are very close together, and the 50-ft buffer areas of the two merged together (Figure 3); therefore, these impacts were calculated as a combined value.

4 Although impacts to "vernal pool/non-native grassland" shows in the table, no vegetation removal other than weedy nonnatives will occur within the impact areas, and the dry vernal pool (including any vernal pool plants that may be present) will be protected by boards placed along the pathways. In addition, the 0.001 acre impact to southern willow scrub is from the canopy overhead, which will not be trimmed or removed; therefore, there are no impacts to this habitat type.

With implementation of mitigation measures **BIO-1** and **BIO-3**, temporary direct impacts to 0.072 acre of coastal sage scrub from the proposed Project would be **Less than Significant Impact with Mitigation Incorporated**.

#### Indirect Impacts (Temporary)

#### Vernal Pool Habitat

Potential indirect impacts to vernal pool habitat are described in Section 7.2a (vernal pool plants and fairy shrimp). With implementation of mitigation measure **BIO-2**, impacts to vernal pool habitat from the proposed Project would be **Less than Significant Impact with Mitigation Incorporated**.

#### **Coastal Sage Scrub Habitat**

Temporary indirect impacts to coastal sage scrub could be caused by dumping cut vegetation onsite, which could be flammable and potentially serve as tinder for wildfire. Implementation of mitigation measure **BIO-2** will prevent negative effects from the cut vegetation by requiring that it be properly disposed of or mulched and dispersed onsite at the discretion of the Project vernal pool biologist.

Unauthorized trespass is unlikely to cause many impacts to the habitat itself because the coastal sage scrub is mature and too dense to walk through; however, encampments could result in ignition of a fire that could burn the coastal sage scrub. One small encampment was identified in 2023 right next to the access path for the 41C-6 manhole just outside of the Project area on the southern boundary. Implementation of mitigation measure **BIO-2** would require that access into the Preserve along the pathways be blocked during and after Project implementation, until the habitat grows back, and that temporary signage be installed during the habitat restoration period.

Weed seeds could be brought in by the Project personnel or trespassers, which could impact the coastal sage scrub habitat over time. Mitigation measure **BIO-2** requires that all Project-related personnel decontaminate their clothes, boots and equipment every day before entering the site and that access trespassers be blocked.

With implementation of mitigation measure **BIO-2**, impacts to sensitive habitat from the proposed Project would be **Less than Significant Impact with Mitigation Incorporated**.

### c) Protected Wetlands, Including Vernal Pools

As discussed in Section 7.2b, there are no direct impacts to freshwater marsh, southern willow scrub or ponded water. A total of 0.033 acre of land cover identified as "vernal pool/non-native grasslands" under the jurisdiction of the RWQCB and CCC occurs within the temporary impact area. However, the Project will not include any activities that would result in "direct removal, filling, hydrological interruption, or other means." All activities will occur during the dry season and all power washing will occur completely inside the sewer manholes and pipeline areas and will not adversely affect protected wetlands, including vernal pools.

Therefore, the Project would have **no significant impact** on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means.

# d) Wildlife Movement or Use of Native Wildlife Nursery Sites

The Project area does not provide a significant movement corridor for wildlife. The Project area is completely surrounded by development, and the only opportunity for movement north or south of the site is within the railway right-of-way. Any such movement would also be deterred by a number of busy east-west roadways that would have to be crossed at-grade. Therefore, the Project would have **no significant impact** on wildlife movement or use of native wildlife nursery sites.

# e) Local Policies or Ordinances Protecting Biological Resources

#### Source: Dudek 2024b

The Project site is within the Mello II segment of the city's Local Coastal Plan (LCP). The city's LCP contains policies to protect environmentally sensitive habitat areas including those provided in the city's HMP. The coastal zone standards in the HMP are discussed in Section 7.2f below.

Further, the Project would comply with applicable requirements described in the City's LCP Policy 3-4, Grading and Landscaping because, as discussed in Section X, Hydrology and Water Quality, of this Initial Study, all Project activity would be subject to the typical restrictions, including BMPs and requirements that address erosion and runoff, including the federal CWA; NPDES and MS4 Permits issued by the San Diego RWQCB; City of Carlsbad Engineering Standards; the city's Master Drainage Plan, Grading Ordinance, Storm Water Ordinance, BMP Design Manual, and Jurisdictional Runoff Management Plan; and the Project-specific SWPPP. Project construction and maintenance activities, which would occur on the 0.13-acre area of direct impact within the Project site, would not substantially increase the rate of surface runoff. The scope of work involved in the rehabilitation process would not require any significant excavation or disturbance of the surrounding soil. Although, minor soil disturbance may occur during access and staging for the rehabilitation work, which could increase the risk of soil erosion in the immediate vicinity of the manhole, plywood would be placed along access routes to protect the trimmed vegetation and soil from trampling. Furthermore, once the rehabilitation work is complete the Project site would be returned to its existing conditions.

With implementation of mitigation measures **BIO-1**, **BIO-2**, **BIO-3**, **BIO-4**, and **BIO-5**, the Project would not conflict with any local policies or ordinances protecting biological resources. Therefore, potential impacts would be **Less than Significant Impact with Mitigation Incorporated**.

*f)* Approved Regional Habitat Conservation Plan, including the HMP Source: LSA 202

San Diego button celery, spreading navarretia, California Orcutt grass, San Diego fairy shrimp and Riverside fairy shrimp and coastal California gnatcatcher are all "covered species" under the HMP. As discussed in Section 7.2(a) above, implementation of mitigation measures **BIO-1**, **BIO-2**, **BIO-4** and **BIO-5** would reduce potential direct and indirect impacts to these species to a level below significant.

In addition, all projects within the Coastal Zone are required to comply with HMP Coastal Zone Standards 7-1 through 7-14 (HMP Section D). Because the Project is a maintenance project, rather than a development project, many of the policies are not applicable. Compliance with these standards is described below.

- **7-1 Environmentally Sensitive Habitat Areas (ESHA).** Coastal sage scrub is considered ESHA by the Coastal Commission. In addition, although not specifically mentioned in the Coastal Zone standards, vernal pools are also considered to be ESHA due to their rarity and value.
- 7-2 Coastal Sage Scrub. Conservation of a minimum of 67 percent of the coastal sage scrub and 75 percent of the coastal California gnatcatchers onsite is required. The Project is expected to temporarily affect 0.072 acre of coastal sage scrub, and no coastal California gnatcatchers are expected to be affected by Project-related activities. Implementation of mitigation measures BIO-1, BIO-2, BIO-3, BIO-4 and BIO-5 would reduce potential impacts to a level below significant. See Section 7.2 (a)-(c) for more details.
- 7-3 Oak Woodland. No oak woodland is present within the temporary impact area.
- 7-4 Streams. No streams are present within the temporary impact area.
- **7-5 Ephemeral Drainages and Ephemeral Streams.** No ephemeral drainages or ephemeral streams are present within the temporary impact area.
- 7-6 Wetlands. A total of 0.033 acre of vernal pools/non-native grassland occurs within the temporary impact area. Vernal pools are considered to be a CCC wetland. No direct impacts will occur from the project. Implementation of mitigation measure BIO-1 will reduce potential direct impacts to a level below significant. See Section 7.2(b) for more details
- **7-7** Wetland Mitigation Requirements. Implementation of mitigation measure BIO-1 will reduce potential direct impacts to CCC wetlands (vernal pools) to a level below significant.
- **7-8** No Net Loss of Habitat. The Project will not result in a net loss of coastal sage scrub habitat within the Coastal Zone. Temporary impacts to coastal sage scrub will be mitigated through restoration to pre-project conditions (**BIO-3**).
- **7-9** Upland Habitat Mitigation Requirements. Temporary impacts to coastal sage scrub will be mitigated through restoration to pre-project conditions (BIO-3).
- **7-10** Highly Constrained Properties. The Project site is not a "highly constrained property" as defined by this standard (greater than 80% cover of coastal sage scrub on the property).
- **7-11** Upland and Wetland Buffers. This Project is a maintenance project, rather than a development project. In addition, there will be no permanent impacts to habitat onsite.
- 7-12 Grading and Landscaping Requirements. No grading or landscaping are proposed for this Project.
- **7-13** City-Owned Lands Adjacent to Macario Canyon and Veterans Memorial Park. These standards are not applicable to this Project.
- 7-14 Parcel-Specific Standards These standards are not applicable to this Project.

With implementation of mitigation measures **BIO-1**, **BIO-2**, **BIO-3**, **BIO-4**, and **BIO-5**, the Project would not conflict with any local policies or ordinances protecting biological resources or the city's adopted HMP. Therefore, potential impacts would be **Less than Significant Impact with Mitigation Incorporated**.

# 8.0 PROJECT MITIGATION AND AVOIDANCE MEASURES

#### BIO-1 Measures to avoid direct impacts to vernal pool species and sensitive vegetation

The following mitigation measures will be implemented to avoid impacts to vernal pool species (plants and fairy shrimp) and sensitive vegetation from direct temporary impacts caused by vegetation removal, trampling, etc. as described in Section 7.2 (a) and (b).

- a. No work shall be conducted during the rainy season, when soils are wet, or ponding is present.
- b. The use of heavy machinery for this Project is prohibited. Heavy machinery could damage vernal pool species and delicate soils.
- c. A rare plant survey shall be conducted by a qualified vernal pool biologist immediately before work areas are established and impacts to any species observed shall be avoided.
- d. The vernal pool biologist shall be onsite during vegetation trimming, establishment of the pathways, placement of boards and removal of boards. The biologist will ensure that the access pathways are no wider than eight feet, and will assist with slight modifications of pathways if necessary to avoid impacts to vernal pool species.
- e. The biologist will be present to ensure that, prior to placement, all boards used onsite along the pathways and work areas are clean of all debris, plant material (seeds, leaves, etc), pests or other contaminants that could negatively affect the vernal pool species.
- f. When the work is complete, the boards will be thoroughly cleaned before removal to ensure that they do not pick up any fairy shrimp cysts, vernal pool plant seeds or other material that should stay onsite.
- g. To avoid any other inadvertent impacts to the sensitive species, habitats or Preserve area, the biological monitor will be onsite daily to monitor Project activities.

#### BIO-2 Measures to avoid indirect impacts to vernal pools and sensitive vegetation

The following mitigation measures will be implemented to avoid impacts to vernal pool plants and sensitive vegetation from indirect temporary impacts caused by dumping cut vegetation onsite, unauthorized access and potential contamination from Project-related personnel and equipment as described in Section 7.2 (a) and (b).

- a. All Project staging and equipment storage shall occur outside of the Preserve on developed or unvegetated areas.
- b. All cut vegetation must be properly disposed of offsite at an appropriate facility, or mulched into small pieces (approximately one to three inches) and disbursed onsite as directed by the Project vernal pool biologist. If acceptable to the HOA, the mulch could be spread along the edge of the trail to suppress weed growth.
- c. During the Project, access along the temporary pathways by unauthorized persons (after hours, and after all maintenance on a manhole has been completed) will be blocked by orange construction fencing or other appropriate method (temporary measure).

- d. Upon completion of the Project, to avoid ongoing indirect impacts from unauthorized access into the sensitive areas from trail users, dog walkers, and other unauthorized persons the following measures will be implemented until the coastal sage scrub grows back enough to block access:
  - i. Fencing and gates and any other holes in the chain link fence will be fully repaired;
  - Temporary barriers that can withstand vandalism (e.g., three wire or post and cable fencing) will be placed perpendicularly to block the access path. The barrier shall be placed at the entrance closes to the trail. Where necessary, informative signs (e.g., "Habitat Restoration in Progress") will be placed on these sections to inform trail users to stay out.
- e. To protect the Preserve from contamination (weed seeds, pests, or other contaminants), anyone entering the site will be required to clean off their equipment, clothing and boots prior to entering the site each day. The Project biologist will monitor compliance and may inspect boots and/or equipment. Decontamination methods include:
  - i. Carry appropriate equipment to remove soil, seeds, dried mud and plant parts (e.g., wire brushes, boot brushes, backpack sprayer or spray bottle with water, soap, hoof picks or small screwdriver, etc.).
  - ii. Remove all material from boots (including all crevices on top and bottom of boots), clothing and equipment in the staging area located on hardscape prior to entering the site.
  - iii. Properly dispose of all material that is cleaned off.

#### BIO-3 Conceptual Restoration Plan for revegetation within temporary impact areas

As discussed in Section 7.2 (b) the Project would temporarily impact 0.072 acre of coastal sage scrub. After this work is completed, the contractor would remove the plywood from each manhole worker/vehicle access area, and all temporarily affected areas would be restored in place to preconstruction conditions (1:1 mitigation ratio) by allowing the trimmed vegetation and cut stumps to resprout. To facilitate this recovery, the temporary access routes would be seeded with a coastal sage scrub seed mix to help those areas recover faster, and a weed control program would be implemented to control weed invasion while the vegetation recovers. A conceptual restoration plan for the restoration of the temporary impact areas shall be prepared and approved by the city's Habitat Management Division prior to the initiation of the Project as described below.

- a. The plan shall be consistent with the city's Components of a Conceptual Restoration/Mitigation Plan (2022) and Guidelines for Habitat Creation and Restoration (2009).
- b. The plan will include a 3 to 5 year maintenance plan, which will consist of passive regrowth of the coastal sage scrub species, seeding with coastal sage scrub species, weed control, and site monitoring to evaluate signs of unauthorized trespass.
- c. The restoration plan shall also include installation of temporary barriers and signage as described in mitigation measure BIO-2c.
- d. Annual monitoring and annual reporting will be required. The restoration must meet performance standards (included in the plan) prior to sign off by the city's Habitat Management Division.

# BIO-4 Measures to avoid impacts to the Coastal California gnatcatcher, raptors, and migratory birds during the breeding season

To avoid impacts to the coastal California gnatcatcher, raptors, and migratory birds, vegetation removal and other Project activities should be avoided during the bird breeding season (January 15 – August 15). If the breeding season cannot be avoided, following mitigation measures shall be implemented:

- a. No clearing of coastal sage scrub shall occur between March 15 and August 15.
- b. The breeding season for coastal California gnatcatcher and other potentially occurring bird species (other than raptors) is February 15 August 31. If vegetation clearing cannot avoid the breeding season outside of the prohibited time frame listed above (i.e. if clearing is to occur February 15 March 14 or August 16 August 31), then pre-construction nest clearance surveys must be conducted by a qualified biologist no more than three days prior to initiation of the vegetation removal.
- c. Nest clearance surveys shall be conducted within 500 feet of the vegetation removal areas in coastal sage scrub habitat.
- d. If active nests are located, a no-work buffer shall be established around the nest until the nest is no longer active. The no-work buffer for the coastal California gnatcatcher is 500 feet. The appropriate width of the buffer for other species is to be determined by a qualified biologist and the city based on the species. All vegetation removal activity shall be prohibited within the protective buffer until all nestlings have successfully fledged.
- e. Once the vegetation has been removed, if an active nest is located, the need for a no-work buffer will be determined by the Project biologist in coordination with the city depending on the species and the specific type of work anticipated to occur near the nest.

#### BIO-5 Project biologist qualifications

A qualified Project biologist will be required to oversee the implementation of the biological mitigation measures. Because vernal pool species can be difficult to identify and vernal pool ecology is unique, the Project biologist must be approved by the city by demonstrating proficiency in working with vernal pools in the San Diego region (e.g., provide resume upon request). Specific monitoring requirements are described in each mitigation measure. Some work may be performed by other biological personnel under the direction of the Project biologist; however, the Project biologist will be responsible, and in some cases a vernal pool biologist must be the one performing the monitoring whenever identification of vernal pool habitat or species is required.

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#### **LIST OF FIGURES**

- Figure 1. Project Vicinity Map
- Figure 2. Landownership and Conservation Easements
- Figure 3. Project Site Map
- Figure 4. Pre-Existing Easements

Figure 5 (a and b). Vegetation Communities and Gnatcatcher Observation (LSA 2020)
Figure 6 (a and b). Vernal Pool Species (Dudek 2023)
Figure 7 (a - c). Impacts to Aquatic Resources (Dudek 2024)
Figure 8 (a - h). Impacts to Vegetation Communities (Dudek 2021)

# LIST OF ATTACHMENTS

Attachment A. Site Photographs Attachment B. List of Observed Plant Species Attachment C. List of Observed Wildlife Species Attachment D. Aquatic Resources Report (Dudek 2024)



SOURCE: USGS 7.5-Minute Series Encinitias Quadrangles

1,000

2,000 \_\_\_\_ Feet

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FIGURE 1 Project Vicinity Poinsettia Manhole Repair Project



Figure 2. Landowners and Conservation Easements Poinsettia Station Vernal Pool Preserve

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SOURCE: SanGIS 2020; SSURGO 2023

330 Beet



RITM0013452\_18\Figure3\_Pre-existingEasements.mxd





Nonnative Grassland/Vernal Pool

Southern Willow Scrub

Ornamental

Freshwater Marsh

Ponded Water

Bare Ground

Developed

Disturbed Habitat

Manhole

Sewer Line

Photo Locations

Note: CAGN = Coastal California Gnatcatcher

#### LEGEND



CAGN-Occupied Coastal Sage Scrub

CAGN-Occupied Baccharis-Dominated Coastal Sage Scrub

Nonnative Grassland

SOURCE: Nearmap (01/06/2020)

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FIGURE 5a sheet 1 of 2

North Ponto Interceptor Manhole Rehabilitation Project

Vegetation Communities

LSA, 2020





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Sheet 2 of 2

North Ponto Interceptor Manhole Rehabilitation Project

Vegetation Communities

LSA, 2020



SOURCE: SANGIS 2023, 2024

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80

160 Beet FIGURE 6A Vernal Pool Species 2023 Ponto Sewer Manhole Rehabilitation Project



SOURCE: SANGIS 2023, 2024

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160 Beet FIGURE 6B Vernal Pool Species 2023 Ponto Sewer Manhole Rehabilitation Project



SOURCE: SanGIS 2020

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50

100 Beet

# FIGURE 7a Impacts to Aquatic Resources Poinsettia Station Vernal Pool Preserve Sewer Manhole Rehabilitation Project



SOURCE: SanGIS 2020

100 Beet FIGURE 7b Impacts to Aquatic Resources Poinsettia Station Vernal Pool Preserve Sewer Manhole Rehabilitation Project



SOURCE: SanGIS 2020



100 Beet

# FIGURE 7c Impacts to Aquatic Resources Poinsettia Station Vernal Pool Preserve Sewer Manhole Rehabilitation Project



Biological Study Area (50' Buffer)

- Temporary Access Impact Area
- Poinsettia Station Preserve
- San Diego Button Celery
- Vegetation Communities/Land Covers
- Baccharis-dominated Coastal Sage Scrub
- Nonnative Vegetation/Vernal Pool
- Ornamental
- Disturbed
- Developed



SOURCE: LSA 2021; SANGIS 2023, 2024

FIGURE 8A Biological Resources Impacts

Ponto Sewer Manhole Rehabilitation Project



- Biological Study Area (50' Buffer)
- Temporary Access Impact Area
- Poinsettia Station Preserve
- San Diego Button Celery
- Vegetation Communities/Land Covers
- Baccharis-dominated Coastal Sage Scrub
- Coastal Sage Scrub
- Nonnative Vegetation/Vernal Pool
- Southern Willow Scrub
- Developed



SOURCE: LSA 2021; SANGIS 2023, 2024

FIGURE 8B Biological Resources Impacts Ponto Sewer Manhole Rehabilitation Project



- Biological Study Area (50' Buffer)
- Temporary Access Impact Area
- Spreading Navarretia
- Poinsettia Station Preserve
- San Diego Button Celery
- 🗖 San Diego Fairy Shrimp
- Vegetation Communities/Land Covers
- Baccharis-dominated Coastal Sage Scrub
- Barren Ground
- Coastal Sage Scrub
- Freshwater Marsh
- Nonnative Vegetation/Vernal Pool
- Ornamental
- Southern Willow Scrub
- Developed



SOURCE: LSA 2021; SANGIS 2023, 2024

FIGURE 8C Biological Resources Impacts Ponto Sewer Manhole Rehabilitation Project


- Biological Study Area (50' Buffer)
- Temporary Access Impact Area
- Consettia Station Preserve
- San Diego Button Celery
- Vegetation Communities/Land Covers
- Baccharis-dominated Coastal Sage Scrub
- Barren Ground
- Coastal Sage Scrub
- Nonnative Vegetation/Vernal Pool
- Ornamental
- Disturbed
- Developed



SOURCE: LSA 2021; SANGIS 2023, 2024

FIGURE 8D Biological Resources Impacts Ponto Sewer Manhole Rehabilitation Project



Biological Study Area (50' Buffer)

- Temporary Access Impact Area
- Poinsettia Station Preserve
- San Diego Button Celery

Vegetation Communities/Land Covers

- Baccharis-dominated Coastal Sage Scrub
- Barren Ground
- Coastal Sage Scrub
- Nonnative Vegetation/Vernal Pool
- Ornamental
- Developed



SOURCE: LSA 2021; SANGIS 2023, 2024

FIGURE 8E Biological Resources Impacts Ponto Sewer Manhole Rehabilitation Project



- Biological Study Area (50' Buffer)
- Temporary Access Impact Area
- Coastal California gnatcatcher
- Constitia Station Preserve
- San Diego Button Celery
- Orcutts Brodiaea
- Callifornia Orcutts Grass
- Vegetation Communities/Land Covers
- Baccharis-dominated Coastal Sage Scrub
- Barren Ground
- Coastal Sage Scrub
- Nonnative Vegetation/Vernal Pool
- Ornamental
- Developed



SOURCE: LSA 2021; SANGIS 2023, 2024

FIGURE 8F Biological Resources Impacts Ponto Sewer Manhole Rehabilitation Project



Biological Study Area (50' Buffer)
 Temporary Access Impact Area
 Poinsettia Station Preserve
 San Diego Button Celery
 Riverside Fairy Shrimp
 Callifornia Orcutts Grass
 Vegetation Communities/Land Covers
 Barren Ground
 Coastal Sage Scrub
 Nonnative Grassland
 Nonnative Vegetation/Vernal Pool
 Ornamental
 Ponded Water
 Developed



SOURCE: LSA 2021; SANGIS 2023, 2024

FIGURE 8G Biological Resources Impacts

Ponto Sewer Manhole Rehabilitation Project



Biological Study Area (50' Buffer)
 Temporary Access Impact Area
 Poinsettia Station Preserve
 San Diego Button Celery
 Riverside Fairy Shrimp
 Callifornia Orcutts Grass
 Vegetation Communities/Land Covers
 Barren Ground
 Coastal Sage Scrub
 Nonnative Grassland
 Nonnative Vegetation/Vernal Pool
 Ornamental

- Ponded Water
- Developed



SOURCE: LSA 2021; SANGIS 2023, 2024



FIGURE 8H Biological Resources Impacts Ponto Sewer Manhole Rehabilitation Project

## ATTACHMENT A

#### SITE PHOTOGRAPHS

LSA 2020 and Dudek 2023



**Photograph 1:** View of the northern end of the BSA, facing west. The area within the fence contains nonnative grassland and a vernal pool.



**Photograph 2:** View of a potential pedestrian access path to Manhole 41A-5, facing west.



**Photograph 3:** View of the northern end of the BSA, facing north. Representative photograph of the nonnative grassland/vernal pool vegetation community.



**Photograph 4:** View of the northern end of the BSA, facing south. Representative photograph of the nonnative grassland/vernal pool vegetation community.

## LSA

North Ponto Interceptor Manhole Rehabilitation Project

Site Photographs



**Photograph 5:** View of the central portion of the BSA, facing north.



**Photograph 6:** View of the central portion of the BSA, facing south.



**Photograph 7:** View of the northern half of the BSA, facing north.



**Photograph 8:** View of the southern half of the BSA, facing south.

## LSA

North Ponto Interceptor Manhole Rehabilitation Project

Site Photographs



**Photograph 9:** View of southern end of the BSA, facing north. Representative photograph of the nonnative grassland/vernal pool vegetation community



**Photograph 10:** View of the southern end of the BSA, facing south. Representative photograph of the nonnative grassland/vernal pool vegetation community



**Photograph 11:** View of the southern end of the BSA, facing north. Photograph shows a large ponded area.



**Photograph 12:** View from the southern end of the BSA, facing north. Manhole 41C-6 is in the foreground.

## LSA

North Ponto Interceptor Manhole Rehabilitation Project

Site Photographs

Dudek 2023



Figure 3: Ponding at the Northern End of the Preserve in 2023



Figure 4: Ponding at the Southern End of the Preserve in 2023 Poinsettia Preserve 2023 Annual Report December 2023





Figure 5: San Diego Button-Celery at the Northern End of the Preserve in 2023



Figure 6: Spreading Navarretia at the Northern End of the Preserve in 2023

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Figure 7: California Orcutt's Grass at the Southern End of the Preserve in 2023



Figure 8: Result of HRS Weed Control Efforts in 2023

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## ATTACHMENT B

#### **VASCULAR PLANT SPECIES OBSERVED**

LSA 2020

The following vascular plant species were observed by LSA in the Project area during the general biological resources survey.

Scientific Name	Common Name
Aizoaceae	Carpet weed family
Carpobrotus edulis (nonnative species)	Hottentot-fig
Anacardiaceae	Sumac family
Rhus integrifolia	Lemonadeberry
Schinus molle (nonnative species)	Peruvian pepper tree
Apiaceae	Carrot family
Eryngium aristulatum var. parishii	San Diego button-celery
Foeniculum vulgare (nonnative species)	Fennel
Asteraceae	Sunflower family
Artemisia californica	California sagebrush
Baccharis pilularis	Coyote brush
Baccharis salicifolia	Mule fat
Centaurea melitensis (nonnative species)	Tocalote
Chrysanthemum coronarium (nonnative species)	Crown daisy
Conyza canadensis	Canadian horseweed
Deinandra fasciculata	Fascicled tarweed
Encelia californica	California encelia
Gazania sp. (nonnative species)	African daisy
Hedypnois cretica (nonnative species)	Crete weed
Heterotheca grandiflora	Telegraph weed
Isocoma menziesii var. menziesii	Coastal goldenbush
Iva hayesiana	San Diego marsh-elder
Lactuca serriola (nonnative species)	Prickly lettuce
Pluchea odorata	Sweetscent
Pseudognaphalium canescens	Wright's rabbit-tobacco
Pseudognaphalium luteoalbum (nonnative species)	Jersey cudweed
Psilocarphus tenellus	Slender woolly-heads
Sonchus asper (nonnative species)	Prickly sow thistle
Sonchus oleraceus (nonnative species)	Common sow thistle
Brassicaceae	Mustard family
Brassica nigra (nonnative species)	Black mustard
Hirschfeldia incana (nonnative species)	Shortpod mustard
Callitrichaceae	Water-Starwort family
Callitriche marginata	Winged water-starwort
Chenopodiaceae	Saltbush family
Atriplex lentiformis	Big saltbush
Bassia hyssopifolia (nonnative species)	Five-hook bassia

#### Vascular Plant Species Observed

vascular Plant Species Observe	Vascul	lar Pl	ant S	pecies	Observed
--------------------------------	--------	--------	-------	--------	----------

Scientific Name	Common Name
Salsola tragus (nonnative species)	Russian thistle
Convolvulaceae	Morning-glory family
Calystegia macrostegia	Morning-glory
Cressa truxillensis	Alkali weed
Crassulaceae	Stonecrop family
Crassula aquatica	Stonecrop
Euphorbiaceae	Spurge family
Euphorbia peplus (nonnative species)	Petty spurge
Ricinus communis (nonnative species)	Castor bean
Fabaceae	Pea family
Acacia sp. (nonnative species)	Acacia
Acmispon glaber	Deerweed
Medicago polymorpha (nonnative species)	Bur-clover
Melilotus indicus (nonnative species)	Annual yellow sweetclover
Geraniaceae	Geranium family
Erodium botrys (nonnative species)	Longbeak stork's bill
Erodium cicutarium (nonnative species)	Redstem stork's bill
Lamiaceae	Mint family
Salvia mellifera	Black sage
Lythraceae	Loosestrife family
Lythrum hyssopifolium (nonnative species)	Hyssop loosestrife
Malvaceae	Mallow family
Malvella leprosa	Alkali mallow
Myoporaceae	Myoporum family
Myoporum laetum (nonnative species)	Myoporum
Oleaceae	Olive family
Olea europaea (nonnative species)	European olive
Onagraceae	Evening primrose family
Camissonia bistorta	Southern suncup
Oxalidaceae	Oxalis family
Oxalis pes-caprae (nonnative species)	Bermuda buttercup
Pinaceae	Pine family
Pinus sp. (nonnative species)	Ornamental pine
Plantaginaceae	Plantain family
Plantago coronopus (nonnative species)	Cut-leaf plantain
Plantago erecta	Dwarf plantain
Platanaceae	Sycamore family
Platanus racemosa	California sycamore
Plumbaginaceae	Leadwort family
Limonium perezii (nonnative species)	Statice

Vascular Pl	ant Species	Observed
-------------	-------------	----------

Scientific Name	Common Name
Polygonaceae	Buckwheat family
Eriogonum fasciculatum	California buckwheat
Rumex crispus (nonnative species)	Curly dock
Primulaceace	Primrose family
Anagallis arvensis (nonnative species)	Scarlet pimpernel
Anagallis minima	Chaffweed
Rosaceae	Rose family
Heteromeles arbutifolia	Toyon
Salicaceae	Willow family
Salix lasiolepis	Arroyo willow
Solanaceae	Nightshade family
Datura wrightii	Sacred thorn-apple
Nicotiana glauca (nonnative species)	Tree tobacco
Solanum elaeagnifolium	Silverleaf horse-nettle
Arecaceae	Palm family
Washingtonia robusta (nonnative species)	Mexican fan palm
Cyperaceae	Sedge family
Cyperus involucratus (nonnative species)	Umbrella plant
Eleocharis acicularis	Needle spikerush
Juncaceae	Rush family
Juncus bufonius	Toad rush
Liliaceae	Lily family
Agave americana (nonnative species)	American century plant
Asparagus asparagoides (nonnative species)	African asparagus fern
Poaceae	Grass family
Arundo donax (nonnative species)	Giant reed
Avena barbata (nonnative species)	Slender wild oat
Bromus diandrus (nonnative species)	Ripgut brome
Bromus hordeaceus (nonnative species)	Soft chess
Bromus rubens (nonnative species)	Red brome
Cortaderia selloana (nonnative species)	Pampas grass
Hordeum murinum (nonnative species)	Foxtail barley
Pennisetum setaceum (nonnative species)	African fountain grass
Polypogon monspeliensis (nonnative species)	Rabbitfoot grass
Schismus barbatus (nonnative species)	Common Mediterranean grass
Vulpia myuros (nonnative species)	Rat-tail fescue
Typhaceae	Cattail family
Typha latifolia	Broadleaf cattail

#### WILDLIFE SPECIES OBSERVED

LSA 2020

This is a list of the conspicuous aerial insects, reptiles, birds, and mammals noted in or adjacent to the Project Area by LSA during the general biological reconnaissance survey. Presence may be noted if a species is seen or heard, or identified by the presence of tracks, scat, or other signs.

Scientific Name	Common Name	
REPTILIA	REPTILES	
Uta stansburiana	Common side-blotched lizard	
AVES	BIRDS	
Ardea alba	Great egret	
Buteo lineatus	Red-shouldered hawk	
Calypte anna	Anna's hummingbird	
Carduelis psaltria	Lesser goldfinch	
Carpodacus mexicanus	House finch	
Charadrius vociferus	Killdeer	
Corvus brachyrhynchos	American crow	
Geothlypis trichas	Common yellowthroat	
Larus californicus	California gull	
Melospiza melodia	Song sparrow	
Mimus polyglottos	Northern mockingbird	
Myiarchus cinerascens	Ash-throated flycatcher	
Passer domesticus (nonnative species)	House sparrow	
Pipilo crissalis	California towhee	
Polioptila californica californica	Coastal California gnatcatcher	
Psaltriparus minimus	Bushtit	
Sayornis nigricans	Black phoebe	
Zenaida macroura	Mourning dove	
MAMMALIA	MAMMALS	
Spermophilus beecheyi	California ground squirrel	
Sylvilagus audubonii	Desert cottontail	

#### Wildlife Species Observed

Taxonomy and nomenclature are based primarily on the following:

Birds: American Ornithologists' Union (1998, The A.O.U. Checklist of North American Birds, Seventh Edition, American Ornithologists' Union, Washington D.C.; and supplements; Website: http://www.aou.org/checklist/north/index.php).

## ATTACHMENT D

#### AQUATIC RESOURCES DELINEATION REPORT

**DUDEK 2024** 

# Aquatic Resources Delineation Report **Poinsettia Station Vernal Pool Preserve Sewer Manhole Rehabilitation Project**

**JANUARY 2024** 

Prepared for:

#### CITY OF CARLSBAD

5950 El Camino Real Carlsbad, California 92008 *Contact: Keri Martinez* 

Prepared by:



2280 Historic Decatur Road, Suite 200 San Diego, California 92106 *Contact: Tricia Wotipka* 

Printed on 30% post-consumer recycled material.

## Table of Contents

#### SECTION

#### PAGE NO.

Acror	nyms and	d Abbreviations	iii		
1	Introc	duction	1		
	1.1	Disclaimer Statement	1		
	1.2	Contact Information	1		
2	Revie	Review Area Description and Landscape Setting			
	2.1	Soils	3		
	2.2	Vegetation	3		
	2.3	Watershed	4		
	2.4	Review Area Alterations, Current and Past Land Use	4		
3	Preci	pitation Data and Analysis	5		
4	Inves	tigation Methods	7		
	4.1	U.S. Army Corps of Engineers	7		
	4.2	Regional Water Quality Control Board	7		
	4.3	California Department of Fish and Wildlife			
	4.4	California Coastal Act	8		
5	Aquat	Aquatic Resource Narrative			
	5.1	Non-Wetland Waters	9		
		5.1.1 Freshwater Pond	9		
	5.2	Wetlands	9		
		5.2.1 Scrub-Shrub Wetland	9		
		5.2.2 Vernal Pool	9		
	5.3	Riparian			
	5.4	Aquatic Resources Data Summary			
	5.5	National Wetland Inventory			
6	Concl	lusions			
	6.1	Waters of the United States (USACE)			
	6.2	Waters of the State (RWQCB)			
	6.3	CDFW Jurisdiction			
	6.4	California Coastal Commission Jurisdiction			
7	Refer	rences Cited	15		

i

#### TABLES

1	Contact Information	1
2	Antecedent Precipitation Tool Data for the Review Area	5
3	Schedule of the Aquatic Resources Delineation	7
4	Wetland Sampling Point Data Summaries	10
5	Summary of Potentially Jurisdictional Aquatic Resources in the Review Area	13

#### FIGURES

1	Project Vicinity	17
2	Project Site	19
3	Soils	21
4	Hydrologic Setting	23
5-1	Aquatic Resources	25
5-2	Aquatic Resources	27
5-3	Aquatic Resources	29
6	Photo Points	31

#### **APPENDICES**

- A Request for a Jurisdictional Determination
- B Antecedent Precipitation Tool Output
- C Data Forms
- D Review Area Photos

ii

## Acronyms and Abbreviations

Acronym/Abbreviation	Definition
APT	Antecedent Precipitation Tool
ARC	antecedent runoff condition
CDFW	California Department of Fish and Wildlife
ESHA	Environmentally Sensitive Habitat Area
NWW	non-wetland water
OHWM	ordinary high-water mark
PDSI	Palmer Drought Severity Index
project	Poinsettia Station Vernal Pool Preserve Manhole Rehabilitation Project
RWQCB	Regional Water Quality Control Board
SDAM	Streamflow Duration Assessment Method
USACE	U.S. Army Corps of Engineers
WET	wetland



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## 1 Introduction

This Aquatic Resources Delineation Report was prepared in accordance with the Minimum Standards for Acceptance of Aquatic Resources Delineation Reports (USACE 2017). This report and supporting appendices provide the 20 items listed in the Minimum Standards for Acceptance of Aquatic Resources Delineation Reports. This report presents the results of the jurisdictional aquatic resource delineation conducted by Dudek for the proposed Poinsettia Station Vernal Pool Preserve Sewer Manhole Rehabilitation Project (project) located in Carlsbad, California. The delineation was conducted to identify and map existing aquatic resources potentially subject to the regulatory jurisdiction of the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act (33 USC 1344), waters of the state potentially subject to the regulatory jurisdiction of the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act, stream and riparian habitats potentially subject to the jurisdiction of the California Department of Fish and Wildlife (CDFW) pursuant to Section 1602 of the California Fish and Game Code, and wetlands and Environmentally Sensitive Habitat Areas potentially subject to the jurisdiction of the California Coastal Commission (CCC) (collectively defined as jurisdictional aquatic resources).

### 1.1 Disclaimer Statement

This report presents Dudek's best effort to quantify the extent of aquatic resources potentially regulated by USACE, RWQCB, and CDFW (i.e., regulatory agencies) within the identified review areas using the current regulations, written policies, and guidance from these regulatory agencies. The potential jurisdictional boundaries described in this report are subject to verification by the regulatory agencies. Only the regulatory agencies can make a final determination on whether the features present are subject to USACE, RWQCB, CDFW, and/or CCC regulation. A request for USACE Jurisdictional Determination is provided in Appendix A.<sup>1</sup>

## 1.2 Contact Information

Contact information for the project applicant and agent are provided in Table 1.<sup>2</sup> Access to the review area is not restricted, but if a site visit is requested, the project applicant or agent will accompany regulatory staff to the review area.<sup>3</sup> The City of Carlsbad is the project applicant and landowner.

Project Applicant	City of Carlsbad Public Works	Agent	Dudek
Contact Name	Keri Martinez	Contact Name	Tricia Wotipka
Address	5950 El Camino Real Carlsbad, California 92008	Address	2280 Historic Decatur Road, #200 San Diego, California 92106
Phone	442-200-7376	Phone	760-479-4295
Email	Keri.Martinez@carlsbadca.gov	Email	twotipka@dudek.com

#### Table 1. Contact Information

<sup>&</sup>lt;sup>1</sup> Minimum Standards Item 1 (Request for Jurisdictional Determination)

<sup>&</sup>lt;sup>2</sup> Minimum Standards Item 2 (Contact Information)

<sup>&</sup>lt;sup>3</sup> Minimum Standards Item 3 (Site Access Statement)

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2 Review Area Description and Landscape Setting<sup>4</sup>

The approximately 3.29-acre review area for the Poinsettia Station Vernal Pool Preserve Sewer Manhole Rehabilitation Project (project) is located along the eastern right-of-way of the North County Transit District railway between Avenida Encinas and Poinsettia Boulevard in the City of Carlsbad, California at 33.106221°N and 117.317500°W (Figure 1, Project Vicinity)<sup>5</sup>. Directions to the review area are as follows: from Interstate 5 North or South, take Exit 45 for Poinsettia Lane toward Aviara Parkway. Turn west onto Poinsettia Lane then turn right at the second cross street onto Avenida Encinas. In approximately 0.7 miles, turn left into the Carlsbad Poinsettia Station Transit parking lot. Access the site through one of multiple gates along the eastern fence line. The review area consists of temporary access areas surrounding nine existing manholes plus a 50-foot buffer within the Poinsettia Station Vernal Pool Preserve (PSVPP; Figure 2, Project Site). The PSVPP is protected and managed by the City of Carlsbad and contains vernal pool and adjacent scrub habitat that is occupied by a number of special-status plant and wildlife species. Topography within the review area is a relatively flat, closed depression. Elevation within the review area ranges from 48 to 54 feet above mean sea level. The review area is adjoined to the west by the Carlsbad Poinsettia Amtrak Coaster Station, to the east by the Carlsbad Poinsettia Station Transit parking lot, to the north by an undeveloped parcel, and it is situated within a larger matrix of residential and commercial development. The review area occurs on Section 29 of Township 12 South and Range 4 West in the northern half of the 'Encinitas' U.S. Geological Survey 7.5-minute quadrangle. The review area intersects 20 Assessor's Parcel Numbers parcels (APN's): 2141500800, 2141501100, 2141501200, 2141502000, 2146104700, 2146104800, 2146105600, 2146105800, 2146106100, 2146111600, 2146113900, 2146115200, 2146115300, 2146115400, 2146116100, 2146121100, 2146122600, 2146126100, 2146130900, and 2146131400.

### 2.1 Soils<sup>6</sup>

One soil mapping unit is mapped in the review area: Marina loamy coarse sand, 2% to 9% slopes (USDA 2023a) (Figure 3, Soils). This mapping unit is not classified as hydric (USDA 2023b). The Marina soil series consists of somewhat excessively drained soils that formed in eolian sands derived from mixed sources.

## 2.2 Vegetation

The review area supports the following vegetation communities and land cover types as identified by existing vegetation mapping: non-native grassland/vernal pool, freshwater marsh, ponded water, coastal sage scrub, *Baccharis*-dominated coastal sage scrub, non-native grassland, disturbed habitat, bare ground, ornamental vegetation, and urban/developed land (LSA 2013).

<sup>&</sup>lt;sup>4</sup> Minimum Standards Items 4 (Directions) and 10 (Description of Existing Field Conditions)

<sup>&</sup>lt;sup>5</sup> Minimum Standard Item 14 (Site Location Map)

<sup>&</sup>lt;sup>6</sup> Minimum Standards Item 13 (Soil Descriptions)

### 2.3 Watershed

The review area occurs in the northern half of the Loma Alta Creek-Frontal Gulf of Santa Catalina Subwatershed (Hydrologic Unit Code [HUC] 180703030504) of within the San Luis Rey-Escondido Subbasin (HUC 18070303; Figure 4, Hydrologic Setting). The San Luis Rey-Escondido Subbasin comprises approximately 186 square miles (119,500 acres) and contains Loma Alta Creek, Buena Vista Creek, Agua Hedionda Creek, and San Marcos Creek. The latter three of these collect in lagoons before entering the Pacific Ocean.

### 2.4 Review Area Alterations, Current and Past Land Use

The review area itself remains undeveloped and protected with the exception of an existing natural gas pipeline and wastewater collection pipelines and sewer access holes constructed in 1972. Historical hydrology of the review area has been altered by the construction of the adjacent railroad, roadways, and surrounding urban development, and the site current receives runoff from the adjacent uplands. The PSVPP is fenced with educational signage to discourage pedestrian traffic entering from the adjacent walking trail and pedestrian overpasses and to prevent trespassing, vandalism, and illegal dumping.

## 3 Precipitation Data and Analysis<sup>7</sup>

The USACE-developed Antecedent Precipitation Tool (APT) was used to assess whether the delineation date occurred in a drier, average, or wetter than normal period (USACE 2023a). To determine what constitutes a "typical year," USACE developed the APT. The information generated from the APT can help to determine whether normal hydrologic and/or climatic conditions were present during the site visit and assist with completing the Wetland Determination Data Form.

The APT provides three climatological parameters: Palmer Drought Severity Index (PDSI), season, and antecedent precipitation condition. The PDSI is a standardized index calculated on a monthly basis with PDSI value outputs ranging from -4 (extreme drought) to +4 (very wet) (NOAA 2021) to assess drought conditions (i.e., PDSI Class). The APT determines wet vs. dry season based on related procedures provided in the applicable regional supplement for the review area (in this case, the Arid West Supplement). If the antecedent runoff condition (ARC) score is less than 10, then the antecedent precipitation condition is classified as drier than normal; normal conditions are present with an ARC score of 10 to 14; conditions are wetter than normal when an ARC score is greater than 14 (USACE 2023a).

Table 2 summarizes the key data extrapolated from the APT output: estimated drought conditions (PDSI Class), wet or dry season determination, ARC score, and antecedent precipitation condition. Based on the APT output provided in Appendix B and summarized in Table 2, the precipitation and climatic conditions for the review area were within the normal range during the time of the delineation.

#### Table 2. Antecedent Precipitation Tool Data for the Review Area

Main Field Survey Date	PDSI Class	Season	ARC Score	Antecedent Precipitation Condition
April 5, 2023	Extreme wetness	Dry Season	18	Wetter than Normal

Notes: PDSI = Palmer Drought Severity Index; ARC = antecedent runoff condition

Additionally, according to the U.S. Department of Agriculture's Agricultural Applied Climate Information System (USDA 2023c), the area around the review area receives an average of 10.07 inches of precipitation annually.

<sup>8</sup> Minimum Standards Item 11 (Discussion of Hydrology)

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## 4 Investigation Methods<sup>8</sup>

The jurisdictional delineation was conducted by Dudek biologists Anna Touchstone and Dylan Ayers on April 5, 2023 (Table 3). Prior to conducting the jurisdictional delineation, U.S. Fish and Wildlife Service's National Wetland Inventory data (USFWS 2023) was reviewed to determine if the review area contained any features mapped by the U.S. Fish and Wildlife Service. Site-specific topographical data was reviewed in conjunction with aerials, both current and historical, to determine the potential presence of non-wetland waters. Current vegetation mapping was reviewed to assess whether the review area supported hydrophytic vegetation and potential wetlands; several areas supporting hydrophytic vegetation were also assessed for the presence of wetland hydrology and hydric soils to determine whether they were three-parameter wetlands. Digging is not permitted in the PSVPP due to the presence of special status plant and wildlife species; therefore, soils were assumed to be hydric when the other two wetland indicators (i.e., hydrophytic vegetation and hydrology) were present. Aquatic resource boundaries were mapped in the field using ESRI Collector on a mobile device. Remote sensing was not used for this delineation.

#### Table 3. Schedule of the Aquatic Resources Delineation

Date	Hours	Personnel	Conditions
April 5, 2023	8:00 AM-11:00 AM	Anna Touchstone, Dylan Ayers	53-55°F, 0-25% cloud cover; 0-3 m.p.h. wind

## 4.1 U.S. Army Corps of Engineers

The USACE wetlands delineation was conducted in accordance with the 1987 USACE Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008a). A Field Guide to the Identification of the OHWM in the Arid West Region of the Western United States: A Delineation Manual (USACE 2008b) was used to determine the limits of non-wetland waters. Non-wetland waters were delineated on topographical maps in conjunction with ESRI Collector on a mobile device. The widths of each non-wetland water were determined in the field according to the OHWM manual.

Wetland Determination Forms were taken at certain points within drainages or vegetation communities where a predominance of hydrophytic vegetation was present; hydrology, vegetation, and soils were assessed to determine whether USACE three-parameter wetlands were present. USACE OHWM Forms were completed at representative cross-sections of non-wetland waters to capture their characteristics and widths. All data forms are provided in Appendix C.

## 4.2 Regional Water Quality Control Board

Waters of the state regulated by the RWQCB were mapped in accordance with the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2019). As described in these procedures, wetland waters of the state are mapped based on the procedures in USACE's 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987) and its 2008 Regional Supplement to the Corps of Engineers Wetland

<sup>&</sup>lt;sup>8</sup> Minimum Standards Item 8 (Dates of Field Work), Item 5 (Use of 1987 Manual, Regional Supplement, and OHWM guide), Item 12 (Statement Regarding Use of Remote Sensing), Item 18 (Data Forms) and Item 19 (Methods)

Delineation Manual: Arid West Region (Version 2.0) (USACE 2008a). Non-wetland waters are mapped at the OHWM based on the procedures defined in USACE's 2008 A Field Guide to Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008b).

### 4.3 California Department of Fish and Wildlife

CDFW jurisdictional areas were mapped to include the bank of the stream/channel and outer dripline of adjacent riparian vegetation, as set forth under California Fish and Game Code 1602. Streambeds under the jurisdiction of CDFW were delineated using the Cowardin method of waters classification, which defines waters boundaries by a single parameter (i.e., hydric soils, hydrophytic vegetation, or hydrology) (Cowardin et al. 1979).

### 4.4 California Coastal Act

Under the California Coastal Act of 1976 (CCA), the California Coastal Commission (CCC) and other agencies that have been delegated authority by CCC regulate development in the "coastal zone" and require a coastal development permit for almost all development within this zone. From 3 miles seaward, the coastal zone generally extends approximately 1,000 yards inland. In less-developed areas, it can extend up to 5 miles inland from the mean high-tide line but can also be considerably less than 1,000 yards inland in developed areas.

The CCA also protects designated sensitive coastal areas by providing additional review and approvals for proposed actions in these areas. The CCA defines wetlands as "lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, swamps, mudflats, and fens" (California Public Resources Code Section 30121). The CCA allows diking, filling, or dredging of wetlands for certain uses, such as restoration. The CCA also directs each city or county within the coastal zone to prepare a local coastal program for CCC certification (California Public Resources Code Section 30500). Under this definition, the CCC takes jurisdiction over all wetlands (as defined by the presence of any one of the three USACE criteria using the Cowardin method) (Cowardin et al. 1979).

Environmentally Sensitive Habitat Areas (ESHAs) are defined in the CCA as "any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments" (California Public Resources Code Section 30107.5).

## 5 Aquatic Resource Narrative<sup>9</sup>

Four aquatic resource types were documented in the review area and are described in further detail below: freshwater pond, scrub-shrub wetland, vernal pool, and riparian area. Figure 5, Aquatic Resources, visually depicts aquatic resources mapped in the review area<sup>10</sup>.

### 5.1 Non-Wetland Waters

#### 5.1.1 Freshwater Pond

There is one (1) freshwater pond (Pond-1a and Pond-1b) comprising 0.123 acre (170 linear feet [LF]) in Areas 7 and 8 of the review area. Freshwater ponds occur in closed landscape depressions. The pond had standing water up to approximately 12 inches in depth at the time of the field delineation, but is small enough is size that it is likely to have intermittent hydrology that dries up completely for part of the year. Evidence of an ordinary high water mark within the pond included destruction of terrestrial vegetation, and change in plant community and/or cover. Inundation was visible on aerial imagery (Google Earth 2023). The pond was predominantly barren of vegetation but did support sparse pale spikerush (*Eleocharis macrostachya*) and curly dock (*Rumex crispus*) outside of the review area and wetland sampling point locations. The pond was adjoined to the east by Vernal Pool-3 (described in more detail below).

### 5.2 Wetlands

#### 5.2.1 Scrub-Shrub Wetland

There is one (1) scrub-shrub wetland comprising 0.032 acres (52 LF) in Area 3 of the review area. Scrub-shrub wetlands are three-parameter wetlands with woody plants less than 20 feet in height as the dominant life form. The scrub-shrub wetland supports a tree canopy of Goodingg's willow (*Salix gooddingii*), shrub canopy of arroyo willow (*Salix lasiolepis*) and coyote brush (*Baccharis pilularis*), and sparse understory of annual tall willowherb (*Epilobium brachycarpum*). Wetland hydrology was confirmed by the presence of standing water and water-stained leaves. The wetland had standing water up to approximately 4 inches in depth at the time of the field delineation. As previously described in Section 4, soils were assumed to be hydric due to the presence of hydric vegetation and wetland hydrology.

### 5.2.2 Vernal Pool

There are three (3) vernal pools ,comprising 1.006 acres (1,183 LF), in the review area. Vernal Pool-1 occurs in Area 1, Vernal Pool-2 occurs in Area 2, and Vernal Pool-3a through -3f are all associated with the same hydrologically connected feature occurring in Areas 3 through 8. Vernal pools are three-parameter wetlands with a hardpan or restrictive soil layer that supports shallow seasonal inundation and habitat for distinctive plant and animal species. The vernal pools were dominated by fascicled tarweed (*Deinandra faciculata*), hyssop loosestrife (*Lythrum hyyssopifolium*), and San Diego button-celery (*Eryngium aristulatum* var. *parishii*). Wetland hydrology was confirmed

<sup>&</sup>lt;sup>9</sup> Minimum Standards Item 6 (Aquatic Resource Narrative)

<sup>&</sup>lt;sup>10</sup> Minimum Standards Items 7 and 16 (Delineation Maps)

by the presence of surface soil cracks and biotic crust. Areas of standing water up to approximately 6 inches in depth were present at the time of the field delineation. As previously described in Section 4, soils were assumed to be hydric due to the presence of hydric vegetation and wetland hydrology.

### 5.3 Riparian

There are two (2) riparian areas comprising 0.042 acres (66 LF) in Areas 2 and 3 of the review area. Riparian-1 consists of a single arroyo willow shrub surrounded by coyote brush (*Baccharis pilularis*) that adjoins Vernal Pool-2 to the east. Riparian-2 consists of a single California sycamore tree (*Platanus racemosa*) that is rooted outside of the review area, with a drip line that extends over upland scrub habitat within the review area. Riparian areas did not exhibit evidence of wetland hydrology.

### 5.4 Aquatic Resources Data Summary

Results from observable field indicators at ten (10) wetland sampling points indicate that approximately 1.203 acres (1,471 linear feet) of aquatic resources occur in the review area. The data collected at each wetland sampling point are included in Appendix C and summarized in Table 4 below. Photos of the potential aquatic features delineated within the review area, as well as additional areas reviewed for the presence of these resources, are provided in Appendix D.<sup>11</sup> The locations of these photos are shown in Figure 6, Photo Points.

Sampling Point ID	Wetland Vegetation	Wetland Soils*	Wetland Hydrology	Determination
WSP-1a	Yes	Yes	Yes	Vernal Pool
WSP-1b	No	No	No	Upland
WSP-2	No	No	No	Riparian
WSP-3a	Yes	Yes	Yes	Scrub-shrub wetland
WSP-3b	No	No	No	Upland
WSP-4a	Yes	Yes	Yes	Vernal Pool
WSP-4b	No	No	No	Upland
WSP-5a	No	No	Yes	Freshwater Pond
WSP-5b	Yes	Yes	Yes	Vernal Pool
WSP-5c	No	No	No	Upland

#### **Table 4. Wetland Sampling Point Data Summaries**

Note:

Digging is not permitted in the PSVPP; therefore, soils were assumed to be hydric when wetland hydrology and vegetation indicators were present. Soils were not assumed to be hydric when either hydrophytic vegetation or wetland hydrology was absent.

<sup>&</sup>lt;sup>11</sup> Minimum Standards Item 17 (Ground Photos)

## 5.5 National Wetland Inventory

The National Wetland inventory shows a linear pattern of a freshwater palustrine emergent wetland through the separate review areas (USFWS 2023; see Figure 4). These mapped patterns are consistent with and overlap the delineated vernal pool complex.

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## 6 Conclusions

Based on the data collected during the field delineation, Dudek biologist determined that approximately 1.203 acres (1,471 linear feet) of aquatic resources occur in the review area (Table 5). This report can be used by those agencies to determine if they would regulate the features described herein. The GIS data for the delineation is provided digitally. <sup>12</sup> A copy of the ORM Bulk Upload Aquatic Resources or Consolidated Excel spreadsheet is not submitted with this report because this information is presented in Table 5.<sup>13</sup>

Feature Name	Cowardin <sup>1</sup>	OHWM Indicators	Location (Latitude/ Longitude; Decimal Degrees)	Acres/Linear Feet <sup>3</sup>		
Non-Wetland Water	Non-Wetland Waters					
Pond-1a	POW	DTV, CVS, CVC	33.10395, -117.3167	0.063/86		
Pond-1b	POW	DTV, CVS, CVC	33.10302, -117.3162	0.060/84		
		Non	Wetland Waters Subtotal	0.123/170		
Wetlands						
Scrub-Shrub Wetland-1	PSS	N/A	33.10796, -117.3183	0.032/52		
Vernal Pool-1	PEM	N/A	33.11007, -117.3195	0.059/152		
Vernal Pool-2	PEM	N/A	33.10913, -117.319	0.072/122		
Vernal Pool-3a	PEM	N/A	33.10809, -117.3185	0.233/149		
Vernal Pool-3b	PEM	N/A	33.10713, -117.318	0.151/143		
Vernal Pool-3c	PEM	N/A	33.10606, -117.3176	0.102/139		
Vernal Pool-3d	PEM	N/A	33.10503, -117.3171	0.127/127		
Vernal Pool-3e	PEM	N/A	33.10407, -117.3166	0.145/162		
Vernal Pool-3f	PEM	N/A	33.10283, -117.3162	0.118/189		
			Wetlands Subtotal	1.038/1,235		
Riparian						
Riparian-1	N/A	N/A	33.1091, -117.3189	0.008/29		
Riparian-2	N/A	N/A	33.10816, -117.3183	0.034/37		
			Riparian Subtotal	0.042/66		
			Grand Total	1.203/1,471		

Table 5. Summary of Potential	y Jurisdictional Aquatic Resources in the Review Area <sup>14</sup>
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**Notes:** OHWM = ordinary high-water mark; N/A = not applicable; DTV = destruction of terrestrial vegetation; CVS = change in vegetation species; CVC = change in vegetation cover

<sup>1</sup> Pursuant to Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979) and USACE Cowardin Codes for ORM Data Entry (USACE 2023b).

<sup>3</sup> Totals may not sum due to rounding.

<sup>&</sup>lt;sup>12</sup> Minimum Standards Item 20 (Digital Data)

<sup>&</sup>lt;sup>13</sup> Minimum Standards Item 15 (ORM Bulk Upload Aquatic Resources or Consolidated Excel spreadsheet)

<sup>&</sup>lt;sup>14</sup> Minimum Standards Item 9 (Table Listing All Aquatic Resources)

### 6.1 Waters of the United States (USACE)

The vernal pools, scrub-shrub wetland, and freshwater pond appear to be isolated in nature and lack a direct, continuous surface connection to a traditional navigable waterbody (i.e. Pacific Ocean or a tributary to the Pacific Ocean). Therefore, all features on site do not appear to meet the current definition of waters of the U.S.

### 6.2 Waters of the State (RWQCB)

One (1) freshwater pond comprising approximately 0.123 acres of non-wetland waters, three (3) vernal pools and one (1) scrub-shrub wetland comprising 1.038 acres of wetlands are anticipated to meet the criteria for jurisdictional waters of the state. Contrary to the USACE, the RWQCB asserts jurisdiction over isolated surface waters under the Porter-Cologne Water Quality Control Act.

### 6.3 CDFW Jurisdiction

All aquatic resources comprising described in Section 6.2 are anticipated to also be subject to CDFW regulation. These include 0.123 (170 linear feet) acres of non-wetland waters and 1.038 acres (1,235 linear feet) of wetlands, The riparian areas are not associated with a lake or streambed and are therefore not anticipated to be subject to CDFW regulation.

### 6.4 California Coastal Commission Jurisdiction

All aquatic resources described in Section 4 are anticipated to be subject to CCC regulation, as they constitute habitat for listed species and/or are at least single-parameter wetlands (i.e., positive wetland hydrology, hydrophytic vegetation, or hydric soils). These include 0.123 acres (170 linear feet) of non-wetland waters, 1.038 acres (1,235 linear feet) of wetlands, and 0.042 acres (66 linear feet) acres of riparian areas.

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15

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SOURCE: USGS 7.5-Minute Series Encinitas Quadrangles Township 12S; Range 4W; Section 29

1,000

2,000 Feet





330 Beet



SOURCE: SanGIS 2020; SSURGO 2023

330 —— Feet



SOURCE: SanGIS 2020; USGS NHD and WBD 2023; NWI 2023; FEMA 2023; CA Dept. of Conservation 2012

520 Feet

FIGURE 4 Hydrologic Setting Poinsettia Station Vernal Pool Preserve Sewer Manhole Rehabilitation Project



DUDEK 💩 🛀

50

100 Beet

#### FIGURE 5-1 Aquatic Resources Poinsettia Station Vernal Pool Preserve Sewer Manhole Rehabilitation Project





100 Beet





100 Beet

#### FIGURE 5-3 Aquatic Resources Poinsettia Station Vernal Pool Preserve Sewer Manhole Rehabilitation Project



175

0

350 Beet

## **Appendix A**

Request for a Jurisdictional Determination

#### Appendix A - REQUEST FOR CORPS JURISDICTIONAL DETERMINATION (JD)

To:	o: <u>Los Angeles District</u> (Distric	ct Name)		
•	I am requesting a JD on property located at: 6511 Avenida Encina	as, Carlsbad, C (Street Addre	<u>CA 92009</u> ss)	
	City/Township/Parish: Carlsbad	County:	San Diego	State: CA
	Acreage of Parcel/Review Area for JD: <u>3.29 acres</u>		9	
	Section: 29 Township: 12S Range: 4W			
	Latitude (decimal degrees): 33.106221 Longitude (de	cimal degrees)	: <u>-117.317500</u>	
	(For linear projects, please include the center point of the propose	d alignment.)		
•	Please attach a survey/plat map and vicinity map identifying location	on and review	area for the JD.	
•	$\Box$ I currently own this property. $\Box$ I plan to purchase this prope	rty.		
	oxtimes I am an agent/consultant acting on behalf of the requestor.			
	□ Other (please explain):			
•	Reason for request: (check as many as applicable)			
	□ I intend to construct/develop a project or perform activities on this	parcel which v	vould be designed to a	avoid all
	aquatic resources.			
	$oxed{initial}$ I intend to construct/develop a project or perform activities on this	parcel which v	vould be designed to a	avoid all
	jurisdictional aquatic resources under Corps authority.			
	$\Box$ I intend to construct/develop a project or perform activities on this	parcel which n	nay require authorizat	ion from the
	Corps, and the JD would be used to avoid and minimize impacts to j	urisdictional aq	uatic resources and a	s an initial
	step in a future permitting process.			
	□ I intend to construct/develop a project or perform activities on this	parcel which n	nay require authorizat	ion from the
	Corps; this request is accompanied by my permit application and the	e JD is to be us	ed in the permitting pr	ocess.
	☐ I intend to construct/develop a project or perform activities in a na	ivigable water o	of the U.S. which is inc	cluded on the
	district Section 10 list and/or is subject to the ebb and flow of the tid	e.		
	□ A Corps JD is required in order to obtain my local/state authorizat	tion.		
	☐ I intend to contest jurisdiction over a particular aquatic resource a	nd request the	Corps confirm that jur	risdiction
	does/does not exist over the aquatic resource on the parcel.			
	$\Box$ I believe that the site may be comprised entirely of dry land.			
	□ Other:			
•	Type of determination being requested:			
	$\boxtimes$ I am requesting an approved JD.			
	☐ I am requesting a preliminary JD.			
	□ I am requesting a "no permit required" letter as I believe my propo	osed activity is	not regulated.	
	$\Box$ I am unclear as to which JD I would like to request and require ad	Iditional informa	ation to inform my dec	ision.
<b>D</b> . <i>t</i>		, antiner an the		t of a manage
Dy:	y signing below, you are indicating that you have the authority, or are reprint with such authority, to and do bereby grant Corps, personnel i	right of entry to	Legally access the si	it of a person
tor	perform the JD. Your signature shall be an affirmation that you pos	sess the requis	site property rights to	request a .ID
ont	in the subject property.			
011				
*Sic	Signature: Visia Wotupka	Date:	January 3, 2024	

 Typed or printed name: <u>Tricia Wotipka</u> Company name: Dudek

 Address:
 2280 Historic Decatur Road, Suite 200

 San Diego, CA 92106

 Daytime phone no.:
 (760) 420-2042

 Email address:
 twotipka@dudek.com

\*Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332. Principal Purpose: The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above.

Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USAGE website.

**Disclosure:** Submission of requested information is voluntary; however, if information is not provided, the request for an AJD cannot be evaluated nor can an AJD be issued.

# **Appendix B**

Antecedent Precipitation Tool Output

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Written by Jason Deters U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation $\Delta$	Weighted $\Delta$	Days Normal	Days Antecedent
RLSBAD MCCLELLAN PALOMAR AP	33.13, -117.2764	312.992	2.89	262.812	2.06	8945	90
CARLSBAD 3.8SE	33.1187, -117.3044	167.979	1.799	145.013	1.07	1	0
CARLSBAD 2.2SE	33.1427, -117.3206	21.982	2.704	291.01	2.004	1	0
VISTA	33.2353, -117.2322	430.118	7.711	117.126	4.373	2282	0
OCEANSIDE MARINA	33.2097, -117.395	9.843	8.796	303.149	6.625	124	0

- Daily Total
- ----- 30-Day Rolling Total
  - 30-Year Normal Range

Jun 202	3 2	Jul Aug 023 2023
ondition Value	Month Weight	Product
3	3	9
3	2	6
3	1	3
		Wetter than Normal - 18



Project/Site: Poinsettia SVPP Manhole Repair	City/County: San Diego/San Diego County Sampling Date: 2023-04-05
Applicant/Owner: City of Carlsbad	State: California Sampling Point: WSP-1a
Investigator(s): Anna Touchstone and Dylan Ayers	Section, Township, Range: S20 T12S R4W
Landform (hillslope, terrace, etc.): Vernal Pool	_ Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0</u>
Subregion (LRR): C 19 Lat: 33	3.11000858 Long: -117.31947344 Datum: WGS 84
Soil Map Unit Name: MIC - Marina loamy coarse sand, 2 to 9	percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes No 🖌 (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes <u>*</u> Yes <u>*</u> Yes <u>*</u>	No No No	Is the Sampled Area within a Wetland?	Yes 🖌	No
Remarks:					
Pit taken within VP-1					

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum     (Plot size: 30 ft f       1.	<u>% Cover</u>	<u>Species?</u>	<u>Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC: $\underline{2}$ (A)
23				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
4 Sapling/Shrub Stratum (Plot size: 5 ft r)		= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7</u> (A/B)
1.				Prevalence Index worksheet:
2.				Total % Cover of:Multiply by:
3.				OBL species $30 \times 1 = 30$
4.				FACW species $0$ $x_2 = 0$
5				FAC species $0$ $x_3 = 0$
		= Total Co	ver	FACU species $15$ x 4 = $60$
Herb Stratum (Plot size: 5 ft r )				UPL species $5 \times 5 = 25$
1. Lythrum hyssopifolium	20	~	OBL	Column Totals: 50 (A) 115 (B)
2. Deinandra fasciculata	10	~	FACU	
<sub>3.</sub> Eryngium aristulatum var. parishii	10	~	OBL	Prevalence Index = B/A = 2.30
<sub>4.</sub> Brassica nigra	5		UPL	Hydrophytic Vegetation Indicators:
<sub>5.</sub> Vulpia myuros	5		FACU	✓ Dominance Test is >50%
6.				✓ Prevalence Index is ≤3.0 <sup>1</sup>
7				Morphological Adaptations <sup>1</sup> (Provide supporting
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 30 ft r )	50%	= Total Co	ver	
1.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
2.				be present, unless disturbed or problematic.
% Bare Ground in Herb Stratum <u>50.0</u> % Cover	of Biotic C	_ = Total Co rust	ver	Hydrophytic Vegetation Present? Yes <u>/</u> No
Remarks:				1

	Redux realures	2	
inches) Color (moist) %	Color (moist) % Type' L	<u>_oc<sup>2</sup> Texture Remarks</u>	
-			
-			
<u> </u>			
-			
Type: C=Concentration, D=Depletion, RM=R	educed Matrix, CS=Covered or Coated S	and Grains. <sup>2</sup> Location: PL=Pore Lining, M=Ma	atrix.
lydric Soil Indicators: (Applicable to all LF	RRs, unless otherwise noted.)	Indicators for Problematic Hydric Soil	s³:
Histosol (A1)	Sandy Redox (S5)	1 cm Muck (A9) (LRR C)	
Histic Epipedon (A2)	Stripped Matrix (S6)	2 cm Muck (A10) (LRR B)	
Black Histic (A3)	Loamy Mucky Mineral (F1)	Reduced Vertic (F18)	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Red Parent Material (TF2)	
Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)	<ul> <li>Other (Explain in Remarks)</li> </ul>	
1 cm Muck (A9) ( <b>LRR D</b> )	Redox Dark Surface (F6)		
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	2	
_ Thick Dark Surface (A12)	Redox Depressions (F8)	<sup>3</sup> Indicators of hydrophytic vegetation and	
Sandy Mucky Mineral (S1)	Vernal Pools (F9)	wetland hydrology must be present,	
Sandy Gleyed Matrix (S4)		unless disturbed or problematic.	
(estrictive Layer (if present):			
Туре:	_		
Depth (inches):		Hydric Soil Present? Yes V	°
Remarks:			
ngging not permitted in ven	iai pools, assumed nyunc		
YDROLOGY			
YDROLOGY Vetland Hydrology Indicators:			

Primary indicators (minimum	or one requi	reu, cri	IECK a	ali that apply)		Secondary indicators (2 or more required)
Surface Water (A1)				Salt Crust (B11)		Water Marks (B1) (Riverine)
High Water Table (A2)		~	✓ Biotic Crust (B12)		Sediment Deposits (B2) (Riverine)	
Saturation (A3)			Aquatic Invertebrates (B13)		Drift Deposits (B3) (Riverine)	
Water Marks (B1) (Nonriverine)			Hydrogen Sulfide Odor (C1)		Drainage Patterns (B10)	
Sediment Deposits (B2) (Nonriverine)			Oxidized Rhizospheres along Livi	ing Roots (C3)	Dry-Season Water Table (C2)	
Drift Deposits (B3) (Non	riverine)			Presence of Reduced Iron (C4)		Crayfish Burrows (C8)
✓ Surface Soil Cracks (B6)	)			Recent Iron Reduction in Tilled Se	oils (C6)	Saturation Visible on Aerial Imagery (C9)
Inundation Vis ble on Ae	rial Imagery	(B7)		Thin Muck Surface (C7)		Shallow Aquitard (D3)
Water-Stained Leaves (I	B9)			Other (Explain in Remarks)		<ul> <li>FAC-Neutral Test (D5)</li> </ul>
Field Observations:						
Surface Water Present?	Yes	No	~	_ Depth (inches):		
Water Table Present?	Yes	_ No _	~	Depth (inches):		
Saturation Present? (includes capillary fringe)	Yes	_ No _	~	_ Depth (inches):	Wetland Hy	drology Present? Yes 🖌 No
Describe Recorded Data (str	eam gauge,	monito	ring	well, aerial photos, previous inspec	ctions), if availa	able:
Remarks:						
Surface water cou	th of oo	mole		aint		
Surface water sou	iti or sa	mple	e po	JIII		

Project/Site: Poinsettia SVPP Manhole Repair	City/County: San Diego	/San Diego County	Sampling Date: 2023-04-05		
Applicant/Owner: City of Carlsbad	State: California Sampling Point: WSP-1b				
Investigator(s): Anna Touchstone and Dylan Ayers	Section, Township, Rang	<sub>e:</sub> S20 T12S R4W			
Landform (hillslope, terrace, etc.): Upland	_ Local relief (concave, cor	nvex, none): Concave	e Slope (%): <u>.5</u>		
Subregion (LRR): C 19 Lat: 33	3.1100385 L	.ong: -117.3194277	1 Datum: WGS 84		
Soil Map Unit Name: MIC - Marina loamy coarse sand, 2 to 9	percent slopes	NWI classific	ation:		
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes No 👱	(If no, explain in Re	emarks.)		
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "No	ormal Circumstances" p	resent? Yes No _		
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If need	ed, explain any answei	rs in Remarks.)		
SUMMARY OF FINDINGS – Attach site map showing	g sampling point loc	ations, transects	, important features, etc.		
Hydrophytic Vegetation Present? Ves No 🗸					

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No <u>v</u> No <u>v</u> No <u>v</u>	Is the Sampled Area within a Wetland?	Yes	No
Remarks:					
Upland point					

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum     (Plot size: 30 ft r       1.	<u>% Cover</u>	<u>Species?</u>	<u>Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
23				Total Number of Dominant       Species Across All Strata:   (B)
4 Sapling/Shrub Stratum (Plot size: 5 ft r)	- <u> </u>	= Total Co	over	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1				Prevalence Index worksheet:
2.				Total % Cover of:Multiply by:
3.				OBL species $0   x 1 = 0$
4.				FACW species $0$ $x_2 = 0$
5				FAC species $5$ $x_3 = 15$
		= Total Co	over	FACU species 80 x 4 = 320
Herb Stratum (Plot size: 5 ft r )				UPL species $5$ x 5 = $25$
1. Deinandra fasciculata	40	<b>~</b>	FACU	Column Totals: 90 (A) 360 (B)
<sub>2.</sub> Vulpia myuros	40	~	FACU	
<sub>3.</sub> Brassica nigra	5		UPL	Prevalence Index = $B/A = 4.00$
4. Sonchus asper	5		FAC	Hydrophytic Vegetation Indicators:
5.				Dominance Test is >50%
6.				Prevalence Index is ≤3.0 <sup>1</sup>
7				Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8 20 ft r	90%	= Total Co	over	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: <u>30 ft i</u> )				<sup>1</sup> Indicators of hydric soil and wotland hydrology must
1			·	be present, unless disturbed or problematic.
2				
% Bare Ground in Herb Stratum 10.0 % Cover	r of Biotic C	_ = Total Co rust	over	Hydrophytic Vegetation Present? Yes No
Remarks:				1

Profile Desc	ription: (Describe t	o the depth i	needed to docum	ent the i	ndicator	or confirm	the absence of ind	icators.)			
Depth	Matrix		Redox	Features	3						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks			
-											
-							·				
			<u> </u>								
-											
-											
-											
			<u> </u>								
-											
<sup>1</sup> Type: C=Co	oncentration, D=Depl	etion, RM=Re	educed Matrix, CS	=Covered	or Coate	d Sand Gra	ains. <sup>2</sup> Location:	PL=Pore Lining,	M=Matrix.		
Hydric Soil I	ndicators: (Applica	ble to all LR	Rs, unless other	wise note	ed.)		Indicators for Pr	oblematic Hydri	c Soils³:		
Histosol	(A1)		Sandy Redo	x (S5)			1 cm Muck (A	A9) (LRR C)			
Histic Ep	ipedon (A2)		Stripped Mat	trix (S6)			2 cm Muck (A	A10) ( <b>LRR B</b> )			
Black His	stic (A3)		Loamy Muck	xy Mineral	(F1)		Reduced Ver	tic (F18)			
Hydroge	n Sulfide (A4)		Loamy Gleye	ed Matrix	(F2)		Red Parent Material (TF2)				
Stratified	Layers (A5) (LRR C	;)	Depleted Ma	atrix (F3)			Other (Explain in Remarks)				
1 cm Mu	ck (A9) ( <b>LRR D</b> )		Redox Dark	Surface (	F6)						
Depleted	Below Dark Surface	e (A11)	Depleted Da	rk Surface	e (F7)		0				
Thick Da	rk Surface (A12)		Redox Depre	essions (F	-8)		<sup>3</sup> Indicators of hyd	rophytic vegetatic	on and		
Sandy M	lucky Mineral (S1)		Vernal Pools	s (F9)			wetland hydrol	ogy must be pres	ent,		
Sandy G	leyed Matrix (S4)						unless disturbe	d or problematic.			
Restrictive L	.ayer (if present):										
Туре:			_								
Depth (inc	ches):		_				Hydric Soil Prese	nt? Yes	No		
Remarks:											
Digging	not permitted	d in verna	al pools, as	sume	d not h	nydric (	due to lack of	f other indi	cators		

Wetland Hydrology Indicat	ors:						
Primary Indicators (minimum	<u>ı of one requi</u>		Secondary Indicators (2 or more required)				
Surface Water (A1)				Water Marks (B1) (Riverine)			
High Water Table (A2)				Sediment Deposits (B2) (Riverine)			
Saturation (A3)				Drift Deposits (B3) (Riverine)			
Water Marks (B1) (Non	riverine)			Hydrogen Sulfide Odor (C1)		Drainage Patterns (B10)	
Sediment Deposits (B2)	(Nonriverine	<b>e</b> )		Oxidized Rhizospheres along Livit	ng Roots (C3)	Dry-Season Water Table (C2)	
Drift Deposits (B3) (Non	riverine)			Presence of Reduced Iron (C4)		Crayfish Burrows (C8)	
Surface Soil Cracks (B6	)			Recent Iron Reduction in Tilled So	oils (C6)	Saturation Visible on Aerial Imagery (C9)	
Inundation Vis ble on Ae	rial Imagery	(B7)		Thin Muck Surface (C7)		Shallow Aquitard (D3)	
Water-Stained Leaves (	B9)			Other (Explain in Remarks)		FAC-Neutral Test (D5)	
Field Observations:							
Surface Water Present?	Yes	_ No	~	_ Depth (inches):			
Water Table Present?	Yes	_ No	~	_ Depth (inches):			
Saturation Present? (includes capillary fringe)	Yes	_ No _	~	_ Depth (inches):	Wetland Hy	drology Present? Yes No 🔽	
Describe Recorded Data (str	eam gauge,	monitc	ring	well, aerial photos, previous inspec	tions), if availa	ble:	
Remarks:							

Project/Site: Poinsettia SVPP Manhole Repair	City/County: San Diego/San Diego County Sampling Date: 2023-04-05						
Applicant/Owner: City of Carlsbad	State: California Sampling Point: WSP-2						
Investigator(s): Anna Touchstone and Dylan Ayers	Section, Township, Range: S29 T12S R4W						
Landform (hillslope, terrace, etc.): Upland	_ Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0</u>						
Subregion (LRR): C 19 Lat: 33	3.1091176 Long: -117.31895465 Datum: WGS 84						
Soil Map Unit Name: MIC - Marina loamy coarse sand, 2 to 9	percent slopes NWI classification: PEM1A						
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes No (If no, explain in Remarks.)						
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" present? Yes No						
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, explain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects, important features, etc.						
Hydrophytic Vegetation Present?       Yes       No _        Is the Sampled Area         Hydric Soil Present?       Yes       No _        within a Wetland?       Yes       No _          Wetland Hydrology Present?       Yes       No _							
Remarks:							
Point taken within southern willow scrub (s	single individual willow tree), Riparian-1						

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30 ft r</u> ) 1.	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
23.				Total Number of Dominant Species Across All Strata 2 (B)
4.				
Sanling/Shrub Stratum (Plot size: 5 ft r )	0%	= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1 Salix lasiolepis	80	~	FACW	Prevalence Index worksheet:
2 Baccharis pilularis	20	~	UPL	Total % Cover of Multiply by
3				$\begin{array}{c} \hline \hline \\ $
а				EACW species $80$ $x_2 = 160$
T				EAC species $0$ x 3 = $0$
	100%	= Total Co	vor	FACIL species $0$ $x = 0$
Herb Stratum (Plot size: 5 ft r)		10(a) 00		$\frac{1111}{1111} \text{ species } \frac{20}{1111} \times 5 = \frac{100}{100}$
1				Column Totals: $100$ (A) $260$ (B)
2.				
3.				Prevalence Index = $B/A = 2.60$
4.				Hydrophytic Vegetation Indicators:
5.				Dominance Test is >50%
6.				Prevalence Index is ≤3.0 <sup>1</sup>
7	_			Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 30 ft r )		_ = Total Co	ver	
1,				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		= Total Co	over	Hydrophytic Vegetation
% Bare Ground in Herb Stratum % Cove	r of Biotic C	rust		Present? Yes No V
Remarks:				

Profile Desc	ription: (Describe t	o the depth	needed to docur	nent the i	ndicator	or confirm	the absence of ind	licators.)			
Depth	Matrix		Redo	x Features	S	<u> </u>					
(inches)	Color (moist)	%	Color (moist)	%	Type'	Loc <sup>2</sup>	Texture	Remark	S		
-											
-											
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				·							
-											
				·							
				·							
-											
-											
<sup>1</sup> Type: C=Co	oncentration, D=Depl	etion, RM=R	educed Matrix, CS	S=Covered	d or Coate	d Sand Gr	ains. <sup>2</sup> Location:	PL=Pore Lining	, M=Matrix.		
Hydric Soil I	ndicators: (Applica	ble to all LF	Rs, unless other	wise note	ed.)		Indicators for Pr	oblematic Hydr	ic Soils <sup>3</sup> :		
Histosol	(A1)		Sandy Redo	ox (S5)			1 cm Muck (/	A9) ( <b>LRR C</b> )			
Histic Ep	ipedon (A2)		Stripped Ma	atrix (S6)			2 cm Muck (A	A10) ( <b>LRR B</b> )			
Black His	stic (A3)		Loamy Muc	ky Minera	l (F1)		Reduced Ver	rtic (F18)			
<u> </u>	n Sulfide (A4)		Loamy Gley	ed Matrix	(F2)		Red Parent Material (TF2)				
<u> </u> Stratified	Layers (A5) (LRR C	)	Depleted M	atrix (F3)			Other (Explain in Remarks)				
1 cm Mu	ck (A9) ( <b>LRR D</b> )		Redox Dark	Surface (	F6)						
Depleted	Below Dark Surface	(A11)	Depleted Date	ark Surfac	e (F7)		2				
Thick Da	rk Surface (A12)		Redox Dep	ressions (I	-8)		°Indicators of hyd	rophytic vegetat	ion and		
Sandy M	ucky Mineral (S1)		Vernal Pool	s (F9)			wetland hydrol	ogy must be pre	sent,		
Sandy G	leyed Matrix (S4)						unless disturbe	ed or problemation	).		
Restrictive L	ayer (if present):										
Туре:			_								
Depth (inc	:hes):		_				Hydric Soil Prese	ent? Yes	No 🔽		
Remarks:							•				
Diaging	nat narmitta	linvor			d not l	Ndrie	dua ta laak a	fatharind	iaatara		
ugging i	not permitted	a in vern	ai pools, as	sume	u not r	iyunc	uue to lack o	i other ind	icators		

Wetland Hydrology Indica	ors:						
Primary Indicators (minimun	<u>ı of one requir</u>		Secondary Indicators (2 or more required)				
Surface Water (A1)			Water Marks (B1) (Riverine)				
High Water Table (A2)				Biotic Crust (B12)		Sediment Deposits (B2) (Riverine)	
Saturation (A3)				Aquatic Invertebrates (B13)		Drift Deposits (B3) (Riverine)	
Water Marks (B1) (Non	riverine)			Hydrogen Sulfide Odor (C1)		Drainage Patterns (B10)	
Sediment Deposits (B2)	(Nonriverine	)		Oxidized Rhizospheres along Livi	ng Roots (C3)	Dry-Season Water Table (C2)	
Drift Deposits (B3) (Nor	iriverine)			Presence of Reduced Iron (C4)		Crayfish Burrows (C8)	
Surface Soil Cracks (B6	i)			Recent Iron Reduction in Tilled So	oils (C6)	Saturation Visible on Aerial Imagery (C9)	
Inundation Vis ble on A	erial Imagery (	(B7)		Thin Muck Surface (C7)		Shallow Aquitard (D3)	
Water-Stained Leaves (	B9)			Other (Explain in Remarks)	FAC-Neutral Test (D5)		
Field Observations:							
Surface Water Present?	Yes	No_	~	Depth (inches):			
Water Table Present?	Yes	No_	~	Depth (inches):			
Saturation Present? (includes capillary fringe)	Yes	No_	~	_ Depth (inches):	Wetland Hy	drology Present? Yes No	
Describe Recorded Data (st	ream gauge, r	nonito	ring	well, aerial photos, previous inspec	tions), if availa	ble:	
Remarks:							

Project/Site: Poinsettia SVPP Manhole Repair		City/County	San Dieg	go/San Diego Co	ounty San	npling Date: 20	23-04-05
Applicant/Owner: City of Carlsbad				State: Cali	ifornia San	npling Point: W	SP-3a
Investigator(s): Anna Touchstone and Dylan Ayers		Section, To	wnship, Ra	nge: S29 T12S I	R4W		
Landform (hillslope, terrace, etc.): Upland		Local relief	(concave,	convex, none): Co	oncave	Slope	<u>(%):</u> 0
Subregion (LRR): C 19	Lat: 33.	.10797273	3	Long: -117.318	827282	Datum:	WGS 84
Soil Map Unit Name: MIC - Marina loamy coarse san	nd, 2 to 9 p	percent sl	opes	NWI o	classification	1:	
Are climatic / hydrologic conditions on the site typical for thi	s time of ve	ar? Yes	No	(If no. expl	ain in Remar	rks.)	
Are Vegetation , Soil , or Hydrology s	significantly	disturbed?	Are '	Normal Circumsta	inces" prese	nt? Yes	No 🖌
Are Vegetation , Soil , or Hydrology r	naturally pro	blematic?	(lf ne	eded, explain any	answers in	Remarks.)	
SUMMARY OF FINDINGS – Attach site map	showing	samplin	g point l	ocations, tran	sects, im	portant feat	ures, etc.
Hydrophytic Vegetation Present?       Yes       V         Hydric Soil Present?       Yes       V         Wetland Hydrology Present?       Yes       V         Remarks:       Point taken within southern willow southern       Second Seco	lo lo lo crub, St	Is th with	e Sampled in a Wetlar	Area nd? Ye	.s	No	
VEGETATION – Use scientific names of plan	its.						
Tree Stratum (Plot size: 30 ft r )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Tes	st workshee	et:	
1 Salix gooddingii	25	<u> </u>	FACW	Number of Dom That Are OBL. F	inant Specie ACW, or FA	es AC· 3	(A)
2. Salix lasiolepis	25	<ul> <li></li> </ul>	FACW				
3				Total Number of Species Across	All Strata:	4	(B)
4 Sapling/Shrub Stratum (Plot size: 5 ft r)	50%	_= Total Co	ver	Percent of Domi That Are OBL, F	inant Specie FACW, or FA	s AC: <u>75</u>	(A/B)
1. Baccharis pilularis	25	~	UPL	Prevalence Ind	ex workshe	et:	
2				Total % Cov	ver of:	Multiply b	<u>y:</u>
3				OBL species	0	$x_1 = \frac{0}{100}$	<u> </u>
4			. <u> </u>	FACW species	50	$x_2 = 100$	
5	25%			FAC species	<u>25</u> 0	$x_3 = \frac{73}{0}$	
Herb Stratum (Plot size: 5 ft r	25%	= Total Co	ver	FACU species	25	$x_4 = 0$	
1. Epilobium brachycarpum	25	~	FAC	Column Totals	100	(A) 300	(B)
2						_ (//)	(2)
3				Prevalence	e Index = B/	/A = <u>3.00</u>	
4				Hydrophytic Ve	egetation In	dicators:	
5				✓ Dominance	Test is >50°	%	
6				Prevalence	Index is ≤3.0	0'	
7				data in F	cal Adaptatic Remarks or c	ons" (Provide suj on a separate sh	pporting eet)
8 20.# r	25%	= Total Co	ver	Problematic	: Hydrophytic	c Vegetation <sup>1</sup> (E	xplain)
Woody Vine Stratum         (Plot size: _30 ft r)           1         2				<sup>1</sup> Indicators of hy be present, unle	dric soil and ess disturbed	wetland hydrold	ogy must
% Bare Ground in Herb Stratum 75.0 % Cove	r of Biotic C	_ = Total Co	ver	Hydrophytic Vegetation Present?	Yes _	No	
Remarks:							

Profile Desc	ription: (Describe t	o the depth	needed to docun	nent the i	ndicator	or confirm	the absence of ind	dicators.)			
Depth	Matrix		Redo	x Features	3						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks			
-											
-											
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				·							
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-											
<sup>1</sup> Type: C=Co	oncentration, D=Deple	etion, RM=R	educed Matrix, CS	=Covered	l or Coate	d Sand Gra	ains. <sup>2</sup> Location:	PL=Pore Lining, M=Ma	atrix.		
Hydric Soil I	ndicators: (Applica	ble to all LR	Rs, unless other	wise note	∋d.)		Indicators for P	roblematic Hydric Soil	s <sup>3</sup> :		
<u> </u>	(A1)		Sandy Redo	ox (S5)			1 cm Muck (	A9) ( <b>LRR C</b> )			
Histic Ep	vipedon (A2)		Stripped Ma	trix (S6)			2 cm Muck (	A10) ( <b>LRR B</b> )			
Black His	stic (A3)		Loamy Muc	ky Mineral	(F1)		Reduced Ve	rtic (F18)			
Hydroge	n Sulfide (A4)		Loamy Gley	ed Matrix	(F2)		Red Parent Material (TF2)				
Stratified	I Layers (A5) ( <b>LRR C</b>	)	Depleted Ma	atrix (F3)			Other (Explain in Remarks)				
1 cm Mu	ck (A9) ( <b>LRR D</b> )		Redox Dark	Surface (	F6)						
Depleted	Below Dark Surface	(A11)	Depleted Da	ark Surfac	e (F7)		0				
Thick Da	rk Surface (A12)		Redox Depr	ressions (F	-8)		<sup>3</sup> Indicators of hyd	drophytic vegetation and			
Sandy M	lucky Mineral (S1)		Vernal Pool	s (F9)			wetland hydro	logy must be present,			
Sandy G	leyed Matrix (S4)						unless disturb	ed or problematic.			
Restrictive L	ayer (if present):										
Туре:											
Depth (inc	ches):						Hydric Soil Pres	ent? Yes 🚩 N	o		
Remarks:							•				
Digging	not permitted	l in vern	al pools, as	sume	d hydr	ic due	to presence	of other indica	tors		

Wetland Hydrology Indicators:									
Primary Indicators (minimum of one required; check a	Secondary Indicators (2 or more required)								
✓ Surface Water (A1)	Water Marks (B1) (Riverine)								
High Water Table (A2)	Sediment Deposits (B2) (Riverine)								
Saturation (A3)	Aquatic Invertebrates (B13)	Drift Deposits (B3) (Riverine)							
Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)							
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizospheres along Livin	g Roots (C3) Dry-Season Water Table (C2)							
Drift Deposits (B3) (Nonriverine)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)							
Surface Soil Cracks (B6)	Recent Iron Reduction in Tilled Soi	ls (C6) Saturation Visible on Aerial Imagery (C9)							
Inundation Vis ble on Aerial Imagery (B7)	Thin Muck Surface (C7)	Shallow Aquitard (D3)							
<ul> <li>Water-Stained Leaves (B9)</li> </ul>	Other (Explain in Remarks)	FAC-Neutral Test (D5)							
Field Observations:									
Surface Water Present? Yes <u></u> No	Depth (inches): <u>4</u>								
Water Table Present? Yes No _	Depth (inches):								
Saturation Present? Yes No <u> v</u>	Depth (inches):	Wetland Hydrology Present? Yes 🖌 No							
Describe Recorded Data (stream gauge, monitoring v	well, aerial photos, previous inspecti	ons), if available:							
Remarks:									

Project/Site: Poinsettia SVPP Manhole Repair	City/County: San Diego/San Diego County Sampling Date: 2023-04-05
Applicant/Owner: City of Carlsbad	State: California Sampling Point: WSP-3b
Investigator(s): Anna Touchstone and Dylan Ayers	_ Section, Township, Range: S29 T12S R4W
Landform (hillslope, terrace, etc.): Upland	Local relief (concave, convex, none): Concave Slope (%): .5
Subregion (LRR): C 19 Lat:	33.10804843 Long: -117.31826077 Datum: WGS 84
Soil Map Unit Name: MIC - Marina loamy coarse sand, 2 to	9 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	<sup>:</sup> year? Yes No∕ (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significan	ntly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showin	ng sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No _	Is the Sampled Area

Hydric Soil Present? Wetland Hydrology Present?	Yes Yes	No 🖌	Is the Sampled Area within a Wetland?	Yes	No
Remarks:					
Upland point					

Tree Other (Distring, 30 ft r	Absolute	Dominant	Indicator	Dominance Test worksheet:
1)	% Cover	<u>Species</u> ?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
2 3				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
4		= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)
Baccharis pilularis	100	~	UPL	Prevalence Index worksheet:
2.				Total % Cover of: Multiply by:
3				$OBL \text{ species } 0 \qquad x_1 = 0$
4				FACW species $0$ x 2 = $0$
5				FAC species $0$ $x_3 = 0$
··	100%	= Total Co	ver	FACU species $0 \times 4 = 0$
Herb Stratum (Plot size: 5 ft r)		10101 00	VCI	UPL species $100 \times 5 = 500$
1				$\begin{array}{c} c = c \\ c = c \\$
2				
3.				Prevalence Index = $B/A = 5.00$
4.				Hydrophytic Vegetation Indicators:
5.				Dominance Test is >50%
6.				Prevalence Index is ≤3.0 <sup>1</sup>
7				Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 30 ft r )		_ = Total Co	ver	
1				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
2				be present, unless disturbed or problematic.
£		= Total Co	ver	Hydrophytic
% Bare Ground in Herb Stratum 10.0 % Cove	r of Biotic C	rust		Present? Yes No 🖌
Remarks:				1

Profile Desc	ription: (Describe t	o the depth	needed to docur	nent the i	ndicator	or confirm	the absence of ir	dicators.)			
Depth	Matrix		Redo	x Feature	s						
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	8		
-											
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-											
-											
<sup>1</sup> Type: C=Co	oncentration D=Deple	etion RM=R	educed Matrix CS	S=Covered	d or Coate	d Sand Gr	ains <sup>2</sup> l ocation	n <sup>.</sup> PI =Pore Lining	M=Matrix		
Hydric Soil I	Indicators: (Applica	ble to all LF	Rs, unless other	wise not	ed.)		Indicators for I	Problematic Hydri	c Soils <sup>3</sup> :		
Histosol	(A1)		Sandy Redo	ox (S5)			1 cm Muck	(A9) ( <b>LRR C</b> )			
Histic Ep	bipedon (A2)		Stripped Ma	atrix (S6)			2 cm Muck	(A10) ( <b>LRR B</b> )			
Black Hi	stic (A3)		Loamy Muc	ky Minera	l (F1)		Reduced Vertic (F18)				
Hydroge	n Sulfide (A4)		Loamy Gley	ed Matrix	(F2)		Red Parent Material (TF2)				
Stratified	d Layers (A5) ( <b>LRR C</b>	)	Depleted M	atrix (F3)			Other (Explain in Remarks)				
1 cm Mu	ick (A9) ( <b>LRR D</b> )		Redox Dark	Surface (	F6)						
Depleted	d Below Dark Surface	(A11)	Depleted Date	ark Surfac	e (F7)						
Thick Da	ark Surface (A12)		Redox Depr	essions (l	F8)		<sup>3</sup> Indicators of hydrophytic vegetation and				
Sandy M	lucky Mineral (S1)		Vernal Pool	s (F9)			wetland hydro	ology must be pres	ent,		
Sandy G	eleyed Matrix (S4)						unless distur	ped or problematic.			
Restrictive L	_ayer (if present):										
Туре:											
Depth (inc	ches):						Hydric Soil Pres	sent? Yes	No 🖌		
Remarks:							1				
Diaging	not normitte		al na ala		ط مم ۲ ا	avdric	due te lectr	of othor in di	ootoro		
gging וע	not permitted	a in vern	iai pools, as	sume	u not i	iyaric	que to lack (	other indi	cators		

Wetland Hydrology Indicat	ors:								
Primary Indicators (minimum	<u>ı of one requ</u>	Secondary Indicators (2 or more required)							
Surface Water (A1) Salt Crust (B11)						Water Marks (B1) (Riverine)			
High Water Table (A2)				Biotic Crust (B12)		Sediment Deposits (B2) (Riverine)			
Saturation (A3)				Aquatic Invertebrates (B13)		Drift Deposits (B3) (Riverine)			
Water Marks (B1) (Non	r <b>iverine</b> )			Hydrogen Sulfide Odor (C1)		Drainage Patterns (B10)			
Sediment Deposits (B2)	(Nonriverin	ıe)		Oxidized Rhizospheres along Livi	ng Roots (C3)	Dry-Season Water Table (C2)			
Drift Deposits (B3) (Nor	riverine)			Presence of Reduced Iron (C4)		Crayfish Burrows (C8)			
Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6						Saturation Visible on Aerial Imagery (C9)			
Inundation Vis ble on A	rial Imagery	(B7)		Thin Muck Surface (C7)		Shallow Aquitard (D3)			
Water-Stained Leaves (	B9)			Other (Explain in Remarks)		FAC-Neutral Test (D5)			
Field Observations:									
Surface Water Present?	Yes	No	~	_ Depth (inches):					
Water Table Present?	Yes	No	~	Depth (inches):					
Saturation Present? (includes capillary fringe)	Yes	No	~	_ Depth (inches):	Wetland Hy	drology Present? Yes No			
Describe Recorded Data (st	ream gauge,	monitor	ing	well, aerial photos, previous inspec	tions), if availa	ble:			
Remarks:									

Project/Site: Poinsettia SVPP Manhole Repair	City/County: San Diego/San Diego County Sampling Date: 2023-04-05						
Applicant/Owner: City of Carlsbad	State: California Sampling Point: WSP-4a						
Investigator(s): Anna Touchstone and Dylan Ayers	Section, Township, Range: S29 T12S R4W						
Landform (hillslope, terrace, etc.): Vernal Pool	Local relief (concave, convex, none): Concave Slope (%): 0						
Subregion (LRR): C 19 Lat: 33	3.10807299 Long: -117.31844275 Datum: WGS 84						
Soil Map Unit Name: MIC - Marina loamy coarse sand, 2 to 9	percent slopes NWI classification:						
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes No (If no, explain in Remarks.)						
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" present? Yes No						
Are Vegetation, Soil, or Hydrology naturally pr	roblematic? (If needed, explain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.							
Hydrophytic Vegetation Present? Yes _ 🖌 No	Is the Sampled Area						

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         No           Yes         V         No           Yes         V         No	Is the Sampled Area within a Wetland?	Yes 🥢 No
Remarks:			

# Pit taken within VP-3. Mapped as CSS but completed inundated showing hydrophytic veg and hydrology

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30 ft r</u> ) 1	<u>% Cover</u>	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2 3				Total Number of Dominant       Species Across All Strata:   (B)
4 Sapling/Shrub Stratum (Plot size: 5 ft r )	<u> </u>	= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. Baccharis pilularis	30	~		Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				$\frac{1}{OBL \text{ species}} \frac{80}{x + 1} = \frac{80}{x + 1}$
4				FACW species $0$ $x_2 = 0$
5				EAC species $0 \times 3 = 0$
	30%	- Total Co	vor	EACLI species $0$ $x = 0$
Herb Stratum (Plot size: 5 ft r )		10tal 00	VCI	$\frac{1111}{1111} = \frac{1111}{1111}$
1. Eryngium aristulatum var. parishii	75	~	OBL	Column Totals: $80$ (A) $80$ (B)
2. Lythrum hyssopifolium	5		OBL	
3.				Prevalence Index = $B/A = 1.00$
4.				Hydrophytic Vegetation Indicators:
5.				✓ Dominance Test is >50%
6.				$\checkmark$ Prevalence Index is ≤3.0 <sup>1</sup>
7				Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8	80%	= Total Co	ver	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 30 It I				
1				be present, unless disturbed or problematic.
2			. <u></u>	·····
% Bare Ground in Herb Stratum 20.0 % Cove	r of Biotic C	_ = Total Co rust	ver	Hydrophytic Vegetation Present? Yes <u>/</u> No
Remarks:				1

Profile Desc	ription: (Describe t	o the depth r	needed to docum	ent the i	ndicator	or confirm	the absence of ind	icators.)			
Depth	Matrix		Redox	Features	8						
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks			
-											
							·				
-											
-											
-											
		<u> </u>					·				
-											
-											
<sup>1</sup> Type: C=Co	ncentration D=Denk	etion RM=Re	duced Matrix CS	=Covered	l or Coate	d Sand Gr	ains <sup>2</sup> Location:	PI =Pore Lining M=	Matrix		
Hydric Soil I	ndicators: (Applica	ble to all LRI	Rs, unless other	wise note	ed.)		Indicators for Pr	oblematic Hydric S	oils <sup>3</sup> :		
Histosol	(A1)		Sandy Redo	x (S5)			1 cm Muck (A	(LRR C)			
Histic Ep	ipedon (A2)		Stripped Mat	trix (S6)			2 cm Muck (A	( <b>LRR B</b> )			
Black His	stic (A3)		Loamv Muck	v Mineral	(F1)		Reduced Vertic (F18)				
Hydrogei	n Sulfide (A4)		Loamy Gley	ed Matrix	(F2)		Red Parent Material (TF2)				
Stratified	Layers (A5) (LRR C	)	Depleted Ma	atrix (F3)	. ,		✓ Other (Explain in Remarks)				
1 cm Mu	ck (A9) ( <b>LRR D</b> )		Redox Dark	dox Dark Surface (F6)							
Depleted	Below Dark Surface	e (A11)	Depleted Da	rk Surfac	e (F7)						
Thick Da	rk Surface (A12)		Redox Depre	essions (F	-8)		<sup>3</sup> Indicators of hydrophytic vegetation and				
Sandy M	ucky Mineral (S1)		Vernal Pools	s (F9)			wetland hydrology must be present,				
Sandy G	leyed Matrix (S4)						unless disturbe	d or problematic.			
Restrictive L	ayer (if present):										
Туре:			_								
Depth (inc	hes):		_				Hydric Soil Prese	nt? Yes 🖌	No		
Remarks:							•				
Digging I	not permitted	l in verna	al pools, as	sume	d hydr	ic due	to presence	of other indic	ators		

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that ap	ply) Secondary Indicators (2 or more required)
✓ Surface Water (A1) Salt Cru	st (B11) Water Marks (B1) (Riverine)
High Water Table (A2) Biotic C	ust (B12) Sediment Deposits (B2) (Riverine)
Saturation (A3) Aquatic	Invertebrates (B13) Drift Deposits (B3) (Riverine)
Water Marks (B1) (Nonriverine) Hydroge	n Sulfide Odor (C1) Drainage Patterns (B10)
Sediment Deposits (B2) (Nonriverine) Oxidized	Rhizospheres along Living Roots (C3) Dry-Season Water Table (C2)
Drift Deposits (B3) (Nonriverine) Presence	e of Reduced Iron (C4) Crayfish Burrows (C8)
Surface Soil Cracks (B6) Recent	ron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Inundation Vis ble on Aerial Imagery (B7) 🛛 💆 Thin Mu	ck Surface (C7) Shallow Aquitard (D3)
✓ Water-Stained Leaves (B9) Other (E	xplain in Remarks)  Yest (D5)
Field Observations:	
Surface Water Present? Yes <u>V</u> No Depth (	inches): <u>1</u>
Water Table Present? Yes No Depth (	inches):
Saturation Present? Yes No <u>'</u> Depth (	inches): Wetland Hydrology Present? Yes <u>V</u> No
Describe Recorded Data (stream gauge, monitoring well, aeria	al photos, previous inspections), if available:
	·····
Remarke:	
Nemans.	

Project/Site: Poinsettia SVPP Manhole Repair	_ City/County: San Diego/San Diego County Sampling Date: 2023-04-05
Applicant/Owner: City of Carlsbad	State: California Sampling Point: WSP-4b
Investigator(s): Anna Touchstone and Dylan Ayers	Section, Township, Range: S29 T12S R4W
Landform (hillslope, terrace, etc.): Upland	Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>.5</u>
Subregion (LRR): C 19 Lat: 33	3.10822823 Long: -117.31826284 Datum: WGS 84
Soil Map Unit Name: MIC - Marina loamy coarse sand, 2 to 9	9 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	year? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	tly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally pr	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	ng sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No No	<u> </u>	Is the Sampled Area	Vaa	
Wetland Hydrology Present?	Yes	No	<ul> <li></li> </ul>	within a wetland?	res	NO
Remarks:						
Upland point						

The Other (Distributed as 30 ft r	Absolute	Dominant	Indicator	Dominance Test worksheet:
1)	% Cover	<u>Species</u> ?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: $1$ (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4		= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1. Baccharis pilularis	50	~	UPL	Prevalence Index worksheet:
2. Iva hayesiana	10		FACW	Total % Cover of: Multiply by:
3				OBL species <u>10</u> x 1 = <u>10</u>
4.				FACW species <u>10</u> x 2 = <u>20</u>
5.				FAC species $0 \times 3 = 0$
	60%	= Total Co	ver	FACU species $0   x 4 = 0$
Herb Stratum (Plot size: 5 ft r)		-		UPL species 50 x 5 = 250
1. Eryngium aristilatum var. parishii	10	<ul> <li>✓</li> </ul>	OBL	Column Totals: 70 (A) 280 (B)
2				
3				Prevalence Index = B/A = 4.00
4				Hydrophytic Vegetation Indicators:
5				Dominance Test is >50%
6				Prevalence Index is ≤3.0 <sup>1</sup>
7				Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
o	10%	= Total Co	ver	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody vine Stratum (Plot size:)				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1				be present, unless disturbed or problematic.
<ul> <li>% Bare Ground in Herb Stratum <u>10.0</u> % Cover</li> </ul>	of Biotic C	= Total Co	ver	Hydrophytic Vegetation Present? Yes No 🖌
Remarks:				

Profile Descri	ption: (Describe to	o the depth n	eeded to docum	nent the in	ndicator o	or confirm	the absence of indica	ators.)			
Depth	Matrix		Redox	k Features	;						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks			
-											
-						·					
-											
-											
-											
<sup>1</sup> Type: C=Con	centration. D=Deple	etion. RM=Re	duced Matrix. CS	=Covered	or Coate	d Sand Gra	ains. <sup>2</sup> Location: P	L=Pore Linina. N	1=Matrix.		
Hydric Soil Ind	dicators: (Applica	ble to all LRF	Rs, unless other	wise note	ed.)		Indicators for Prob	lematic Hydric	Soils <sup>3</sup> :		
Histosol (A	.1)		Sandy Redo	ox (S5)			1 cm Muck (A9)	(LRR C)			
Histic Epip	edon (A2)		Stripped Ma	trix (S6)			2 cm Muck (A10	) (LRR B)			
Black Histi	c (A3)		Loamy Mucł	ky Mineral	(F1)		Reduced Vertic (F18)				
Hydrogen	Sulfide (A4)		Loamy Gley	ed Matrix	(F2)		Red Parent Material (TF2)				
Stratified L	ayers (A5) (LRR C	)	Depleted Ma	atrix (F3)			Other (Explain in Remarks)				
1 cm Muck	(A9) ( <b>LRR D</b> )		Redox Dark	Surface (I	F6)						
Depleted E	Below Dark Surface	(A11)	Depleted Date	ark Surface	e (F7)						
Thick Dark	Surface (A12)		Redox Depr	essions (F	F8) <sup>3</sup> Indicators of hydrophytic vegetation and						
Sandy Mud	cky Mineral (S1)		Vernal Pools	s (F9)			wetland hydrolog	/ must be preser	nt,		
Sandy Gle	yed Matrix (S4)						unless disturbed	or problematic.			
Restrictive La	yer (if present):										
Туре:			_								
Depth (inche	es):		_				Hydric Soil Present	? Yes	No 🖌		
Remarks:											
Digging n	ot permitted	l in verna	al pool, ass	umed	not hy	/dric d	ue to lack of o	her indica	tors		

Wetland Hydrology Indica	ors:							
Primary Indicators (minimun	<u>ı of one requi</u>	Secondary Indicators (2 or more required)						
Surface Water (A1)	Surface Water (A1)					Water Marks (B1) (Riverine)		
High Water Table (A2)				Biotic Crust (B12)		Sediment Deposits (B2) (Riverine)		
Saturation (A3)				Aquatic Invertebrates (B13)		Drift Deposits (B3) (Riverine)		
Water Marks (B1) (Non	r <b>iverine</b> )			Hydrogen Sulfide Odor (C1)		Drainage Patterns (B10)		
Sediment Deposits (B2)	(Nonriverine	e)		Oxidized Rhizospheres along Livit	ng Roots (C3)	Dry-Season Water Table (C2)		
Drift Deposits (B3) (Nor	riverine)			Presence of Reduced Iron (C4)		Crayfish Burrows (C8)		
Surface Soil Cracks (B6)	)			Recent Iron Reduction in Tilled So	oils (C6)	Saturation Visible on Aerial Imagery (C9)		
Inundation Vis ble on A	erial Imagery	(B7)		Thin Muck Surface (C7)		Shallow Aquitard (D3)		
Water-Stained Leaves (	B9)			Other (Explain in Remarks)		<ul> <li>FAC-Neutral Test (D5)</li> </ul>		
Field Observations:								
Surface Water Present?	Yes	_ No	~	_ Depth (inches):				
Water Table Present?	Yes	_ No	~	_ Depth (inches):				
Saturation Present? Yes <u>No</u> <u>V</u> (includes capillary fringe)		_ Depth (inches):	Wetland Hydrology Present? Yes No					
Describe Recorded Data (st	ream gauge, i	monito	ring	well, aerial photos, previous inspec	tions), if availa	ible:		
Remarks:								

Project/Site: Poinsettia SVPP Manh	City/County: S	an Diego/Sa	an Diego County	Sampling [	Date: 2023-04-0			
Applicant/Owner: City of Carlsbad	State: California Sampling Point: WSP-5a							
Investigator(s): Anna Touchstone a	nd Dylan Aye	ers	Section, Town	Section, Township, Range: S29 T12S R4W				
Landform (hillslope, terrace, etc.): Pond	k		_ Local relief (co	oncave, conve	ex, none): <u>Concav</u>	е	Slope (%):	
Subregion (LRR): C 19		Lat: 3	3.10412697	Lon	<sub>g:</sub> -117.3164417	6	Datum: WGS 84	
Soil Map Unit Name: MIC - Marina Ic	amy coarse	sand, 2 to 9	ercent slop	es	NWI classific	ation:		
Are climatic / hydrologic conditions on th	e site typical fo	r this time of y	/ear? Yes	No	_ (If no, explain in R	emarks.)		
Are Vegetation, Soil, or I	y disturbed?	Are "Norm	al Circumstances" p	present? Ye	es No 📕			
Are Vegetation, Soil, or I	roblematic?	(If needed	, explain any answe	rs in Remar	ks.)			
SUMMARY OF FINDINGS - A	tach site m	ap showin	g sampling	ooint locat	ions, transects	, importa	int features, et	
Hydrophytic Vegetation Present?	Yes	No 🖌	- Is the S	ampled Area				
Hydric Soil Present?	Yes	No 🖌	- within a	within a Wetland? Yes No			~	
Wetland Hydrology Present?	-							
Remarks:								

#### Point taken in ponded area

	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30 ft r</u> ) 1.	<u>% Cover Species? Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
23		Total Number of Dominant       Species Across All Strata:   (B)
4 Sapling/Shrub Stratum (Plot size: 5 ft r )	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>NaN</u> (A/B)
1.		Prevalence Index worksheet:
2.		Total % Cover of: Multiply by:
3.		$\frac{1}{OBL \text{ species } 0} \qquad \frac{1}{x + 1} = 0$
4		FACW species $0$ $x_2 = 0$
5		FAC species $0$ $x_3 = 0$
· ·	= Total Cover	FACU species $0$ $x = 0$
Herb Stratum (Plot size: 5 ft r)		UPL species $0$ x 5 = $0$
1		Column Totals: 0 (A) 0 (B)
2		
3		Prevalence Index = B/A = <u>NaN</u>
4		Hydrophytic Vegetation Indicators:
5		Dominance Test is >50%
6		Prevalence Index is ≤3.0 <sup>1</sup>
7		Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
o20.ftr	= Total Cover	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: <u>50 TT</u> )		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1		be present, unless disturbed or problematic.
2	= Total Cover	Hydrophytic
% Bare Ground in Herb Stratum % Cove	er of Biotic Crust	Vegetation Present? Yes No V
Remarks:		
Eleocharis macrostachya and Rume	x crispus growing in p	oond south of sample point

Profile Description: (Describe to the d	lepth needed to document the indicator or confi	irm the absence of indicators.)			
Depth Matrix	Redox Features				
(inches) Color (moist) %	<u>Color (moist)</u> % <u>Type<sup>1</sup></u> Loc <sup>2</sup>	Texture Remarks			
-					
-					
-					
<sup>1</sup> Type: C=Concentration, D=Depletion, F	RM=Reduced Matrix, CS=Covered or Coated Sand	Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
Hydric Soil Indicators: (Applicable to	all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>2</sup> :			
Histosol (A1)	Sandy Redox (S5)	1 cm Muck (A9) ( <b>LRR C</b> )			
Histic Epipedon (A2)	Stripped Matrix (S6)	2 cm Muck (A10) ( <b>LRR B</b> )			
Black Histic (A3)	Loamy Mucky Mineral (F1)	Reduced Vertic (F18)			
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Red Parent Material (1F2)			
1 cm Muck (A9) (LRR C)	Depleted Matrix (F3) Reday Dark Surface (F6)				
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)				
Thick Dark Surface (A12)	Redox Depressions (F8)	<sup>3</sup> Indicators of hydrophytic vegetation and			
Sandy Mucky Mineral (S1)	wetland hydrology must be present,				
Sandy Gleyed Matrix (S4)		unless disturbed or problematic.			
Restrictive Layer (if present):					
Туре:					
Depth (inches):		Hydric Soil Present? Yes No			
Remarks:					
Digging not permitted in v	vernal pools				
HYDROLOGY					
Wetland Hydrology Indicators:					
Primary Indicators (minimum of one requ	ired; check all that apply)	Secondary Indicators (2 or more required)			
✓ Surface Water (A1)	Water Marks (B1) (Riverine)				
High Water Table (A2)	Biotic Crust (B12)	Sediment Deposits (B2) ( <b>Riverine</b> )			
Saturation (A3)	Aquatic Invertebrates (B13)	Drift Deposits (B3) ( <b>Riverine</b> )			
Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)			
Sediment Deposits (B2) (Nonriverin	e) Oxidized Rhizospheres along Living R	Roots (C3) Dry-Season Water Table (C2)			
Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8)					

Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) \_\_\_\_ Saturation Visible on Aerial Imagery (C9)

\_\_\_\_ Shallow Aquitard (D3)

\_\_\_\_ FAC-Neutral Test (D5)

- Surface Soil Cracks (B6) Inundation Vis ble on Aerial Imagery (B7) \_\_\_\_ Thin Muck Surface (C7)
- Water-Stained Leaves (B9) \_\_\_\_ Other (Explain in Remarks)

Field Observations:							
Surface Water Present?	Yes 🖌	No	Depth (inches):	12			
Water Table Present?	Yes	No	Depth (inches):				
Saturation Present? (includes capillary fringe)	Yes	_ No	Depth (inches):		Wetland Hydrology Present?	Yes 🖌	No
Describe Recorded Data (stre	am gauge, r	nonitori	ing well, aerial photos	previous inspec	tions), if available:		

Remarks:

~

Project/Site: Poinsettia SVPP Manhole Repair	City/County: San Diego/San Diego County Sampling Date: 2023-04-05					
Applicant/Owner: City of Carlsbad	State: California Sampling Point: WSP-5b					
Investigator(s): Anna Touchstone and Dylan Ayers	Section, Township, Range: S29 T12S R4W					
Landform (hillslope, terrace, etc.): Vernal Pool	_ Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0</u>					
Subregion (LRR): C 19 Lat: 33	3.10402676 Long: -117.31648047 Datum: WGS 84					
Soil Map Unit Name: MIC - Marina loamy coarse sand, 2 to 9	percent slopes NWI classification:					
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" present? Yes No					
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.						
Hydrophytic Vegetation Present?       Yes          ✓        No         Hydric Soil Present?       Yes          ✓        No         Wetland Hydrology Present?       Yes          ✓        No	Is the Sampled Area within a Wetland? Yes <u> V</u> No					

Remarks:

### Point taken in vernal pool 3 cont'd

Tara Charter (Dist size: 30 ft r	Absolute	Dominant Indicator	Dominance Test worksheet:
1)	% Cover		Number of Dominant Species That Are OBL, FACW, or FAC: $1$ (A)
2 3			Total Number of Dominant Species Across All Strata: <u>1</u> (B)
4Sanling/Shrub Stratum (Plot size: 5 ft r)		_ = Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1.			Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3.			OBL species 90 $x_1 = 90$
4.			FACW species 0 x 2 = 0
5.			FAC species 0 x 3 = 0
		= Total Cover	FACU species $0   x 4 = 0$
Herb Stratum (Plot size: 5 ft r )		-	UPL species $0 \times 5 = 0$
1. Lythrum hyssopifolium	90	✓ OBL	Column Totals: 90 (A) 90 (B)
2			
3			Prevalence Index = $B/A = 1.00$
4			Hydrophytic Vegetation Indicators:
5			✓ Dominance Test is >50%
6			$\checkmark$ Prevalence Index is ≤3.0 <sup>1</sup>
7			Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
o 30 ft r	90%	= Total Cover	✓ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum         (Plot size:         30 mm           1.			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
2	_		be present, unless disturbed or problematic.
% Bare Ground in Herb Stratum 10.0 % Cove	r of Biotic C	_ = Total Cover	Hydrophytic Vegetation Present? Yes V No
Pemarke:	. 51 21000 0		

Donth	Matrix		Dodo		-	,			
(inches)	Color (moist)	%	Color (moist)	<u>% realures</u> %	Type <sup>1</sup>	$1 \text{ oc}^2$	Texture	Remarks	
		/0			турс			Remarko	
_		<u> </u>				······	<u> </u>		
-						. <u> </u>			
-									
		<u> </u>					·		
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-									
	·								
		·				<u> </u>	·		
-									
ype: C=C	oncentration, D=Depl	etion, RM:	Reduced Matrix, C	S=Covered	d or Coate	d Sand Gr	ains. <sup>2</sup> Location:	PL=Pore Lining, M=Matrix.	
ydric Soil	Indicators: (Applica	able to all	LRRs, unless othe	rwise note	ed.)		Indicators for P	roblematic Hydric Soils <sup>3</sup> :	
Histosol (A1)		Sandy Red	Sandy Redox (S5)				1 cm Muck (A9) (LRR C)		
Histic Epipedon (A2)			Stripped Ma	atrix (S6)			2 cm Muck (	A10) ( <b>LRR B</b> )	
Black Hi	stic (A3)		Loamy Muc	ky Mineral	l (F1)		Reduced Vertic (F18)		
Hydroge	en Sulfide (A4)		Loamy Gleyed Matrix (F2)				Red Parent I	Material (TF2)	
Stratified	d Layers (A5) ( <b>LRR C</b>	;)	Depleted Matrix (F3)				Other (Explain of the image	in in Remarks)	
_ 1 cm Mu	uck (A9) ( <b>LRR D</b> )		Redox Dark	surface (	F6)				
_ Depleted	d Below Dark Surface	e (A11)	Depleted Dark Surface (F7)						
_ Thick Da	ark Surface (A12)		Redox Depressions (F8)				<sup>3</sup> Indicators of hydrophytic vegetation and		
Sandy N	lucky Mineral (S1)		Vernal Pools (F9)				wetland hydrology must be present,		
Sandy Gleyed Matrix (S4)					unless disturbed or problematic.				
estrictive l	Layer (if present):								
Type:									
Depth (inches):							Hydric Soil Prese	ent? Yes 🖌 No 🔜	
							1		

Wetland Hydrology Indicators:								
Primary Indicators (minimum of one required; che	Secondary Indicators (2 or more required)							
✓ Surface Water (A1)	Salt Crust (B11)	Water Marks (B1) (Riverine)						
High Water Table (A2)	Biotic Crust (B12)	Sediment Deposits (B2) (Riverine)						
Saturation (A3)	Aquatic Invertebrates (B13)	Drift Deposits (B3) (Riverine)						
Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)						
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizospheres along Living Roots (C3	) Dry-Season Water Table (C2)						
Drift Deposits (B3) (Nonriverine)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)						
Surface Soil Cracks (B6)	Recent Iron Reduction in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9)						
Inundation Vis ble on Aerial Imagery (B7)	Thin Muck Surface (C7)	Shallow Aquitard (D3)						
Water-Stained Leaves (B9)	Other (Explain in Remarks)	FAC-Neutral Test (D5)						
Field Observations:								
Surface Water Present? Yes <u>Yes</u> No	Depth (inches): 3							
Water Table Present? Yes No	Depth (inches):							
Saturation Present? Yes <u>No</u> (includes capillary fringe)	Depth (inches): Wetland H	ydrology Present? Yes _ ✔_ No						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks:								
Algal bloom within inundated area, indicates shallower depth than ponded area								
#### WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Poinsettia SVPP Manhole Repair	City/County: San Diego/San Diego County Sampling Date: 2023-04-0					
Applicant/Owner: City of Carlsbad	State: California Sampling Point: WSP-5c					
Investigator(s): Anna Touchstone and Dylan Ayers	Section, Township, Range: S29 T12S R4W					
Landform (hillslope, terrace, etc.): Upland	_ Local relief (concave, convex, none): <u>None</u> Slope (%): <u>0</u>					
Subregion (LRR): C 19 Lat: 33	3.10408588 Long: -117.31614312 Datum: WGS 84					
Soil Map Unit Name: MIC - Marina loamy coarse sand, 2 to 9 percent slopes NWI classification:						
Are climatic / hydrologic conditions on the site typical for this time of y	rear? Yes No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" present? Yes No					
Are Vegetation, Soil, or Hydrology naturally pr	roblematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects, important features, etc					
Hydrophytic Vogetation Present? Ves No ¥						

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No <u>v</u> No <u>v</u> No <u>v</u>	Is the Sampled Area within a Wetland?	Yes	No
Remarks: Upland point					

#### **VEGETATION – Use scientific names of plants.**

$\tau$ of $r$ (p) $r$ = 20 ft r	Absolute	Dominant	Indicator	Dominance Test worksheet:
1	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2 3	·			Total Number of Dominant Species Across All Strata: <u>3</u> (B)
4 Sapling/Shrub Stratum (Plot size: 5 ft r)		= Total Co	over	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3</u> (A/B)
1.				Prevalence Index worksheet:
2.				Total % Cover of: Multiply by:
3				$\frac{1}{OBL \text{ species } 50} \frac{1}{x + 1} = 50$
4				FACW species $0$ x 2 = $0$
5				FAC species $0$ $x_3 = 0$
···		= Total Co	ver	FACU species $0$ x 4 = $0$
Herb Stratum (Plot size: 5 ft r )		<u> </u>		UPL species $50 \times 5 = 250$
1. Lythrum hyssopifolium	50	~	OBL	Column Totals: 100 (A) 300 (B)
2. Baccharis pilularis	25	<ul> <li>✓</li> </ul>	UPL	
3. Eriogonum fasciculatum	25	~	UPL	Prevalence Index = $B/A = 3.00$
4				Hydrophytic Vegetation Indicators:
5.				Dominance Test is >50%
6.				Prevalence Index is ≤3.0 <sup>1</sup>
7				Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8 20.4 r	100%	= Total Co	over	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum       (Plot size:)         1)				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2		. <u> </u>		······································
		= Total Co	over	Hydrophytic Vegetation
% Bare Ground in Herb Stratum % Cover	of Biotic C	rust		Present? Yes No V
Remarks:				

Profile Desc	ription: (Describe to	o the depth n	eeded to docum	nent the in	ndicator of	or confirm	the absence of i	indicators.)	
Depth	Matrix		Redox	K Features	5				
(inches)	Color (moist)	% (	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remark	(S
-									
-									
·									
-									
-									
-									
							·		
-									
-									
-									
<sup>1</sup> Type: C=Co	ncentration D=Deple	etion RM=Red	duced Matrix CS	=Covered	or Coate	d Sand Gra	ains <sup>2</sup> Locatio	on <sup>.</sup> PI =Pore Lining	M=Matrix
Hydric Soil I	ndicators: (Applica	ble to all LRF	Rs, unless other	wise note	ed.)		Indicators for	Problematic Hyd	ric Soils <sup>3</sup> :
Histosol	(A1)		Sandv Redo	ox (S5)			1 cm Mucl	k (A9) ( <b>LRR C</b> )	
Histic Ep	ipedon (A2)		Stripped Ma	trix (S6)			2 cm Mucl	k (A10) ( <b>LRR B</b> )	
Black His	stic (A3)		Loamy Mucky Mineral (F1)				Reduced Vertic (F18)		
Hydroge	n Sulfide (A4)		Loamy Gley	ed Matrix	(F2)		Red Parer	nt Material (TF2)	
Stratified	Layers (A5) (LRR C	)	Depleted Matrix (F3)				Other (Exp	plain in Remarks)	
1 cm Mu	ck (A9) ( <b>LRR D</b> )		Redox Dark	Surface (I	F6)				
Depleted	Below Dark Surface	(A11)	Depleted Da	ark Surface	e (F7)				
Thick Da	rk Surface (A12)		Redox Depr	essions (F	-8)		<sup>3</sup> Indicators of hydrophytic vegetation and		
Sandy M	ucky Mineral (S1)		Vernal Pools	s (F9)			wetland hyd	rology must be pre	sent,
Sandy G	leyed Matrix (S4)						unless distu	rbed or problemation	2.
Restrictive L	ayer (if present):								
Туре:			_						
Depth (inc	hes):		_				Hydric Soil Pre	esent? Yes	No 🔽
Remarks:									
Digging	not permitted	l in verna	al pools, as	sume	d not h	nydric o	due to lack	of other ind	icators

#### HYDROLOGY

Wetland Hydrology Indicat	ors:							
Primary Indicators (minimum	Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required)							
Surface Water (A1)				Salt Crust (B11)		Water Marks (B1) (Riverine)		
High Water Table (A2)			Biotic Crust (B12)		Sediment Deposits (B2) (Riverine)			
Saturation (A3)			Aquatic Invertebrates (B13)		Drift Deposits (B3) (Riverine)			
Water Marks (B1) (Non	r <b>iverine</b> )			Hydrogen Sulfide Odor (C1)		Drainage Patterns (B10)		
Sediment Deposits (B2)	(Nonriverin	ıe)		Oxidized Rhizospheres along Livi	ng Roots (C3)	Dry-Season Water Table (C2)		
Drift Deposits (B3) (Nor	riverine)			Presence of Reduced Iron (C4)		Crayfish Burrows (C8)		
Surface Soil Cracks (B6)				Recent Iron Reduction in Tilled Se	oils (C6)	Saturation Visible on Aerial Imagery (C9)		
Inundation Vis ble on A	rial Imagery	(B7)		_ Thin Muck Surface (C7)		Shallow Aquitard (D3)		
Water-Stained Leaves (B9)				Other (Explain in Remarks) FAC-Neutral Test (D5)		FAC-Neutral Test (D5)		
Field Observations:								
Surface Water Present?	Yes	No	~	_ Depth (inches):				
Water Table Present?	Yes	No	~	Depth (inches):				
Saturation Present? (includes capillary fringe)	Yes	No	~	_ Depth (inches): Wetland Hydrology Present? Yes No _		drology Present? Yes No		
Describe Recorded Data (st	ream gauge,	monitor	ing	well, aerial photos, previous inspec	tions), if availa	ble:		
Remarks:								

## **Appendix D** Review Area Photos





**Photo Point 1.** Wetland Sampling Point (WSP)-1a within Vernal Pool-1 in Area 1 at north end of review area.

Photo Point 2. WSP-1b within upland in Area 1.



**Photo Point 3.** Vernal Pool-2 in Area 2 at north end of review area.



Photo Point 4. WSP-2 within Riparian-1 in Area 2.





**Photo Point 5.** WSP-3a within Shrub-Scrub Wetland-1 in Area 3 at north end of review area.

Photo Point 6. WSP-3b within upland in Area 3.



**Photo Point 7.** WSP-4a within Vernal Pool-3a in Area 3 at north end of review area.



Photo Point 8. WSP-4b within upland in Area 3.





**Photo Point 9.** Within Riparian-2, view of lone *Platanus* tree outside of preserve fenceline in Area 3.

**Photo Point 10.** Within Vernal Pool-3b in Area 4 located centrally within the review area.



**Photo Point 11.** Within Vernal Pool-3c in Area 5 located centrally within the review area.



**Photo Point 12.** Within Vernal Pool-3d in Area 6 located centrally within the review area.





**Photo Point 13.** WSP-5a within Pond-1a in Area 7 at south end of review area.

Photo Point 14. WSP-5b within Vernal Pool-3e in Area 7.



Photo Point 15. WSP-5c within upland in Area 7.



**Photo Point 16.** View of Pond-1b at northernmost manhole of Area 8 at south end of review area.





Photo Point 17. Within Vernal Pool-3f Area 8.

**Photo Point 18**. Alternate view of Vernal Pool-3f at location of southernmost manhole in Area 8. (covered by *Baccharis* shrub).



## Appendix C

Cultural Resources Survey Report

This is a list of the conspicuous aerial insects, reptiles, birds, and mammals noted in or adjacent to the Project Area by LSA during the general biological reconnaissance survey. Presence may be noted if a species is seen or heard, or identified by the presence of tracks, scat, or other signs.

Scientific Name	Common Name
REPTILIA	REPTILES
Uta stansburiana	Common side-blotched lizard
AVES	BIRDS
Ardea alba	Great egret
Buteo lineatus	Red-shouldered hawk
Calypte anna	Anna's hummingbird
Carduelis psaltria	Lesser goldfinch
Carpodacus mexicanus	House finch
Charadrius vociferus	Killdeer
Corvus brachyrhynchos	American crow
Geothlypis trichas	Common yellowthroat
Larus californicus	California gull
Melospiza melodia	Song sparrow
Mimus polyglottos	Northern mockingbird
Myiarchus cinerascens	Ash-throated flycatcher
Passer domesticus (nonnative species)	House sparrow
Pipilo crissalis	California towhee
Polioptila californica californica	Coastal California gnatcatcher
Psaltriparus minimus	Bushtit
Sayornis nigricans	Black phoebe
Zenaida macroura	Mourning dove
MAMMALIA	MAMMALS
Spermophilus beecheyi	California ground squirrel
Sylvilagus audubonii	Desert cottontail

#### Wildlife Species Observed

Taxonomy and nomenclature are based primarily on the following:

Birds: American Ornithologists' Union (1998, The A.O.U. Checklist of North American Birds, Seventh Edition, American Ornithologists' Union, Washington D.C.; and supplements; Website: http://www.aou.org/checklist/north/index.php).

## Appendix D

Construction Noise and Vibration Assessment

# Aquatic Resources Delineation Report **Poinsettia Station Vernal Pool Preserve Sewer Manhole Rehabilitation Project**

**JANUARY 2024** 

Prepared for:

### CITY OF CARLSBAD

5950 El Camino Real Carlsbad, California 92008 *Contact: Keri Martinez* 

Prepared by:



2280 Historic Decatur Road, Suite 200 San Diego, California 92106 *Contact: Tricia Wotipka* 

Printed on 30% post-consumer recycled material.

## Table of Contents

### SECTION

### PAGE NO.

Acror	nyms and	d Abbreviations	iii						
1	Introc	duction	1						
	1.1	Disclaimer Statement	1						
	1.2	Contact Information	1						
2	Revie	Review Area Description and Landscape Setting							
	2.1	Soils	3						
	2.2	Vegetation	3						
	2.3	Watershed	4						
	2.4	Review Area Alterations, Current and Past Land Use	4						
3	Preci	pitation Data and Analysis	5						
4	Inves	tigation Methods	7						
	4.1	U.S. Army Corps of Engineers	7						
	4.2	Regional Water Quality Control Board	7						
	4.3	California Department of Fish and Wildlife	8						
	4.4	California Coastal Act							
5	Aquat	Aquatic Resource Narrative							
	5.1	Non-Wetland Waters	9						
		5.1.1 Freshwater Pond	9						
	5.2	Wetlands	9						
		5.2.1 Scrub-Shrub Wetland	9						
		5.2.2 Vernal Pool	9						
	5.3	Riparian							
	5.4	Aquatic Resources Data Summary							
	5.5	National Wetland Inventory							
6	Concl	lusions							
	6.1	Waters of the United States (USACE)							
	6.2	Waters of the State (RWQCB)							
	6.3	CDFW Jurisdiction							
	6.4	California Coastal Commission Jurisdiction							
7	Refer	rences Cited							

i

### TABLES

1	Contact Information	1
2	Antecedent Precipitation Tool Data for the Review Area	5
3	Schedule of the Aquatic Resources Delineation	7
4	Wetland Sampling Point Data Summaries	10
5	Summary of Potentially Jurisdictional Aquatic Resources in the Review Area	13

#### FIGURES

1	Project Vicinity	17
2	Project Site	19
3	Soils	21
4	Hydrologic Setting	23
5-1	Aquatic Resources	25
5-2	Aquatic Resources	27
5-3	Aquatic Resources	29
6	Photo Points	31

#### **APPENDICES**

- A Request for a Jurisdictional Determination
- B Antecedent Precipitation Tool Output
- C Data Forms
- D Review Area Photos

ii

## Acronyms and Abbreviations

Acronym/Abbreviation	Definition
APT	Antecedent Precipitation Tool
ARC	antecedent runoff condition
CDFW	California Department of Fish and Wildlife
ESHA	Environmentally Sensitive Habitat Area
NWW	non-wetland water
OHWM	ordinary high-water mark
PDSI	Palmer Drought Severity Index
project	Poinsettia Station Vernal Pool Preserve Manhole Rehabilitation Project
RWQCB	Regional Water Quality Control Board
SDAM	Streamflow Duration Assessment Method
USACE	U.S. Army Corps of Engineers
WET	wetland



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## 1 Introduction

This Aquatic Resources Delineation Report was prepared in accordance with the Minimum Standards for Acceptance of Aquatic Resources Delineation Reports (USACE 2017). This report and supporting appendices provide the 20 items listed in the Minimum Standards for Acceptance of Aquatic Resources Delineation Reports. This report presents the results of the jurisdictional aquatic resource delineation conducted by Dudek for the proposed Poinsettia Station Vernal Pool Preserve Sewer Manhole Rehabilitation Project (project) located in Carlsbad, California. The delineation was conducted to identify and map existing aquatic resources potentially subject to the regulatory jurisdiction of the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act (33 USC 1344), waters of the state potentially subject to the regulatory jurisdiction of the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act, stream and riparian habitats potentially subject to the jurisdiction of the California Department of Fish and Wildlife (CDFW) pursuant to Section 1602 of the California Fish and Game Code, and wetlands and Environmentally Sensitive Habitat Areas potentially subject to the jurisdiction of the California Coastal Commission (CCC) (collectively defined as jurisdictional aquatic resources).

### 1.1 Disclaimer Statement

This report presents Dudek's best effort to quantify the extent of aquatic resources potentially regulated by USACE, RWQCB, and CDFW (i.e., regulatory agencies) within the identified review areas using the current regulations, written policies, and guidance from these regulatory agencies. The potential jurisdictional boundaries described in this report are subject to verification by the regulatory agencies. Only the regulatory agencies can make a final determination on whether the features present are subject to USACE, RWQCB, CDFW, and/or CCC regulation. A request for USACE Jurisdictional Determination is provided in Appendix A.<sup>1</sup>

## 1.2 Contact Information

Contact information for the project applicant and agent are provided in Table 1.<sup>2</sup> Access to the review area is not restricted, but if a site visit is requested, the project applicant or agent will accompany regulatory staff to the review area.<sup>3</sup> The City of Carlsbad is the project applicant and landowner.

Project Applicant	City of Carlsbad Public Works	Agent	Dudek
Contact Name	Keri Martinez	Contact Name	Tricia Wotipka
Address	5950 El Camino Real Carlsbad, California 92008	Address	2280 Historic Decatur Road, #200 San Diego, California 92106
Phone	442-200-7376	Phone	760-479-4295
Email	Keri.Martinez@carlsbadca.gov	Email	twotipka@dudek.com

#### Table 1. Contact Information

<sup>&</sup>lt;sup>1</sup> Minimum Standards Item 1 (Request for Jurisdictional Determination)

<sup>&</sup>lt;sup>2</sup> Minimum Standards Item 2 (Contact Information)

<sup>&</sup>lt;sup>3</sup> Minimum Standards Item 3 (Site Access Statement)

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2 Review Area Description and Landscape Setting<sup>4</sup>

The approximately 3.29-acre review area for the Poinsettia Station Vernal Pool Preserve Sewer Manhole Rehabilitation Project (project) is located along the eastern right-of-way of the North County Transit District railway between Avenida Encinas and Poinsettia Boulevard in the City of Carlsbad, California at 33.106221°N and 117.317500°W (Figure 1, Project Vicinity)<sup>5</sup>. Directions to the review area are as follows: from Interstate 5 North or South, take Exit 45 for Poinsettia Lane toward Aviara Parkway. Turn west onto Poinsettia Lane then turn right at the second cross street onto Avenida Encinas. In approximately 0.7 miles, turn left into the Carlsbad Poinsettia Station Transit parking lot. Access the site through one of multiple gates along the eastern fence line. The review area consists of temporary access areas surrounding nine existing manholes plus a 50-foot buffer within the Poinsettia Station Vernal Pool Preserve (PSVPP; Figure 2, Project Site). The PSVPP is protected and managed by the City of Carlsbad and contains vernal pool and adjacent scrub habitat that is occupied by a number of special-status plant and wildlife species. Topography within the review area is a relatively flat, closed depression. Elevation within the review area ranges from 48 to 54 feet above mean sea level. The review area is adjoined to the west by the Carlsbad Poinsettia Amtrak Coaster Station, to the east by the Carlsbad Poinsettia Station Transit parking lot, to the north by an undeveloped parcel, and it is situated within a larger matrix of residential and commercial development. The review area occurs on Section 29 of Township 12 South and Range 4 West in the northern half of the 'Encinitas' U.S. Geological Survey 7.5-minute quadrangle. The review area intersects 20 Assessor's Parcel Numbers parcels (APN's): 2141500800, 2141501100, 2141501200, 2141502000, 2146104700, 2146104800, 2146105600, 2146105800, 2146106100, 2146111600, 2146113900, 2146115200, 2146115300, 2146115400, 2146116100, 2146121100, 2146122600, 2146126100, 2146130900, and 2146131400.

### 2.1 Soils<sup>6</sup>

One soil mapping unit is mapped in the review area: Marina loamy coarse sand, 2% to 9% slopes (USDA 2023a) (Figure 3, Soils). This mapping unit is not classified as hydric (USDA 2023b). The Marina soil series consists of somewhat excessively drained soils that formed in eolian sands derived from mixed sources.

## 2.2 Vegetation

The review area supports the following vegetation communities and land cover types as identified by existing vegetation mapping: non-native grassland/vernal pool, freshwater marsh, ponded water, coastal sage scrub, *Baccharis*-dominated coastal sage scrub, non-native grassland, disturbed habitat, bare ground, ornamental vegetation, and urban/developed land (LSA 2013).

<sup>&</sup>lt;sup>4</sup> Minimum Standards Items 4 (Directions) and 10 (Description of Existing Field Conditions)

<sup>&</sup>lt;sup>5</sup> Minimum Standard Item 14 (Site Location Map)

<sup>&</sup>lt;sup>6</sup> Minimum Standards Item 13 (Soil Descriptions)

### 2.3 Watershed

The review area occurs in the northern half of the Loma Alta Creek-Frontal Gulf of Santa Catalina Subwatershed (Hydrologic Unit Code [HUC] 180703030504) of within the San Luis Rey-Escondido Subbasin (HUC 18070303; Figure 4, Hydrologic Setting). The San Luis Rey-Escondido Subbasin comprises approximately 186 square miles (119,500 acres) and contains Loma Alta Creek, Buena Vista Creek, Agua Hedionda Creek, and San Marcos Creek. The latter three of these collect in lagoons before entering the Pacific Ocean.

### 2.4 Review Area Alterations, Current and Past Land Use

The review area itself remains undeveloped and protected with the exception of an existing natural gas pipeline and wastewater collection pipelines and sewer access holes constructed in 1972. Historical hydrology of the review area has been altered by the construction of the adjacent railroad, roadways, and surrounding urban development, and the site current receives runoff from the adjacent uplands. The PSVPP is fenced with educational signage to discourage pedestrian traffic entering from the adjacent walking trail and pedestrian overpasses and to prevent trespassing, vandalism, and illegal dumping.



## 3 Precipitation Data and Analysis<sup>7</sup>

The USACE-developed Antecedent Precipitation Tool (APT) was used to assess whether the delineation date occurred in a drier, average, or wetter than normal period (USACE 2023a). To determine what constitutes a "typical year," USACE developed the APT. The information generated from the APT can help to determine whether normal hydrologic and/or climatic conditions were present during the site visit and assist with completing the Wetland Determination Data Form.

The APT provides three climatological parameters: Palmer Drought Severity Index (PDSI), season, and antecedent precipitation condition. The PDSI is a standardized index calculated on a monthly basis with PDSI value outputs ranging from -4 (extreme drought) to +4 (very wet) (NOAA 2021) to assess drought conditions (i.e., PDSI Class). The APT determines wet vs. dry season based on related procedures provided in the applicable regional supplement for the review area (in this case, the Arid West Supplement). If the antecedent runoff condition (ARC) score is less than 10, then the antecedent precipitation condition is classified as drier than normal; normal conditions are present with an ARC score of 10 to 14; conditions are wetter than normal when an ARC score is greater than 14 (USACE 2023a).

Table 2 summarizes the key data extrapolated from the APT output: estimated drought conditions (PDSI Class), wet or dry season determination, ARC score, and antecedent precipitation condition. Based on the APT output provided in Appendix B and summarized in Table 2, the precipitation and climatic conditions for the review area were within the normal range during the time of the delineation.

### Table 2. Antecedent Precipitation Tool Data for the Review Area

Main Field Survey Date	PDSI Class	Season	ARC Score	Antecedent Precipitation Condition
April 5, 2023	Extreme wetness	Dry Season	18	Wetter than Normal

Notes: PDSI = Palmer Drought Severity Index; ARC = antecedent runoff condition

Additionally, according to the U.S. Department of Agriculture's Agricultural Applied Climate Information System (USDA 2023c), the area around the review area receives an average of 10.07 inches of precipitation annually.

<sup>8</sup> Minimum Standards Item 11 (Discussion of Hydrology)

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## 4 Investigation Methods<sup>8</sup>

The jurisdictional delineation was conducted by Dudek biologists Anna Touchstone and Dylan Ayers on April 5, 2023 (Table 3). Prior to conducting the jurisdictional delineation, U.S. Fish and Wildlife Service's National Wetland Inventory data (USFWS 2023) was reviewed to determine if the review area contained any features mapped by the U.S. Fish and Wildlife Service. Site-specific topographical data was reviewed in conjunction with aerials, both current and historical, to determine the potential presence of non-wetland waters. Current vegetation mapping was reviewed to assess whether the review area supported hydrophytic vegetation and potential wetlands; several areas supporting hydrophytic vegetation were also assessed for the presence of wetland hydrology and hydric soils to determine whether they were three-parameter wetlands. Digging is not permitted in the PSVPP due to the presence of special status plant and wildlife species; therefore, soils were assumed to be hydric when the other two wetland indicators (i.e., hydrophytic vegetation and hydrology) were present. Aquatic resource boundaries were mapped in the field using ESRI Collector on a mobile device. Remote sensing was not used for this delineation.

### Table 3. Schedule of the Aquatic Resources Delineation

Date	Hours	Personnel	Conditions	
April 5, 2023	8:00 AM-11:00 AM	Anna Touchstone, Dylan Ayers	53-55°F, 0-25% cloud cover; 0-3 m.p.h. wind	

## 4.1 U.S. Army Corps of Engineers

The USACE wetlands delineation was conducted in accordance with the 1987 USACE Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008a). A Field Guide to the Identification of the OHWM in the Arid West Region of the Western United States: A Delineation Manual (USACE 2008b) was used to determine the limits of non-wetland waters. Non-wetland waters were delineated on topographical maps in conjunction with ESRI Collector on a mobile device. The widths of each non-wetland water were determined in the field according to the OHWM manual.

Wetland Determination Forms were taken at certain points within drainages or vegetation communities where a predominance of hydrophytic vegetation was present; hydrology, vegetation, and soils were assessed to determine whether USACE three-parameter wetlands were present. USACE OHWM Forms were completed at representative cross-sections of non-wetland waters to capture their characteristics and widths. All data forms are provided in Appendix C.

## 4.2 Regional Water Quality Control Board

Waters of the state regulated by the RWQCB were mapped in accordance with the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2019). As described in these procedures, wetland waters of the state are mapped based on the procedures in USACE's 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987) and its 2008 Regional Supplement to the Corps of Engineers Wetland

<sup>&</sup>lt;sup>8</sup> Minimum Standards Item 8 (Dates of Field Work), Item 5 (Use of 1987 Manual, Regional Supplement, and OHWM guide), Item 12 (Statement Regarding Use of Remote Sensing), Item 18 (Data Forms) and Item 19 (Methods)

Delineation Manual: Arid West Region (Version 2.0) (USACE 2008a). Non-wetland waters are mapped at the OHWM based on the procedures defined in USACE's 2008 A Field Guide to Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008b).

### 4.3 California Department of Fish and Wildlife

CDFW jurisdictional areas were mapped to include the bank of the stream/channel and outer dripline of adjacent riparian vegetation, as set forth under California Fish and Game Code 1602. Streambeds under the jurisdiction of CDFW were delineated using the Cowardin method of waters classification, which defines waters boundaries by a single parameter (i.e., hydric soils, hydrophytic vegetation, or hydrology) (Cowardin et al. 1979).

### 4.4 California Coastal Act

Under the California Coastal Act of 1976 (CCA), the California Coastal Commission (CCC) and other agencies that have been delegated authority by CCC regulate development in the "coastal zone" and require a coastal development permit for almost all development within this zone. From 3 miles seaward, the coastal zone generally extends approximately 1,000 yards inland. In less-developed areas, it can extend up to 5 miles inland from the mean high-tide line but can also be considerably less than 1,000 yards inland in developed areas.

The CCA also protects designated sensitive coastal areas by providing additional review and approvals for proposed actions in these areas. The CCA defines wetlands as "lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, swamps, mudflats, and fens" (California Public Resources Code Section 30121). The CCA allows diking, filling, or dredging of wetlands for certain uses, such as restoration. The CCA also directs each city or county within the coastal zone to prepare a local coastal program for CCC certification (California Public Resources Code Section 30500). Under this definition, the CCC takes jurisdiction over all wetlands (as defined by the presence of any one of the three USACE criteria using the Cowardin method) (Cowardin et al. 1979).

Environmentally Sensitive Habitat Areas (ESHAs) are defined in the CCA as "any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments" (California Public Resources Code Section 30107.5).

## 5 Aquatic Resource Narrative<sup>9</sup>

Four aquatic resource types were documented in the review area and are described in further detail below: freshwater pond, scrub-shrub wetland, vernal pool, and riparian area. Figure 5, Aquatic Resources, visually depicts aquatic resources mapped in the review area<sup>10</sup>.

### 5.1 Non-Wetland Waters

### 5.1.1 Freshwater Pond

There is one (1) freshwater pond (Pond-1a and Pond-1b) comprising 0.123 acre (170 linear feet [LF]) in Areas 7 and 8 of the review area. Freshwater ponds occur in closed landscape depressions. The pond had standing water up to approximately 12 inches in depth at the time of the field delineation, but is small enough is size that it is likely to have intermittent hydrology that dries up completely for part of the year. Evidence of an ordinary high water mark within the pond included destruction of terrestrial vegetation, and change in plant community and/or cover. Inundation was visible on aerial imagery (Google Earth 2023). The pond was predominantly barren of vegetation but did support sparse pale spikerush (*Eleocharis macrostachya*) and curly dock (*Rumex crispus*) outside of the review area and wetland sampling point locations. The pond was adjoined to the east by Vernal Pool-3 (described in more detail below).

### 5.2 Wetlands

### 5.2.1 Scrub-Shrub Wetland

There is one (1) scrub-shrub wetland comprising 0.032 acres (52 LF) in Area 3 of the review area. Scrub-shrub wetlands are three-parameter wetlands with woody plants less than 20 feet in height as the dominant life form. The scrub-shrub wetland supports a tree canopy of Goodingg's willow (*Salix gooddingii*), shrub canopy of arroyo willow (*Salix lasiolepis*) and coyote brush (*Baccharis pilularis*), and sparse understory of annual tall willowherb (*Epilobium brachycarpum*). Wetland hydrology was confirmed by the presence of standing water and water-stained leaves. The wetland had standing water up to approximately 4 inches in depth at the time of the field delineation. As previously described in Section 4, soils were assumed to be hydric due to the presence of hydric vegetation and wetland hydrology.

### 5.2.2 Vernal Pool

There are three (3) vernal pools ,comprising 1.006 acres (1,183 LF), in the review area. Vernal Pool-1 occurs in Area 1, Vernal Pool-2 occurs in Area 2, and Vernal Pool-3a through -3f are all associated with the same hydrologically connected feature occurring in Areas 3 through 8. Vernal pools are three-parameter wetlands with a hardpan or restrictive soil layer that supports shallow seasonal inundation and habitat for distinctive plant and animal species. The vernal pools were dominated by fascicled tarweed (*Deinandra faciculata*), hyssop loosestrife (*Lythrum hyyssopifolium*), and San Diego button-celery (*Eryngium aristulatum* var. *parishii*). Wetland hydrology was confirmed

<sup>&</sup>lt;sup>9</sup> Minimum Standards Item 6 (Aquatic Resource Narrative)

<sup>&</sup>lt;sup>10</sup> Minimum Standards Items 7 and 16 (Delineation Maps)

by the presence of surface soil cracks and biotic crust. Areas of standing water up to approximately 6 inches in depth were present at the time of the field delineation. As previously described in Section 4, soils were assumed to be hydric due to the presence of hydric vegetation and wetland hydrology.

### 5.3 Riparian

There are two (2) riparian areas comprising 0.042 acres (66 LF) in Areas 2 and 3 of the review area. Riparian-1 consists of a single arroyo willow shrub surrounded by coyote brush (*Baccharis pilularis*) that adjoins Vernal Pool-2 to the east. Riparian-2 consists of a single California sycamore tree (*Platanus racemosa*) that is rooted outside of the review area, with a drip line that extends over upland scrub habitat within the review area. Riparian areas did not exhibit evidence of wetland hydrology.

### 5.4 Aquatic Resources Data Summary

Results from observable field indicators at ten (10) wetland sampling points indicate that approximately 1.203 acres (1,471 linear feet) of aquatic resources occur in the review area. The data collected at each wetland sampling point are included in Appendix C and summarized in Table 4 below. Photos of the potential aquatic features delineated within the review area, as well as additional areas reviewed for the presence of these resources, are provided in Appendix D.<sup>11</sup> The locations of these photos are shown in Figure 6, Photo Points.

Sampling Point ID	Wetland Vegetation	Wetland Soils*	Wetland Hydrology	Determination
WSP-1a	Yes	Yes	Yes	Vernal Pool
WSP-1b	No	No	No	Upland
WSP-2	No	No	No	Riparian
WSP-3a	Yes	Yes	Yes	Scrub-shrub wetland
WSP-3b	No	No	No	Upland
WSP-4a	Yes	Yes	Yes	Vernal Pool
WSP-4b	No	No	No	Upland
WSP-5a	No	No	Yes	Freshwater Pond
WSP-5b	Yes	Yes	Yes	Vernal Pool
WSP-5c	No	No	No	Upland

#### **Table 4. Wetland Sampling Point Data Summaries**

Note:

 Digging is not permitted in the PSVPP; therefore, soils were assumed to be hydric when wetland hydrology and vegetation indicators were present. Soils were not assumed to be hydric when either hydrophytic vegetation or wetland hydrology was absent.

<sup>&</sup>lt;sup>11</sup> Minimum Standards Item 17 (Ground Photos)

## 5.5 National Wetland Inventory

The National Wetland inventory shows a linear pattern of a freshwater palustrine emergent wetland through the separate review areas (USFWS 2023; see Figure 4). These mapped patterns are consistent with and overlap the delineated vernal pool complex.

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## 6 Conclusions

Based on the data collected during the field delineation, Dudek biologist determined that approximately 1.203 acres (1,471 linear feet) of aquatic resources occur in the review area (Table 5). This report can be used by those agencies to determine if they would regulate the features described herein. The GIS data for the delineation is provided digitally. <sup>12</sup> A copy of the ORM Bulk Upload Aquatic Resources or Consolidated Excel spreadsheet is not submitted with this report because this information is presented in Table 5.<sup>13</sup>

Feature Name	Cowardin <sup>1</sup>	OHWM Indicators	Location (Latitude/ Longitude; Decimal Degrees)	Acres/Linear Feet <sup>3</sup>			
Non-Wetland Water							
Pond-1a	POW	DTV, CVS, CVC	33.10395, -117.3167	0.063/86			
Pond-1b	POW	DTV, CVS, CVC	33.10302, -117.3162	0.060/84			
	Wetland Waters Subtotal	0.123/170					
Wetlands							
Scrub-Shrub Wetland-1	PSS	N/A	33.10796, -117.3183	0.032/52			
Vernal Pool-1	PEM	N/A	33.11007, -117.3195	0.059/152			
Vernal Pool-2	PEM	N/A	33.10913, -117.319	0.072/122			
Vernal Pool-3a	PEM	N/A	33.10809, -117.3185	0.233/149			
Vernal Pool-3b	PEM	N/A	33.10713, -117.318	0.151/143			
Vernal Pool-3c	PEM	N/A	33.10606, -117.3176	0.102/139			
Vernal Pool-3d	PEM	N/A	33.10503, -117.3171	0.127/127			
Vernal Pool-3e	PEM	N/A	33.10407, -117.3166	0.145/162			
Vernal Pool-3f	PEM	N/A	33.10283, -117.3162	0.118/189			
			Wetlands Subtotal	1.038/1,235			
Riparian							
Riparian-1	N/A	N/A	33.1091, -117.3189	0.008/29			
Riparian-2	N/A	N/A	33.10816, -117.3183	0.034/37			
			Riparian Subtotal	0.042/66			
			Grand Total	1.203/1,471			

#### Table 5. Summary of Potentially Jurisdictional Aquatic Resources in the Review Area<sup>14</sup>

**Notes:** OHWM = ordinary high-water mark; N/A = not applicable; DTV = destruction of terrestrial vegetation; CVS = change in vegetation species; CVC = change in vegetation cover

<sup>1</sup> Pursuant to Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979) and USACE Cowardin Codes for ORM Data Entry (USACE 2023b).

<sup>3</sup> Totals may not sum due to rounding.

<sup>&</sup>lt;sup>12</sup> Minimum Standards Item 20 (Digital Data)

<sup>&</sup>lt;sup>13</sup> Minimum Standards Item 15 (ORM Bulk Upload Aquatic Resources or Consolidated Excel spreadsheet)

<sup>&</sup>lt;sup>14</sup> Minimum Standards Item 9 (Table Listing All Aquatic Resources)

### 6.1 Waters of the United States (USACE)

The vernal pools, scrub-shrub wetland, and freshwater pond appear to be isolated in nature and lack a direct, continuous surface connection to a traditional navigable waterbody (i.e. Pacific Ocean or a tributary to the Pacific Ocean). Therefore, all features on site do not appear to meet the current definition of waters of the U.S.

### 6.2 Waters of the State (RWQCB)

One (1) freshwater pond comprising approximately 0.123 acres of non-wetland waters, three (3) vernal pools and one (1) scrub-shrub wetland comprising 1.038 acres of wetlands are anticipated to meet the criteria for jurisdictional waters of the state. Contrary to the USACE, the RWQCB asserts jurisdiction over isolated surface waters under the Porter-Cologne Water Quality Control Act.

### 6.3 CDFW Jurisdiction

All aquatic resources comprising described in Section 6.2 are anticipated to also be subject to CDFW regulation. These include 0.123 (170 linear feet) acres of non-wetland waters and 1.038 acres (1,235 linear feet) of wetlands, The riparian areas are not associated with a lake or streambed and are therefore not anticipated to be subject to CDFW regulation.

### 6.4 California Coastal Commission Jurisdiction

All aquatic resources described in Section 4 are anticipated to be subject to CCC regulation, as they constitute habitat for listed species and/or are at least single-parameter wetlands (i.e., positive wetland hydrology, hydrophytic vegetation, or hydric soils). These include 0.123 acres (170 linear feet) of non-wetland waters, 1.038 acres (1,235 linear feet) of wetlands, and 0.042 acres (66 linear feet) acres of riparian areas.

## 7 References Cited

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SOURCE: USGS 7.5-Minute Series Encinitas Quadrangles Township 12S; Range 4W; Section 29

1,000

2,000 Feet





SOURCE: SanGIS 2020

330 Beet



SOURCE: SanGIS 2020; SSURGO 2023

330 \_\_\_\_\_ Feet


SOURCE: SanGIS 2020; USGS NHD and WBD 2023; NWI 2023; FEMA 2023; CA Dept. of Conservation 2012

520 Feet

FIGURE 4 Hydrologic Setting Poinsettia Station Vernal Pool Preserve Sewer Manhole Rehabilitation Project



DUDEK 💩 🛀

50

100 Beet

### FIGURE 5-1 Aquatic Resources Poinsettia Station Vernal Pool Preserve Sewer Manhole Rehabilitation Project





100 Beet





100 Beet

### FIGURE 5-3 Aquatic Resources Poinsettia Station Vernal Pool Preserve Sewer Manhole Rehabilitation Project



175

0

350 Beet

## **Appendix A**

Request for a Jurisdictional Determination

#### Appendix A - REQUEST FOR CORPS JURISDICTIONAL DETERMINATION (JD)

To:	o: <u>Los Angeles District</u> (Distric	ct Name)		
•	I am requesting a JD on property located at: 6511 Avenida Encina	as, Carlsbad, C (Street Addre	<u>CA 92009</u> ss)	
	City/Township/Parish: Carlsbad	County:	San Diego	State: CA
	Acreage of Parcel/Review Area for JD: <u>3.29 acres</u>		9	
	Section: 29 Township: 12S Range: 4W			
	Latitude (decimal degrees): 33.106221 Longitude (de	cimal degrees)	: <u>-117.317500</u>	
	(For linear projects, please include the center point of the propose	d alignment.)		
•	Please attach a survey/plat map and vicinity map identifying location	on and review	area for the JD.	
•	$\Box$ I currently own this property. $\Box$ I plan to purchase this prope	rty.		
	oxtimes I am an agent/consultant acting on behalf of the requestor.			
	□ Other (please explain):			
•	Reason for request: (check as many as applicable)			
	□ I intend to construct/develop a project or perform activities on this	parcel which v	vould be designed to a	avoid all
	aquatic resources.			
	$oxed{initial}$ I intend to construct/develop a project or perform activities on this	parcel which v	vould be designed to a	avoid all
	jurisdictional aquatic resources under Corps authority.			
	$\Box$ I intend to construct/develop a project or perform activities on this	parcel which n	nay require authorizat	ion from the
	Corps, and the JD would be used to avoid and minimize impacts to j	urisdictional aq	uatic resources and a	s an initial
	step in a future permitting process.			
	□ I intend to construct/develop a project or perform activities on this	parcel which n	nay require authorizat	ion from the
	Corps; this request is accompanied by my permit application and the	e JD is to be us	ed in the permitting pr	ocess.
	☐ I intend to construct/develop a project or perform activities in a na	ivigable water o	of the U.S. which is inc	cluded on the
	district Section 10 list and/or is subject to the ebb and flow of the tid	e.		
	□ A Corps JD is required in order to obtain my local/state authorizat	tion.		
	☐ I intend to contest jurisdiction over a particular aquatic resource a	nd request the	Corps confirm that jur	risdiction
	does/does not exist over the aquatic resource on the parcel.			
	$\Box$ I believe that the site may be comprised entirely of dry land.			
	□ Other:			
•	Type of determination being requested:			
	$\boxtimes$ I am requesting an approved JD.			
	☐ I am requesting a preliminary JD.			
	□ I am requesting a "no permit required" letter as I believe my propo	osed activity is	not regulated.	
	$\Box$ I am unclear as to which JD I would like to request and require ad	Iditional informa	ation to inform my dec	ision.
<b>D</b> . <i>t</i>		, antiner an the		t of a manage
Dy:	y signing below, you are indicating that you have the authority, or are reprint with such authority, to and do bereby grant Corps, personnel i	right of entry to	Legally access the si	it of a person
tor	perform the JD. Your signature shall be an affirmation that you pos	sess the requis	site property rights to	request a .ID
ont	in the subject property.			
011				
*Sic	Signature: Visia Wotupka	Date:	January 3, 2024	

 Typed or printed name: <u>Tricia Wotipka</u> Company name: Dudek

 Address:
 2280 Historic Decatur Road, Suite 200

 San Diego, CA 92106

 Daytime phone no.:
 (760) 420-2042

 Email address:
 twotipka@dudek.com

\*Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332. Principal Purpose: The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above.

Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USAGE website.

**Disclosure:** Submission of requested information is voluntary; however, if information is not provided, the request for an AJD cannot be evaluated nor can an AJD be issued.

# **Appendix B**

Antecedent Precipitation Tool Output

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Written by Jason Deters U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation $\Delta$	Weighted $\Delta$	Days Normal	Days Antecedent
RLSBAD MCCLELLAN PALOMAR AP	33.13, -117.2764	312.992	2.89	262.812	2.06	8945	90
CARLSBAD 3.8SE	33.1187, -117.3044	167.979	1.799	145.013	1.07	1	0
CARLSBAD 2.2SE	33.1427, -117.3206	21.982	2.704	291.01	2.004	1	0
VISTA	33.2353, -117.2322	430.118	7.711	117.126	4.373	2282	0
OCEANSIDE MARINA	33.2097, -117.395	9.843	8.796	303.149	6.625	124	0

- Daily Total
- ----- 30-Day Rolling Total
  - 30-Year Normal Range

Jun 202	3 2	Jul Aug 023 2023
ondition Value	Month Weight	Product
3	3	9
3	2	6
3	1	3
		Wetter than Normal - 18



Project/Site: Poinsettia SVPP Manhole Repair	City/County: San Diego/San Diego County Sampling Date: 2023-04-05						
Applicant/Owner: City of Carlsbad	State: California Sampling Point: WSP-1a						
Investigator(s): Anna Touchstone and Dylan Ayers	Section, Township, Range: S20 T12S R4W						
Landform (hillslope, terrace, etc.): Vernal Pool	Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0</u>						
Subregion (LRR): C 19 Lat: 33	3.11000858 Long: -117.31947344 Datum: WGS 84						
Soil Map Unit Name: MIC - Marina loamy coarse sand, 2 to 9 percent slopes NWI classification:							
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes No 🖌 (If no, explain in Remarks.)						
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" present? Yes No						
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, explain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects, important features, etc.						

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes <u>*</u> Yes <u>*</u> Yes <u>*</u>	No No No	Is the Sampled Area within a Wetland?	Yes 🖌	No
Remarks:					
Pit taken within VP-1					

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum     (Plot size: 30 ft f       1.	<u>% Cover</u>	<u>Species?</u>	<u>Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC: $\underline{2}$ (A)
23				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
4 Sapling/Shrub Stratum (Plot size: 5 ft r)		= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7</u> (A/B)
1.				Prevalence Index worksheet:
2.				Total % Cover of:Multiply by:
3.				OBL species 30 x 1 = 30
4.				FACW species $0$ $x_2 = 0$
5				FAC species $0$ $x_3 = 0$
		= Total Co	ver	FACU species $15$ x 4 = $60$
Herb Stratum (Plot size: 5 ft r )				UPL species $5 \times 5 = 25$
1. Lythrum hyssopifolium	20	~	OBL	Column Totals: 50 (A) 115 (B)
2. Deinandra fasciculata	10	~	FACU	
<sub>3.</sub> Eryngium aristulatum var. parishii	10	~	OBL	Prevalence Index = B/A = 2.30
<sub>4.</sub> Brassica nigra	5		UPL	Hydrophytic Vegetation Indicators:
<sub>5.</sub> Vulpia myuros	5		FACU	✓ Dominance Test is >50%
6.				✓ Prevalence Index is ≤3.0 <sup>1</sup>
7				Morphological Adaptations <sup>1</sup> (Provide supporting
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 30 ft r )	50%	= Total Co	ver	
1.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
2.				be present, unless disturbed or problematic.
% Bare Ground in Herb Stratum <u>50.0</u> % Cover	Hydrophytic Vegetation Present? Yes <u>/</u> No			
Remarks:				1

	Redux realures	2			
inches) Color (moist) %	Color (moist) % Type' L	<u>_oc<sup>2</sup> Texture Remarks</u>			
-					
-					
<u> </u>					
-					
Type: C=Concentration, D=Depletion, RM=R	educed Matrix, CS=Covered or Coated S	and Grains. <sup>2</sup> Location: PL=Pore Lining, M=Ma	atrix.		
lydric Soil Indicators: (Applicable to all LF	RRs, unless otherwise noted.)	Indicators for Problematic Hydric Soil	s³:		
Histosol (A1)	Sandy Redox (S5)	1 cm Muck (A9) (LRR C)			
Histic Epipedon (A2)	Stripped Matrix (S6)	2 cm Muck (A10) (LRR B)	2 cm Muck (A10) (LRR B)		
Black Histic (A3)	Loamy Mucky Mineral (F1)	Reduced Vertic (F18)	Reduced Vertic (F18)		
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Red Parent Material (TF2)	Red Parent Material (TF2)		
Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)	<ul> <li>Other (Explain in Remarks)</li> </ul>	<ul> <li>Other (Explain in Remarks)</li> </ul>		
1 cm Muck (A9) ( <b>LRR D</b> )	Redox Dark Surface (F6)				
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	2			
_ Thick Dark Surface (A12)	Redox Depressions (F8)	<sup>3</sup> Indicators of hydrophytic vegetation and			
Sandy Mucky Mineral (S1)	Vernal Pools (F9)	wetland hydrology must be present,			
Sandy Gleyed Matrix (S4)		unless disturbed or problematic.			
(estrictive Layer (if present):					
Туре:	_				
Depth (inches):		Hydric Soil Present? Yes V	°		
Remarks:					
ngging not permitted in ven	iai pools, assumed nyunc				
YDROLOGY					
YDROLOGY Vetland Hydrology Indicators:					

Primary indicators (minimum	or one requi	reu, cri	IECK a	ali that apply)		Secondary indicators (2 or more required)		
Surface Water (A1)				Salt Crust (B11)		Water Marks (B1) (Riverine)		
High Water Table (A2)				Biotic Crust (B12)		Sediment Deposits (B2) (Riverine)		
Saturation (A3)				Aquatic Invertebrates (B13)		Drift Deposits (B3) (Riverine)		
Water Marks (B1) (Nonr	iverine)			Hydrogen Sulfide Odor (C1)		Drainage Patterns (B10)		
Sediment Deposits (B2)	(Nonriverine	e)		Oxidized Rhizospheres along Livi	ing Roots (C3)	Dry-Season Water Table (C2)		
Drift Deposits (B3) (Non	riverine)			Presence of Reduced Iron (C4)		Crayfish Burrows (C8)		
✓ Surface Soil Cracks (B6)	)			Recent Iron Reduction in Tilled Se	oils (C6)	Saturation Visible on Aerial Imagery (C9)		
Inundation Vis ble on Aerial Imagery (B7)				Thin Muck Surface (C7)		Shallow Aquitard (D3)		
Water-Stained Leaves (B9)				Other (Explain in Remarks)		<ul> <li>FAC-Neutral Test (D5)</li> </ul>		
Field Observations:								
Surface Water Present?	Yes	No	~	_ Depth (inches):				
Water Table Present?	Yes	_ No _	~	Depth (inches):				
Saturation Present? (includes capillary fringe)	Yes	_ No _	~	_ Depth (inches):	Wetland Hy	drology Present? Yes 🖌 No		
Describe Recorded Data (str	eam gauge,	monito	ring	well, aerial photos, previous inspec	ctions), if availa	able:		
Remarks:								
Surface water cou	th of oo	mole		aint				
Surface water sou	iti or sa	mple	e po	JIII				

Project/Site: Poinsettia SVPP Manhole Repair	City/County: San Diego	/San Diego County	Sampling Date: 2023-04-05				
Applicant/Owner: City of Carlsbad		State: California	Sampling Point: WSP-1b				
Investigator(s): Anna Touchstone and Dylan Ayers	Section, Township, Rang	<sub>e:</sub> S20 T12S R4W					
Landform (hillslope, terrace, etc.): Upland	_ Local relief (concave, cor	nvex, none): Concave	e Slope (%): <u>.5</u>				
Subregion (LRR): C 19 Lat: 33	3.1100385 L	.ong: -117.3194277	1 Datum: WGS 84				
Soil Map Unit Name: MIC - Marina loamy coarse sand, 2 to 9	Soil Map Unit Name: MIC - Marina loamy coarse sand, 2 to 9 percent slopes NWI classification:						
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes No 👱	(If no, explain in Re	emarks.)				
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "No	ormal Circumstances" p	resent? Yes No _				
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If need	ed, explain any answei	rs in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.							
Hydrophytic Vegetation Present? Ves No 🗸							

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No <u>v</u> No <u>v</u> No <u>v</u>	Is the Sampled Area within a Wetland?	Yes	No
Remarks:					
Upland point					

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum     (Plot size: 30 ft r       1.	<u>% Cover</u>	<u>Species?</u>	<u>Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
23				Total Number of Dominant       Species Across All Strata:   (B)
4 Sapling/Shrub Stratum (Plot size: 5 ft r)	- <u> </u>	= Total Co	over	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1				Prevalence Index worksheet:
2.				Total % Cover of:Multiply by:
3.				OBL species $0   x 1 = 0$
4.				FACW species $0$ $x_2 = 0$
5				FAC species $5$ $x_3 = 15$
		= Total Co	over	FACU species 80 x 4 = 320
Herb Stratum (Plot size: 5 ft r )				UPL species $5$ x 5 = $25$
1. Deinandra fasciculata	40	<b>~</b>	FACU	Column Totals: 90 (A) 360 (B)
<sub>2.</sub> Vulpia myuros	40	~	FACU	
<sub>3.</sub> Brassica nigra	5		UPL	Prevalence Index = $B/A = 4.00$
4. Sonchus asper	5		FAC	Hydrophytic Vegetation Indicators:
5.				Dominance Test is >50%
6.				Prevalence Index is ≤3.0 <sup>1</sup>
7				Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8 20 ft r	90%	= Total Co	over	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: <u>30 ft i</u> )				<sup>1</sup> Indicators of hydric soil and wotland hydrology must
1			·	be present, unless disturbed or problematic.
2				
% Bare Ground in Herb Stratum 10.0 % Cover	Hydrophytic Vegetation Present? Yes No			
Remarks:				1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix		Redox	Features	3				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
-									
-							·		
			<u> </u>						
-									
-									
-									
			<u> </u>						
							<u> </u>		
-									
<sup>1</sup> Type: C=Co	oncentration, D=Depl	etion, RM=Re	educed Matrix, CS	=Covered	or Coate	d Sand Gra	ains. <sup>2</sup> Location:	PL=Pore Lining,	M=Matrix.
Hydric Soil I	ndicators: (Applica	ble to all LR	Rs, unless other	wise note	ed.)		Indicators for Pr	oblematic Hydri	c Soils³:
Histosol	(A1)		Sandy Redo	x (S5)			1 cm Muck (A	A9) (LRR C)	
Histic Ep	ipedon (A2)		Stripped Matrix (S6)			2 cm Muck (A10) (LRR B)			
Black His	stic (A3)		Loamy Mucky Mineral (F1)			Reduced Vertic (F18)			
Hydroge	n Sulfide (A4)		Loamy Gleyed Matrix (F2)			Red Parent M	laterial (TF2)		
Stratified	Layers (A5) (LRR C	;)	Depleted Matrix (F3)			Other (Explai	n in Remarks)		
1 cm Mu	ck (A9) ( <b>LRR D</b> )		Redox Dark Surface (F6)						
Depleted	Below Dark Surface	e (A11)	Depleted Dark Surface (F7)						
Thick Da	rk Surface (A12)		Redox Depressions (F8)			<sup>3</sup> Indicators of hydrophytic vegetation and			
Sandy M	lucky Mineral (S1)		Vernal Pools (F9)				wetland hydrology must be present,		
Sandy G	leyed Matrix (S4)						unless disturbe	d or problematic.	
Restrictive L	.ayer (if present):								
Туре:			_						
Depth (inches): Hydric Soil Prese							Hydric Soil Prese	nt? Yes	No
Remarks:									
Digging not permitted in vernal pools, assumed not hydric due to lack of other indicators									

Wetland Hydrology Indicat	ors:									
Primary Indicators (minimum	<u>ı of one requi</u>		Secondary Indicators (2 or more required)							
Surface Water (A1) Salt Crust (B11)						Water Marks (B1) (Riverine)				
High Water Table (A2) Biotic Crust (B12)						Sediment Deposits (B2) (Riverine)				
Saturation (A3)				Aquatic Invertebrates (B13)		Drift Deposits (B3) (Riverine)				
Water Marks (B1) (Non	riverine)			Hydrogen Sulfide Odor (C1)		Drainage Patterns (B10)				
Sediment Deposits (B2)	(Nonriverine	<b>e</b> )		Oxidized Rhizospheres along Livit	ng Roots (C3)	Dry-Season Water Table (C2)				
Drift Deposits (B3) (Non	riverine)			Presence of Reduced Iron (C4)		Crayfish Burrows (C8)				
Surface Soil Cracks (B6	)			Recent Iron Reduction in Tilled So	oils (C6)	Saturation Visible on Aerial Imagery (C9)				
Inundation Vis ble on Ae	rial Imagery	(B7)		Thin Muck Surface (C7)		Shallow Aquitard (D3)				
Water-Stained Leaves (	B9)			Other (Explain in Remarks)		FAC-Neutral Test (D5)				
Field Observations:										
Surface Water Present?	Yes	_ No	~	_ Depth (inches):						
Water Table Present?	Yes	_ No	~	_ Depth (inches):						
Saturation Present? (includes capillary fringe)	Yes	_ No _	~	_ Depth (inches):	Wetland Hydrology Present? Yes No					
Describe Recorded Data (str	eam gauge,	monitc	ring	well, aerial photos, previous inspec	tions), if availa	ble:				
Remarks:										

Project/Site: Poinsettia SVPP Manhole Repair	City/County: San Diego/San Diego County Sampling Date: 2023-04-05
Applicant/Owner: City of Carlsbad	State: California Sampling Point: WSP-2
Investigator(s): Anna Touchstone and Dylan Ayers	Section, Township, Range: S29 T12S R4W
Landform (hillslope, terrace, etc.): Upland	_ Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0</u>
Subregion (LRR): C 19 Lat: 33	3.1091176 Long: -117.31895465 Datum: WGS 84
Soil Map Unit Name: MIC - Marina loamy coarse sand, 2 to 9	percent slopes NWI classification: PEM1A
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present?       Yes No         Hydric Soil Present?       Yes No         Wetland Hydrology Present?       Yes No	Is the Sampled Area within a Wetland? Yes No
Remarks:	
Point taken within southern willow scrub (s	single individual willow tree), Riparian-1

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30 ft r</u> ) 1.	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
23.				Total Number of Dominant Species Across All Strata 2 (B)
4.				
Sanling/Shrub Stratum (Plot size: 5 ft r )	0%	= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1 Salix lasiolepis	80	~	FACW	Prevalence Index worksheet:
2 Baccharis pilularis	20	~	UPL	Total % Cover of Multiply by
3				$\begin{array}{c} \hline \hline \\ $
а				EACW species $80$ x 2 = $160$
T				EAC species $0$ x 3 = $0$
	100%	= Total Co	vor	FACIL species $0$ $x = 0$
Herb Stratum (Plot size: 5 ft r)		10(a) 00		$\frac{1111}{1111} \text{ species } \frac{20}{1111} \times 5 = \frac{100}{100}$
1				Column Totals: $100$ (A) $260$ (B)
2.				
3.				Prevalence Index = $B/A = 2.60$
4.				Hydrophytic Vegetation Indicators:
5.				Dominance Test is >50%
6.				Prevalence Index is ≤3.0 <sup>1</sup>
7	_			Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 30 ft r )		_ = Total Co	ver	
1, 2.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		= Total Co	over	Hydrophytic Vegetation
% Bare Ground in Herb Stratum % Cove	r of Biotic C	rust		Present? Yes No V
Remarks:				

Profile Desc	ription: (Describe t	o the depth	needed to docur	nent the i	ndicator	or confirm	the absence of ind	licators.)		
Depth	Matrix		Redo	x Features	S	<u> </u>				
(inches)	Color (moist)	%	Color (moist)	%	Type'	Loc <sup>2</sup>	Texture	Remark	S	
-										
-										
		<u> </u>					·			
				·						
-										
				·						
				·						
-										
-										
<sup>1</sup> Type: C=Co	oncentration, D=Depl	etion, RM=R	educed Matrix, CS	S=Covered	d or Coate	d Sand Gr	ains. <sup>2</sup> Location:	PL=Pore Lining	, M=Matrix.	
Hydric Soil I	ndicators: (Applica	ble to all LF	Rs, unless other	wise note	ed.)		Indicators for Pr	oblematic Hydr	ic Soils <sup>3</sup> :	
Histosol	(A1)		Sandy Redo	ox (S5)			1 cm Muck (/	A9) ( <b>LRR C</b> )		
Histic Ep	ipedon (A2)		Stripped Ma	atrix (S6)			2 cm Muck (A	A10) ( <b>LRR B</b> )		
Black His	stic (A3)		Loamy Mucky Mineral (F1)				Reduced Vertic (F18)			
<u> </u>	n Sulfide (A4)		Loamy Gley	ed Matrix	(F2)	) Red Parent Material (TF2)				
<u> </u> Stratified	Layers (A5) (LRR C	)	Depleted M	atrix (F3)			Other (Explain in Remarks)			
1 cm Mu	ck (A9) ( <b>LRR D</b> )		Redox Dark	Surface (	F6)					
Depleted	Below Dark Surface	(A11)	Depleted Da	ark Surfac	e (F7)		2			
Thick Da	rk Surface (A12)		Redox Dep	ressions (I	-8)		°Indicators of hyd	rophytic vegetat	ion and	
Sandy M	ucky Mineral (S1)		Vernal Pool	s (F9)			wetland hydrol	ogy must be pre	sent,	
Sandy G	leyed Matrix (S4)						unless disturbe	ed or problemation	).	
Restrictive L	ayer (if present):									
Туре:			_							
Depth (inc	:hes):		_				Hydric Soil Prese	ent? Yes	No 🔽	
Remarks:							•			
Diaging	nat narmitta	linvor			d not l	Ndrie	dua ta laak a	fatharind	iaatara	
ugging i	not permitted	a in vern	ai pools, as	sume	u not r	iyunc	uue to lack o	i other ind	icators	

Wetland Hydrology Indica	ors:									
Primary Indicators (minimun	<u>ı of one requir</u>	Secondary Indicators (2 or more required)								
Surface Water (A1) Salt Crust (B11)						Water Marks (B1) (Riverine)				
High Water Table (A2) Biotic Crust (B12)						Sediment Deposits (B2) (Riverine)				
Saturation (A3)				Aquatic Invertebrates (B13)		Drift Deposits (B3) (Riverine)				
Water Marks (B1) (Non	riverine)			Hydrogen Sulfide Odor (C1)		Drainage Patterns (B10)				
Sediment Deposits (B2)	(Nonriverine	)		Oxidized Rhizospheres along Livi	ng Roots (C3)	Dry-Season Water Table (C2)				
Drift Deposits (B3) (Nor	iriverine)			Presence of Reduced Iron (C4)		Crayfish Burrows (C8)				
Surface Soil Cracks (B6	i)			Recent Iron Reduction in Tilled So	oils (C6)	Saturation Visible on Aerial Imagery (C9)				
Inundation Vis ble on A	erial Imagery (	(B7)		Thin Muck Surface (C7)		Shallow Aquitard (D3)				
Water-Stained Leaves (	B9)			Other (Explain in Remarks)		FAC-Neutral Test (D5)				
Field Observations:										
Surface Water Present?	Yes	No_	~	Depth (inches):						
Water Table Present?	Yes	No_	~	Depth (inches):						
Saturation Present? (includes capillary fringe)	Yes	No_	~	_ Depth (inches):	Wetland Hy	drology Present? Yes No				
Describe Recorded Data (st	ream gauge, r	nonito	ring	well, aerial photos, previous inspec	tions), if availa	ble:				
Remarks:										

Project/Site: Poinsettia SVPP Manhole Repair		City/County	San Dieg	go/San Diego Co	ounty San	npling Date: 20	23-04-05
Applicant/Owner: City of Carlsbad				State: Cali	ifornia San	npling Point: W	SP-3a
Investigator(s): Anna Touchstone and Dylan Ayers		Section, To	wnship, Ra	nge: S29 T12S I	R4W		
Landform (hillslope, terrace, etc.): Upland		Local relief	(concave,	convex, none): Co	oncave	Slope	<u>(%):</u> 0
Subregion (LRR): C 19	Lat: 33.	.10797273	3	Long: -117.318	827282	Datum:	WGS 84
Soil Map Unit Name: MIC - Marina loamy coarse san	nd, 2 to 9 p	percent sl	opes	NWI o	classification	1:	
Are climatic / hydrologic conditions on the site typical for thi	s time of ve	ar? Yes	No	(If no. expl	ain in Remar	rks.)	
Are Vegetation , Soil , or Hydrology s	significantly	disturbed?	Are '	Normal Circumsta	inces" prese	nt? Yes	No 🖌
Are Vegetation , Soil , or Hydrology r	naturally pro	blematic?	(lf ne	eded, explain any	answers in	Remarks.)	
SUMMARY OF FINDINGS – Attach site map	showing	samplin	g point l	ocations, tran	sects, im	portant feat	ures, etc.
Hydrophytic Vegetation Present?       Yes       V         Hydric Soil Present?       Yes       V         Wetland Hydrology Present?       Yes       V         Remarks:       Point taken within southern willow southern       Second Seco	lo lo lo crub, St	Is th with	e Sampled in a Wetlar	Area nd? Ye	.s	No	
VEGETATION – Use scientific names of plan	its.						
Tree Stratum (Plot size: 30 ft r )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Tes	st workshee	et:	
1 Salix gooddingii	25	<u> </u>	FACW	Number of Dom That Are OBL. F	inant Specie ACW, or FA	es AC· 3	(A)
2. Salix lasiolepis	25	<ul> <li></li> </ul>	FACW				
3				Total Number of Species Across	All Strata:	4	(B)
4 Sapling/Shrub Stratum (Plot size: 5 ft r)	50%	_= Total Co	ver	Percent of Domi That Are OBL, F	inant Specie FACW, or FA	s AC: <u>75</u>	(A/B)
1. Baccharis pilularis	25	~	UPL	Prevalence Ind	ex workshe	et:	
2				Total % Cov	ver of:	Multiply b	<u>y:</u>
3				OBL species	0	$x_1 = \frac{0}{100}$	<u> </u>
4			. <u> </u>	FACW species	50	$x_2 = 100$	
5	25%			FAC species	<u>25</u> 0	$x_3 = \frac{73}{0}$	
Herb Stratum (Plot size: 5 ft r	25%	= Total Co	ver	FACU species	25	$x_4 = 0$	
1. Epilobium brachycarpum	25	~	FAC	Column Totals	100	(A) 300	(B)
2						_ (//)	(2)
3				Prevalence	e Index = B/	/A = <u>3.00</u>	
4				Hydrophytic Ve	egetation In	dicators:	
5				✓ Dominance	Test is >50°	%	
6				Prevalence	Index is ≤3.0	0'	
7				data in F	cal Adaptatic Remarks or c	ons" (Provide suj on a separate sh	pporting eet)
8 20.# r	25%	= Total Co	ver	Problematic	: Hydrophytic	c Vegetation <sup>1</sup> (E	xplain)
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft r</u> ) 1) 2				<sup>1</sup> Indicators of hy be present, unle	dric soil and ess disturbed	wetland hydrold or problematic.	ogy must
% Bare Ground in Herb Stratum 75.0 % Cove	r of Biotic C	_ = Total Co	ver	Hydrophytic Vegetation Present?	Yes _	No	
Remarks:							

Profile Desc	ription: (Describe t	o the depth	needed to docun	nent the i	ndicator	or confirm	the absence of ind	dicators.)		
Depth	Matrix		Redo	x Features	3					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
-										
-										
				·			·			
				·					<u> </u>	
-										
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				·						
				·						
-				·			· ·			
-										
<sup>1</sup> Type: C=Co	oncentration, D=Deple	etion, RM=R	educed Matrix, CS	=Covered	l or Coate	d Sand Gra	ains. <sup>2</sup> Location:	PL=Pore Lining, M=Ma	atrix.	
Hydric Soil I	ndicators: (Applica	ble to all LR	Rs, unless other	wise note	∋d.)		Indicators for P	roblematic Hydric Soil	s <sup>3</sup> :	
<u> </u>	(A1)		Sandy Redo	ox (S5)			1 cm Muck (	A9) ( <b>LRR C</b> )		
Histic Ep	vipedon (A2)		Stripped Ma	trix (S6)			2 cm Muck (	A10) ( <b>LRR B</b> )		
Black His	stic (A3)		Loamy Mucky Mineral (F1)				Reduced Vertic (F18)			
Hydroge	n Sulfide (A4)		Loamy Gleyed Matrix (F2)				Red Parent Material (TF2)			
Stratified	I Layers (A5) ( <b>LRR C</b>	)	Depleted Ma	atrix (F3)			Other (Explain the image of	in in Remarks)		
1 cm Mu	ck (A9) ( <b>LRR D</b> )		Redox Dark Surface (F6)							
Depleted	Below Dark Surface	(A11)	Depleted Da	ark Surfac	e (F7)		0			
Thick Da	rk Surface (A12)		Redox Depr	ressions (F	-8)		<sup>3</sup> Indicators of hyd	drophytic vegetation and		
Sandy M	lucky Mineral (S1)		Vernal Pool	s (F9)			wetland hydro	logy must be present,		
Sandy G	leyed Matrix (S4)						unless disturb	ed or problematic.		
Restrictive L	ayer (if present):									
Туре:										
Depth (inc	ches):						Hydric Soil Pres	ent? Yes 🚩 N	o	
Remarks:							•			
Digging	not permitted	l in vern	al pools, as	sume	d hydr	ic due	to presence	of other indica	tors	

Wetland Hydrology Indicators:						
Primary Indicators (minimum of one required; check a	Secondary Indicators (2 or more required)					
✓ Surface Water (A1)	Water Marks (B1) ( <b>Riverine</b> )					
High Water Table (A2)	High Water Table (A2)					
Saturation (A3)	Aquatic Invertebrates (B13)	Drift Deposits (B3) (Riverine)				
Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)				
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizospheres along Livin	g Roots (C3) Dry-Season Water Table (C2)				
Drift Deposits (B3) (Nonriverine)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)				
Surface Soil Cracks (B6)	Recent Iron Reduction in Tilled Soi	ls (C6) Saturation Visible on Aerial Imagery (C9)				
Inundation Vis ble on Aerial Imagery (B7)	Thin Muck Surface (C7)	Shallow Aquitard (D3)				
<ul> <li>Water-Stained Leaves (B9)</li> </ul>	Other (Explain in Remarks)	FAC-Neutral Test (D5)				
Field Observations:						
Surface Water Present? Yes <u></u> No	Depth (inches): <u>4</u>					
Water Table Present? Yes No _	Depth (inches):					
Saturation Present? Yes No <u> v</u>	Depth (inches):	Wetland Hydrology Present? Yes 🖌 No				
Describe Recorded Data (stream gauge, monitoring v	well, aerial photos, previous inspecti	ons), if available:				
Remarks:						

Project/Site: Poinsettia SVPP Manhole Repair	City/County: San Diego/San Diego County Sampling Date: 2023-04-05
Applicant/Owner: City of Carlsbad	State: California Sampling Point: WSP-3b
Investigator(s): Anna Touchstone and Dylan Ayers	_ Section, Township, Range: S29 T12S R4W
Landform (hillslope, terrace, etc.): Upland	Local relief (concave, convex, none): Concave Slope (%): .5
Subregion (LRR): C 19 Lat:	33.10804843 Long: -117.31826077 Datum: WGS 84
Soil Map Unit Name: MIC - Marina loamy coarse sand, 2 to	9 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	<sup>:</sup> year? Yes No∕ (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significan	ntly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showin	ng sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No _	Is the Sampled Area

Hydric Soil Present? Wetland Hydrology Present?	Yes Yes	No 🖌	Is the Sampled Area within a Wetland?	Yes	No
Remarks:					
Upland point					

Tree Other (Distring, 30 ft r	Absolute	Dominant	Indicator	Dominance Test worksheet:
1)	% Cover	<u>Species</u> ?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
2 3				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
4		= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)
Baccharis pilularis	100	~	UPL	Prevalence Index worksheet:
2.				Total % Cover of: Multiply by:
3				$OBL \text{ species } 0 \qquad x_1 = 0$
4				FACW species $0$ x 2 = $0$
5				FAC species $0$ $x_3 = 0$
··	100%	= Total Co	ver	FACU species $0 \times 4 = 0$
Herb Stratum (Plot size: 5 ft r)			VCI	UPL species $100 \times 5 = 500$
1				$\begin{array}{c} c = c \\ c = c \\$
2				
3.				Prevalence Index = $B/A = 5.00$
4.				Hydrophytic Vegetation Indicators:
5.				Dominance Test is >50%
6.				Prevalence Index is ≤3.0 <sup>1</sup>
7				Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 30 ft r )		_ = Total Co	ver	
1				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
2				be present, unless disturbed or problematic.
£		= Total Co	ver	Hydrophytic
% Bare Ground in Herb Stratum 10.0 % Cove	r of Biotic C	rust		Present? Yes No 🖌
Remarks:				1

Profile Desc	ription: (Describe t	o the depth	needed to docur	nent the i	ndicator	or confirm	the absence of ir	dicators.)		
Depth	Matrix		Redo	x Feature	s ,					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	8	
-										
-										
-										
-										
-										
				·						
				·						
-										
-										
<sup>1</sup> Type: C=Co	oncentration D=Deple	etion RM=R	educed Matrix CS	S=Covered	d or Coate	d Sand Gr	ains <sup>2</sup> l ocation	n <sup>.</sup> PI =Pore Lining	M=Matrix	
Hydric Soil I	Indicators: (Applica	ble to all LF	Rs, unless other	wise not	ed.)		Indicators for I	Problematic Hydri	c Soils <sup>3</sup> :	
Histosol	(A1)		Sandy Redo	ox (S5)			1 cm Muck	(A9) ( <b>LRR C</b> )		
Histic Ep	bipedon (A2)		Stripped Ma	atrix (S6)			2 cm Muck	(A10) ( <b>LRR B</b> )		
Black Hi	stic (A3)		Loamy Mucky Mineral (F1)				Reduced Vertic (F18)			
Hydroge	n Sulfide (A4)		Loamy Gleyed Matrix (F2)				Red Parent Material (TF2)			
Stratified	d Layers (A5) ( <b>LRR C</b>	)	Depleted Matrix (F3)				Other (Explain in Remarks)			
1 cm Mu	ick (A9) ( <b>LRR D</b> )		Redox Dark	Surface (	F6)					
Depleted	d Below Dark Surface	(A11)	Depleted Date	ark Surfac	e (F7)					
Thick Da	ark Surface (A12)		Redox Depressions (F8)				<sup>3</sup> Indicators of hydrophytic vegetation and			
Sandy M	lucky Mineral (S1)		Vernal Pool	s (F9)			wetland hydro	ology must be pres	ent,	
Sandy G	eleyed Matrix (S4)						unless distur	ped or problematic.		
Restrictive L	_ayer (if present):									
Туре:										
Depth (inc	ches):						Hydric Soil Pres	sent? Yes	No 🖌	
Remarks:							1			
Diaging	not normitte		al na ala		ط مم ۲ ا	avdric	due te lectr	of othor in di	ootoro	
gging וע	not permitted	a in vern	iai pools, as	sume	u not i	iyaric	que to lack (	other indi	cators	

Wetland Hydrology Indicat	ors:									
Primary Indicators (minimum	<u>ı of one requ</u>		Secondary Indicators (2 or more required)							
Surface Water (A1)				Salt Crust (B11)		Water Marks (B1) (Riverine)				
High Water Table (A2)			Biotic Crust (B12)		Sediment Deposits (B2) (Riverine)					
Saturation (A3)				Aquatic Invertebrates (B13)		Drift Deposits (B3) (Riverine)				
Water Marks (B1) (Non	r <b>iverine</b> )			Hydrogen Sulfide Odor (C1)		Drainage Patterns (B10)				
Sediment Deposits (B2)	(Nonriverin	ıe)		Oxidized Rhizospheres along Livi	ng Roots (C3)	Dry-Season Water Table (C2)				
Drift Deposits (B3) (Nor	riverine)			Presence of Reduced Iron (C4)		Crayfish Burrows (C8)				
Surface Soil Cracks (B6)				Recent Iron Reduction in Tilled Se	oils (C6)	Saturation Visible on Aerial Imagery (C9)				
Inundation Vis ble on A	rial Imagery	(B7)		Thin Muck Surface (C7)		Shallow Aquitard (D3)				
Water-Stained Leaves (	B9)			Other (Explain in Remarks)		FAC-Neutral Test (D5)				
Field Observations:										
Surface Water Present?	Yes	No	~	_ Depth (inches):						
Water Table Present?	Yes	No	~	Depth (inches):						
Saturation Present? (includes capillary fringe)	Yes	No	~	_ Depth (inches):	Wetland Hy	drology Present? Yes No 🖌				
Describe Recorded Data (st	ream gauge,	monitor	ing	well, aerial photos, previous inspec	tions), if availa	ble:				
Remarks:										

Project/Site: Poinsettia SVPP Manhole Repair	City/County: San Diego/San Diego County Sampling Date: 2023-04-05							
Applicant/Owner: City of Carlsbad	State: California Sampling Point: WSP-4a							
Investigator(s): Anna Touchstone and Dylan Ayers	Section, Township, Range: S29 T12S R4W							
Landform (hillslope, terrace, etc.): Vernal Pool	Local relief (concave, convex, none): Concave Slope (%): 0							
Subregion (LRR): C 19 Lat: 33	3.10807299 Long: -117.31844275 Datum: WGS 84							
Soil Map Unit Name: MIC - Marina loamy coarse sand, 2 to 9	percent slopes NWI classification:							
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes No (If no, explain in Remarks.)							
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" present? Yes No							
Are Vegetation, Soil, or Hydrology naturally pr	roblematic? (If needed, explain any answers in Remarks.)							
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.								
Hydrophytic Vegetation Present? Yes _ 🖌 No	Is the Sampled Area							

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         No           Yes         V         No           Yes         V         No	Is the Sampled Area within a Wetland?	Yes 🥢 No
Remarks:			

# Pit taken within VP-3. Mapped as CSS but completed inundated showing hydrophytic veg and hydrology

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30 ft r</u> ) 1	<u>% Cover</u>	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2 3				Total Number of Dominant       Species Across All Strata:   (B)
4 Sapling/Shrub Stratum (Plot size: 5 ft r )	<u> </u>	= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. Baccharis pilularis	30	~		Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				$\frac{1}{OBL \text{ species}} \frac{80}{x + 1} = \frac{80}{x + 1}$
4				FACW species $0$ $x_2 = 0$
5				EAC species $0$ $x_3 = 0$
	30%	- Total Co	vor	EACLI species $0$ $x = 0$
Herb Stratum (Plot size: 5 ft r )		10tal 00	VCI	$\frac{1111}{1111} = \frac{1111}{1111}$
1. Eryngium aristulatum var. parishii	75	~	OBL	Column Totals: $80$ (A) $80$ (B)
2. Lythrum hyssopifolium	5		OBL	
3.				Prevalence Index = $B/A = 1.00$
4.				Hydrophytic Vegetation Indicators:
5.				✓ Dominance Test is >50%
6.				$\checkmark$ Prevalence Index is ≤3.0 <sup>1</sup>
7				Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8	80%	= Total Co	ver	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 30 It I				
1				be present, unless disturbed or problematic.
2			. <u></u>	·····
% Bare Ground in Herb Stratum 20.0 % Cove	r of Biotic C	_ = Total Co rust	ver	Hydrophytic Vegetation Present? Yes <u>/</u> No
Remarks:				1

Profile Desc	ription: (Describe t	o the depth r	needed to docum	ent the i	ndicator	or confirm	the absence of ind	icators.)			
Depth	Matrix		Redox	Features	8						
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks			
-											
							·				
-											
-											
-											
		<u> </u>					·				
-											
-											
<sup>1</sup> Type: C=Co	ncentration D=Denk	etion RM=Re	duced Matrix CS	=Covered	l or Coate	d Sand Gr	ains <sup>2</sup> Location:	PI =Pore Lining M=	Matrix		
Hydric Soil I	ndicators: (Applica	ble to all LRI	Rs, unless other	wise note	ed.)		Indicators for Pr	oblematic Hydric S	oils <sup>3</sup> :		
Histosol	(A1)		Sandy Redo	x (S5)			1 cm Muck (A	(LRR C)			
Histic Ep	ipedon (A2)		Stripped Mat	trix (S6)			2 cm Muck (A10) ( <b>LRR B</b> )				
Black His	stic (A3)		Loamv Muck	v Mineral	(F1)		Reduced Vertic (F18)				
Hydrogei	n Sulfide (A4)		Loamy Gley	ed Matrix	(F2)		Red Parent Material (TF2)				
Stratified	Layers (A5) (LRR C	)	Depleted Ma	atrix (F3)	. ,		<ul> <li>Other (Explain in Remarks)</li> </ul>				
1 cm Mu	ck (A9) ( <b>LRR D</b> )		Redox Dark	Surface (	F6)						
Depleted	Below Dark Surface	e (A11)	Depleted Da	rk Surfac	e (F7)						
Thick Da	rk Surface (A12)		Redox Depre	essions (F	-8)		<sup>3</sup> Indicators of hydrophytic vegetation and				
Sandy M	ucky Mineral (S1)		Vernal Pools	s (F9)			wetland hydrology must be present,				
Sandy G	leyed Matrix (S4)						unless disturbed or problematic.				
Restrictive L	ayer (if present):										
Туре:			_								
Depth (inc	hes):		_				Hydric Soil Prese	nt? Yes 🖌	No		
Remarks:							•				
Digging I	not permitted	l in verna	al pools, as	sume	d hydr	ic due	to presence	of other indic	ators		

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that ap	ply) Secondary Indicators (2 or more required)
✓ Surface Water (A1) Salt Cru	st (B11) Water Marks (B1) (Riverine)
High Water Table (A2) Biotic C	ust (B12) Sediment Deposits (B2) (Riverine)
Saturation (A3) Aquatic	Invertebrates (B13) Drift Deposits (B3) (Riverine)
Water Marks (B1) (Nonriverine) Hydroge	n Sulfide Odor (C1) Drainage Patterns (B10)
Sediment Deposits (B2) (Nonriverine) Oxidized	Rhizospheres along Living Roots (C3) Dry-Season Water Table (C2)
Drift Deposits (B3) (Nonriverine) Presence	e of Reduced Iron (C4) Crayfish Burrows (C8)
Surface Soil Cracks (B6) Recent	ron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Inundation Vis ble on Aerial Imagery (B7) 🛛 💆 Thin Mu	ck Surface (C7) Shallow Aquitard (D3)
✓ Water-Stained Leaves (B9) Other (E	xplain in Remarks)  Yest (D5)
Field Observations:	
Surface Water Present? Yes <u>V</u> No Depth (	inches): <u>1</u>
Water Table Present? Yes No Depth (	inches):
Saturation Present? Yes No <u>'</u> Depth (	inches): Wetland Hydrology Present? Yes <u>V</u> No
Describe Recorded Data (stream gauge, monitoring well, aeria	al photos, previous inspections), if available:
	·····
Remarke:	
Nemana.	

Project/Site: Poinsettia SVPP Manhole Repair	_ City/County: San Diego/San Diego County Sampling Date: 2023-04-05
Applicant/Owner: City of Carlsbad	State: California Sampling Point: WSP-4b
Investigator(s): Anna Touchstone and Dylan Ayers	Section, Township, Range: S29 T12S R4W
Landform (hillslope, terrace, etc.): Upland	Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>.5</u>
Subregion (LRR): C 19 Lat: 33	3.10822823 Long: -117.31826284 Datum: WGS 84
Soil Map Unit Name: MIC - Marina loamy coarse sand, 2 to 9	9 percent slopes NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of y	year? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	tly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally pr	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	ng sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No No	<u> </u>	Is the Sampled Area	Vaa	
Wetland Hydrology Present?	Yes	No	<ul> <li></li> </ul>	within a wetland?	res	NO
Remarks:						
Upland point						

The Other (Distributed as 30 ft r	Absolute	Dominant	Indicator	Dominance Test worksheet:
1)	% Cover	<u>Species</u> ?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: $1$ (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4		= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1. Baccharis pilularis	50	~	UPL	Prevalence Index worksheet:
2. Iva hayesiana	10		FACW	Total % Cover of: Multiply by:
3				OBL species <u>10</u> x 1 = <u>10</u>
4.				FACW species <u>10</u> x 2 = <u>20</u>
5.				FAC species $0 \times 3 = 0$
	60%	= Total Co	ver	FACU species $0   x 4 = 0$
Herb Stratum (Plot size: 5 ft r)		-		UPL species 50 x 5 = 250
1. Eryngium aristilatum var. parishii	10	<ul> <li>✓</li> </ul>	OBL	Column Totals: 70 (A) 280 (B)
2				
3				Prevalence Index = B/A = 4.00
4				Hydrophytic Vegetation Indicators:
5				Dominance Test is >50%
6				Prevalence Index is ≤3.0 <sup>1</sup>
7				Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
o	10%	= Total Co	ver	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody vine Stratum (Plot size:)				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1				be present, unless disturbed or problematic.
<ul> <li>% Bare Ground in Herb Stratum <u>10.0</u> % Cover</li> </ul>	of Biotic C	= Total Co	ver	Hydrophytic Vegetation Present? Yes No 🖌
Remarks:				

Profile Descri	ption: (Describe to	o the depth n	eeded to docum	nent the in	ndicator o	or confirm	the absence of indica	ators.)			
Depth	Matrix		Redox	k Features	;						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks			
-											
-						·					
-											
-											
-											
<sup>1</sup> Type: C=Con	centration. D=Deple	etion. RM=Re	duced Matrix. CS	=Covered	or Coate	d Sand Gra	ains. <sup>2</sup> Location: P	L=Pore Linina. N	1=Matrix.		
Hydric Soil Ind	dicators: (Applica	ble to all LRF	Rs, unless other	wise note	ed.)		Indicators for Prob	lematic Hydric	Soils <sup>3</sup> :		
Histosol (A	.1)		Sandy Redo	ox (S5)			1 cm Muck (A9)	(LRR C)			
Histic Epip	edon (A2)		Stripped Ma	trix (S6)			2 cm Muck (A10) ( <b>LRR B</b> )				
Black Histi	c (A3)		Loamy Mucł	ky Mineral	(F1)		Reduced Vertic (F18)				
Hydrogen	Sulfide (A4)		Loamy Gley	ed Matrix	(F2)		Red Parent Material (TF2)				
Stratified L	ayers (A5) (LRR C	)	Depleted Ma	atrix (F3)			Other (Explain in Remarks)				
1 cm Muck	(A9) ( <b>LRR D</b> )		Redox Dark	Surface (I	F6)						
Depleted E	Below Dark Surface	(A11)	Depleted Da	ark Surface	e (F7)						
Thick Dark	Surface (A12)		Redox Depr	essions (F	8)		<sup>3</sup> Indicators of hydrophytic vegetation and				
Sandy Mud	cky Mineral (S1)		Vernal Pools	s (F9)			wetland hydrolog	/ must be preser	nt,		
Sandy Gle	yed Matrix (S4)						unless disturbed	or problematic.			
Restrictive La	yer (if present):										
Туре:			_								
Depth (inche	es):		_				Hydric Soil Present	? Yes	No 🖌		
Remarks:											
Digging n	ot permitted	l in verna	al pool, ass	umed	not hy	/dric d	ue to lack of o	her indica	tors		

Wetland Hydrology Indicat	ors:									
Primary Indicators (minimum	<u>ı of one requi</u>		Secondary Indicators (2 or more required)							
Surface Water (A1)				Salt Crust (B11)		Water Marks (B1) ( <b>Riverine</b> )				
High Water Table (A2)				Biotic Crust (B12)		Sediment Deposits (B2) (Riverine)				
Saturation (A3)				Aquatic Invertebrates (B13)		Drift Deposits (B3) (Riverine)				
Water Marks (B1) (Non	r <b>iverine</b> )			Hydrogen Sulfide Odor (C1)		Drainage Patterns (B10)				
Sediment Deposits (B2)	(Nonriverine	e)		Oxidized Rhizospheres along Livit	ng Roots (C3)	Dry-Season Water Table (C2)				
Drift Deposits (B3) (Nor	riverine)			Presence of Reduced Iron (C4)		Crayfish Burrows (C8)				
Surface Soil Cracks (B6	)			Recent Iron Reduction in Tilled So	oils (C6)	Saturation Visible on Aerial Imagery (C9)				
Inundation Vis ble on A	erial Imagery	(B7)		Thin Muck Surface (C7)		Shallow Aquitard (D3)				
Water-Stained Leaves (	B9)			Other (Explain in Remarks)		<ul> <li>FAC-Neutral Test (D5)</li> </ul>				
Field Observations:										
Surface Water Present?	Yes	_ No	~	_ Depth (inches):						
Water Table Present?	Yes	_ No	~	_ Depth (inches):						
Saturation Present? (includes capillary fringe)	Yes	_ No _	~	_ Depth (inches):	Wetland Hy	drology Present? Yes No 🖌				
Describe Recorded Data (st	ream gauge, i	monito	ring	well, aerial photos, previous inspec	tions), if availa	ible:				
Remarks:										

Project/Site: Poinsettia SVPP Manh	City/County: S	an Diego/Sa	n Diego County	Sampling D	ate: 2023-04-05			
Applicant/Owner: City of Carlsbad					State: California	Sampling P	oint: WSP-5a	
Investigator(s): Anna Touchstone a	nd Dylan Aye	ers	Section, Township, Range: S29 T12S R4W					
Landform (hillslope, terrace, etc.): Pond	k		_ Local relief (co	oncave, conve	x, none): <u>Concave</u>	e	Slope (%): 0	
Subregion (LRR): C 19		Lat: 3	3.10412697	Lon	<sub>g:</sub> -117.31644170	6	Datum: WGS 84	
Soil Map Unit Name: MIC - Marina Ic	amy coarse	sand, 2 to 9	ercent slop	es	NWI classific	ation:		
Are climatic / hydrologic conditions on th	e site typical fo	r this time of y	/ear? Yes	No	(If no, explain in R	emarks.)		
Are Vegetation, Soil, or I	Hydrology	significantl	y disturbed?	Are "Norm	al Circumstances" p	resent? Ye	s No_	
Are Vegetation, Soil, or I	-lydrology	naturally p	roblematic?	(If needed,	explain any answe	rs in Remark	.s.)	
SUMMARY OF FINDINGS - A	ttach site m	ap showin	g sampling p	oint locati	ions, transects	, importai	nt features, etc.	
Hydrophytic Vegetation Present?	Yes	No 🖌	- Is the S	ampled Area				
Hydric Soil Present?	Yes	No 🖌	within a	a Wetland?	Yes	No	~	
Wetland Hydrology Present?	Yes 🖌	No	-					
Remarks:								

### Point taken in ponded area

	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30 ft r</u> ) 1.	<u>% Cover Species? Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
23		Total Number of Dominant Species Across All Strata: 0 (B)
4 Sapling/Shrub Stratum (Plot size: 5 ft r )	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>NaN</u> (A/B)
1.		Prevalence Index worksheet:
2.		Total % Cover of: Multiply by:
3.		$OBL species 0 \qquad x 1 = 0$
4		FACW species $0$ x 2 = $0$
5		FAC species $0$ x 3 = $0$
· ·	= Total Cover	FACU species $0$ x 4 = $0$
Herb Stratum (Plot size: 5 ft r)		UPL species $0$ x 5 = $0$
1		Column Totals: 0 (A) 0 (B)
2		
3		Prevalence Index = B/A = <u>NaN</u>
4		Hydrophytic Vegetation Indicators:
5		Dominance Test is >50%
6		Prevalence Index is ≤3.0 <sup>1</sup>
7		Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
o20.ftr	= Total Cover	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: <u>50 rt 1</u> )		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1		be present, unless disturbed or problematic.
2	= Total Cover	Hydrophytic
% Bare Ground in Herb Stratum % Cove	er of Biotic Crust	Vegetation Present? Yes No V
Remarks:		•
Eleocharis macrostachya and Rume	x crispus growing in p	oond south of sample point

Profile Description: (Describe to the de	epth needed to document the indicator or confi	irm the absence of indicators.)		
Depth <u>Matrix</u>	Redox Features			
(inches) Color (moist) %	<u>Color (moist)</u> <u>%</u> <u>Type<sup>1</sup></u> Loc <sup>2</sup>	Texture Remarks		
-				
-				
-				
<sup>1</sup> Type: C=Concentration, D=Depletion, R	M=Reduced Matrix, CS=Covered or Coated Sand	Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators: (Applicable to a	II LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :		
Histosol (A1)	Sandy Redox (S5)	1 cm Muck (A9) ( <b>LRR C</b> )		
Histic Epipedon (A2)	Stripped Matrix (S6)	2 cm Muck (A10) ( <b>LRR B</b> )		
Black Histic (A3)	Loamy Mucky Mineral (F1)	Reduced Vertic (F18)		
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Red Parent Material (1F2)		
1 cm Muck (A9) (LRR C)	Depleted Matrix (F3) Redox Dark Surface (E6)			
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)			
Thick Dark Surface (A12)	Redox Depressions (F8)	<sup>3</sup> Indicators of hydrophytic vegetation and		
Sandy Mucky Mineral (S1)	Vernal Pools (F9)	wetland hydrology must be present,		
Sandy Gleyed Matrix (S4)		unless disturbed or problematic.		
Restrictive Layer (if present):				
Туре:				
Depth (inches):		Hydric Soil Present? Yes No		
Remarks:				
<b>D</b> <sup>1</sup> · · · · · · · · · · · · · · · · · · ·				
Digging not permitted in ve	ernal pools			
HYDROLOGY				
Wetland Hydrology Indicators:				
Primary Indicators (minimum of one requir	ed; check all that apply)	Secondary Indicators (2 or more required)		
<ul> <li>Surface Water (A1)</li> </ul>	Salt Crust (B11)	Water Marks (B1) (Riverine)		
High Water Table (A2)	Biotic Crust (B12)	Sediment Deposits (B2) ( <b>Riverine</b> )		
Saturation (A3)	Aquatic Invertebrates (B13)	Drift Deposits (B3) ( <b>Riverine</b> )		
Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)		
Sediment Deposits (B2) (Nonriverine	Oxidized Rhizospheres along Living R	Roots (C3) Dry-Season Water Table (C2)		
Drift Deposits (B3) (Nonriverine)	Crayfish Burrows (C8)			

Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) \_\_\_\_ Saturation Visible on Aerial Imagery (C9)

\_\_\_\_ Shallow Aquitard (D3)

\_\_\_\_ FAC-Neutral Test (D5)

- Surface Soil Cracks (B6) Inundation Vis ble on Aerial Imagery (B7) \_\_\_\_ Thin Muck Surface (C7)
- Water-Stained Leaves (B9) \_\_\_\_ Other (Explain in Remarks)

Field Observations:							
Surface Water Present?	Yes 🖌	No	Depth (inches):	12			
Water Table Present?	Yes	No	Depth (inches):				
Saturation Present? (includes capillary fringe)	Yes	_ No	Depth (inches):		Wetland Hydrology Present?	Yes 🖌	No
Describe Recorded Data (stre	am gauge, r	nonitori	ing well, aerial photos	previous inspec	tions), if available:		

Remarks:

~

Project/Site: Poinsettia SVPP Manhole Repair	City/County: San Diego/San Diego County Sampling Date: 2023-04-05					
Applicant/Owner: City of Carlsbad	State: California Sampling Point: WSP-5b					
Investigator(s): Anna Touchstone and Dylan Ayers	Section, Township, Range: S29 T12S R4W					
Landform (hillslope, terrace, etc.): Vernal Pool	_ Local relief (concave, convex, none): <u>Concave</u> Slope (%): <u>0</u>					
Subregion (LRR): C 19 Lat: 33	3.10402676 Long: -117.31648047 Datum: WGS 84					
Soil Map Unit Name: MIC - Marina loamy coarse sand, 2 to 9	percent slopes NWI classification:					
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)						
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" present? Yes No					
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.						
Hydrophytic Vegetation Present?       Yes          ✓        No         Hydric Soil Present?       Yes          ✓        No         Wetland Hydrology Present?       Yes          ✓        No	Is the Sampled Area within a Wetland? Yes <u> V</u> No					

Remarks:

### Point taken in vernal pool 3 cont'd

Tara Charter (Dist size: 30 ft r	Absolute	Dominant Indicator	Dominance Test worksheet:
1)	% Cover		Number of Dominant Species That Are OBL, FACW, or FAC: $1$ (A)
2 3			Total Number of Dominant Species Across All Strata: <u>1</u> (B)
4Sanling/Shrub Stratum (Plot size: 5 ft r)		_ = Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1.			Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3.			OBL species 90 $x_1 = 90$
4.			FACW species 0 x 2 = 0
5.			FAC species 0 x 3 = 0
		= Total Cover	FACU species $0   x 4 = 0$
Herb Stratum (Plot size: 5 ft r )		-	UPL species $0 \times 5 = 0$
1. Lythrum hyssopifolium	90	✓ OBL	Column Totals: 90 (A) 90 (B)
2			
3			Prevalence Index = $B/A = 1.00$
4			Hydrophytic Vegetation Indicators:
5			✓ Dominance Test is >50%
6			$\checkmark$ Prevalence Index is ≤3.0 <sup>1</sup>
7			Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
o 30 ft r	90%	= Total Cover	✓ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum         (Plot size:         30 mm           1.			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
2	_		be present, unless disturbed or problematic.
% Bare Ground in Herb Stratum 10.0 % Cove	r of Biotic C	_ = Total Cover	Hydrophytic Vegetation Present? Yes V No
Pemarke:	. 51 21000 0		

Denth	Matrix		Dodo							
(inches)	Color (moist)	%	Color (moist)	<u>% realures</u> %	Type <sup>1</sup>	$1 \text{ oc}^2$	Texture	Remarks		
					турс			Kemarko		
						·	·			
-						. <u> </u>	·			
-										
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							·			
-										
Type: C=Co	ncentration. D=Depl	etion. RM=	Reduced Matrix. C	S=Covered	d or Coate	d Sand Gr	ains. <sup>2</sup> Location:	PL=Pore Lining, M=Matrix,		
lydric Soil I	ndicators: (Applica	ble to all	LRRs, unless othe	rwise note	ed.)		Indicators for P	roblematic Hydric Soils <sup>3</sup> :		
Histosol	(A1)		Sandy Red	ox (S5)			1 cm Muck (A	A9) ( <b>LRR C</b> )		
Histic Ep	ipedon (A2)		Stripped Ma	atrix (S6)			2 cm Muck (	A10) ( <b>LRR B</b> )		
Black His	stic (A3)		Loamy Muc	ky Mineral	l (F1)		Reduced Vertic (F18)			
Hydroge	n Sulfide (A4)		Loamy Glev	ed Matrix	(F2)		Red Parent Material (TF2)			
Stratified	Layers (A5) (LRR C	:)	Depleted M	atrix (F3)	. ,		✓ Other (Explain in Remarks)			
1 cm Mu	ck (A9) ( <b>LRR D</b> )		Redox Dark	surface (	F6)			,		
Depleted	Below Dark Surface	e (A11)	Depleted D	ark Surfac	e (F7)					
Thick Da	rk Surface (A12)		Redox Dep	ressions (F	-8)		<sup>3</sup> Indicators of hyd	Irophytic vegetation and		
Sandy M	ucky Mineral (S1)		Vernal Pools (F9)				wetland hydrology must be present,			
Sandy G	leyed Matrix (S4)						unless disturbed or problematic.			
Restrictive L	ayer (if present):									
Type:										
Depth (inc	:hes):						Hydric Soil Prese	ent? Yes 🖌 No 🔜		
Remarks:							1			

Wetland Hydrology Indicators:								
Primary Indicators (minimum of one required; che	Secondary Indicators (2 or more required)							
✓ Surface Water (A1)	Salt Crust (B11)	Water Marks (B1) (Riverine)						
High Water Table (A2)	High Water Table (A2) Biotic Crust (B12)							
Saturation (A3)	Aquatic Invertebrates (B13)	Drift Deposits (B3) (Riverine)						
Water Marks (B1) (Nonriverine)	Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1)							
Sediment Deposits (B2) (Nonriverine)	) Dry-Season Water Table (C2)							
Drift Deposits (B3) (Nonriverine)	Crayfish Burrows (C8)							
Surface Soil Cracks (B6)	Recent Iron Reduction in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9)						
Inundation Vis ble on Aerial Imagery (B7)	_ Inundation Vis ble on Aerial Imagery (B7) Thin Muck Surface (C7)							
Water-Stained Leaves (B9)	Other (Explain in Remarks)	<ul> <li>FAC-Neutral Test (D5)</li> </ul>						
Field Observations:								
Surface Water Present? Yes <u>Yes</u> No	Depth (inches): 3							
Water Table Present? Yes No	Depth (inches):							
Saturation Present? Yes <u>No</u> (includes capillary fringe)	Depth (inches): Wetland H	ydrology Present? Yes _ ✔_ No						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks:								
Algal bloom within inundated a	rea, indicates shallower depth t	han ponded area						

Project/Site: Poinsettia SVPP Manhole Repair	City/County: San Diego/San Diego County Sampling Date: 2023-04-0					
Applicant/Owner: City of Carlsbad	State: California Sampling Point: WSP-5c					
Investigator(s): Anna Touchstone and Dylan Ayers	Section, Township, Range: S29 T12S R4W					
Landform (hillslope, terrace, etc.): Upland	_ Local relief (concave, convex, none): <u>None</u> Slope (%): <u>0</u>					
Subregion (LRR): C 19 Lat: 33	3.10408588 Long: -117.31614312 Datum: WGS 84					
Soil Map Unit Name: MIC - Marina loamy coarse sand, 2 to 9	percent slopes NWI classification:					
Are climatic / hydrologic conditions on the site typical for this time of y	rear? Yes No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" present? Yes No					
Are Vegetation, Soil, or Hydrology naturally pr	roblematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects, important features, etc					
Hydrophytic Vogetation Present? Ves No Y						

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No <u>v</u> No <u>v</u> No <u>v</u>	Is the Sampled Area within a Wetland?	Yes	No
Remarks: Upland point					

$\tau$ of $r$ (p) $r$ = 20 ft r	Absolute	Dominant	Indicator	Dominance Test worksheet:
1	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2 3				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
4 Sapling/Shrub Stratum (Plot size: 5 ft r)		= Total Co	over	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3</u> (A/B)
1.				Prevalence Index worksheet:
2.				Total % Cover of: Multiply by:
3				$\frac{1}{OBL \text{ species}} 50 \qquad x_1 = 50$
4				FACW species $0$ x 2 = $0$
5				FAC species $0$ $x_3 = 0$
···		= Total Co	ver	FACU species $0$ x 4 = $0$
Herb Stratum (Plot size: 5 ft r )		<u> </u>		UPL species $50 \times 5 = 250$
1. Lythrum hyssopifolium	50	~	OBL	Column Totals: 100 (A) 300 (B)
2. Baccharis pilularis	25	<ul> <li>✓</li> </ul>	UPL	
3. Eriogonum fasciculatum	25	~	UPL	Prevalence Index = $B/A = 3.00$
4				Hydrophytic Vegetation Indicators:
5.				Dominance Test is >50%
6.				Prevalence Index is ≤3.0 <sup>1</sup>
7				Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8	100%	= Total Co	over	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum       (Plot size:)         1)				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2		. <u> </u>		······································
		= Total Co	over	Hydrophytic Vegetation
% Bare Ground in Herb Stratum % Cover	of Biotic C	rust		Present? Yes No V
Remarks:				

Profile Desc	ription: (Describe te	o the depth n	eeded to docum	nent the in	ndicator of	or confirm	the absence of i	indicators.)		
Depth	Matrix		Redox	K Features	5					
(inches)	Color (moist)	% (	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remark	(S	
-										
-										
·										
-										
-										
-										
							·			
-										
-										
-										
<sup>1</sup> Type: C=Co	ncentration D=Deple	etion RM=Red	duced Matrix CS	=Covered	or Coate	d Sand Gra	ains <sup>2</sup> Locatio	on <sup>.</sup> PI =Pore Lining	M=Matrix	
Hydric Soil I	ndicators: (Applica	ble to all LRF	Rs, unless other	wise note	ed.)		Indicators for	Problematic Hyd	ric Soils <sup>3</sup> :	
Histosol	(A1)		Sandv Redo	ox (S5)			1 cm Mucl	k (A9) ( <b>LRR C</b> )		
Histic Ep	ipedon (A2)		Stripped Ma	trix (S6)			2 cm Mucl	k (A10) ( <b>LRR B</b> )		
Black His	stic (A3)		Loamy Muck	ky Mineral	(F1)		Reduced Vertic (F18)			
Hydroge	n Sulfide (A4)		Loamy Gley	ed Matrix	(F2)		Red Parent Material (TF2)			
Stratified	Layers (A5) (LRR C	)	Depleted Ma	atrix (F3)			Other (Explain in Remarks)			
1 cm Mu	ck (A9) ( <b>LRR D</b> )		Redox Dark	Surface (I	F6)					
Depleted	Below Dark Surface	(A11)	Depleted Da	ark Surface	e (F7)					
Thick Da	rk Surface (A12)		Redox Depr	essions (F	-8)		<sup>3</sup> Indicators of hydrophytic vegetation and			
Sandy M	Sandy Mucky Mineral (S1) Vernal Pools (F9)					wetland hydrology must be present,				
Sandy G	leyed Matrix (S4)						unless distu	rbed or problemation	2.	
Restrictive L	ayer (if present):									
Туре:			_							
Depth (inc	hes):		_				Hydric Soil Pre	esent? Yes	No 🔽	
Remarks:										
Digging	not permitted	l in verna	al pools, as	sume	d not h	nydric o	due to lack	of other ind	icators	

Wetland Hydrology Indicat	ors:						
Primary Indicators (minimum	<u>ı of one requ</u>		Secondary Indicators (2 or more required)				
Surface Water (A1)				Salt Crust (B11)		Water Marks (B1) (Riverine)	
High Water Table (A2) Biotic				Biotic Crust (B12)		Sediment Deposits (B2) (Riverine)	
Saturation (A3)				Aquatic Invertebrates (B13)		Drift Deposits (B3) (Riverine)	
Water Marks (B1) (Non	r <b>iverine</b> )			Hydrogen Sulfide Odor (C1)		Drainage Patterns (B10)	
Sediment Deposits (B2)	(Nonriverin	ıe)		Oxidized Rhizospheres along Livi	ng Roots (C3)	Dry-Season Water Table (C2)	
Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (						Crayfish Burrows (C8)	
Surface Soil Cracks (B6) Recer				Recent Iron Reduction in Tilled Se	oils (C6)	Saturation Visible on Aerial Imagery (C9)	
Inundation Vis ble on Aerial Imagery (B7)			Thin Muck Surface (C7)		Shallow Aquitard (D3)		
Water-Stained Leaves (B9)			Other (Explain in Remarks)		FAC-Neutral Test (D5)		
Field Observations:							
Surface Water Present?	Yes	No	~	_ Depth (inches):			
Water Table Present?	Yes	No	~	Depth (inches):			
Saturation Present? (includes capillary fringe)	Yes	No	~	_ Depth (inches): Wetland Hydrology Present? Yes No			
Describe Recorded Data (st	ream gauge,	monitor	ing	well, aerial photos, previous inspec	tions), if availa	ble:	
Remarks:							

### **Appendix D** Review Area Photos





**Photo Point 1.** Wetland Sampling Point (WSP)-1a within Vernal Pool-1 in Area 1 at north end of review area.

Photo Point 2. WSP-1b within upland in Area 1.



**Photo Point 3.** Vernal Pool-2 in Area 2 at north end of review area.



Photo Point 4. WSP-2 within Riparian-1 in Area 2.





**Photo Point 5.** WSP-3a within Shrub-Scrub Wetland-1 in Area 3 at north end of review area.

Photo Point 6. WSP-3b within upland in Area 3.



**Photo Point 7.** WSP-4a within Vernal Pool-3a in Area 3 at north end of review area.



Photo Point 8. WSP-4b within upland in Area 3.





**Photo Point 9.** Within Riparian-2, view of lone *Platanus* tree outside of preserve fenceline in Area 3.

**Photo Point 10.** Within Vernal Pool-3b in Area 4 located centrally within the review area.



**Photo Point 11.** Within Vernal Pool-3c in Area 5 located centrally within the review area.



**Photo Point 12.** Within Vernal Pool-3d in Area 6 located centrally within the review area.





**Photo Point 13.** WSP-5a within Pond-1a in Area 7 at south end of review area.

Photo Point 14. WSP-5b within Vernal Pool-3e in Area 7.



Photo Point 15. WSP-5c within upland in Area 7.



**Photo Point 16.** View of Pond-1b at northernmost manhole of Area 8 at south end of review area.







Photo Point 17. Within Vernal Pool-3f Area 8.

**Photo Point 18**. Alternate view of Vernal Pool-3f at location of southernmost manhole in Area 8. (covered by *Baccharis* shrub).


# Appendix C

Cultural Resources Survey Report from Makayla Murillo, Keshia Montifolca, Brad Comeau, and Micah Hale, Archeologist, Dudek, dated November 21, 2023

# Cultural Resources Survey Report

# Poinsettia Manhole Repair Project, City of Carlsbad, San Diego County, California

**NOVEMBER 2023** 

Prepared for:

**CITY OF CARLSBAD** 5950 El Camino Real Carlsbad, California 92008 *Contact: Keri Martinez* 

> Prepared by: **DUDEK** 605 Third Street Encinitas, California 92024 avla Murillo BA: Keshia Montifolca: MA RPA:

Makayla Murillo BA; Keshia Montifolca; MA, RPA; Brad Comeau, MSc, RPA; and Micah Hale, PhD, RPA Type of Study: Cultural Resource Phase I Survey

USGS Quadrangle: Encinitas, California 7.5', T12S, R4W, Sections 20 and 29

Area: 11.71 acres

**Key Words:** Pedestrian survey; Positive; City of Carlsbad; CEQA; CA-SDI-016385H; San Diego Northern Railway, Poinsettia Manhole Repair Project

# Table of Contents

### SECTION

### PAGE NO.

gement	Summary	iii				
Introd	luction	1				
1.1	Project Description and Location	1				
1.2	1.2 Regulatory Context					
	1.2.1 State Level Regulations	1				
	1.2.2 Local Level Regulations					
1.3	Native American Coordination					
1.4	Report Format and Key Personnel					
Settin	g					
2.1	Environmental and Geological Setting					
2.2	Prehistoric Context					
	2.2.1 Paleoindian Period (pre-5500 BC)					
	2.2.2 Archaic Period (8000 BC-AD 500)					
	2.2.3 Late Prehistoric Period					
	2.2.4 Ethnographic Period					
2.3	Historic Period					
Resea	arch Methods					
3.1	Cultural Resources					
Metho	ods and Results					
4.1	Archival Research					
4.2	NAHC and Tribal Correspondence					
4.3	SCIC Record Search					
	4.3.1 Previously Conducted Cultural Resource Studies					
	4.3.2 Previously Recorded Cultural Resources					
4.4	Cultural Resources Field Survey Results					
Sumn	nary and Management Considerations					
5.1	Unanticipated Discovery of Cultural Resources					
5.2	Unanticipated Discovery of Human Remains					
Refer	ences					
Natio	nal Archaeological Database (NADB) Information					
	gement Introd 1.1 1.2 1.3 1.4 Settin 2.1 2.2 2.3 Resea 3.1 Metho 4.1 4.2 4.3 4.4 Sumn 5.1 5.2 Referent	gement Summary         Introduction         1.1       Project Description and Location         1.2       Regulatory Context         1.2.1       State Level Regulations.         1.2.2       Local Level Regulations.         1.3       Native American Coordination         1.4       Report Format and Key Personnel         Setting.				

i

### TABLES

1	Previously Recorded Cultural Studies within the Project Area	.26
2	Previously Recorded Cultural Resources within the One-Mile Search Buffer	. 28

### **FIGURES**

1	Project Location	5
2	Project Site	7
3	View of manhole on northern portion of Project area, view to west (Manhole facing W)	31
4	View of southern portion of Project area, view to southwest (South portion facing S)	31

### **APPENDICES**

A	Confidential	Cultural	Resources	Record Sea	arch
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- B Native American Correspondence
- C Cultural Resources Map and Department of Parks and Recreation Site Form

# Management Summary

This report presents the results of a Phase I cultural resources investigation performed by Dudek for the Poinsettia Manhole Repair Project (Project), located in the City of Carlsbad, San Diego County, California. The Project proposes cleaning and rehabilitating nine (9) existing sewer manholes within the North County Transit District (NCTD) right-of-way spaced at approximately 400-foot intervals located between Avenida Encinas and Poinsettia Lane in the City of Carlsbad (APNs 214-150-11 and 214-150-12). The proposed rehabilitation activities include pressure washing the inside of the manholes and sewer line, installing a liner inside the manholes, and replacing the 5-foot diameter manhole frames and/or covers. The Project area consists of approximately 11.71 acres and is located in Sections 20 and 29 of Township 12 South, Range 4 West, as shown on the Encinitas, California, USGS 7.5 Minute Series Quadrangle. The area of direct impact (ADI) which consists of the rehabilitation activities, is in the easternmost boundary of the Project area is 0.13 acres. The City of Carlsbad (City) is the Lead Agency for compliance with the California Environmental Quality Act (CEQA). In accordance with CEQA and the City of Carlsbad's Guidelines, Dudek performed a Phase I cultural resources inventory of the Project area.

The study includes a pedestrian survey for cultural resources, Native American Heritage Commission (NAHC) Sacred Lands File search, records search from the South Coastal Information Center (SCIC), and archival research.

The SCIC revealed one cultural resource (CA-SDI-016385H) intersecting the Project area and located within the westernmost boundary of the Project area and outside of the ADI. CA-SDI-016385H is the San Diego Northern Railway. The segment of this resource located within the Project area has been previously evaluated and determined not eligible for the National Register of Historic Places (NRHP), as all aspects of the original, historic railway in this segment have been replaced and upgraded and therefore, has poor integrity (McLean 2012). The proposed Project rehabilitation activities are located to the east of the railway and no impacts to CA-SDI-016385H will occur during Project implementation. The NAHC Sacred Lands File search indicated that Native American resources are present, however, they did not specify whether resources had been identified directly within the Project area of within the search radius. The NAHC also provided a list of Native American tribes and individuals/ organizations with traditional geographic associations that might have knowledge of cultural resources in the area. Outreach letters were mailed on November 21, 2023 to all Native American group representatives included in the list from the NAHC. No responses have been received as of date. No prehistoric archaeological resources were identified within the Project area or the immediate vicinity during the intensive pedestrian survey. The intensive pedestrian survey of the project did not identify archaeological resources.

Dudek's cultural resources inventory of the Project indicates that there is low sensitivity for identifying intact subsurface cultural resource deposits during proposed Project rehabilitation activities. While CA-SDI-016385H is located within the Project area, Project activities will avoid impacts to the resource. The Project area is highly disturbed as a result of grading operations for the railroad and existing sewer line. Dudek recommends no further archaeological efforts or mitigation, including archaeological monitoring, to be necessary in support of implementation of the Project.

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# 1 Introduction

# 1.1 Project Description and Location

The Poinsettia Manhole Repair Project (Project) proposes cleaning and rehabilitating nine (9) existing sewer manholes within the North County Transit District (NCTD) right-of-way spaced at approximately 400-foot intervals located between Avenida Encinas and Poinsettia Lane in the City of Carlsbad (APNs 214-150-11 and 214-150-12). The existing sewer manholes are significantly corroding. The proposed rehabilitation activities would take place within an existing sewer easement and would include pressure washing the inside of the manholes and sewer line, installing a liner inside the manholes, and replacing the 5-foot diameter manhole frames and/or covers. The Project does not require heavy equipment. The equipment needed for the rehabilitation activities may include a truck-mounted pressure washer and a truck mounted crane. To minimize impacts to vegetation and soil located in the Project area, plywood boards will be placed along the access routes to each manhole and work area.

The Project is located at the Poinsettia Carlsbad Transit Station right-of-way in the City of Carlsbad, San Diego County, California. The 11.71-acre Project is located in Sections 20 and 29 of Township 12 South, Range 4 West on the Encinitas, California, USGS 7.5 Minute Series Quadrangle (Figure 1). The Project area is located approximately 0.20 miles east of the Pacific Ocean, 0.25 miles west of the I-5 North, and immediately north of Poinsettia Lane. The Project area consists of 11.7 acres and is comprised of the North Coast Transit District (NCTD) railroad right-of-way located at the Poinsettia Carlsbad Transit Station. The area of direct impact (ADI) is located to the east of the railway and consists of the rehabilitation activities which include the nine sewer manholes and access routes and is 0.13 acres (Figure 2). The entirety of the Project area has been disturbed with the development of the NCTD transit station, pedestrian sidewalks, manholes/sewer, and utilities. The City of Carlsbad (City) is the Lead Agency for compliance with the California Environmental Quality Act (CEQA). In accordance with CEQA and the City of Carlsbad's Guidelines, Dudek performed a Phase I intensive pedestrian cultural resources survey and records search of the Project area.

## 1.2 Regulatory Context

### 1.2.1 State Level Regulations

The California Register of Historic Resources (Public Resources Code section 5020 et seq.)

In California, the term "historical resource" includes but is not limited to "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (California Public Resources Code section 5020.1(j)). In 1992, the California legislature established CRHR "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (California Public Resources Code section 5024.1(a)). A resource is eligible for listing in the CRHR if the State Historical Resources Commission determines that it is a significant resource and that it meets any of the following National Register of Historic Places (NRHP) criteria:

• Associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

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- Associated with the lives of persons important in our past.
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- Has yielded, or may be likely to yield, information important in prehistory or history.

(California Public Resources Code section 5024.1(c).) Resources less than 50 years old are not considered for listing in the CRHR, but may be considered if it can be demonstrated that sufficient time has passed to understand the historical importance of the resource (see 14 CCR, section 4852(d)(2)).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed or formally designated as eligible for listing on the NRHP are automatically listed on the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys. The State Historic Preservation Officer maintains the CRHR.

#### Native American Historic Cultural Sites (California Public Resources Code section 5097 et seq.)

State law addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a Project; and establishes the Native American Heritage Commission (NAHC) to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resource Protection Act makes it a misdemeanor punishable by up to 1 year in jail to deface or destroy an Indian historic or cultural site that is listed or may be eligible for listing in the CRHR.

### California Environmental Quality Act

As described further below, the following CEQA statutes and CEQA Guidelines are of relevance to the analysis of archaeological and historic resources:

- 1. California Public Resources Code section 21083.2(g): Defines "unique archaeological resource."
- 2. California Public Resources Code section 21084.1 and CEQA Guidelines section 15064.5(a): Define historical resources. In addition, CEQA Guidelines section 15064.5(b) defines the phrase "substantial adverse change in the significance of an historical resource;" it also defines the circumstances when a project would materially impair the significance of a historical resource.
- 3. California Public Resources Code section 5097.98 and CEQA Guidelines section 15064.5(e): Set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.
- 4. California Public Resources Code sections 21083.2(b)-(c) and CEQA Guidelines section 15126.4: Provide information regarding the mitigation framework for archaeological and historic resources, including options of preservation-in-place mitigation measures; preservation-in-place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context, and may also help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).



### California Native American Graves Protection and Repatriation Act

The California Native American Graves Protection and Repatriation Act (California Repatriation Act), enacted in 2001, required all state agencies and museums that receive state funding and that have possession or control over collections of human remains or cultural items, as defined, to complete an inventory and summary of these remains and items on or before January 1, 2003, with certain exceptions. The California Repatriation Act also provides a process for the identification and repatriation of these items to the appropriate tribes.

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### Figure 1. Project Location



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#### Figure 2. Project Site



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### California Environmental Quality Act

Under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (California Public Resources Code section 21084.1; CEQA Guidelines section 15064.5(b)). If a site is either listed or eligible for listing in the CRHR, or if it is included in a local register of historic resources, or identified as significant in a historical resources survey (meeting the requirements of California Public Resources Code section 5024.1(q)), it is a "historical resource" and is presumed to be historically or culturally significant for purposes of CEQA (California Public Resources Code section 21084.1; CEQA Guidelines section 15064.5(a)). The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption (California Public Resources Code section 21084.1; CEQA Guidelines section 15064.5(a)).

A "substantial adverse change in the significance of an historical resource" reflecting a significant effect under CEQA means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (CEQA Guidelines section 15064.5(b)(1); California Public Resources Code section 5020.1(q)). In turn, the significance of a historical resource is materially impaired when a project:

- 1. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or
- 2. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- 3. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. As described below, these procedures are detailed in California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98.

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the County coroner has examined the remains (California Health and Safety Code Section 7050.5[b]). If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the NAHC within 24 hours (California Health and Safety Code Section 7050.5[c]). In accordance with California Public Resources Code Section 5097.98(a), the NAHC will notify the Most Likely Descendant (MLD). With the permission of the landowner, the MLD may inspect the site of discovery. Within 48 hours of being granted access



to the site, the MLD may recommend means of treatment or disposition, with appropriate dignity, of the human remains and associated grave goods.

### Assembly Bill 52

California Assembly Bill 52 (AB 52), which took effect July 1, 2015, establishes a consultation process between California Native American Tribes and lead agencies in order to address tribal concerns regarding project impacts and mitigation to "tribal cultural resources" (TCR). Public Resources Code section 21074(a) defines TCRs and states that a project that has the potential to cause a substantial adverse change to a TCR is a project that may have an adverse effect on the environment. A TCR is defined as a site, feature, place, cultural landscape, sacred place, and object with cultural value to a California Native American tribe that is either:

- 1. listed or eligible for listing in the CRHR or a local register of historical resources, or
- 2. determined by a lead agency to be a TCR.

### 1.2.2 Local Level Regulations

#### City of Carlsbad General Plan

The City of Carlsbad General Plan (2015) affords consideration for the preservation of cultural resources. The City's Vision Statement Core Values for their General Plan note examples of the historical resources within the City including the Rancho Carrillo, the Marron Adobe, the Barrio neighborhood, the Magee House, and the Village (ECORP 2017). The General Plan includes guidelines to help revitalize the historic Barrio and Village neighborhoods. The General Plan also states the goal of enhancing education about the area's Native American history. Following are relevant goals and policies of the Arts, History, Culture, and Education Element of the City's General Plan (paraphrased):

Goal 7-G-1: Recognize, protect, preserve, and enhance the city's diverse heritage.

- Policy 7-P.1: Prepare an updated inventory of historic resources in Carlsbad with recommendations for specific properties and districts to be designated in national, state, and local registries, if determined appropriate and with agreement of the property owners.
- Policy 7-P.2: Encourage the use of regional, state and federal programs that promote cultural preservation to upgrade and redevelop properties with historic or cultural value.
- Policy 7-P.5: Encourage the rehabilitation of qualified historic structures through application of the California Historical Building Code.
- Policy 7-P.6: Ensure compliance with the City of Carlsbad Cultural Resource Guidelines to avoid or substantially reduce impacts to historic structures listed or eligible to be listed in the National Register of Historic Places or the California Register of Historical Resources.
- Policy 7-P.7: Implement the City of Carlsbad Cultural Resources Guidelines to avoid or substantially reduce impacts to archaeological and paleontological resources.



- Policy 7-P.8: During construction of specific development projects, require monitoring of grading, grounddisturbing, and other major earth-moving activities in previously undisturbed areas or in areas with known archaeological or paleontological resources by a qualified professional, as well as a tribal monitor during activities in areas with cultural resources of interest to local Native American tribes. Both the qualified professional and tribal monitor shall observe grading, ground-disturbing, and other earth-moving activities.
- Policy 7-P.9: Ensure that treatment of any cultural resources discovered during site grading complies with the City of Carlsbad Cultural Resource Guidelines. Determination of the significance of the cultural resource(s) and development and implementation of any data recovery program shall be conducted in consultation with interested Native American tribes. All Native American human remains and associated grave goods shall be returned to their most likely descendent and repatriated.
- Policy 7-P.10: Require consultation with the appropriate organizations and individuals, Information Centers of the California Historical Resources Information Systems [CHRIS], the Native American Heritage Commission [NAHC], and Native American groups and individuals) to minimize potential impacts to cultural resources that may occur as a result of a proposed project.
- Policy 7-P.11: Prior to occupancy of any buildings, a cultural resource monitoring report identifying all materials recovered shall be submitted to the City Planner.

Goal 7-G-2: Make Carlsbad's history more visible and accessible to residents and visitors.

- Policy 7-P.3: Formalize a program of historical markers/plaques at resources in state and national registers or of local importance.
- Policy 7-P.4: Promote community education of historic resources, integration and celebration of such resources as part of community events.

The General Plan includes designating Special Resource Areas that help preserve natural and cultural features. The following policy is from the Open Space, Conservation, and Recreation Element of the City's General Plan (paraphrased):

Policy 4-P.32: Where appropriate, designate an open space for those areas that preserve historic, cultural, archaeological, paleontological and education resources.

#### Carlsbad Tribal, Cultural, and Paleontological Resources Guidelines

The City of Carlsbad developed guidelines for the treatment of tribal, cultural, and paleontological resources (ECORP 2017). The tribal, cultural, and paleontological resources guidelines were developed in consultation with the San Luis Rey Band of Mission Indians, cultural and paleontological resources professionals, City staff, and the public (ECORP 2017). The City developed an archaeological sensitivity model of the City and categorizes them as Low, Moderate, and High.

High Sensitivity: these represent those areas that are situated in landforms that typically contain archaeological sites, or for which signatures of cultural resources are visible from aerial photography, or for which there is a higher concentration of previously recorded cultural resources.



Moderate Sensitivity: these represent those areas that can be classified neither as high nor low, because they have not been surveyed for cultural resources or do not otherwise fall into either the high or low categories.

Low Sensitivity: these areas represent areas that are either reflected in the files at CHRIS for having been previously surveyed, and/or have lower frequencies of previously recorded sites, or have recently been fully developed (as determined from historic through modern aerials), or have no visible indication of cultural resources on aerial photographs, or are set back from major water courses, such that the potential for cultural resources is relatively low. This includes heavily developed areas and areas built after 1983.

Due to developed and disturbed nature of the Project area from grading operations for the railroad and existing sewer line, the Project area would be categorized as Low Sensitivity by the City of Carlsbad Standards.

The City's tribal, cultural, and paleontological resources guidelines provides thresholds on whether or not a historical resource under CEQA will be significantly affected by a project (ECORP 2017). A significant impact under CEQA, occurs when a project may alter, directly or indirectly, any of the characteristics of a resource that negatively affect its significance.

Examples of adverse effects include, but are not limited to: physical destruction or damage to all or part of the property; alteration, restoration, rehabilitation, repair, maintenance, stabilization, or remediation; removal of the property from its historic location; change of the character or physical features; introduction of visual, atmospheric, or audible elements; neglect; or transfer, lease, or sale out of federal ownership (36 CFR 800.5[a][2] et seq.).

In addition, impacts to a Historical Resource (as defined by CEQA) are significant if the resource is demolished or destroyed or if the characteristics that made the resource eligible are materially impaired [CCR Title 14, Section 15064.5(a)].

In general, the City's tribal, cultural, and paleontological resources guidelines build on federal and state cultural resources laws and guidelines in an attempt to streamline the process of considering impacts to tribal, cultural, and paleontological resources within the City's jurisdiction. The Principal Investigator, in consultation with the City, project applicant, and, if applicable, San Luis Rey Band of Mission Indians or California Native American Tribes, shall determine whether or not the project will have a significant impact on a cultural resource.

### City of Carlsbad Council Policy No. 83

Effective March 1, 2016, the City Council passed Policy No. 83, Tribal Consultation and Treatment and Protection of Tribal Cultural Resources (ECORP 2017). The purpose of the policy was to recognize the City's "responsibility to protect with improved certainty the important historical and cultural values of current Tribal Cultural Resources within the City limits and to establish an improved framework for the City's consultation with Native American Tribes that are traditionally and culturally affiliated with the City of Carlsbad, including the San Luis Rey Band of Mission Indians."

This policy arose out of focused consultation with San Luis Rey Band of Mission Indians and, to the extent allowed under the authority of the City, urges City and private projects under the jurisdiction of the City to be designed to avoid or substantially reduce impacts to Tribal Cultural Resources, as defined in CEQA (ECORP 2017).

### City of Carlsbad Municipal Code – Historic Preservation

According to Chapter 22.06 of the City of Carlsbad Municipal Code, an historic resource may be considered and approved by the City Council for inclusion in the City's historic resources inventory based on one or more of the following:

- It exemplifies or reflects special elements of the City's cultural, social, economic, political, aesthetic, engineering, or architectural history;
- It is identified with persons or events significant in local, state, or national history;
- It embodies distinctive characteristics of a style, type, period, or method of construction, is a valuable example of the use of indigenous materials or craftsmanship, or is representative of a notable work of an acclaimed builder, designer, or architect;
- It is an archaeological, paleontological, botanical, geological, topographical, ecological, or geographical site which has the potential of yielding information of scientific value;
- It is a geographically definable area with a concentration of buildings, structures, improvements, or objects linked historically through location, design, setting, materials, workmanship, feeling, and/or association, in which the collective value of the improvements may be greater than the value of each individual improvement.

## 1.3 Native American Coordination

The City is responsible for conducting formal government-to-government consultation with Native American tribes. Dudek has assisted with this process by initiating contact with the NAHC in a letter requesting a review of the Sacred Lands File (SLF) on March 10, 2023. The NAHC replied via email on March 22, 2023 stating that the SLF search was completed with positive results; however, they did not specify whether resources had been identified directly within the Project area (Appendix B). The NAHC also attached a contact list containing 32 Native American individuals and/or tribal organizations who may have direct knowledge of cultural resources in or near the Project area (Appendix B). Outreach letters with a map and description of the planned Project were mailed to these individuals and organizations on November 21, 2023 (Appendix B). Any responses that are received will be forwarded to the City.

## 1.4 Report Format and Key Personnel

Following this Introduction, Chapter 2 presents the environmental and historical background of the area. Chapter 3 outlines the methods used to conduct this study. Chapter 4 presents the results of the records searches and field survey. Chapter 5 summarizes the study. Three appendices accompany this report: Confidential Appendix A includes the cultural resources records search results; Appendix B includes Native American correspondence documents; and Confidential Appendix C includes a cultural resources map and a Department of Recreation and Parks (DPR) site record for the resource in the Project area.

Makayla Murillo, B.A., Keshia Montifolca, M.A., RPA, and Angela Pham, M.A. RPA, authored the report. Brad Comeau, MSc, RPA and Micah Hale, PhD, RPA, contributed to the cultural context section. Ms. Pham acted as Principal Investigator (PI) for the Project. The pedestrian survey was performed by Dudek archaeologist Makayla Murillo and Saving Sacred Sites representative Geo Ventura. Makayla Murillo performed the cultural resources records search at the South Coastal Information Center (SCIC) and the archival research.



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# 2 Setting

# 2.1 Environmental and Geological Setting

The Project area is situated in a marina setting within the South Coast subregion of the Southwestern California region of the California Floristic Province and within the Carlsbad Hydrologic Unit or Carlsbad Watershed. The Project area contains numerous vernal pools consisting of seasonally wet depressional wetlands, in areas with hard soils and high clay components (Morales 2020). According to the U.S. Department of Agriculture Natural Resources Conservation Services (USDA 2023), one soil type is mapped in the Project area, including of marina loamy coarse sand with a slope ranging from 2 to 9 percent slopes. The marina loamy coarse sand series generally occur in settings with ridges, derive from Eolian sands derived from mixed sources, and are typically in elevations ranging from 0 to 430 feet (USDA 2023).

The Project area contains 11 vegetation communities and land cover types including nonnative grassland/vernal pool, freshwater marsh, southern willow scrub, ponded water, Gnatcatcher-Occupied coastal sage scrub, Gnatcatcher-Occupied baccharis-dominated coastal sage scrub, nonnative grassland, disturbed habitat, bare ground, ornamental vegetation, and developed land (Morales 2020). The surrounding area consists of the railway, moderately dense residential and commercial development. Elevation within the Project site is between 47 and 55 feet above mean sea level.

## 2.2 Prehistoric Context

Evidence for continuous human occupation in Southern California spans the last 10,000 years. Various attempts to parse out variability in archaeological assemblages over this broad time frame have led to the development of several cultural chronologies; some of these are based on geologic time, most are based on temporal trends in archaeological assemblages, and others are interpretive reconstructions. Each of these reconstructions describes essentially similar trends in assemblage composition in more or less detail. This research employs a common set of generalized terms used to describe chronological trends in assemblage composition: Paleoindian (pre-5500 BC), Archaic (8000 BC-AD 500), Late Prehistoric (AD 500–1769), and Ethnohistoric (post-AD 1769).

### 2.2.1 Paleoindian Period (pre-5500 BC)

Evidence for Paleoindian occupation in coastal Southern California is tenuous, especially considering the fact that the oldest dated archaeological assemblages look nothing like the Paleoindian artifacts from the Great Basin. One of the earliest dated archaeological assemblages in coastal Southern California (excluding the Channel Islands) derives from SDI-4669/W-12, in La Jolla. A human burial from SDI-4669 was radiocarbon dated to 9,590–9,920 years before present (95.4% probability) (Hector 2007). The burial is part of a larger site complex that contained more than 29 human burials associated with an assemblage that fits the Archaic profile (i.e., large amounts of ground stone, battered cobbles, and expedient flake tools). In contrast, typical Paleoindian assemblages include large stemmed projectile points, high proportions of formal lithic tools, bifacial lithic reduction strategies, and relatively small proportions of ground stone tools. Prime examples of this pattern are sites that were studied by Emma Lou Davis (1979) on Naval Air Weapons Station China Lake near Ridgecrest, California. These sites



contained fluted and unfluted stemmed points and large numbers of formal flake tools (e.g., shaped scrapers, blades). Other typical Paleoindian sites include the Komodo site (MNO-679)—a multicomponent fluted point site, and MNO-680—a single component Great Basined Stemmed point site (see Basgall et al. 2002). At MNO-679 and -680, ground stone tools were rare while finely made projectile points were common.

Turning back to coastal Southern California, the fact that some of the earliest dated assemblages are dominated by processing tools runs counter to traditional notions of mobile hunter–gatherers traversing the landscape for highly valued prey. Evidence for the latter—that is, typical Paleoindian assemblages—may have been located along the coastal margin at one time, prior to glacial desiccation and a rapid rise in sea level during the early Holocene (pre-7500 BP) that submerged as much as 1.8-kilometers of the San Diego coastline. If this were true, however, it would also be expected that such sites would be located on older landforms near the current coastline. Some sites, such as SDI-210 along Agua Hedionda Lagoon, contained stemmed points similar in form to Silver Lake and Lake Mojave projectile points (pre-8000 BP) that are commonly found at sites in California's high desert (see Basgall and Hall 1993). SDI-210 yielded one corrected radiocarbon date of 8520–9520 BP (see Warren et al. 2004). However, sites of this nature are extremely rare and cannot be separated from large numbers of milling tools that intermingle with old projectile point forms.

Warren et al. (2004) claimed that a biface manufacturing tradition present at the Harris site complex (SDI-149) is representative of typical Paleoindian occupation in the San Diego region that possibly dates between 10,365 and 8200 BC (Warren et al. 2004). Termed San Dieguito (Rogers 1945), assemblages at the Harris site are qualitatively distinct from most others in the San Diego region because the site has large numbers of finely made bifaces (including projectile points), formal flake tools, a biface reduction trajectory, and relatively small amounts of processing tools (see also Warren 1964, 1968). Despite the unique assemblage composition, the definition of San Dieguito pattern is simply an inland manifestation of a broader economic pattern. Gallegos' interpretation of San Dieguito has been widely accepted in recent years, in part because of the difficulty in distinguishing San Dieguito components from other assemblage constituents. In other words, it is easier to ignore San Dieguito as a distinct socioeconomic pattern than it is to draw it out of mixed assemblages.

The large number of finished bifaces (i.e., projectile points and non-projectile blades), along with large numbers of formal flake tools at the Harris site complex, is very different than nearly all other assemblages throughout the San Diego region, regardless of age. Warren et al. (2004) made this point, tabulating basic assemblage constituents for key early Holocene sites. Producing finely made bifaces and formal flake tools implies that relatively large amounts of time were spent for tool manufacture. Such a strategy contrasts with the expedient flake-based tools and cobble-core reduction strategy that typifies non-San Dieguito Archaic sites. It can be inferred from the uniquely high degree of San Dieguito assemblage formality that the Harris site complex represents a distinct economic strategy from non-San Dieguito assemblages.

San Dieguito sites are rare in the inland valleys of Riverside County, with one possible candidate, RIV-2798/H, located on the shore of Lake Elsinore. Excavations at Locus B at RIV-2798/H produced a toolkit consisting predominately of flaked stone tools, including 15 crescents, 6 points, and 49 bifaces, and lesser amounts of groundstone tools (9 handstones, 10 millingstones), among other items (Grenda 1997). A calibrated and reservoir corrected radiocarbon date from a shell produced a date of 6630 BC. Grenda (1997) suggested this site represents seasonal exploitation of lacustrine resources and small game, and resembles coastal San Dieguito assemblages and spatial patterning.

If San Dieguito truly represents a distinct socioeconomic strategy from the non-San Dieguito Archaic processing regime, its rarity implies that it was not only short-lived, but that it was not as economically successful as the Archaic strategy. Such a conclusion would fit with other trends in Southern California deserts, wherein hunting-related tools are replaced by processing tools during the early Holocene (see Basgall and Hall 1993; Basgall and McGuire 1988).

### 2.2.2 Archaic Period (8000 BC-AD 500)

The more than 2,500-year overlap between the presumed age of Paleoindian occupations and the Archaic period highlights the difficulty in defining a cultural chronology in the San Diego region. If San Dieguito is the only recognized Paleoindian component in the San Diego region, then the dominance of hunting tools implies that it derives from Great Basin adaptive strategies and is not necessarily a local adaptation. Warren et al. (2004) admitted as much, citing strong desert connections with San Dieguito. Thus, the Archaic pattern is the earliest local socioeconomic adaptation in the San Diego region (see Hale 2001, 2009).

The Archaic pattern is relatively easy to define with assemblages that consist primarily of processing tools: millingstones, handstones, battered cobbles, heavy crude scrapers, incipient flake-based tools, and cobble-core reduction. These assemblages occur in all environments across the San Diego region, with little variability in tool composition. Low assemblage variability over time and space among Archaic sites has been equated with cultural conservatism (see Byrd and Reddy 2002; Warren 1968; Warren et al. 2004). Despite enormous amounts of archaeological work at Archaic sites, little change in assemblage composition occurred until the bow and arrow was adopted at around AD 500, as well as ceramics at approximately the same time (Griset 1996; Hale 2009). Even then, assemblage formality remained low. After the bow was adopted, small arrow points appear in large quantities and already low amounts of formal flake tools are replaced by increasing amounts of expedient flake tools. Similarly, shaped millingstones and handstones decreased in proportion relative to expedient, unshaped ground stone tools (Hale 2009). Thus, the terminus of the Archaic period is equally as hard to define as its beginning because basic assemblage constituents and patterns of manufacturing investment remain stable, complimented only by the addition of the bow and ceramics.

### 2.2.3 Late Prehistoric Period

The period of time following the Archaic and prior to ethnohistoric times (AD 1769) is commonly referred to as the Late Prehistoric (Rogers 1945; Wallace 1955; Warren et al. 2004). However, several other subdivisions continue to be used to describe various shifts in assemblage composition, including the addition of ceramics and cremation practices. In northern San Diego County, the post-A.D. 1450 period is called the San Luis Rey Complex (True 1980). Rogers (1929) also subdivided the last 1,000 years into the Yuman II and III cultures, based on the distribution of ceramics. Despite these regional complexes, each is defined by the addition of arrow points and ceramics, and the widespread use of bedrock mortars. Vagaries in the appearance of the bow and arrow and ceramics make the temporal resolution of the San Luis Rey complexes difficult. For this reason, the term Late Prehistoric is well-suited to describe the last 1,500 years of prehistory in this region.

Temporal trends in socioeconomic adaptations during the Late Prehistoric are poorly understood. This is partly due to the fact that the fundamental Late Prehistoric assemblage is very similar to the Archaic pattern, but includes arrow points, large quantities of fine debitage from producing arrow points, ceramics, and cremations. The appearance of mortars and pestles is difficult to place in time because most mortars are found on bedrock surfaces; bowl mortars are actually rare in this region. Some argue that the ethnohistoric intensive acorn economy extends



as far back as AD 500 (Bean and Shipek 1978). However, there is no substantial evidence that reliance on acorns, and the accompanying use of mortars and pestles, occurred prior to AD 1400. True (1980) argued that acorn processing and ceramic use in the northern San Diego region did not occur until the San Luis Rey pattern emerged after approximately AD 1450. Similar to True (1980), Hale (2009) argued that an acorn economy did not appear in the southern San Diego region until just prior to ethnohistoric times, and that when it did occur, a major shift in social organization followed. An acorn dependent economy likely appeared in southwestern Riverside County and Northern San Diego County around the same time, with equivalent social changes.

## 2.2.4 Ethnographic Period

Early descriptions of the lifeways of Southern California ethnohistoric groups were provided by explorers, missionaries, administrators, and other travelers, who gave particular attention to the coastal populations (Boscana 1846; Fages 1937; Geiger and Meighan 1976; Harrington 1934; Laylander 2000). Subsequent ethnographers in the early twentieth century were able to give much more objective, detailed, and penetrating accounts. Most of the ethnographers attempted to distinguish between observations of the customs of surviving Native Americans and orally transmitted or inferred information concerning the lifeways of native groups prior to European intrusion into the region. The second of these subjects provides a terminal baseline for discussing the cultures of the region's prehistory. Despite the relatively rich ethnographic record, attempts to distinguish between the archaeological residues that were produced by the linguistically unrelated but culturally similar Luiseño and Ipai/Kumeyaay have been largely unsuccessful (Pigniolo 2004; True 1966).

The first systematic ethnographic work in California was done in 1871 and 1872 by Stephen Powers (Heizer 1978); in 1877, Powers collected and printed his ethnographic observations in *Tribes of California* (Powers 1877). Prior to the work of Powers, there were limited records and accounts that might be broadly considered as ethnohistorical data, such as Boscana (1846). At the beginning of the twentieth century, Alfred L. Kroeber and others began four decades of systematic documentation of tribal ethnographies. Kroeber's (1925) monumental work on the Indians of California continues to be an authoritative source of information. It is important to note that even though there were many informants for these early ethnographies who were able to provide information from personal experiences about native life before the Europeans, a significantly large proportion of these informants were born after 1850 (Heizer and Nissen 1973); therefore, the documentation of pre-contact, aboriginal culture was being increasingly supplied by individuals born in California after considerable contact with Europeans. As Robert F. Heizer (1978) stated, this is an important issue to note when examining these ethnographies, since considerable culture change had undoubtedly occurred by 1850 among the Native American survivors of California. Nonetheless, the enormous value of the ethnographies done under Kroeber's guidance is obvious. The major sources for this review include Lowell John Bean and Florence C. Shipek (1978), Kroeber (1925), Philip S. Sparkman (1908), and Raymond White (1963).

Carlsbad is situated within the ethnohistoric territory of the Native American Luiseño cultural group, according to Kroeber's study (1925; Rivers 1993). This group is a Shoshonean-speaking population that has inhabited what are now northern San Diego, southern Orange, and southwestern Riverside counties through the ethnohistoric period into the twenty-first century. The boundary between the ethnohistoric Native American Luiseño and Juaneño cultural groups lie within Camp Pendleton according to Kroeber's study (1925: 636; Rivers 1993). Both the Luiseño and Juaneño cultural groups are Takic-speaking populations, each having their own respective dialect, that have inhabited what is now northern San Diego, southern Orange, and southwestern Riverside counties through the Ethnohistoric period into the twenty-first century. They are linguistically and culturally related to the Gabrielino, Cupeño, and Cahuilla, and represent the descendants of local Late Prehistoric populations. They are generally



considered to have migrated into the area from the Mojave Desert, possibly displacing the prehistoric ancestors of the Yuman-speaking Kumeyaay (Ipai-Tipai) that lived directly to the south during Ethnohistoric times.

Territorial distribution of ethnohistoric groups is of critical importance in reconstructing adaptations and ethnohistoric modeling for prehistoric interpretation. There is limited ethnohistoric information recorded about the Juaneño, and much of it is derived from accounts about the Luiseño (Kroeber 1925). The name Juaneño derives from association with the Mission San Juan Capistrano. There appear to be differences in dialect and culture between the Juaneño and Luiseño, despite their similarities. The limited territory ascribed to the Juaneño by Kroeber (1925: 636) extended from Aliso Creek on the north to the area between San Onofre and Las Pulgas drainages on the south, with the Pacific Ocean forming the western boundary and the crest of the Santa Ana Mountains forming the boundary on the east. Their neighbors to the north were the Gabrielino, and the Luiseño bordered them on the northeast, east, and south. There is, however, some controversy over the nature of the Juaneño as a group. Kroeber (1925: 636) recognized Juaneño language as a dialect of Luiseño, but treated the populations as separate groups. Constance Cameron (1987: 318) supports this interpretation based on archaeological evidence. Bean and Shipek (1978: 550), and White (1963: 91) treat the Juaneño as part of the Luiseño in the basis of cultural and linguistic similarities. For the purposes of this ethnohistoric discussion, the Juaneño are considered distinct from the Luiseño.

The Uto–Aztecan inhabitants of northern San Diego County were called Luiseños by Franciscan friars, who named the San Luis Rey River and established the San Luis Rey Mission in the heart of Luiseño territory. Luiseño territory encompassed an area from roughly Agua Hedionda Creek on the coast, east to Lake Henshaw, north to Lake Elsinore, and west through San Juan Capistrano to the coast (Bean and Shipek 1978; Kroeber 1925). The Luiseño shared boundaries with the Gabrielino and Serrano to the west and northwest, the Cahuilla from the deserts to the east, the Cupeño to the southeast, and the Kumeyaay to the south. All but the Kumeyaay (Ipai also known as Northern Diegueño) are linguistically similar to the Luiseño, belonging to the Takic subfamily of Uto–Aztecan (Bean and Shipek 1978).

The Luiseño were organized into patrilineal clans centered on a chief, comprised of 25–30 people (Kroeber 1925), each of which had their own territorial land where food and other resources were collected (Sparkman 1908). Luiseño population estimates at the time of Spanish contact range from 3,000–4,000 (Kroeber 1925) to upwards of 10,000 (White 1963). In either case, the arrival of the Spanish undoubtedly decimated Native peoples through disease and changed living conditions (Bean and Shipek 1978).

## 2.3 Historic Period

Francisco Ulloa, exploring the Pacific coast under orders from Hernán Cortes, is reported to have stopped at the San Luis Rey River in 1540, marking the first contact between Europeans and the Luiseño, although the accuracy of his exploration is disputed (Garrahy and Weber 1971). Juan Rodriguez Cabrillo, who is widely considered the first European to explore Alta California, sailed the coast through Luiseno territory in 1542, but is not reported to have landed. Spanish colonial settlement was initiated in 1769 with the founding of the first mission in San Diego by Father Junípero Serra. Father Juan Mariner and Father-Presidente Fermín Lasuén explored what would become northern San Diego County and western Riverside County in 1795 and 1797, respectively, in search of a location for another mission (Brigandi 1998). In 1798 Lasuén founded Mission San Luis Rey de Francia in the San Luis Rey Valley, which would become one of the largest and most prosperous missions in California (Brigandi 1998).



Under Spanish control, the missions set out to convert local populations to Christianity and to expand the influence of the Spanish empire. To support the growing mission, numerous asistencias, or sub-missions, and ranchos were established throughout the territory at or adjacent to Luiseño villages.

Following Mexican independence from Spain in 1821, secularization of the missions began in 1833 in order to turn over the large land holding to private citizens, including local Indians. Mission San Luis Rey was divided into six ranchos in 1835: Santa Margarita, Las Flores, Guajome, Agua Hedionda, Buena Vista, and Monserrate. Rancho Aqua Hedionda became the base of what makes up today's modern Carlsbad.

In 1851, a group of Cahuilla and Cupeño Indians attacked American settlers in Warner's Hot Spring, hoping to unite Indian tribes and drive out the Americans (Bibb 1991). Led by Pablo Apis, the Luiseño of Temecula went to Mission San Louis Rey and remained out of the conflict (Bibb 1991). In 1852, the Treaty of Temecula (Treaty of Peace and Friendship) was signed, providing certain lands, horses, cattle, and other supplies to the Luiseño, Cahuilla, and Serrano in exchange for government control of the rest of their lands (Bibb 1991, Van Horn 1974). This treaty, and 17 others in California, was rejected by the U.S. Senate later that year.

In 1858, John Butterfield established the Butterfield Stage Route along the Southern Emigrant Trail, delivering mail from St. Louis to San Francisco (Cato 2000). The Butterfield route also provided an easier mode of transportation for settlers coming into Southern California (Van Horn 1974). The start of the Civil War shut down the Butterfield Stage Route after a short 3-year stint, as it passed through Confederate states. By the 1870s, ranching had become quite prosperous in the area (Van Horn 1974).

In 1860, Francis Hinton hired Robert "Uncle John" Kelly as part owner and Major Domo of Rancho Aqua Hedionda. Kelly, originally from the Isle of Man, was a bit of a local legend and a well-known Rancher in the south west. This partnership would lead to Kelly's eventual ownership of the Rancho on Hinton's death in 1870 (Harmon 1961). Kelly granted a coastal right of way for the San Diego Railway which allowed for San Diego to be connected to all points north. This land along with the land of John Frazier would soon become popular train stops for fresh water on the routes north (Harmon 1967).

The name Carlsbad came from the German immigrant Gerhard Schutte who came to the city in 1886 and dreamed of building "a town of gracious homes and small farms." Along with Samuel Church, Henry Nelson, and D.D. Wadsworth, Schutte formed the Carlsbad Land and Mineral Water Company which purchased all of Frazier's property plus 275 more acres (Harmon 1967). Frazier stayed on as superintendent of the new company's water holdings and worked to entice future residents to their land with the promotion of the mineral water. Support for the water's healing properties came with support from an Eastern laboratory with analyzed samples of the water and declared them to be chemically identical to those drawn from Well Number Nine in Karlsbad, Bohemia. Wanting to make this connection to the famed European spa as strong as possible, the directors of the Carlsbad Land and Mineral Water Company named their town Carlsbad (Jones 1982).

In the 1880's, a group of investors hearing about the "Frasier Station Well," created the Carlsbad Land and Water Company by purchasing land from Frasier and adjoining unassociated lands (Harmon 1967). With this purchase the Town of Carlsbad was formed. The California land bust of the 1890's almost left the town abandoned, until the South Coast Land Company purchased most of the land and helped re-establish the commercial life of Carlsbad through additional wells and avocado groves (Harmon 1961).



Through the early 1900's and into the 1930's, Carlsbad continued to grow through the completion of the Highway 101, the relocation of the Army Navy Academy to the town, construction of the California Carlsbad Mineral Spring Hotel and the establishment of the Chamber of Commerce which provided the area with much needed stability and financial growth (Harmon 1961).

Despite the large number of new businesses in the Carlsbad area, the city could not totally elude the effects of the national Depression. Buildings such as the First National Bank on Elm Avenue, that opened as recently as the late 1920s, closed its doors for good and the recently homeless families of the city moved into the building for shelter. Perhaps not growing as fast as it did pre-1929, Carlsbad did continue to grow despite the economic hardships which could be attributed in part to the sale of avocados. By the end of the Depression, the Works Progress Administration paid one hundred men sixty cents an hour to build a drainage system in Carlsbad. One of the most significant developments from this period was the relocation of the Davis Military Academy to Carlsbad from Pacific Beach in 1936. With this came money for the local economy, which in turn helped shake off some of the impact from the Depression (Gutierrez 2002).

Furthering the influx of military members and the capital that came with them was the move in 1942 of the U.S. Marine Corps to Rancho Santa Margarita to establish Camp Pendleton. Although the move wasn't all positive, the large amount of new military members and their families caused a severe housing crisis. There was a lack of rentable units which caused many military families to purchase their own homes. Additionally, local residents began to buy us vacant lots in order to construct low-cost rental cottages. By the end of WWII the population of Carlsbad was steadily rising and there was a growing dissatisfaction with San Diego County's administration for Carlsbad. It was the culmination of multiple small problems that caused many citizens to push for the formation of a local government (Gutierrez 2002).

Carlsbad residents were dissatisfied with their lack of locally controlled services including: no basic fire and police services, a declining water supply, lack of fire hydrants, and an antiquated sewage system built in 1929. The construction of a power plant by SDG&E was the primary reason for Carlsbad incorporating as a city, supplying enough tax revenue to justify having a city government (Orton 1994). In 1952 after much debate the City of Carlsbad was incorporated has continued to expand and grow into the modern day city (City of Carlsbad 2018).

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# 3 Research Methods

# 3.1 Cultural Resources

The cultural resource investigation consisted of a records search of the Project area and a one-mile radius around the Project at the South Coastal Information Center (SCIC); initiation of correspondence with the NAHC and Native American representatives; and an intensive pedestrian survey of the Project area.

The pedestrian survey was performed by Dudek archaeologist Makayla Murillo and Saving Sacred Sites representative Geo Ventura, on March 17, 2023, using standard archaeological procedures and techniques that meet the Secretary of Interior's standards and guidelines for cultural resources inventory. The formal survey was conducted for all accessible portions of the Project with exposed ground surface using north-south transects, where possible, and spaced no more than 15 meters apart. Since a segment of the NCTD railroad is located within the Project area, the survey surrounding the railroad right-of-way was characterized by opportunistic survey and transects were spaced five meters wide and oriented north-south. Landscaped areas and areas where soils were visible surrounding the railroad and railroad right-of-way were inspected for artifacts.

Throughout the survey area, the ground surface was examined for prehistoric artifacts (e.g., flaked stone tools, toolmaking debris, stone milling tools, ceramics, fire-affected rock), soil discoloration that might indicate the presence of a cultural midden, soil depressions, features indicative of the current or former presence of structures or buildings (e.g., standing exterior walls, post holes, foundations), and historic artifacts (e.g., metal, glass, ceramics, building materials). Ground disturbances such as burrows, cut banks, and drainages were also visually inspected for exposed subsurface materials. All fieldwork was documented using field notes, digital photography, a Global Positioning System (GPS) receiver with sub-meter accuracy, iPad technology with close-scale field maps, and aerial photographs. Location-specific photographs were taken using an Apple 11<sup>th</sup> Generation iPad equipped with 8 MP resolution and ESRI ArcGIS Field Maps. Accuracy of this device ranged between 3 meters and 10 meters. INTENTIONALLY LEFT BLANK

# 4 Methods and Results

This section details the results of the archival review and intensive pedestrian survey.

# 4.1 Archival Research

Dudek consulted historic topographic maps (earliest available from 1893) and aerial photographs to understand development of the Project site and surrounding properties. Historic aerial photographs and maps of the Project area were available from 1947 to 2020 (NETR 2023). The 1947 historic photograph reveals that the Southern California Railroad/Atchison, Topeka, and Santa Fe Railroad and Pacific Coast Highway 101 were constructed while the surrounding Project area was undeveloped. The 1953 aerial imagery shows grading activity throughout the surrounding properties. By 1964, manufactured homes are developed immediately to the west of the railroad. The 1967 aerial imagery shows no changes in the Project area, while the Interstate-5 is developed. By 1978, tract homes to the southeast of the Project area are developed. Between 1980 and 1984, the aerial imagery shows no substantial changes within the Project area and surrounding properties. The imagery from 1985 shows Poinsettia Lane as being graded, and by 1986, Poinsettia Lane is paved. From 1987 to 1994, the Project area and surrounding properties reveal no substantial changes. By 1995, the aerial imagery shows grading activity for the current Poinsettia Carlsbad Transit Station parking lot, located immediately east of the railroad. The 1996 aerial imagery shows the pedestrian access routes from the parking lot to the platform of the station. No substantial changes appear in the Project area or the surrounding properties from 1997 to 1999. The aerial imagery in 2000 shows construction activity immediately west of the parking lot associated with the Poinsettia Carlsbad Transit Station. By 2002, the imagery shows additional housing structures built to the southwest of the railroad. The 2003 and 2005 photographs show development of tract homes south of the parking lot and west of the railroad. The current condition of the Project area and surrounding properties are the same as seen in the 2009 aerial imagery.

The historic topographic (topo) maps of the Project area were reviews (earliest map available is 1893). The 1893 topo map reveals the Southern California Railroad. The name of the railroad changes to Atchison, Topeka, and Santa Fe on the 1949 topo map. The physical railroad tracks are outside the Project area. No additional historic structures appear in the historic topo imagery.

# 4.2 NAHC and Tribal Correspondence

Dudek requested a Native American Heritage Commission (NAHC) search of the Sacred Lands File (SLF) on March 10, 2023, for the Project area. The SLF consists of a database of known Native American resources. These resources may not be included in the SCIC database. The NAHC responded on March 22, 2023 with positive results, however, they did not specify whether resources had been identified directly within the Project area (Appendix B). The NAHC additionally provided a list of Native American tribes and individuals/organizations with traditional geographic associations that might have knowledge of cultural resources in this area.

Outreach letters were mailed on November 21, 2023 to all Native American group representatives included on the NAHC contact list (Appendix B). These letters attempt to solicit additional information relating to Native American resources that may be impacted by the Project. Native American representatives have been requested to define a general area where known resources intersect the Project area. No responses have been received to date. These letters will be forwarded to the City and included in Appendix B.

In compliance with Assembly Bill 52, the City, as lead agency, is responsible for conducting government to government consultation with tribal entities.

## 4.3 SCIC Record Search

As part of the cultural resources study prepared for the Project, Dudek conducted a records search of the California Historical Resources Information System (CHRIS) at the South Coastal Information Center (SCIC) at San Diego State University (SDSU) on March 13, 2023, of the Project area and surrounding one-mile search buffer. Confidential Appendix A provides the results of the records search and a bibliography of prior cultural resources studies.

### 4.3.1 Previously Conducted Cultural Resource Studies

The SCIC records search results indicate that 95 previous cultural resources studies have been conducted within the Project area and the one-mile search buffer (Confidential Appendix A). Of the 95 studies identified within the one-mile buffer, 11 intersect the proposed Project area and are summarized below in Table 1. The entirety of the Project area has been previously studied which resulted in the identification of one resource (CA-SDI-016385H) in the Project area. These studies consist of two Section 106 consultations, a cultural resource survey, regional historic preservation study, historic and archaeological survey report, historic property survey report, archaeological survey report, cultural resources assessment, survey results report, updated cultural resource record search, and an archaeological testing letter report. The reports within the one-mile search buffer not intersecting the Project area are included in Confidential Appendix A.

SCIC Report Number	Year	Report Title	Author/Company
SD-01851	1989	Cultural Resources Survey of The San Diego Commuter Rail Project	Hector, Susan
SD-01984	1980	Regional Historic Preservation Study	Westec Services, Inc.
SD-03004	1994	Historical/Archaeological Survey and Test Report for The Poinsettia Lane Project, Carlsbad, California	Strudwick, Ivan And Dennis Gallegos
SD-06629	1999	Historic Property Survey Report Oceanside to San Diego-Rail To Trail	Rosen, Martin
SD-09361	2002	Archaeological Survey Report for The Phase I Archaeological Survey Along Interstate 5 San Diego County, CA.	Byrd, Brian F. And Collin O'Neill
SD-17230	2017	Cultural Resources Assessment of The Taylormade Puc Project, Carlsbad, San Diego County, California (BCR Consulting Project No. Syn1606)	Brunzell, David
SD-18022	2012	Survey Results Report Poinsettia Station Improvement Project, City of Carlsbad, San Diego County, California	Mclean, Roderic
SD-18023	2015	Updated Cultural Resources Record Search for The Poinsettia Station Improvement Project, City of Carlsbad, San Diego County, California	Gunderman Castells, Shelby
SD-18056	2017	Section 106 Consultation for The Poinsettia Station Improvements Project, Carlsbad, Ca (Fta_20016_1208_001)	Rogers, Leslie T.

### Table 1. Previously Recorded Cultural Studies within the Project Area



SCIC Report Number	Year	Report Title	Author/Company
SD-18057	2017	Confidential Archaeological Testing Letter Report for The Poinsettia Station Improvements Project, City of Carlsbad, San Diego County, California	Valasik, Molly
SD-18471	2016	Section 106 Consultation for The Poinsettia Station Improvements Project, Carlsbad, Ca	Rogers, Leslie T.

### Table 1. Previously Recorded Cultural Studies within the Project Area

#### SD-03004

This is a historical/archaeological survey and test report for the Poinsettia Lane Project prepared by Gallegos & Associates in 1994 (Strudwick and Gallegos 1994). The report covers approximately 45% of the northern section of the current proposed Project area. The survey resulted in the identification of a multicomponent site (CA-SDI-013739) within the western section of the project area (west of the railroad tracks), however, no cultural resources were identified within the eastern portion of the project area (east of the railroad tracks), which intersects the current proposed Project area. The site located to the west and outside of the current proposed Project area was tested and determined not important under CEQA and no mitigation was recommended (Strudwick and Gallegos 1994).

### SD-18022

This cultural resources survey report was completed for the Poinsettia Station Improvement Project prepared by LSA Associates, Inc. in 2012 (McLean 2012). The report covers approximately 95% of the current proposed Project area. The survey resulted in the identification of a previously unrecorded segment of the San Diego Northern Railway (CA-SDI-016385H) located in the area of potential effects (APE) and was evaluated for its eligibility for the NRHP. None of the original structure remains in the segment in the APE, and due to its poor integrity, the segment was recommended ineligible for the NRHP and does not require mitigation (McLean 2012). In addition, a prehistoric shell scatter (CA-SDI-000760) was located and observed adjacent to the APE. This resource is not located within the current proposed project area. Due to the potential for subsurface deposits for CA-SDI-000760, monitoring was recommended within 50-feet of the resource (McLean 2012).

#### SD-18023

This report provided an updated cultural resources record search for the Poinsettia Station Improvement Project and was prepared by ASM Affiliates in 2015 (Castells 2015). The report covers 80% of the current proposed Project area. The report included an updated cultural resources record search as the APE was modified from the APE included in the 2012 cultural resources report prepared by LSA Associates, Inc. (McLean 2012). No additional prehistoric or historic cultural resources have been recorded within the Project area since the preparation of the 2012 cultural resources report prepared by LSA Associates, Inc. The report recommended that a cultural resources inventory of the current APE should be conducted by a qualified archaeologist and Native American monitor, and that the shell scatter (CA-SDI-000760) should be evaluated for the NRHP through a subsurface testing plan (Castells 2015).



### SD-18057

This is an archaeological testing letter report for the Poinsettia Station Improvements Project prepared by Cogstone in 2017 (Valasik 2017). The report covers approximately 80% of the current proposed Project area. The report focused on areas of the APE that were modified and not included in the 2012 cultural resources report prepared by LSA Associates, Inc. (McLean 2012). An additional survey was conducted along with an extend Phase I testing in the vicinity of the shell scatter (CA-SDI-000760). A total of 11 STPs were excavated. The STPs measured approximately 40 cm in diameter and were excavated in 10 cm levels until at least 2 levels (20 cm) of sterile soil were removed. A total of 10 STPs were sterile, and one STP resulted in two shell fragments and a small mammal bone. The study recommended that no further archaeological efforts were required for the project (Valasik 2017).

### 4.3.2 Previously Recorded Cultural Resources

The SCIC records search also revealed that 20 previously recorded cultural resources have been identified within the Project area and the one-mile search buffer (Confidential Appendix A). Of these 20 previous resources, one resource, a historic railroad (CA-SDI-016385H), intersects the Project area. The remaining resources include 17 prehistoric resources, one multicomponent resource, and one missing site record. The 20 previously recorded resources are summarized in Table 2 below. The results of the records search and all Department of Parks and Recreation site forms are located in Confidential Appendix A.

Primary Number	Trinomial	Resource Type	Resource Description	Recorded By and Year	NRHP Eligibility		
Inside the Project area							
P-37-024739	CA-SDI-016385H	Historic	Railroad	R. McLean (2012)	Not Eligible		
Outside of the P	roject area						
P-37-000760	CA-SDI-000760	Prehistoric	Shell and lithic scatter	K. Crabtree (1961)	Not evaluated		
P-37-006067	CA-SDI-006067	Prehistoric	Artifact scatter	M. Roeder (1982); R. Franklin (1978)	Not evaluated		
P-37-006749*	CA-SDI-006749	N/A	N/A	N/A	N/A		
P-37-006750	CA-SDI-006750	Prehistoric	Shell scatter	R. Franklin (1978)	Not evaluated		
P-37-006829	CA-SDI-006829	Prehistoric	Shell midden	S. Hector (1985); R. Franklin (1978)	Not evaluated		
P-37-009590**	CA-SDI-009590	Prehistoric	Midden and artifact scatter	J. Woodward (1982)	Not evaluated		
P-37-009607	CA-SDI-009607	Prehistoric	Artifact scatter	M. Desautels (1982)	Not evaluated		
P-37-010670	CA-SDI-010670	Prehistoric	Shell and lithic scatter	Gallegos and Associates (1992); RBR and Associates (1987)	Not evaluated		
P-37-011026	CA-SDI-011026	Prehistoric	Artifact scatter	T. Bueren (1988); May (1972)	Not evaluated		

### Table 2. Previously Recorded Cultural Resources within the One-Mile Search Buffer



Primary Number	Trinomial	Resource Type	Resource Description	Recorded By and Year	NRHP Eligibility
P-37-012670	CA-SDI-012670	Prehistoric	Artifact scatter	D. Laylander (2003); T. Bueren (1988)	Not evaluated
P-37-012814	CA-SDI-012814	Prehistoric	Shell and artifact scatter	Gallegos and Associates (1992)	Not evaluated
P-37-018804	CA-SDI-015678	Prehistoric	Shell and artifact scatter	D. Laylander (2003); C. O'Neil (2000)	Not evaluated
P-37-018805	CA-SDI-015679	Prehistoric	Shell scatter	D. Laylander (2003); C. O'Neil (2000)	Not evaluated
P-37-018809	_	Prehistoric	lsolate: Shell	C. O'Neil (2000)	Not eligible
P-37-019033	CA-SDI-013739	Multicomp onent	Temporary camp and historic debris	I.Strudwick and M. Caldwell (1994)	Not evaluated
P-37-026507	CA-SDI-017403	Prehistoric	Artifact scatter and midden	G. Stickel (1978)	Not evaluated
P-37-026512	CA-SDI-017408	Prehistoric	Temporary camp	N/A	Not evaluated
P-37-033595	_	Prehistoric	lsolate: Lithic core	A.Pigniolo (2014)	Not evaluated
P-37-036392	CA-SDI-022036	Prehistoric	Habitation debris	Foglia and Droessler (2016)	Not evaluated

### Table 2. Previously Recorded Cultural Resources within the One-Mile Search Buffer

\* Site record missing from SCIC.

\*\* Recommended to be removed from the inventory.

### CA-SDI-016385H

CA-SDI-016385H was originally recorded in 2002 by CRM Tech (Ballester and Woodward 2002) and consists of the Atchison, Topeka and Santa Fe (AT&SF) Railroad. The segment that intersects the current proposed Project was evaluated by R. McLean in 2012 for the Poinsettia Station Improvement Project (McLean 2012). The historic structure consists of a 4,600-foot segment of the Los Angeles-San Diego-San Luis Obispo (LOSSAN) Rail Corridor, also known as the San Diego Northern Railway. This segment of the railway runs north-south and roughly follows the coastline from Palomar Airport to Poinsettia Lane in Carlsbad, California.

The San Diego Northern Railway began construction in 1881. The railway has experienced improvements since 1939 including maintenance, replacement of lines, and expansion from a single line to double line (McLean 2012). The San Diego Northern Railway is eligible for the NRHP under Criterion A due to its contribution to the development and economy of San Diego. However, all aspects of the original, historic railway in this segment have been replaced and upgraded as it has continually been in use. Due to the ongoing maintenance and improvements, all the original materials have been replaced. The rail lines were replaced in 1939 and in 1943 additional track improvements began (McLean 2012). In 1971, Amtrack acquired the railroad which also led to additional maintenance and upgrades. The Poinsettia Station was constructed in the 1990s, and the existing railroad now consists of a double
line (McLean 2012). While the railroad is associated with the development of San Diego, this segment of the railroad has poor integrity, no longer maintains this association, and is recommended ineligible for the NRHP (McLean 2012). Dudek concurs with the previous recommendation. The resource has not been evaluated for eligibility to the CRHR, however, the proposed Project would rehabilitate nine existing sewer manholes within the NCTD right-of-way located east of the railroad and avoid impacts to the resource.

## 4.4 Cultural Resources Field Survey Results

Dudek archaeologist, Makayla Murillo conducted an intense level pedestrian survey of the proposed Project area on March 17, 2023. Saving Sacred Sites Native American Monitor, Geo Ventura participated in the pedestrian survey.

The Project area is comprised of the NCTD railroad right-of-way located at the Poinsettia Carlsbad Transit Station. The Project area is relatively flat. Ground visibility in the vacant land of the northern portion of the Project area was fair (25-50%) in areas where the ground surface was obscured by vegetation and imported gravel (Figure 3). Ground visibility in the southern portion of the Project area was poor (0-25%) in areas where the ground surface was inaccessible due to current flooded conditions from previous rain and heavy content of vegetation (Figure 4). A very light amount of modern debris (e.g. plastic food wrappers) was observed throughout this area. The soils appeared to be wet moderate brown sand and clay mixture. The vegetation consisted of low-lying grasses, shrubs, trees, and succulents. A segment of the San Diego Northern Railway (CA-SDI-016385H) was observed within the western boundary of the Project area and was in the same condition as described in the DPR site form. No prehistoric archaeological resources were identified within the Project area. Photographs documenting field conditions are presented in Figures 3 and 4.

Figure 3. View of manhole on northern portion of Project area, view to west (Manhole facing W).



Figure 4. View of southern portion of Project area, view to southwest (South portion facing S).





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# 5 Summary and Management Considerations

Dudek's Phase I cultural resources inventory of the Project indicates that there is low sensitivity for intact subsurface archaeological deposits. The SCIC records search revealed one cultural resource (CA-SDI-016385H) intersecting the Project area. CA-SDI-016385H consists of a segment of the San Diego Northern Railway. The segment of this resource has been previously evaluated and determined not eligible for the NRHP, as all aspects of the original, historic railway in this segment have been replaced and upgraded and therefore, has poor integrity (McLean 2012). The proposed Project rehabilitation activities would only disturb the area located within the ADI, and not the entire Project area. The railway is located outside of the ADI. The rehabilitation activities are located to the east of the railway and would not impact CA-SDI-016385H. The pedestrian survey did not identify any prehistoric resources within the Project area. The NAHC indicated that Native American resources were present, however, they did not specify whether resources had been identified directly within the Project area. Outreach letters were mailed and no responses have been received as of date. The review of the historic aerials reveal that the entire Project area is highly disturbed and has undergone ground-disturbing activities as a result of grading operations for the railroad and existing sewer line. Any intact archaeological resources that may have been previously located within the area were likely disturbed by past construction activity. Dudek recommends no further archaeological efforts or mitigation, including archaeological monitoring, necessary in support of implementation of the Project.

The following recommendations are suggested in the unlikely event that cultural resources or human remains are encountered during construction activities.

## 5.1 Unanticipated Discovery of Cultural Resources

In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities for the Project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find and determine whether or not additional study is warranted. Depending upon the significance of the find, the archaeologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA, additional work such as preparation of an archaeological treatment plan, testing, or data recovery may be warranted.

#### 5.2 Unanticipated Discovery of Human Remains

In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are found, the County Coroner shall be notified within 24 hours of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined, within two working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the remains are determined to be Native American, the Coroner shall notify the NAHC in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the MLD from the deceased Native American. The MLD shall complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains.



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# 7 National Archaeological Database (NADB) Information

Authors:	Makayla Murillo BA; Keshia Montifolca MA, RPA; Angela Pham, MA, RPA; Brad Comeau, MSc, RPA; and Micah Hale, PhD, RPA
Firm:	Dudek
Project Proponent:	City of Carlsbad
Report Date:	November 2023
Report Title:	Cultural Resources Survey Report for the Poinsettia Manhole Repair, City of Carlsbad, San Diego County, California
Type of Study:	Archaeological Inventory
Resources:	CA-SDI-016385H
USGS Quadrangle:	Encinitas, California 7.5', T12S, R4W, Sections 20 and 29
Area:	11.71 acres
Permit Numbers:	N/A
Type of Study:	Cultural Resource Phase I Survey
Key Words:	Pedestrian survey; Positive; City of Carlsbad; CEQA; CA-SDI-016385H; San Diego Northern Railway; Poinsettia Manhole Repair Project

POINSETTIA MANHOLE REPAIR PROJECT / CULTURAL RESOURCES SURVEY REPORT

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# **Appendix A**

Confidential Cultural Resources Record Search

# **Appendix B** Native American Correspondence

# Appendix C

Cultural Resources Map and Department of Parks and Recreation Site Form

# Appendix D

Construction Noise and Vibration Assessment from Connor Burke, Environmental Acoustician, Dudek, dated July 10, 2023

#### MEMORANDUM

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As part of Dudek's approved scope this technical memorandum presents the results of a predictive noise and vibration study to determine potential environmental impacts associated with anticipated construction activities in the vicinity of the proposed Poinsettia Station vernal Pool Preserve Manhole Rehabilitation Project (project), which consists of cleaning and rehabilitating nine (9) sewer manholes within the North County Transit district (NCTD) right-of-way spaced at approximately 400-foot intervals located between Avenida Encinas and Poinsettia Lane in the City of Carlsbad (City). Existing residential land uses are present approximately 60 feet east of a majority of the manholes. Dudek assumes post-construction operational noise assessment will not be required. Similarly, because flows of traffic on nearby roadways will be unaffected by project operation, operational noise impacts will not be assessed herein.

## 1 Background

#### 1.1 Project Description and Context

The Poinsettia Manhole Repair Project consists of cleaning and rehabilitating nine (9) sewer manholes within the North County Transit district (NCTD) right-of-way spaced at approximately 400-foot intervals located between Avenida Encinas and Poinsettia Lane in the City of Carlsbad (City) (APNs 214-150-11 and 214-150-12). The existing manholes are approximately 50 years old and are significantly corroding; therefore, the purpose of this project is to rehabilitate these existing manholes to avoid potential leaks and structural failure that could occur. The proposed rehabilitation activities would occur within an existing sewer easement and would include pressure washing the inside of the manholes/sewer line, installing a liner inside the manholes, and replacing the 5-foot diameter manhole frames and/or covers.

The City proposes to perform the required maintenance activities during the dry season, generally April 2 to September 30. The types of equipment needed for these activities may include truck-mounted pressure washing equipment and a truck-mounted crane. This project does not include the use of heavy equipment. Plywood boards will be placed along the access route to each manhole and associated work area to minimize impacts to vegetation and soil wherever worker/vehicle access and manhole inspection and remediation is necessary. Maintenance work

is expected to conclude in four business days. After work completion, the contractor will remove the plywood boards from each manhole work/access areas and all temporarily affected areas will be restored in place to preconstruction contours and conditions.

#### 1.2 Noise Characteristics

Sound is mechanical energy transmitted by pressure waves in a compressible medium, such as air. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired. The sound pressure level has become the most common descriptor used to characterize the loudness of an outdoor ambient sound level. The unit of measurement of sound pressure is a decibel (dB). Under controlled conditions in an acoustics laboratory, the trained, healthy human ear is able to discern changes in sound levels of 1 dB when exposed to steady, single-frequency signals in the mid-frequency range. Outside such controlled conditions, it is widely accepted that the average healthy ear can barely perceive noise level changes of 3 dB. A change of 5 dB is readily perceptible, and a change of 10 dB is perceived as twice or half as loud (Caltrans 2013). A doubling of sound energy results in a 3 dB increase in sound, which means that a doubling of sound energy (e.g., doubling the number of daily trips along a given road) would result in a barely perceptible change in sound level.

Sound may be described in terms of level or amplitude (measured in dB), frequency or pitch (measured in hertz or cycles per second), and duration (measured in seconds or minutes). Because the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale is used to relate noise to human sensitivity. The A-weighted decibel (dBA) scale performs this compensation by discriminating against low and very high frequencies in a manner approximating the sensitivity of the human ear.

Several descriptors of noise (a.k.a., noise metrics) exist to help predict average community reactions to the adverse effects of environmental noise, including traffic-generated noise. These descriptors include the equivalent noise level over a given period ( $L_{eq}$ ), the day-night average noise level ( $L_{dn}$ ), and the community noise equivalent level (CNEL). Each of these descriptors uses units of dBA.

The L<sub>eq</sub> value is a decibel quantity that represents the constant or energy-averaged value equivalent to the amount of variable sound energy received by a receptor during a time interval. For example, a 1-hour L<sub>eq</sub> measurement of 60 dBA would represent the average amount of energy contained in all the noise that occurred in that hour. The L<sub>eq</sub> value is an effective noise descriptor because of its ability to assess the total time-varying effects of noise on sensitive receptors, which can then be compared to an established L<sub>eq</sub> standard or threshold of the same duration. Another descriptor is maximum sound level (L<sub>max</sub>), which is the greatest sound level measured during a designated time interval or event. The minimum sound level (L<sub>min</sub>) is often called the floor of a measurement period.

Unlike the  $L_{eq}$ ,  $L_{max}$ , and  $L_{min}$  metrics,  $L_{dn}$  and CNEL descriptors always represent 24-hour periods and differ from a 24-hour  $L_{eq}$  value because they apply a time-weighted factor designed to emphasize noise events that occur during the non-daytime hours (when speech and sleep disturbance is of more concern). "Time weighted" refers to the fact that  $L_{dn}$  and CNEL penalize noise that occurs during certain sensitive periods. In the case of CNEL, noise occurring during the daytime (7:00 a.m. to 7:00 p.m.) receives no penalty. Noise during the evening (7:00 p.m. to 10:00 p.m.) is penalized by adding 5 dB to the actual levels, and nighttime (10:00 p.m. to 7:00 a.m.) noise is penalized by adding 10 dB to the actual levels.  $L_{dn}$  differs from CNEL in that the daytime period is longer (defined instead as 7:00 a.m. to 10:00 p.m.), thus eliminating the dB adjustment for the evening period.  $L_{dn}$  and CNEL are the predominant criteria used to measure roadway noise affecting residential receptors. These two metrics generally

differ from one another by no more than 0.5–1 dB and are often considered or defined as being essentially equivalent by many jurisdictions.

#### 1.3 Vibration Fundamentals

Vibration is oscillatory movement of mass (typically a solid) over time. It is described in terms of frequency and amplitude and can be expressed as displacement, velocity, or acceleration. For environmental studies, vibration is often studied as a velocity that, akin to the discussion of sound pressure levels, can also be expressed in dB in order to cast a wide range of vibration levels in a more convenient scale and with respect to a reference quantity. Vibration impacts to buildings are generally discussed in terms of inches per second (ips) peak particle velocity (PPV), which will be used herein to discuss vibration levels for ease of reading and comparison with relevant standards.

Vibration can also be annoying and thereby impact occupants of structures, and vibration of sufficient amplitude can disrupt sensitive equipment and processes (Caltrans 2020), such as those involving the use of electron microscopes and lithography equipment. Common sources of vibration within communities include construction activities and railroads. Groundborne vibration generated by construction projects is usually highest during pile driving, rock blasting, soil compacting, jack hammering, and demolition-related activities where sudden releases of subterranean energy or powerful impacts of tools on hard materials occur. Depending on their distances to a sensitive receptor, operation of large bulldozers, graders, loaded dump trucks, or other heavy construction equipment and vehicles on a construction site also have the potential to cause high vibration amplitudes.

# 2 Regulatory Setting and Guidelines

The project site is located in the City of Carlsbad (City). The following guidance relating to noise is relevant to the proposed project.

#### 2.1 Federal

#### Federal Transit Administration

In its *Transit Noise and Vibration Impact Assessment* guidance manual (FTA 2006), the Federal Transit Administration (FTA) offers guidance on the estimation of construction noise levels from a construction project site. It also provides suggested thresholds that include no more than 80 dBA  $L_{eq}$  (over an eight-hour period) as received at a residential land use. In the absence of such a quantified limit provided by the City, this analysis adopts 80 dBA  $L_{eq8h}$  for quantitative construction noise impact assessment.

#### 2.1 Local

#### City of Carlsbad Municipal Code

Carlsbad Municipal Code Chapter 8.48 outlines regulations for limitation of hours for construction (i.e., the erection, demolition, alteration, or repair of any building or structure or the grading or excavation of land) that creates disturbing, excessive, or offensive noise. Construction can occur Monday through Friday from 7 a.m. to 6 p.m., and

Saturday 8 a.m. to 6 p.m.; no work can be conducted on Sundays or on federal holidays. Carlsbad Municipal Code Chapter 8.48 also outlines exceptions that may be granted by the City for circumstances such as emergency repairs required to protect the health and safety of the community.

## 3 Existing Conditions

Dudek conducted sound pressure level (SPL) measurements at representative positions near the project alignment on March 17, 2023, to quantify and characterize the existing outdoor ambient sound environment and establish a quantified baseline for a noise assessment. Table 3.13-1 provides the location, date, and time at which these noise level measurements were performed.

Three short-term (ST) noise level measurement locations were selected along the Carlsbad Poinsettia Station western boundary as well as the dirt walking path to the south to represent outdoor ambient sound environmental conditions considered comparable to those of existing off-site noise-sensitive receivers in the project vicinity. These surveyed locations, referred to as ST1, ST2, and ST3, are displayed in figures provided in Appendix G and described in Table 3.13-1. The measured noise levels, expressed as both equivalent continuous sound level ( $L_{eq}$ ) and maximum sound level during the measurement interval ( $L_{max}$ ), are presented in Table 3.13-1. The primary noise source measured and perceived at the sites was distant traffic and rail noise. As shown in Table 3.13-1, the measured SPL at the three sampled locations ranged from approximately 49.0 A-weighted decibels (dBA)  $L_{eq}$  at ST3 to 53.1 dBA  $L_{eq}$  at ST1.

		Date (yyyy-mm-dd) &		
Site	Location/Address	Time (hh:mm)	L <sub>eq</sub> (dBA)	L <sub>max</sub> (dBA)
ST1	Approximately 70 feet east of Poinsettia station boarding platform	2023-03-17, 12:40 PM to 12:50 PM	53.1	61.6
ST2	Approximately 40 west of Seaward Avenue cul-de-sac	2023-03-17, 12:55 PM to 01:05 PM	49.8	51.8
ST3	Approximately 40 west of Red Coral Avenue cul-de-sac	2023-03-17, 01:10 PM to 01:20 PM	49.0	61.4

#### Table 2. Measured Baseline Outdoor Ambient Noise Levels

Source: Attachment A.

**Notes:**  $L_{eq}$  = equivalent continuous sound level (time-averaged sound level); dBA = A-weighted decibels;  $L_{max}$  = maximum sound level during the measurement interval.

#### 4 Impact Thresholds

The following significance criteria are based on Appendix G of the California Environmental Quality Act Guidelines (14 CCR 15000 et seq.) and will be used to determine the significance of potential noise and vibration impacts. Impacts associated with noise and vibration would be significant if the proposed project would result in:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- Generation of excessive groundborne vibration or groundborne noise levels.
- Expose people residing or working in the project area to excessive noise levels (for a project located within the vicinity of a private airstrip or an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport or public use airport).

In light of these above significance criteria, this analysis uses the following standards to evaluate potential noise and vibration impacts.

- **Construction noise** within allowable construction hours per the City of Carlsbad General Plan Noise Element (City of Carlsbad 2015a), adoption of the 80 dBA eight-hour L<sub>eq</sub> threshold consistent with FTA guidance (FTA 2006).
- Construction vibration Guidance from Caltrans indicates that a vibration velocity level of 0.2 ips PPV received at a structure would be considered annoying by occupants within (Caltrans 2020). As for the receiving structure itself, aforementioned Caltrans guidance from Section 2 recommends that a vibration level of 0.3 ips PPV would represent the threshold for building damage risk of older residential structures exposed to continuous or frequently intermittent sources of groundborne vibration.

## 5 Impact Discussion

a) Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

#### Short-Term Construction

Less-Than-Significant Impact. The project would generate construction noise that would be received by residences and businesses in the vicinity of the project work areas and laydown areas. Construction noise and vibration are temporary phenomena, with emission levels varying from hour to hour and day to day, depending on the equipment in use, the operations performed, and the distance between the source and receptor. Equipment that would be in use during construction would include, in part, concrete saws, jackhammers, generators, pressure washers, and various hand tools. The typical maximum noise levels at a distance of 50 feet from various pieces of construction equipment and activities anticipated for use on the proposed project site are presented in Table 4. Note that the equipment noise levels presented in Table 4 are maximum noise levels. Usually, construction equipment operates in alternating cycles of full power and low power, producing average noise levels over time that are less than the maximum noise level. The

average sound level of construction activity also depends on the amount of time that the equipment operates and the intensity of construction activities during that time.

#### Table 4. Typical Construction Equipment Maximum Noise Levels

Equipment Type	Typical Equipment (L <sub>max</sub> , dBA at 50 Feet)
Concrete Saw	90
Concrete Mixer	72
Generator	72
Jackhammer	85

Source: DOT 2006.

Note: L<sub>max</sub> = maximum sound level; dBA = A-weighted decibels.

Aggregate noise emission from proposed project construction activities, broken down by sequential phase, was predicted to the nearest existing noise-sensitive receptor. In this studied scenario, because of the equipment location is known, all the equipment for a construction phase is assumed to operate at the various manhole locations that all have a similar distance from the nearest residential receivers to the east. Table 5 summarizes these distances to the apparent closest noise-sensitive receptor for each of the three sequential construction phases. At the site boundary, this analysis assumes that all equipment of each listed type per phase will be involved in the construction activity for the full 8-hour period.

# Table 5. Estimated Distances between Construction Activities and the Nearest Noise-sensitive Receptors

Construction Phase (And Equipment Types Involved)	Distance from Nearest Noise-Sensitive Receptor to Construction Site Boundary (feet)
Demolish Concrete Pads Around Manholes (concrete saw, jackhammer)	60
Clean Manhole Inside Walls (generator, pressure washer)	25
Repair Manhole (concrete mixer)	25

A Microsoft Excel-based noise prediction model emulating and using reference data from the Federal Highway Administration Roadway Construction Noise Model (RCNM) (FHWA 2008) was used to estimate construction noise levels at the nearest occupied noise-sensitive land use. (Although the RCNM was funded and promulgated by the Federal Highway Administration, it is often used for non-roadway projects, because the same types of construction equipment used for roadway projects are often used for other types of construction.) Input variables for the predictive modeling consist of the equipment type and number of each (e.g., two graders, a loader, a tractor), the duty cycle for each piece of equipment (e.g., percentage of time within a specific time period, such as an hour, when the equipment is expected to operate at full power or capacity and thus make noise at a level comparable to what is presented in Table 4), and the distance from

the noise-sensitive receiver. The predictive model also considers how many hours that equipment may be on site and operating (or idling) within an established work shift. It also includes the 6-foot solid masonry wall on the western property line of the residential properties. The RCNM has default duty-cycle values for the various pieces of equipment, which were derived from an extensive study of typical construction activity patterns. Those default duty-cycle values were used for this noise analysis, which is detailed in Appendix G, Construction Noise Modeling Input and Output, and produce the predicted results displayed in Table 6.

#### Table 6. Predicted Construction Noise Levels per Activity Phase

Construction Phase (and Equipment Types Involved)	8-Hour $L_{eq}$ at Nearest Noise-Sensitive Receptor to Construction Site Boundary (dBA)
Demolish Concrete Pads Around Manholes (concrete saw, jackhammer)	70.8
Clean Manhole Inside Walls (generator, pressure washer)	62.1
Repair Manhole (concrete mixer)	68.1

**Notes:** L<sub>eq</sub> = equivalent noise level; dBA = A-weighted decibels.

As presented in Table 6, the highest estimated construction noise levels are predicted to stay below 71 dBA  $L_{eq}$  over an 8-hour period at the nearest existing residences on east of the manhole repairs (as close as 25 feet away) when construction activities take place near the eastern project boundaries. Short-term construction noise remains well the FTA guidance of 80 dBA  $L_{eq}$  over an 8-hour period, and therefore is **less than significant**.

#### b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

**Less than significant.** Construction activities may expose persons to excessive groundborne vibration, causing a potentially significant impact. Information from Caltrans indicates that continuous vibrations with a PPV of approximately 0.2 ips is considered "annoying." For context, construction equipment, such as a jackhammer that may be expected on the project site, have peak particle velocities of approximately 0.035 ips or less at a reference distance of 25 feet (DOT 2006).

Groundborne vibration attenuates rapidly, even over short distances. The attenuation of groundborne vibration as it propagates from source to receptor through intervening soils and rock strata can be estimated with expressions found in FTA and Caltrans guidance. By way of example, for a jackhammer operating on site at the nearest manhole (i.e., 60 feet from the nearest occupied property) the estimated vibration velocity level would be 0.013 ips per the equation as follows (FTA 2006):

PPV<sub>rcvr</sub> = PPV<sub>ref</sub> \* (25/D)^1.5 = 0.013 = 0.035 \* (25/60)^1.5

In the above equation, PPV<sub>rcvr</sub> is the predicted vibration velocity at the receiver position, PPV<sub>ref</sub> is the reference value at 25 feet from the vibration source (the jackhammer), and D is the actual horizontal distance to the receiver. Therefore, at this predicted PPV, the impact of vibration-induced annoyance to occupants of nearby existing homes would be less than significant.

Construction vibration, at sufficiently high levels, can also present a building damage risk. However, anticipated construction vibration associated with the proposed project would yield levels of 0.003 ips, which do not surpass the guidance limit of 0.2 to 0.3 ips PPV for preventing damage to residential structures (Caltrans 2020). Because the predicted vibration level at 60 feet is less than this guidance limit, the risk of vibration damage to nearby structures is considered less than significant.

C. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The nearest airport is McClellan-Palomar Airport, located approximately 2.1 miles northeast of the project site. Based on the McClellan-Palomar Airport Land Use Compatibility Plan (San Diego County Airport Land Use Commission 2010), the project site is located outside of the airport's 60 dBA CNEL noise contour. As such, lessthan-significant impacts from airport/aircraft noise would occur, and no noise mitigation is required.

#### 6 Conclusions

This technical noise memorandum was conducted to predictively quantify potential construction noise and vibration adverse effects attributed to the proposed project at the nearest existing occupied properties along the studied alignment of manhole locations. The results indicate that potential noise levels from anticipated project conventional construction activities may cause temporary and substantial increases to the existing outdoor sound environment, but would be compliant with the construction hours in the City's Noise Ordinance when construction occurs Monday through Friday from 7 a.m. to 6 p.m., and Saturday 8 a.m. to 6 p.m. in addition, Short-term construction noise remains well the FTA guidance of 80 dBA Leq over an 8-hour period.

With respect to groundborne vibration received by occupied residential structures at these aforementioned studied nearest occupied properties, predicted PPV values are less than thresholds for annoyance and building damage risk per appropriate Caltrans guidance.

We trust that this technical memorandum meets your project needs at this time. Should you have any questions or require additional information, please do not hesitate to contact Connor Burke at 760.479.4272 or cburke@dudek.com.

Sincerely,

Connor Burke, INCE. Environmental Specialist

## 7 References

- Caltrans (California Department of Transportation). 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol. September.
- Caltrans. 2020. Transportation and Construction Vibration Guidance Manual. Division of Environmental Analysis, Environmental Engineering, Hazardous Waste, Air, Noise, Paleontology Office. Sacramento, California. April.

City of Carlsbad. 2013. Carlsbad Municipal Code, Chapter 8.48, Noise.

City of Carlsbad. 2015a. Carlsbad General Plan Noise Element. September 2015.

- FHWA. 2008. Roadway Construction Noise Model (RCNM), Software Version 1.1. U.S. Department of Transportation, Research and Innovative Technology Administration, John A. Volpe National Transportation Systems Center, Environmental Measurement and Modeling Division. Washington, D.C. December 8, 2008.
- U.S. Department of Transportation, Federal Transit Administration (FTA). 2006. *Transit Noise and Vibration Impact* Assessment. May 2006.

# Figures

1 - Project Location

2 - Site Plan

3 – Noise Measurement Locations



SOURCE: USGS 7.5-Minute Series Encinitias Quadrangles

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FIGURE 1 Project Location Poinsettia Manhole Repair Project



SOURCE: SANGIS 2020, 2023

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250 500

FIGURE 2 Project Site Poinsettia Manhole Repair Project



SOURCE: SANGIS 2023

# Attachment A

Field Noise Measurement Forms

#### Field Noise Measurement Data

Record: 1591	
Project Name	Poinsettia manhole.
Observer(s)	Connor Burke
Date	2023-03-17

Monitoring	
Record #	1
Site ID	ST1
Site Location Lat/Long	33.108189, -117.318263
Begin (Time)	12:40:00
End (Time)	12:50:00
Leq	53.1
Lmax	61.6
Lmin	49.2
Other Lx?	L90, L50, L10
L90	49.3
L50	50.4
L10	54.5
Other Lx (Specify Metric)	L
Primary Noise Source	Rail
Other Noise Sources (Background)	Birds, Distant Traffic, Rustling Leaves

# FOUDER RRMS FIELD DATA REPORT Is the same instrument and calibrator being used as previously noted? Yes Are the meteorological conditions the same as previously noted? Yes

**Description / Photos** 

Site Photos

Photo





Monitoring	
Record #	2
Site ID	ST2
Site Location Lat/Long	33.107292, -117.317908
Begin (Time)	12:55:00
End (Time)	13:05:00
Leq	49.8
Lmax	51.8
Lmin	47.1
Other Lx?	L90, L50, L10
L90	48.2
L50	49.8
L10	51.3
Other Lx (Specify Metric)	L
Primary Noise Source	Landscaping
Other Noise Sources (Background)	Birds, Distant Aircraft, Distant Conversations / Yelling, Distant Traffic, Rustling Leaves
Other Noise Sources Additional Description	No rail
Is the same instrument and calibrator being used as previously noted?	Yes
Are the meteorological conditions the same as previously noted?	Yes



**Description / Photos** 



# FOR RMS FIELD DATA REPORT

Monitoring	
Record #	3
Site ID	ST3
Site Location Lat/Long	33.106441, -117.317536
Begin (Time)	13:10:00
End (Time)	13:20:00
Leq	49
Lmax	61.4
Lmin	45.7
Other Lx?	L90, L50, L10
L90	46
L50	46.4
L10	47.7
Other Lx (Specify Metric)	L
Primary Noise Source	Distant traffic
Other Noise Sources (Background)	Birds, Distant Aircraft, Distant Traffic, Rustling Leaves
Is the same instrument and calibrator being used as previously noted?	Yes
Are the meteorological conditions the same as previously noted?	Yes



**Description / Photos** 



# Attachment B

Construction Activity Noise Modeling
## Poinsettia Manhole Repair Project

To User: bordered cells are inputs, unbordered cells have farmulae

noise level limit for construction phase at occupied building, per San Diego County (36.409) = 80 allowable hours over which Leq is to be averaged (example: 8 per SD County 36.409) = 8

Construction Activity	Equipment	Total Equipment Oty	AUF % (from FHWA RCNN	Reference Lmax @ 50 ft () from FHWA RCNM	Client Equipment Description, Data Source and/e Notes	r Source to NSF Distance (ft.)	R Temporary Barrier Insertion Loss (dB)	Additional Noise Reduction	Distance- Adjusted Lmax	Allowable Operation Time Op (hours)	Allowable F peration Time (minutes)	Predicted 8- hour Leq	Source Elevation (it) E	Receiver Ban Elevation (It) Heigt	t (tt) Horiz (tt)	Rcvr. to Barr. ("B") Horiz. (H)	Source to Rcvr. ("C") Horiz. (tt)	"A" (ff)	"B" (ff)	"C" (f)	Path Length Diff. "P" (It)	Abarr (dB) II	Lbarr (dB)	Notes
Demolish Concrete Pads Around Manholes	concrete saw	1	2	90 9	0	6	0 11.8		76.6	8	480	70	3	5	6	5 55	60	5.8	55.0	60.0	0.81	12.1	11.8	
	jackhammer	1	2	80 8	5	6	D 11.8		71.6	8	480	65	3	5	6	5 55	60	5.8	55.0	60.0	0.81	12.1	11.8	
							Total fo	r Demolish Concrete	e Pads Around Mar	holes Phase:		70.8												
Clean Manhole Inside Walls	generator	1		i0 7	2	2	5 12.9		65.1	8	480	62	3	5	6	5 20	25	5.8	20.0	25.1	0.78	11.9	12.9	
								Total for Cle	an Manhole Inside	Walls Phase:		62.1												
Repair Manhole	Concrete Mixer Truck	1	4	10 7	9 Concrete Mixer	2	5 12.9		72.1 Total for Repair Ma	8 anhole Phase:	480	68 68.1	3	5	6	5 20	25	5.8	20.0	25.1	0.78	11.9	12.9	