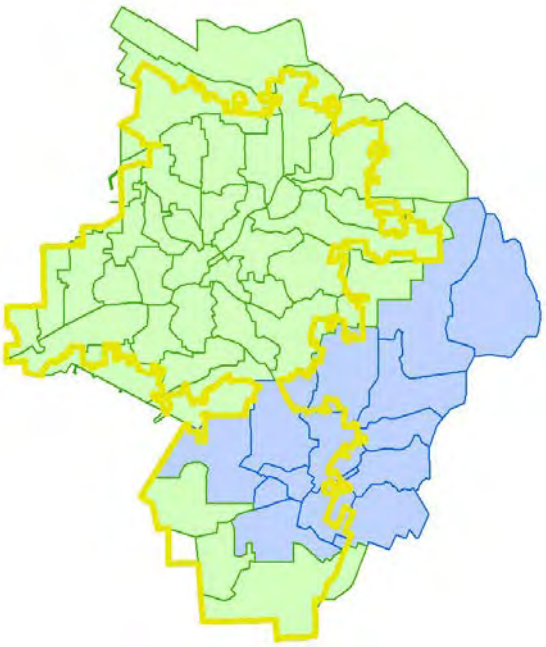

2017 Comprehensive Sewer Master Plan

Supplemental Program Environmental Impact Report

Draft

Vista, California

July 2017

State Clearinghouse #2007091072

Prepared for:

City of Vista
200 Civic Center Drive
Vista, CA 92084

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Appendices

Figures

Tables

Acronyms and Abbreviations

μ/m^3	microgram per cubic meter of air
2017 CSMP	2017 Comprehensive Sewer Master Plan
2008 SMPU	2008 Sewer Master Plan Update
2008 PEIR	2008 Program EIR (for the 2008 SMPU)
AB	Assembly Bill
ACM	asbestos containing material
ADT	average daily trips
AHLS	Agua Hedionda Lift Station
AIA	Airport Influence Area
ALUCP	airport land use compatibility plan
APCD	Air Pollution Control District
AR5	Fifth Assessment Report
AST	aboveground storage tank
Basin Plan	San Diego Basin
BAU	business-as-usual
BCPS	Buena Creek Pump Station
BMPs	best management practices
BVPS	Buena Vista Pump Station
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalARP	California Accident Release Protection
Cal EPA	California Environmental Protection Agency
Cal/OSHA	California Division of Occupational Safety and Health
CalFire	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDP	Coastal Development Permit
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGS	California Geological Survey

CH_4	methane
CHRIS	California Historical Resources Information System
CIP	capital improvement program
CIPP	cured-in-place-pipe
City	City of Vista
CMP	Congestion Management Plan
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
Cortese List	Hazardous Waste and Substances Site List - Site Cleanup
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Ranking
CSMP Category 1	CIP Capacity and Condition Projects (Hardscape Environs)
CSMP Category 2	CIP Capacity and Condition Projects (Cross-Country Environs)
CSMP Category 3	O&M Program Operations and Pump Station Operations, Maintenance, and Rehabilitation
CSMP Category 4	Out-of-Service Area Project(s)
CWPP	Community Wildfire Protection Plan
dB	decibels
dBA	A-weighted sound level
DDE	Dichlorodiphenyldichloroethylene
DIP	ductile iron pipe
District	Buena Sanitation District
DOORS	Diesel Off-Road Online Reporting System
DPM	diesel particulate matter
DPW	Department of Public Works
DSS	decent, safe, and sanitary
DTSC	Department of Toxic Substances Control
DVSP	Downtown Vista Specific Plan
edu	equivalent dwelling unit
EIR	Environmental Impact Report
EO	Executive Order
EPCRA	Emergency Planning and Community Right-to-Know Act
ESA	Endangered Species Act

EWA	Encina Wastewater Authority
EWPCF	Encina Water Pollution Control Facility
FAA	Federal Aviation Administration
FE	Federally Endangered
FHWA	Federal Highway Administration
FPA	focused planning area
FT	Federally Threatened
FTA	Federal Transit Administration
GHG	greenhouse gas
GP 2030 Update	Vista General Plan 2030 Update
GPD	gallons per day
GWP	global warming potential
HC	Hydrocarbon
HCM	Highway Capacity Manual
HDD	horizontal directional drilling
HFC	hydrofluorocarbon
HMBP	Hazardous Material Business Plans
HMP	Habitat Management Plan
hp	horsepower
HRA	health risk assessments
HVAC	Heating, Ventilation, and Air Conditioning
ICLEI	Local Governments for Sustainability
I/I	Inflow/Infiltration
IPCC	Intergovernmental Panel on Climate Change
JRMP	Jurisdictional Runoff Management Program
LBP	lead based paint
LCFS	low carbon fuel standard
LCP	local coastal programs
Leq	equivalent sound level
LOS	level of service
LRT	light rail
LUST	leaking underground storage tanks
MBTA	Migratory Bird Treaty Act
MGD	million gallons per day
MHCP	Multiple Habitat Conservation Program
MMRP	mitigation monitoring and reporting program

mpg	miles per gallon
MRZ	mineral resource zone
MS4	municipal separate storm sewer system
MSCP	Multiple Species Conservation Program
MT CO_2e	metric tons of carbon dioxide equivalent
MY	model year
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCTD	North County Transit District
ND	negative declaration
NESHAP	National Emission Standard for Hazardous Air Pollutants
NF_3	nitrogen trifluoride
NHTSA	National Highway Traffic Safety Administration
NO_2	nitrogen dioxide
NOI	Notice of Intent
NOP	notice of preparation
NO_X	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
NRHP	National Register of Historic Places
O&M	operations and maintenance
O_3	ozone
OHP	Office of Historic Preservation
OWTS	Onsite Wastewater Treatment Systems
Pb	lead
PEIR	Program Environmental Impact Report
PFC	perfluorocarbons
PLC	Programmable Logic Controller
PM	particulate matter
ppm	parts per million
PPV	peak particle velocity
PRC	public resources code
PVC	polyvinyl chloride
RAQS	Regional Air Quality Strategy

RCP	reinforced concrete pipe
RCRA	Resource Conservation and Recovery Act
RMS	root-mean square
ROG	reactive organic compound
ROW	right-of-way
RPS	Raceway Pump Station
RPS	renewable portfolio standard
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SB	senate bill
SCIC	South Coast Information Center
SDAPCD	San Diego Air Pollution Control District
SDCDEH	San Diego County Department of Environmental Health
SDCRAA	San Diego County Regional Airport Authority
SDG&E	San Diego Gas and Electric
SDHR	San Diego Hydrologic Region
SE	State Endangered
SF_6	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SHRC	State Historical Resources Commission
SIP	State Implementation Plan
SMPU	Sewer Master Plan Update
SO_2	sulfur dioxide
SO_2F_2	sulfuryl fluoride
SOI	sphere of influence
SPEIR	Supplemental Program Environmental Impact Report
SR	State Route
SSMP	Sanitary Sewer Management Plan
ST	State Threatened
Study Area	EIR Study Area
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TIA	transportation impact analysis

UNFCCC	United Nations Framework Convention on Climate Change
USA	underground services alert
USACE	U. S. Army Corps of Engineers
USFWS	U. S. Fish and Wildlife Service
V/C	Vista/Carlsbad
VCP	vitrified clay pipe
VdB	velocity decibel
VDT	video display terminal
VFD	variable frequency driver
VFD	Vista Fire Department
VFPD	Vista Fire Protection District
VHFHSZs	very high fire hazard severity zones
VOC	volatile organic compound
VWD	Vallecitos Water District
WCI	Western Climate Initiative
WDR	waste discharge requirement
WQIP	Water Quality Improvement Plan
WUI	Wildland Urban Interface

ES Executive Summary

This executive summary provides a brief synopsis of the project description and results of the environmental analysis contained in the Supplemental Program Environmental Impact Report (SPEIR) prepared for the City of Vista's (City) proposed 2017 Comprehensive Sewer Master Plan (2017 CSMP). By necessity, this summary does not contain the extensive background and analysis found in the document. Therefore, the reader should review the entire document to fully understand the 2017 CSMP and its environmental consequences.

ES.1 Study Area Location

The City of Vista is located in the northwestern part of San Diego County, California (see Figure ES-1). The geographic area covered by the proposed 2017 CSMP is similar to the area covered in the City's 2008 Sewer Master Plan Update (SMPU) and Program EIR (PEIR), which includes the City limits and Buena Sanitation District (District) boundaries. For the purposes of this SPEIR, the City has defined a Study Area for the proposed 2017 CSMP that includes these same areas within the City limits, portions of neighboring cities, including Oceanside, Carlsbad, and San Marcos, and unincorporated areas in the County of San Diego's North Metro Planning Area (see Figure ES-2). The Study Area also comprises two linear areas extending west of the City's service area to include the Buena Vista Pump Station (BVPS) and Buena Creek Pump Station (BCPS) and related interceptor access roads.

ES.2 Description of the CSMP

The City is proposing an update to its Sewer Master Plan, which was last adopted in 2008 and provided a set of recommended conveyance projects for inclusion in the City's Capital Improvement Program (CIP). These improvements were analyzed in the 2008 PEIR. The 2017 CSMP builds on and refines the previous 2008 SMPU by providing a set of recommended projects for inclusion in the City's capital improvement program (CIP) and operations and maintenance (O&M) program. The CIP component of the 2017 CSMP includes a combination of conveyance capacity improvements to address undersized pipelines and replacement/rehabilitation improvements to address pipelines in poor condition and experiencing inflow/infiltration (I/I).

CAPACITY-RELATED CIP PROJECTS. The City has identified a total of 14 capacity-related projects in the 2017 CSMP, seven within the City and seven within the District; which is a decrease from the 20 capacity projects previously identified in the 2008 SMPU. These conveyance improvements are further prioritized for near-term or future construction based on localized capacity needs. All capacity-related CIP projects would include the replacement and upsizing of existing sewerage collection pipelines.

NON-CAPACITY-RELATED CIP PROJECTS. Similar to the 2008 SMPU, the 2017 CSMP includes the rehabilitation or replacement of all ductile iron pipe (DIP) and non-vitrified clay pipe (VCP) or polyvinyl chloride (PVC) conveyance pipelines and those over 45 years in age. City standards also require the replacement of all 6-inch conveyance pipelines with 8-inch pipelines. Under the proposed 2017 CSMP, approximately 85,045 linear feet (or 16.1 miles) of the City's existing collection system is proposed for rehabilitation or replacement with no corresponding increase in capacity.

Figure ES-1. Regional Location

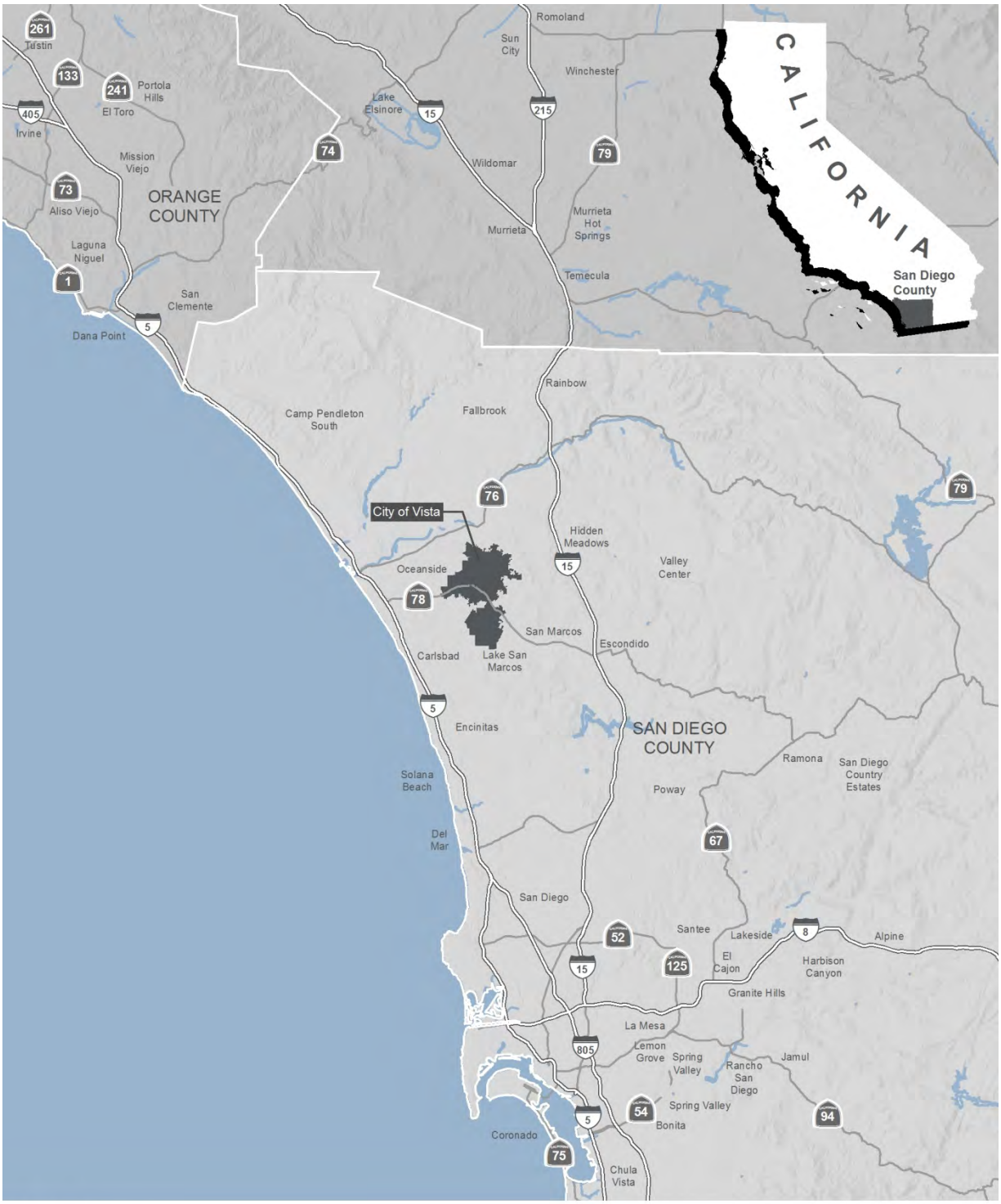

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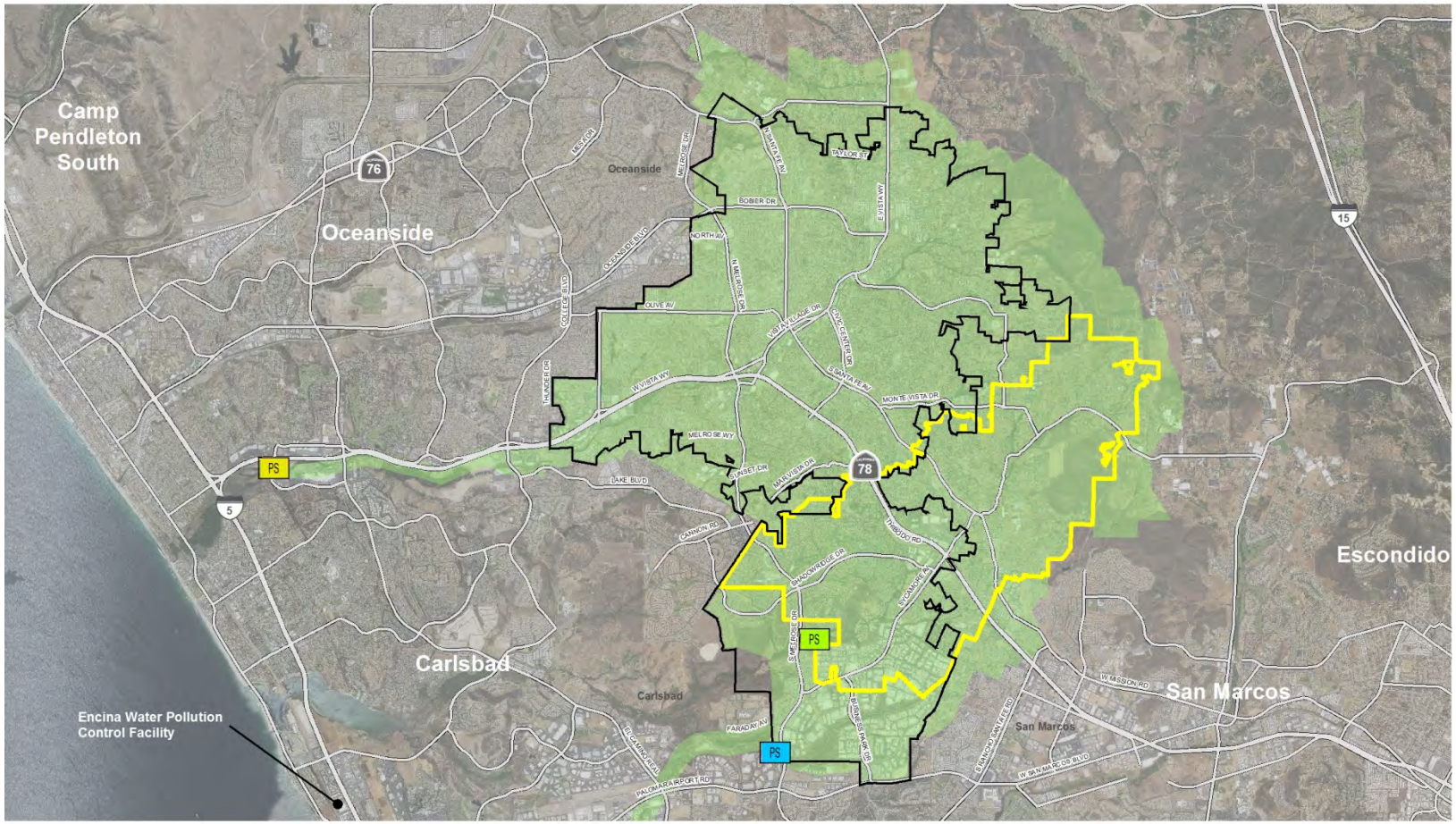
Figure ES-2. Study Area



O&M PROGRAM. The O&M Program provides a continuation of the City's existing condition assessment program consistent with the City's adopted Sanitary Sewer Management Plan (SSMP 2014). The condition assessment program is a combination of wet-weather flow measurement, televised inspections, and aboveground inspections on a 5- to 10-year program basis. Typical activities would also include routine patrolling, inspections, and emergency repair by the City's Wastewater Maintenance Division; similar to existing conditions.

Other components of the O&M Program include the replacement/rehabilitation of the City's existing pumping stations, including the BVPS, BCPS, and Raceway Pump Stations (RPS). In addition, the repair, upgrade, and rehabilitation of existing access roads would occur under the O&M Program on an as-needed basis.

ES.3 Required Approvals

The approval of the proposed 2017 CSMP would require a discretionary action by the City. Consistent with Sections 15050 and 15367 of the State CEQA Guidelines, the City is designated as the Lead Agency for the 2017 CSMP. The following discretionary actions would be required to implement the 2017 CSMP:

- Certification of the Final SPEIR
- Approval/Adoption of the 2017 CSMP and sewer fees

Certain improvements proposed under the 2017 CSMP would also require a permit and/or discretionary approval by other State and local agencies. Agencies and their potential approvals for the components included in the 2017 CSMP are identified in Table 3-6.

ES.4 Areas of Controversy Known to the Lead Agency

State CEQA Guidelines Section 15123(b)(2) requires that areas of controversy known to the Lead Agency be stated in the EIR summary. Comments on the Notice of Preparation for the 2017 CSMP were received from the following:

- Native American Heritage Commission
- San Diego County Parks and Recreation
- Department of Toxic Substances Control
- Preserve Calavera
- California Department of Transportation
- Rincon Band of Luiseño Indians
- San Luis Rey Band of Mission Indians

These comment letters are contained in Appendix A of this SPEIR.

ES.5 Issues to be Resolved by the Decision-Making Body

The State CEQA Guidelines Section 15123(b)(3) requires a discussion of issues to be resolved including a choice of alternatives and whether or how to mitigate significant effects. Based on all

information included in the Record of Proceedings, the City Council must decide whether or not the EIR was prepared in compliance with CEQA (Public Resources Code 21000, et. seq.) and Guidelines for Implementation of CEQA (California Code of Regulations [CCR] Section 15000, et seq.). The City Council is required to certify the EIR and consider whether to approve the 2017 CSMP or one of the project alternatives. Furthermore, the City Council must decide if the proposed mitigation is adequate and choose whether or how to mitigate any significant impacts. Alternatives have also been identified that would reduce or avoid the significant impacts identified for the proposed 2017 CSMP. The City Council will need to decide to approve one of the alternatives discussed in this EIR instead or approve the proposed 2017 CSMP.

ES.6 Impacts and Alternatives Summary

Table ES-1 summarizes the environmental impacts, mitigation measures, and level of significance after mitigation associated with the 2017 CSMP. Detailed analyses of these topics are included within each corresponding section contained within Chapter 4 of this document. As described in more detail in Section 4.0.1, the programmatic analysis in this SPEIR differentiates between the major components (or project categories) of the 2017 CSMP. These 2017 CSMP categories include the following:

- Category 1: CIP Capacity and Condition Projects (Hardscape Environs);
- Category 2: CIP Capacity and Condition Projects (Cross-Country Environs);
- Category 3: O&M Program Operations and Pump Station Rehabilitations; and
- Category 4: Out-of-Service Area Projects.

Table ES-2 provides a summary comparison of the alternatives to the 2017 CSMP. The alternatives that were analyzed in detail in this SPEIR are the No Project Alternative and 2008 SMPU Alternative. Refer to Chapter 6 for a detailed discussion of each alternative. Where new mitigation measures are proposed, these measures would replace the applicable mitigation measures and/or project design features and construction measures identified in the 2008 PEIR. In addition, where proposed, this SPEIR identifies which of the 2017 CSMP Categories in which the mitigation would apply.

Table ES-1. Summary of Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation [1, 2]				Mitigation Measures	Significance After Mitigation [1, 2]			
		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4
Air Quality										
Conflict with an Air Quality Management Plan	The 2017 CSMP would not conflict with or obstruction implementation of an applicable air quality plan.	LS	LS	LS	LS	No mitigation is required.	LS	LS	LS	LS
Consistency with Air Quality Standards or Cumulatively Considerable Net Increase of Criteria Pollutant	The 2017 CSMP would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. The 2017 CSMP would not 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.	LS	LS	LS	LS	No mitigation is required.	LS	LS	LS	LS
Expose Sensitive Receptors to Substantial Pollutants	The 2017 CSMP would not expose sensitive receptors to substantial pollutant concentrations.	LS	LS	LS	LS	No mitigation is required.	LS	LS	LS	LS
Odors	The 2017 CSMP would not create objectionable odors affecting a substantial number of people.	LS	LS	LS	LS	No mitigation is required.	LS	LS	LS	LS

Table ES-1. Summary of Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation [1, 2]				Mitigation Measures	Significance After Mitigation [1, 2]			
		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4
Biological Resources										
Candidate, Sensitive, or Special-Status Species	**Impact 4.2-1: The** 2017 CSMP could 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 CDFW or USFWS.	S	S	S	S	**BIO-1: MBTA Nest Avoidance.** **BIO-2: Habitat Assessment and Focused Surveys for Special-Status Species and Sensitive Habitats** **BIO-3: Formal Wetland Delineation and Permit Acquisition** **HWQ-1: Assess Project Risk, Receiving Water Vulnerability, and Implement a Water Quality Protection Strategy** **HWQ-2: Prepare and Implement a Flow Diversion Plan for Construction**	LS	LS	LS	LS

Table ES-1. Summary of Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation [1, 2]				Mitigation Measures	Significance After Mitigation [1, 2]			
		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4
Sensitive Habitat	**Impact 4.2-2:** Sensitive natural communities including Diegan coastal sage scrub, southern maritime chaparral, southern mixed chaparral, southern coast live oak riparian forest, southern riparian scrub, southern sycamore-alder riparian woodland, and southern cottonwood-willow riparian forest could be impacted by the 2017 CSMP.	LS	S	LS	S	**BIO-1: MBTA Nest Avoidance.** **BIO-2: Habitat Assessment and Focused Surveys for Special-Status Species and Sensitive Habitats** **BIO-3: Formal Wetland Delineation and Permit Acquisition** **HWQ-1: Assess Project Risk, Receiving Water Vulnerability, and Implement a Water Quality Protection Strategy** **HWQ-2: Prepare and Implement a Flow Diversion Plan for Construction**	LS	LS	LS	LS

Table ES-1. Summary of Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation [1, 2]				Mitigation Measures	Significance After Mitigation [1, 2]			
		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4
Wetlands	**Impact 4.2-3:** Construction of conveyance (cross-country) and access improvements as part of the 2017 CSMP could involve construction-related, direct impacts to wetlands and waters of the U.S. and State within the Study Area. These activities could result in the placement of fill materials or excavation within jurisdictional waters of the U.S., including wetlands, and State. In addition, potentially jurisdictional areas could be indirectly impacted by erosion, sedimentation, or inadvertent spills during construction.	LS	S	LS	S	**BIO-3: Formal Wetland Delineation and Permit Acquisition** **HWQ-1: Assess Project Risk, Receiving Water Vulnerability, and Implement a Water Quality Protection Strategy** **HWQ-2: Prepare and Implement a Flow Diversion Plan for Construction**	LS	LS	LS	LS
Wildlife Movement	The 2017 CSMP would not 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.	LS	LS	LS	LS	No mitigation is required.	LS	LS	LS	LS
Conflict with Local Policies Protecting Biological Resources	The 2017 CSMP would not conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance.	LS	LS	LS	LS	No mitigation is required.	LS	LS	LS	LS

Table ES-1. Summary of Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation [1, 2]				Mitigation Measures	Significance After Mitigation [1, 2]			
		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4
Conflict with Habitat Conservation Plan	**Impact 4.2-6:** Components of the 2017 CSMP may be constructed in sensitive habitat areas that are subject to the San Diego County MHCP or Carlsbad HMP.	NI	S	NI	S	**BIO-2: Habitat Assessment and Focused Surveys for Special-Status Species and Sensitive Habitats** **BIO-3: Formal Wetland Delineation and Permit Acquisition**	NI	LS	NI	LS
Cultural Resources										
Historical Resources	**Impact 4.3-1:** Construction activities within 25 feet of fragile structures could result in damaging vibrations levels for historical resources.	S	S	NI	NI	**CULT-1: Construction-Related Vibration**	LS	LS	NI	NI
Archaeological Resources	**Impact 4.3-2:** Potential impacts to cultural resources could result from clearing, trenching, and grading activities associated with the construction of pipelines or other related facilities and any rehabilitations of existing pipes, which may result in disturbing native soil.	S	S	S	S	**CULT-2: Project-Specific Archaeological Survey** **CULT-3: Archaeological Monitoring**	LS	LS	LS	LS
Paleontological Resources	**Impact 4.3-3:** Pipeline improvements, where extending to a depth of 10 feet or greater, located in areas characterized with a moderate to high sensitivity for paleontological resources have the potential to directly destroy paleontological resources during excavation activities.	S	S	S	S	**CULT-4: Paleontological Monitoring**	LS	LS	LS	LS

Table ES-1. Summary of Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation [1, 2]				Mitigation Measures	Significance After Mitigation [1, 2]			
		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4
Human Remains	The 2017 CSMP would not disturb any human remains, including those interred outside of formal cemeteries.	S	S	S	S	**CULT-5 Disturbance to Human Remains.**	LS	LS	LS	LS
Tribal Cultural Resources	**Impact 4.3-5:** Multiple improvements proposed under the 2017 CSMP would involve ground disturbing construction activities that would occur within 100 feet of potentially significant pre-historic and historic archaeological resources. These direct impacts could be significant.	S	S	LS	S	**CULT-2: Project-Specific Archaeological Survey** **CULT-3: Archaeological Monitoring**	LS	LS	LS	LS
Greenhouse Gases and Energy										
Greenhouse Gas Emissions	The 2017 CSMP would not generate GHG emissions either directly or indirectly, that may have a significant impact on the environment or conflict with an applicable plan, policy, or regulation.	LS	LS	LS	LS	No mitigation is required.	LS	LS	LS	LS
Wasteful, Inefficient, or Unnecessary Consumption of Energy	The 2017 CSMP would not result in the wasteful, inefficient, or unnecessary consumption of energy.	LS	LS	LS	LS	No mitigation is required.	LS	LS	LS	LS
Hazards and Hazardous Materials										
Routine Transport, Use, or Disposal of Hazardous Materials	The 2017 CSMP would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	LS	LS	LS	LS	No mitigation is required.	LS	LS	LS	LS

Table ES-1. Summary of Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation [1, 2]				Mitigation Measures	Significance After Mitigation [1, 2]			
		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4
Accidental Release of Hazardous Materials	**Impact 4.5-2:** Construction of new conveyance facilities or access road reconstruction would involve excavation and grading activities, which could encounter documented and unreported contaminated soils and groundwater during excavation activities. In addition, if demolition is required for the reconstruction of pump station sites, there is a potential to expose the public and the environment to lead based paint, asbestos, and or/other hazardous materials.	S	S	S	S	**HAZ-1: Halt Construction Work if Potentially Hazardous Materials are Encountered** **HAZ-2: Hazardous Materials Surveys** **HWQ-1: Assess Project Risk, Receiving Water Vulnerability, and Implement a Water Quality Protection Strategy**	LS	LS	LS	LS
Hazardous Materials Near Schools	The 2017 CSMP would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.	LS	LS	LS	NI	No mitigation is required.	LS	LS	LS	NI
Located on a Hazardous Material Site	The 2017 CSMP would not be located on a site which is located on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.	LS	LS	LS	LS	No mitigation is required.	LS	LS	LS	LS

Table ES-1. Summary of Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation [1, 2]				Mitigation Measures	Significance After Mitigation [1, 2]			
		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4
Airports	The 2017 CSMP would not result in a safety hazard for people residing or working in the project area, if 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.	LS	LS	LS	LS	No mitigation is required.	LS	LS	LS	LS
Emergency Response Plan	**Impact 4.5-6:** Access for emergency vehicles could be impaired as result of reduced roadway widths (or capacity) and increased volumes of construction-related traffic and/or re-distributed traffic.	S	S	S	S	**TR-1: Prepare and Implement a Traffic Control Plan**	LS	LS	LS	LS
Wildland Fires	**Impact 4.5-7:** There are CIP Capacity and Condition Projects (Cross-Country Environs), out-of-service area access roads, and pump stations located within fire hazard severity zones. Furthermore, a majority of these improvements are located on undeveloped land and potentially flammable materials such as brush, grass, or trees could pose a slight risk of wildland fires during construction.	LS	S	S	S	**HAZ-3: Keep Construction Area Clear of Combustible Materials** **HAZ-4: Provide Accessible Fire Suppression Equipment**	LS	LS	LS	LS

Table ES-1. Summary of Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation [1, 2]				Mitigation Measures	Significance After Mitigation [1, 2]			
		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4
Hydrology and Water Quality										
Violate Water Quality Standards or Waste Discharge Requirements	**Impact 4.6-1:** Projects with cross-country segments would be constructed in or adjacent to natural and open space areas and could result in greater disturbance areas, vegetation removal, deeper excavations, and/or construction dewatering and associated temporary containment and/or treatment. Precipitation during construction would likely increase the amount of sedimentation in surface runoff. Vegetation removal would result in the exposure of bare ground to the precipitation and wind movement, changing the velocity and amount of surface runoff.	LS	S	LS	S	**HWQ-1: Assess Project Risk, Receiving Water Vulnerability, and Implement a Water Quality Protection Strategy**	LS	LS	LS	LS
Groundwater Depletion and Recharge	The 2017 CSMP would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.	LS	LS	LS	LS	No mitigation is required.	LS	LS	LS	LS

Table ES-1. Summary of Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation [1, 2]				Mitigation Measures	Significance After Mitigation [1, 2]			
		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4
Alteration of Existing Drainage Pattern and Flooding	**Impact 4.6-3:** Multiple projects included in the 2017 CSMP would be implemented in a 100-year flood zone. These improvements could be subjected to related flood hazards. Additionally, construction activities occurring within the channel and delineated 100-year flood zone would likely require the passage or diversion of flow through the active construction area, if present.	LS	S	LS	S	**HWQ-1: Assess Project Risk, Receiving Water Vulnerability, and Implement a Water Quality Protection Strategy** **HWQ-2: Prepare and Implement a Flow Diversion Plan for Construction**	LS	LS	LS	LS
Runoff Water	**Impact 4.6-4:** See Impact 4.6-1 above.	LS	S	LS	S	**HWQ-1: Assess Project Risk, Receiving Water Vulnerability, and Implement a Water Quality Protection Strategy**	LS	LS	LS	LS
Failure of a Levee or Dam	**Impact 4.6-5:** Multiple projects included in the 2017 CSMP would be implemented in a 100-year flood zone. These improvements could be subjected to related flood hazards.	LS	S	LS	LS	**HWQ-1: Assess Project Risk, Receiving Water Vulnerability, and Implement a Water Quality Protection Strategy**	LS	LS	LS	LS
Land Use and Planning										
Divide an Established Community	The 2017 CSMP would not physically divide an established community.	LS	LS	NI	NI	No mitigation is required.	LS	LS	NI	NI

Table ES-1. Summary of Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation [1, 2]				Mitigation Measures	Significance After Mitigation [1, 2]			
		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4
Conflict with an Applicable Land Use Plan, Policy, or Regulation	The 2017 CSMP would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.	LS	LS	LS	LS	No mitigation is required.	LS	LS	LS	LS
Conflict with a Habitat Conservation Plan or Natural Community Conservation Plan	The 2017 CSMP would not conflict with a habitat conservation plan or natural community conservation plan.	LS	LS	LS	LS	No mitigation is required.	LS	LS	LS	LS
Noise and Vibration										
Generate Noise Levels in Excess of Standards	**Impact 4.8-1:** Construction-related noise associated with the 2017 CSMP has the potential to exceed the thresholds established in the City of Vista Noise Control Ordinance and the County of San Diego Noise Control Ordinance of 75 dBA for more than eight hours during any 24 hour period.	S	S	S	S	**NV-1: Construction Noise Reduction Measures**	LS	LS	LS	LS
Groundborne Vibration and Noise	The 2017 CSMP would not expose people to or generate excessive ground-borne vibration or ground-borne noise levels.	LS	LS	LS	LS	No mitigation is required.	LS	LS	LS	LS
Aircraft Noise	The 2017 CSMP would not result in the exposure of people residing or working in the project area to excessive noise levels from public or private aircraft.	LS	LS	LS	LS	No mitigation is required.	LS	LS	LS	LS

Table ES-1. Summary of Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation [1, 2]				Mitigation Measures	Significance After Mitigation [1, 2]			
		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4
Transportation and Circulation										
Conflict with an Applicable Congestion Management Program	**Impact 4.9-1:** Construction-related activities and traffic associated with the proposed 2017 CSMP could result in a temporary and intermittent decrease in the level of service capacity of public streets due to pipe line work that may require partial or full street closures.	P	S	LS	S	**TR-1: Prepare and Implement a Traffic Control Plan**	LS	LS	LS	LS
Hazards from Design or Incompatible Uses	**Impact 4.9-2:** Construction activities could result in the direct disruption of traffic flows and street operations (including the use of bus stops), and restriction of bicycle and pedestrian access to adjacent land uses and streets.	S	S	LS	S	**TR-1: Prepare and Implement a Traffic Control Plan**	LS	LS	LS	LS
Inadequate Emergency Access	**Impact 4.9-3:** Construction of the individual conveyance improvements under the proposed 2017 CSMP would occur within mainly public roadway ROW. As construction progresses, access for emergency vehicles could be impaired as result of reduced roadway widths (or capacity) and increased volumes of construction-related traffic and/or re-distributed traffic.	S	S	LS	LS	**TR-1: Prepare and Implement a Traffic Control Plan**	LS	LS	LS	LS

Table ES-1. Summary of Impacts and Mitigation Measures

Issue	Impact	Significance Before Mitigation [1, 2]				Mitigation Measures	Significance After Mitigation [1, 2]			
		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4		CSMP Cat. 1	CSMP Cat. 2	CSMP Cat. 3	CSMP Cat. 4
Conflict with Plans Supporting Alternative Transportation	**Impact 4.9-4:** Because pipeline construction would require sufficient space (e.g. up to 60-foot construction zone) to accommodate open trenches/pits and additional room for the placement of material and equipment, the travel width of roadways (and sidewalks) would be reduced. As such, alternative transportation and circulation patterns in the vicinity of work zones would temporarily be disrupted. Specifically, impacts could include direct disruption of bus service, changes to pedestrian movements, or restrictions to bicycle access to adjacent land uses and streets.	S	S	LS	S	**TR-1: Prepare and Implement a Traffic Control Plan**	LS	LS	LS	LS

Source: HDR

Notes:

1. CSMP Cat. 1 = CIP Capacity and Condition Projects (Hardscape Environs)
   CSMP Cat. 2 = CIP Capacity and Condition Projects (Cross-Country Environs)
   CSMP Cat. 3 = O&M Program Operations and Pump Station Operations, Maintenance, and Rehabilitation
   CSMP Cat. 4 = Out-of-Service Area Project(s)
2. NI = No impact
   LS = Less than significant impact
   S= Potentially significant impact

Table ES-2. Comparison of Alternatives to 2017 CSMP

Environmental Issue Area	Proposed 2017 CSMP	No Project (2008 SMPU) Alternative	Alternative 1 – Near Term Capacity Improvements
Air Quality	NSI	Greater	Similar
Biological Resources	LTSM	Similar	Similar
Cultural Resources	LTSM	Similar	Similar
Greenhouse Gases and Energy	NSI	Similar	Similar
Hazards and Hazardous Materials	LTSM	Similar	Similar
Hydrology and Water Quality	LTSM	Similar	Similar
Land Use and Planning	NSI	Greater	Similar
Noise and Vibration	LTSM	Similar	Similar
Transportation and Circulation	LTSM	Similar	Similar

Source: HDR
Notes: NA = No significant impact identified associated with 2017 CSMP.
LTSM = Less than significant impact with mitigation.
Avoid = Impacts under this alternative avoided as compared to impacts for the 2017 CSMP.
Reduced = Impacts under this alternative reduced as compared to impacts for the 2017 CSMP.
Similar = Impacts under this alternative similar to impacts for the 2017 CSMP.
Greater = Impacts under this alternative greater to impacts for the 2017 CSMP.

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1 Introduction

1.1 Overview of the Comprehensive Sewer Master Plan

The City of Vista (City) is proposing an update to its Sewer Master Plan (referred to herein as the "Comprehensive Sewer Master Plan [CSMP]" or "2017 CSMP"). The City's existing Sewer Master Plan Update (SMPU) was last adopted in 2008 and provided a set of recommended projects for inclusion in the City's overall capital improvement program (CIP). These improvements were analyzed in a Program Environmental Impact Report (PEIR), which was certified in 2008 (2008 PEIR). Similar to the SMPU, the proposed 2017 CSMP includes a CIP component, comprising a combination of capacity and replacement/rehabilitation improvements that would be implemented over the next 20 years. In addition, the proposed 2017 CSMP includes an operations and maintenance (O&M) component that provides for the continuation of the City's existing condition assessment program consistent with the City's adopted Sanitary Sewer Management Plan (SSMP).

1.2 Purpose of this Supplemental Program EIR

The purpose of this Supplemental Program Environmental Impact Report (SPEIR) is to publicly disclose the significant effects of the proposed 2017 CSMP on the environment, to identify alternatives that would avoid or substantially lessen a significant effect, and to indicate the manner in which those significant effects can be mitigated or avoided (California Environmental Quality Act [CEQA] Guidelines Section 15002[f]). Furthermore, pursuant to State CEQA Guidelines Section 15021, a public agency is required avoid or mitigate significant environmental impacts of projects it carries out or approves, whenever feasible. In instances where significant impacts cannot be avoided or mitigated, a project may nonetheless be carried out or approved if the approving agency finds, through a Statement of Overriding Considerations, that economic, legal, social, technological, or other benefits outweigh the unavoidable significant environmental impacts.

1.3 Intended Uses of this Supplemental Program EIR

This SPEIR incorporates by reference the 2008 PEIR and updates the environmental analysis to reflect the improvements contemplated in the proposed CSMP. Subsequent facility improvement projects would be examined in the light of the SPEIR to determine whether an additional environmental document must be prepared (CEQA Guidelines Section 15168). A subsequent environmental document may be "tiered" from this SPEIR, pursuant to CEQA Guidelines sections 15152 and 15168. "Tiering" refers to the use of analysis from a broader EIR, with later EIRs and negative declarations (NDs) prepared for subsequent projects, concentrating on issues specific to the later projects.

1.3.1 Lead Agency

The City is serving as the lead agency for the purposes of this SPEIR. CEQA Guidelines Section 15367 defines the lead agency as "*…the public agency, which has the principal responsibility for carrying out or approving a project*." Other public agencies may use this SPEIR in the decision-making or permit processing and would consider the information in this SPEIR along with other information that may be presented during the CEQA process. After the required public review for the Draft SPEIR, the City will respond to written comments, edit the document, and produce a

Final SPEIR to be certified by the City Council prior to making a decision on whether to approve the project.

1.4 Type of EIR

This Draft SPEIR has been prepared in conformance with the requirements of CEQA (Public Resources Code [PRC] Section 21000 et seq.); the State CEQA Guidelines (California Code of Regulations [CCR] Section 15000 et seq.); and the rules, regulations, and procedures adopted by the City. As stated above, the purpose of this SPEIR is to evaluate potential environmental impacts associated with the implementation of the proposed CSMP. The City, in its role as Lead Agency as authorized by Section 15050 under the State CEQA Guidelines, has determined that a supplement to the 2008 PEIR is the appropriate environmental document for the proposed 2017 CSMP. This SPEIR has been prepared pursuant to CEQA Guidelines Section 15163 to address updates to the SMPU (2008) since the preparation of the original 2008 PEIR. This SPEIR focuses primarily on the changes in the environmental impacts that would result from implementation of the 2017 CSMP. The SPEIR, by statute, is required to examine all phases of the project including planning, construction, and operation. Section 15163 (b) of the CEQA Guidelines specifically states that the supplement to an EIR need only contain the information necessary to make the previous EIR adequate for the project as revised.

In addition, this document has been prepared as a Program EIR. As stated in Section 15168 of the State CEQA Guidelines, a Program EIR is one prepared on a series of actions that can be characterized as one large project, are related geographically, are logical parts of a chain of contemplated actions, and are related to the adoption of a plan that will govern conduct of a continuing program of actions. The series of actions analyzed in this SPEIR is the future implementation of the City's 2017 CSMP, including the CIP and O&M program, as described in Chapter 3, Project Description.

As addressed in State CEQA Guidelines Sections 15168(c), (1) if a later activity would have effects not examined in the SPEIR, a new Initial Study would need to be prepared leading to either an EIR or a Negative Declaration, or (2) if the lead agency finds that pursuant to Section 15162, no new effects could occur or no new mitigation measures are required, the agency can approve the activity as being within the scope of the project covered by the SPEIR and no new environmental documentation would be required. Thus the City, as Lead Agency, would rely on the SPEIR in conjunction with its consideration of subsequent improvements identified under the 2017 CSMP, as deemed appropriate and consistent with the requirements of CEQA. This SPEIR is intended to serve as an informational document to be considered by the City during deliberations on the approval of the 2017 CSMP.

1.5 Scope of the SPEIR

This SPEIR complies with the criteria, standards, and procedures of CEQA and the State CEQA Guidelines; and the City's local CEQA Guidelines, as revised July 2001. In accordance with State CEQA Guidelines Section 15082(a), the City's Engineering Department circulated a notice of preparation (NOP) to trustee agencies, other interested agencies, organizations, and individuals; and solicited comments regarding the scope of environmental review for the CSMP. The 30-day NOP comment period began on March 24, 2017, and ended on April 24, 2014. All comments

received were considered during the Draft SPEIR preparation. The NOP and comments are included as Appendix A of this Draft SPEIR.

1.5.1 Environmental Resources to be Analyzed

In accordance with CEQA Guidelines 15163, a Lead Agency may choose to prepare a supplement to an EIR if: (1) any of the conditions described in Section 15162 would require the preparation of a subsequent EIR, and (2) only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation. Based on these requirements, the environmental issues considered in Chapter 4 of the SPEIR include the following:

- Air Quality
- Biological Resources
- Cultural Resources
- Greenhouse Gases
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise and Vibration
- Transportation and Circulation

Environmental issue areas that were previously addressed in the 2008 PEIR and require no further analysis include the following:

- Aesthetics
- Geology and Soils
- Mineral Resources
- Recreation
- Public Services
- Utilities and Service Systems

These topical areas are discussed in Chapter 5 of the SPEIR.

1.6 Draft SPEIR Review Process

The Draft SPEIR is available to the public and public agencies for a 45-day review period for the purpose of providing written comments "*on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided and mitigated*" (State CEQA Guidelines Section 15204). All public comments received during the 45-day public review period will be incorporated into the Final SPEIR along with a formal written response to each comment.

The Draft SPEIR and appendices will be available for review at the development counter of the City Community Development Department, 200 Civic Center Drive, Vista, CA 92084. Comments on the Draft SPEIR should be mailed or faxed to the City's Principal Engineer at the following address:

Elmer Alex, Principal Engineer
200 Civic Center Drive
Vista, CA 92084-6275
Fax: (760) 643-5416
E-mail: ealex@cityofvista.com

As stated above, the City will review and prepare a written response to comments and forward them to the commenting party at least 10 days prior to certification of the Final SPEIR. The City, as Lead Agency, will consider the written comments received on the Draft SPEIR in making its decision whether to certify the Final SPEIR as completed in compliance with CEQA prior to approving or taking action on the 2017 CSMP.

1.7 Required Approvals

Pursuant to State CEQA Guidelines Section 15124(d)(1)(B), this Draft SPEIR contains a list of permits or other approvals required to implement the CSMP. Approvals will require the following actions by the City:

- City Council to certify the SPEIR and adopt Mitigation Monitoring and Reporting Program, CEQA Findings of Fact; and
- City Council to approve the 2017 CSMP and adopt new sewer rates.

Although the City has consulted with many other agencies during the preparation of the 2017 CSMP, no other agencies are required to approve the 2017 CSMP.

1.8 Organization of the SPEIR

The content and format of this Draft SPEIR is designed to meet the requirements of CEQA and the State CEQA Guidelines Article 9. Table 1-1 summarizes the organization and content of the Draft SPEIR.

Table 1-1. Organization and Contents of this Draft SPEIR

Draft SPEIR Chapter	Description
Executive Summary	Summarizes the CSMP, the potential significant impacts with mitigation measures, and the alternatives that would reduce or avoid the significant impacts; also summarizes public comments and concerns, areas of controversy, and issues to be resolved. (State CEQA Guidelines Section 15123)
Chapter 1 Introduction	Provides a general overview of the CSMP; an overview of CEQA and the purpose of an EIR; a discussion of the scope and content of this Draft SPEIR; information on how to comment; and an outline of the Draft SPEIR's organization.
Chapter 2 Environmental Setting	Describes the existing physical conditions in the vicinity of the CSMP as of April 2017. Specific existing conditions for each resource area are contained in the applicable resource section under Chapter 4, "Environmental Analysis." (State CEQA Guidelines Section 15125)

Table 1-1. Organization and Contents of this Draft SPEIR

Draft SPEIR Chapter	Description
Chapter 3 Description of the CSMP	Lists the CSMP's central objectives and provides a detailed description of the CSMP; a list of required approvals; and a summary of the intended uses of this Draft SPEIR and a list of those agencies expected to use it to guide their actions during the approval process. (State CEQA Guidelines Section 15124[a], [b], [c], and [d])
Chapter 4 Environmental Analysis	Describes the existing physical conditions for each resource area as of April 2017, criteria for judging whether an impact is significant, impact assessment methodology, impacts that would result from the CSMP, and applicable mitigation measures that would eliminate or reduce significant impacts. (State CEQA Guidelines Sections 15125–15126.4) Cumulative impacts are also considered in Chapter 4.
Chapter 5 Effects Determined Not to be Significant	Presents a brief discussion and the rationale of the environmental resource impacts that were found to not be significant during the preparation of the SPEIR. (State CEQA Guidelines Section 15128)
Chapter 6 Alternatives	Describes a reasonable range of alternatives to the CSMP including the No Project Alternative, compares and contrasts the significant environmental impacts of alternatives to the CSMP, and identifies the environmentally superior alternative. (State CEQA Guidelines Section 15126.6)
Chapter 7 Growth-Inducement	Discusses the way the CSMP could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. (State CEQA Guidelines Section 15126.2[d])
Chapter 8 Significant Irreversible Changes	Describes the significant irreversible changes associated with the CSMP's implementation. (State CEQA Guidelines Section 15126.2[c] and 15127)
Chapter 9 Document Production	Lists the individuals and agencies involved in preparing the Draft SPEIR. (State CEQA Guidelines Section 15129)
Chapter 10 References	Provides a comprehensive listing by chapter of all references cited in the Draft SPEIR. (State CEQA Guidelines Section 15148)
Appendices	Present additional background information and technical detail for several of the resource areas.

Note: A list of acronyms and abbreviations is provided for the reader's reference immediately following the list of tables in the Table of Contents.

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2 Environmental Setting

2.1 Introduction

Section 15125 of the State California Environmental Quality Act (CEQA) Guidelines requires that Environmental Impact Reports (EIRs) include a description of the physical environmental conditions in the vicinity of a proposed project that exist at the time of the issuance of the notice of preparation (NOP). As identified in Chapter 1, the NOP was published on March 24, 2017. This chapter defines the geographical context for the proposed 2017 Comprehensive Sewer Master Plan (2017 CSMP) and describes the current baseline physical conditions within the EIR Study Area (Study Area). The current physical conditions provide the basis upon which the effects of the 2017 CSMP can be determined and quantified. The existing baseline conditions for individual resources (e.g., transportation, land use, hydrology) are discussed in Chapter 4, "Environmental Analysis."

This section incorporates by reference Chapter 2, Environmental Setting, from the 2008 Program EIR (2008 PEIR). Updates to the original description are provided based on the following:

- Land areas not considered in the 2008 PEIR
- Changes in existing conditions as described in the 2008 PEIR

2.2 General Physical Setting

The Study Area for the 2017 CSMP Update encompasses approximately 40 square miles. As described in the 2008 PEIR, the 2008 Sewer Master Plan Update (SMPU) considered project components located both within and outside the City of Vista (City) and Buena Sanitation District (District) boundaries as shown in Figure 2-2 of the 2008 PEIR. For the purposes of this SPEIR, the City defined a Study Area for the 2017 CSMP, which encompasses all the contemplated improvements as further defined in Chapter 3 and illustrated in Figure 3-2.

More specifically, the Study Area includes all areas within the City's sphere of influence and small portions of adjacent jurisdictions including Carlsbad, San Marcos, Oceanside, and unincorporated portions within the County's North Metro Planning Area. The physical features and characteristics of these areas, including the descriptions of the Buena Vista Drainage Area and Agua Hedionda Drainage Area, remain similar to that described in the 2008 PEIR. In addition, the Study Area includes two linear areas extending west of the City's service area to include the Buena Vista Pump Station (BVPS) and Buena Creek Pump Station (BCPS) and related interceptor access roads.

2.3 Planning Context

Since the certification of the 2008 PEIR, the City and other adjacent jurisdictions, including Carlsbad, San Marcos, and San Diego County have updated their respective General Plan documents. These updates are described in more detail in Section 4.7 of Chapter 4 of the SPEIR. Since certification of the 2008 PEIR, the following General Plan Updates have been adopted by the following jurisdictions within the Study Area:

- City of Vista General Plan 2030 Update (GP 2030 Update) (2011);

- City of Carlsbad General Plan Update (2015);
- City of San Marcos General Plan Update (2012); and
- San Diego County General Plan Update (2011), North Metro Subarea Plan.

In addition to these General Plan Update, the San Diego Association of Governments (SANDAG) adopted the 2050 San Diego Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) in 2011. The RTP/SCS is discussed further in Section 4.9 of Chapter 4 of the SPEIR.

3 Description of the Comprehensive Sewer Master Plan

3.1 Introduction

This chapter provides a description of the City of Vista's (City) proposed 2017 Comprehensive Sewer Master Plan (2017 CSMP). The chapter incorporates by reference the description of the City's 2008 Sewer Master Plan Update (SMPU) and the corresponding certified Final Program EIR (2008 PEIR).

3.2 Study Area Location

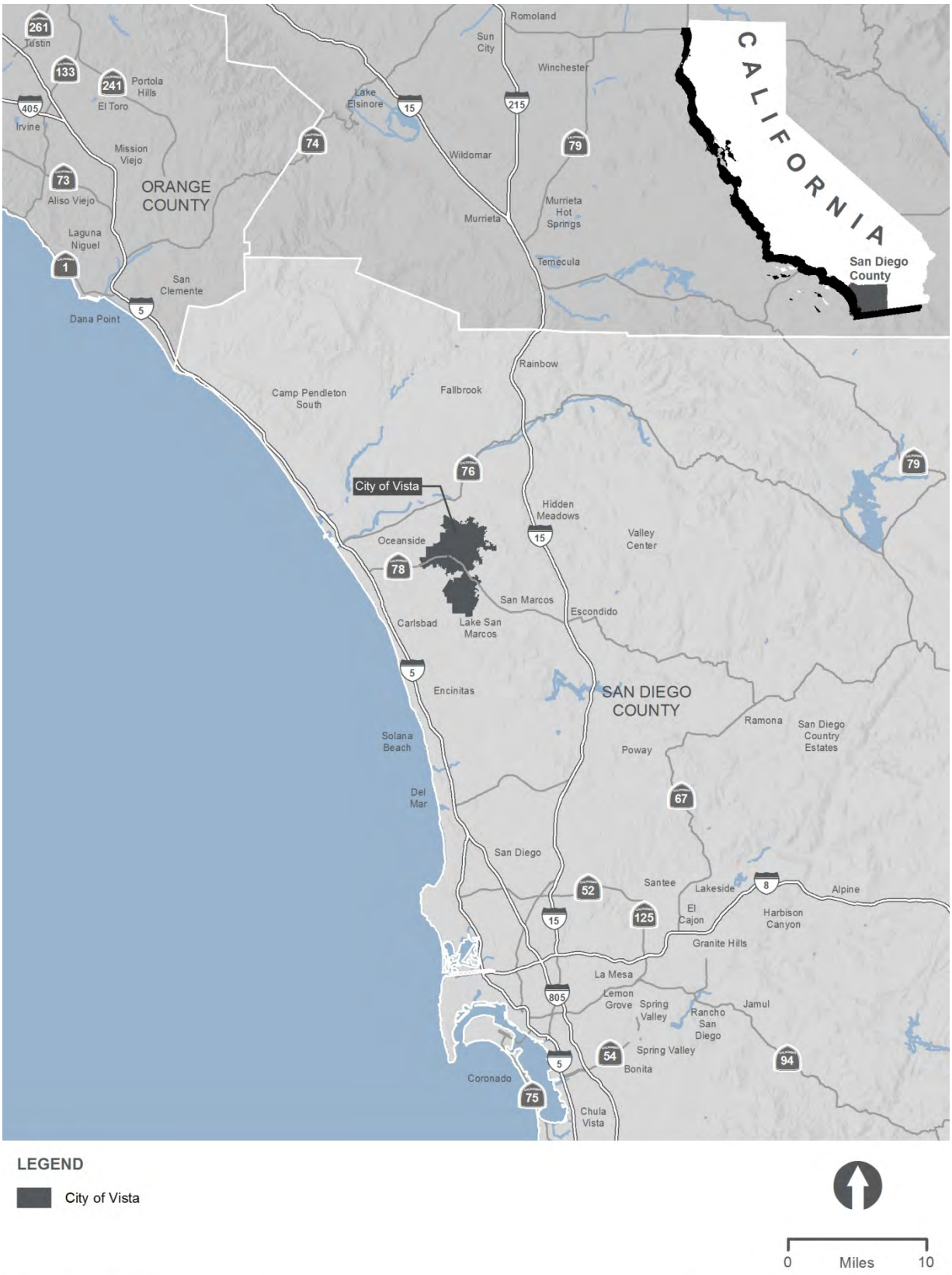
The City of Vista is located in the northern part of San Diego County, California (see Figure 3-1). The geographic area covered by the proposed CSMP would be similar to the area covered in the 2008 SMPU and PEIR, which include the City limits and Buena Sanitation District (District) boundaries. A formal Study Area for characterizing existing conditions was not defined in the 2008 PEIR and, for this reason; this SPEIR defines a Study Area for the proposed 2017 CSMP. Similar to the 2008 PEIR, the Study Area includes areas within the City limits, portions of neighboring cities, including Oceanside, Carlsbad, and San Marcos, and unincorporated areas in the County of San Diego that are serviced by the City or District (see Figure 3-2). As shown in Figure 3-2, the Study Area also comprises two linear areas extending west of the City's service area to include the Buena Vista Pump Station (BVPS) and Buena Creek Pump Station (BCPS) and related interceptor access roads.

3.3 Lead Agency Goal and Objectives

The City's overall goal for the 2017 CSMP is to update and refine the 2008 SMPU by reprioritizing CIP projects based on more current population and development projections and corresponding future demand capacity. The CIP projects address the capacity and non-capacity-related improvements necessary to maintain a safe and reliable sanitary sewer collection system. The 2017 CSMP would also include prioritization of improvements included in the City's O&M Program. The following objectives have been identified for this project:

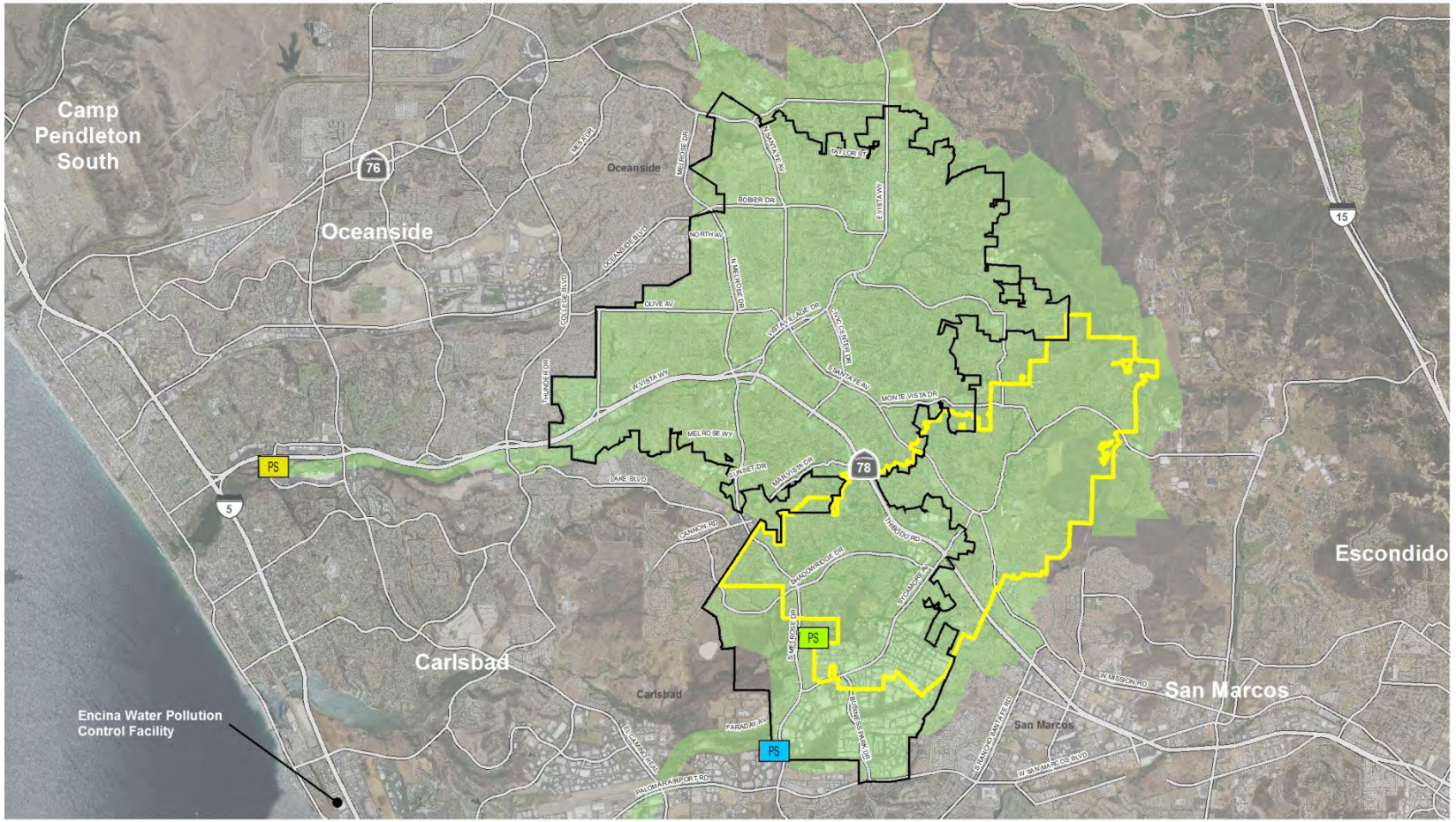
- Reduce the potential for sanitary sewer overflows consistent with State Water Resources Control Board Order No. 2006-003-Statewide General Waste Discharge Requirements (WDR);
- Implement facility improvements based on age, material, and condition related infrastructure;
- Maintain and/or enhance existing sanitary sewer collection service;
- Prioritize a list of CIP projects for capacity, replacement, and rehabilitation improvements and implementation of these improvements; and
- Prioritize a list of projects and activities for inclusion in the O&M Program and implementation of these projects and activities.

Figure 3-1. Regional Map



ABURVALL2/21/2017 G:\GIS_PRODUCTION\PROJECTS\CITYOFVISTA_00000000\COMPREHENSIVE_SEWER_MANAGEMENT_PLAN_000000000\MAP_DOCS\MXD\NOP\REGIONAL.MXD

Figure 3-2. Study Area



The CIP projects included in the proposed 2017 CSMP were identified through hydraulic modeling and capacity analysis, review of known conditions and identification of new regulatory requirements. The complete condition assessment, replacements, and rehabilitation program would minimize the potential for system overflows and facilitate compliance with the State's WDR.

3.4 Existing Sanitary Sewer Service Area and Collection System

The City is responsible for maintenance, operation, and management of the City's sanitary sewer (or wastewater) collection system. The City Council is the governing body over the City sewer collection system, which includes the Buena Sanitation District (District) per San Diego County Resolution No. 98-289 (San Diego County 1998). The City's Department of Public Works (DPW) is responsible for the operation and maintenance of the sanitary sewer collection system, which serves approximately 23,070 permitted connections and conveys an average flow of 5.4 million gallons per day (MGD) from the City and an additional 1.5 MGD from the District.

3.4.1 Existing Sanitary Sewer Collection System

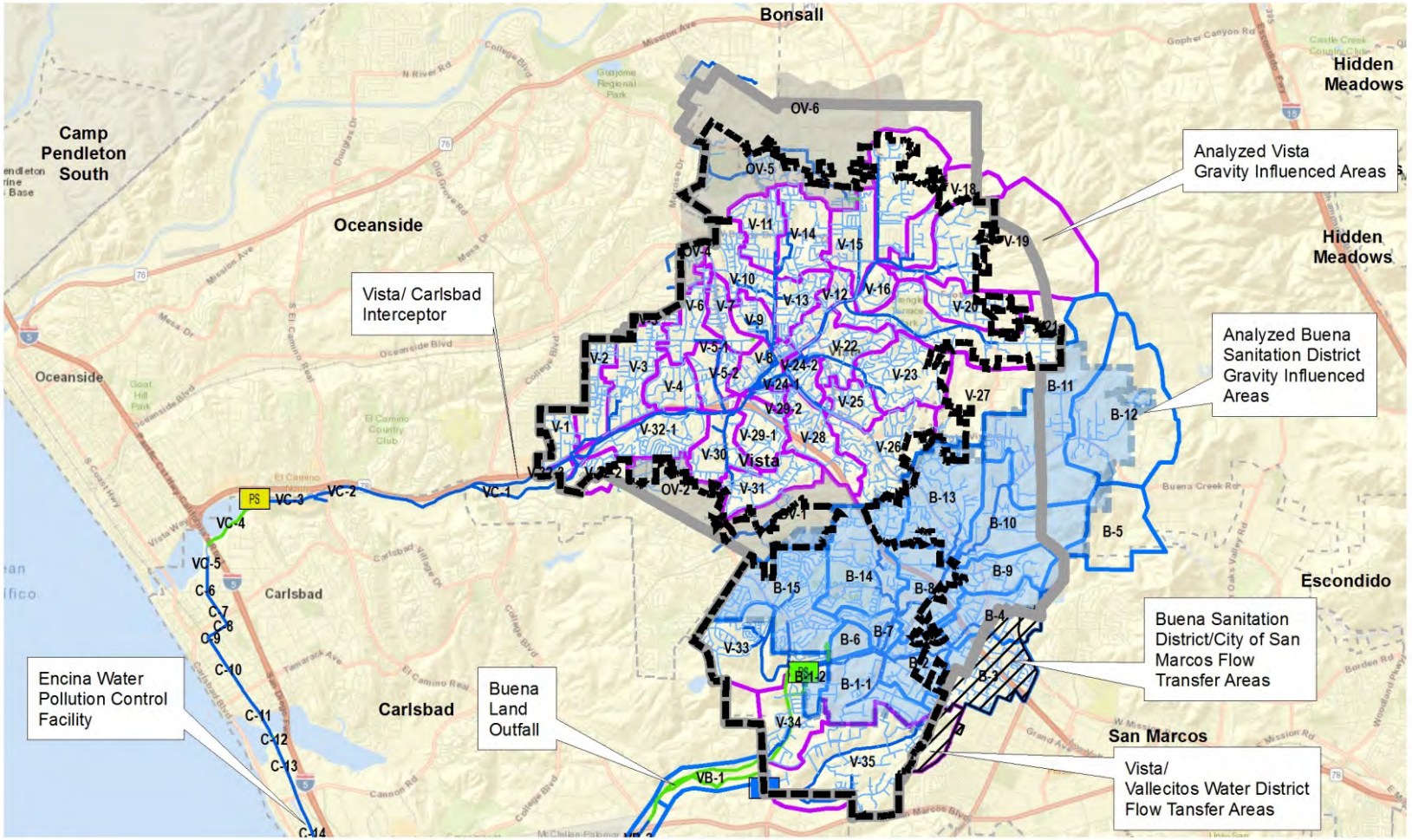
Sanitary sewer collection systems are generally designed to flow downhill by gravity to minimize the need for pumping facilities. As a result, the topography of the Study Area greatly influences the layout of the City's sanitary sewer collection system. As depicted in Figure 3-3, the City's service area aligns with two major drainage basins that drain from the northeast to the southwest. The northern half of the City's service area generally overlaps with the Buena Vista Drainage Basin; while the southern half of Vista, including the District's service area, falls within the Agua Hedionda Drainage Basin.

Buena Vista Drainage Basin

Within the Buena Vista Drainage Basin, the northern half of the City's sanitary sewer collection system is comprised of 35 sub-drainage areas (see Figure 3-3). The collection system is a network comprising approximately 215 linear miles of sanitary gravity sewers and sewer force mains ranging in size from 4 to 36 inches in diameter (City of Vista 2017). Of the total collection system, approximately 127 miles of pipeline is constructed of vitrified clay pipe (VCP) with the remaining 88 miles of pipeline constructed of plastic or polyvinyl chloride (PVC).

All flows from the City's sanitary sewer collection system are conveyed by gravity to the Vista/Carlsbad (V/C) Interceptor, located west (outside) of the City's service area. The V/C Interceptor then extends approximately 8 miles west to the Encina Water Pollution Control Facility (EWPCF).

Figure 3-3. Existing Sanitary Sewer Collection System



Agua Hedionda Drainage Basin

The southern portion of the City (and District) Sewer Service Area is located primarily in the Agua Hedionda Drainage Basin, which is comprised of 15 sub-drainage basins (see Figure 3-3). The collection system within the Agua Hedionda Drainage Basin is comprised of approximately 101 miles of sanitary gravity sewers and force mains ranging in size from 4 to 30 inches in diameter (City of Vista 2017). VCP accounts for more than 45 miles of pipeline in the collection system with the remainder composed of PVC. Sewer flows generated within this basin drain to the Buena Creek Pump Station and are conveyed to EWPCF via the Buena Force Main and, the approximately 4-mile, Buena Outfall.

3.4.2 Existing Sanitary Sewer Pump Stations

Pump (or lift) stations convey sanitary sewer flows from low lying areas constrained by topographic elevations to higher elevations. The City's collection system is served by four pump stations that are responsible for conveying flow to the EWPCF. The location of each of the pump stations is illustrated in Figure 3-3[1]. These pump stations are operated by the Encina Wastewater Authority (EWA) under various agreements and include the following:

- The Raceway Pump Station (RPS) is located at 2685 South Melrose Drive and is owned by the City. The existing pump station was replaced in 2007 and has a design capacity of 1.9 MGD and an average daily flow of 0.5 MGD. Figure 3-4 illustrates the existing RPS and related facilities.
- The Buena Creek Pump Station (BCPS) is located at 2080 South Melrose Drive and is owned by the District. The existing pump station was built in 2002 and has a design capacity of 8.8 MGD and an average daily flow of 2.1 MGD. The pump station building is approximately 2,900 square feet and 12 feet in height. Figure 3-5 illustrates the existing BCPS and related facilities.
- The Buena Vista Pump Station (BVPS) is located at the eastern edge of the Buena Vista Lagoon on Jefferson Street. The City owns approximately 90 percent of the pump station capacity with the City of Carlsbad owning the remaining capacity. The pump station was rebuilt in 1994 and has a design capacity of 23.1 MGD with approximately 5 MGD in average daily flows. The pump station building is approximately 14,221 square feet and stands at 38 feet in height. BVPS operates 24 hours a day, 7 days a week with two parallel pumps. Figure 3-6 illustrates the existing BVPS and related facilities.
- The Agua Hedionda Lift Station (AHLS) is located at the western end of Agua Hedionda Lagoon; northeast of the NRG Cabrillo power plant. The City owns approximately 69 percent of the lift station capacity, which is currently undergoing an upgrade to 33 MGD capacity that will be completed in 2018; while the City of Carlsbad owns the remaining capacity.

3.4.3 Existing Wastewater Treatment and Disposal

All sanitary sewer flows currently collected within the City's system is conveyed to the EWPCF for treatment and disposal. The majority of sewer flows generated from the City drains to the EWPCF via the V/C Interceptor, with the remaining flows conveyed via the Buena Interceptor. In

[1] The City of Carlsbad is the lead owner of the Buena Vista Pump Station and Agua Hedionda Lift Station. The stations are situated west of the area shown in Figure 3-3.

2016, wastewater flows to the EWPCF totaled 20.76 MGD, including flows from the City's service area. The EWPCF was expanded in 2009 to 43.3 MGD to meet anticipated wastewater flows through 2025 (City of Vista 2017).

Table 3-1 shows past and existing sanitary sewer flows that were conveyed from the City and District service areas to the EWPCF. Based on the annual average historical flows presented in Table 3-1, sewer flows experienced an increase from 1982 through 2007. These increases are largely attributed to growth within the City's service area during that time period, combined with the application of a conservative generation rate of 250 gallons per day (gpd) per equivalent dwelling unit (EDU) associated with past master plan modeling efforts, including the 2008 SMPU.

Table 3-1. Historical Annual Average Wastewater Flow to EWPCF

Report Year	Vista (MGD)	Buena (MGD)	Total* (MGD)	Estimated gpd per EDU
1982	4.20	0.68	4.88	248
1993	5.14	2.03	7.17	230
2001	5.50	2.75	8.25	226
2007	6.55	1.84	8.74	236
2015	4.89	1.98	6.87	204
2016	5.36	1.48	6.84	205

Source: HDR 2017
* Total flows recorded by EWA may differ from City-owned flow meters.
** Vista sewer sub-basin (V-33) flows to Buena's Buena Creek pump station. To account for this transfer, the EWA automatically subtracts 0.5 mgd from Buena's flow total and adds it to Vista's flow total. Based on the modeling conducted in support of the 2017 CSMP, current flows generated in sub-basin V-33 are estimated at 0.22 mgd.

More recently, sewer system flows have decreased to approximately 204 gpd per EDU (see Table 3-1). This recent downtrend in sewer generation is attributed to several factors including the economic downturn, drought, and water conservation efforts. For this reason, the proposed CSMP applies a conservative generation rate of 205 gpd/ EDU.

Figure 3-4. Existing Raceway Pump Station

Figure 3-5. Existing Buena Creek Pump Station

Figure 3-6. Existing Buena Vista Pump Station

3.5 Proposed Comprehensive Sewer Master Plan

3.5.1 Background

In 2008, the City certified a Final PEIR (SCH No. 2007091072) for the 2008 SMPU. The previously certified 2008 PEIR addressed the environmental impacts associated with the 2008 SMPU, which was an update to the City and District's Infrastructure Review Summary and Wastewater Master Plan Update prepared in 2003. The purpose of the 2008 SMPU was to update and identify a prioritized CIP that addresses the capacity and condition related improvement projects necessary to maintain a safe and reliable operation of the sanitary sewer collection system consistent with State regulations.

The City is now proceeding with an update to its 2008 SMPU. The current update includes complete hydraulic modeling of all sewer collection facilities combined with maintenance analysis and extensive review of previous master plans. The 2017 CSMP provides a set of recommended projects for inclusion in the City's overall CIP. These projects include improvements resulting from the current condition assessment, such as pipeline replacements and/or rehabilitation, and capacity-related upgrades (e.g. pipe up-sizing). Additionally, the CSMP identifies operational and maintenance activities that would be implemented over the 20-year planning horizon.

Planning for the 2017 CSMP is based on the latest regional growth forecasts developed by the San Diego Association of Governments (SANDAG) and is consistent with the adopted land uses defined in the GP 2030 Update and the current land use plans of other jurisdictions within the sewer service area boundaries (e.g. San Diego County). As discussed above, average dry-weather flows are based on a generation rate of 205 gpd per EDU. Future build-out flows were derived based on the

highest density zoning allowed for each parcel within the City's service area. A summary of the projected sanitary sewer flows developed as part of the 2017 CSMP is presented in Table 3-2.

Table 3-2. Projected Sewer Flows

Basin	Existing Flow in 2016 (MGD)	Projected Sewer Flows (Based on 205 gpd/EDU)		
		Existing + Septic (MGD)	2030 Buildout (MGD)	Max Density (MGD)
Vista Sewer Basin (Buena Vista Drainage Basin)	4.94	5.18	8.56	11.60
Buena Sewer Basin (Agua Hedionda Drainage Basin)	2.03	2.04	4.22	5.89
Raceway Sewer Basin (Agua Hedionda Drainage Basin)	0.34	0.35	0.87	1.32
All Basins	7.30*	7.57	13.65	18.81

Source: HDR 2017

* Flows recorded from City-owned flow meters may differ from total flows recorded by EWA.

The proposed 2017 CSMP builds on and refines the previous 2008 SMPU by providing a set of recommended projects for inclusion in the City's overall CIP and O&M Program. Similar to before, the CIP component of the CSMP includes a combination of capacity improvements to address undersized pipeline and replacement/rehabilitation improvements to address pipelines in poor condition. The main components of the proposed CSMP are described further under the following headings.

3.5.2 Capital Improvement Program

Capacity-Related Projects

The 2008 SMPU CIP recommended 20 capacity improvement projects over a 20-year planning period. Under the proposed CSMP, the City has identified a total of 14 capacity-related projects. These projects are then further prioritized for near-term or build-out (future) construction based on localized capacity needs. Table 3-3 identifies the capacity-related projects within the City's service area and the proposed method of installation. Table 3-4 identifies the capacity-related projects within the District's service area and the proposed method of installation. All capacity-related CIP projects would include the replacement and upsizing of existing sewer collection pipelines with the exception of a new, redundant force main proposed at Buena Creek Pump Station. Figure 3-7 and Figure 3-8 illustrate the extent of proposed CIP capacity-related improvements within the City and District service areas, respectively.

Capacity deficient pipelines were proposed for upsizing in order to meet the design criteria of 50 percent capacity for conveyance pipelines with a diameter of less than or equal to 12 inches and 75 percent of capacity for the conveyance pipelines with diameter greater than 12-inch during peak wet-weather flows. Capacity deficient pipelines were grouped to create logically constructible projects as presented in Table 3-3 and Table 3-4 to maintain consistency, in terms of material and age.

Table 3-3. Capital Improvement Projects (Capacity) – Vista Service Area

CSMP CIP No.	2008 SMPU CIP No.[1]	Description	Project Category[2]	Linear Feet	Map Reference
Near Term Projects					
Vista EX_V1	V5-Eucalyptus Upsize	Upsize existing pipeline in Eucalyptus Avenue and S. Citrus Avenue from 10 inch to 12 inch. Installation via traditional open-cut trench.	Hardscape	1,379	3-4
Vista EX_V2	V8 – Monte Vista / S. Santa Fe Phase 2 Upsize	Upsize existing pipeline in S. Santa Fe Avenue and Civic Center Drive from 8 inch to 10 inch. Installation via traditional open-cut trench.	Hardscape	69	3-4
Build Out					
Vista BO_V1	V4 – Broadway / Main / Santa Fe Upsize	Upsize existing pipeline in E. Broadway Avenue between S. Santa Fe Avenue and S. Citrus Avenue from 18 inch to 21 inch. Installation via traditional open-cut trench.	Hardscape	1,086	3-4
Vista BO_V2	V8 – Monte Vista / S. Santa Fe Phase 2 Upsize	Upsize existing pipeline in S. Santa Fe Avenue and Civic Center Drive from 8 inch to 10 inch. Installation via traditional open-cut trench.	Hardscape	706	3-4
Vista BO_V3	V7 – Vista South Santa Fe Phase 1 Upsize	Upsize existing pipeline in S. Santa Fe Avenue and Buena Vista Creek from 12 inch to 18 inch. Installation via traditional open-cut trench.	Hardscape	137	3-4
Vista BO_V4	V9 – North Santa Fe Upsize	Upsize existing pipeline in N. Santa Fe Avenue and W. Los Angeles Drive/Townsite Drive from 15 inch to 18 inch. Installation via traditional open-cut trench.	Hardscape	409	3-4
Vista BO_V5[3]	V2 – Hacienda / Vista Village Upsize	Upsize existing pipelines in Hacienda Drive between La Tortuga Drive and Vista Village Drive from 30 inch to 36 inch. Installation via traditional open-cut trench and trenchless construction methods.	Cross-Country	1,707	3-4

Source: HDR 2017

1 Some of the previous capacity improvements are no longer required.

2 Project categories are further defined in Chapter 4

3 BO-V5 may be excluded by diverting flow to a new 24 inch pipeline, north of SR-78.

Table 3-4. Capital Improvement Projects (Capacity) – Buena Service Area

CSMP CIP No.	2008 SMPU CIP No.[1]	Project Description	Project Category[2]	Linear Feet	Map Reference
Near Term Projects					
Buena EX_B1	B1 – Green Oak Upsize	Upsize existing pipelines along Agua Hedionda Creek and Green Oak Drive east of the Buena Lift Station: 12 inch to 15 inch, 18 inch to 21 /27 inch, 21 inch to 24 inch. Installation via traditional open-cut trench and/or trenchless construction methods.	Cross-Country	5,079	3-5
Buena EX_B2	--	Upsize existing pipeline in Poinsettia Avenue between Mimosa Avenue and Smilax Road. 8 inch to 10 inch. Installation via traditional open-cut trench.	Cross-Country	1,768	3-5
Buena EX_B3	B2 – Watson Upsize and Realignment	Upsize existing pipelines near Arbor Glen Lane at Shadowridge Drive and Sycamore Avenue: 15 inch to 18 inch. Installation via traditional open-cut trench.	Cross-Country	863	3-5
Buena EX_B4	B3 – El Valle Opulento Upsize	Upsize existing pipeline in El Valle Opulento: 10 inch to 12 inch. [Installation via traditional open-cut trench.]	Cross-Country	916	3-5
Build Out					
Buena BO_B1	--	Upsize existing pipeline along Agua Hedionda Creek and Green Oak Drive near Sycamore Avenue: 24 inch to 27 inch. Installation via traditional open-cut trench.	Cross-Country	79	3-5
Buena BO_B2	--	Upsize existing pipeline between Grand Avenue and Green Oak Road near Aqua Hedionda Creek: 12 inch to 15 inch. Installation via traditional open-cut trench.	Hardscape	98	3-5
Buena BO_B3	B2 - Waton Upsize and Realignment	Upsize existing pipeline in Shadowridge Drive and Sycamore Avenue: 15 inch to 18 inch. Installation via traditional open-cut trench and/or trenchless construction methods.	Cross-Country	2,228	3-5

Source: HDR 2017

[1] Some of the previous capacity improvements are no longer required.

[2] Project categories are further defined in Chapter 4.

Figure 3-7. CIP Capacity-Related Projects (City Service Area)

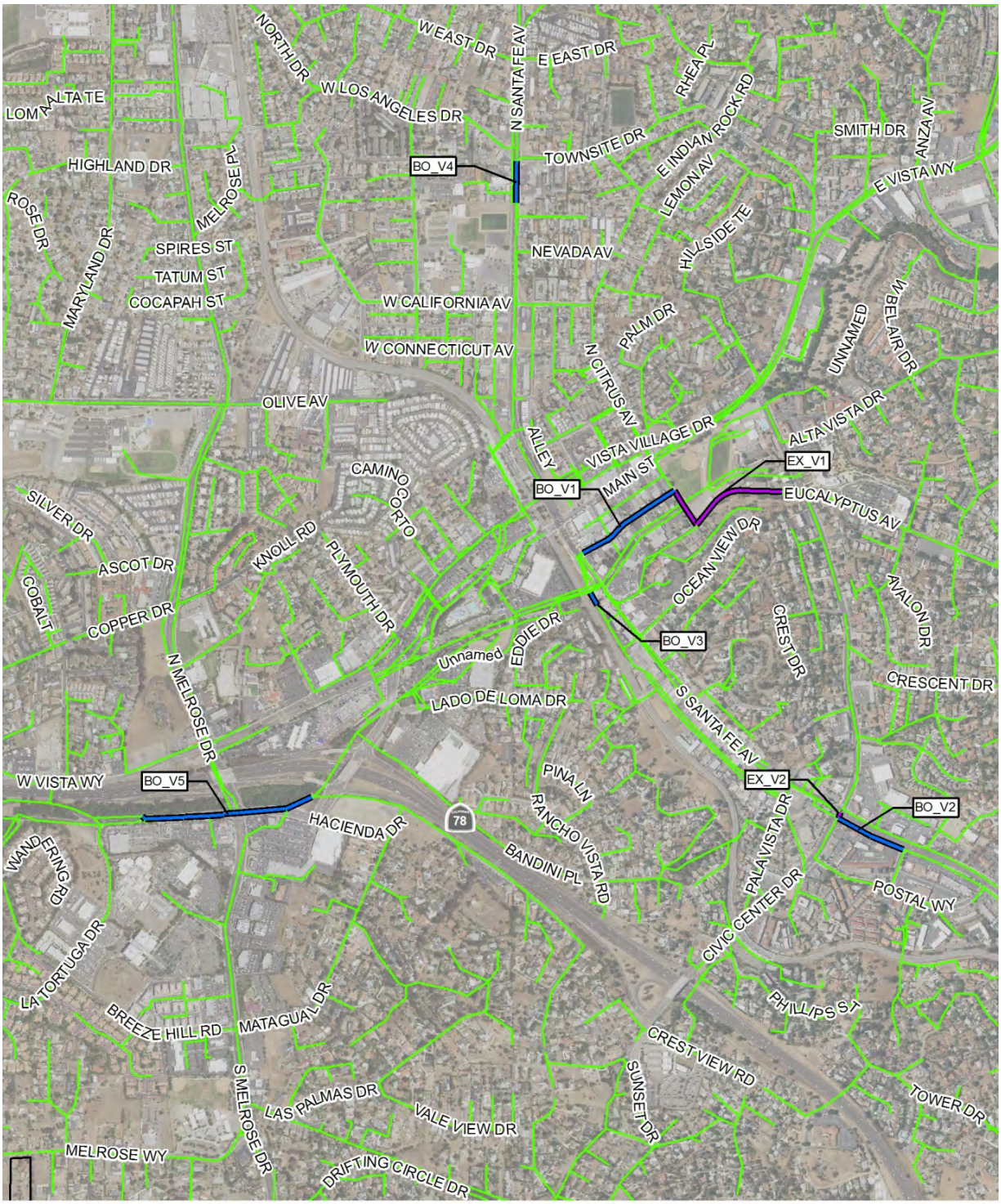


Figure 3-8. CIP Capacity-Related Projects (District Service Area)

Condition-Related Projects

Similar to the 2008 SMPU, the proposed 2017 CSMP includes the rehabilitation or replacement of all ductile iron pipe (DIP) and non-vitrified clay pipe (VCP) or polyvinyl chloride (PVC) pipes along with pipes over 45 years in age. City/District standards also require a replacement and upsizing of all 6- inch pipes to 8- inch pipes for the purpose of providing maintenance access only, due to the size limitations of cleaning and camera equipment. Under the proposed CSMP, approximately 85,045 linear feet (or 16.1 miles) of existing conveyance pipe is proposed for rehabilitation or replacement with no corresponding increase in capacity. These improvements reflect the progress made by the City since the adoption of the 2008 SMPU, which identified up to 451,624 (or 85.5 miles) of condition-related rehabilitation or replacement. Figure 3-9 illustrates the conveyance improvements proposed in the 2008 SMPU, which are no longer proposed as part of the 2017 CSMP.

As part of the proposed CSMP, a useful life assessment and analysis was performed on portions of the City's existing sanitary sewer collection system constructed between the 1920s and 1980s. All conveyance pipelines installed after 1990 are assumed to be in good operating condition. The analysis included an evaluation of the average life cycle of the various pipe materials that constitute the City's collection system including concrete, VCP, and reinforced concrete pipe (RCP) that were installed between the 1920s through the 1960s. The analysis was also extended to include pipe materials installed from the 1970s and through the 1980s that included primarily VCP and polyvinylchloride (PVC) pipe.

To estimate the potential rehabilitation or replacement improvements for the City's collection system, each decade was assessed based on system characteristics including age, pipe size, and material and the City's rehabilitation rating included in the database. Based on the average life-cycle for each type of material, an estimated timeline was projected for replacement and rehabilitation improvements. The City's goal is to minimize total pipeline replacement and maximize pipeline rehabilitations to minimize system inflow and infiltration (I/I). Accordingly, the projections assume that, of the total length of pipeline identified, 90 percent would be rehabilitated and 10 percent would be replaced. Appendix B includes a summary of the length of pipe by diameter estimated for replacement or rehabilitation. Condition-related CIP improvements proposed as part of the CSMP are illustrated in Figure 3-10, Figure 3-11, Figure 3-12, Figure 3-13, Figure 3-14, Figure 3-15, Figure 3-16 and Figure 3-17.

3.5.3 Operations and Maintenance Program

The City's proposed O&M Program consists of the operation and maintenance of the existing (and upgraded) sanitary sewer collection system and a continuation of the City's existing condition assessment program, consistent with the City's adopted Sanitary Sewer Management Plan (SSMP). Typical activities included under the O&M Program consist of routine maintenance, emergency repair, and periodic pipeline dewatering to allow for interior inspections or repairs. The City's Wastewater Maintenance Division would continue to be the primary entity responsible for implementing the O&M Program. Other activities covered under the O&M Program include maintenance and upgrade of the City's existing pump stations and limited access improvements to facilitate the ongoing inspection and maintenance program.

Figure 3-9. Condition-Related Projects Removed from the 2017 CSMP

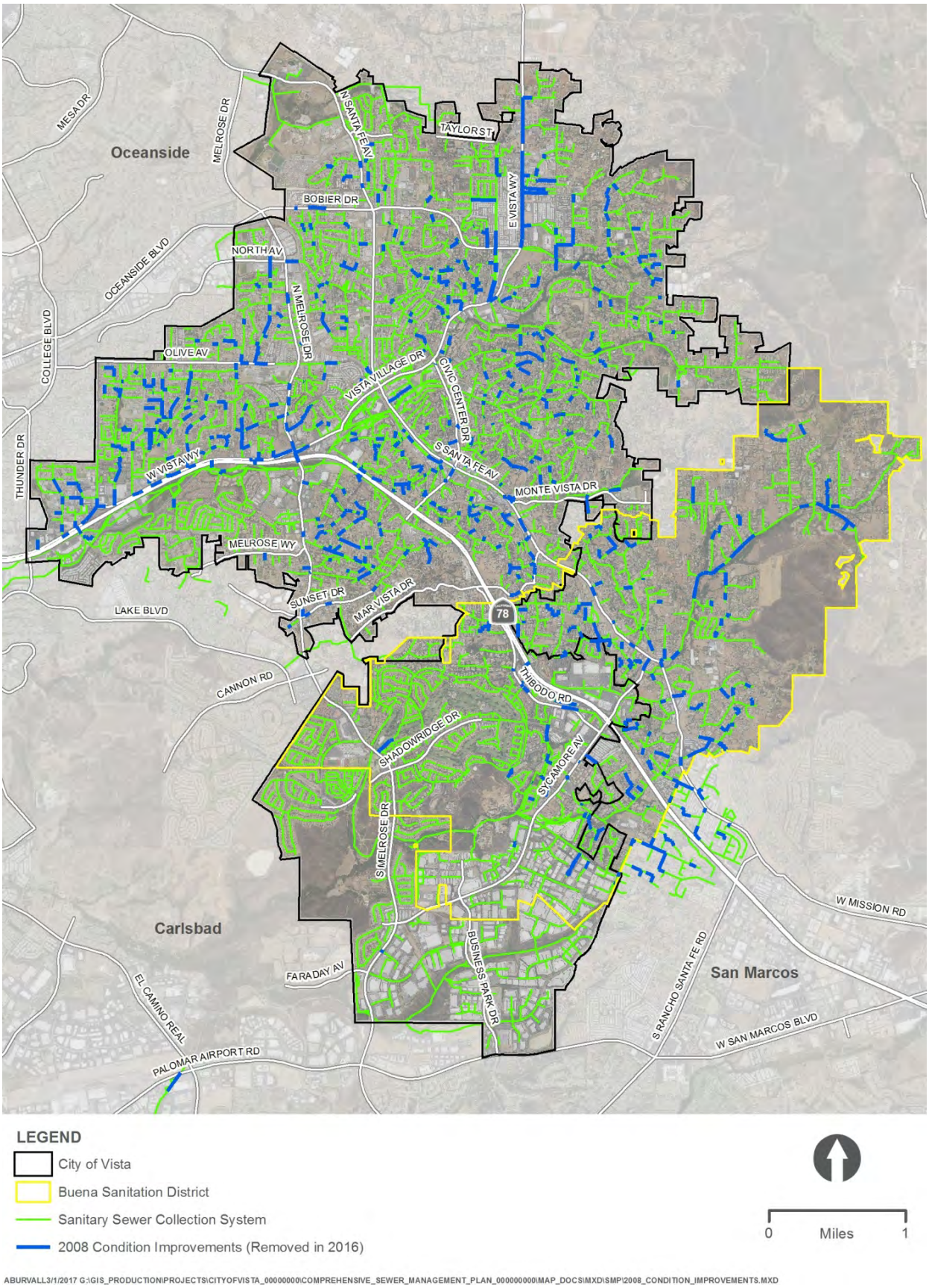


Figure 3-10. Condition-Related Projects under the Proposed 2017 CSMP (Map 1)

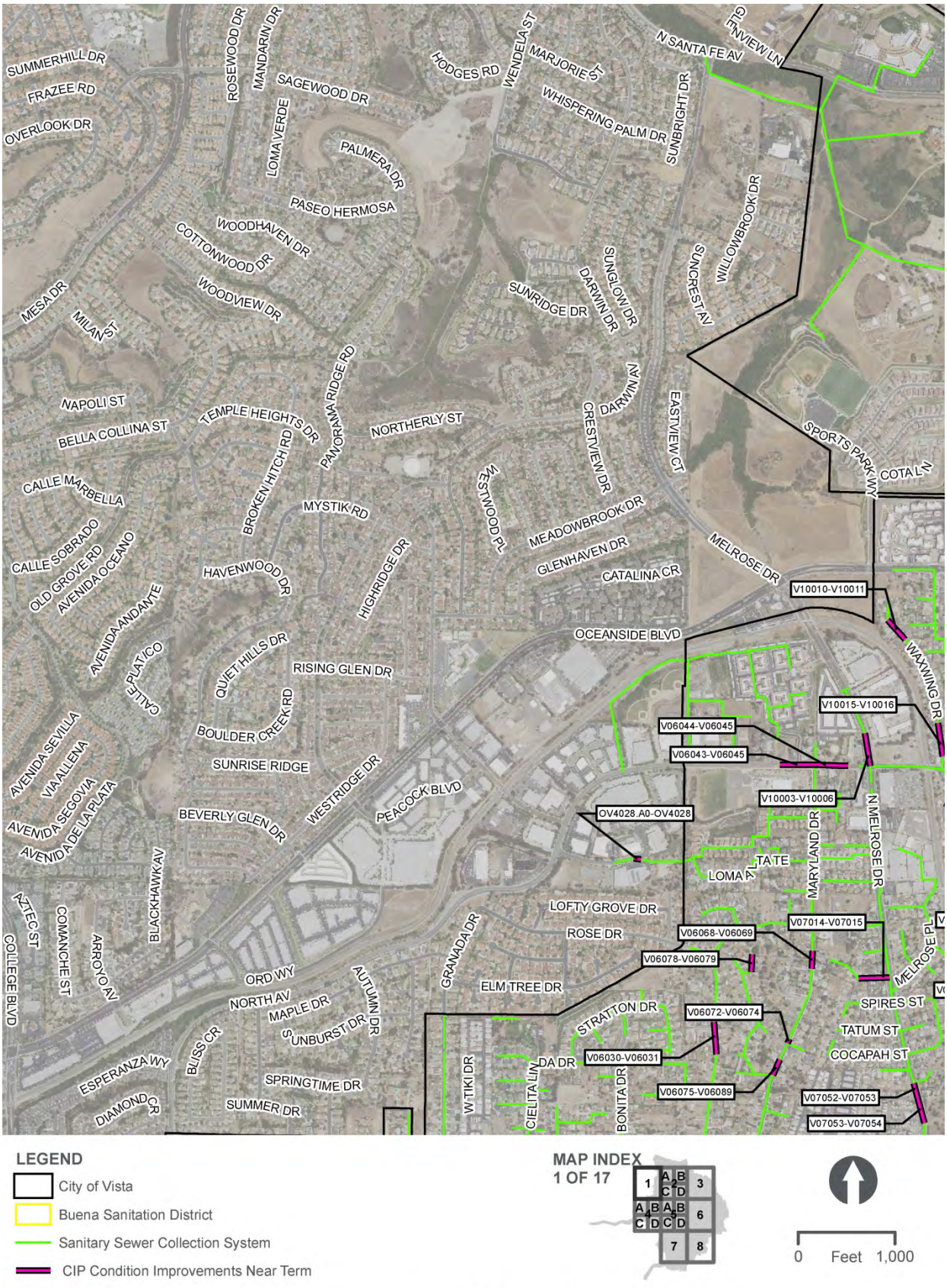


Figure 3-11A. Condition-Related Projects under the Proposed 2017 CSMP (Map 2)

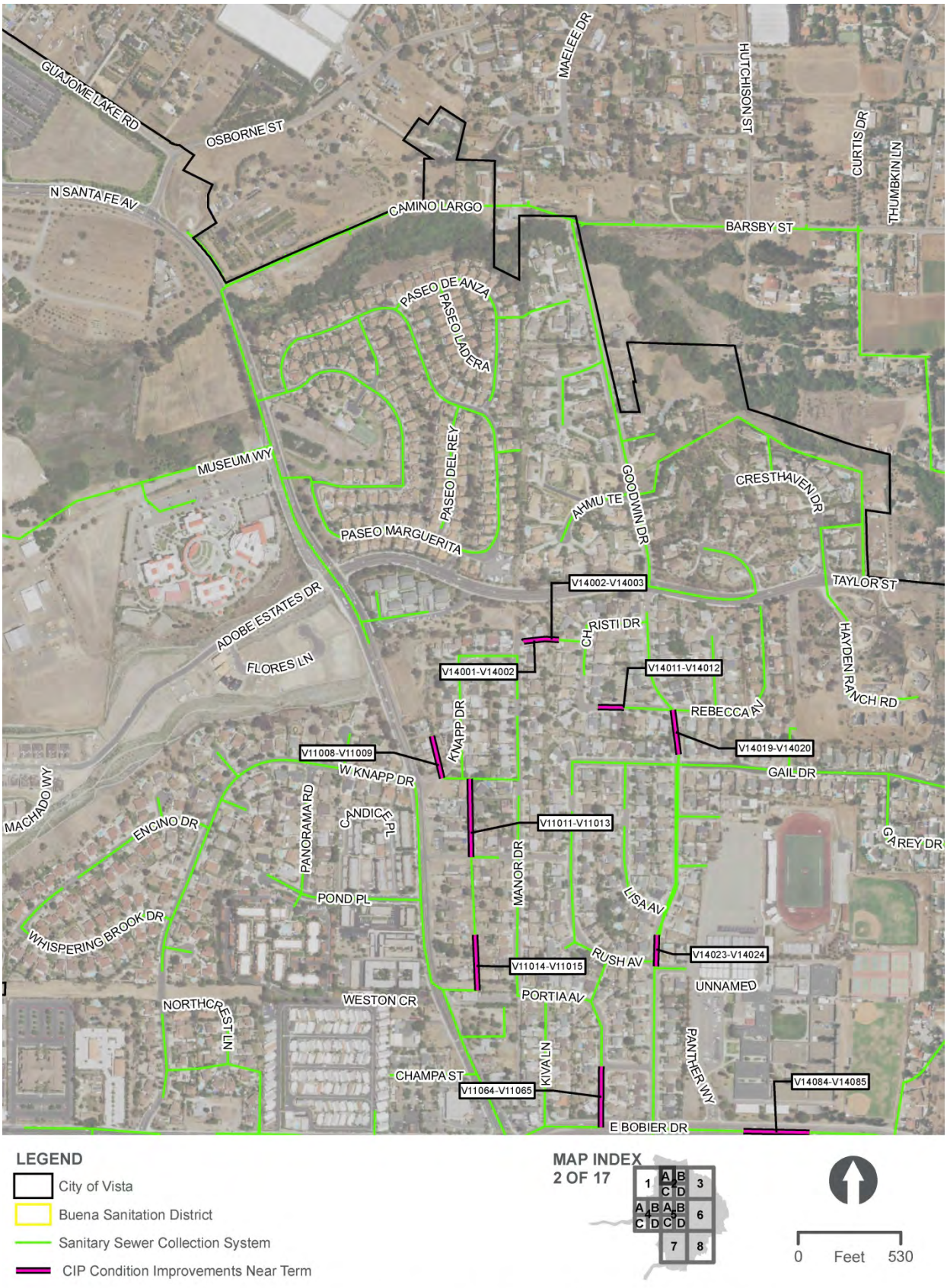
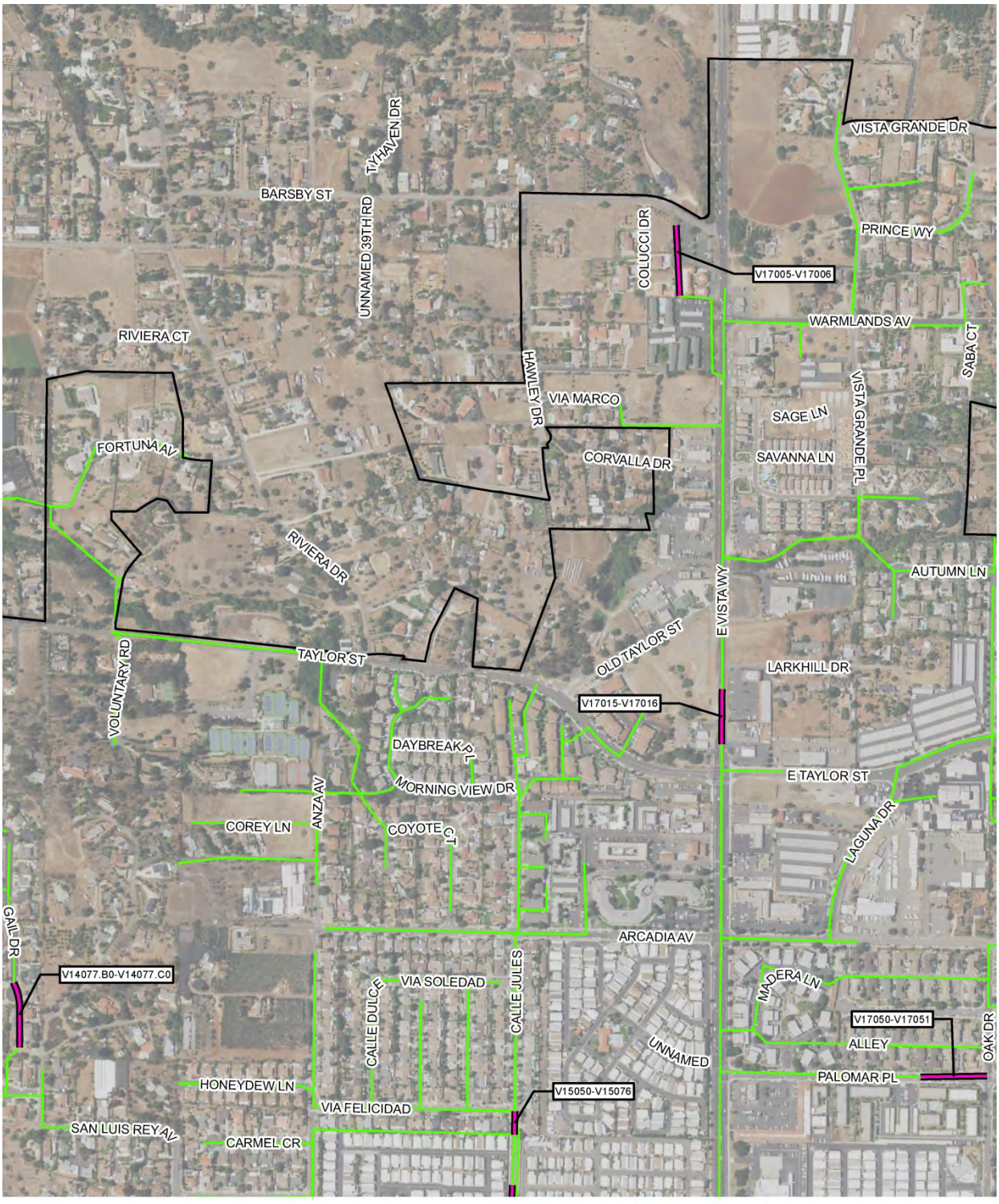


Figure 3-11B. Condition-Related Projects under the Proposed 2017 CSMP (Map 3)



LEGEND

- City of Vista
- Buena Sanitation District
- Sanitary Sewer Collection System
- CIP Condition Improvements Near Term

MAP INDEX
3 OF 17

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Figure 3-11C. Condition-Related Projects under the Proposed 2017 CSMP (Map 4)

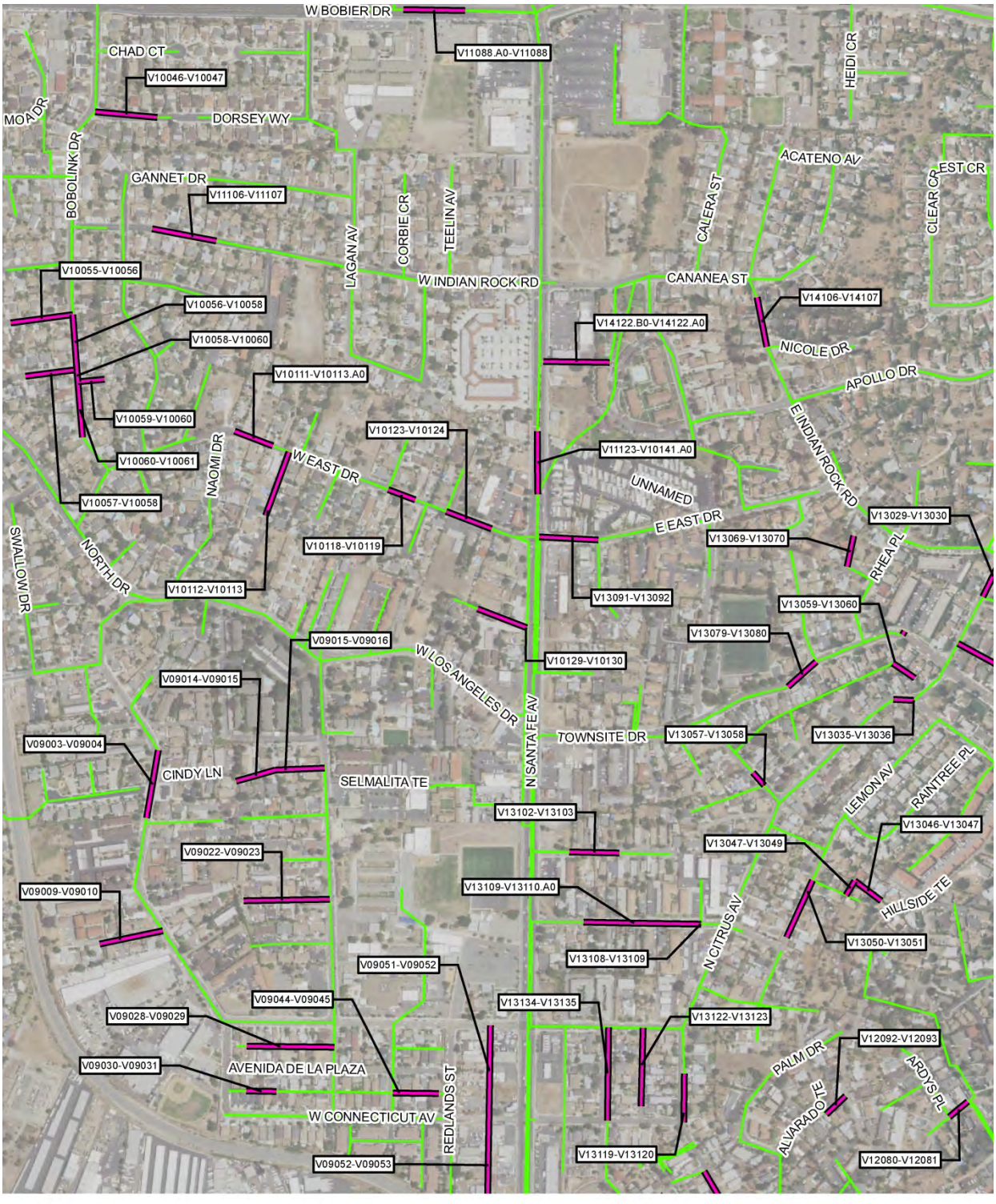

Figure 3-11D. Condition-Related Projects under the Proposed 2017 CSMP (Map 5)

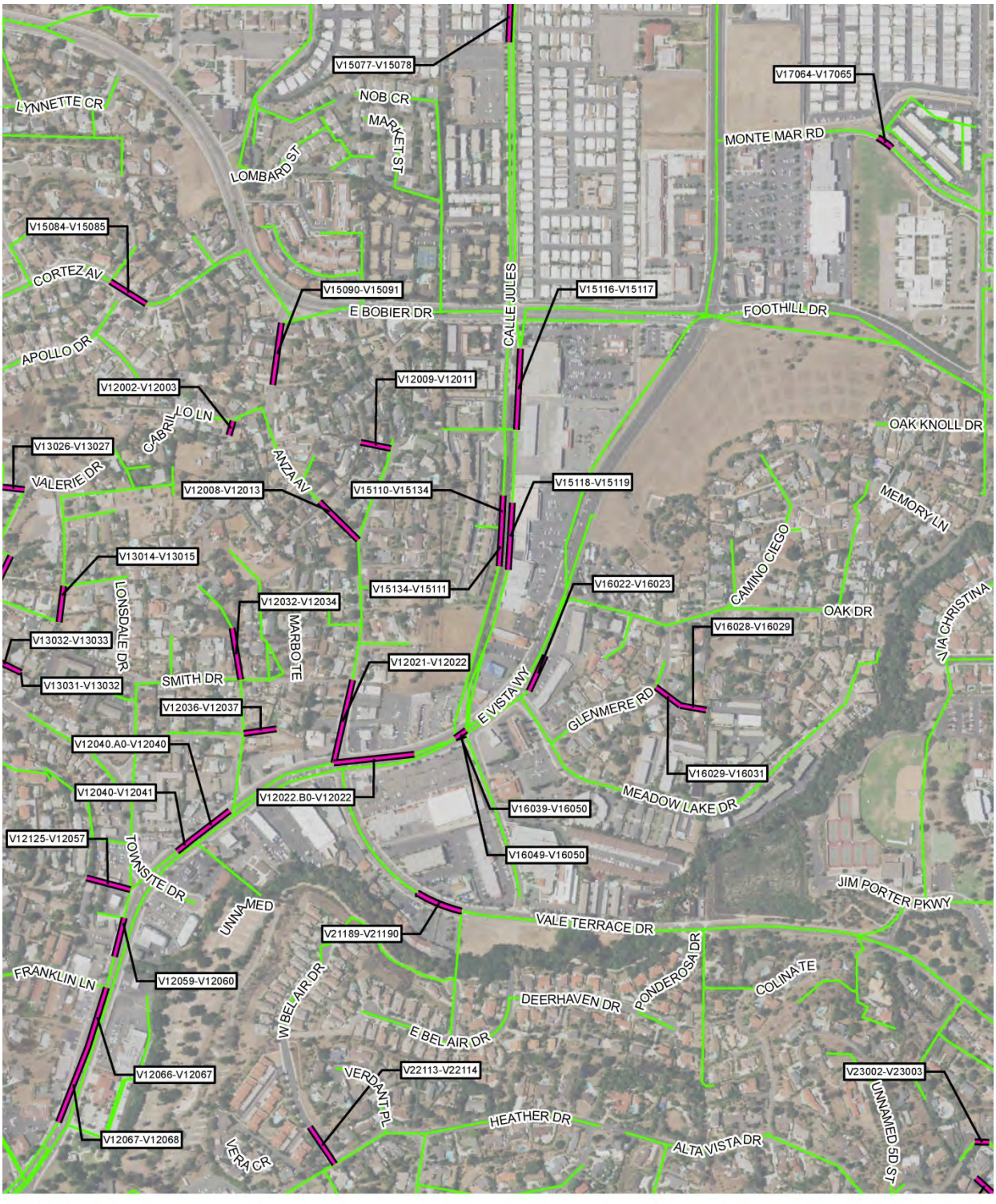

Figure 3-12. Condition-Related Projects under the Proposed 2017 CSMP (Map 6)

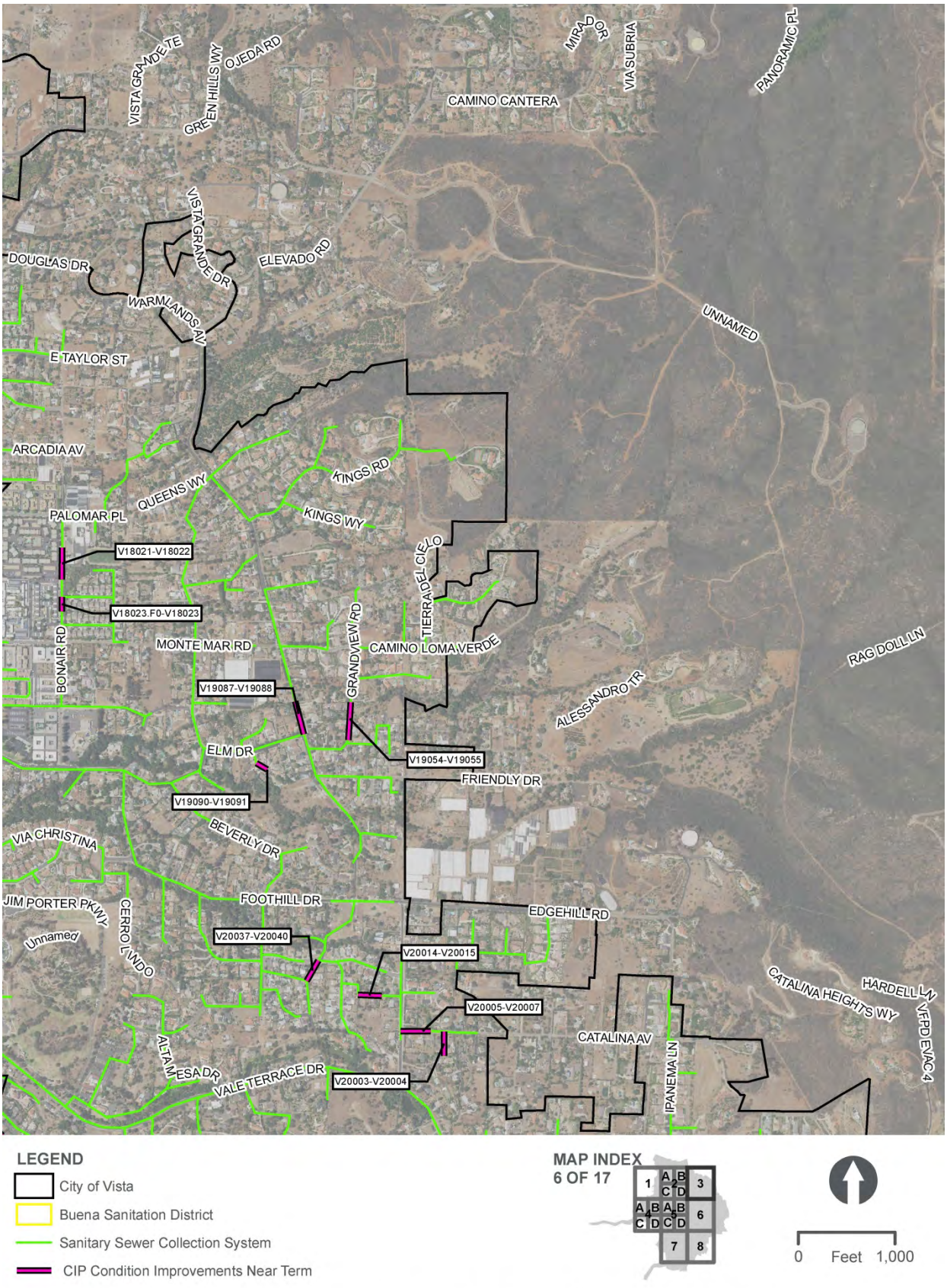

Figure 3-13A. Condition-Related Projects under the Proposed 2017 CSMP (Map 7)

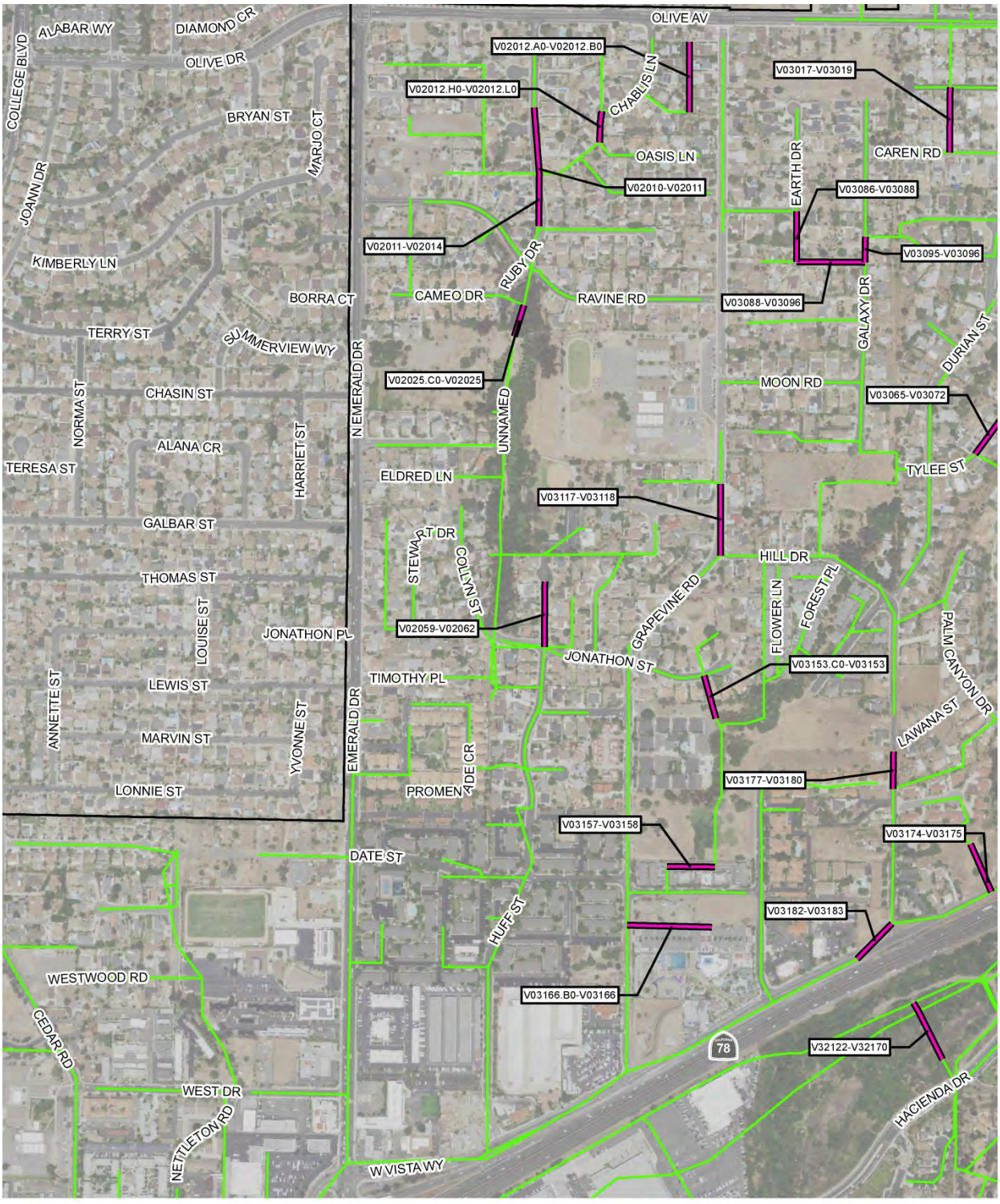

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Figure 3-13B. Condition-Related Projects under the Proposed 2017 CSMP (Map 8)

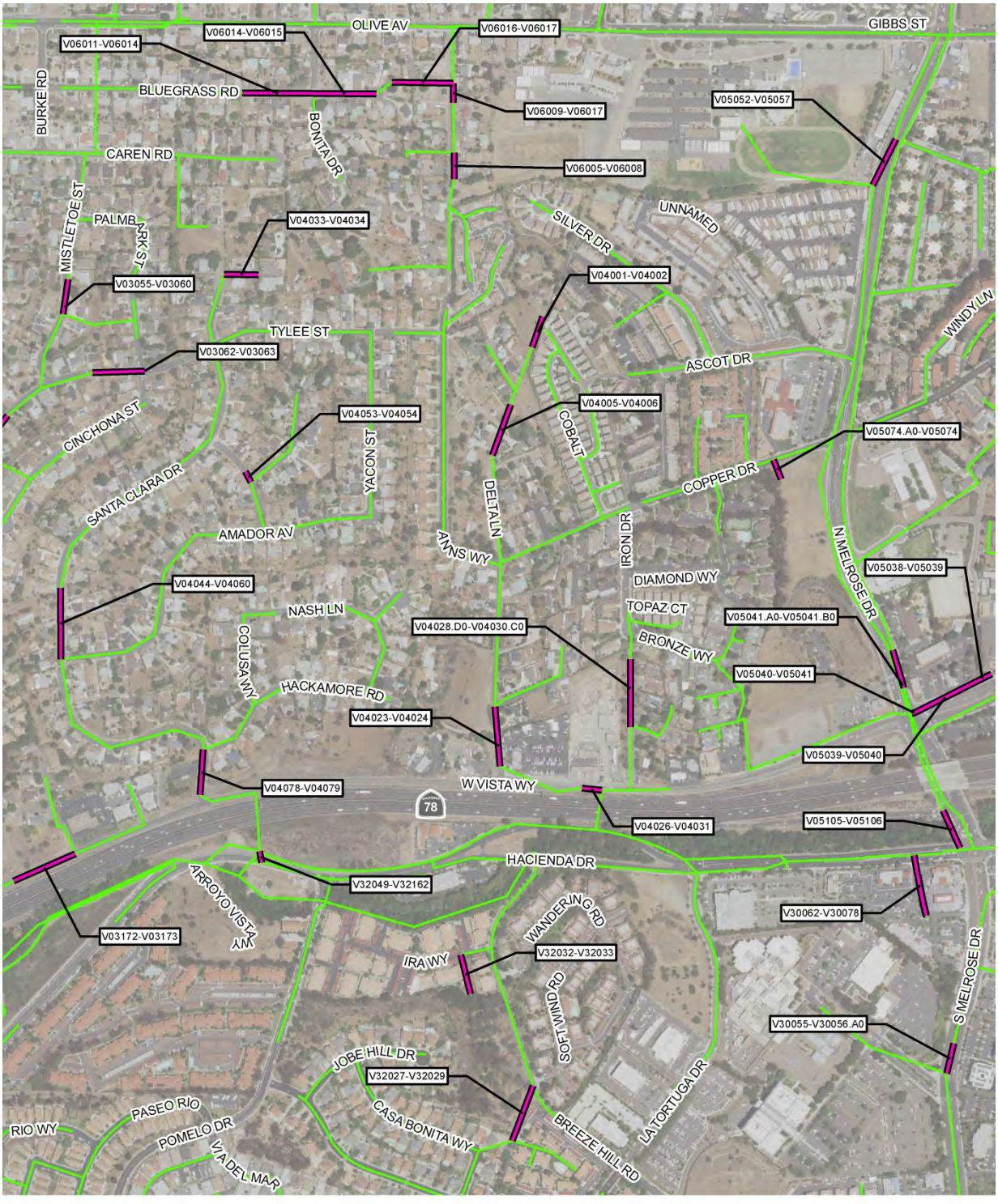

Figure 3-13C. Condition-Related Projects under the Proposed 2017 CSMP (Map 9)

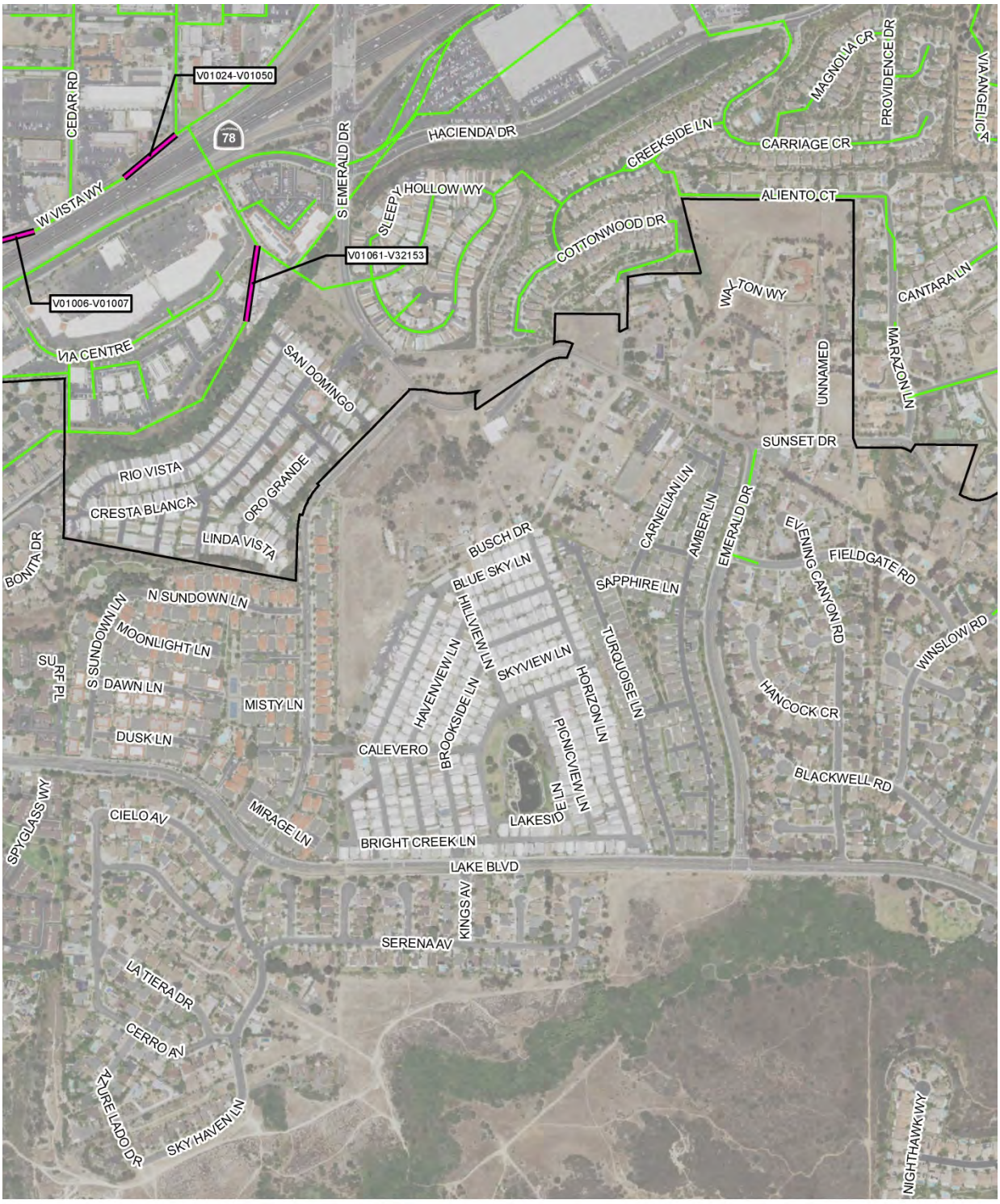

Figure 3-13D. Condition-Related Projects under the Proposed 2017 CSMP (Map 10)

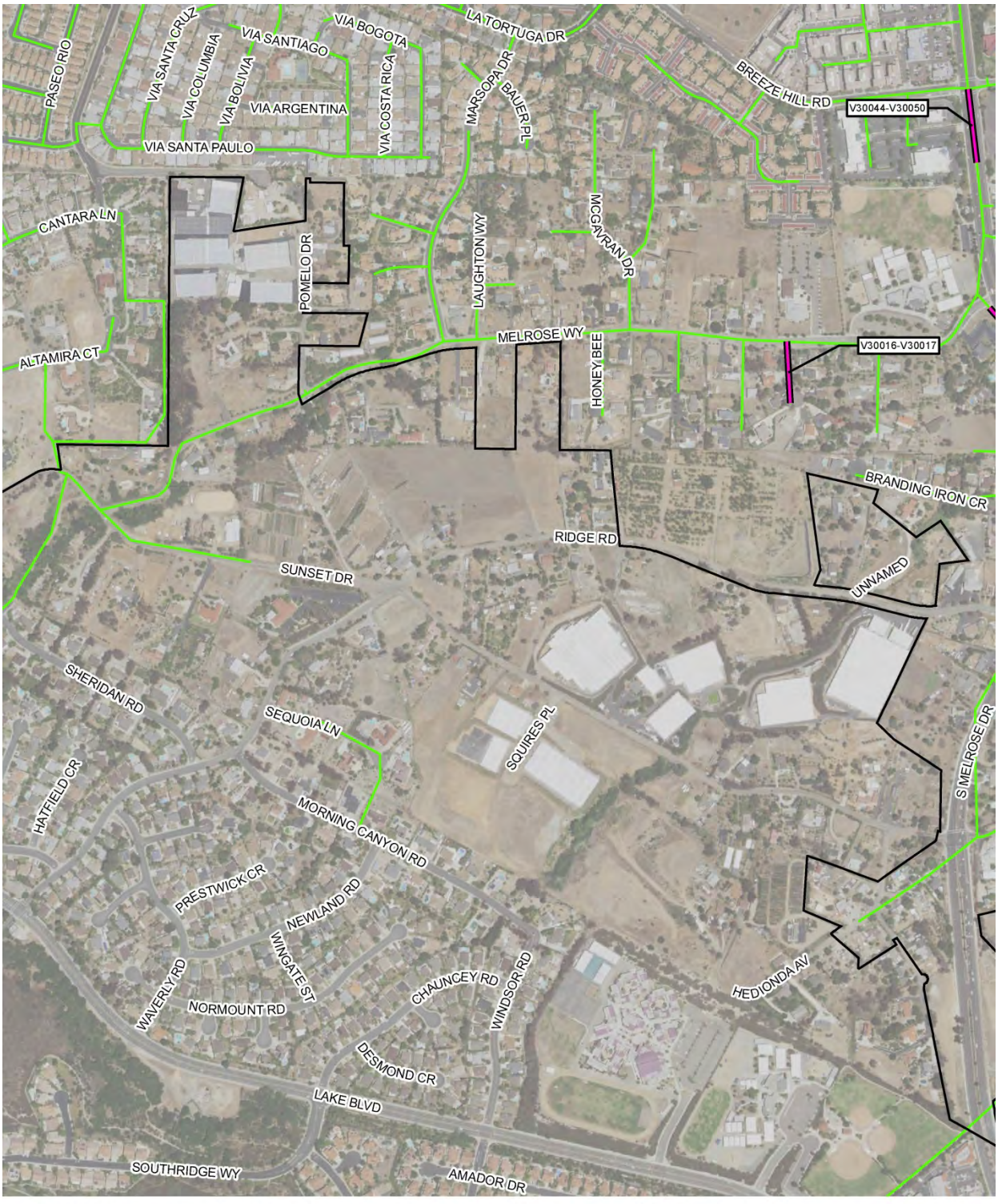

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Figure 3-14A. Condition-Related Projects under the Proposed 2017 CSMP (Map 11)

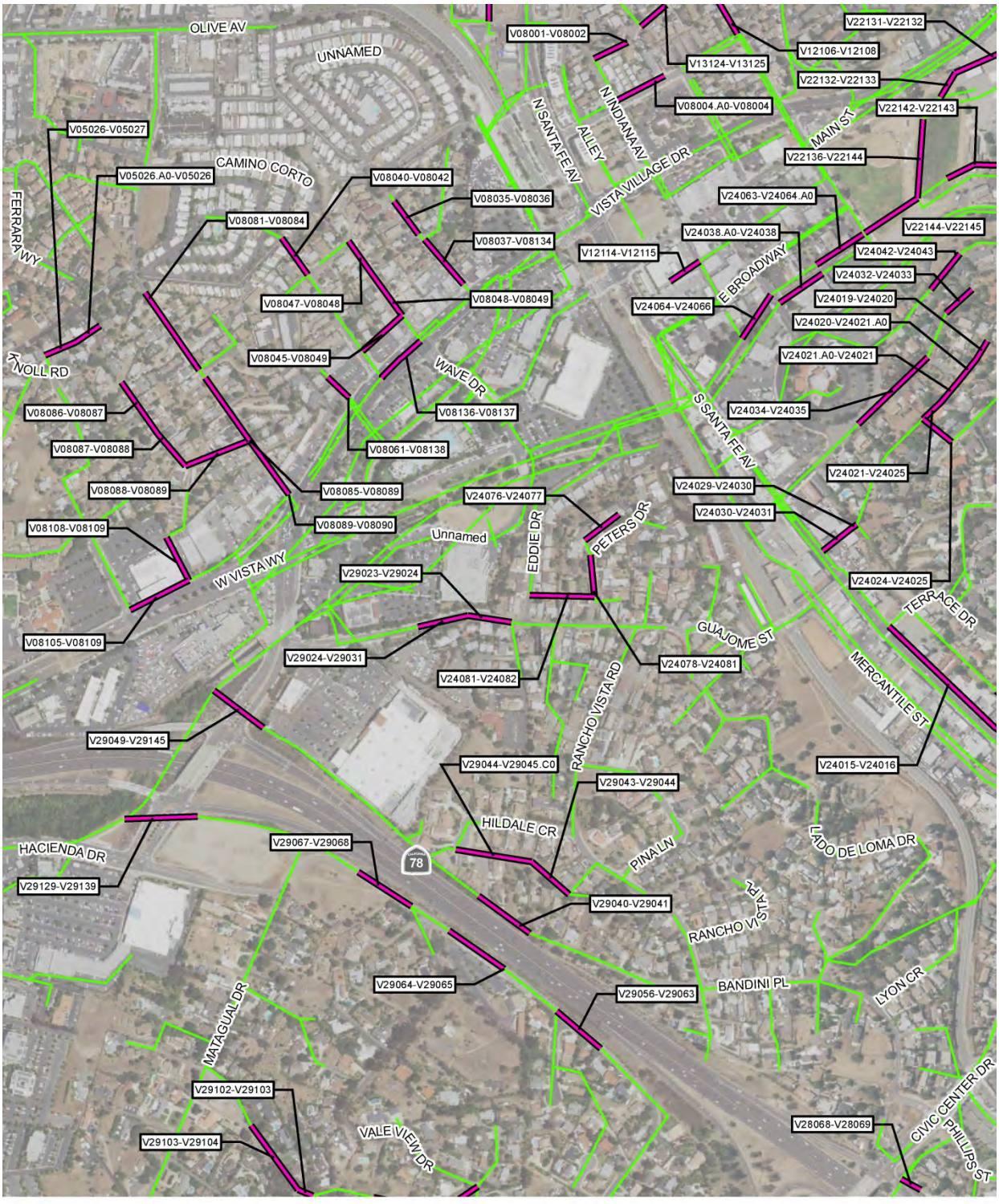

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Figure 3-14B. Condition-Related Projects under the Proposed 2017 CSMP (Map 12)

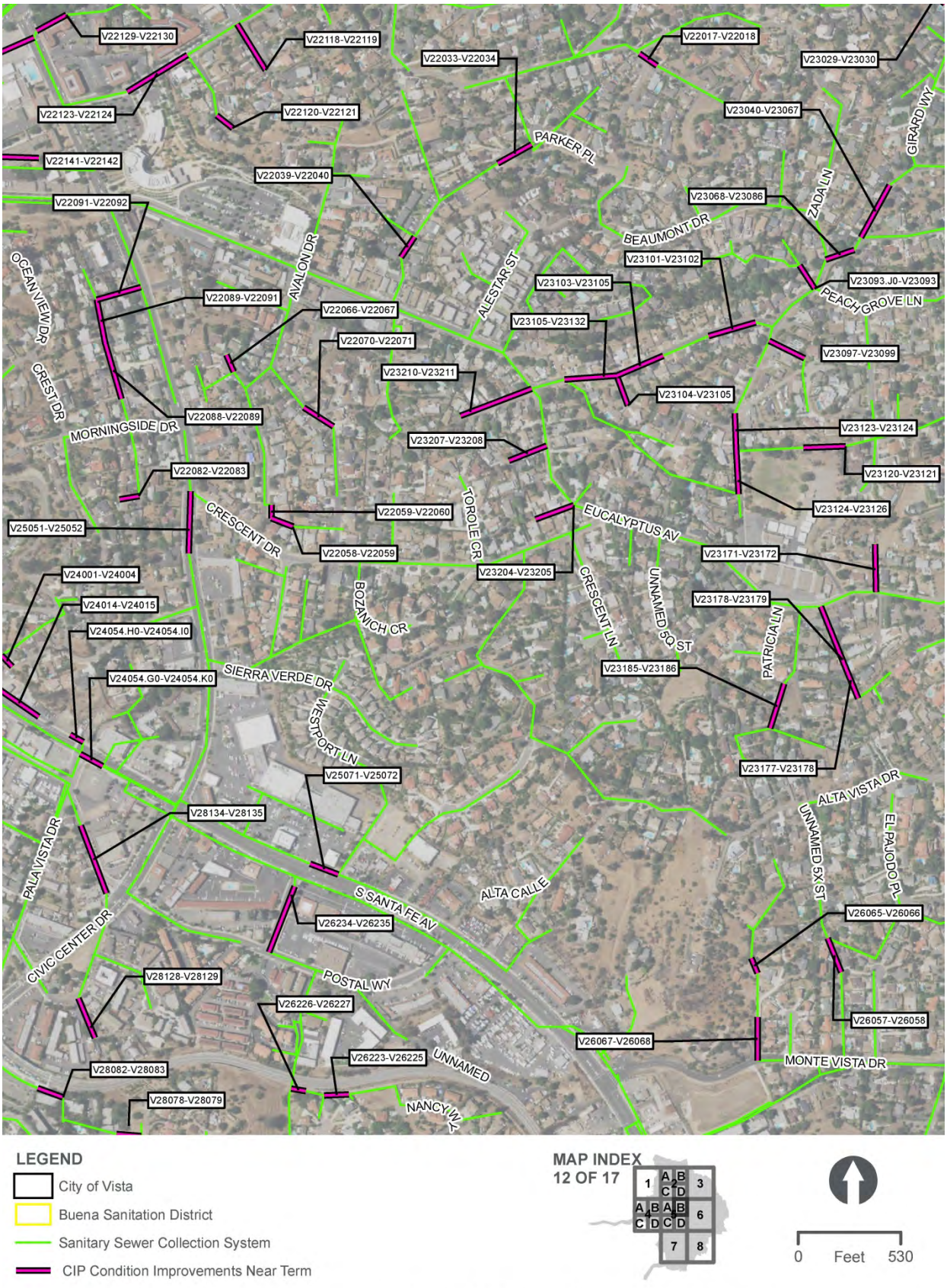

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Figure 3-14C. Condition-Related Projects under the Proposed 2017 CSMP (Map 13)

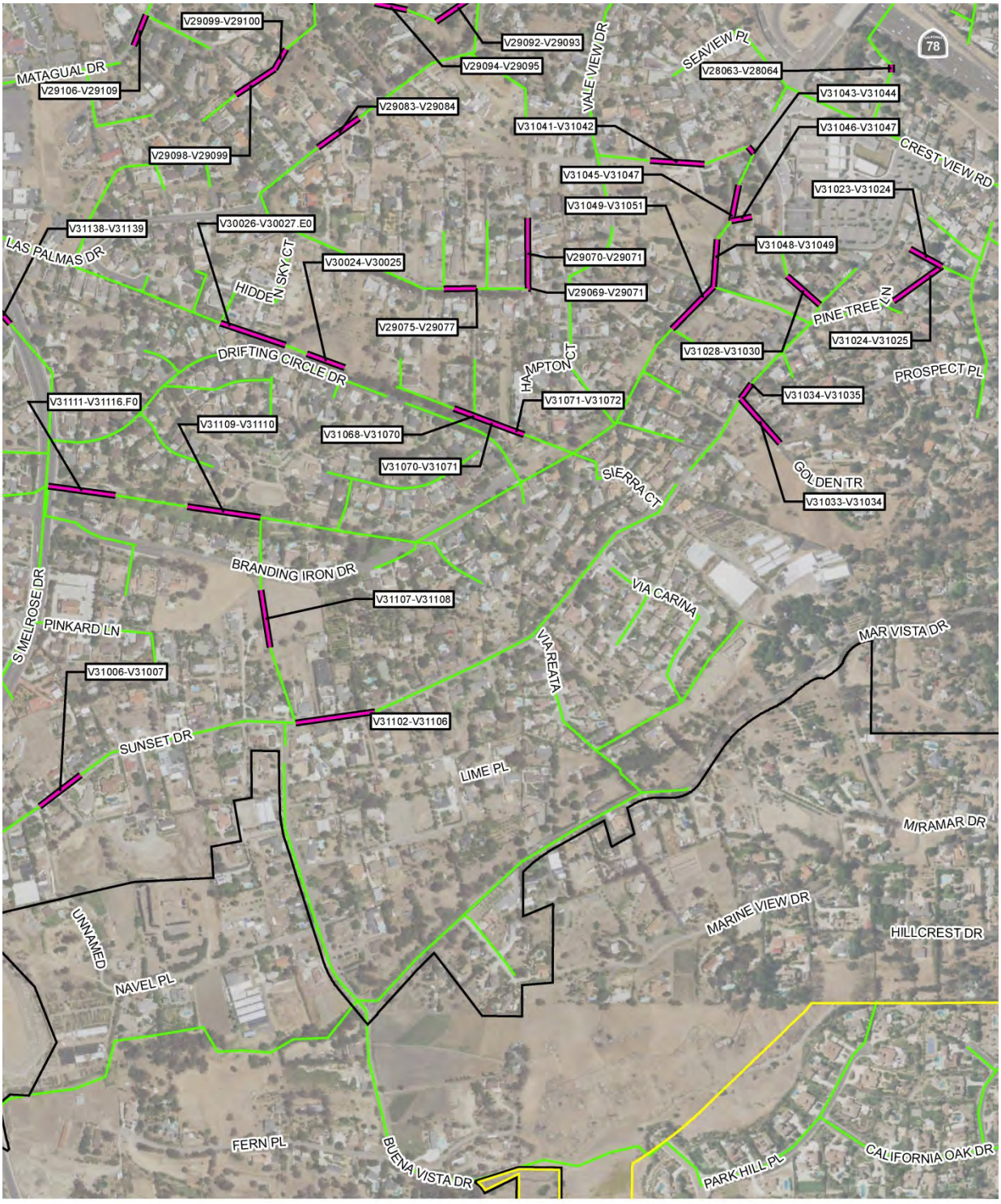

Figure 3-14D. Condition-Related Projects under the Proposed 2017 CSMP (Map 14)

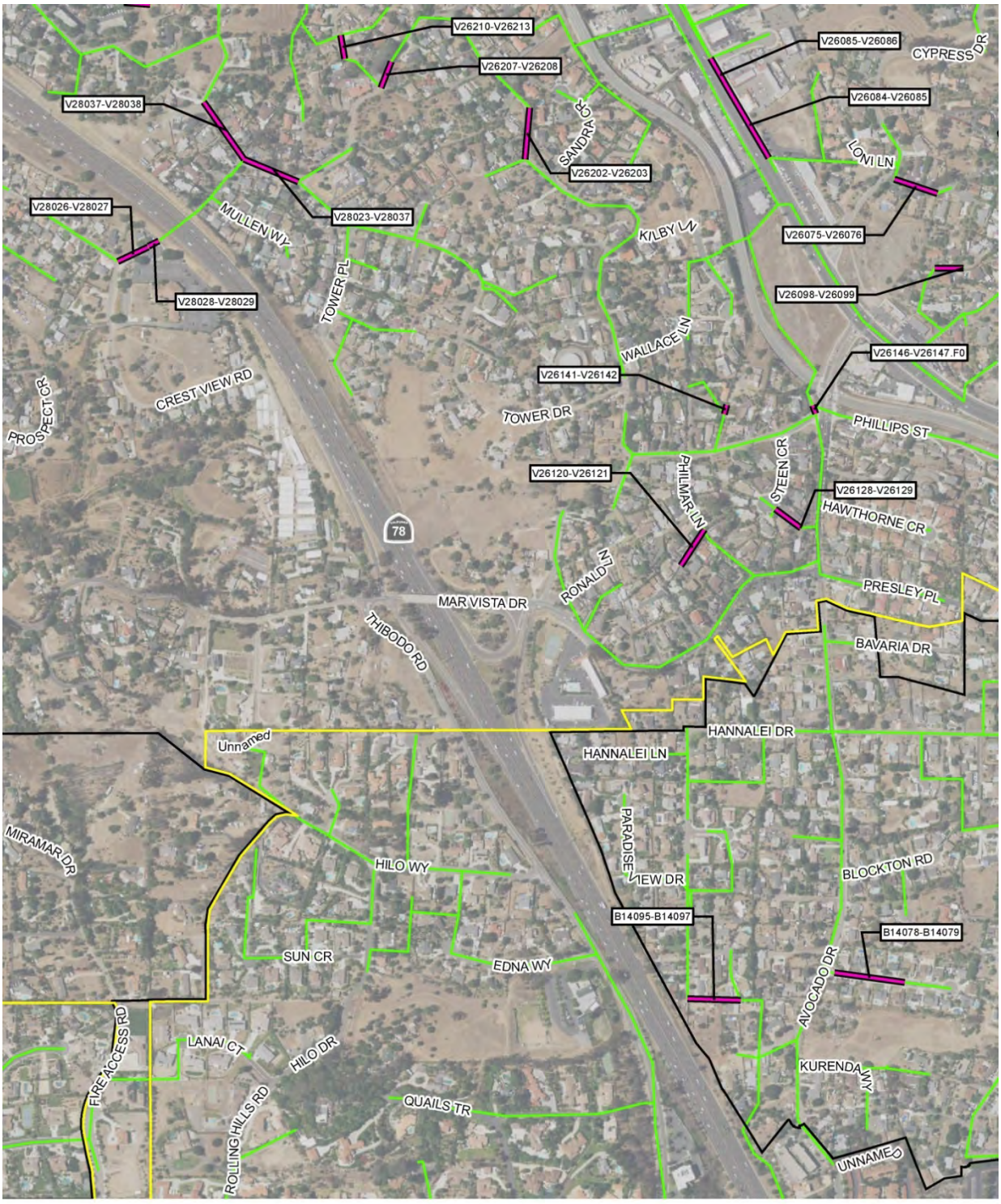

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Figure 3-15. Condition-Related Projects under the Proposed 2017 CSMP (Map 15)

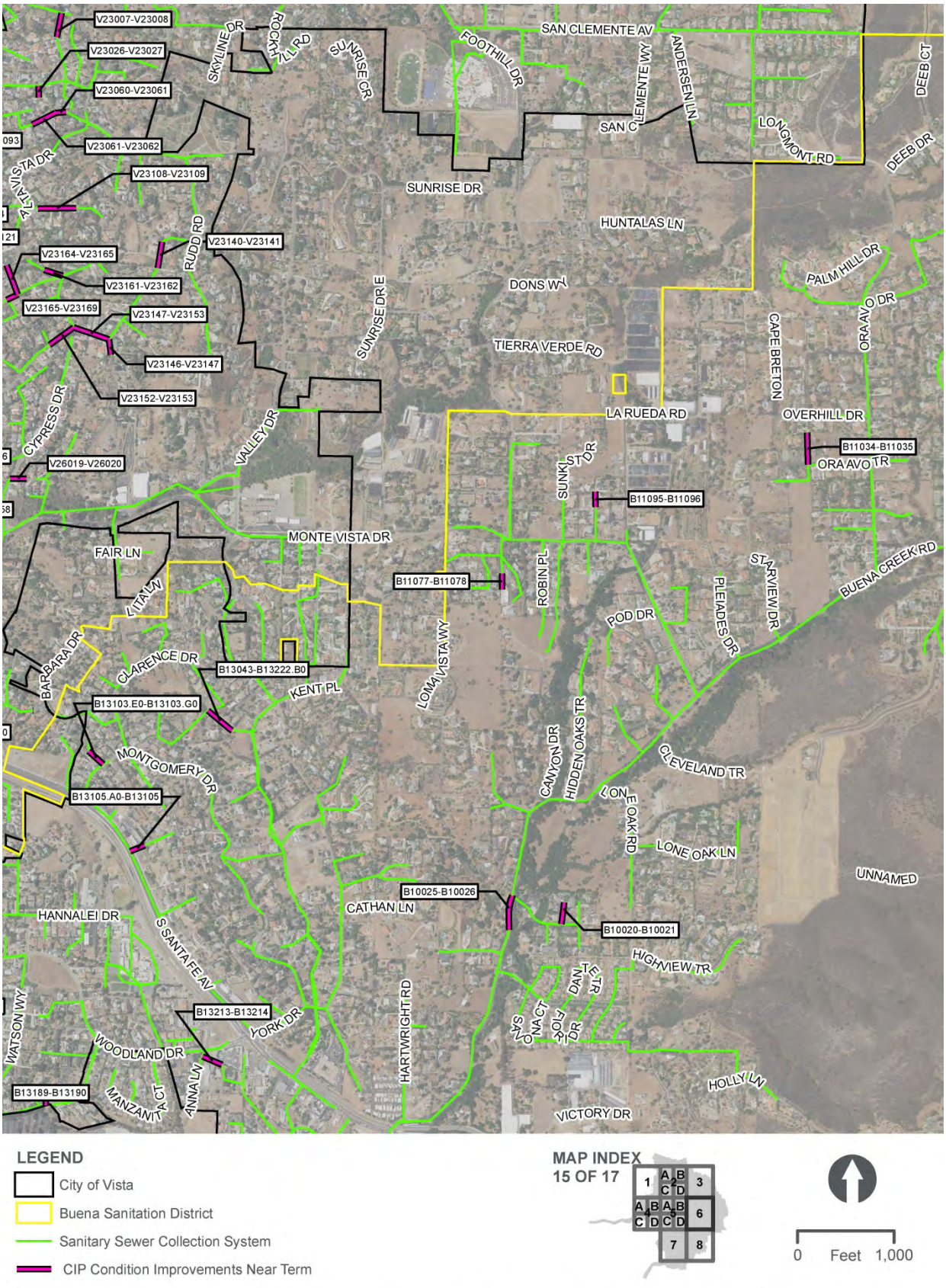


Figure 3-16. Condition-Related Projects under the Proposed 2017 CSMP (Map 16)

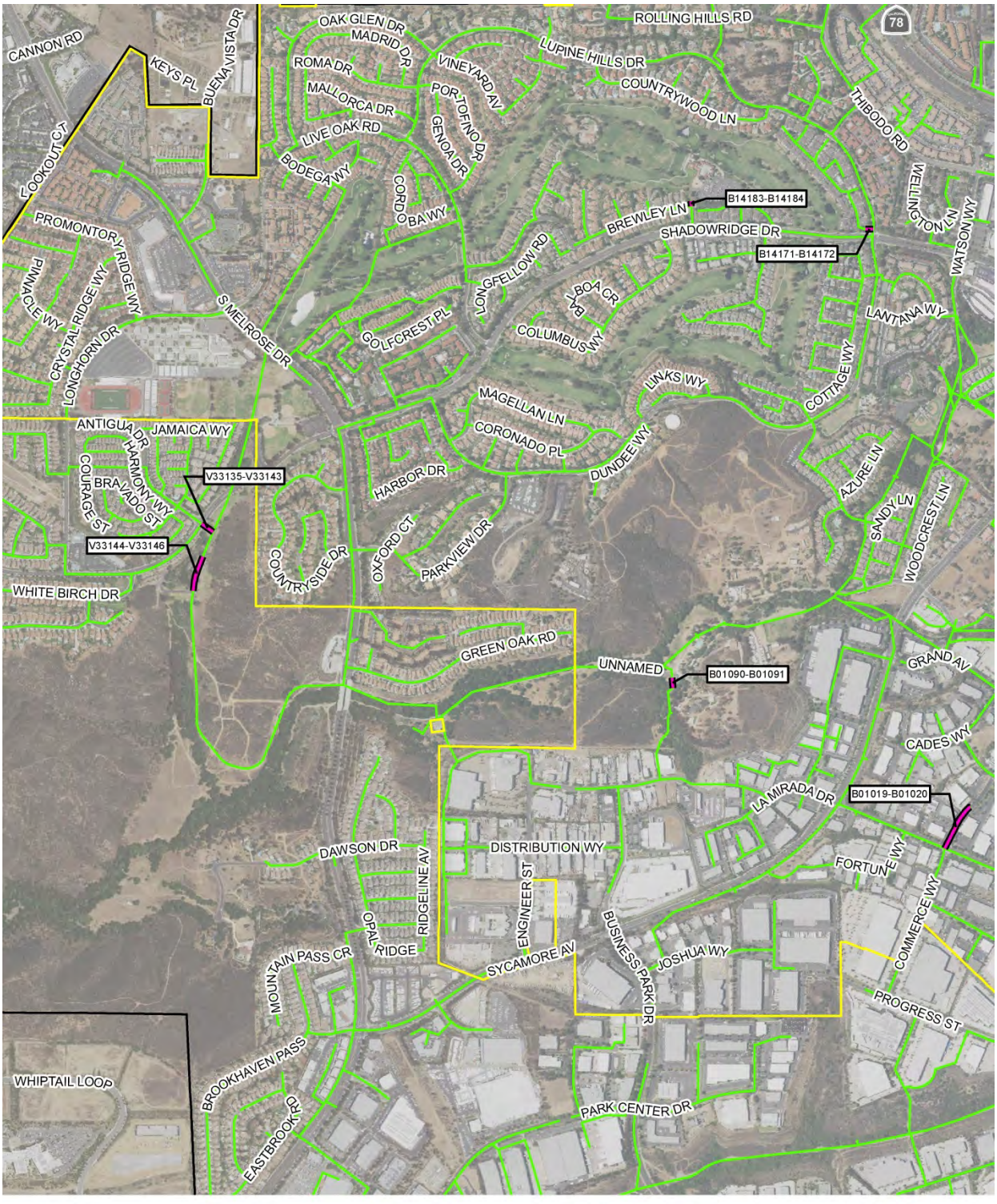
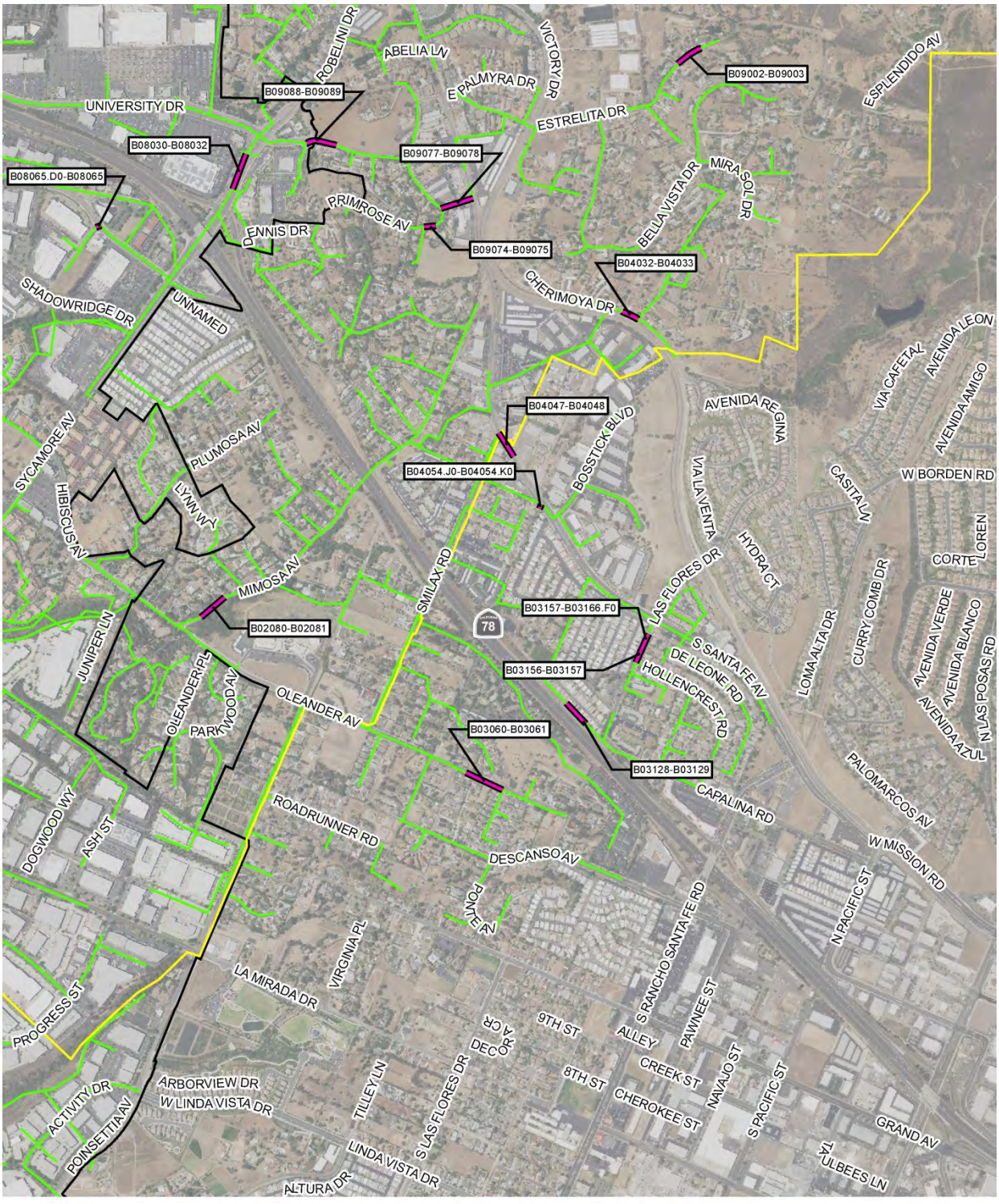


Figure 3-17. Condition-Related Projects under the Proposed 2017 CSMP (Map 17)



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O&M activities would include continuation of the existing condition assessment program and no-dig rehabilitations such as epoxy coatings, polyurethane coatings, slip liners, and cured-in-place resin compound liners. The condition assessment program is composed of a combination of wet-weather flow measurement, televised inspections, smoke testing, and aboveground inspections on a 5- to 10-year program basis. Other elements of the O&M Program are described under the following headings.

Pump Station Improvements

In 2016, the City completed a Pump Station Condition Assessment and Rehabilitation Report (City of Vista 2016a) that identifies and prioritizes potential improvements to three of the four pump stations conveying flow from the City to the EWPCF: RPS, BCPS, and BVPS. For each pump station, an asset inventory list was created to document the assets at the pump station. The asset list was used to track asset condition, condition rankings, remaining useful life estimates, criticality, vulnerability, and overall risk. From the list, high-risk assets were identified for rehab or replacement and were grouped into larger O&M projects resulting in four large projects. Table 3-5 provides a list of the proposed pump station improvements included as part of the CSMP O&M Program.

Table 3-5. O&M Program Pump Station Projects

Project No.	Project	Pump Station(s)
O&M1	Variable Frequency Driver (VFD)/Programmable Logic Controller (PLC); Grinder Improvements; Wet Well Rehab	RPS, BCPS, BCPS
O&M2	Grinder Replacement: construct new concrete grinder vault, channel grinders, and bypass pumps. See Figure 3-18.	BVPS
O&M3	Consolidated Rehab Items: install exhaust fans; replace flow meters, valves, and pumps; repair/replace existing building interior/exterior features (e.g. doors, fencing, etc.); repair/replace drain piping, wet wells, and emergency containment area. New containment structures may also be added.	RPS, BCPS, BCPS
O&M4	Vapor Phase Odor Control: Install two-stage biological scrubber contained in a single tower.	BVPS

Source: City of Vista 2016a

Figure 3-18. Proposed Grinder Improvements at BVPS

AHLS currently has two standby emergency diesel power pumps; both are rated at 700 horsepower (hp) and capable of pumping 10,000 gpm. These pumps serve as standby pumps in the event of a commercial power loss. Upon completion of the new, upgraded AHLS in 2018, one standby emergency diesel pump would be relocated to BVPS and the other to BCPS. Minor modifications to BVPS and BCPS would be required to include above ground piping and miscellaneous pipe appurtenances. These activities would be conducted in conjunction with the O&M Program and, to the extent practical, would be coordinated with the improvements identified in Table 3-5.

Access Improvements

The City maintains multiple easements to facilitate access to the conveyance and pumping facilities within and outside its service area. These easements range from 10 to 20 feet in width to accommodate maintenance equipment. The City is proposing the repair, upgrade, and/or rehabilitation of two existing unpaved access roads as part of the O&M Program. Figure 3-19 and Figure 3-20 illustrate the two access roads proposed for future maintenance and repair. In general, these improvements may include limited grading, re-surfacing, vegetation trimming or removal, and limited drainage improvements to minimize erosion/sedimentation. Additionally, access improvements may also be implemented at entrance points from adjacent paved, roadways.

3.5.4 Construction Methods

Following certification of the SPEIR, the City will determine the implementation schedule for the construction of the improvements contemplated under the CSMP. Once selected for construction, the City will develop project-specific plans and specifications for each project, perform a project-level CEQA review, and file the appropriate documentation for all necessary permits and approvals in advance of awarding a construction contract. For the purposes of this SPEIR, the City has applied a standard construction zone of impact for linear construction in addition to approximating the area of direct impact for staging areas and/or other temporary use areas. Typical construction methods for sanitary sewer conveyance improvements and pump station facilities are described below.

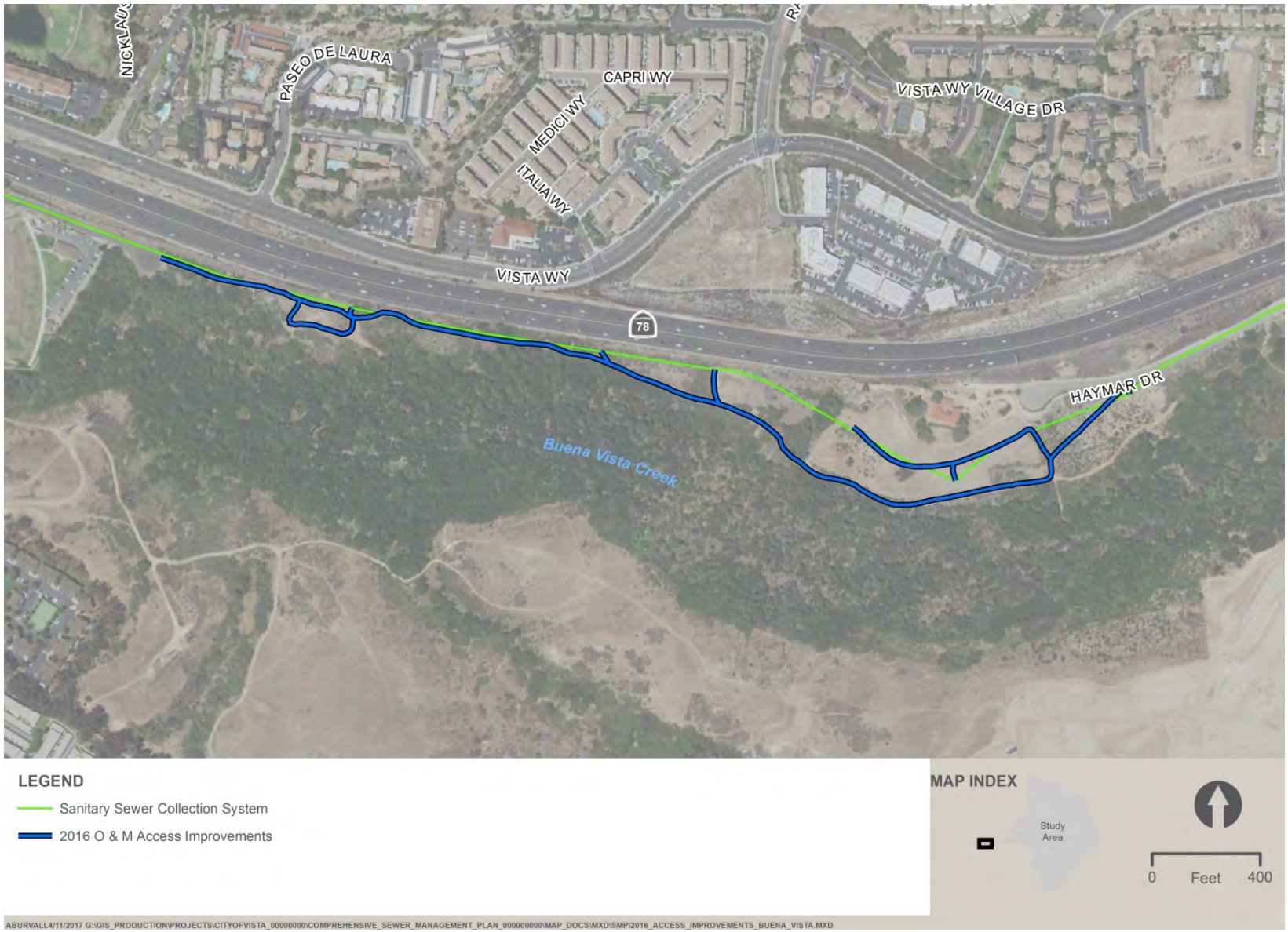
Capacity- and Condition-Related Conveyance Improvements

New capacity- and condition-related conveyance pipelines would be installed in existing and, possibly, newly acquired right-of-ways (ROWs) and would be completely buried. Typical pipeline construction processes for projects located within paved (or hardscape) areas are described below:

Staging Areas. At various locations along the construction route(s), staging areas would be required to store pipe, construction equipment, and other construction-related material. Staging areas would be established by the contractor along the route where space is available, such as vacant lots, roadway turnouts, parking lots, and segments of closed traffic lanes. Certain staging areas may be used for the duration of project construction due to their favorable location in terms of short access, lack of sensitive receptors, etc. In other cases, as pipeline construction moves along the route, staging areas may also be moved to minimize hauling distances and avoid disrupting any one area for extended periods. In general, staging areas would be less than 1 acre in size.

Figure 3-19. Maintenance Access Improvements along Buena Interceptor

Figure 3-20. Maintenance Access Improvements along V/C Interceptor



The City, or contractors, would make short-term arrangements for the use of staging areas at appropriate locations (e.g., vacant lots, parking lot, etc.) with property owners. Staging areas would not be located in sensitive habitat areas unless the habitat would be permanently lost because of subsequent development or facility siting and all required approvals are in place.

Surface Preparation. Surface preparation involves removing any structures (such as fences), pavement, and/or vegetation from the surface of the trench area. Equipment used for this activity includes jackhammers, pavement saws, graders, bulldozers, loaders, and trucks.

Trench Excavation/Shoring. A backhoe, excavator, or trencher would be used to dig trenches for pipe installation. In general, trenches would have vertical sidewalls to minimize the amount of soil excavated, and the area needed for the temporary construction work. Shoring would be used where required. For developed (or hardscape) environs, pipeline construction would be constrained by available roadway widths, existing utilities, and/or existing structures. For this reason, pipeline construction in these areas would progress, on average, 100 linear feet per day and would require a minimum work area of 20 feet (in width). For larger pipe diameters (e.g. equal to or greater than 24 inches), the minimum temporary work area would be increased to 30 feet (in width).

Soils excavated from the trenches, if of suitable quality, would be stockpiled alongside the trench or in staging areas for later reuse in backfilling the trench. If not reusable, the soil would be hauled off-site for disposal. Disposal options include use as cover material at sanitary landfills. In general, pipe trenches would be 3- to 6-feet wide and 7- to 20-feet deep.

Pipeline trenches, in any given location, would be open for 2 to 3 days on average. During construction, vertical wall trenches would be temporarily “closed” at the end of each work day, by covering with steel plates or backfill material, or installing fences to restrict access. Dump trucks would be used to deliver imported, engineered backfill material to stockpiles near the trenching operation.

Surface Restoration. The final step in the installation process would be to restore the ground surface. When the pipe is installed in a paved roadway, repaving would occur after construction. New asphalt or concrete pavement would be placed to match the surrounding road type. For asphalt repaving, a temporary asphalt material may be installed to allow traffic to use the roadway immediately after sewer construction. A repaving crew would follow the pipe installation crew and prepare the road surface for repaving. Final repaving would be done after pipe installation is completed.

Capacity- and Condition-Related Conveyance Improvements (Cross-Country)

For facilities located beyond existing ROW, the City would generally require a wider, temporary construction work area. Vegetation would be trimmed or cleared and the construction work area graded to provide for safe and efficient operation of construction equipment, and to provide space for temporary storage of spoil material and salvaged topsoil. In general, the construction work area would be up to 50 feet wide for pipelines equal to or greater than 24 inches in diameter. For smaller pipes or where sensitive resources are present, the temporary work area would be kept to a practical minimum (e.g. 30 feet) to avoid undue disturbance of adjacent resources. Brush clearing would be limited to trimming and/or crushing in those areas specified by the jurisdictional agency to avoid disturbance of root systems. Where tree clearing is necessary, the work area boundaries would be flagged and any specimen trees on the perimeter would be preserved from damage. Cross-country

construction would be planned for the dry months to the extent feasible and could progress at a rate of up to 500 feet per day, depending on local site conditions.

All brush and other materials that are cleared would be windrowed along the perimeter of the temporary work area. Where necessary, all brush and other debris cleared would be disposed of in accordance with instructions from the jurisdictional agency or landowner, and all applicable laws and regulations. In areas of public view, cleared materials would be removed and disposed of prior to the completion of pipeline construction and cleanup activities. The temporary work area would then be graded and restored to pre-construction conditions. Topsoil would be preserved for subsequent restoration activities to the extent feasible.

The City's ROW agents would coordinate with affected property owners and tenants to minimize disruptions to existing uses. Fences crossing the ROW would be braced, cut, and temporarily fitted with gates to permit passage. During construction, the opening would be controlled as necessary. Existing fences would be replaced and braces kept in place upon completion of construction activities. All survey monuments located within the ROW would be protected during construction activities.

Trenchless Construction Methods

Under certain circumstances, conveyance pipelines would need to be installed without disturbing the ground surface. In these circumstances, trenchless construction methods would be employed, such as horizontal directional drilling (HDD), cured-in-place-pipe (CIPP), pipe-bursting, microtunneling, or jack and boring. Approximately 90 percent of the condition-related improvements would be installed via trenchless construction methods. These methods are described in more detail below:

Jack and Boring. Jack and boring employs a non-steerable system that drives an open-ended pipe laterally using a percussive hammer, thereby resulting in the displacement of soil limited to the wall thickness of the pipe. For this construction method, pits would be dug on either side of the surface feature to be avoided (e.g., water crossing or heavily traveled roadway). The pits are typically 10 to 15 feet wide and 50 feet long. The depth would depend on the feature to be avoided. The boring equipment and pipe would be lowered into the pit and aligned at the appropriate depth and angle to achieve the desired exit location. A compressor would supply air to the pneumatic ramming tool to thrust the pipe forward. A cutting shoe may be welded to the front of the lead pipe to help reduce friction and cut through the soil.

Several options are available for ramming various lengths of pipe. An entire length of pipe could be installed at once or, for longer distances, one section at a time could be installed. In that case, the ramming tool would be removed after each section is in place and a new section would be welded on to the end of the previously installed section. The ramming machine would be connected to the new section and ramming would continue. In certain installations, a winch could be connected to the lead end of the pipe to assist in pulling it out. This would require installation of a connection via a pilot hole.

Depending on the size of the installation, spoils from inside the pipe would be removed with compressed air, water, a pig system, or a combination of techniques. A seal cap would be installed on the starter pit side of the installation and spoil would be discharged into the receiver pit. Using this technique, ground surface disturbance would not occur, with the exception of jacking pits.

Horizontal Directional Drilling (HDD). HDD crossings are installed by using a drill rig laid on its side, with the top of the drill rig tilted up to an angle of 10 degrees from horizontal. The bore entry holes are drilled from the starting point to the destination point. In preparing the hole, a small diameter (3 inches wide) pilot hole is first drilled in a gentle arc from the drill rig to the completion hole on the other side of the area to be crossed. This pilot hole can be guided using magnetic readings transmitted from the drill bit back to the drill rig. After the initial hole is drilled, the final bore entry pit, approximately 10 feet square by approximately 8 feet deep, is constructed and is used as the collection point for Bentonite drilling mud and drill spoil. During the directional drill procedure, drilling mud is injected into the drill and recovered from the entry hole until the drill bit surfaces at the exit pit. Once the drill bit surfaces, the drilling mud is recovered at both the entry and exit holes, pumped into tanks and transported back to the rig location for cleaning and eventual reuse.

Microtunneling. Microtunneling is a directional digging process, similar to HDD, which uses a remotely controlled microtunnel boring machine combined with the pipe jack-and-bore method to directly install pipes underground in a single pass.

Cured-in-Place-Pipe (CIPP or Pipe-Patching). CIPP is a trenchless rehabilitation method that would be employed, where appropriate, to repair existing condition-deficient pipelines using a resin-saturated felt tube made of polyester, fiberglass cloth or other materials. Depending upon design considerations, an excavation may be made to create an entrance point; however, the liner is more often than not installed through a manhole or other existing access point. This technique also allows for the restoration of lateral connections without excavation via a remote controlled device that drills a hole in the liner at the point of the lateral connection.

Pipe-bursting. Pipe bursting is a trenchless method of replacing buried pipelines without the need for a traditional construction trench whereby an existing pipe is broken either by brittle fracture or by splitting, using an internal mechanically applied force by a bursting tool. At the same time, a new pipe of the same or larger diameter is pulled in to replace the existing pipe. Similar, to a jack and bore, launching and receiving pits are required at both ends. Where appropriate, pipe-bursting may also be used to upsize existing pipeline capacity.

Sliplining. Sliplining is completed by installing a smaller, "carrier pipe" into a larger "host pipe," grouting the annular space between the two pipes, and sealing the ends. Sliplining can be used to stop infiltration and restore structural integrity to an existing pipe. However, the new pipe will generally have a reduced cross sectional area because of the size difference between the inside diameter of the existing pipe and the outside diameter of the new pipe, as well as the wall thickness of the new pipe.

Structural Facility Construction

Typical construction activities involved in the repair or reconstruction of pump station sites and existing access roads include the following:

Building Retrofit/Demolition. Replacement and reconstruction one or more of the pump stations may involve the demolition of one or more structural components (e.g. wall) to facilitate replacement or reconstruction.

Structural Improvements. New structural forms, rebar, and conduits would be installed, as needed, at each pump station. Following the placement of these features new concrete may be required in

limited areas. After the concrete footing, slab, and walls are poured, new roofing materials or decking may be erected.

Paving. All parking areas, roads, and designated locations may be subject to repaving in conjunction with other site improvements.

Pumps, Motors, and Back-Up Generators. The power service for the pumping facilities would be upgraded, if necessary, via existing connections and standby emergency generators would be upgraded or replaced to provide a backup supply, as needed.

Electrical/Instrumentation. New instrumentation may be installed at one or more pump stations, which may include but is not limited to, flow meters, level probes, pressure meters, and process analyzers. Additionally, sampling, communication, and monitoring equipment would be installed.

Startup and Testing. Under City supervision, the construction contractor would startup and test the new pump station equipment on-site to guarantee that pumps, motors, monitoring and communication equipment are functional and able to meet design standards.

Trip Generation

For the purposes of this SPEIR, the City has estimated a maximum-day scenario to characterize potential impacts resulting from the CIP and O&M Program components of the CSMP. It has been assumed that the most intense construction activities would occur during periods when multiple CIP projects are undergoing concurrent construction, which is expected to occur in 2018-19. In order to characterize and analyze potential construction impacts, the City has identified maximum crew size, truck trips, and worker trips, based on expected excavation volumes and quantities of imported materials. To support these activities, the main pieces of equipment that may be used at any one time during construction may include:

- track-mounted excavators
- backhoes
- graders
- crane
- scrapers
- boring machine
- compactors
- end and bottom dump trucks
- front-end loaders
- water trucks
- paver and roller
- flat-bed delivery trucks
- forklifts
- concrete trucks
- compressors/jack hammers

During peak excavation and earthwork activities, each individual capacity- or conditional-related improvement project could involve up to two construction crews working simultaneously. In assuming an average crew size of 15, including inspectors, construction activities could generate up to 30 round-trip personal automobile trips per day. In addition, during peak construction activities, each individual project could require up to 10 round-trip general delivery, concrete delivery, and/or soil import/export truck trips per day. For the purposes of analysis, the City assumed a worst-case day where active construction of up to two CIP or O&M projects could occur concurrently.

Construction-Related Water Use. Water would be required to support project-related construction for HDD operations, hydro-testing, debris removal from gravity pipelines and dust control. Traditional sources would include:

- Public/Private water system (via fire hydrants)
- Water brought in by truck or storage tanks

Following the construction of new force main pipeline facilities, each segment would undergo hydrostatic testing to City standards, using water from municipal water sources. Any leaks would be repaired and the section retested until specifications are achieved.

Water utilized in during hydrostatic testing would be disposed of in accordance with contract documents, RWQCB requirements, and the City's National Pollutant Discharge Elimination System (NPDES) Permit.

Following the construction of new gravity pipelines, each segment would be flushed of any construction related debris using water. The water utilized would be collected using a vacuum truck and disposed of in accordance with contract documents, RWQCB requirements, and the City's National Pollutant Discharge Elimination System (NPDES) Permit.

Construction Dewatering. In areas that contain shallow groundwater, dewatering activities may be required. Groundwater encountered during construction that would not be contained onsite would be pumped into containment tanks (or equivalent) and filtered prior to discharge into the existing sanitary sewer collection system or existing drainage facilities. Discharges to land or surface waters would be required to comply with RWQCB requirements.

Corrosion Protection and Detection Systems. External corrosion control measures for individual projects would be dependent on localized soil conditions and may include protective coatings on the exterior of the pipe and use of cathodic protection systems. These systems are designed to meet the minimum requirements established by the City for protection of metallic facilities from external, internal, and atmospheric corrosion. The location and installation of a rectifier (used for cathodic protection of the pipe) would be determined during final engineering.

Existing Utilities. Prior to construction, the project contractor(s) would implement an underground services alert (USA) to identify existing underground utilities and service connections prior to commencing any excavation work. The exact utility locations would be determined by hand-excavated test pits dug at locations determined and approved by the construction manager (also referred to as "pot-holing"). Temporary disruption of service may be required to allow for construction. Service on such lines would not be disrupted until prior approval is received from the City and the service provider.

Waste Management. Generally, waste generation from construction would be in the form of short sections of line pipe, welding, and coating as well as boxes and crates used in the shipment of materials. These materials would be sorted by metal or non-metal and typically would be hauled to local waste disposal centers. Trash containers would be provided at each yard for daily refuse from construction workers. Other construction wastes would include contaminated soil that cannot be returned to the trench as backfill; rubble from trenching paved areas; and water used to hydrostatically test the pipeline. The non-hazardous wastes would be hauled to a sanitary landfill; the used hydrostatic test water would be treated as required and discharged under permit or into the

sanitary sewer system, and hazardous wastes would be sent to a permitted treatment or disposal facility. Construction crews would use portable chemical toilets.

Construction and operation of the proposed pipeline would not create gaseous waste. Liquid waste would be disposed of at an approved disposal facility. Solid waste would be transported to, and disposed at, a local landfill.

3.6 Future Permit and Discretionary Approvals

The City is serving as the lead agency for the purposes of this SPEIR. Responsible Agencies are those agencies that have discretionary approval over one or more actions involved with development of projects included in the proposed CSMP. Trustee Agencies are state agencies that have discretionary approval or jurisdiction by law over natural resources affected by a project. Agencies and their potential approvals for one or more projects covered under the CCSMP are identified in Table 3-6.

Table 3-6. Potential Regulatory Permits and Approvals

Agency	Potential Permit or Approval	CSMP Build Components			
		Capacity and Condition Conveyance (Hardscape)	Capacity and Condition Conveyance (Cross Country)	O&M Program	O&M Program Access
City of Vista (multiple departments)	Encroachment Permit; Project Funding	X	X	X	X
City of Carlsbad (multiple departments)	Encroachment Permit; Coastal Development Permit Consistency	X	X		X
City of Oceanside (multiple departments)	Encroachment Permit	X	X		
San Diego County (multiple departments)	Encroachment Permit	X	X		X
San Diego Regional Water Quality Control Board (RWQCB), Region 9	National Pollution Discharge Elimination System (NPDES), General Construction Permit	X	X	X	X
	Clean Water Act, Section 401, Water Quality Certification	X	X		X
California Department of Fish and Wildlife (CDFW)	1601 (or 1603) Streambed Alternation Agreement		X		X
	California Endangered Species Act		X		X

Table 3-6. Potential Regulatory Permits and Approvals

Agency	Potential Permit or Approval	CSMP Build Components			
		Capacity and Condition Conveyance (Hardscape)	Capacity and Condition Conveyance (Cross Country)	O&M Program	O&M Program Access
U. S. Army Corps of Engineers (USACE)	Individual 404 or Nationwide Permit		X		X
	Rivers & Harbors Act Section 10 Permit	X			X
U. S. Fish and Wildlife Service (USFWS)	Federal Endangered Species Act		X		X
State Historic Preservation Officer (SHPO)	Section 106, National Historic Preservation Act	X	X	X	X
San Diego County Air Pollution Control District (APCD)		X	X	X	X
San Diego Gas and Electric (SDG&E)		X	X	X	X

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4 Environmental Analysis

4.0 Introduction

This SPEIR provides an analysis of impacts for those environmental topics where it was determined to have the potential to result in "significant impacts" on the environment. Sections 4.1 through 4.9 discuss the environmental impacts that may result with approval and implementation of the proposed 2017 CSMP and revisit the determinations provided in the 2008 PEIR.

Environmental topics addressed in the 2008 PEIR included in aesthetics, air quality, biological and cultural resources, geology and soils, hazards and hazardous materials, water quality and floodplains, land use, planning, and zoning, noise, transportation and traffic, and public services and utilities. Topics evaluated in this SPEIR include: air quality; biological resources; cultural resources; greenhouse gases (GHGs); hazards and hazardous materials; hydrology and water quality; land use and planning; noise and vibration; and transportation and circulation. The descriptions of the environmental setting for these topical areas are contained in Section 4 of the 2008 PEIR, which is incorporated by reference into this SPEIR. With this prior information, each environmental resource section supplements and/or updates the information provided in the 2008 PEIR for the following, as applicable:

- The environmental setting as it relates to the specific resource topic;
- The regulatory framework governing that issue;
- The methodology used in identifying the issues;
- The significance criteria;
- An evaluation of the program-specific impacts and identification of mitigation measures;
- A determination of the level of significance after mitigation measures are implemented;
- An analysis of potential cumulative effects; and
- A summary of significant and unavoidable impacts, if any.

4.0.1 Environmental Analysis Terminology

Determining the severity of project impacts is fundamental to achieving the objectives of CEQA. According to the CEQA Guidelines Section 15382, a significant effect on the environment means "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project…" The SPEIR uses the following terminology to denote the significance of environmental impacts of the 2017 CSMP:

- *No impact* indicates that the construction, operation, and maintenance of the project would not have any direct or indirect effects on the environment. It means no change from existing conditions. This impact level does not need mitigation.
- A *less than significant impact* is one that would not result in a substantial or potentially substantial adverse change in the physical environment. This impact level does not require mitigation, even if feasible, under CEQA.

- A *significant impact* is defined by CEQA Section 21068 as one that would cause "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project." Levels of significance can vary by project, based on the change in the existing physical condition. Under CEQA, mitigation measures or alternatives to the Proposed Project must be provided, where feasible, to reduce the magnitude of significant impacts.
- A *significant and unavoidable* impact is one that would result in a substantial or potentially substantial adverse effect on the environment, and that could not be reduced to a less-than-significant level even with any feasible mitigation. Under CEQA, a project with significant and unavoidable impacts could proceed, but the lead agency would be required to prepare a "statement of overriding considerations" in accordance with State CEQA Guidelines CCR Section 15093, explaining why the lead agency would proceed with the project in spite of the potential for significant impacts.

According to State CEQA Guidelines Section 15145, an impact may have a level of significance that is too uncertain to be reasonably determined, which would be designated too speculative for meaningful evaluation. Where some degree of evidence points to the reasonable potential for a significant effect, the EIR may explain that a determination of significance is uncertain, but is still assumed to be "significant," as described above. In other circumstances, after thorough investigation, the determination of significance may still be too speculative to be meaningful. This is an effect for which the degree of significance cannot be determined for specific reasons, such as because aspects of the impact itself are either unpredictable or the severity of consequences cannot be known at this time.

Format of the Impact Analysis

This SPEIR analyzes the potential impacts that could result from the components of the 2017 CSMP along with any supporting mitigation requirements. For further differentiation of component-related impacts, the program analysis presents a discussion specific to each of the individual, major components that comprise the 2017 CSMP, including off-site features. For each impact statement, the impact discussion is sub-divided, as appropriate, to differentiate between the environmental effects for each of the following project components described in Chapter 3, Project Description:

- Category 1: CIP Capacity and Condition Projects (Hardscape Environs). Tables 3-3 and 3-4 in Chapter 3 identify the near-term and build out CIP capacity-related projects included within this category. Figures 3-7 and 3-8 illustrate the locations of the capacity improvements. Table 1 in Appendix B of this SPEIR includes a list of CIP condition Projects included within this category. Figures 3-9 through 3-17 illustrate the location of the condition-relate improvements.
- Category 2: CIP Capacity and Condition Projects (Cross-Country Environs). Tables 3-3 and 3-4 identify the near-term and build out CIP capacity-related projects included within this category. Figures 3-7 and 3-8 illustrate the locations of the capacity improvements. Table 2 in Appendix B of this SPEIR includes a list of CIP condition projects included in this category. Figures 3-9 through 3-17 illustrate the location of the condition-relate improvements.

- Category 3: O&M Program Operations and Pump Station Rehabilitation. Table 3-5 in Chapter 3 of this SPEIR includes a list of the O&M Program improvements included within this category.
- Category 4: Out-of-Service Area Projects. Figures 3-19 and 3-20 illustrate the out-of-service area project(s) improvements included within this category.

Where similar environmental impacts would occur for multiple components, the impact discussion is consolidated. Likewise, in instances where impacts would be different for one or more components, the discussion is separated accordingly to distinguish between key differences in the level of impact. Subheadings and sub-numbering is used, where appropriate, for transitions between major topics and particular distinctions in impact determinations for sub-issues covered by the impact statement. Terminology used in describing the range of impact mechanisms follows that described below. Where mitigation is prescribed, the analysis clearly indicates to which project component(s) it would apply.

Impact Mechanisms

Mechanisms that could cause impacts are discussed for each issue area. If the 2017 CSMP is approved, construction activities could begin as early as 2018. The 2017 CSMP is expected to be implemented over approximately 20 years. Environmental effects resulting from the 2017 CSMP would be direct or indirect. A *direct effect* is an effect that would be caused by an action and would occur at the same time and place as the action. An *indirect effect* is an effect that would be caused by an action but would occur later in time, or at another location, yet is reasonably foreseeable in the future. These effects are then further categorized into one of the following:

- A *temporary effect* would occur only during construction or, if required, demolition activities. The environmental analysis addresses significant impacts from the direct effects of construction at the location of probable conveyance pipeline and related improvements (e.g., access roads), potential construction staging areas, or construction traffic.
- A *short-term effect* would last from the time construction ceases to within 3 years following construction.
- A *long-term effect* would last longer than 3 years following completion of construction. In some cases, a long-term effect could be considered a permanent effect. Some longer term effects may be indirect and could result from certain mitigation activities (e.g. revegetation).

Mitigation measures identified in this SPEIR are characterized in one of three categories: (1) measures necessary to reduce the identified impact below a level of significance; (2) measures recommended to reduce the magnitude of a significant impact, but not below a level of significance; and (3) measures recommended to reduce the magnitude of a less than significant impact. Where implementation of more than one mitigation measure is needed to reduce an impact below a level of significance, this is noted. Mitigation measures, where proposed in the SPEIR, would replace and supersede the mitigation measures adopted in the 2008 PEIR.

In accordance with California Public Resources Code Section 21081.6(a), the City Council would adopt a mitigation monitoring and reporting program (MMRP) at the time that it certifies the SPEIR. The City Council would also be required to adopt findings identifying each significant effect

of the project and the extent to which feasible mitigation measures have been adopted (California Public Resources Code Section 21081.)

4.0.2 Cumulative Analysis

CEQA Guidelines, Section 15130, requires a cumulative impacts analysis of a project when the project's incremental effect is "cumulatively considerable", as defined in Section 15065(a)(3). Each technical section of this Draft SPEIR addresses whether the project would have a cumulative effect on an environmental resource.

Section 15355 of the CEQA Guidelines defines cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Cumulative impacts are the changes caused by the incremental impact of an individual project compounded with the incremental impacts from closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

State CEQA Guidelines Section 15130(b)(1) states that the information utilized in an analysis of cumulative impacts should come from one of two sources:

1. A list of past, present and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or
2. A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

Based on the programmatic nature of the 2017 CSMP, the cumulative impact analysis contained in this SPEIR applies method No. 2, as described above. Consistent with Section 15130(b)(1)(B) of the CEQA Guidelines, this SPEIR analyzes the environmental impacts of adopting the 2017 CSMP, which contemplates new and upgrading sanitary sewer facilities. As a result, this SPEIR addresses the cumulative impacts of these facilities in conjunction with new development planned within the incorporated jurisdictions, including Vista, Carlsbad, Oceanside, and San Marcos, and unincorporated areas within San Diego County.

Key planning documents used in the cumulative analysis and incorporated by reference into this SPEIR include the following:

- City of Vista General Plan Update and Program EIR (GP 2030 Update) (2011) – Analyzed build out of Vista General Plan (2030), which is responsible for sewer flows as projected in the 2017 CSMP. Where the City's sphere of influence overlaps with the County of San Diego General Plan, City land use projections were assumed for the purposes of the 2017 CSMP.
- County of San Diego General Plan Update and EIR (2011) - Analyzed build out of North County Metropolitan Area in unincorporated portions of the San Diego County (2030). Sewer flows as projected in the 2017 CSMP anticipate build out as contemplated by the County's General Plan.

- City of Carlsbad General Plan Update and EIR (2015) - Analyzed build out of Carlsbad General Plan (2015) and wastewater flows that are conveyed through the portions of Carlsbad, which are responsible for sewer flows as projected in the 2017 CSMP.
- San Diego Association of Governments Regional Transportation Plan and Sustainable Communities Strategy 2050 and EIR (2011) – Identifies regional transportation projects that may contribute to cumulative impacts.
- City of Carlsbad, Agua Hedionda Sewer Lift Station and Trunk Line Initial Study and Mitigated Negative Declaration (2010) – Analyzed expansion of the Agua Hedionda Lift Station and sanitary trunk, which accepts sanitary sewer flows from the Vista's collection system.

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4.1 Air Quality

4.1.1 Introduction

This section provides an update to the existing air quality conditions described in 2008 PEIR for the Study Area, including changes to applicable rules and regulations as adopted. These updates include changes to the attainment status of one of more criteria air pollutants (since 2008), updates to regional air pollution control plans, and GP 2030 Updates.

The impact analysis considers these updates in the context of the proposed 2017 CSMP, as described in Chapter 3, the prior environmental analysis, which is incorporated by reference from Section 4.2 of the 2008 SMPU PEIR, and current air quality mitigation practices.

4.1.2 Existing Conditions

Section 4.2 of the 2008 PEIR provides a description of existing conditions for the Study Area, including descriptions of local meteorology and climate, background concentrations of pollutants, existing air quality monitoring, and attainment status. Descriptions of the local meteorology and climate for the San Diego Air Basin and associated ambient air quality conditions are incorporated by reference. The following sections supplement the descriptions provided in the 2008 PEIR and provide updates, where applicable, based on current conditions.

Local Air Quality Conditions and Health Risks

The following section supplements the description of the existing air quality environment and regulatory setting of the Study Area in the 2008 PEIR.

Criteria Air Pollutants

Criteria air pollutants relevant to this analysis are carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), sulfur dioxide (SO_2), and reactive organic compounds and volatile organic compounds (ROGs/VOCs). The health effects for each of these criteria air pollutants, except ROGs/VOCs, are described in the 2008 PEIR. Other criteria air pollutants for which national or state ambient standards have been established include lead, visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. The construction and operation of the proposed project would not generate emissions of lead, visibility reducing particles, sulfates, hydrogen sulfide, or vinyl chloride. Therefore, existing conditions information for these pollutants is not discussed in this section. Table 4.1-1 presents a summary of the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) adopted by the federal and California Clean Air Acts, respectively.

REACTIVE ORGANIC GASES AND VOLATILE ORGANIC COMPOUNDS – OZONE PRECURSORS

There are several subsets of organic gases, including Reactive Organic Gases (ROGs) and volatile organic compounds (VOCs). Hydrocarbons (HCs) are organic gases that are formed solely of hydrogen and carbon. ROGs include all HCs except those exempted by the California Air Resources Board (CARB). Therefore, ROGs are designated by state rules and regulations. VOCs are similar to ROGs in that they include all organic gases except those exempted by federal law. Both VOCs and ROGs are emitted from incomplete combustion of HCs or other carbon-based fuels. Combustion

engine exhaust, oil refineries, and oil-fueled power plants are the primary sources of HCs. Another source of HCs is evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint. Generally speaking, ROGs and VOCs are used interchangeably to refer to the HCs that are a precursor to ozone formation.

The primary health effects of HCs result from the formation of ozone and its related health effects. High levels of HCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. There are no separate NAAQS or CAAQS for ROGs.

Table 4.1-1. Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Standard (ppm)		Standard (µ/m^3)		Violation Criteria	
		CA	U.S.	CA	U.S.	CA	U.S.
Ozone (O_3)	1-hour	0.09	--	180	--	If exceeded	--
	8-hour	0.070	0.070	137	137	If exceeded	If 4th highest 8-hour concentration in a year, averaged over 3 years, is exceeded
PM_{10}	24-hour	--	--	50	150	If exceeded	If expected number of days per year with a 24-hour concentration above standard exceeds 1
	Annual	--	--	20	--	If exceeded	If exceeded
$PM_{2.5}$	24-hour	--	--	--	35	--	If average 2% over 3 years is exceeded
	Annual	--	--	12	12.0	If exceeded	If exceeded
NO_2	1-hour	0.18	0.100	339	188	If exceeded	If exceeded more than once a year
	Annual	0.030	0.053	57	100	If exceeded	If exceeded
CO	1-hour	20	35	23,000	40,000	If exceeded	If exceeded more than once a year
	8-hour	9.0	9	10,000	10,000	If exceeded	If exceeded more than once a year
SO_2	1-hour	0.25	0.075	655	196	If exceeded	If the 3-year average of the 99th percentile of the 1-hour daily max exceeds standard
	Annual	--	0.030	--	--		If exceeded
Pb	3-month avg.	--	--	--	1.5	--	If exceeded more than once a year

Source: CARB 2016

Toxic Air Contaminants (TACs)

Although Ambient Air Quality Standards exist for criteria pollutants, no ambient standards exist for TACs. Many pollutants are identified as TACs because of their potential to increase the risk of developing cancer or because of their acute or chronic health risks. For TACs that are known or

suspected carcinogens, CARB has consistently found that there are no levels or thresholds below which exposure is risk-free. Individual TACs vary greatly in the risk each presents. At a given level of exposure, one TAC may pose a hazard that is many times greater than another. For certain TACs, a unit risk factor can be developed to evaluate cancer risk. For acute and chronic health risks, a similar factor, called a Hazard Index, is used to evaluate risk. To date, CARB has identified 21 TACs, and has also adopted the EPA's list of hazardous air pollutants as TACs. Diesel particulate matter (DPM) was added to the CARB list of TACs in 1999 and Environmental Tobacco Smoke was added in 2007 (CARB 2011).

The Vista and Buena Sanitation District facilities do not currently generate substantial sources of TAC emissions that could pose or contribute to a health risk. No sewer facilities are currently listed within the 2014 Air Toxics "Hot Spots" Program Report for San Diego County (SDAPCD 2015). The "Hot Spots" report lists the facilities in the county that are required to prepare health risk assessments (HRA) due to their generation of TACs, as well as the results of their annual HRAs. Companies and organizations listed within the report are those considered to pose possible health risks to the community of San Diego County with regards to TACs.

Air Quality Monitoring Data and Thresholds

The San Diego Air Pollution Control District (SDAPCD) operates a network of ambient air monitoring stations throughout San Diego County. The purpose of the monitoring stations is to measure ambient concentrations of the pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. The closest monitoring stations to the Study Area are the Camp Pendleton Station and the Escondido–East Valley Parkway Monitoring Station. Pollutant concentrations measured at the Escondido monitoring station provide a more conservative estimate of background ambient air quality than the Camp Pendleton Station because the Escondido monitoring station is located in an area where there is more traffic congestion. Concentrations of pollutants over the most recently available 5 years (2011–2015) from the Escondido monitoring station are presented in Table 4.1-2 Certain pollutants, including sulfur dioxide (SO_2) and lead (Pb), are not measured at the Escondido monitoring station and have been compiled from the closest stations with available data over the 2011-2015 time period, located in El Cajon and Carlsbad, respectively.

Table 4.1-2 Ambient Background Concentrations of Air Pollutants (2011-2015)

(parts per million (ppm) unless otherwise indicated)

Pollutant	Averaging Time	2011	2012	2013	2014	2015	CAAQS Threshold	NAAQS Threshold	Monitoring Station
Ozone (O_3)	1-hour	0.098	0.084	0.084	0.099	0.079	0.09	--	Escondido
	8-hour	0.089	0.074	0.075	0.080	0.071	0.070	0.070	Escondido
PM_{10} (ug/m^3)	24-hour	40.0	33.0	82.0	44.0	31.0	50	150	Escondido
	Annual	18.8	18.1	23.1	21.5	*	20	--	Escondido
$PM_{2.5}$ (ug/m^3)	24-hour	27.4	70.7	56.3	77.5	29.4	--	35	Escondido
	Annual	10.4	10.6	11.0	10.0	*	12.0	15.0	Escondido
NO_2 (ppb)	1-hour	49	51	51	55	46	0.18 ppm	100	Escondido
	Annual	13.32	12.94	12.15	11.2	10.06	0.030 ppm	0.053 ppm	Escondido

Table 4.1-2 Ambient Background Concentrations of Air Pollutants (2011-2015)

(parts per million (ppm) unless otherwise indicated)

Pollutant	Averaging Time	2011	2012	2013	2014	2015	CAAQS Threshold	NAAQS Threshold	Monitoring Station
CO	1-hour	3.5	4.4	3.2	3.8	3.1	20	35	Escondido
	8-hour	2.3	3.8	2.6	3.1	2	9	9	Escondido
Pb (ug/m^3)	3-month avg.	*	0.17	0.12	0.01	0.02	--	0.15	Carlsbad
SO_2 (ppb)	1-hour	1.2	1.6	6.5	1.2	1.2	250	75	El Cajon
	Annual	0.17	0.16	0.14	0.10	0.11	--	30	El Cajon

Notes and Sources: CARB 2016; CARB 2017; U.S. EPA 2017a
Data not available

Concentrations of 1-hour ozone exceeded the CAAQS threshold for only 2 of the years from 2011-2015, but 8-hour ozone CAAQS and NAAQS were exceeded all 5 years. The NAAQS were not exceeded for any of the years for PM_{10}, but CAAQS were exceeded 2 years for PM_{10}.

The monitored 24-hour $PM_{2.5}$ values exceeded NAAQS in 3 of the years between 2011 and 2015. However, no violation of the NAAQS occurred because the 24-hour $PM_{2.5}$ monitored data are averaged over a 3-year period. The 24-hour $PM_{2.5}$ standard is attained because at least 98 percent of the daily monitoring data are below the daily and annual attainment NAAQS.

Neither the 8- nor 1-hour CO NAAQS and CAAQS were exceeded any of the reported years. Similarly, neither the 1-hour nor annual NO_2 NAAQS and CAAQS were exceeded any of these years.

Attainment Status

The California Clean Air Act (CCAA) requires CARB to designate areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous 3 calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard and are not used as a basis for designating areas as nonattainment.

If a pollutant concentration is lower than the state or federal standard, the area is classified as being in attainment for that pollutant. If a pollutant violates the standard, the area is considered a nonattainment area. If data are insufficient to determine whether a pollutant is violating the standard, the area is designated unclassified. San Diego County is classified as a nonattainment area for the state 1-hour ozone standard, the federal and state 8-hour ozone standards, and the state PM_{10} and $PM_{2.5}$ standards. San Diego County is in attainment for federal $PM_{2.5}$, state and federal CO and state and federal NO_2, SO_2, and lead standards, as well as the state sulfates standard (SDAPCD 2017a).

Sensitive Receptors

Sensitive land uses are defined as locations where particularly pollutant-sensitive members of the population may reside or where the presence of air pollutant emissions could adversely affect the use of the land. Sensitive members of the population include those who may be more negatively impacted by poor air quality than other members of the population, such as children, the elderly, or the infirmed. CARB has identified the following people as the most likely to be affected by air pollution: children younger than 14, the elderly older than 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of sensitive population groups include residential areas, hospitals, daycare facilities, elder-care facilities, elementary schools, and parks.

4.1.3 Regulatory Framework

This section updates the description of the federal, state, and local regulatory framework adopted for the purposes of protecting air quality as identified in the 2008 SMPU PEIR.

Federal

Clean Air Act

The Clean Air Act (CAA) was first enacted in 1963 and has been amended numerous times in subsequent years (1965, 1967, 1970, 1977, and 1990). The CAA establishes federal air quality standards, and specifies future dates for achieving compliance. The CAA also mandates that the state submit and implement a State Implementation Plan (SIP) for local areas not meeting those standards. The plans must include pollution control measures that demonstrate how the standards will be met. The Study Area is within the SDAB and, as such, is in an area designated as nonattainment for certain pollutants that are regulated under the CAA.

The 1990 amendments to the CAA identify specific emission-reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or meet interim milestones. Table 4.1-2 shows the NAAQS currently in effect for each criteria pollutant. The NAAQS were amended in July 1997 to include an 8-hour standard for ozone and adopt a NAAQS for fine $PM_{2.5}$.

The SDAB fails to meet national standards for ozone and therefore is considered a federal nonattainment area for that pollutant. The SDAB is designated attainment or unclassified for federal standards for all other pollutants (SDAPCD 2017a).

State

California Clean Air Act

In California, CARB, which became part of the California Environmental Protection Agency (Cal EPA) in 1991, is responsible for meeting the state requirements of the federal CAA, administering the CCAA, and establishing the CAAQS. The CCAA, as amended in 1992, requires all air districts in the state to endeavor to achieve and maintain the CAAQS. The CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

The CARB regulates mobile air pollution sources, such as motor vehicles. The agency is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. The CARB established passenger vehicle fuel specifications, which became effective in March 1996. The CARB oversees the functions of local air pollution control districts and air quality management districts, which in turn administer air quality activities at the regional and county levels.

The CCAA was signed into law on September 30, 1988, and became effective on January 1, 1989. The act outlines a program to attain the CAAQS by the earliest practical date, and requires that local air districts implement regulations to reduce emissions from mobile sources through the adoption and enforcement of transportation control measures. The CCAA required the SDAB to achieve a 5 percent annual reduction in ozone precursor emissions from 1987 until the standards are attained. If this reduction cannot be achieved, all feasible control measures must be implemented. Furthermore, the CCAA required local air districts to implement a Best Available Control Technology rule and to require emission offsets for nonattainment pollutants. Because the CAAQS are more stringent than the NAAQS, attainment of the CAAQS will require more emissions reductions than what would be required to show attainment of the NAAQS. Consequently, the main focus of attainment planning in California has shifted from the federal to state requirements. Similar to the federal system, the state requirements and compliance dates are based on the severity of the ambient air quality standard violation within a region. Table 4.1-2 shows the CAAQS currently in effect for each criteria pollutant.

The SDAB is currently designated nonattainment for state 1- and 8-hour ozone, PM_{10}, and $PM_{2.5}$ standards. The SDAB is designated attainment or unclassified for all other pollutants (SDAPCD 2017a).

California Toxic Air Contaminants Regulations

California regulates TACs primarily through the Tanner Air Toxics Act (AB 1807—Tanner Act) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588—Hot Spots Act). The Tanner Act sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB designates a substance as a TAC. To date, CARB has identified 21 TACs, and has also adopted EPA's list of Hazardous Air Pollutants (HAPs) as TACs. Since August 1998, diesel particulate matter (DPM) was added to the CARB list of TACs in 1999 and Environmental Tobacco Smoke was added in 2007 (CARB 2011).

The Hot Spots Act requires that existing facilities that emit toxic substances above specified levels: (1) prepare a toxic emission inventory, (2) prepare a risk assessment if emissions are significant (i.e., 10 tons per year or on the Air District's Hot Spots Risk Assessment list), (3) notify the public of significant risk levels, and (4) prepare and implement risk reduction measures.

In September 2000, CARB approved the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. The plan outlined a comprehensive program that included the development of numerous new control measures over the next several years aimed at substantially reducing emissions from new and existing on-road vehicles (e.g., heavy-duty trucks and buses), off-road equipment (e.g., graders, tractors, forklifts, sweepers, and boats), portable equipment (e.g., pumps), and stationary engines (e.g., stand-by power generators).

CARB has adopted several regulations that will reduce diesel emissions from in-use vehicles and engines throughout California, including the In-Use Off-Road Diesel Fueled Fleets Regulation which

uses the Diesel Off-Road Online Reporting System (DOORS) to report relevant vehicles to CARB, and the New Off-Road Compression-Ignition (Diesel) Engines and Equipment certification. In some cases, the particulate matter reduction strategies also reduce smog-forming emissions such as NO_X (CARB 2012). As an ongoing process, CARB reviews air contaminants and identifies those that are classified as TACs.

Regional

San Diego Air Pollution Control District

The local air pollution control district (APCD) has the primary responsibility for the development and implementation of rules and regulations designed to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, development of air quality management plans, and adoption and enforcement of air pollution regulations. The SDAPCD is the local agency responsible for the administration and enforcement of air quality regulations in San Diego County. The SDAPCD is responsible for monitoring air quality, as well as planning, implementing, and enforcing programs designed to attain and maintain state and federal ambient air quality standards within the SDAB. Programs it has developed include air quality rules and regulations that regulate stationary, area, point, and certain mobile-source emissions. The SDAPCD is also responsible for establishing permitting requirements for stationary sources and ensuring that new, modified, or relocated stationary sources do not create net emission increases and, therefore, continue to meet the region's air quality goals.

Regional Air Quality Strategy and State Implementation Plan

All areas designated as nonattainment under the CCAA are required to prepare plans showing how the area would meet the state and federal air quality standards by its attainment dates. The San Diego County Regional Air Quality Strategy (RAQS) is the region's plan for improving air quality in the region, while the State Implementation Plan (SIP) addresses the federal requirements, such as the CAA and CCAA requirements, and demonstrates attainment with ambient air quality standards.

The SDAPCD and the San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The RAQS was initially adopted in 1991, and is updated on a triennial basis. The RAQS was updated in 1995, 1998, 2001, 2004, 2009, and most recently in 2016. The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for 1-hour ozone. It does not address the state air quality standards for PM_{10} or $PM_{2.5}$ (SDAPCD 2017b).

The SDAPCD has also developed the air basin's input to the SIP, which is required under the federal CAA for areas that are out of attainment of air quality standards. The SIP includes the SDAPCD's plans and control measures for attaining the ozone NAAQS, and also is updated on a triennial basis. For the 8-hour ozone standard, the SDAPCD submitted its 2008 Eight-Hour Ozone Attainment Plan in December 2016, calling for emission control measures to continue reducing ozone concentrations throughout San Diego County to the level of the 2008 eight-hour ozone NAAQS by the conclusion of the 2017 ozone season (SDAPCD 2017b).

The SDAPCD also is responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and state air quality laws. All development projects within Vista may be subject to the following SDAPCD rules (as well as others):

- Rule 50—Visible Emissions: establishes limits to the opacity of emissions within the SDAPCD.
- Rule 51—Nuisance: prohibits emissions that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or which endanger the comfort, repose, health, or safety of any such persons or the public; or which cause injury or damage to business or property.
- Rule 52—Particulate Matter: establishes limits to the discharge of any particulate matter from non-stationary sources.
- Rule 54—Dust and Fumes: establishes limits to the amount of dust or fume discharged into the atmosphere in any 1 hour.
- Rule 55—Fugitive Dust Control: sets restrictions on visible fugitive dust from construction and demolition projects.
- Rule 67—Architectural Coatings: establishes limits to the volatile organic compound (VOC) content for coatings applied within the SDAPCD.

4.1.4 Project Impacts

Methodology

Air quality emissions that would result from implementation of the proposed project are estimated using the CalEEMod Model, Version 2016.3.1. CalEEMod quantifies emissions from construction and operation activities (including vehicle use), in annual and daily amounts. Emissions are quantified based on the construction information in Chapter 3, Project Description, and additional information provided by the City. Where project-specific information is not available, model default values are assumed. Complete model inputs and outputs are provided in Appendix D.

This analysis considers the category components of the 2017 CSMP identified in Section 4.0.1. Because compliance with applicable existing laws, regulations, and ordinances is mandatory, the analysis assumes that future projects covered under the CSMP would comply with all applicable regulations related to air quality emissions as described in Section 4.1.3.

Thresholds of Significance

Based on the State CEQA Guidelines Appendix G and existing City policies and regulations, a project would result in a significant air quality impact if it would:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.

Impact Analysis

IMPACT 4.1-1	Would the 2017 CSMP conflict with an applicable air quality plan?

CATEGORIES 1, 2, 3, and 4

Direct Effects – Construction and Operation: Based on Appendix G of the CEQA Guidelines, an impact would be considered significant if implementation of the 2017 CSMP would result in a conflict with or obstruct implementation of the San Diego County RAQS or applicable portions of the SIP. Projects that are consistent with existing General Plan documents, which are used to develop air emissions budgets for the purpose of air quality planning and attainment demonstrations, would be consistent with the RAQS and the SIP. To be consistent with the existing General Plan, the project must propose the same or less development as accounted for in the General Plan. If General Plan consistency is demonstrated, the project would be in compliance with applicable rules and regulations adopted by the SDAPCD through its air quality planning process, and the project would not conflict with or obstruct implementation of the RAQS or SIP.

As explained in Section 4.7, Land Use and Planning, implementation of the 2017 CSMP would be consistent with the General Plans for the Cities of Vista, Oceanside, Carlsbad, and San Marcos as well as the San Diego County General Plan and North County Metro Subregional Plan. The latest SANDAG growth forecasts were used to develop assumptions about future growth and associated sewer infrastructure needs in the Study Area. As a result, the 2017 CSMP would be in compliance with applicable rules and regulations adopted by the SDAPCD, and would not conflict with or obstruct implementation of the RAQS or SIP. Consequently, the proposed 2017 CSMP would be consistent with applicable air quality plans and a less than significant impact would result.

Indirect Effects: The improvement projects identified in the 2017 CSMP would provide the infrastructure necessary to accommodate planned growth; they would not generate any additional population growth, nor would they serve unplanned growth. As result, no impact would result.

IMPACT 4.1-2	Would the 2017 CSMP violate any air quality standard or contribute substantially to an existing or projected air quality violation?

CATEGORIES 1, 2, 3, and 4

To determine whether a project would (a) result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation; or (b) result in a cumulatively considerable net increase of PM_{10} or exceed quantitative thresholds for ozone precursors (NO_X and VOCs), project emissions may be evaluated based on the quantitative emission thresholds established by the SDAPCD. As part of its air quality permitting process, the SDAPCD has established thresholds in Rule 20.2 for the preparation of Air Quality Impact Assessments (AQIA). Because SDAPCD does not have AQIA thresholds for emissions of $PM_{2.5}$ and VOCs, it is appropriate to use the County of San Diego's Guidelines for Determining Significance (San Diego County, Land Use & Environment Group 2007) as thresholds for these pollutants. The screening thresholds are listed in Table 4.1-3.

Table 4.1-3. Screening Level Criteria Thresholds for Air Quality Impacts

Pollutant	Emission Rate		
	(pounds/hour)	(pounds/day)	(tons/year)
PM_{10}	--	100	15
$PM_{2.5}$		55	10
NO_X	25	250	40
SO_X	25	250	40
CO	100	550	100
Pb	--	3.2	0.6
VOC	--	75	13.7

Sources: SDAPCD Regulation II, Rule 20.2; San Diego County Land Use & Environment Group 2007
PM_{10} – Particulate Matter less than 10 microns
$PM_{2.5}$ – Particulate matter less than 2.5 microns
NO_X – Oxides of Nitrogen
SO_X – Oxides of Sulfur
CO – Carbon Monoxide
Pb – Lead and lead compounds
VOC – Volatile organic compounds

The thresholds listed in Table 4.1-3 represent screening-level thresholds that can be used to evaluate whether project-related emissions could cause a significant impact on air quality. Emissions below the screening-level thresholds would not cause a significant impact. For nonattainment pollutants (PM_{10} and ozone precursors NO_X and VOCs), if emissions exceed the thresholds shown in Table 4.1-3, the proposed project could have the potential to result in a cumulatively considerable net increase in these pollutants and thus could have a significant impact on the ambient air quality.

Direct Effects – Construction. The purpose of this analysis is a programmatic estimate of worst-case maximum daily construction emissions from the proposed 2017 CSMP based on the construction methods described in Section 3, Project Description, and available information provided by the City regarding existing energy use. Details of individual construction projects are not currently available; however, the City developed a conservative construction scenario, as described in Chapter 3, based on past experience. Additionally, a schedule for implementation of the individual improvements included in the 2017 CSMP has not yet been established. However, it is anticipated that implementation of the near-term projects would occur incrementally starting in 2018 and 2019.

For the purposes of this conservative, worst-case analysis, it is assumed that all near-term capacity-related conveyance improvements, up to 11,781 feet of pipeline installation, would occur in a single year. It is assumed that condition-related improvements would be phased over the 20-year forecast period, so that a total of 4,252 feet of pipeline would be rehabilitated or replaced beginning in year 2018, and then continuing at that approximate pace from that point forward. It is currently unknown what type, or types of trenchless construction methods would be required for each pipeline segment, therefore a disturbance area of 20 feet in width, which is similar to installation of smaller pipelines is assumed for the length of the condition-related pipelines. It is assumed that construction would be phased in linear segments with a portion being started and completed each day. Therefore, the entire construction fleet for all pipeline-related construction activities would be onsite

for the duration of construction, although only a few individual pieces of equipment would be operating simultaneously.

Construction of one pump station improvement project and one access road improvement are also assumed to occur in 2018 for this worst-case analysis. Improvements to the BVPS are assumed because it is the largest pump station. It is conservatively assumed that the pump station would be demolished and completely reconstructed. It is also assumed that no new interior coating would be required, but two new coats of exterior architectural coating would be required. Construction of pump station improvements would last approximately 6 months. Based on Figure 3-16, is assumed that approximately 2,300 feet of access roadway would be constructed, with a permanent disturbance area of approximately 20 feet wide. The construction duration would be approximately 2 months.

It is assumed that pipeline projects would be on-going for the entire year 2018. Two construction crews of up to 15 workers each are assumed for each project. A maximum of 10 daily truck trips for material import and export is anticipated for each project. Up to two projects would occur simultaneously; therefore, the worst-case construction scenario would be construction of either the pump station or access road simultaneously with a pipeline project. Estimated worst-case maximum daily emissions from improvements proposed for construction under the 2017 CSMP are reported in Table 4.1-4. These estimates reflect compliance with SDAPCD rules and regulations.

Table 4.1-4. Worst-Case Construction Criteria Pollutant Emissions

Construction Activity	Criteria Air Pollutants (pounds per day)					
	VOC	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Pipeline Installation	5	53	29	<1	9	6
Pump Station						
Demolition	*4*	*39*	*23*	*<1*	*3*	*2*
Earthwork	*3*	*31*	*18*	*<1*	*9*	*5*
Construction	*3*	*24*	*19*	*<1*	*2*	*1*
Architectural Coating	*24*	*2*	*3*	*<1*	*<1*	*<1*
Access Road Construction	6	60	35	<1	12	8
Worst-Case Simultaneous Construction						
Pipeline Installation + Access Road[a]	29[a]	113	64	<1	21	14
Significant Impacts						
Threshold	75	250	550	250	100	55
Significant Impact?	No	No	No	No	No	No

Source: CalEEMod Version 2016.3.1 See Appendix D for model input and output.

[a] The worst-case scenario for all pollutants is pipeline installation simultaneous with access road construction, with the exception of VOCs. For this pollutant, the worst-case scenario of pipeline installation with pump station coating is reported.

As shown in Table 4.1-4, worst-case emissions associated with construction of the 2017 CSMP improvements are below the significance thresholds. Therefore, the emissions associated with construction of the proposed 2017 CSMP improvements would result in a less than significant impact on ambient air quality or any cumulatively considerable net increase of non-attainment pollutants including PM_{10}, NO_X and VOCs.

Direct Effects – Operations. Most of the projects associated with the 2017 CSMP would be passive-flowing (or gravity driven), new or upgraded pipelines, which would not result in any new sources of operational air pollution. Likewise, existing pump station rehabilitation and access road improvements would improve existing facility operations and no net increase in operational emissions would occur, once constructed. As explained in Chapter 3, Project Description, ongoing maintenance would involve vehicle trips to inspect sewer facilities. Based on information provided by the City, it is assumed that long-term maintenance would involve up to 15 workers travelling to existing and proposed facilities, resulting in an average of 30 daily trips. It is assumed that the average trip length would be 15 miles. The results of the operational analysis are presented in Table 4.1-5.

Table 4.1-5. Worst-Case Operation Criteria Pollutant Emissions

(pounds/day)

O&M Program	Criteria Air Pollutants (pounds per day)					
	VOC	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Vehicle Trips	<1	<1	1	<1	<1	<1
Threshold	75	250	550	250	100	55
Significant Impact?	No	No	No	No	No	No

Source: CalEEMod Version 2016.3.1 See Appendix D for model input and output.

As shown in Table 4.1-5, air pollution emissions from ongoing maintenance activities would be well below the significance thresholds for all pollutants. Based on the anticipated vehicle trips generated by the proposed 2017 CSMP, exceedance of federal and State air quality thresholds is not expected to occur with the implementation of future operations. Therefore, future 2017 CSMP operations would result in a less than significant impact on ambient air quality and no cumulatively considerable net increase of non-attainment pollutants, including PM_{10}, NO_X and VOCs.

Indirect Effects. Implementation of the proposed 2017 CSMP would not result in any indirect criteria pollutant emissions. As described under Impact 4.1.4, the proposed 2017 CSMP would serve planned development. It would not induce growth or serve unplanned growth that would result in additional criteria pollutant emissions. A less than significant impact would occur.

IMPACT 4.1-3	Would the 2017 CSMP expose sensitive receptors to substantial pollutant concentrations?

CATEGORIES 1, 2, 3, and 4

Direct Impacts – Construction and Operations. With regard to evaluating whether a project would have a significant impact on sensitive receptors, air quality regulators typically define sensitive receptors as schools (preschool-12th grade), hospitals, resident care facilities, or day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. Any project which has the potential to directly impact a sensitive receptor located within 12 mile and results in a health risk greater than 10 in 1 million would be deemed to have a potentially significant impact.

Sensitive receptors, including residences, schools, hospitals, or day care centers, may be found around and adjacent to the entire individual improvements contemplated under the 2017 CSMP. However, as discussed in Impact 4.1-2, air emissions that could occur from both construction and operation of the projects identified in the 2017 CSMP would be well below significance thresholds. Furthermore, the existing sewer facilities do not generate substantial sources of TAC emissions that could pose or contribute to a health risk. No sewer facilities are currently listed within the 2014 Air Toxics "Hot Spots" Program Report for San Diego County (SDAPCD 2015). Therefore, impacts to sensitive receptors would be less than significant.

Indirect Effects. As presented in Table 4.1-4, activities proposed under the 2017 CSMP would not indirectly or incrementally contribute to significant emissions of PM-10 or PM-2.5. As a result, indirect health risk impacts resulting from the 2017 would be less than significant.

IMPACT 4.1-4	Would the 2017 CSMP create objectionable odors affecting a substantial number of people?

CATEGORIES 1, 2, 3, and 4

According to CEQA Guidelines, a project that proposes a use which would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors.

Direct Effects – Construction. CARB's Air Quality and Land Use Handbook (CARB 2005) includes a list of the most common sources of odor complaints received by local air districts. Typical sources of odor complaints include facilities such as sewage treatment plants, landfills, recycling facilities, petroleum refineries, and livestock operations. Construction activities are not a typical source of odor complaints.

During construction, diesel equipment operating at the project sites could potentially generate some nuisance odors. However, due to the temporary and short-term nature of construction in any single location, and the tendency for odors (e.g., diesel exhaust) to dissipate within very short distances, odors associated with construction would be less than significant.

Direct Effects – Operations. Based on the CARB's Air Quality and Land Use Handbook (2005) list of common odor complaints, sewer facilities have the potential to cause objectionable odors. The

proposed pipelines transport raw sewage; however, the pipelines are sealed, underground, and would not release odors into the surrounding environment except at manholes, pump stations, or other ventilation locations. The capacity- and condition-related pipeline improvement projects would largely replace existing facilities and would not result in a new source of odors.

Each of the pump stations, except BVPS, operated by the City and District has an odor control unit that would remain in place, or be improved, following implementation of the proposed 2017 CSMP. As identified in Table 3-5 of Chapter 3, the City is proposing the installation of an odor control unit at BVPS as part of its O&M Program. Additionally, the City and District would continue to enforce odor controlling measures as part of its routine maintenance schedule. The City would continue to respond to any odor complaints with additional maintenance.

Furthermore, SDAPCD Rule 51 (Public Nuisance) prohibits the emission of any material which causes nuisance to a considerable number of persons or endangers the comfort, health or safety of any person. The SDAPCD responds to odor complaints by investigating the complaint to determine whether the odor violates SDAPCD Rule 51. The inspector takes enforcement action if the source is not in compliance with the SDAPCD rules and regulations (SDAPCD 2016). Therefore, odor impacts associated with new or expanded sewer facilities would be less than significant.

Indirect Effects. The proposed 2017 CSMP would not result in any indirect effects related to odor. The 2017 CSMP does not include any off-site components or facilitate any additional projects that would generate new sources of odor. No impact would occur.

4.1.5 Mitigation Measures

Impacts related to violations of air quality standards and exposure of sensitive receptors to substantial pollutant concentrations would be less than significant. No mitigation is required for the proposed 2017 CSMP.

4.1.6 Cumulative Impacts

The geographic scope for the analysis of cumulative impacts relative to criteria pollutants and air quality plans is the SDAB.

The RAQS and SIP address cumulative air quality impacts in the SDAB based on future growth predicted by SANDAG. SANDAG's future growth predictions are based on the general plans of local jurisdictions. For this reason, development consistent with the applicable general plan would also be consistent with the RAQS and SIP. Cumulative development within the SDAB is not anticipated to result in a significant impact in terms of conflicting with the RAQS and SIP because the majority of cumulative projects would be consistent with their respective general plans and the growth anticipated under the air quality management plans. As stated in Section 4.1.4, Issue 1, the projects identified in the 2017 CSMP are necessary to meet sewer infrastructure capacity needs forecasted using the latest growth data from SANDAG, the City, and neighboring jurisdictions, and would not result in or accommodate unplanned growth. Therefore, the 2017 CSMP, in combination with other cumulative projects, would not conflict with or obstruct implementation of the RAQS or SIP. No cumulative impact would occur.

The baseline cumulative impact to the SDAB due to air pollution emissions associated with basin-wide polluting activities is significant because San Diego County is already classified as a nonattainment area for the state 1-hour ozone standard, the federal and state 8-hour ozone

standards, and the state PM_{10} and $PM_{2.5}$ standards. According to the County of San Diego's Guidelines for Determining Significance for Air Quality (San Diego County, Land Use & Environment Group 2007)), a project would result in a cumulative impact if the proposed project, alone or in combination with the construction of another cumulative project, would exceed the significance thresholds listed in Table 4.1-3 during construction. During operation, a project would result in a significant cumulative impact if it would conflict with the RAQS or SIP during operation, or exceed the significance thresholds listed in Table 4.1-3.

As shown in Table 4.1-4, the worst-case construction scenario would not exceed the significance thresholds. The worst-case scenario assumes continuous pipeline construction in tandem with either a pump station rehabilitation project or an access road project. In reality, construction activities would likely be more geographically and temporally dispersed. Thus, air pollution emissions would be less than the worst-case scenario at any particular construction site. For these reasons, and due to the temporary nature of construction impacts, construction associated with implementation of the 2017 CSMP is not anticipated to result in a violation of significance thresholds. The 2017 CSMP would not result in a cumulatively considerable contribution to a cumulative air quality impact during construction.

As shown in Table 4.1-5, operational emissions associated with the proposed projects would not exceed the significance thresholds. Additionally, as discussed in Section 4.1.4, Issue 1, the proposed projects would not conflict with or obstruct the implementation of the RAQS or the SIP. The potential air pollution emissions associated with operation of the proposed projects would not obstruct the ability of the SDAB to eventually attain compliance with the CAAQS and NAAQS. Thus, the 2017 CSMP would not result in a cumulatively considerable contribution to a cumulative air quality impact from operation.

The geographic scope for the analysis of cumulative impacts relative to sensitive receptors is the Study Area because sensitive receptors (e.g., residences, schools, and hospitals) are interspersed throughout the area where the proposed 2017 CSMP projects would be carried out. Cumulative growth in the Study Area would have the potential to result in carbon monoxide hotspots. However, as discussed in Section 4.1.4, Issue 3, air emissions from project construction and operation, including emissions of carbon monoxide, would be well below significance thresholds. The overall net vehicle trips associated with the proposed projects would be negligible. Furthermore, the existing sewer facilities do not generate substantial sources of TAC emissions that could pose or contribute to a health risk. Therefore, the 2017 CSMP, together with other cumulative projects, would not result in a cumulatively considerable air quality impact on sensitive receptors.

The geographic scope for the analysis of cumulative impacts relative to objectionable odors is the area immediately surrounding the odor source. Objectionable odors are not cumulative in nature because the air emissions that cause the odors disperse beyond the odor source, making the odor less detectable. Furthermore, as discussed in Section 4.1.4, Issue 4, existing odor control devices and ongoing routine maintenance would control potential nuisance odors associated with the proposed projects. Cumulative projects would be required to comply with SDAPCD Rule 51 (Public Nuisance), as discussed above. Therefore, the 2017 CSMP, in combination with other cumulative projects, would not result in a significant cumulative impact associated with objectionable odors.

4.1.7 Significant and Unavoidable Impacts

Air quality effects associated with the proposed 2017 CSMP would not result in significant and unavoidable impacts.

4.2 Biological Resources

4.2.1 Introduction

This section provides an update to the existing conditions described in the 2008 PEIR for biological resources in the CSMP Study Area, including changes to applicable rules and regulations governing their protection, as adopted. These updates include changes to the extent and occurrence of special status biological species and their habitats (since 2008), and changes in species listing status.

The impact analysis considers these updates in the context of the proposed CSMP, as described in Chapter 3 of this document, the prior environmental analysis, which is incorporated by reference from Section 4.3 of the 2008 PEIR, and currently accepted biological mitigation avoidance and minimization practices.

4.2.2 Existing Conditions

Section 4.3 of the 2008 PEIR provides a description of existing conditions for the Study Area, including descriptions of vegetation communities, sensitive wetland and watershed areas, and special status species occurrences. Descriptions of the vegetation communities (from Holland 1986) and the San Diego Multiple Habitat Conservation Program (MHCP) are incorporated by reference; the following sections supplement the descriptions provided in the PEIR and provide updates, where applicable, based on current conditions.

Vegetation Communities

The 2008 PEIR identified the vegetation communities mapped within the Study Area and included descriptions of these communities (from Holland). These vegetation communities largely remained unchanged under current conditions and include the following:

- Disturbed Wetland
- Disturbed Habitat
- Urban/Developed
- Orchards and Vineyards
- Extensive Agriculture - Field/Pasture, Row Crops
- Field/Pasture
- Diegan Coastal Sage Scrub
- Southern Mixed Chaparral
- Valley and Foothill Grassland
- Non-Native Grassland
- Southern Coast Live Oak Riparian Forest
- Southern Cottonwood-Willow Riparian Forest
- Southern Sycamore-Alder Riparian Woodland
- Southern Riparian Scrub
- Coastal and Valley Freshwater Marsh
- Freshwater
- Eucalyptus Woodland

Figure 4.2-1 through Figure 4.2-5 depicts the probable limits of construction for components included in the 2017 CSMP overlaid on updated vegetation mapping (SANDAG 2011). Each of the above vegetation communities is described in the 2008 PEIR.

Figure 4.2-1. Updated Vegetation Mapping (Map 1 - Index)

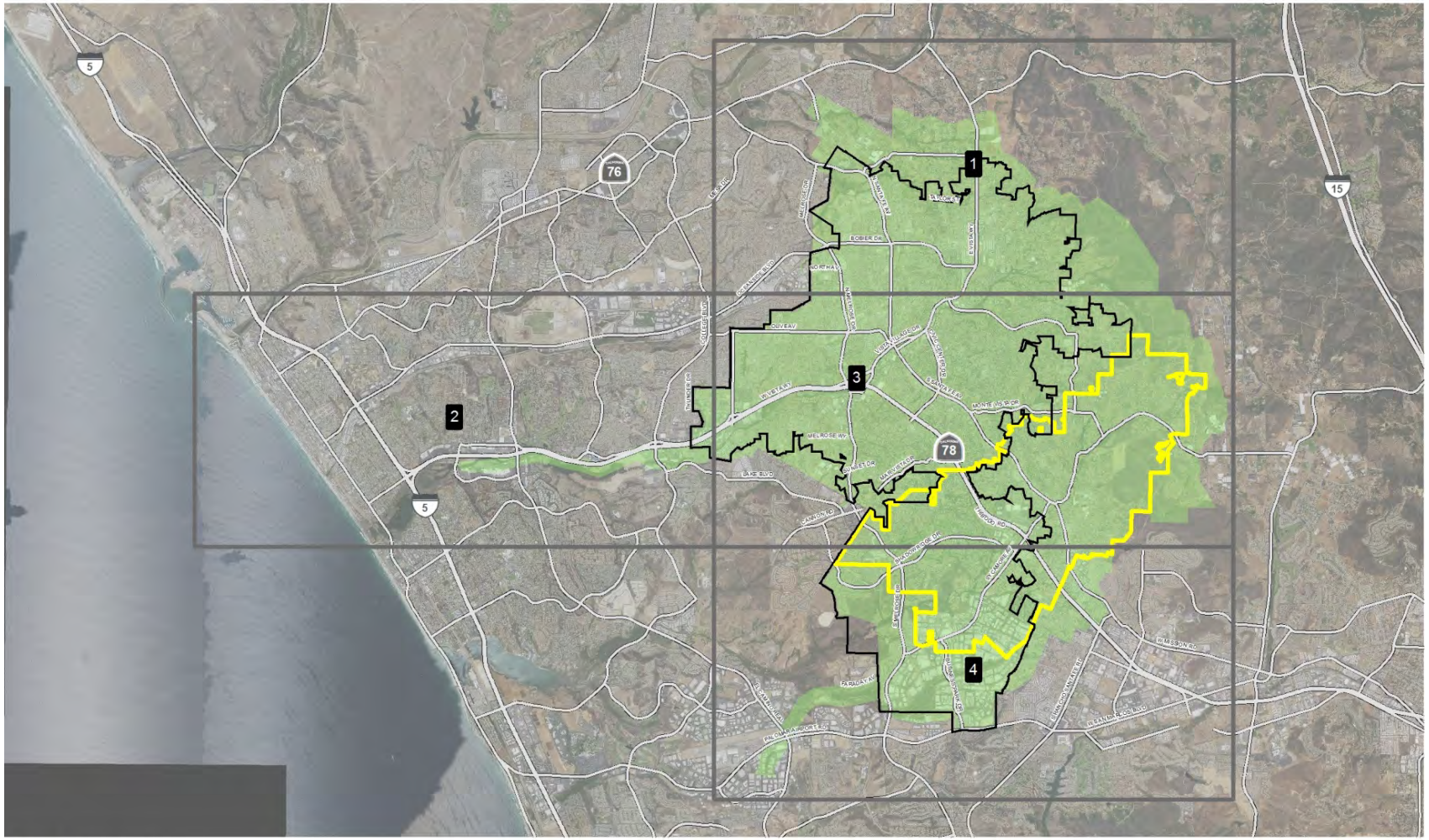


Figure 4.2-2. Updated Vegetation Mapping (Map 2)

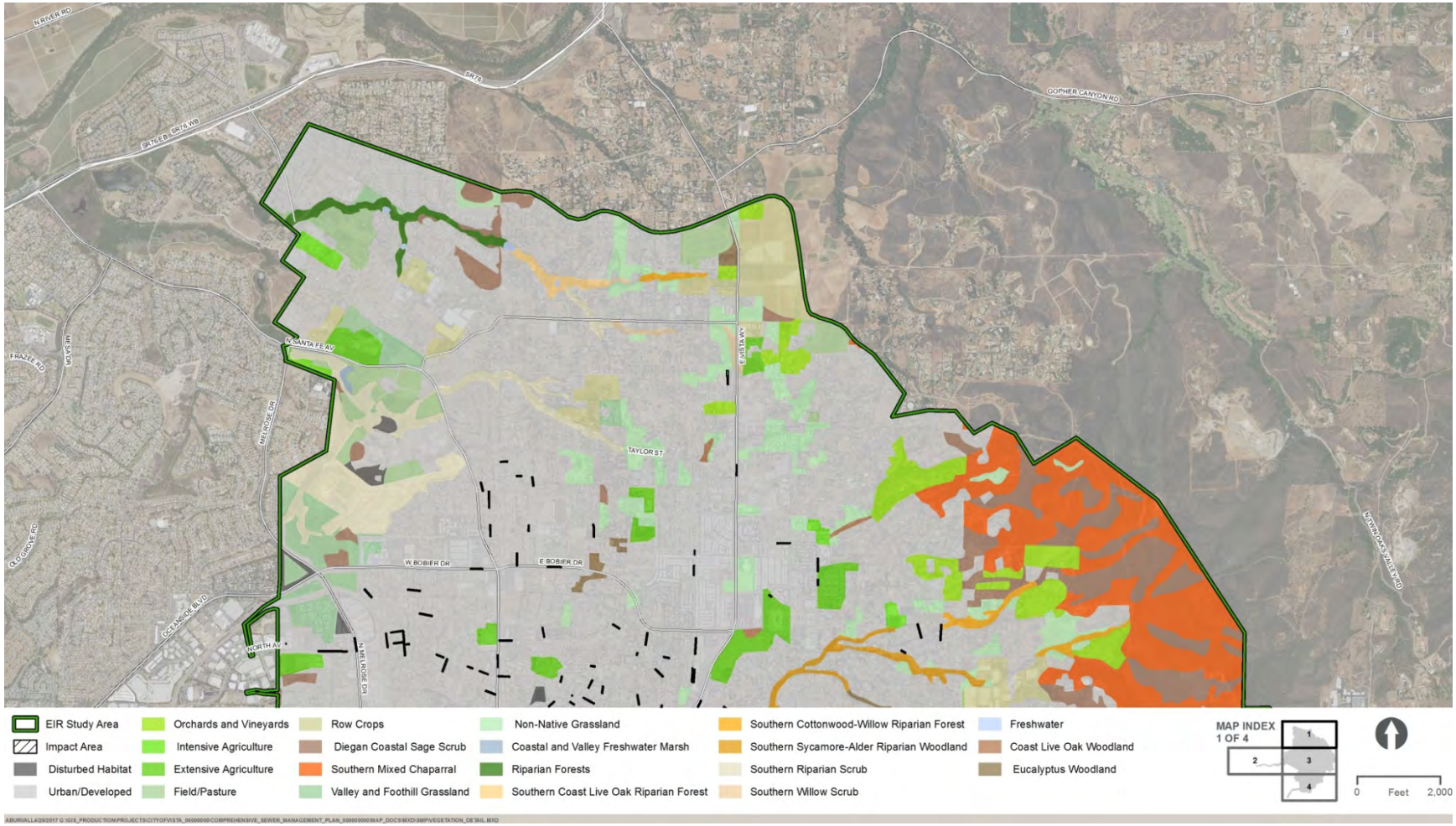


Figure 4.2-3. Updated Vegetation Mapping (Map 3)

Figure 4.2-4. Updated Vegetation Mapping (Map 4)

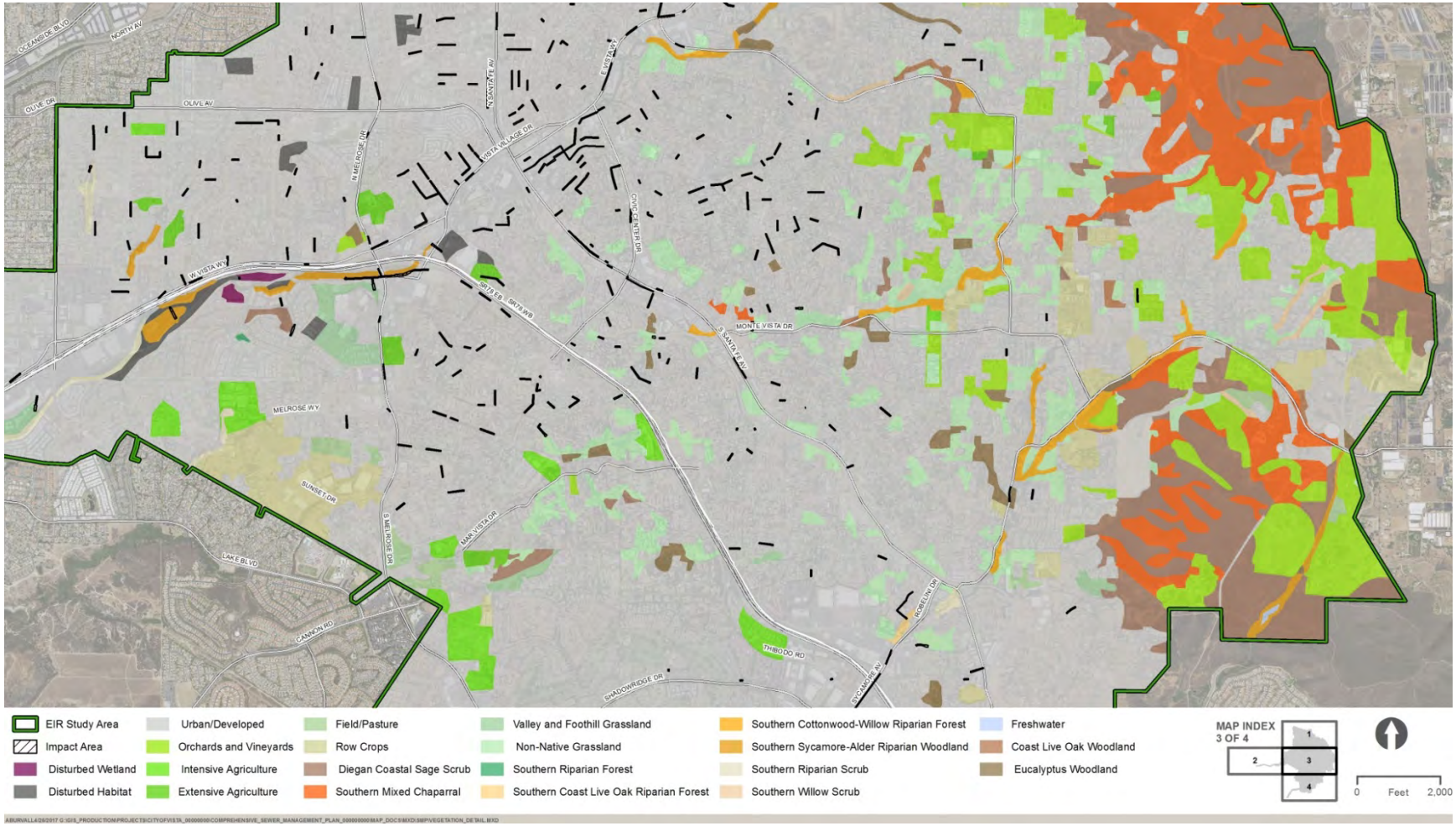
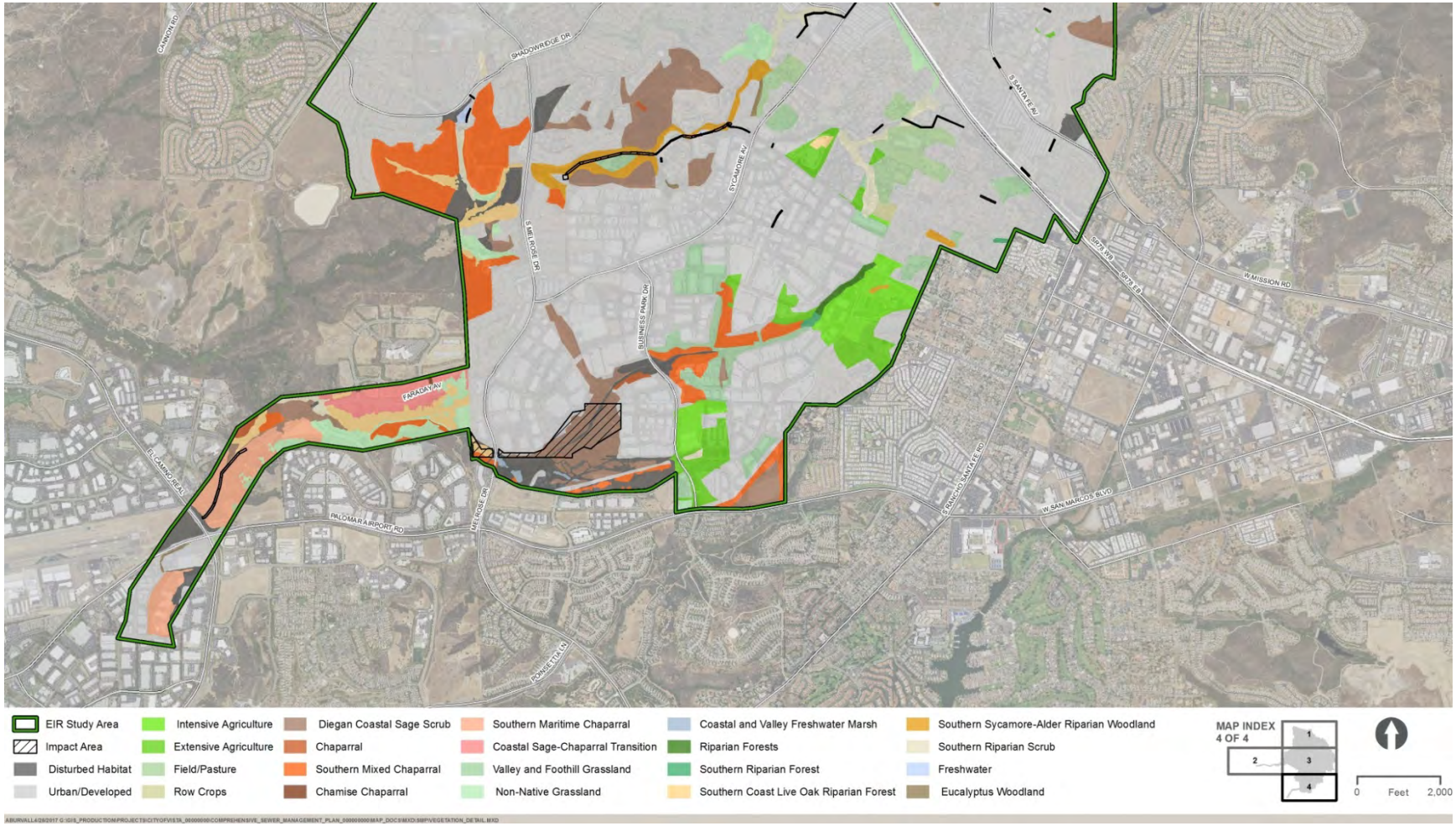


Figure 4.2-5. Updated Vegetation Mapping (Map 5)



Wetlands and Waters of the U. S. and State

The Study Area includes a combination of water features that would likely qualify as waters of the U.S., including wetland and other Waters of the U.S. pursuant to the Clean Water Act; subject to a jurisdictional delineation to identify the limits of the U. S. Army Corps of Engineers (USACE) jurisdiction. All potential USACE jurisdictional areas within the Study Area are also considered jurisdictional by the California Department of Fish and Wildlife (CDFW; previously the California Department of Fish and Game). CDFW jurisdiction is similar to that of USACE jurisdiction, but also extends to the top of the bank and encompasses riparian vegetation when present.

For the purposes of this program level analysis, portions (or all there of) the following vegetation communities may contain waters of the U. S. (and State) and/or wetlands: disturbed wetland, disturbed habitat, southern coast live oak riparian forest, southern cottonwood-willow riparian forest, southern sycamore-alder riparian woodland, southern riparian scrub, coastal and valley freshwater marsh, and freshwater. In general, these vegetation communities are closely associated with Mission, Buena Vista, and Agua Hedionda Creeks and related lagoons.

Ephemeral waters may also be located in these vegetation communities and are commonly demarcated by the blue line features contained in the National Hydrology Dataset produced by the U. S. Geological Survey. These features are illustrated in Figure 4.2-6.

Special-Status Plant Species

A list of special-status plant species that occur in the Study Area was compiled using resources including the California Natural Diversity Database (CNDDB 2017). For each species, habitat requirements were assessed and compared to vegetation communities/habitats present within the Study Area. Based on this review of habitat requirements, an assessment was made regarding the potential for a species to occur in the Study Area. Table 4.2-1 lists the sensitive plants that are known to exist or have a moderate potential to occur within one or more locations within the Study Area. Each sensitive plant species is listed with general vegetation habitat and environmental affiliations. Appendix E includes a complete list of plant species evaluated for potential to occur within the Study Area based on recorded sightings and including those species with low potential to occur within the Study Area.

Figure 4.2-7 illustrates the critical habitat areas for San Diego thorn mint, threaded-leaved brodiaea, spreading navarretia, and San Diego ambrosia. As shown, critical habitat areas are designed in the Study Area for San Diego thorn mint and threaded-leaved brodiaea.

Special-Status Wildlife Species

A list of special-status animal species that occur in the Study Area was compiled using resources including the California Natural Diversity Database (CNDDB 2017). For each species, habitat requirements were assessed and compared to vegetation communities/habitats present within the Study Area. Based on this review of habitat requirements, an assessment was made regarding the potential for a species to occur in the Study Area. Table 4.2-2 lists the sensitive wildlife species that are known to existing or have a moderate potential for occurrence within the Study Area. Each sensitive wildlife species is listed with general habitat affiliations. Appendix E includes a complete list of wildlife species evaluated for potential to occur within the Study Area based on recorded sightings and including those species with low potential to occur within the Study Area.

Figure 4.2-6. Environmentally Sensitive Areas and National Hydrology Dataset Waterways

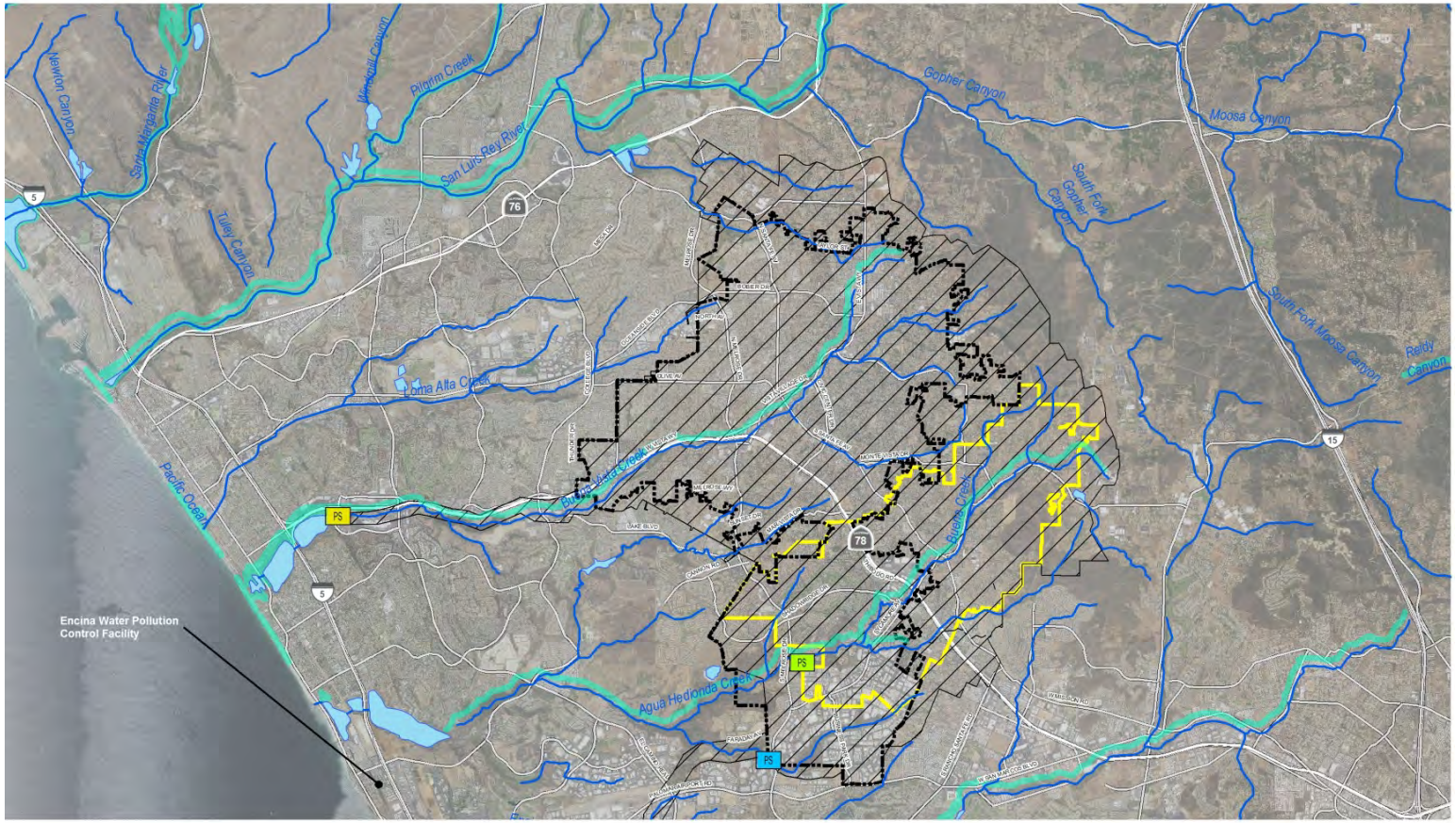


Table 4.2-1. Potential of Special Status Plant Species to Occur Within Study Area

Scientific Name	Common Name	Federal Status	Species Summary	2008 SMPU Inclusion	2017 CSMP Occurrence
APIACEAE (Carrot Family)					
Eryngium aristulatum var. *parishii*	San Diego buttoncelery	Federal: FE State: SE CRPR: 1B.1	Annual/perennial herb. Mesic soils in coastal scrub, valley and foothill grassland, and vernal pools from 66-2,034 ft. (20-620 m) AMSL. Blooms April-June.	Yes	Moderate Potential
Eryngium pendletonense	Pendleton button-celery	Federal: None State: None CRPR: 1B.1	Perennial herb. Occurs in clay, vernally mesic soils in coastal bluff scrub, valley and foothill grassland, and vernal pools from 49 to 360 ft. (15 to 110 m) AMSL. Blooms April-July.	No	Moderate Potential
ASTERACEAE (Sunflower Family)					
Ambrosia pumila	San Diego ambrosia	Federal: FE State: None CRPR: 1B.1	Perennial rhizomatous herb. Occurs in sandy loam or clay, often in disturbed areas, sometimes alkaline in chaparral, coastal scrub, valley and foothill grassland, and vernal pools from 65-1,361ft. (20 to 415 m) AMSL. Blooms from April-October.	Yes	Moderate potential
Baccharis vanessae	Encinitas baccharis	Federal: FT State: SE CRPR: 1B.1	Perennial deciduous shrub. Sandstone soils in chaparral (maritime) and cismontane woodland from 197-2,362 ft. (60-720 m) AMSL. Blooms August-November.	Yes	Moderate Potential in southern Maritime Chaparral only
Centromadia parryi ssp. *australis*	southern tarplant	Federal: None State: None CRPR: 1B.1	Annual herb. Margins of salt marshes, in vernally mesic grasslands, and vernal pools below 1,575 ft. (480 m) AMSL. Blooms May-November.	Yes	Moderate Potential (lagoon and drainage areas only)
Centromadia pungens ssp. *laevis*	smooth tarplant	Federal: None State: None CRPR: 1B.1	Annual herb. Per the MSHCP, suitable habitat for smooth tarplant includes alkali scrub, alkali playas, and grasslands with alkaline affinities below 2,099 ft. (640 m) AMSL. Blooms April-November.	Yes	Moderate Potential (drainage areas only)
Chaenactis glabriuscula var. *orcuttiana*	Orcutt's pincushion	Federal: None State: None CRPR: 1B.1	Annual herb. Occurs in sandy coastal bluff scrub and coastal dunes below 328 ft. (100 m) AMSL. Blooms January-August.	No	Low Potential based on lack of suitable habitat

Table 4.2-1. Potential of Special Status Plant Species to Occur Within Study Area

Scientific Name	Common Name	Federal Status	Species Summary	2008 SMPU Inclusion	2017 CSMP Occurrence
Corethrogyne filaginifolia var. *incana*	San Diego sand aster	Federal: None State: None CRPR: 1B.1	Perennial herb. Occurs in coastal bluff scrub, chaparral, and coastal scrub from 9 to 377 ft. (3 to 115 m) AMSL. Blooms June-September.	No	Moderate Potential
Corethrogyne filaginifolia var. *linifolia*	Del Mar Mesa sand aster	Federal: None State: None CRPR: 1B.1	Perennial herb. Occurs sandy soils in coastal bluff scrub, chaparral (maritime, openings), and coastal scrub from 49 to 492 ft. (15 to 150 m) AMSL. Blooms May-September.	Yes	Moderate Potential
Ericameria palmeri var. *palmeri*	Palmer's goldenbush	Federal: None State: None CRPR: 1B.1	Perennial evergreen shrub. Occurs in mesic soils in chaparral and coastal scrub from 98 to 1,968 ft. (30 to 600 m) AMSL. Blooms July-November.	No	Moderate Potential
Hazardia orcuttii	Orcutt's hazardia	Federal: None State: ST CRPR: 1B.1	Perennial evergreen shrub. Occurs in clay soils in maritime chaparral and coastal scrub from 262 to 279 ft. (80 to 85 m). Blooms August- October.	Yes	Moderate Potential
Heterotheca sessiliflora ssp. *sessiliflora*	beach goldenaster	Federal: None State: None CRPR: 1B.1	Perennial herb. Occurs in chaparral (coastal), coastal dunes, and coastal scrub below 4,019 ft. (1,225 m) AMSL. Blooms March-December.	No	Moderate Potential
Isocoma menziesii var. *decumbens*	Decumbent goldenbush	Federal: None State: None CNPS: 1B.2	Shrub. Occurs in sandy soils, often in disturbed areas in coastal scrub and chaparral from 30 to 440 ft. (10 to 135 m) AMSL. Blooms April-November.	Yes	Known to occur in Study Area
Iva hayesiana	San Diego marsh-elder	Federal: None State: None CNPS: 2B.2	Perennial herb. Occurs in marshes and playas from 30 to 1,600 ft. (10 to 500 m) AMSL. Blooms April-October.	Yes	Moderate Potential (drainage areas only)
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	Federal: None State: None CNPS: 1B.1	Annual herb. Occurs in alkaline soils in marshes, playas, vernal pools, and valley and foothill grasslands below 4,600 ft. (1,400 m) AMSL. Blooms February-June.	Yes	Moderate Potential (drainage areas only)

Table 4.2-1. Potential of Special Status Plant Species to Occur Within Study Area

Scientific Name	Common Name	Federal Status	Species Summary	2008 SMPU Inclusion	2017 CSMP Occurrence
Leptosyne maritima	sea dahlia	Federal: None State: None CNPS: 2B.2	Occurs in a variety of soil types, including sandstone, within coastal scrub and coastal bluff scrub from coastal San Diego County and Baja California from 15 to 500 ft. (5 to 150 m) AMSL. Blooms March-May.	No	Moderate Potential
Pseudognaphalium leucocephalum	white rabbit-tobacco	Federal: None State: None CRPR: 2B.2	Perennial herb. Occurs in sandy and gravelly soils in chaparral, cismontane woodland, coastal scrub, and riparian woodland below 6,889 ft. (below 2,100 m) AMSL. Blooms July- December.	No	Low Potential – based on known distribution of species
BORAGINACEAE (Borage Family)					
Cryptantha wigginsii	Wiggins' cryptantha	Federal: None State: None CRPR: 1B.2	Annual herb. Often occurs in clay soils in coastal scrub from 65 to 902 ft. (20 to 275 m) AMSL. Blooms February-June.	No	Moderate Potential
Nama stenocarpa	mud nama	Federal: None State: None CRPR: 2B.2	Annual/perennial herb. Occurs in marshes and swamps along lake margins, riverbanks and seasonal ponds from 16 to 1,640 ft. (5 to 500 m) AMSL. Blooms January-July.	No	Moderate Potential
CACTACEAE (Cactus Family)					
Ferocactus viridescens	San Diego barrel cactus	Federal: None State: None CRPR: 2B.1	Perennial stem succulent. Often on exposed, level or south-facing slopes within chaparral, coastal scrub, and grasslands below 1,500 ft. (460 m) AMSL. Blooms May- June.	Yes	Moderate Potential (common in sage scrub)
CHENOPODIACEAE (Goosefoot Family)					
Atriplex coulteri	Coulter's saltbush	Federal: None State: None CRPR: 1B.2	Perennial herb. Occurs in alkaline or clay soils in open sites, coastal bluff scrub, coastal scrub, and valley and foothill grassland from 10 to 1,509 ft. (3 to 460 m) AMSL. Blooms March-October.	No	Moderate Potential
Atriplex pacifica	south coast saltscale	Federal: None State: None CRPR: 1B.2	Annual herb. Occurs in alkaline soils in coastal sage scrub, playas, coastal bluff scrub, coastal dunes, and chenopod scrub from 600 to 1,400 ft. (200 to 430 m) AMSL. Blooms March-October.	Yes	Moderate Potential

Table 4.2-1. Potential of Special Status Plant Species to Occur Within Study Area

Scientific Name	Common Name	Federal Status	Species Summary	2008 SMPU Inclusion	2017 CSMP Occurrence
Atriplex parishii	Parish's brittlescale	Federal: None State: None CRPR: 1B.1	Annual herb. Occurs in alkaline or clay soils in chenopod scrub, playas, and vernal pools from 82 to 6,232 ft. (25 to 1,900 m) AMSL. Blooms June-October.	No	Low Potential – based on known distribution of species
Suaeda esteroa	estuary seablite	Federal: None State: None CRPR: 1B.2	Perennial herb. Occurs in coastal salt marshes and swamps below 16 ft. (5 m) AMSL. Blooms May-January.	No	Low Potential – based on lack of suitable habitat
CRASSULACEAE (Stonecrop Family)					
Dudleya blochmaniae ssp. *blochmaniae*	Blochman's dudleya	Federal: None State: None CRPR: 1B.1	Perennial herb. Occurs in dry rocky places, often on clay or serpentine soils, in chaparral, coastal sage scrub, or grassland below 1,500 ft. (450 m) AMSL. Blooms May- June.	Yes	Known to occur in Study Area
Dudleya multicaulis	Many stemmed dudleya	Federal: None State: None CRPR: 1B.2	Perennial herb. Occurs in heavy often clay soils around granitic outcrops in chaparral, coastal sage scrub and grasslands below 2,600 ft. (790 m) AMSL. Blooms April- July.	Yes	Moderate Potential
Dudleya variegate	variegated dudleya	Federal: None State: None CRPR: 1B.2	Perennial herb. Occurs in clay soils in chaparral, coastal scrub, vernal pools, valley and foothill grassland and cismontane woodlands from 10 to 1903 ft. (3 to 580 m) AMSL. Blooms April- June.	Yes	Moderate Potential
Dudleya viscida	sticky dudleya	Federal: None State: None CRPR: 1B.2	Perennial herb. Occurs in rocky soils in coastal bluff scrub, chaparral, cismontane woodland, and coastal scrub from 32 to 1,804 ft. (10 to 550 m) AMSL. Blooms May – June.	Yes	Known to occur in Study Area
ERICACEAE (Heath Family)					
Arctostaphylos glandulosa ssp. *crassifolia*	Del Mar manzanita	Federal: FE State: None CRPR: 1B.1	Perennial evergreen shrub. Occurs in sandy areas in maritime chaparral and coniferous forest, typically on coastal mesas and ocean bluffs below 1,200 ft. (365 m) AMSL. Blooms December-June.	Yes	Known to occur in Study Area
Arctostaphylos rainbowensis	rainbow manzanita	Federal: None State: None CRPR: 1B.1	Perennial evergreen shrub. Occurs in chaparral from 672 to 2,198 ft. (205 to 670 m) AMSL. Blooms December-March.	No	Moderate Potential

Table 4.2-1. Potential of Special Status Plant Species to Occur Within Study Area

Scientific Name	Common Name	Federal Status	Species Summary	2008 SMPU Inclusion	2017 CSMP Occurrence
Comarostaphylis diversifolia ssp. *diversifolia*	summer holly	Federal: None State: None CRPR: 1B.2	Perennial evergreen. Occurs in chaparral and cismontane woodland from 98 to 2,591 ft. (30 to 790 m) AMSL. Blooms April-June.	Yes	Known to occur in Study Area
EUPHORBIACEAE (Spurge Family)					
Euphorbia misera	cliff spurge	Federal: None State: None CRPR: 2B.2	Perennial shrub. Occurs in rocky soils in coastal bluff scrub, coastal scrub, and Mojavean desert scrub from 32 to 1,640 ft. (10 to 500 m) AMSL. Blooms December-October.	Yes	Known to occur in Study Area
FABACEAE (Pea Family)					
Acmispon prostratus	Nuttall's acmispon	Federal: None State: None CRPR: 1B.1	Annual herb. Occurs in coastal dunes and sandy coastal scrub below 32 ft. (10m) AMSL. Blooms March-July.	No	Not expected. No suitable habitat below 32 ft in elevation
FAGACEAE (Oak and Beech Family)					
Quercus dumosa	Nuttall's scrub oak	Federal: None State: None CRPR: 1B.1	Perennial evergreen shrub. Sandy and clay load soils in closed-cone coniferous forest, chaparral, and coastal scrub from 45 to 1,312 ft. (15 to 400 m) AMSL. Blooms January-April.	Yes	Known to occur in Study Area
LAMIACEAE (Mint Family)					
Acanthomintha ilicifolia	San Diego thorn-mint	Federal: FT State: SE CRPR: 1B.1	Annual herb. Occurs is vertisol clay soils of mesas and valleys within grasslands, chaparral, coastal scrub and vernal pool communities from 20 to 3,200 ft. (10 to 960 m) AMSL. Blooms April-June.	Yes	Known to occur in Study Area
Lepechinia cardiophylla	heart-leaved pitcher sage	Federal: None State: None CRPR: 1B.2	Perennial herb. Occurs in closed-cone coniferous forest, chaparral, and cismontane woodland from 1,706 to 4,494 ft. (520 to 1,370 m) AMSL. Blooms April-July.	No	Low Potential – Based on elevation range of the Study Area
Monardella hypoleuca ssp. *intermedia*	intermediate monardella		Perennial rhizomatous herb. Occurs in the understory of chaparral, cismontane woodland, and lower montane coniferous forest from 1,312 to 4,101 ft. (400 to 1,250 m) AMSL. Blooms April-September.	No	Low Potential – based on known distribution of the species

Table 4.2-1. Potential of Special Status Plant Species to Occur Within Study Area

Scientific Name	Common Name	Federal Status	Species Summary	2008 SMPU Inclusion	2017 CSMP Occurrence
Monardella hypoleuca ssp. *lanata*	Felt-leaved monardella	Federal: None State: None CRPR: 1B.2	Occurs in chaparral and cismontane woodlands from 1,000 to 5,200 ft. (300 to 1,575 m) AMSL. Blooms June- August.	Yes	Known to occur in Study Area
Salvia munzii	Munz's sage	Federal: None State: None CRPR: 2B.2	Perennial evergreen shrub. Occurs in chaparral and coastal scrub from 377 to 3,494 ft. (115 to 1,065 m) AMSL. Blooms February-April.	No	Moderate Potential
LILIACEAE (Lily Family)					
Calochortus dunnii	Dunn's mariposa lily	Federal: None State: None CRPR: 1B.2	Perennial bulbiferous herb. Occurs in gabbroic, metavolcanic, and rocky soils in closed-cone coniferous forest, chaparral, and valley and foothill grasslands from 606 to 6,003 ft. (185 to 1,830 m) AMSL. Blooms February-June.	No	Low Potential – based on known distribution of species
MALVACEAE (Mallow Family)					
Sidalcea neomexicana	salt spring checkbloom	Federal: None State: None CRPR: 2B.2	Perennial herb. Occurs in alkaline and mesic soils in chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, and playas from 49 to 5,019 ft. (15 to 1,530 m) AMSL. Blooms March-June.	No	Moderate Potential in wet areas with alkaline soil
NYCTAGINACEAE (Four o'clock Family)					
Abronia villosa var. *aurita*	chaparral sand-verbena	Federal: None State: None CRPR: 1B.1	Annual herb. Occurs in sandy areas typically with flats and benches along washes in chaparral and coastal sage scrub, and improbably in desert dunes or other sandy areas below 5,300 ft. (1,600 m) AMSL. Blooms March-August.	Yes	Moderate Potential (adjacent to lagoon areas only)
ONAGRACEAE (Willowherb Family)					
Clarkia delicate	delicate clarkia	Federal: None State: None CRPR: 1B.2		Yes	Low Potential – based on known distribution of the species

Table 4.2-1. Potential of Special Status Plant Species to Occur Within Study Area

Scientific Name	Common Name	Federal Status	Species Summary	2008 SMPU Inclusion	2017 CSMP Occurrence
PICRODENDRACEAE					
Tetracoccus dioicus	Parry's tetracoccus	Federal: None State: None CRPR: 1B.2	Perennial deciduous shrub. Occurs in chaparral and coastal scrub from 541 to 3,281 ft. (165 to 1,000 m) AMSL. Blooms April-May.	Yes	Known to occur in the Study Area
PLANTAGINACEAE (Plantain Family)					
Stemodia durantifolia	purple stemodia	Federal: None State: None CRPR: 2B.1	Perennial herb. Occurs in Sonoran desert scrub (often mesic, sandy soils) from 590 to 984 ft. (180 to 300 m) AMSL. Blooms January-December.	No	Low Potential – based on lack of suitable habitat
POACEAE (Grass Family)					
Orcuttia californica	California Orcutt's grass	Federal: FE State: FE CRPR: 1B.1	Annual grass. Occurs in vernal pools from 50 to 2,200 ft. (15 to 660 m) AMSL. Blooms April-August.	Yes	Moderate Potential
POLEMONIACEAE (Jacob's-ladder or Phlox Family)					
Navarretia fossalis	Spreading navarretia	Federal: FT State: None CRPR: 1B.1	Annual herb. Occurs in vernal pools, playas, shallow freshwater marshes and similar areas from 100 to 4,300 ft. (30 to 1,310 m) AMSL. Blooms April- June.	Yes	Moderate Potential
POLYGONACEAE (Buckwheat Family)					
Chorizanthe orcuttiana	Orcutt's spineflower	Federal: None State: None CRPR: 1B.1	Annual herb. Occurs in sandy soils in coastal scrub, chaparral, and closed-cone coniferous forests from 10 to 410 ft. (3 to 125 m) AMSL. Blooms March- May.	Yes	Moderate Potential
Chorizanthe polygonoides var. *longispina*	Long-spined spineflower	Federal: None State: None CRPR: 1B.2	Annual herb. Occurs in clay soils in chaparral, coastal scrub, or woodlands from 100 to 5,600 ft. (40 to 1,705 m) AMSL. Blooms April- July.	Yes	Moderate Potential
Nemacaulis denudata var. *denudate*	Coast woolly-heads	Federal: None State: None CRPR: 1B.2	Annual herb. Occurs in sandy places such as coastal dunes below 300 ft. (100 m) AMSL. Blooms April-September.	Yes	Low Potential – based on lack of suitable habitat

Table 4.2-1. Potential of Special Status Plant Species to Occur Within Study Area

Scientific Name	Common Name	Federal Status	Species Summary	2008 SMPU Inclusion	2017 CSMP Occurrence
Nemacaulis denudata var. *gracilis*	slender cottonheads	Federal: None State: None CRPR: 2B.2	Annual herb. Occurs in coastal dunes, desert dunes, and Sonoran desert scrub from -164 to 1,312 ft. (-50 to 400 m) AMSL. Blooms March-May.	No	Low Potential – based on lack of suitable habitat
RANUNCULACEAE (Buttlecup or Crowfoot Family)					
Myosurus minimus ssp. *apus*	Little mousetail	Federal: None State: None CRPR: 3.1	Annual herb. Occurs in alkaline areas in vernal pools from 70 to 2,100 ft. (20 to 640 m) AMSL. Blooms March- June.	Yes	Moderate Potential
RHAMNACEAE (Buckthorn Family)					
Adolphia californica	California adolphia	Federal: None State: None CRPR: 2B.1	Perennial deciduous shrub. Occurs in clay soils in grasslands, coastal sage scrub, and chaparral communities from 33 to 2,400 ft. (10 to 740 m) AMSL. Blooms December- May.	Yes	Known to occur in Study Area
Ceanothus verrucosus	wart-stemmed ceanothus	Federal: None State: None CRPR: 2B.2	Shrub. Occurs in chaparral below 1,250 ft. (380 m) AMSL. Blooms December- May.	Yes	Known to occur in Study Area
ROSACEAE (Rose Family)					
Horkelia cuneata ssp. *puberula*	Mesa horkelia	Federal: None State: None CRPR: 1B.1	Perennial herb. Occurs typically in sandy and gravelly soils in chaparral and rarely in cismontane woodland or coastal scrub from 200 to 2,700 ft. (70 to 825 m) AMSL. Blooms February-July occasionally till September.	Yes	Low Potential
Horkelia truncata	Ramona horkelia	Federal: None State: None CRPR: 1B.3	Occurs in clay soils in chaparral and woodland from 1,000 to 4,900 ft. (300 to 1,500 m) AMSL. Blooms May-June.	Yes	Moderate Potential

Table 4.2-1. Potential of Special Status Plant Species to Occur Within Study Area

Scientific Name	Common Name	Federal Status	Species Summary	2008 SMPU Inclusion	2017 CSMP Occurrence
RUSCACEAE (Butcher's Broom Family)					
Nolina cismontana	Chaparral nolina	Federal: None State: None CRPR: 1B.2	Perennial shrub. Occurs in sandstone or gabbro soils in chaparral and coastal sage scrub from 1,150 to 5,600 ft. (350 to 1,700 m) AMSL. Blooms May- July.	Yes	Moderate Potential
THEMIDACEAE (Brodiaea Family)					
Bloomeria clevelandii	San Diego goldenstar	Federal: None State: None CRPR: 1B.1	Perennial bulbiferous herb. Occurs in clay soils in chaparral, coastal scrub, valley and foothill grassland, and vernal pools from 164 to 1,525 ft. (50 to 465 m) AMSL. Blooms April-May.	No	Known to occur in Study Area
Brodiaea filifolia	thread-leaved brodiaea	Federal: FT State: SE CRPR: 1B.1	Perennial herb. Occurs on clay soils associated with vernal pools or alkaline flats. Occasionally in vernally moist sites in fine soils including clay loam, silt loam, fine sandy loam, loam, loamy fine sand. Typically associated with needlegrass or alkali grassland or vernal pools from 80 to 3,700 ft. (25 to 1,120 m) AMSL. Blooms March- June.	Yes	Known to occur in Study Area
Brodiaea orcuttii	Orcutt's brodiaea	Federal: None State: None CRPR: 1B.1	Perennial herb. Clay and some serpentine soils, usually associated with streams and vernal pools from 100 to 5,600 ft. (30 to 1,700 m) AMSL. Blooms May- July.	Yes	Known to occur in Study Area

Table 4.2-1. Potential of Special Status Plant Species to Occur Within Study Area

Scientific Name	Common Name	Federal Status	Species Summary	2008 SMPU Inclusion	2017 CSMP Occurrence

Source: CNDDB 2017; USFWS 2017

FE = Federally Endangered.

FT = Federally Threatened

SE = State Endangered

ST = State Threatened

CRPR = California Rare Plant Ranking

List 1B = Plants rare, threatened or endangered in California and elsewhere.

List 2B = Plants rare, threatened or endangered in California but more common elsewhere.

List 3 = more information needed about this plant (Review List)

List 4 = Plants of limited distribution (Watch List)

0.1 Seriously endangered in California

0.2 Fairly endangered in California

0.3 Not very endangered in California

[1] CNPS, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website http://www.rareplants.cnps.org [accessed 8 March 2017].

[2] Calflora: Information on California plants for education, research and conservation, with data contributed by public and private institutions and individuals, including the Consortium of California Herbaria. [web application]. 2016. Berkeley, California: The Calflora Database [a non-profit organization]. Available: http://www.calflora.org/ (accessed: March 8, 2017).

Table 4.2-2. Potential of Special Status Wildlife Species to Occur on Project Site

Scientific Name	Common Name	Status	Species Summary	2008 SMPU Inclusion	Potential to Occur
INVERTEBRATES					
Branchinecta lynchi	vernal pool fairy shrimp	Federal: FT State: None	Vernal pools and swales in grassland areas. Known from the Central Valley, the central coast and south coast mountains as far south as Ventura County, and from the Santa Rosa Plateau, Skunk Hollow, and the Stowe Road vernal pool near Salt Creek just west of Hemet in Riverside County.	No	Known to occur in the Study Area
Branchinecta sandiegonensis	San Diego fairy shrimp	Federal: FE State: None	Vernal pools; cool water seasonal pools with low to moderate dissolved solids.	Yes	Moderate Potential
Streptocephalus wootoni	Riverside fairy shrimp	Federal: FE State: None	Vernal pools; deep cool water seasonal pools. Pools with low to moderate dissolved solids.	Yes	Low Potential – project site south of known range for the species
FISH					
Eucyclogobius newberryi	tidewater goby	Federal: FE State: SSC	Endemic to California inhabits coastal lagoons, estuaries, and marshes. Generally found in brackish water in shallow lagoons and in lower stream reaches where water is still but not stagnant. They prefer a sandy substrate for breeding. Favors sparse vegetation containing submerged or emergent aquatic plants such as widgeongrass (Ruppia maritima), bullrushes (Scirpus sp.), and pondweed (Potamogeton sp.).Historically found from the mouth of the Smith River, Del Norte County to Agua Hedionda Lagoon in Northern San Diego County.	No	Low Potential based on lack of suitable brackish habitat (critical habitat located west of the Study Area)
Gila orcuttii	arroyo chub	Federal: None State: SSC	Perennial streams or intermittent streams with permanent pools; slow water sections of streams with mud or sand substrates; spawning occurs in pools. Native to Los Angeles, San Gabriel, San Luis Rey, Santa Ana, and Santa Margarita River systems; introduced in Santa Ynez, Santa Maria, Cuyama, and Mojave River systems and smaller coastal streams.	No	Moderate Potential

Table 4.2-2. Potential of Special Status Wildlife Species to Occur on Project Site

Scientific Name	Common Name	Status	Species Summary	2008 SMPU Inclusion	Potential to Occur
AMPHIBIANS & REPTILES					
Anaxyrus californicus	arroyo toad	Federal: FE State: SSC	Inhabits washes, arroyos, sandy riverbanks, riparian areas with willow, sycamores, oaks, and cottonwoods. Requires exposed sandy streamsides with stable terraces for burrowing with scattered vegetation for shelter, and areas of quiet water or pools free of predatory fishes with sandy or gravel bottoms without silt for breeding. Coastal and a few desert streams from Santa Barbara County to Baja California.	Yes	Moderate Potential
Spea hammondii	western spadefoot	Federal: None State: SSC	Found in grasslands, but occasionally populations also occur in valley-foothill hardwood woodlands. Some populations persist in orchard or vineyard habitats. Occurs in the Central valley and adjacent foothills. In the Coast Ranges, it is found from Santa Barbara County south to the Mexican border. Elevation from sea level to 1,363m (4,460 ft) in the southern Sierra foothills.	Yes	Moderate Potential (suitable habitat is located in the Study Area)
Arizona elegans occidentalis	California glossy snake	Federal: None State: SSC	Inhabits arid scrub, rocky washes, grasslands, and chaparral. Nocturnal. In underground burrows in daytime. Lays eggs in June and July, juveniles hatch in late summer and early fall. Found from eastern part of the San Francisco Bay area south to northwestern Baja California.	Yes	Moderate Potential (suitable habitat is located in the Study Area)
Aspidoscelis hyperythra	orange-throated whiptail	Federal: None State: SSC	Inhabits semi-arid brushy areas typically with loose soils and rock, including washes, streamsides, rocky hillsides, coastal scrub, chamise-redshank chaparral, mixed chaparral, coastal chaparral, and valley-foothill hardwood habitats. Occurs in Orange, riverside, and San Diego Counties west of the crest of the Peninsular Ranges. Also in southwestern San Bernardino County near Colton. Elevation ranges from sea level to 3410 ft. (1040 m).	Yes	Known to occur in Study Area

Table 4.2-2. Potential of Special Status Wildlife Species to Occur on Project Site

Scientific Name	Common Name	Status	Species Summary	2008 SMPU Inclusion	Potential to Occur
Aspidoscelis tigris stejnegeri	Coastal whiptail	Federal: None State: SSC	Wide variety of ecosystems, primarily hot and dry open areas with sparse foliage, including coastal sage scrub, sparse grassland, and riparian woodland; coastal and inland valleys and foothills; Ventura County to Baja California.	Yes	Moderate Potential (suitable habitat is located in the Study Area)
Crotalus ruber	red-diamond rattlesnake	Federal: None State: SSC	Inhabits arid scrub, coastal chaparral, oak and pine woodlands, rocky grassland, and cultivated areas. On the desert slopes of mountains, it ranges into rocky desert flats. From Morongo Valley west to the coast and south along the peninsular ranges to mid Baja California.	Yes	Moderate Potential (suitable habitat is located in the Study Area)
Emys marmorata	western pond turtle	Federal: None State: SSC	Inhabits permanent or nearly permanent water, in ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches with abundant vegetation, and either rocky or muddy bottoms, in woodland, forest, and grassland. In streams, prefers pools to shallower areas. Logs, rocks, cattail mats, and exposed banks are required for basking. May enter brackish water and even seawater. San Francisco Bay south to Baja California, including Mojave River.	Yes	Moderate Potential
Phrynosoma blainvillii	coast horned lizard	Federal: None State: SSC	Inhabits open areas of sandy soils and low vegetation in valleys, foothills, and semiarid mountains. Found in grasslands, coniferous forests, woodlands, and chaparral, with open areas and patches of loose soil. Often found in lowlands along sandy washes with scattered shrubs and along dirt roads, and frequently found near ant hills. Along Pacific coast from Baja California border west of the deserts and the Sierra Nevada, north to the Bay Area, and inland as far north as Shasta Reservoir, and south into Baja California.	Yes	Known to occur in the Study Area

Table 4.2-2. Potential of Special Status Wildlife Species to Occur on Project Site

Scientific Name	Common Name	Status	Species Summary	2008 SMPU Inclusion	Potential to Occur
Salvadora hexalepis virgultea	Coast patch-nosed snake	Federal: None State: SSC	Inhabits semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains. Widely distributed throughout lowlands, up to 2,130 meters (7,000 feet) elevation. Ranges from San Luis Obispo County, south through coastal zone, south and west of the deserts, into coastal northern Baja California.	Yes	Moderate Potential (suitable habitat is located in the Study Area)
Thamnophis hammondii	two-striped gartersnake	Federal: None State: SSC	Highly aquatic. Found around pools, creeks, cattle tanks, and other water sources, often in rocky areas in oak woodland, chaparral, brushland, and coniferous forest. From Monterey County to northwest Baja California.	Yes	Moderate Potential (suitable habitat is located in the Study Area)
Thamnophis sirtalis ssp. *infernalis*	south coast gartersnake	Federal: None State: SSC	Inhabits forests, mixed woodlands, grassland, chaparral, farmlands, and often near ponds, marshes, or streams. Active during daylight and often escapes into water when threatened. Endemic to California, ranging from Humboldt County south along the coast ranges into San Diego County.	Yes	Moderate Potential (suitable habitat is located in the Study Area)
BIRDS					
Agelaius tricolor	tricolored blackbird	Federal: None State: CE	Forages in agricultural areas, particularly where livestock are present and grass is short. Breeds in freshwater marshes with tall emergent vegetation, in upland habitats (especially thickets of non-native blackberry), and in silage fields. Breeds April-July, in large congregations.	Yes	Moderate Potential (suitable habitat is located in the Study Area)
Aquila chrysaetos	golden eagle	Federal: None State: Protected	Open and semi-open country featuring native vegetation. Found primarily in mountains up to 12,000 feet, canyonlands, rimrock terrain, and riverside cliffs and bluffs. Nests on cliffs and steep escarpments in grassland, chaparral, shrubland, forest, and other vegetated areas.	Yes	Low Potential based on lack of suitable breeding habitat

Table 4.2-2. Potential of Special Status Wildlife Species to Occur on Project Site

Scientific Name	Common Name	Status	Species Summary	2008 SMPU Inclusion	Potential to Occur
Buteo swainsoni	Swainson's hawk	Federal: None State: ST	Favor open habitats such as native prairie and grassland habitats, will forage in agricultural fields, pastures, grain crops, and row crops. Nests in scattered stands of trees near agricultural fields and grasslands for nesting.	Yes	Moderate Potential for foraging/ Low Potential for breeding
Campylorhynchus brunneicapillus sandiegensis	San Diego cactus wren	Federal: None State: SSC	Resident in arid and semi-arid regions from southern California, Baja California, Utah, Nevada, New Mexico, Texas, and Mexico. Favors coastal lowlands and coastal sage scrub with thickets of chollas or prickly-pear cacti tall enough to support and protect the birds' nests. Can nest in relict stands of cactus or even spiny ornamental garden plants.	Yes	Moderate Potential
Charadrius alexandrinus nivosus	western snowy plover	Federal: FT State: SSC	Barren to sparsely vegetated sand beaches, dry salt flats in lagoons, dredge spoils deposited on beach or dune habitat, levees and flats at salt-evaporation ponds, river bars, along alkaline or saline lakes, reservoirs, and ponds. Breeds from Washington state south to Baja California, Mexico.	Yes	Moderate Potential (lagoon areas only)
Circus cyaneus	northern harrier	Federal: None State: SCC	Common in large, undisturbed tracts of wetlands and grasslands with low, thick vegetation. Breed in freshwater and brackish marshes, lightly grazed meadows, old fields, tundra, dry upland prairies, drained marshlands, high-desert shrubsteppe, and riverside woodlands.	Yes	Moderate Potential (suitable foraging habitat is located in the Study Area)
Coccyzus americanus occidentalis	western yellow-billed cuckoo	Federal: FT State: SE	Nests in extensive stands of low to moderate elevation native forests such as dense cottonwood/willow riparian forests and require relatively large (>20 hectares) of contiguous patches of multilayered riparian habitat. Also know to nest in early to mid-successional native riparian habitat.	No	Moderate Potential (suitable habitat is located in the Study Area)
Elanus leucurus	White-tailed kite	Federal: None State: Protected	Found in open groves, river valleys, marshes, grasslands, oak grasslands, desert grasslands, and farm country. Often nests in live oaks with open ground and high populations of rodents.	Yes	Known to occur in the Study Area

Table 4.2-2. Potential of Special Status Wildlife Species to Occur on Project Site

Scientific Name	Common Name	Status	Species Summary	2008 SMPU Inclusion	Potential to Occur
Empidonax traillii extimus	southwestern willow flycatcher	Federal: FE State: SE	Breeds in southern California, Arizona, New Mexico, Nevada, Utah, and Texas in relatively dense riparian tree and shrub communities associated with rivers, swamps, and other wetlands including lakes and reservoirs. The dense vegetation occurs within the first 10 to 13 feet above the ground. Habitat patches must be at least 0.25 ac in size and at least 30 feet wide. Prefers nesting in native vegetation but will use thickets dominated by non-native tamarisk or mixed native non-native stands.	Yes	Known to occur in the Study Area
Icteria virens	yellow–breasted chat	Federal: None State: SCC	Nests in areas of dense shrubbery such as brushy tangles, briars, stream thickets, and willow thickets often along streams and at the edges of swamps or ponds. Sometimes in dry overgrown pastures and upland thickets along margins of woods. Migrates to Mexico and central America.	Yes	Known to occur in the Study Area
Ixobrychius exilis	least bittern	Federal: None State: SCC	Nest and forages in dense tall emergent freshwater or brackish marsh vegetation. May be over fairly deep water, it mostly climbs in reeds rather than wading. Southern California populations are non-migratory.	Yes	Low Potential
Laterallus jamaicensis coturniculus	California black rail	Federal: None State: ST	Requires fresh, brackish, and pickleweed-dominated salt marshes. Appear to prefer tidal salt marshes with a heavy canopy of pickleweed and an open structure below the canopy for nesting and accessibility. Known from coastal California, San Francisco Bay south to Baja California, Colorado River, and isolated populations in the Sierra foothills. Begins nesting in February, in stands of pickleweed and tall grasses, near the upper limits of tidal flooding zone.	Yes	Low Potential based on lack of suitable habitat
Passerculus sandwichensis beldingi	Belding's savannah sparrow	Federal: None State: SE	Resident in coastal salt marshes from Santa barbara County south to Mexico. Nests in pickleweed from January to August. Also found in mudflats, sandflats, and rock jetties.	Yes	Low Potential based on lack of suitable habitat

Table 4.2-2. Potential of Special Status Wildlife Species to Occur on Project Site

Scientific Name	Common Name	Status	Species Summary	2008 SMPU Inclusion	Potential to Occur
Polioptila californica californica	Coastal California gnatcatcher	Federal: FT State: SSC	Prefers open sage scrub with California sagebrush as a dominant or co-dominant species. More abundant near sage scrub-grassland interface than where sage scrub grades into chaparral.	Yes	Known to occur in the Study Area
Rallus obsoletus levipes	light-footed clapper rail	Federal: FE State: SE	Inhabits coastal marshes and lagoons in southern California south to northern Baja California. Require shallow water and mudlfats for foraging, with adjacent higher vegetation for cover during high water. Prefers tidal marshes dominated by cordgrass.	Yes	Low Potential based on the lack of suitable habitat
Riparia riparia	bank swallow	Federal: None State: ST	Found near water in fields, marshes, streams, and lakes. Typically seen feeding in flight over water at all seasons. Nests in colonies in vertical banks of dirt or sand, usually along rivers or ponds, seldom away from water.	No	Moderate Potential (suitable habitat is located in the Study Area)
Setophaga petechia	yellow warbler	Federal: None State: SSC	Nests in riparian and wetland habitats, thickets, and other disturbed or regrowing habitats. Three subspecies breed in California: morcomi, brewsteri, and sonorana. (Sonoran yellow warbler nests along the Colorado River.)	No	Known to occur in the Study Area
Sternula antillarum browni	California least tern	Federal: FE State: SE	Found on sea costs, beaches, bays, estuaries, lagoons, lakes, and rivers. Nests on sandy or gravelly beaches and banks of rivers or lakes.	Yes	Low Potential for nesting based on lack of suitable habitat; may forage in areas of open water
Vireo bellii pusillus	Least Bell's vireo	Federal: FE State: SE	Inhabits lowland riparian forests and willow thickets. Also found in foothill streams and scattered location in the Mojave Desert. Ranges from Santa Barbara south to San Diego County.	Yes	Known to occur in the Study Area

Table 4.2-2. Potential of Special Status Wildlife Species to Occur on Project Site

Scientific Name	Common Name	Status	Species Summary	2008 SMPU Inclusion	Potential to Occur
MAMMALS					
Antrozous pallidus	Pallid bat	Federal: None State: SSC	Inhabits a wide variety of habitats including grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. Most common in open, dry habitats with rocky areas for roosting. Breeds October -February, young born April-June, juveniles independent July-August	Yes	Moderate Potential (suitable habitat is located in the Study Area)
Chaetodipus californicus femoralis	Dulzura pocket mouse	Federal: None State: SSC	Inhabits Diegan and Riversidean upland sage scrub, alluvial fan sage scrub, sagescrub/grassland ecotones, chaparral, and desert scrubs below 2,600 feet. Found in Orange, Riverside, San Diego, Tulare, and Ventura Counties.	Yes	Moderate Potential (suitable habitat is located in the Study Area)
Chaetodipus fallax fallax	Northwestern San Diego pocket mouse	Federal: None State: SSC	Inhabits coastal scrub, chamise-redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland. Found in San Diego, Riverside, and San Bernardino Counties below 4,500 feet. Favors rocky, gravelly, or sandy ground.	Yes	Moderate Potential (suitable habitat is located in the Study Area)
Choeronycteris mexicana	Mexican long-tongued bat	Federal: None State: SSC	Known to only occur in San Diego county in California as a summer resident. Occupies caves, mines, buildings, desert and montane riparian, desert succulent shrub, and pinyon-juniper habitats. Primarily nectar feeder.	Yes	Low Potential based on lack of suitable habitat
Corynorhinus townsendii	Townsend's big-eared bat	Federal: None State: SSC	Found throughout California in all but subalpine and alpine habitats, and any season throughout its range. Most abundant in mesic habitats. Requires caves, mines, tunnels, buildings, or other human-made structures for roosting. May use separate sites for night, day, hibernation, or maternity roosts. Roosting sites are the most important limiting resource. Feeds primarily on small moths, beetles, and a variety of soft-bodied insects.	Yes	Moderate Potential (suitable habitat is located in the Study Area)

Table 4.2-2. Potential of Special Status Wildlife Species to Occur on Project Site

Scientific Name	Common Name	Status	Species Summary	2008 SMPU Inclusion	Potential to Occur
Dipodomys stephensi	Stephens' kangaroo rat	Federal: FE State: ST	Inhabits annual and perennial grassland habitats but may occur in coastal scrub or sagebrush with sparse canopy cover, or in disturbed areas such as abandoned agricultural fields. Preferred perennials are buckwheat and chamise, preferred annuals are brome grass and filaree. Found in San Jacinto valley, southwestern San Bernardino County, and northern San Diego between 55 and 1,250 meters elevation.	Yes	Moderate Potential
Eumops perotis californicus	western mastiff bat	Federal: None State: SCC	Occurs near significant rock features offering suitable roosting habitat. Found in a variety of habitats including desert scrub, chaparral, oak woodland, dry desert washes, flood plains, coastal sage scrub, grasslands, agricultural areas, and ponderosa pine. Primarily a crevice dwelling species, often found under large exfoliating slabs of granite, sandstone slabs or in columnar basalt, on cliff faces or in large boulders. Rossts are generally high above the ground with a clear vertical drop. Primarily feeds on moths, but also includes beetles and crickets.	Yes	Moderate Potential (suitable habitat is located in the Study Area)
Lasiurus xanthinus	Western yellow bat	Federal: None State: SSC	Found in Los Angeles and San Bernardino Counties, south to the Mexican border. Inhabits foothill riparian, desert riparian, desert wash, and palm oasis habitats below 2000'. Roosts in trees, including palm trees. Feeds on flying insects, forages over water and among trees.	No	Known to occur in the Study Area
Leptonycteris curasoae yerbabuenae	lesser long-nosed bat	Federal: FE State: None	Occurs in the Sonoran desert with columnar cacti and agaves. Requires columnar cacti and agaves for roosting and food. Day roosts include caves, mines, rock crevices, trees and shrubs, and occasionally abandoned buildings. Very sensitive to human disturbance. Requires columnar cactus flowers and fruits; agave flowers represent the core diet. Also important are nectar, pollen, and fruit produced by a variety of columnar cacti.	No	Low Potential – Study Area not within typical range for species

Table 4.2-2. Potential of Special Status Wildlife Species to Occur on Project Site

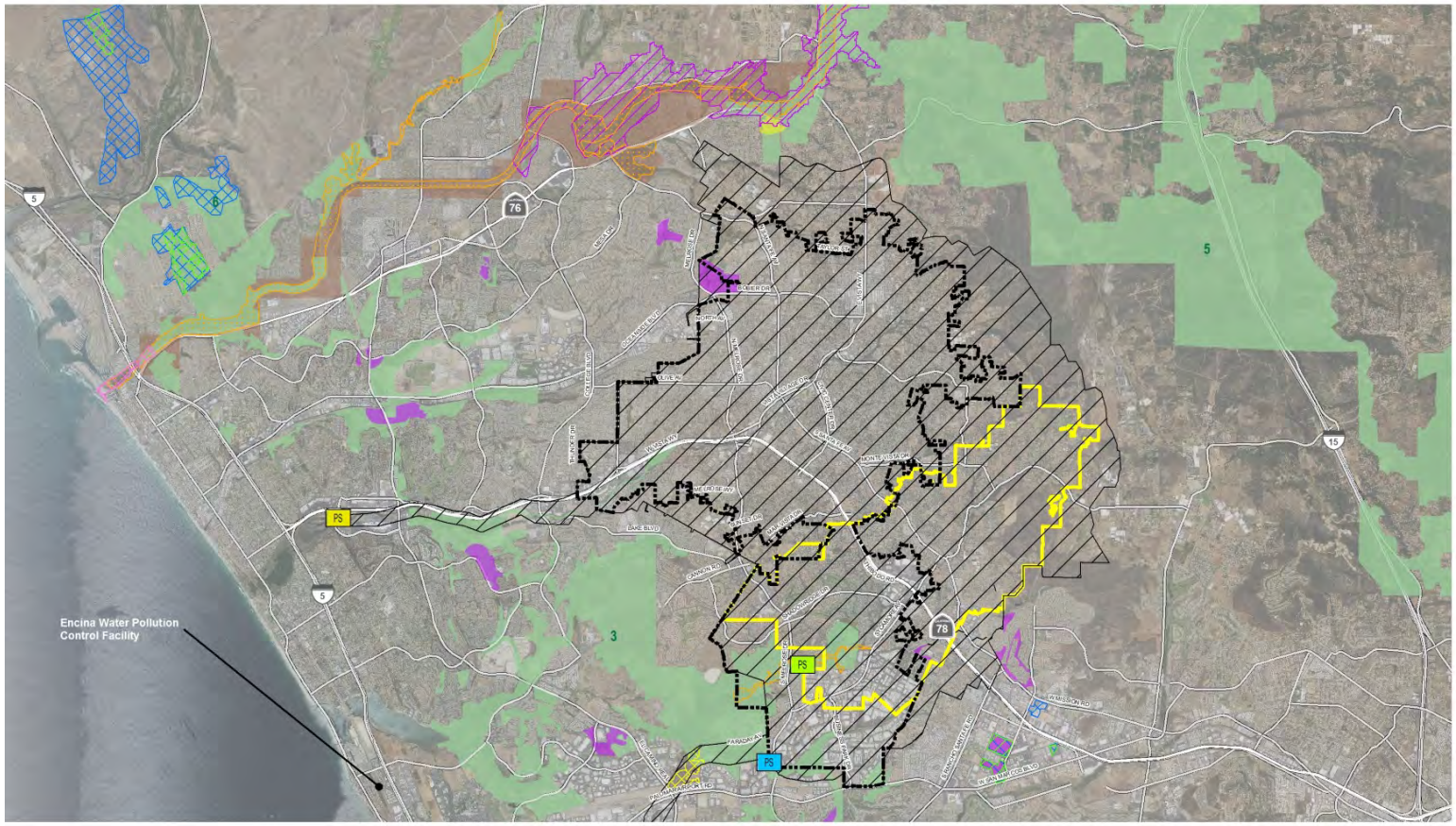
Scientific Name	Common Name	Status	Species Summary	2008 SMPU Inclusion	Potential to Occur
Lepus californicus bennettii	San Diego black-tailed jackrabbit	Federal: None State: SSC	Inhabits a variety of open and semi-open habitats, primarily grasslands, Riversidean sage scrub, Riversidean alluvial fan sage scrub, Great Basin sagebrush, desert scrub, agricultural fields, and juniper and oak woodlands.	Yes	Moderate Potential (suitable habitat is located in the Study Area)
Neotoma lepida intermedia	San Diego desert woodrat	Federal: None State: SSC	Found in desert scrub and coastal sage scrub habitat, especially in association with cactus patches. Builds stick nests around cacti, or on rocky crevices. Occurs along the Pacific slope from San Luis Obispo County to northwest Baja California.	Yes	Moderate Potential (suitable habitat is located in the Study Area)
Nyctinomops femorosaccus	pocketed free-tailed bat	Federal: None State: SSC	Found in Riverside, San Diego, and Imperial Counties in pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oasis. Feeds on flying insects, primarily large moths. Roosts in rock crevices in cliffs, rock outcrops, caverns, or buildings.	Yes	Moderate Potential (suitable habitat is located in the Study Area)
Nyctinomops macrotis	big free-tailed bat	Federal: None State: SSC	Inhabits crevices in high cliffs, rock outcrops, and other rugged rocky terrain below 2,500 m in elevation. Roosts in buildings, caves, and occasionally in holes in trees.	Yes	Low Potential – based on lack of suitable roosting habitat
Perognathus longimembris pacificus	Pacific pocket mouse	Federal: FE State: SSC	Inhabits shrublands with firm sandy soils. Fine-grain, sandy substrates in the immediate vicinity of the ocean; coastal dunes, river alluvium, and coastal sage scrub growing on marine terraces. Has been found on flats, often submerged by high tides at the mouth of the Tijuana River.	Yes	Low Potential – based on lack of suitable habitat
Taxidea taxus	American badger	Federal: None State: SSC	Inhabits drier open stages of most shrub, forest, and herbaceous habitats with friable soils. Burrows dug in relatively dry, often sandy soils, usually in areas with sparse overstory cover. Frequently reuse old burrows.	Yes	Known to occur in the Study Area

Table 4.2-2. Potential of Special Status Wildlife Species to Occur on Project Site

Scientific Name	Common Name	Status	Species Summary	2008 SMPU Inclusion	Potential to Occur

Source: CNDDB 2017; USFWS 2017
FE = Federally Endangered.
FT = Federally Threatened
SE = State Endangered
ST = State Threatened
SSC = Species of special concern

Figure 4.2-7. Critical Habitat Areas



Wildlife Critical Habitat Areas

- City of Vista
- Study Area
- Buena Sanitation District
- Major Roads
- PS Buena Vista PS
- PS Buena Creek PS
- PS Raceway PS
- Tidewater goby
- Southwest willow flycatcher
- San Diego fairy shrimp
- Arroyo toad
- (#) Coastal California gnatcatcher (Unit #)
- Least Bell's viero

Plant Critical Habitat Areas

- Spreading navarretia
- San Diego thorn mint
- Threaded-leaved brodiace
- San Diego ambrosia

0 Miles 1

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Figure 4.2-7 illustrates the critical habitat areas for southwestern willow flycatcher, Coastal California gnatcatcher, least Bell's vireo, San Diego fairy shrimp, arroyo toad, and tidewater goby. As shown, critical habitat areas are designated within the Study Area for Coastal California gnatcatcher and southwestern willow flycatcher.

Migratory Birds

Migratory birds are protected under the Migratory Bird Treaty Act (MBTA). Suitable habitat that would support breeding, roosting, and foraging migratory birds occurs throughout the Study Area. Suitable habitat includes mature trees (>24-inch diameter), ornamental vegetation, utility poles, and building rafters and eves.

Regional Corridors and Linkages

Within the Study Area, as described in the 2008 PEIR existing corridors and linkages largely coincide with waterways and low lying valleys where urban development has not occurred. Many of these corridors correspond to environmentally sensitive areas identified by San Diego County. Figure 4.2-6 illustrates the environmentally sensitive areas within the Study Area, which generally follow existing waterways, including Agua Hedionda Creek.

Habitat Conservation Planning

As described in the 2008 PEIR, the Study Area is located with the limits of the north planning area of San Diego Multiple Habitat Conservation Program. The North County MHCP subregion encompasses seven incorporated cities: Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista. Each is responsible for the preparation and implementation of a subarea plan that describes the specific policies that each will institute for the North County MHCP. Similar to the 2008 PEIR, the proposed hardline and softline Focused Planning Areas (FPAs) have been developed and are considered in this analysis as a potential preserve system. Figure 4.2-8 illustrates the Plan Subareas in relation to the Study Area for the 2017 CSMP.

The City of Carlsbad Habitat Management Plan (HMP) was adopted in November 2004 and does not include specific provisions for known public infrastructure projects. Portions of the Study Area within Carlsbad may be subject to an applicable HMP.

4.2.3 Regulatory Framework

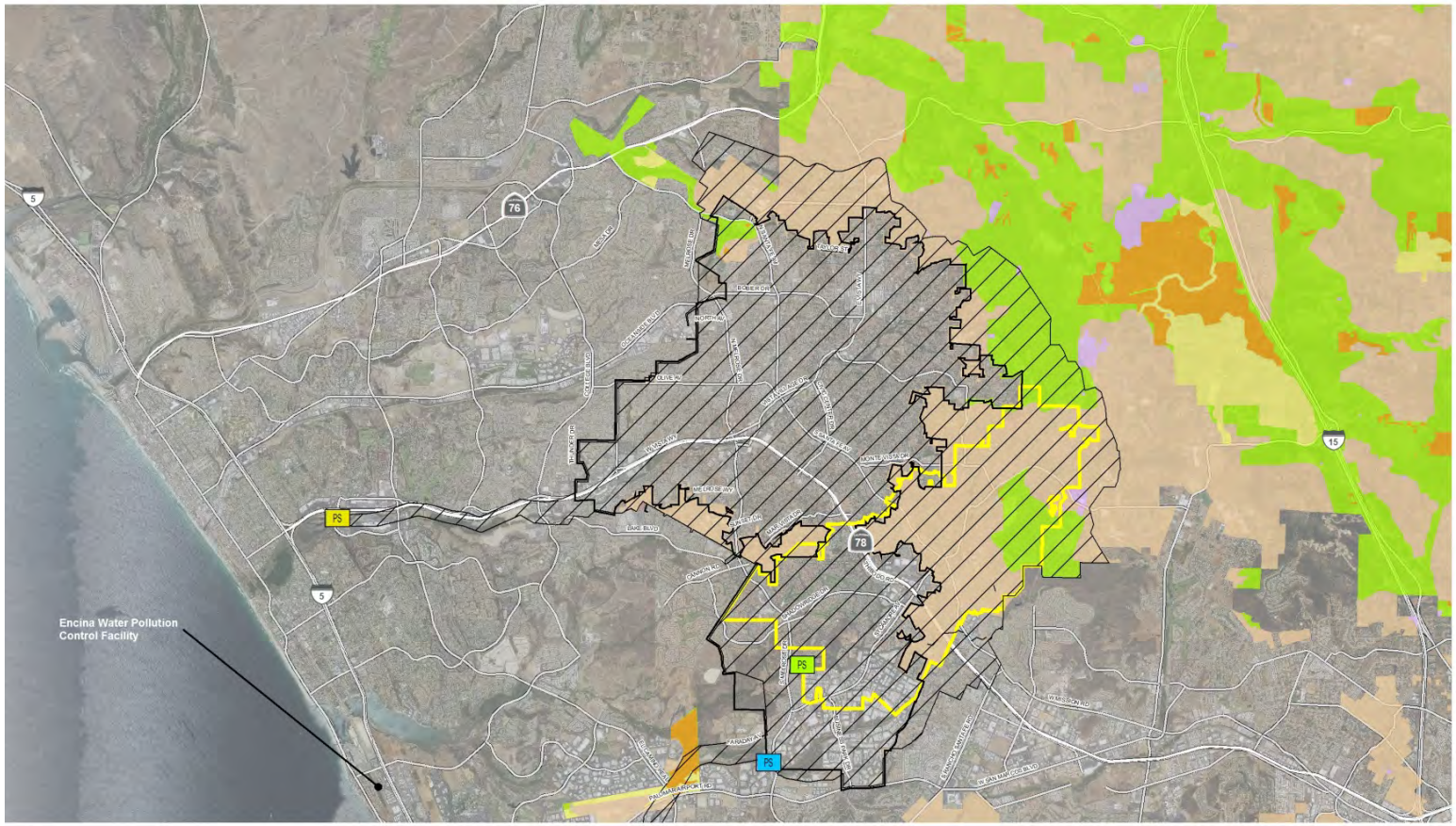
This section updates the description of the federal, state, and local regulatory framework adopted for the purposes of protecting sensitive biological resources as identified in the 2008 PEIR.

Federal

Federal Endangered Species Act

The Federal Endangered Species Act (ESA) defines and lists species as "endangered" or "threatened" and provides regulatory protection for the listed species. Section 9 of the ESA prohibits take of threatened or endangered species, including to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. Section 7 of the ESA provides a means for authorizing take of threatened and endangered species by federal agencies through issuance of a biological opinion.

Figure 4.2-8. North County MHCP Subregion



Migratory Bird Treaty Act

The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 Code of Federal Regulations (C.F.R.) Part 10.

Clean Water Act

Section 404 of the Clean Water Act establishes a program to regulate the discharge of fill materials into waters of the U.S., including wetlands. The Section 404 permit program authorizes discharges to waters of the U.S. through the USACE Nationwide Permit or Individual Permit Programs based on the area affected by temporary and permanent impacts.

Section 401 of the Clean Water Act protects water quality by regulating the dumping or flow of pollutants into streams, lakes, and rivers. A water quality certification, obtainable through the State Water Resources Control Board (SWRCB) or Regional Water Quality Control Boards (RWQCB), must be obtained in order to receive a 404 permit or be authorized under the 404 nationwide permits.

State

California Endangered Species Act

The California ESA prohibits the take of listed species, except as otherwise provided in state law. Due to the potential presence of state-listed rare, threatened, endangered, or candidate species within the Study Area (e.g., California gnatcatcher, southwestern willow flycatcher, etc.), compliance with the California ESA was considered in the evaluation of the 2017 CSMP.

Sections 3503 and 3503.5 of the State Fish and Wildlife Code

These sections of the State Fish and Wildlife Code provide regulatory protection to resident and migratory birds and all birds of prey within the State of California. Due to the presence of resident and migratory nesting birds within the Study Area, Sections 3503 and 3503.5 of the State Fish and Wildlife Code were considered in the evaluation of the 2017 CSMP.

Sections 1600 to 1603 of the State Fish and Wildlife Code

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California are subject to the regulatory authority of the CDFW pursuant to Sections 1600 through 1603 of the State Fish and Wildlife Code and require preparation of a Streambed Alteration Agreement. Due to the presence of ephemeral streams within the Study Area, Sections 1600 through 1603 of the State Fish and Wildlife Code were considered in the evaluation of the 2017 CSMP.

Regional

San Diego County General Plan Update

The San Diego County General Plan Update was adopted in August 3, 2011. Chapter 5 of the General Plan Update sets goals and policies for land use-based conservation that protect the ecological lifecycle needs of threatened, endangered, or otherwise sensitive species and their associated habitats. Applicable goals and polices are identified below.

Goal COS-2: Sustainability of the Natural Environment - Sustainable ecosystems with long-term viability to maintain natural processes, sensitive lands, and sensitive, as well as common species, coupled with sustainable growth and development.

Policy COS-2.1: Protection, Restoration and Enhancement - Protect and enhance natural wildlife habitat outside of preserves as development occurs according to the underlying land use designation. Limit the degradation of regionally important natural habitats within the Semi-Rural and Rural Lands regional categories, as well as within Village lands where appropriate.

Policy COS-2.2: Habitat Protection through Site Design – Require development to be sited in the least biologically sensitive areas and minimize the loss of natural habitat through site design.

Goal COS-3: Protection and Enhancement of Wetlands – Wetlands that are restored and enhanced and protected from adverse impacts.

Policy COS-3.1: Wetland Protection – Require development to preserve existing natural wetland areas and associated transitional riparian and upland buffers and retain opportunities for enhancement.

Policy COS-3.2: Minimize Impacts of Development – Require development projects to:

- Mitigate any unavoidable losses of wetlands, including its habitat functions and values; and
- Protect wetlands, including vernal pools, from a variety of discharges and activities, such as dredging or adding fill material, exposure to pollutants such as nutrients, hydro modification, land and vegetation clearing, and the introduction of invasive species.

Local

Vista General Plan 2030 Update

The Vista General Plan 2030 Update (GP 2030 Update) was adopted by the City in 2012. The update adopts six general plan elements, including Resource Conservation and Sustainability, in order to guide planning efforts for development and natural resource protection over a 20-year planning period. The update addresses efforts to preserve and enhance important and sensitive biological resources by limiting land use and recreational use incompatibilities, and establish long-term maintenance and management standards. Applicable goals and polices are identified below.

RCS Goal 5: Preserve and protect, to the extent practicable, the range of natural biological communities and species native to the City and region; and conserve viable populations of endangered, threatened, and key sensitive species and their habitats.

RCS Policy 5.1: Continue to require development that is proposed in areas identified or expected to contain sensitive vegetation and wildlife communities to consult with wildlife agencies (i.e., U.S. Fish and Wildlife Service [USFWS] and the California Department of Fish and Game [CDFG]) early in the development review process regarding special status plant and wildlife species; conduct biological assessments, as appropriate; and develop and implement project-specific mitigation measures to mitigate impacts on threatened and endangered species.

RCS Policy 5.2: In areas that are adjacent to sensitive vegetation and/or wildlife communities, continue to require development, uses, and activities to be designed and managed to ensure minimal impacts to those resources. Examples include, but are not limited to the following:

- Prohibit parking lots and other developed areas from draining into sensitive resources.
- Require land uses that use chemicals or fertilizers or generate by-products that are potentially toxic or harmful to wildlife, sensitive species, and habitats to incorporate measures to mitigate those impacts.
- Require development to incorporate measures that avoid degradation of habitats from erosion and sedimentation.
- Ensure that sensitive species are protected from night lighting from nearby development.
- Mitigate noise impacts from development, uses, or activities on nearby sensitive species through noise reduction measures and/or restriction of hours during the breeding season of sensitive species.
- Require development that is adjacent to sensitive resources to landscape their sites with native, non-invasive vegetation that is similar to or compatible with the adjacent resources; and prohibit horticultural regimes (irrigation, fertilization, pest control, and pruning) that could alter site conditions in natural areas.

RCS Policy 5.3: Preserve the integrity of riparian habitat areas, creek corridors, and other drainages that support biological resources and contribute to the overall health of the watershed areas through the preservation and restoration of native plants and the removal of invasive, exotic, and nonnative species.

RCS Policy 5.7: To the extent practicable, and as determined by the City, avoid sensitive habitats and species during the planning, design, and construction of new public infrastructure (such as sewers, storm drain and flood control facilities, utilities, and roads), unless alternative locations are not practical.

RCS Goal 6: Implement the provisions of the regional Multiple Habitat Conservation Plan (MHCP).

RCS Policy 6.2: Limit land uses within the BPO to only those necessary for the protection of public health and safety, or recreational uses that are consistent with the conservation standards in the MHCP. Biological conservation shall be the primary objective within the BPO whenever potential conflicts with recreational uses arise.

RCS Policy 6.5: Use the mitigation ratios established in the MHCP for impacts to sensitive biological habitats.

City of Carlsbad General Plan Update

The Carlsbad General Plan Update was adopted in 2015. In the context of biological resources, the plan provides direction to preserve and enhance Carlsbad's natural and recreational resources. Applicable goals and polices are identified below.

Goal 4-G.3: Protect environmentally sensitive lands, wildlife habitats, and rare, threatened or endangered plant and animal communities.

Goal 4-G.4: Promote conservation of hillsides and ridgelines.

Policy 4-P.9: Maintain and implement Carlsbad's Habitat Management Plan (HMP), including the requirement that all development projects comply with the HMP and related documents. Require assessments of biological resources prior to approval of any development on sites with sensitive habitat.

Policy 4-P.14: Assure that development or grading on hillsides (if allowed) relates to the slope of the land in order to preserve the integrity and appearance of natural hillsides and other landforms wherever possible.

Policy 4-P.15: Maintain functional wildlife corridors and habitat linkage in order to contribute to regional biodiversity and the viability of rare, unique or sensitive biological resources throughout Carlsbad.

Policy 4-P.18: Require that, at the time of any discretionary approval, any land identified as open space for its habitat or scenic value shall have an appropriate easement and/or land use and zoning designation placed on it for resource protection.

Policy 4-P.19: Require a city permit for any grading, grubbing, or clearing of vegetation in undeveloped areas, with appropriate penalties for violations.

4.2.4 Project Impacts

Methodology

This program-level analysis of potential impacts to local biological resources is based on the description of the 2017 CSMP components as identified and described in Chapter 3. The impact analysis focuses on foreseeable changes to existing condition in the context of the significance criteria presented above. In conducting the following impact analysis for biological resources, three principal factors were taken into consideration when determining the significance of the individual 2017 CSMP components:

- magnitude of the impact (e.g., substantial/not substantial);
- uniqueness of the affected resource (i.e., rarity of the resource); and
- susceptibility of the affected resource to disturbance (i.e., sensitivity of the resource).

The significance evaluation considers the interrelationship of these three components. For example, a relatively small magnitude impact to a state or federally listed species or associated habitat would be considered significant if the species is very rare and is believed to be very susceptible to disturbance (e.g., least Bells vireo). Conversely, common wildlife species found in urban areas are not rare or sensitive to disturbance. Therefore, a much larger magnitude of impact would be required to result in a significant impact.

The analysis of impacts to biological resources resulting from implementation of the 2017 CSMP is based on review of existing biological resources, including wetlands and fisheries, documented on or within 10-miles of the Study Area. Sources of information contributing to this analysis were obtained from the CNDDB and California Native Plant Society (CNPS) databases, National Wetlands Inventory, an updated review of updated vegetation mapping produced by SANGIS (2011), and the 2008 PEIR. These background reports and databases included identification of vegetation

communities, wildlife habitats, and animal species occurring in the Study Area. No field reconnaissance was completed in support of this analysis.

At the 2017 CSMP programmatic stage, precise evaluation of direct, indirect, permanent, and temporary impacts is not achievable in the absence of detailed design plans and constructability details. To quantify potential impacts to vegetation communities, including wetlands and waters of the U. S., and special status species potentially inhabiting these areas, this analysis applies a probable limits of construction for each of the four 2017 CSMP project categories as defined in Section 4.0. If ground disturbance are avoidable through use of trenchless construction techniques, then impacts to sensitive biological resources may be avoided and; hence, may be over- or under-estimated in the programmatic analysis pending future project-level information, engineering design details, and the implementation of the proposed mitigation measures, where applicable.

Thresholds of Significance

As defined in Appendix G of the CEQA Guidelines, project impacts to biological resources would be considered significant if the project was determined to:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified in 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 the U.S. Fish and Wildlife Service.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- 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.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation plan, or other approved local, regional, or state habitat conservation plan.

Impact Analysis

IMPACT 4.2-1	Would the 2017 CSMP 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 CDFW or USFWS.

CATEGORIES 1 and 3

Direct Effects – Construction: Improvements contemplated under the 2017 CSMP would be constructed throughout the Study Area as described in Chapter 3. Approximately 90 percent of the contemplated improvements would be constructed in hardscape environs (e.g. roadways or parking lot) and existing facility site locations (e.g., BVPS). Conveyance improvements within hardscape areas would result in a disturbance area ranging from 20 to 30 feet wide, depending on the diameter of the pipe, multiplied by the length of the conveyance improvement. Many of the condition-related improvements would be performed using trenchless methods and, therefore, would result in a smaller disturbance area. Pump station improvements would be limited to their existing site locations, and no expansion of these areas is contemplated under the 2017 CSMP.

In total, these improvements would impact approximately 61 acres of urban and developed land, as mapped in Figure 4.2-1 through Figure 4.2-5. However, this acreage does not factor in the likelihood for trenchless construction methods, which would likely reduce the total disturbance area. Construction work in urban and developed environs is unlikely to adversely affect special status species or their habitats. However, given that special status bird species covered under the MBTA, such white-tailed kite, are known to inhabit ornamentals, including non-native street trees, and vacated structures that may be located adjacent to project construction, these species could be impacted by project construction if it occurs during nesting season. Nest abandonment would be considered a potentially significant impact. Mitigation Measure BIO-1 is proposed to minimize potential impacts to MBTA protected birds.

Direct Effects – Operations: Operations and maintenance activities would include the continuation of the existing condition assessment program and no-dig rehabilitation of the pipeline and pump station facilities. These activities would occur in hardscape environs within roadway right-of-ways or existing facility sites, such that impacts to special status species and their habitats are unlikely. This impact is considered less than significant.

Indirect Effects: Once constructed, these improvements would be housed in existing facilities or underground. The improvements would not result in other activities that could otherwise result in impacts to special status species or their habitats. No impact would result.

CATEGORIES 2 and 4

Direct Effects – Construction: A total of 45 special-status terrestrial wildlife species were identified as having a potential to occur within 5 miles of the Study Area. Approximately 37 of these species are either known to exist or have a moderate potential for occurrence, including but not limited to, the Coastal California gnatcatcher, light-footed clapper rail, least Bell's vireo, and California least tern. The Study Area also provides habitat for several species of concern, which include San Diego desert woodrat, loggerhead shrike, San Diego horned lizard, burrowing owl, and pallid bat. In addition to special status wildlife, 61 special-status plant species have a potential to occur within the

Study Area in habitats illustrated in Figure 4.2-1 through Figure 4.2-5; 47 of these species are known to exist or have a moderate potential for occurrence.

Construction of these conveyance and access improvements under the 2017 CSMP may result in direct impacts to plant and wildlife species listed in Table 4.2-1 and Table 4.2-2, respectively. Construction activities would involve physical land disturbance, including grading, vegetation clearing or trimming, stockpiling of soil materials, vehicle and equipment movements, and, if necessary work within or adjacent to local waterways. These construction activities would occur within a disturbance area ranging from 30 to 50 feet wide, depending on the pipe diameter or roadway crown width, multiplied by the length of each respective improvement. Where sensitive habitats are present, the City would attempt to avoid or minimize the disturbance areas through the incorporation of trenchless construction methods or a narrower construction easement, if feasible. Potential impacts to the groups of special-status species identified in Table 4.2-1 and Table 4.2-2 are addressed below.

Special Status Birds. Construction of the Category 2 and 4 2017 CSMP improvements would occur in habitats potentially occupied by Coastal California gnatcatcher (FT, SSC), light-footed clapper rail (FE, SE), southwestern willow flycatcher (FE, SE), least Bell's vireo (FE, SE), western snowy plover (FT, SSC), western yellow-billed cuckoo (FT, SE), and California least tern (FE, SE). These habitats include, but are not limited to, southern riparian scrub, Diegan coastal sage scrub, and southern cottonwood-willow riparian forest. Depending on the length of the improvement and timing of construction, construction activities could coincide with the breeding season (March 15-September 15) and could result in direct effects to these species (e.g., nest abandonment). This is considered a potentially significant impact. Mitigation Measures BIO-1 and BIO-2 are proposed to mitigate this impact.

Special Status Amphibians and Reptiles. Wetlands, southern coast live oak riparian forest, southern riparian scrub, southern sycamore-alder riparian woodland, and open water habitat occur throughout the western portions of the Study Area and provide suitable habitat for special-status amphibians and reptiles, such as western spadefoot toad (SSC), arroyo toad (FE, SSC), western pond turtle (SSC), and south coast garter snake (SSC). Construction activities associated with the conveyance pipelines and access roads could result in direct impacts to these habitats, and hence, potential habitat for western spadefoot toad and other special status amphibians and reptiles. This direct impact is considered potentially significant. Mitigation Measures BIO-2, BIO-BIO-3, and HWQ-2 are proposed to mitigate this impact.

Invertebrates. Wetlands, southern coast live oak riparian forest, southern riparian scrub, and southern sycamore-alder riparian woodland occur within the western portions of the Study Area and may provide suitable habitat for special-status invertebrates, including vernal pool fairy shrimp (FT) and San Diego fairy shrimp (FE). These species may inhabit depressional areas within these vegetative communities; however, protocol surveys would be required to determine their presence. The location of access roadways and conveyance pipeline proposed under the 2017 CSMP could result in temporary or permanent impacts to these depressional areas, and, if present, vernal pool or San Diego fairy shrimp. This direct impact is considered potentially significant. Mitigation Measures BIO-2, BIO-BIO-3, and HWQ-2 are proposed to mitigate this impact.

Special Status Mammals. Several special-status mammal species have potential to occur within Study Area, including Stephens' kangaroo rat (FE, ST), pallid bat (SSC), Townsend's big-eared bat (SSC), northwestern San Diego pocket mouse (SSC), and American badger (SSC). These species

may forage over open grassland, coastal sage scrub, and woodland areas, as well as riparian areas. In addition, multiple small bridge crossings are present in the Study Area, which could provide suitable bat roosting habitat. At this time, it is unknown if these bridge structures provide suitable thermal or structural conditions for roosting bats. However, if one or more of these structures is used as a day roost, hibernation roost, or maternity colony roost, implementation of these improvements could result in injury and mortality of special status bat species. Loss of individual bats or other special status mammals would be considered a significant, direct impact. Mitigation Measure BIO-2 is proposed to mitigate this effect.

Special Status Plants. As provided in Table 4.2-3, construction of the conveyance pipeline and access roadways may result in direct impacts to several special-status plant species. Certain grasslands, sage and riparian scrub, and seasonal wetlands within the Study Area are known to or may potentially provide habitat for numerous special-status plant species, including threaded-leaved brodiaea (FT, SE), California Orcutt's grass (FE, SE), Del Mar manzanita (FE), San Diego thorn mint (FT, SE), San Diego button celery (FE, SE), spreading navarretia (FT), and San Diego ambrosia (FE). As a result, the proposed conveyance (cross-country) and roadway access improvements could directly impact the habitat of one or more of these special status species, or individual plants that may inhabit areas.

Loss of suitable habitat as a result of the 2017 CSMP could result in direct removal or mortality of special-status plants, if they are present. Loss and degradation of habitat that could support special-status plant species and direct impacts on special-status plant species are considered potentially significant. Mitigation Measure BIO-2 is proposed to mitigate this effect.

Direct Effects – Operations: Once constructed, the 2017 CSMP improvements would be contained entirely underground or within existing facility site locations (e.g. BVPS). Future operations and maintenance activities could potentially include no-dig rehabilitation and continuation of the condition assessment program. Vegetation maintenance may also be required for one or more access roadways. These activities may be covered under permits secured to facilitate construction or would be subject to future permitting, depending on the areas affected. Therefore, impacts would be less than significant.

Indirect Effects: Construction activities could also result in indirect impacts on special-status wildlife and plants including impacts caused by sedimentation, changes in vegetation as a result of changes in management practices, altered hydrology, habitat fragmentation, and the introduction of invasive species or noxious weeds from surrounding development. Indirect impacts may include the temporary degradation of water quality or dewatering of pools during construction and could also be significant. Mitigation Measures BIO-2 and HWQ-1 is proposed to mitigate this effect.

IMPACT 4.2-2	Would the 2017 CSMP have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS.

CATEGORIES 1 and 3

Direct Effects – Construction: A majority of the proposed improvements contemplated under the 2017 CSMP are located in hardscape environs including existing roadway right-of-ways, parking lots, and existing sanitary sewer facilities (e.g. BVPS). Construction of these improvements would be

limited to urban and developed areas. As a result, these improvements would be unlikely to affect riparian habitat and sensitive natural communities. Therefore, this impact would be less than significant.

Direct Effects – Operations: Once constructed, these improvements would be located underground or restricted to existing facility site locations. Similar to existing conditions, the O&M Program would entail a continuation of the City's condition assessment program and no-dig rehabilitations, which would be unlikely to affect riparian habitat. Therefore, impacts would be less than significant.

Indirect Effects: Mandatory compliance with the NPDES General Construction Permit or local grading ordinance would minimize the potential for indirect impacts to sensitive communities. This impact is considered less than significant.

CATEGORIES 2 and 4

Direct Effects – Construction: A limited number of improvements proposed as part of the 2017 CSMP could affect riparian habitats and other environmentally sensitive areas during construction or rehabilitation activities. Table 4.2-3 provides a breakdown of the different vegetation communities included within the 50-foot construction corridor for capacity and condition conveyance (cross-country) improvements and existing access roads. As provided in Table 4.2-3, sensitive natural communities including Diegan coastal sage scrub, southern maritime chaparral, southern mixed chaparral, southern coast live oak riparian forest, southern riparian scrub, southern sycamore-alder riparian woodland, and southern cottonwood-willow riparian forest could be impacted by the 2017 CSMP. Riparian areas potentially affected by these 2017 CSMP categories include Buena Vista Creek, and Agua Hedionda Creek.

Table 4.2-3. Impacts to Sensitive Vegetation Communities

Vegetation Community	CIP (Cross-Country)[1]		Access Roads[1]	
	Capacity	Condition	V/C Interceptor	Buena Vista Creek Interceptor
Valley and Foothill Grassland	0.20	0.34	--	--
Disturbed Habitat	--	0.08	2.52	--
Diegan Coastal Sage Scrub	--	0.10	--	0.04
Southern Maritime Chaparral	--	--	--	1.16
Southern Mixed Chaparral	--	0.06	--	--
Potential Areas of Federal and State Jurisdiction				
Disturbed Wetland	--	0.03	2.38	0.91
Southern Coast Live Oak Riparian Forest	0.04	--	--	0.25
Southern Riparian Scrub	0.82	0.04	0.15	--
Southern Sycamore-Alder Riparian Woodland	3.76	0.32	--	--

Table 4.2-3. Impacts to Sensitive Vegetation Communities

Vegetation Community	CIP (Cross-Country)[1]		Access Roads[1]	
	Capacity	Condition	V/C Interceptor	Buena Vista Creek Interceptor
Southern Cottonwood-Willow Riparian Forest	--	0.01	--	--
Freshwater	0.03	0.05	--	--
Totals	**4.85**	**1.03**	**5.05**	**2.36**
Total (Net Potential Jurisdictional Areas)	***4.65***	***0.45***	***2.53***	***1.16***

Source: SANGIS 2016
[1] Values provided in acreages

Given uncertainties regarding the timing of construction and precise location of the conveyance alignment, including the use of trenchless technologies, it is possible that construction could physically encroach into these sensitive natural communities. Trenchless or in-channel construction techniques may be used to cross smaller drainages with trenchless construction potentially occurring at larger waterway crossings such as Agua Hedionda Creek, if required. As engineering design progresses, the City anticipates completing additional routing analysis before finalizing the method for each crossing in consultation with CDFW, the San Diego RWQCB, and USFWS, as appropriate. For these reasons and based on the program-level of this analysis, the City concludes that the impacts provided in Table 4.2-3 could result from vegetation removal or grading. Without mitigation, construction activities in cross-country environs could have a significant effect on riparian habitats or other sensitive natural communities. Therefore, impacts would be considered significant. Mitigation Measures BIO-1, BIO-2, and BIO-3 are proposed to mitigate this this impact.

Direct Effects – Operations: Once constructed, the proposed 2017 CSMP improvements would be located underground and operations and maintenance activities would not require contact with riparian or other sensitive habitats. Access road maintenance would be infrequent and conducted in accordance with issued permits. Therefore, impacts would be considered less than significant.

Indirect Effects: If required, dewatering of trenches or smaller ditches could temporarily affect riparian vegetation, depending on the length of time necessary to install the pipeline and the season of construction. Indirect impacts to riparian vegetation, such as fuel spills and/or disturbance of roots, may also occur under unanticipated circumstances thereby resulting in adverse impacts to riparian resources. The potential impacts of constructing these alternatives could include the direct loss of these acreages from facility footprints, construction-related disturbance, and indirect water quality impacts. For this reason, indirect impacts resulting from construction could be significant. Mitigation Measures HWQ-1 and HWQ-2 are proposed to mitigate this this impact.

IMPACT 4.2-3	Would the 2017 CSMP have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

CATEGORIES 1 and 3

Direct Effects – Construction: Construction of the conveyance improvements would occur within existing roadways and developed areas. The repair, rehabilitation, or replacement of pump station facilities would not require the removal of vegetation to facilitate construction activities. New pump stations would be constructed to the same height and specifications as the existing facility Therefore, this impact is less than significant.

Direct Effects – Operations: Once constructed, the conveyance improvements would be underground. Operations of the pump stations would be similar to existing operations. Therefore, impacts would be less than significant.

Indirect Effects: Potentially jurisdictional areas would generally be avoided by these improvements. Indirect impacts to jurisdictional areas would be minimized through mandatory compliance with the NPDES General Construction Permit and/or local grading regulations. Additionally, implementation of the 2017 CSMP would minimize the potential for sanitary sewer overflows, which could result in indirect, adverse impacts to water quality in jurisdictional areas. Indirect impacts would be less than significant.

CATEGORIES 2 and 4

Direct Effects – Construction: Construction of these conveyance (cross-country) and access improvements as part of the 2017 CSMP could involve construction-related, direct impacts to wetlands and waters of the U.S. and State within the Study Area. These activities could result in the placement of fill materials or excavation within jurisdictional waters of the U.S., including wetlands, and State. As indicated in Impact 4.2-2, the City has approximated the probable limits of construction for the individual improvements, which would affect a corridor of up to 50 feet in width; multiplied by the distance of the specific improvement. To the extent feasible during future project design, the City would route the conveyance alignments to avoid waters of the U.S. while still maintaining the facilities in existing easements, where practical.

The probable 50-foot corridor for the conveyance and roadway improvements contains approximately 8.79 acres of vegetation communities that are closely associated with waters of the U.S., including wetlands, and waters of the State[1]. Table 4.2-3 provides a breakdown of the different vegetation types potentially impacted by each of the facilities. As shown in the table, CIP-related capacity improvements (cross-country) could impact up to 0.04 acre of southern coast live oak riparian forest, 0.82 acre of southern riparian scrub, 0.03 acre of freshwater, and 3.76 acres of southern sycamore-alder riparian woodland. CIP-related condition (cross-country) improvements could impact up to 0.04 acre of southern riparian scrub, 0.32 acre of southern sycamore-alder riparian woodland, 0.01 acre of southern cottonwood-willow riparian forest, and 0.05 acre of

[1] Waters of the State will generally overlap with those areas subject to federal jurisdiction. In some instances, the State's jurisdiction may extend beyond.

freshwater. Improvements to the V/C Interceptor access road could impact up to 2.38 acres of disturbed wetland and 0.15 acre of southern riparian scrub. Access road improvements for the Buena Creek Interceptor could impact up to 0.91 acre of disturbed wetland and 0.25 acre of southern coast live oak riparian forest. These areas could be subject to fill and excavation during construction.

Because the City has not yet completed project specific engineering details for these components, the actual impacts to waters of the U.S., including wetlands, and the State would need to be revisited once project-specific details become available. Based on the preliminary estimates provided in Table 4.2-3, the potential direct impacts to waters of the U.S., including wetlands and the waters of the State under the 2017 CSMP could be potentially significant. Mitigation Measures BIO-3 and HWQ-2 is proposed to mitigate these potential impacts through delineation of jurisdictional areas, resource permitting, and, if required, compensatory mitigation.

Direct Effects – Operations: Once constructed, the proposed improvements would be unlikely to result in direct effects to waters of the U. S., including wetlands, and the State since the facilities would be contained underground or within the access roadway crown. Any future maintenance would be conducted in accordance with approved permits acquired in advance of construction. For these reason, this impact is considered less than significant.

Indirect Effects: Potentially jurisdictional areas could be indirect impacted by erosion, sedimentation, or inadvertent spills during construction. These impacts could be significant. Indirect impacts to jurisdictional areas would be minimized through compliance with Mitigation Measures HWQ-1 and HWQ-2.

IMPACT 4.2-4	Would the 2017 CSMP 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?

CATEGORIES 1, 2, 3, and 4

Direct Effects – Construction: A vast majority of the improvements contemplated under the 2017 CSMP would be constructed within existing road right-of-way and disturbed areas. Construction of the conveyance (cross-country) and access roads may have a temporary impact to the movements of some terrestrial wildlife during construction. However, construction of the conveyance facilities and improved access roads would not result in any permanent barriers to the movement of terrestrial species. Further, existing pump station rehabilitations would be limited to their existing site locations. In this context, impacts to migratory corridors in considered less than significant.

Direct Effects – Operations: Once constructed, 2017 CSMP-related facilities would be underground, at-grade (e.g. roadway surface), or contained on-site and would not adversely affect migratory corridors for wildlife. Operations of the pumping facilities would produce only minor levels of noise from pumps, similar to existing condition, and would not lead to on-going disturbance that would interfere with the movement of any native wildlife species or wildlife corridors and nursery sites. In this context, the 2017 CSMP would result in a less than significant impact to existing wildlife corridors.

Indirect Effects: Implementation of the 2017 CSMP would not result in new growth or secondary projects that could otherwise result in indirect impacts to wildlife corridors. For this reason, this impact would be less than significant.

IMPACT 4.2-5	Would the 2017 CSMP conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

CATEGORIES 1, 2, 3, and 4

Direct Effects – Construction and Operations: Implementation of the 2017 CSMP could involve the removal or disturbance of trees protected by local tree ordinances or tree protection policies contained in the General Plans of adjacent jurisdictions. Because construction of the 2017 CSMP improvements could require the removal of trees, including oak species, compliance with the City's Municipal Code (Chapter 12.04), San Marcos City Code (Chapter 5, Article 5), San Diego County's Tree Permit Program, and the City of Oceanside's Code of Ordinances (Chapter 31A) may be required for one or more improvements. In Carlsbad, improvements would be required to maintain conformance with applicable HMP standards including implementation of minimum buffer widths. Compliance with these requirements would be a condition of approval prior to the pruning or removal of protected trees within each jurisdiction. Based on these preexisting regulations, this impact is less than significant.

Indirect Effects: Implementation of the 2017 CSMP would not result in secondary activities, not otherwise considered in this SPEIR that could conflict with local plans and polices adopted for the purpose of protecting biological resources. For this reason, this impact would be less than significant.

IMPACT 4.2-6	Would the 2017 CSMP conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation plan, or other approved local, regional, or state habitat conservation plan?

CATEGORIES 1 and 3

Direct Effects – Construction and Operations: These improvements would generally occur in urbanized and disturbed are where no HCP, NCCP, or other approved local, regional, or state habitat conservation plan applies due to the absence of sensitive habitats. As a result, the implementation of these conveyance (hardscape) and pump station improvements would not conflict with plans adopted for the purposes of mitigating impacts to listed species and their associated habitats. No impact would result.

Indirect Effects: Implementation of conveyance improvements proposed under the 2017 CSMP would not result in land use changes or secondary effects that could otherwise result in conflicts HCP or NCCP. For this reason, no impact would result.

CATEGORIES 2 and 4

Direct Effects – Construction and Operations: Components of the 2017 CSMP may be constructed in sensitive habitat areas that are subject to the San Diego County MHCP or Carlsbad

HMP. Figure 4.2-8 illustrates the MHCP Plan Subareas in relation to the Study Area for the 2017 CSMP. As shown, the Study Area overlaps with areas identified as preserve areas, outside pre-approved mitigation areas, special districts, and pre-approved mitigation areas. As a result, these components of the 2017 CSMP could be subject to the MHCP depending on the type of improvement once project specific details are known and localized habitat conditions are better understood. Future compliance with the MHCP would avoid the potential for project-specific improvements to conflict with the Subplan areas, as applicable. Compliance with the MHCP would be triggered in conjunction with the implementation of Mitigation Measures BIO-2 and BIO-3 for individual improvements. With the incorporation of Mitigation Measure BIO-2 and BIO-3, the potential for individual improvements to conflict with the MHCP would be avoided.

Additionally, one or more of these conveyance and access improvements within the Carlsbad city limits may require conformance with Carlsbad's HMP implementing ordinance. Conformance with the HMP would also require mitigation for significant impacts identified in the preceding impacts (e.g. bird breeding season restrictions [see Impact 4.2-1]), as applicable. In addition, impacts to non-special-status vegetation communities may be potentially significant and may require in-lieu mitigation fee credits under the HMP. Similar to the MHCP, these requirements would be triggered for each applicable improvement in conjunction with Mitigation Measures BIO-2 and BIO-3, once design details become available. With the incorporation of Mitigation Measure BIO-2 and BIO-3, the potential for individual improvements to conflict with the MHCP would be avoided, and the corresponding impact less than significant.

Indirect Effects: Implementation of the 2017 CSMP would not result in land use changes or secondary effects that could otherwise result in conflicts with an adopted HCP or NCCP. For this reason, this impact would be less than significant.

4.2.5 Mitigation Measures

Implementation of the following avoidance, minimization, and/or mitigation measures would reduce significant impacts identified for 2017 CSMP Categories 1, 2, 3, and 4 as identified under Impact 4.2-1. The proposed mitigation would replace the mitigation measures adopted in the 2008 PEIR for biological resources and apply to 2017 CSMP Categories 1, 2, 3, and 4.

BIO-1 **MBTA Nest Avoidance:** If construction activities occur between January 15 and September 15, a preconstruction survey (within seven days prior to construction activities) shall be conducted by a qualified biologist to determine if active nests are present within or adjacent to the area proposed for development in order to avoid the nesting activities of breeding birds/raptors. The results of the surveys shall be submitted to the City (and made available to the Wildlife Agencies, upon request) prior to initiation of any construction activities.

If nesting activities within 200 feet of the proposed work area are not detected, construction activities may proceed. If nesting activities are confirmed, construction activities shall be delayed within an appropriate buffer (e.g., 300-feet) from the active nest until the young birds have fledged and left the nest or until the nest is no longer active as determined by a qualified biologist. The size of the appropriate buffer shall be determined by a qualified biologist based on field conditions. The results of all biological monitoring shall be submitted to the City (and made available to the Wildlife Agencies, upon request).

Implementation of the following avoidance, minimization, and/or mitigation measures would reduce significant impacts identified for CSMP Categories 2 and 4 as identified under Impact 4.2-1. The proposed mitigation would supersede the mitigation measures adopted in the 2008 PEIR and apply to 2017 CSMP Categories 2 and 4.

BIO-2 **Habitat Assessment and Focused Surveys for Special-Status Species and Sensitive Habitats.** Prior to the issuance of project-specific construction documents for CIP Capacity and Condition Projects (Cross-County) and Out-of-Service Access Roads, a habitat assessment shall be conducted by a qualified biologist to determine the potential for special-status species to occur within the anticipated construction area. If the habitat assessment identifies potentially suitable habitat for threatened and endangered species, focused surveys shall be conducted by a qualified biologist to determine their presence or absence. Sensitive vegetation communities shall be documented as part of the habitat assessment.

If threatened and endangered species are observed/detected, project specific mitigation measures shall be developed to mitigate impacts on threatened and endangered species to below a level of significance. Specific measures shall include, but are not limited to:

- Early consultation with the wildlife agencies (i.e., USFWS, CDFW) for ESA- and CESA-listed species to ensure avoidance to the greatest extent feasible and appropriate “take” authorization.
- Provision of a qualified biological monitor on site during all earth disturbing activities to ensure avoidance of impacts on listed species.
- The use of fencing or flagging to identify sensitive areas that support the listed species and to ensure that the areas are protected from direct and indirect impacts.
- Implementation of noise reduction measures (e.g., noise attenuation structures) within habitats occupied by listed avian species, and noise monitoring during the breeding season.
- Identification and transplantation of listed plant species populations in accordance with best practices.
- Avoidance of the breeding seasons for listed species such as:
    - Arroyo toad—March 1 to September 30
    - Least Bell’s vireo—March 1 to September 30
    - Willow flycatcher (all subspecies)—March 1 to September 30
    - Coastal California gnatcatcher—March 1 to September 30

If no threatened or endangered species are observed or detected during focused surveys, but potentially suitable habitat for non-threatened and non-endangered plant or wildlife species is present, a site-specific determination shall be made as to whether the potential impacts are significant based on the degree of threat and the size of the population/occupied habitat to be impacted.

Implementation of the following avoidance, minimization, and/or mitigation measures would reduce significant impacts identified for CSMP Categories 2 and 4 as identified under Impacts 4.2-2 and

4.2-3. The proposed mitigation would supersede the mitigation measures adopted in the 2008 PEIR and apply to 2017 CSMP Categories 2 and 4.

BIO-3 **Formal Wetland Delineation and Permit Acquisition.** If the habitat assessment identifies potential federal and/or state jurisdictional wetlands, a formal jurisdictional delineation shall be prepared. This document shall map the jurisdictional wetlands present and overlay it on the grading footprint of the project, thereby allowing a calculation of the total impacts. If jurisdictional wetlands would be impacted, mitigation shall be required at a minimum 1:1 ratio; however, coordination with USACE (through the 404 process) and CDFW (through the Section 1602 Streambed Alteration Agreement process) may determine a higher ratio is required. Mitigation shall be achieved through a combination of in-kind creation, restoration, and/or enhancement as determined to be appropriate for each site through consultation with the Resource Agencies. Mitigation shall first be considered on-site, then with an approved mitigation bank, and thirdly through offsite mitigation. The appropriate permit applications shall be submitted to state and federal regulatory agencies. The permits issued by these agencies would finalize the mitigation requirements.

4.2.6 Cumulative Impacts

Implementation of the 2017 CSMP within each respective jurisdiction would result in impacts to biological resources depending on the type of improvement and its geographic location within the Study Area. As described in the 2008 PEIR and, more recently, in applicable general plan updates, continued development within Vista, San Marcos, Oceanside, Carlsbad, and San Diego County would extend urban land uses into vacant areas characterized by natural vegetation communities and used by wildlife. These cumulative habitat effects are expected to continue into the future consistent with adopted plans.

Biological resources, including threatened, endangered, and species of special concern, could be temporarily affected by construction activities associated with the 2017 CSMP in conjunction with other development and infrastructure projects. However, given that the proposed 2017 CSMP improvements are primarily located within previously-disturbed roadway ROWs and existing facility site locations; in most cases, these facilities would avoid the potential for impacts to special-status plants or wildlife.

In instances where a potential impact to biological resources could occur, USACE, RWQCB, CDFW and USFWS have promulgated a regulatory scheme that limits impacts to these species. The effects of the 2017 CSMP improvements in sensitive habitat areas would be rendered less than significant through mitigation requiring compliance with all applicable regulations that protect plant, fish, and animal species, as well as waters of the U.S. and the State (see Mitigation Measures BIO-1, BIO-2, and BIO-3). Other cumulative projects in the Study Area would also be required to avoid impacts to special-status species and/or mitigate to the satisfaction of the CDFW and USFWS for the potential loss of habitat. Similarly, impacts to wetlands would require mitigation to the satisfaction of the CDFW, RWQCB, and USACE. As these program-level mitigation measures would be imposed at the project-level for individual improvements, such as pre-construction surveys and protective fencing, these measure would minimize or avoid impacts to biological resources such that they would not be cumulatively considerable.

All projects must be consistent with the MHCP guidelines for mitigation. Because the affected jurisdictions, including the City, are approving ongoing development so as not to preclude implementation of the MHCP or negatively impact future preserve areas in the Plan area, cumulatively considerable conflicts as its relates to the 2017 CSMP would be avoided.

4.2.7 Significant and Unavoidable Impacts

With implementation of the proposed mitigation measures, potential significant impacts to biological resources would be reduced to a less than significant level for all 2017 CSMP categories.

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4.3 Cultural and Paleontological Resources

4.3.1 Introduction

This section of the SPEIR supplements and provides an update to Section 4.4 (Cultural and Paleontological Resources) of the 2008 PEIR. This section presents a programmatic analysis of the potential cultural and paleontological resources impacts associated with implementation of the individual improvement projects included in the proposed 2017 CSMP.

4.3.2 Existing Conditions

Historic Resources

The GP 2030 Update (City of Vista 2011) provides a description of historic resources within the City. For this reason, Section 4.5 of the City's GP 2030 Update PEIR is incorporated by reference. According to the GP 2030 Update PEIR, there are 12 buildings within Vista and 36 within the City's Sphere Of Influence (SOI) listed in the California Historical Resources Information System (CHRIS). Appendix F1 to this document includes a tabular listing for these buildings as provided in the GP 2030 Update PEIR. Among the structures included is the Rancho Buena Vista adobe ranch house, which was evaluated in 2006 and determined eligible for the California Register of Historical Resources (CRHR) (City of Vista 2011). The remaining buildings have not been evaluated for historic eligibility; however, for the purposes of this SPEIR, they are considered potentially historic pending further evaluation.

Several other historic buildings beyond the officially recorded resources listed in Appendix E are also located within the Study Area. Additional databases maintained by South Coast Information Center (SCIC) list another 21 structures located within the City and are noted as historic in the GP 2030 Update PEIR. Many of these structures are located along Vista Way (east and west) and may be eligible for the National Register of Historic Places (NRHP) pending further evaluation. In addition, a four-block area included as part of the Downtown Vista Specific Plan (DVSP) Update is identified as a potential historic district. The PEIR prepared for the DVSP Update (City of Vista 2009) is incorporated by reference, including Appendix D of the 2008 PEIR, the Cultural Resources Technical Report, and Appendices.

Archaeological Resources

The regional and local cultural setting remains similar to the setting described in Section 4.4 of the 2008 PEIR, which is incorporated by reference. In addition, Appendix B, Cultural Resources Impact Table and Cultural Resources Evaluation, from the 2008 PEIR, is also incorporated by reference. This includes the descriptions of archaeological time periods for the Study Area, including the Paleo-Indian San Dieguito Complex, the Milling Stong Horizon La Jolla Complex, and the Late Prehistoric (Luiseno and Kumeyaay) Periods. Appendix F2 includes a listing of archaeological resources that were identified in the 2008 records search and within 500 feet of one or more of the proposed 2017 CSMP improvements.

Paleontological Resources

The following paleontological resources information is derived from Section 4.5.2.3 of the GP 2030 Update PEIR (City of Vista 2011).

Within Vista's SOI, several distinct geologic formations are found that record portions of the past 140 million years of Earth history. The boundary area can be subdivided into two general geomorphic regions: (1) the Inland Mesa and Canyon Region and (2) the Peninsular Ranges Foothill Region. This geomorphic division reflects a basic geologic difference between the two regions, with Mesozoic metavolcanic and plutonic rocks predominating in the Peninsular Ranges Foothill Region, and Eocene and Pleistocene sedimentary rocks predominating in the Inland Mesa and Canyon Region. The irregular contact between the Peninsular Ranges Foothill Region and the Inland Mesa and Canyon Region reflects the ancient basement topography of this area before it was buried by a thick sequence of Eocene-age sedimentary rocks deposited 50 to 35 million years ago.

The Inland Mesa and Canyon Region is underlain by Eocene and Pleistocene marine and non- marine sedimentary rocks deposited within a variety of paleoenvironments from ancient river flood plains to open marine sea floor to protected estuarine mud flats. The Peninsular Ranges Foothill Region is primarily underlain by Mesozoic plutonic ("granitic") rocks, with Mesozoic metavolcanic and metasedimentary rocks occurring along the extreme western boundary. The Mesozoic plutonic rocks, of volcanic origin, have no potential for fossil finds.

Levels of paleontological sensitivity (High, Moderate, Low and Zero) are rated for individual formations, because it is the formation that may contain fossil remains. High, low, and zero levels of sensitivity are found within the GP 2030 Update boundary, identified by Vista's neighborhoods, as summarized in Table 4.3-1.

Table 4.3-1. Paleontological Sensitivity by Neighborhood

Neighborhood	Paleontological Sensitivity		
	High	Low	Zero
West Vista	Geologic deposits of older Quaternary alluvium may occur in the southern portion of this planning area, generally along the Buena Vista Creek drainage. Geologic deposits of the Santiago Formation occur over a large portion, generally including the region west of Emerald Drive and north of SR -78, the region north of Date Street and Ravine Road and west of Duran Street, and the region north of Olive Drive.	Geologic deposits of younger Quaternary alluvium occur in the southern portion of this planning area, generally along the Buena Vista Creek drainage.	Geologic deposits of the Peninsular Ranges Batholith occur in the southern portion of this planning area, generally south of Ravine Road and Tylee Street, west of Melrose Drive, east of Duran Street, and north of SR-78.

Table 4.3-1. Paleontological Sensitivity by Neighborhood

Neighborhood	Paleontological Sensitivity		
	High	Low	Zero
Southwest Vista	Geologic deposits of older Quaternary alluvium may occur in the northwestern portion of this planning area, generally along the Buena Vista Creek drainage. Geologic deposits of the Santiago Formation occur over a large portion, generally including the region west of Emerald Drive and north of SR-78, the region north of Date Street and Ravine Road and west of Duran Street, and the region north of Olive Drive.	Geologic deposits of younger Quaternary alluvium occur in the southern portion of this planning area, generally along the Buena Vista Creek drainage.	Geologic deposits of the Peninsular Ranges Batholith occur in the northeastern portion of this planning area, generally south of SR-78, west of Melrose Drive, east of Pomelo Drive, and north of Melrose Way.
Shadowridge	Geologic deposits of older Quaternary alluvium may occur in the central portion of this planning area, generally along the Buena Creek and Agua Hedionda Creek drainages. Geologic deposits of the Santiago Formation occur in the eastern portions, generally including the region north of Shadowridge Drive and west of Live Oak Road, the region south of Shadowridge Drive and north and west of Cottage Way, and the region northwest of Mimosa Avenue southeast of Plumosa Avenue and northeast of Oleander Avenue.	Geologic deposits of younger Quaternary alluvium occur in the central portion of this planning area, generally along the Buena Creek and Agua Hedionda Creek drainages.	Geologic deposits of the Peninsular Ranges Batholith occur over a large portion of this planning area, generally from Shadowridge Road south to Sycamore Avenue.

Table 4.3-1. Paleontological Sensitivity by Neighborhood

Neighborhood	Paleontological Sensitivity		
	High	Low	Zero
Vista Business Park	Geologic deposits of older Quaternary alluvium may occur in the southeastern portion of this planning area, generally along the Agua Hedionda Creek drainage. Geologic deposits of the Santiago Formation occur in the eastern portions, generally including the region north of Shadowridge Drive and west of Live Oak Road, the region south of Shadowridge Drive and north and west of Cottage Way, and the region northwest of Mimosa Avenue southeast of Plumosa Avenue and northeast of Oleander Avenue.	Geologic deposits of younger Quaternary alluvium occur in the central portion of this planning area along the local tributary south of Park Center Drive and north of Keystone Way.	Geologic deposits of the Peninsular Ranges Batholith occur in the northwestern and central portions of this planning area, generally in the region north of Sycamore Avenue and the region forming the slopes of the local tributary south of Park Center Drive.

Table 4.3-1. Paleontological Sensitivity by Neighborhood

Neighborhood	Paleontological Sensitivity		
	High	Low	Zero
East Vista	Geologic deposits of older Quaternary alluvium may occur in the southern portion of this planning area, generally along the Buena Creek drainage. Geologic deposits of the Santiago Formation occur in small isolated patches in the east-central portion, generally including the region in the vicinity of the intersection of Monte Vista Drive and Loma Vista Way and the region east of Foothill Drive, south of Foothill Ranch Lane, and north of Sunrise Drive.	Geologic deposits of younger Quaternary alluvium occur in the southern portion of this planning area, generally along the Buena Creek drainage.	Geologic deposits of the Peninsular Ranges Batholith occur over a large portion of this planning area, generally from Santa Fe Avenue northeast to Foothill Drive and north to Gopher Canyon Road. Geologic deposits of the Santiago Peak Volcanics occur in the eastern portion of this planning area, generally east of Foothill Drive, Lone Oak Road, and Cherimoya Drive.
North Vista	Geologic deposits of older Quaternary alluvium occur in the northern portion of this planning area, generally along the Guajome Creek drainage in the vicinity of Guajome Regional Park and may occur along the northern tributary to Buena Creek. Geologic deposits of the Santiago Formation occur in the western portion, generally west of North Santa Fe Avenue, north of California Avenue, and south of Encino Drive.	Geologic deposits of younger Quaternary alluvium occur in the northern portion of this planning area, generally along the Guajome Creek drainage in the vicinity of Guajome Regional Park and along the northern tributary to Buena Creek.	Geologic deposits of the Peninsular Ranges Batholith occur in the northwestern and central portions of this planning area in the region north of Sycamore Avenue and the region forming the slopes of the local tributary south of Park Center Drive. Geologic deposits of the Santiago Peak Volcanics occur in the eastern portion east of Foothill Drive, Lone Oak Road, and Cherimoya Drive.
Vista Village	Geologic deposits of older Quaternary alluvium may occur in the central portion of this planning area, generally along the Buena Vista Creek drainage.	Geologic deposits of younger Quaternary alluvium may occur in the central portion of this planning area, generally along the Buena Vista Creek drainage.	Geologic deposits of the Peninsular Ranges Batholith occur in the northwestern portion of this planning area in the region north of West Vista Way.

Table 4.3-1. Paleontological Sensitivity by Neighborhood

Neighborhood	Paleontological Sensitivity		
	High	Low	Zero
Mar Vista/Sunset/Carriage Hill	Geologic deposits of older Quaternary alluvium may occur in the southwestern and southeastern portions of this planning area, generally along the Loma Alta Creek and Buena Creek drainages. Geologic deposits of the Santiago Formation occur in the southwestern portion in the region generally south of Escondido Avenue, north of Mar Vista Drive, and west of Golden Trail.	Geologic deposits of younger Quaternary alluvium occur in the southwestern and southeastern portions of this planning area, generally along the Loma Alta Creek and Buena Creek drainages.	Geologic deposits of the Peninsular Ranges Batholith occur over major portions of this planning area, generally in the region south of Santa Fe Avenue.

Source: GP 2030 Update PEIR (City of Vista 2011)

Native American Consultation

Assembly Bill (AB) 52 was passed in 2014 and took effect on July 1, 2015. It establishes a new category of environmental resources that must be considered under CEQA called tribal cultural resources (Public Resources Code [PRC] 21074) and establishes a process for consulting with California Native American tribes (PRC 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3).

California Native American tribes traditionally and culturally affiliated with the area containing the site of the proposed project requested consultation for the CSMP project analyzed in this document pursuant to PRC Section 21080.3.1 (a part of AB 52), and consultation was initiated by the City.

4.3.3 Regulatory Framework

This section updates the description of the federal, state, and local regulatory framework adopted for the purposes of managing cultural resources as identified in the 2008 PEIR.

State

California Register of Historical Resources

The Office of Historic Preservation (OHP) administers the California Register of Historic Places (California Register), which was established in 1992 though amendments to the PRC, Section 5024.1, as an authoritative guide 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 from substantial adverse change. The California Register includes resources that have been formally determined eligible for, or listed in, the National Register of Historic Places (NRHP), State Historical Landmark Number 770 or higher, Points of Historical Interest recommended for listing by the State Historical Resources Commission (SHRC) for listing, resources nominated for listing and determined eligible in accordance with criteria and procedures adopted by the SHRC, and resources and

districts designated as city or county landmarks when the designation criteria are consistent with California Register criteria.

The California Register establishes the evaluative criteria used by CEQA in defining a historic resource. A historic resource is significant if it meets one or more of the criteria for listing in the California Register. Resources are eligible for listing in the California Register if they:

Are associated with events that have made a significant contribution to the broad patterns of local or regional history and cultural heritage of California or the U.S.

Are associated with the lives of persons important to the nation or to California's past.

Embody 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.

Have yielded, or may be likely to yield, information important in prehistory or history of the state or nation.

California Environmental Quality Act

CEQA requires lead agencies to carefully consider the potential effects of a project on historical and/or unique archaeological resources.

"*A 'historical resource' includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript, which is historically or archaeologically significant*…" (PRC Section 5020.1 (j)).

State CEQA Guidelines Section 15064.5 specifies criteria for determining the significance of impacts to archaeological and historical resources.

Section 15064.5(a) defines a "historical resource" as:

1) *A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code 5024.1, Title 14 California Code of Regulations [CCR], Section 4850 et seq.).*

A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC or identified as significant in a historical resource survey meeting the requirements section 5024.1(g) of the PRC, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (14 CCR 4852) including the following:

a. *Is associated with events that have made a contribution to the broad patterns of California history and cultural heritage;*
b. *Is associated with the lives of persons important in our past;*

c. *Embodies the distinctive characteristics of a type, period, region or method construction, or represents the work of an important individual or possesses high artistic values; or*
d. *Has yielded, or may be likely to yield, important information in prehistory or history.*

The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the PRC), or identified in a historical resources survey (meeting the criteria in Section 5024.1(g) of the PRC) does not preclude a lead agency from determining that the resource may be a historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

Section 1564.5 (c) of the CEQA Guidelines states:

"CEQA applies to effects on archaeological sites.

1) When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subdivision (a).

2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of the PRC Section 21084.1, and this section, Section 15126.4 of the Guidelines, and the limits contained in PRC Section 21083.2 do not apply.

3) If an archaeological site does not meet the criteria defined in subdivision (a), but does meet the definition of a unique archeological resource in PRC Section 21083.2, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in PRC Section 21083.2 (c-f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.

4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process."

Section 15064.5 (e) of the CEQA Guidelines states:

"In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:

1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

a) The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and

b) If the coroner determines the remains to be Native American:

(1) The coroner shall contact the Native American Heritage Commission within 24 hours.

(2) The Native American heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.

(3) The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provide in the PRC Section 5097.98, or

2) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance."

Section 15064.5 (f) of the CEQA Guidelines states:

'As part of the objectives, criteria, and procedures required by PRC Section 21082, a lead agency should make provisions for historical or unique archaeological resources accidentally discovered during construction. These provisions should include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measure or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place.'

Assembly Bill 52 - Tribal Cultural Resources

On September 25, 2014, Governor Brown signed into law Assembly Bill 52 (AB 52), which amended PRC Section 5097.94 and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to establish that an analysis of a project's impact on cultural resources include whether the project would impact "tribal cultural resources." PRC Section 21074 defines tribal cultural resources as follows:

(a) "Tribal cultural resources" are either of the following:

(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

(A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.

(B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

(2) 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

(b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

(c) A historical resource described in Section 21084.1, a *unique archaeological resource as defined in subdivision (g) of Section 21083.2, or* a *nonunique archaeological resource* as *defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).'*

Per PRC Section 21080.3.1(b), the lead agency is required to consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of a proposed project, if: (1) the tribe requested to the lead agency, in writing, to be informed by the lead agency of proposed projects in that geographic area; and (2) the tribe requests consultation, prior to the release of a negative declaration, mitigated negative declaration or environmental impact report for a project. "Consultation", with a cross-reference to Government Code Section 65352.4, is also defined in this section when local governments consult with tribes on certain planning documents.

The new provisions in PRC Section 21080.3.2(a) enumerate topics that may be addressed during consultation, including identification of the significance of tribal cultural resources, determination of the potential significance of project impacts on tribal cultural resources and the type of environmental document that should be prepared, and identification of possible mitigation measures and project alternatives.

PRC Section 21084.2 states that "*a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment*." PRC Section 21084.3(a) states that public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. Section 21084.3(b) of the PRC includes the following examples of mitigation measures that may be considered to avoid or minimize the significant adverse effects:

(1) Avoidance and preservation of the resources in place, including, but not limited to, planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

(2) Treating the resource with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

(A) Protecting the cultural character and integrity of the resource.

(B) Protecting the traditional use of the resource.

(C) Protecting the confidentiality of the resource.

(3) Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

(4) Protecting the resource.

California Health and Safety Code

California Health and Safety Code Section 7050.5(b) and (c) regulates the procedure in the event of human remains discovery. Pursuant to PRC Section 5097.98, in the event of human remains discovery, no further disturbance is allowed until the County Coroner has made the necessary findings regarding the origin and disposition of the remains. If the remains are determined to be Native American, the coroner is required to contact the Native American Heritage Commission (NAHC). The NAHC is responsible for contacting the most likely Native American descendent, who will consult with the local agency regarding proper treatment and distribution of the remains. According to Section 15064.5 of the State CEQA Guidelines:

(a) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:

1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

(A) The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and

(B) If the coroner determines the remains to be Native American:

1. *The coroner shall contact the Native American Heritage Commission within 24 hours.*
2. *The Native American heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.*
3. *The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provide in the PRC Section 5097.98,*

Local

City of Vista Historic Preservation Code – Municipal Code Chapter 15.12

Chapter 15.12 of the City's Municipal Code relates to historic preservation. The code applies to all public and privately owned historic resources within the corporate limits of Vista, including resources that embody Vista's historic, archaeological, cultural, architectural, and aesthetic heritage. The code includes (among other regulations) the establishment of a Historic Preservation Commission, the City's Register of Designated Historic Resources, and procedures and criteria for inclusion in the register. The code also states that during the CEQA environmental review process, the City will evaluate the historical significance of any feature of the built environment found to be more than 45 years old where a proposed project would result in its alteration or removal, regardless of whether that feature is officially designated on a local, state, or federal register.

4.3.4 Project Impacts

Methodology

This impact analysis presents a program-level analysis that evaluates the potential impacts of implementing the 2017 CSMP on existing pre-historic and historic environmental conditions. Based on the existing conditions described above in Section 4.3.2, and incorporated by reference from the 2008 PEIR, the impact analysis programmatically assesses the direct, indirect, and cumulative impacts on cultural resources as a consequence of implementing the 2017 CSMP. The improvements included within the 2017 CSMP are largely within the scope of the prior analysis; therefore, the focus in this section is placed on how the 2017 CSMP Categories, as defined in Section 4.0.1, would impact the historic and prehistoric archaeological resources evaluated in the 2008 PEIR.

The analysis provided in the GP 2030 Update PEIR for historic and paleontological resources is incorporated by reference for applicable portions of the Study Area. This includes Section 4.5.4.4.1, Historical Resources, of the GP 2030 Update PEIR, which includes an analysis of potential impacts to historical resources within the City SOI. Additionally, this analysis identified a four block area in the DVSP Update as a potential historic district and a list of eligible and potentially eligible buildings within the DVSP area. Section 4.5.4.4.3, Paleontological Resources, of the GP 2030 Update PEIR identifies the Eocene Santiago formation or Quaternary older alluvium, both rated as highly sensitive for paleontological resources.

Thresholds of Significance

As defined in Appendix G of the State CEQA Guidelines, project impacts to cultural resources would be considered significant if the project was determined to:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the CEQA Guidelines;
- Cause a substantial adverse change in the significance of an archaeological resource as defined in Section 15064.5 of the CEQA Guidelines;
- Directly or indirectly destroy a unique paleontological resource or site or unique geological feature;
- Disturb any human remains, including those interred outside of formal cemeteries; or
- Cause a substantial adverse change in the significance of a Tribal Cultural Resource as defined in Public Resources Code §21074?

Impact Analysis

IMPACT 4.3-1	Would the 2017 CSMP cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the CEQA Guidelines?

CATEGORIES 1, 2, 3 and 4

Direct Effects – Construction and Operation: Construction of the 2017 CSMP conveyance improvements would largely occur within existing roadway rights of way and developed areas. The

demolition or direct physical alteration of potential historic structures as identified in the GP 2030 Update PEIR and DVSP Update PEIR, including the historic district located in the DVSP, would be unlikely based on the improvements contemplated and described in Section 3.5.2 and their relative proximity to one or more of the structures. Additionally, these improvements would be unlikely to affect the Rancho Buena Vista adobe ranch house, which is located in the vicinity of the Buena Vista Interceptor. For these reasons, direct impacts to historic properties would be less than significant.

Once constructed, all future maintenance and operational activities would be restricted to City's existing rights of way or existing site locations (e.g. BVPS) and, therefore, no encroachment into adjacent properties would occur. Based on these considerations, no impact would result.

Indirect Effects: Construction of the conveyance improvements would result in temporary vibration-related effects in the immediate vicinity of construction from the use of heavy equipment and machinery under Categories 1, 2, and 4. As described in Section 4.8, construction activities can produce varying degrees of ground vibration depending on the equipment and methods employed and localized soil conditions. The construction activities that typically generate the highest levels of vibration are blasting and impact pile driving. Given that these activities would not occur in conjunction with the 2017 CSMP, the highest vibration levels for construction would be associated with the operation of a vibratory roller (0.210 peak particle velocity [PPV] at 25 feet).

Based on criteria presented in the Federal Transit Administration's (FTA) Noise and Vibration Manual (2006), "fragile buildings" are subject to damage when vibration exceeds 0.20 PPV. Historic structures are often considered in this category due to their age of construction and the building codes enacted at the time of construction. As a result, construction activities within 25 feet of fragile structures could result in damaging vibration levels for historic structures, where present and eligible for the NRHP or CRHR. For example, the CRHR eligible Rancho Buena Vista adobe ranch house is located in close proximity to one or more conveyance improvements proposed under the 2017 CSMP. However, in the absence of precise information on the location and types of construction, if work is proposed within 25 feet or less of one or more contributing elements, vibration-related impacts could potentially be significant. Mitigation Measure CULT-1 is proposed to minimize construction-related vibration impacts to historic structures.

IMPACT 4.3-2	Would the 2017 CSMP cause a substantial adverse change in the significance of an archaeological as defined in Section 15064.5 of the CEQA Guidelines?

CATEGORIES 1, 2, 3, and 4

Direct Effects - Construction: As described in Section 4.4 (Cultural and Paleontological Resources) of the 2008 PEIR, data from the records searches as part of the Cultural Resources Study (City of Vista 2008) was organized in categories for each of the contemplated capacity and condition-related projects as identified in the 2008 SMPU. These categories included the following: 1) presence of recorded sites within 100 feet of sensitive cultural resources, 2) presence of recorded sites within 500 feet of sensitive cultural resources, 3) disturbed and/or developed setting, and 4) undisturbed or partially disturbed setting. A complete listing of pipeline segments within 100 and 500 feet of sensitive cultural resources, and the potentially impacted cultural resources site number, is provided in Table 4.0-1 of the Cultural Resources Evaluation, which can be found in Appendix B of the 2008 PEIR and is incorporated by reference.

As described in Chapter 3 of this SPEIR, there are conveyance improvements that were proposed in the 2008 SMPU that are no longer proposed as part of the 2017 CSMP. To determine the cultural resources impacts that would occur with implementation of the 2017 CSMP, the list of conveyance improvements listed in Table 4.0-1 of the Cultural Resources Evaluation (Appendix B of the 2008 SMPU PEIR) was compared with the list of conveyance capacity and condition improvements proposed as part of the 2017 CSMP (see Tables 3-3, 3-4, and Appendix B). The capacity and condition improvements that are no longer proposed as part of the 2017 CSMP were removed from the list of having the potential to impact cultural resources. As described in Chapter 3 of this document, the City has applied probable work limits for construction for the remaining linear improvements proposed as part of the 2017 CSMP. This includes approximating the area of direct impact for construction, adjacent staging areas, and/or other temporary work areas and averages 50 feet in width. To remain consistent with the prior analysis, those pipeline segments within 100 and 500 feet of known sensitive cultural resources were presumed to potentially impact cultural resources similar to the 2008 PEIR. The pipeline segments and resource site numbers are provided in Appendix F2.

As provided in Appendix F2, 418 pipeline components are situated within 100 and 500 feet of a recorded archaeological site. Of this group, 317 components are situated in undisturbed or partially disturbed areas and retain a high potential for the presence of unknown cultural resources. A potentially important site is included in the group, Site SDI-638, which is a major prehistoric encampment or village. At least two sites have reported human burials, Sites SDI-8736 and SDI-10,782. The majority of the recorded sites are listed as surface scatters of lithic materials or milling tools; however, most of these sites have not been tested or evaluated for significance.

Potential impacts to cultural resources could result from clearing, trenching, and grading activities associated with the construction of pipelines, underground structures, or other related facilities and any rehabilitations of existing pipes, which may result in disturbing native soil. In general, improvements installed via trenching methods (as opposed to trenchless) could result in greater direct impacts depending on the proximity of the construction to any particular resource. Impacts to resources that are determined to be important under criteria provided in CEQA (Section 15064.5) would be considered significant. The precise extent and nature of impacts that could result by the construction of the 140 segments would be determined at the time more engineering detail is developed for each segment. Therefore, all potential impacts are assumed to be significant at the program level of analysis. Mitigation Measures CULT-2 and CULT-3 are proposed to minimize the potential for disturbance of archaeological resources.

Direct Effects - Operations: Once constructed, the conveyance improvements would be installed underground and there would be no potential for additional impacts to archaeological or historic resources. Typical activities under the O&M Program would consist of routine maintenance, emergency repair, and periodic pipeline dewatering to allow for interior inspections or repairs over the next 20 years. These activities are not anticipated to result in additional physical impacts beyond the constructed facilities, which could otherwise impact recorded cultural resources. This is considered a less than significant impact.

Indirect Effects: The 2017 CSMP would not induce new growth not already planned by the City and adjacent jurisdictions. No indirect effects to archaeological resources were identified.

IMPACT 4.3-3	Would the 2017 CSMP directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

CATEGORIES 1, 2, 3, and 4

Direct Effects - Construction: According to the GP 2030 Update PEIR, substantial trenching or grading at depths greater than 10 feet and a total cut amount of more than 1,000 cubic yards within areas characterized with a moderate to high sensitivity for paleontological resources could result in a significant impact on paleontological resources. New capacity- and condition-related conveyance pipelines would be installed in existing and, possibly, newly acquired ROWs. A backhoe, excavator, or trencher would be used to dig trenches for pipe installation. In general, pipe trenches would be 3- to 6-feet wide and 7- to 20-feet deep. Therefore, pipeline improvements, where extending to a depth of 10 feet or greater, located in areas characterized with a moderate to high sensitivity for paleontological resources have the potential to directly destroy paleontological resources during excavation activities. This potential impact could be significant. Mitigation Measure CULT-4 is proposed to reduce these potential impacts to paleontological resources through a monitoring and reporting program.

Construction of the O&M Program improvements, including rehabilitation of BVPS, BCPS, and RPS and access improvements would occur at the existing facility locations. However, new structural improvements could require deep excavations (e.g. greater than ten feet) for the installation of new equipment. Access road improvements would require limited, shallow excavations or slope cut to meet current standards. Additionally, these areas have not been previously mapped for paleontological sensitivity vicinity. As a result, the construction of these improvements has the potential to directly destroy paleontological resources during excavation activities, if required. Mitigation Measure CULT-4 is proposed to reduce these potential impacts to paleontological resources to a less than significant level.

Direct Effects - Operations: Once constructed, the proposed conveyance improvements would be installed underground. No impacts to paleontological resources would occur.

Indirect Effects: The 2017 CSMP would not result in secondary effects or new growth that could indirectly affect paleontological resources. No impact would result.

IMPACT 4.3-4	Would the 2017 CSMP disturb any human remains, including those interred outside of formal cemeteries?

CATEGORIES 1, 2, 3 and 4

Direct Effects - Construction: Construction of the improvements proposed under the 2017 CSMP, including rehabilitation of BVPS, BCPS, and RPS, new or replacement conveyance pipelines, and access improvements would occur at the vicinity of existing facility locations. The potential for improvements located in previously disturbed or developed settings to encounter human remains is very unlikely. However, during the construction of these facilities, the potential for the unexpected discovery of interred human remains, either prehistoric or historic, is a possibility in areas that have supported prehistoric and historic settlements, including Vista and other jurisdictions

within the Study Area. These direct impacts could be significant. Mitigation Measure CULT-5 is proposed to reduce these potential impacts to the unexpected discovery of interred human remains.

Direct Effects - Operations: Once constructed, the proposed CIP conveyance improvements would be installed underground. O&M activities would occur at existing facility site locations and within easements owned by the City; hence, the likelihood for substantial ground disturbance is low along with that of any human remains. This is considered a less than significant impact.

Indirect Effects: No indirect effects to human remains were identified.

IMPACT 4.3-5	Would the 2017 CSMP cause a substantial adverse change in the significance of a Tribal Cultural Resource as defined in Public Resources Code §21074?

CATEGORIES 1, 2, 3 and 4

Direct Effects - Construction: California Native American tribes traditionally and culturally affiliated with the area containing the site of the proposed project requested consultation pursuant to PRC Section 21080.3.1, and consultation was initiated by the City.

As described under Impact 4.3-2, multiple improvements proposed under the 2017 CSMP would involve ground disturbing construction activities that would occur within 100 to 500 feet of potentially significant known or unknown pre-historic and historic archaeological resources. These direct impacts could be significant. As a result, Mitigation Measures CULT-2 and CULT-3 are proposed to mitigate this impact.

Direct Effects - Operations: Once operational, the 2017 CSMP would involve ongoing inspections and periodic maintenance, as needed, of the City's collection system. Since operations occur at the ground surface and there would not be any impacts to buried tribal cultural resources, potentially significant impacts are not anticipated.

Indirect Effects: During construction activities, indirect adverse effects may result from increased accessibility to archaeological or tribal cultural resources (such as artifacts) that could lead to resource looting or vandalism activities. This is considered a significant impact. Mitigation Measures CULT-2 and CULT-3 are proposed to mitigate this potential indirect impact.

4.3.5 Cumulative Impacts

Cultural and paleontological resources are localized and generally unique to each project site. All significant cultural resources associated with the 2017 CSMP and other cumulative projects within the region will be mitigated on a project-by-project basis; therefore, cumulative impacts to the region's known and yet-to-be discovered cultural resources would not occur. Existing laws such as the State CEQA Guidelines Section 15064.5, the State of California Health and Safety Code Section 7050.5, the PRC 5097.98, and the City's Historic Preservation Ordinance require future development to consider and mitigate for the potential of uncovering sensitive cultural resources. Therefore, the proposed 2017 CSMP Update's incremental contribution to cumulative cultural resources impacts from past, present, and reasonably foreseeable future projects would be less than cumulatively considerable following the application of the proposed mitigation measures.

4.3.6 Mitigation Measures

Implementation of the following mitigation measures would reduce potentially significant impacts identified for 2017 CSMP Categories 1 and 2 as identified under Impact 4.3-1. The proposed mitigation would replace the mitigation measures adopted in the 2008 PEIR for cultural resources and apply to 2017 CSMP Categories 1 and 2.

CULT-1 **Construction-Related Vibration.** Prior to the issuance of project-specific construction documents for CIP Capacity and Condition Projects (Hardscape Environs), the City Engineer shall determine whether construction activities would occur within 25 feet of a NRHP or CRHR eligible or listed historic structure. For structures that have not been previously evaluated, the City Engineer shall consult with a qualified Architectural Historian approved by the City to conduct an evaluation of the structure.

If the structure is determined eligible or already eligible or listed in the NRHP or CRHR, a structural evaluation shall be conducted by a Professional Structural Engineer to identify maximum allowable levels of vibration during construction. If a historic determination is required, the engineer shall provide recommendations on approaches to stabilization in conjunction with vibration monitoring. Permanent stabilization measures shall follow the Secretary of the Interior's guidelines for the treatment of historic properties. If the buildings are temporarily stabilized for the duration of construction activities, when removed, the buildings shall be restored to their pre-construction condition when the stabilization measures are removed.

Implementation of the following mitigation measures would reduce potentially significant impacts identified for CSMP Categories 1, 2, 3, and 4 as noted under Impacts 4.3-2 and 4.3-5 to less than significant levels. The proposed mitigation would replace the mitigation measures adopted in the 2008 PEIR for cultural resources.

CULT-2 **Project-Specific Archaeological Survey.** Prior to the issuance of project-specific construction documents for CIP Capacity and Condition Projects (Hardscape and Cross-County Environs), Pump Station Rehabilitations, and Out-of-Service Area Projects, a Qualified Archaeologist approved by the City shall contact the NAHC regarding a Sacred Lands File Search for the project area. In addition, the City shall request a written response from the San Luis Rey Band of Mission Indians (SLR Band) (a tribe traditionally and culturally affiliated with the site) regarding whether the site of the 2017 CSMP improvement project may potentially affect Native American resources. If the NAHC and/or the SLR Band confirms potential known resources, a pedestrian survey (i.e., physical walk over) shall first be conducted by the Qualified Archaeologist and a TCA (traditionally and culturally affiliated) Native American Monitor. Should the pedestrian survey identify Native American cultural resources, the Qualified Archeologist shall, in consultation with the TCA Native American monitor and the SLR Band, make an immediate written evaluation of the significance and appropriate treatment of the resource, including any avoidance measures, additional testing and evaluations, or data recovery plans, and Pre-Excavation Agreements with the Tribe. If the SLR Band confirms, in consultation with the Qualified Archaeologist, that there is a potential for unknown resources to be uncovered during construction activities, then Mitigation Measure CULT-3, Archaeological Monitoring, shall be implemented.

CULT-3 Archaeological Monitoring.

Cultural resource mitigation monitoring shall be conducted to provide for the identification, evaluation, treatment, and protection of any cultural resources that are affected by or may be discovered during the construction of the proposed project. The monitoring shall consist of the full-time presence of a Qualified Archaeologist and a TCA (traditionally and culturally affiliated) Native American Monitor, and the monitoring activities shall be identified and defined in a Pre-Excavation Agreement between the City's Engineering Department and the San Luis Rey Band. The purpose of this agreement shall be to formalize protocols and procedures for the protection, treatment, and disposition of, but not limited to, such items as Native American human remains, funerary objects, cultural and religious landscapes, ceremonial items, traditional gathering areas and cultural items, located and/or discovered through the cultural resource mitigation monitoring program in conjunction with the construction of the proposed project, including additional archaeological surveys and/or studies, excavations, geotechnical investigations, soil surveys, grading, or any other ground disturbing activities. Other tasks of the monitoring program shall include the following:

- The requirement for cultural resource mitigation monitoring shall be noted on all applicable construction documents, including demolition plans, grading plans, etc.
- The Qualified Archaeologist and TCA Native American Monitor shall attend all applicable pre-construction meetings with the Contractor and/or associated Subcontractors.
- The Qualified Archaeologist shall maintain ongoing collaborative consultation with the TCA Native American Monitor during all ground disturbing or altering activities, as identified above.
- The Qualified Archaeologist and/or TCA Native American Monitor may halt ground-disturbing activities if archaeological artifact deposits or cultural features are discovered. In general, ground-disturbing activities shall be directed away from these deposits for a short time to allow a determination of potential significance, the subject of which shall be determined by the Qualified Archaeologist and the TCA Native American Monitor, in consultation with the San Luis Rey Band. Ground- disturbing activities shall not resume until the Qualified Archaeologist, in consultation with the TCA Native American Monitor, deems the cultural resource or feature has been appropriately documented and/or protected. At the Qualified Archaeologist's discretion, the location of ground disturbing activities may be relocated elsewhere on the project site to avoid further disturbance of cultural resources.
- The Qualified Archaeologist and/or TCA Native American Monitor may also halt ground disturbing activities around known archaeological artifact deposits or cultural features if, in their respective opinions, there is the possibility that they could be damaged or destroyed.
- The avoidance and protection of discovered unknown and significant cultural resources and/or unique archaeological resources is the preferable mitigation for the proposed project. If avoidance is not feasible, a Data Recovery Plan may be authorized by the City as the Lead Agency under CEQA. If data recovery is required,

then the San Luis Rey Band shall be notified and consulted in drafting and finalizing any such recovery plan.

- Prior to the release of any Bonds associated with the construction of improvements noted in the 2017 CSMP, a Monitoring Report and/or Evaluation Report, which describes the results, analysis and conclusions of the cultural resource mitigation monitoring efforts (such as, but not limited to, a Data Recovery Program) shall be submitted by the Qualified Archaeologist, along with the TCA Native American Monitor's notes and comments, to the City's Director of Community Development for approval.

Implementation of the following mitigation measure would reduce significant impacts identified for 2017 CSMP Categories 1, 2, 3, and 4 as identified under Impact 4.3-2 to less than significant levels. The proposed mitigation would replace the mitigation measures adopted in the 2008 PEIR for paleontological resources.

CULT-4 **Paleontological Monitoring.** Monitoring during construction grading or trenching shall be required for all CIP conveyance projects (Hardscape and Cross-Country Environs) that would excavate to a depth of ten feet or more. Prior to the issuance of project-specific construction documents, the City Engineer shall retain a Professional Paleontologist to observe all earth-disturbing activities. All fossil materials recovered during mitigation monitoring shall be cleaned, identified, cataloged, and analyzed in accordance with standard professional practices. The results of the field work and laboratory analysis shall be submitted in a technical report and the entire collection transferred to an approved facility.

Implementation of the following mitigation measure would reduce significant impacts identified for 2017 CSMP Categories 1, 2, 3 and 4 as identified under Impact 4.3-4 to less than significant levels. The proposed mitigation would replace the mitigation measures adopted in the 2008 PEIR for potential impacts to human remains.

CULT-5 **Disturbance to Human Remains.** As specified by California Health and Safety Code Section 7050.5, if human remains are found on the project site during construction or during archaeological work, the person responsible for the excavation, or his or her authorized representative, shall immediately notify the San Diego County Coroner's office by telephone. No further excavation or disturbance of the discovery or any nearby area reasonably suspected to overlie adjacent remains (as determined by the Qualified Archaeologist and/or the TCA (traditionally and culturally affiliated) Native American Monitor) shall occur until the Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code 5097.98. If such a discovery occurs, a temporary construction exclusion zone shall be established surrounding the area of the discovery so that the area would be protected (as determined by the Qualified Archaeologist and/or the TCA Native American Monitor), and consultation and treatment could occur as prescribed by law. As further defined by State law, the Coroner would determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC would make a determination as to the Most Likely Descendent. If Native American remains are discovered, the remains shall be kept "*in situ*" ("in place"), or in a secure

location in close proximity to where they were found, and the analysis of the remains shall only occur on-site in the presence of the TCA Native American Monitor.

4.3.7 Significant and Unavoidable Impacts

As provided in the analysis above, implementation of the proposed 2017 CSMP would not result in a significant and unavoidable impact to cultural resources.

4.4 Greenhouse Gases and Energy

4.4.1 Introduction

This section provides an update to the existing global climate change and energy supply conditions described in 2008 for the 2017 CSMP Study Area, including changes to applicable rules and regulations, as adopted. These updates include changes to greenhouse gas inventories, statewide goals and guidance (since 2008), updates to the City of Vista (City) General Plan (GP 2030 Update 2011), and the adoption of the City's Climate Action Plan (CAP) (2012).

The impact analysis considers these updates in the context of the proposed 2017 CSMP as described in Chapter 3, as well as the prior environmental analysis, which is incorporated by reference from Section 4.2 of the 2008 PEIR, and current climate change and energy use policies and mitigation strategies. Unless otherwise noted, information in this section related to existing conditions and regulatory framework comes from the GP 2030 Update PEIR (2011) and the City's CAP (2012).

4.4.2 Existing Conditions

Section 4.2 of the 2008 PEIR provides a description of existing conditions for the Study Area, including descriptions of local meteorology and climate, background concentrations and global warming potentials of greenhouse gases (GHGs), existing onsite conditions, and carbon storage within the 2017 CSMP project component sites. The following sections supplement the descriptions provided in the 2008 SMPU PEIR and provide updates, where applicable, based on current conditions.

Global Climate Change Overview

See page 4.2-8 of the 2008 PEIR for a brief overview of global climate change. GHGs are global pollutants, unlike criteria air pollutants (such as ozone precursors) and TACs. Criteria air pollutants, such as O_3 precursors and TACs, are pollutants solely of regional and local concern, and local concentrations respond to locally-implemented control measures. The extended atmospheric lifetimes of GHGs allow them to be transported long distances from sources and to become well-mixed, unlike criteria air pollutants, which typically exhibit strong concentration gradients away from point sources.

Greenhouse Gases

The standard definition of GHGs includes six substances: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6), plus chlorofluorocarbons and other chlorine or bromine-containing gases. Other GHGs include synthetic gases such as nitrogen trifluoride (NF_3) and sulfuryl fluoride (SO_2F_2). Tropospheric ozone (O_3) and black carbon are also important climate pollutants. Carbon dioxide accounts for the largest amount of GHG emissions, and collectively CO_2, CH_4, and N_2O amount to 80 percent of the total radiative forcing from well-mixed GHGs (CARB 2014).

For each GHG, a global warming potential (GWP) has been calculated to reflect how long emissions remain in the atmosphere and how strongly it absorbs energy on a per-kilogram basis relative to CO_2. For example, 1 pound of methane has 21 times more heat capturing potential than 1 pound of

CO_2. To simplify reporting and analysis, GHG emissions are typically reported in metric tons of carbon dioxide equivalent ($MTCO_2e$) units. GWP is a metric that indicates the relative climate forcing of a kilogram of emissions when averaged over the period of interest (both 20-year and 100-year horizons are used for the GWPs shown in Table 4.4-1). The 20- and 100-year global warming potential estimates shown in Table 4.4-1 are from the Intergovernmental Panel on Climate Change 2013 Fifth Assessment Report (AR5) (CARB 2014).

Table 4.4-1. Global Warming Potential for Selected Greenhouse Gases

Pollutant	Lifetime (years, except for BC)	Global Warming Potential (20-year)	Global Warming Potential (100-year)
Long-lived			
Carbon dioxide	~100[a]	1	1
Nitrous oxide	121	264	265
Nitrogen trifluoride	500	12,800	16,100
Sulfur hexafluoride	3,200	17,500	23,500
Perfluorocarbons	3,000-50,000	5,000-8,000	7,000-11,000
Short-lived (<20 years)			
Black carbon[b]	days to weeks	270-6,200	100-1,700
Methane	12	84	28
Hydrofluorocarbons[c]	(<1 to >100)	~100-11,000	~100-12,000

Source: CARB 2014

[a] Carbon dioxide has a variable atmospheric lifetime and cannot be readily approximated as a single number

[b] Black carbon climate effects are highly uncertain, in large part because they depend on the conditions under which they are emitted (i.e., location and time of year). This type of uncertainty does not apply to the Kyoto greenhouse gases.

[c] Hydrofluorocarbons have a wide range of lifetimes—some long, some short by this definition. Correspondingly, they have a wide range of GWPs.

Greenhouse Gas Inventories

A GHG inventory is a quantification of all GHG emissions and sinks within a selected physical and/or economic boundary. GHG inventories can be performed on a large scale (i.e., for global and national entities) or on a small scale (i.e., for a particular building or person). The inventories described below represent the best available methodologies for assessing emissions at the national, state, and local levels.

United States

Total United States (U.S.) GHG emissions in 2015 were 6,586.2 million metric tons of carbon dioxide equivalents ($MMTCO_2e$). Emissions from electricity generation accounted for the largest portion (29 percent) of total U.S. GHG emissions in 2015. Transportation activities, in aggregate, accounted for the second largest portion (27 percent), while emissions from industry accounted for the third largest portion (22 percent) of total U.S. GHG emissions in 2015. Emissions from industry have in general declined over the past decade, due to a number of factors, including structural changes in the U.S. economy (i.e., shifts from a manufacturing-based to a service-based economy), fuel switching, and energy efficiency improvements. The remaining U.S. GHG emissions were

contributed by, in order of magnitude, the agriculture (9 percent), commercial (6 percent), and residential sectors (6 percent). (U.S. EPA 2017b).

California

Total California GHG emissions in 2014 were 441.5 $MMTCO_2e$, according to the 2016 California Greenhouse Gas Emissions Inventory, which tracks the emissions of seven GHGs for the years 2000 through 2014. During the 2000 to 2014 period, per capita GHG emissions in California have continued to drop from a peak in 2001 of 13.9 metric tons per person to 11.4 metric tons per person in 2014, an 18 percent decrease. The transportation sector remains the largest source of GHG emissions in the state, accounting for 36 percent of the inventory, and shows a small increase in emissions in 2014. Emissions from the electricity sector (20 percent in 2014) continue to decline due to growing zero-GHG energy generation sources. Emissions from the industrial sector contributed 21 percent to total GHG emissions in 2014, the commercial and residential sector contributed 9 percent, agriculture contributed 8 percent, and recycling and waste contributed 2 percent (CARB 2016).

San Diego County

Estimated emissions in San Diego County in 2010 were 32 $MMTCO_2e$, which is about 9 percent more than 1990 GHG emissions levels. In 2010, emissions from cars and light duty trucks represented about 44 percent of total GHG emissions in San Diego County, while the electricity sector accounted for about 24 percent (Anders et al. 2013).

City of Vista

The City's Greenhouse Gas Emissions Inventory was prepared in 2009 and updated in 2011 as the first step in the City's climate protection initiative. The purpose of the inventory was two-fold: to establish a baseline emissions inventory, against which to measure future progress and to establish an understanding of the scale of emissions from various sources. The objective of the inventory was to identify the sources and quantities of GHG emissions in Vista in 2005. Future steps in Vista's climate protection initiative, including developing, implementing, and evaluating the progress of a climate action plan, could not be accomplished without first conducting the GHG inventory. The inventory is presented in two components: emissions due to activity by the community as a whole and emissions due to activity related specifically to the operations of City government. The government operation inventory is a subset of the community-wide inventory. Emissions due to City government operations represent less than 1 percent of the community's emissions, consistent with emissions levels of other California cities of similar size.

Under a "business as usual" (BAU) scenario, the City's emissions will grow by approximately 20 percent, from 545,922 to 654,067 $MTCO_2e$ before 2020. A variety of different reports and projections were used to create the emissions forecast; they are described in detail in ICLEI's report on the City's 2005 emissions inventory, which is included as Appendix B2 of the GP 2030 Update PEIR.

Government operations in Vista emitted an estimated 3,865 $MTCO_2e$ in the year 2005. The 2005 government GHG inventory for Vista includes emissions resulting from fuel consumption of the City vehicle fleet, fuel consumption from employee commutes, electricity and natural gas used at government buildings, electricity used for public lighting, the landfilling of solid waste, and electricity used in water and sewage transport. The largest sources of emissions from government operations

are from fuel consumption used by the City vehicle fleet and employee commutes (approximately 29 percent each, respectively). Emissions from electricity and natural gas used at government buildings are also a significant source of emissions (21 percent), as are emissions from electricity used for public lighting (17 percent). Emissions from government-generated solid waste (3 percent) and water and sewage transport (1 percent) account for the remainder.

The 2005 community GHG inventory for the City as a whole includes GHG emissions from fuel burned for mobile transportation; residential, commercial, and industrial use of electricity and natural gas; landfilling of solid waste; and wastewater. The community inventory does not include emissions of PFCs, SF_6, or embodied emissions related to water transport; nor does it account for carbon sinks. Emissions of PFCs and SF_6 (or high-GWP gases when considered together with HFCs) are likely a small contribution to City emissions. However, emissions related to transport of water from outside of the city limits can be considerable for many communities in southern California. The intent of the ICLEI methodology and software is to capture the majority of emissions of CO_2, CH_4, N_2O, and HFCs because these gases are the most relevant to local government policy making. Algorithms for quantifying the benefits of carbon sinks for local jurisdictions are not yet standardized, and are not currently incorporated into the ICLEI software tool. Inventoried emissions totaled approximately 545,921 $MTCO_2e$ in the year 2005. Vehicles on roads and state highways within Vista are by far the largest source of community emissions (57 percent). Emissions from the built environment (residential, commercial, and industrial sectors) collectively account for around one third (36 percent) of community emissions. The rest of the City's emissions are from waste sent to landfills (6 percent) by residents and businesses, and from wastewater (0.8 percent).

Transportation emissions include those from VMT on streets within the city limits, as well as the emissions from through traffic that does not have an origin or a destination within the City. Specifically, the inventory includes through traffic on SR-78.

Total City emissions (government operations and community emissions) in 2005 accounted for approximately 0.11 percent of California's estimated 2006 emissions.

Energy Resources and Supplies

Electricity and natural gas are provided to the 2017 CSMP Study Area by San Diego Gas and Electric (SDG&E). SDG&E has extensive underground and overhead electric facilities located within and adjacent to Vista. Natural gas is distributed throughout the City by underground lines, typically located within public rights-of-way, functioning as a backbone system to service individual parcels. Vista has over 123 miles of overhead and 205 miles of underground electrical lines.

By 2020 all California power companies are required to have 33 percent of their energy come from clean resources such as wind, solar, biomass, and geothermal. SDG&E is working to acquire more renewable energy for its customers. In 2011, SDG&E was running 20 percent of its resources from renewable sources (SDG&E 2017).

Current monthly average energy use at the City and District-owned pump stations ranges from approximately 7,000 kWh at the RPS to approximately 86,000 kWh at the BVPS. Existing energy-consuming equipment at the pump stations includes generators, fans, lighting, gates, as well as the pumps. As explained in Chapter 3, Project Description, the BVPS has an average daily flow of 5 MGD and operates 24 hours a day, 7 days a week.

4.4.3 Regulatory Framework

The following regulations are intended to reduce energy consumption and GHG emissions. This section updates the regulatory framework described in the 2008 SMPU PEIR.

International

See pages 4.2-10 and 4.2-11 of the 2008 SMPU PEIR for a discussion of the establishment of the Intergovernmental Panel on Climate Change (IPCC) in 1988, the 1994 United Nations Framework Convention on Climate Change (UNFCCC), and the 1996 Kyoto Protocol.

Federal

EPA Update to Fuel Economy Standards

In 2012, the U.S. Environmental Protection Agency (EPA) and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) issued final rules extending the National Program to further reduce GHG emissions and improve fuel economy for model years (MYs) 2017 through 2025 light-duty vehicles. EPA established national GHG emissions standards under the Clean Air Act, and NHTSA established Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act, as amended by the Energy Independence and Security Act (EISA). EPA's standards apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, in MYs 2017 through 2025. The final standards are projected to result in an average industry fleetwide level of 163 grams/mile of carbon dioxide (CO_2) in model year 2025, which is equivalent to 54.5 miles per gallon (mpg) if achieved exclusively through fuel economy improvements (U.S. EPA 2012).

State

See pages 4.2-11 and 4.2-12 of the 2008 PEIR for a discussion of Executive Order (EO) S-3-05, Assembly Bill (AB) 32, AB 1493, Senate Bill (SB) 97, SB 107 and SB 1078.

AB 32 Scoping Plan Supplement and Update

In 2011, the CARB developed a Supplement to the AB 32 Scoping Plan (Scoping Plan Supplement). The Supplement updated the emissions inventory based on current projections for BAU emissions to 506.8 $MMTCO_2e$. The updated projection included adopted measures (Pavley I Fuel Efficiency Standards, 20 percent Renewable Portfolio Standard (RPS) requirement, etc.) and estimated that an additional 16 percent reduction below the estimated BAU levels would be necessary to return to 1990 levels by 2020.

In 2014, the CARB published its First Update to the Climate Change Scoping Plan. This update indicated that the State is on target to meet the goal of reducing GHG emissions to 1990 levels by 2020. The First Update tracks progress in achieving the goals of AB 32, and lays out a new set of actions that will move the State further along the path to achieving the 2050 goal of reducing emissions to 80 percent below 1990 levels. While the First Update discussed setting a mid-term target, the plan did not set a quantifiable target toward meeting the 2050 goal. The CARB is currently developing a Second Update to the Scoping Plan.

California Code of Regulations Title 24

Title 24 of the California Code of Regulations, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow for the consideration and possible incorporation of new energy efficiency technologies and methods. Energy efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for water heating) results in greenhouse gas emissions. Therefore, increased energy efficiency also results in decreased greenhouse gas emissions. Accordingly, Title 24 in the CALGreen Building Code is now a part of the statewide strategy for reducing GHG emissions, and is the only statewide plan for reduction of GHG emissions that every local agency must adopt in a public hearing by adopting the state building code. Consistent with CALGreen, the state recognized that GHG reductions would be achieved through buildings that exceed minimum energy-efficiency standards, decrease consumption of potable water, reduce sold waste during construction and operation, and incorporate sustainable materials. The CARB projects that an additional 26.3 $MMTCO_2e$ could be reduced through expanded green building. Compliance with Title 24 of the CALGreen Building Code is thus a vehicle to achieve statewide electricity and natural gas efficiency targets, and lower GHG emissions from waste and water transport sectors.

The GHG emission inventory was based on Title 24 standards as of October 2013; however, Title 24 has been updated as of 2016. These updated Title 24 standards went into effect January 1, 2017. It is estimated that the Title 24 standards as of 2016 will improve energy efficiency in single-family dwellings by 28 percent.

EO B-30-15, Senate Bill (SB) 32 and AB 197

EO B-30-15 was enacted by the Governor on April 29, 2015. EO B-30-15 established an interim GHG emission reduction goal for the state of California to reduce GHG emissions to 40 percent below 1990 levels by the year 2030. This EO directs all state agencies with jurisdiction over GHG-emitting sources to implement measures designed to achieve the new interim 2030 goal, as well as the preexisting, long-term 2050 goal identified in EO S-3-05 to reduce GHG emissions to 80 percent below 1990 levels by the year 2050. The EO directs CARB to update its Scoping Plan to address the 2030 goal.

In 2016, the Legislature passed SB 32, which codified the 2030 GHG emissions reduction target of 40 percent below 1990 levels. With SB 32, the Legislature passed companion legislation AB 197, which provided additional direction for CARB to develop an update to the Climate Change Scoping Plan. The CARB is currently in the process of developing a Second Update to the Scoping Plan to reflect the 2030 target set by EO B-30-15 and codified by SB 32.

EO S-01-07 – Low Carbon Fuel Standard

EO S-01-07 was enacted by the Governor on January 18, 2007, and mandates that: 1) a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020; and 2) a Low Carbon Fuel Standard ("LCFS") for transportation fuels be established for California. According to the San Diego County Greenhouse Gas Inventory, the effects of the LCFS would be a 10 percent reduction in GHG emissions from fuel use by 2020. On April 23, 2009, the CARB adopted regulations to implement the LCFS.

EO S-14-08 – Renewable Energy

On November 17, 2008, the Governor signed EO S-14-08, which set forth a longer-range target that required all retail sellers of electricity to serve 33 percent of their load with renewable energy by 2020.

EO S-21-09 – Renewable Portfolio Standard (RPS)

EO S-21-09, which the Governor signed on September 15, 2009, directed CARB to implement a regulation consistent with the 2020 33 percent renewable energy target by July 31, 2010. Under EO S-21-09, the CARB will work with the Public Utilities Commission and California Energy Commission to encourage the creation and use of renewable energy sources, and will regulate all California utilities. The CARB will also consult with the Independent System Operator and other load balancing authorities on the impacts on reliability, renewable integration requirements, and interactions with wholesale power markets in carrying out the provisions of the EO. The order required the CARB to establish highest priority for those resources that provide the greatest environmental benefits with the least environmental costs and impacts on public health. The 2020 33 percent RPS target was adopted in 2010.

SB 375 – Sustainable Communities Strategies

SB 375 finds that GHG from autos and light trucks can be substantially reduced by new vehicle technology, but even so "it will be necessary to achieve significant additional greenhouse gas reductions from changed land use patterns and improved transportation. Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." Therefore, SB 375 requires that regions with metropolitan planning organizations adopt sustainable communities' strategies, as part of their regional transportation plans, which are designed to achieve certain goals for the reduction of GHG emissions from mobile sources.

SB 375 also includes CEQA streamlining provisions for "transit priority projects" that are consistent with an adopted sustainable communities strategy. As defined in SB 375, a "transit priority project" shall: (1) contain at least 50 percent residential use, based on total building square footage and, if the project contains between 26 and 50 percent nonresidential uses, a floor area ratio of not less than 0.75; (2) provide a maximum net density of at least 20 dwelling units per acre; and (3) be within 0.5 mile of a major transit stop or high quality transit corridor.

SB 1368 – Greenhouse Gas Emissions Performance Standard

SB 1368 prohibits any retail seller of electricity in California from entering into a long-term financial commitment for baseload generation if the GHG emissions are higher than those from a combined cycle natural gas power plant. This performance standard applies to electricity generated out-of-state as well as in-state and to publicly-owned as well as investor-owned electric utilities.

Western Climate Initiative

The Western Climate Initiative (WCI) is a collaboration of seven western states (Washington, Oregon, California, Arizona, New Mexico, and Montana) and four Canadian provinces (British Columbia, Manitoba, Ontario, and Quebec) that are working together to identify, evaluate, and implement policies to tackle climate change at a regional level. On July 27, 2010, the partner jurisdictions of the WCI released a comprehensive strategy designed to reduce climate-warming GHG emissions, stimulate development of clean-energy technologies, create green jobs, increase

energy security and independence, and protect public health. The objective of the WCI Partner jurisdictions' plan is to reduce regional GHG emissions to 15 percent below 2005 levels by 2020 (similar to AB 32). The regional goal will be reached by creating a market-based system that caps GHG emissions and uses tradable permits to incent development of renewable and lower-polluting energy sources; encouraging GHG emissions reductions in industries not covered by the emissions cap, thus reducing energy costs region wide; and advancing policies that expand energy efficiency programs, reduce vehicle emissions, encourage energy innovation in high-emitting industries, and help individuals transition to new jobs in the clean-energy economy. The central component of the WCI Partner jurisdictions' comprehensive strategy is a flexible, market-based, regional cap-and trade program that encourages the most cost-effective, reliable alternatives to reduce GHG emissions. The CARB is working closely with the other members of the WCI to design a regional cap-and-trade program that can deliver GHG emission reductions within the region at costs lower than could be realized through a California-only program. To that end, the CARB rule development schedule is being coordinated with the WCI timeline for development of a regional cap-and-trade program.

Regional

San Diego Air Pollution Control District

The SDAPCD has the primary responsibility for the development and implementation of rules and regulations designed to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, development of air quality management plans, and adoption and enforcement of air pollution regulations within San Diego County, which is contiguous with the SDAB. The SDAPCD regulates most air pollutant sources, except for mobile sources, which are regulated by the CARB or EPA. State and local government projects, as well as projects proposed by the private sector, are subject to SDAPCD requirements if the sources are regulated by the SDAPCD. Additionally, the SDAPCD, along with the CARB, maintains and operates ambient air quality monitoring stations at numerous locations throughout San Diego County. These stations are used to measure and monitor criteria and toxic air pollutant levels in the ambient air.

The AB 32 Scoping Plan does not provide an explicit role for local air districts in implementing AB 32, but it does state that the CARB will work actively with air districts in coordinating emissions reporting, encouraging and coordinating GHG reductions, and providing technical assistance in quantifying reductions. The ability of air districts to control emissions (both criteria pollutants and GHGs) is provided primarily through permitting as well as through their role as CEQA lead or commenting agency, the establishment of CEQA thresholds, and the development of analytical requirements for CEQA documents. To date, the SDAPCD has not developed specific thresholds of significance with regards to addressing the GHG emissions in CEQA documents.

Local

City of Vista General Plan 2030 Update

The GP 2030 Update is an organized set of goals and policies that guide both the distribution of land uses and the way land is developed (or redeveloped) and used. It expresses the community's goals for the future and provides a basis for decision-making for land use actions. The GP 2030 Update is comprised of the following chapters: Land Use and Community Identity; Circulation; Resource

Conservation and Sustainability; Healthy Vista; Noise; Public Safety, Facilities, and Services; and Housing.

The Resource Conservation and Sustainability Element includes the following: "RCS Goal 2: Reduce GHG emissions from community activities and municipal facilities and operations within the City boundaries to support the State's efforts under Assembly Bill 32, Senate Bill 375, and other State and federal mandates, and to mitigate the community's contributions to global climate change." The relevant GP 2030 Update policies include the following:

- RCS Policy 2.3: Participate in inter-agency and/or inter-jurisdictional meetings and planning activities to share best practices and adaptation strategies to reduce GHG emissions, increase community sustainability, and educate the public about climate change.
- RCS Policy 2.5: Adopt City purchasing practices and standards to support reductions in GHG emissions, including preferences for energy-efficient equipment and the use of recycled materials and manufacturers that have implemented green management practices; encourage other public agencies and private businesses within Vista to do the same, when feasible.
- RCS Policy 2.6: Establish City bidding standards and contracting practices that encourage GHG emissions reductions, including preferences or points for the use of low or zero emission vehicles and equipment, recycled materials, and provider implementation of other green management practices; encourage other public agencies and private businesses within Vista to do the same, when feasible.
- RCS Policy 2.7: Through California Environmental Quality Act (CEQA) documents, evaluate and disclose the contribution new projects could have on climate change and require mitigation measures as appropriate.
- RCS Policy 2.8: Implement new or enhance existing measures to reduce employee vehicle trips and mitigate emissions impacts from business-related travel to reduce GHG emissions.

City of Vista Climate Action Plan

The City adopted a CAP in 2013 to reduce GHG emissions in Vista in order to comply with AB 32 and SB 97. The CAP provides an estimate of business-as-usual (BAU)[1] emissions by the year 2020, and a projection of the amount of reductions needed to meet the City's requirement to reduce GHG emissions to 1990 levels. The CAP estimates that a reduction of 27,187 metric tons of carbon dioxide equivalent GHG emissions ($MTCO_2e$) will be required. The CAP adopts climate action measures designed to provide the necessary reductions to meet the 2020 target, including measures designed to reduce vehicle miles traveled, tree planting programs, and resources to encourage small-scale renewable energy installation.

City of Vista Interim Guidance

In 2016, the City developed interim guidance for evaluating GHG emissions from individual development projects within Vista subject to CEQA in light of the 2015 Newhall Ranch project

[1] The "business-as-usual" (BAU) scenario provides a forecast of GHG emissions in the year 2020 if consumption trends and behavior continue as they were in 2005, absent any new federal, state, regional, or local policies or actions to reduce emissions.

California Supreme Court Ruling.[2] The purpose of the *Interim Policy on Greenhouse Gas Emissions Significance Thresholds for CEQA* (April 6, 2016) is to provide guidance for a consistent and objective evaluation of significant climate change impacts in compliance with AB 32 until the CAP can be updated to include such evaluation criteria. The interim guidance identifies a numerical "Bright Line" threshold based on a review of projects within Vista. It was determined that a level of 1,185 $MTCO_2e$ would capture 90 percent of the City's GHG emissions that are attributable to development projects. To determine if a project is making substantial progress towards meeting 2020 GHG emissions targets set forth in the CAP and AB 32, the total project GHG emissions in its first fully operational year must be less than the "Bright Line" threshold. If the project emissions are below the threshold, the project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

4.4.4 Project Impacts

Methodology

GHG emissions that would result from implementation of the proposed 2017 CSMP are estimated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.1. CalEEMod quantifies direct emissions from construction and operation activities (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, and water use. Emissions are quantified based of the construction information in Chapter 3 and additional information provided by the City. Where project-specific information is not available, model default values are assumed. Complete model inputs and outputs are provided in Appendix C. The analysis differentiates between the 2017 CSMP categories, where applicable.

Thresholds of Significance

According to Appendix G of the State CEQA Guidelines, a project would be considered to have a significant climate change impact if it would:

- Generate GHG either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG.

The numerical "Bright Line" threshold identified in the City interim guidance for evaluating individual development projects within Vista is the applicable threshold for evaluating whether the proposed 2017 CSMP would generate a level of GHG emissions that may have a significant impact on the environment. This threshold is appropriate because it is designed to evaluate whether a project would make substantial progress towards achieving the emissions reduction goals of AB 32 and the CAP. Although the analysis of the 2017 CSMP is programmatic in nature, annual emissions have been estimated based on worst-case construction and operation assumptions for GHG emissions that includes the CIP and O&M Program components of the 2017 CSMP. The worst-case assumptions are discussed in the impact analysis section below. If the total project annual GHG emissions are less than 1,185 $MTCO_2e$, then the project would not generate GHG emissions that would have a significant impact on the environment.

[2] *Center for Biological Diversity v. California Department of Fish and Wildlife* (11/30/2015, Case No. S217763).

The plans, policies, or regulations adopted for the purpose of reducing GHG emissions that are applicable to the 2017 CSMP include the City's interim guidance, CAP, General Plan 2030 Update, as well as AB 32 and SB 32.

In accordance with CEQA Section II (F) of Appendix F, a project would be considered to have a significant energy impact if it would result in wasteful, inefficient, or unnecessary consumption of energy.

Impact Analysis

IMPACT 4.4-1	Would the 2017 CSMP generate GHG emissions either directly or indirectly, that may have a significant impact on the environment.

CATEGORIES 1, 2, 3, and 4

Direct Effects – Construction: Construction of the proposed improvements would result in direct GHG emissions from operation of construction equipment and generation of worker, vendor, and hauling vehicle trips. The purpose of this analysis is to estimate worst-case maximum annual GHG emissions from construction of the proposed improvements. The worst-case construction assumptions for GHG emissions are consistent with the assumptions for criteria pollutant emissions described in Section 4.1, Air Quality. Year 2018 emissions are intended to represent the most intensive year of construction activity; therefore, it is assumed that GHG emissions from all other construction years would be less than those estimated for year 2018. The estimated worst-case annual GHG emissions from construction of the proposed improvements are presented in Table 4.4-2. As shown in Table 4.4-2, worst-case annual emissions from construction of the proposed project are estimated to be 1,059 $MTCO_2e$, which is below the threshold of 1,185 $MTCO_2e$. Therefore, construction of the proposed improvements would not exceed the City's "Bright Line" threshold and would result in a less-than-significant impact.

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Construction Phase	$MTCO_2e$
Pipeline Installation	743
Pump Station	
Demolition	82
Earthwork	65
Construction	35
Architectural Coating	4
Access Road Construction	130
Total Worst-Case Annual Emissions	**1,059**
Threshold	***1,185***
Significant Impact?	***No***

Source: CalEEMod Version 2016.3.1 See Appendix C for model input and output.

Direct Effects – Operations: Operation of the proposed improvements would result in the direct emission of GHGs from additional vehicle maintenance trips. A total of 30 daily maintenance trips are anticipated to serve both existing and proposed facilities. Trip length is anticipated to average 15 miles. Maintenance trips would generate approximately 46 $MTCO_2e$ and would not exceed the City's "Bright Line" threshold. A significant impact would not occur.

In addition, the combined GHG emissions from construction and operational effects would be 1,105 $MTCO_2e$, which is below the City's "Bright Line" threshold. Therefore, combined construction and operation effects from the proposed project would be less than significant.

Indirect Effects: Construction and operation of the proposed improvements are not anticipated to result in a net increase in indirect GHG emissions from energy use, solid waste disposal, or water use. With the exception of the pump stations, new or improved infrastructure would be passive and would not generate solid waste or result in energy or water use. The proposed pump station improvements would not result in increases in capacity or other improvements that would result in an increase in energy demand at the pump station. Two emergency generators would be relocated to the BVPS and BCPS as part of a separate project to upgrade the AHLS. Because these generators are currently operational at the AHLS, relocation to the BVPS and BCPS would not result in a net increase in energy demand. Therefore, impacts related to indirect GHG emissions would be less than significant.

IMPACT 4.4-2	Would the 2017 CSMP conflict with an applicable GHG reduction plan, policy or regulation.

CATEGORIES 1, 2, 3, and 4

Direct Effects: The plans, policies, or regulations adopted for the purpose of reducing GHG emissions that are applicable to the proposed project include AB 32, SB 32, the GP 2030 Update, the CAP, and the City's interim guidance. As discussed above under Impact 4.4-1, total worst-case annual construction and operation GHG emissions would be less than the numerical "Bright Line" threshold identified in the City's interim guidance. Therefore, the proposed project GHG emissions are considered less than significant and it is not expected to conflict with the City's interim guidance.

As explained under Regulatory Framework, above, the City's interim guidance provides an objective methodology for evaluating compliance with AB 32 at the project level until the CAP can be updated to include such methods. Because the proposed project is consistent with the City's interim guidance, it would also, therefore, not conflict with the statewide 2020 GHG reduction targets set forth in AB 32. Furthermore, the proposed project is not expected to impede the City's ability to achieve the goals of its CAP or future updates to the CAP. The purpose of the CAP is to reduce GHG emissions in support of AB 32, and to mitigate Vista's contribution to global climate change. The City's interim guidance provides numerical thresholds that can be used to objectively and consistently evaluate whether individual projects would contribute to that purpose. Because construction and operation GHG emissions are below the level of significance defined in the interim guidance, the proposed project would also not conflict with the overall purpose of the CAP.

Local guidance on the City's portion of the new statewide emission reductions mandated by SB 32 is not yet available, although the City's interim guidance noted that the CAP could be updated to comply with the statewide 2030 GHG emissions targets. Nonetheless, long-term operational GHG emissions from the proposed project would be minimal (46 $MTCO_2e$) and unlikely to significantly affect the ability of the City or state to meet the emissions reduction goals of SB 32. Furthermore, project-related operational emissions would result from maintenance trips, emissions from which are expected to continually decrease over time as a result of future statewide initiatives. For example, a large share of the future emissions reduction goals in SB 32 are expected to be accomplished by statewide initiatives such as the Advanced Clean Cars vehicle emissions standards; incentives for electric vehicles; and the low-carbon fuel standard for imported fuel. For these reasons, the proposed project is not expected to conflict with the new statewide 2030 targets.

As explained under Regulatory Framework above, GP 2030 Update RCS Goal 2 seeks to support the State's efforts under Assembly Bill 32, Senate Bill 375, and other State and federal mandates, and to mitigate the community's contributions to global climate change. The City's primary tools for meeting this goal are its CAP and its interim guidance, which were developed to evaluate climate change impacts in compliance with AB 32. The proposed project is expected to be consistent with GP 2030 Update RCS Goal 2 because the overall GHG emissions would be less than the numerical "Bright Line" threshold identified in the City's interim guidance. The proposed project also discloses the contribution it could have on climate change, consistent with GP 2030 Update Policy 2.7. As such, the 2017 CSMP would have a less-than significant impact on applicable plans, policies, or regulations designed to reduce the emissions of GHG.

Indirect Effects: Implementation of the 2017 CSMP would not induce growth or result in secondary effects that could conflict with an applicable GHG reduction plan. No impact would result.

IMPACT 4.4-3	Would the 2017 CSMP result in the wasteful, inefficient, or unnecessary consumption of energy.

CATEGORIES 1, 2, 3, and 4

Direct Effects – Construction: In accordance with CEQA Section II (F) of Appendix F, a project would be considered to have a significant energy impact if it would result in wasteful, inefficient, or unnecessary consumption of energy. Energy use during construction of future projects identified in the 2017 CSMP would result in consumption of fossil fuels from operation of construction equipment and vehicles. Although details of the construction effort for individual projects are currently unknown, construction of the proposed improvements is anticipated to require only standard construction practices and equipment. Construction is not anticipated to require special circumstances or equipment that would result in the wasteful, inefficient, or unnecessary consumption of energy.

Furthermore, calculations of air quality and GHG emissions from construction of future projects identified in the 2017 CSMP include energy demand. As discussed in Impact 4.4-1 for GHG emissions and Section 4.1, Air Quality, impacts associated with these topics would also be less than significant.

Direct Effects – Operations: As described under Impact 4.4-1, operation of the proposed improvements is not anticipated to result in a net increase in energy use compared to existing

conditions. Replacement of aging pump station equipment would likely result in increased energy efficiency at the pump stations. Therefore, operation of future projects identified in the 2017 CSMP would not result in the wasteful, inefficient, or unnecessary consumption of energy. Impacts would be less than significant.

Furthermore, calculations of air quality and GHG emissions from operation of future projects identified in the 2017 CSMP include energy demand. As discussed in Impact 4.4-1 for GHG emissions and Section 4.1, Air Quality, impacts associated with these topics would also be less than significant.

Indirect Effects: Construction and operation of future projects identified in the 2017 CSMP would not result in indirect effects related to energy because construction and operation of the facilities would not enable or encourage any off-site energy use. A significant impact would not occur.

4.4.5 Mitigation Measures

Implementation of the proposed project would not result in significant impacts associated with GHG emissions or energy use. No mitigation measures are necessary.

4.4.6 Cumulative Impacts

Due to the mixing of greenhouse gases in the atmosphere and their global effect on climate change, it is only possible to analyze the impacts of GHG in a cumulative context. The City's CAP addresses the cumulative impact of GHG emissions from new projects and existing development in Vista. The City's "Bright Line" threshold is intended to address the potential for a project to affect the City's ability to achieve the cumulative emissions reduction goals of the CAP. Therefore, the analysis above under Impacts 4.4-1 and 4.4-2 includes the analysis of cumulative GHG emissions.

A project would result in a cumulative impact related to energy use if the project, in combination with cumulative projects, would result in wasteful, inefficient, or unnecessary consumption of energy. Adoption of the 2017 CSMP, when considered together with the general plans and other planning documents for the affected jurisdictions, would not result in significant energy impacts, but would support the jurisdictions' planned land uses and development in conformance with applicable general plans. As described under Impact 4.4-3, operation of the proposed improvements would not result in a net increase in energy use and would likely result in increased energy efficiency. Therefore, the proposed project would not contribute to a cumulative impact related to energy consumption.

4.4.7 Significant and Unavoidable Impacts

GHG emissions and energy use impacts associated with the proposed project would not result in significant and unavoidable impacts.

4.5 Hazards and Hazardous Materials

4.5.1 Introduction

This section of the SPEIR supplements and provides an update to the existing conditions described in Section 4.6 (Hazards and Hazardous Materials) of the 2008 SMPU PEIR, which is incorporated by reference. This section presents the potential hazards and hazardous materials impacts associated with implementation of the improvements included in the 2017 CSMP Update.

4.5.2 Existing Conditions

Airport Safety Hazard

The information on airport safety hazards, as broadly described in Section 4.6.2 of the 2008 SMPU PEIR, remains substantially similar, except that the most recent airport land use compatibility plan (ALUCP) for the McClellan-Palomar Airport was amended on March 4, 2010 by the San Diego County Regional Airport Authority (SDCRAA). Several improvements included in the 2017 CSMP Update are located within 2 miles of McClellan-Palomar Airport and within the Airport Influence Area (AIA). These proposed improvements include rehabilitation of the RPS and Buena Creek Interceptor access road.

Wildfire Hazards

The information on wildfire hazards remains similar to the description described in Section 4.6.2 of the 2008 SMPU PEIR. Figure 4.5-1 depicts the fire hazard severity zones within the Study Area and surrounding area based on updated mapping produced by the California Department of Forestry and Fire Protection (CalFire). All four zones (Moderate, High, Very High, and Non-Wildland/Non-Urban) exist within the Study Area. Very high fire hazard severity zones (VHFHSZs) occur in the southern, eastern, and northeastern portions of the Study Area. Properties located in areas identified as a VHFHSZ are subject to more stringent building and landscape code requirements then are properties outside of that zone (City of Vista [City] 2011).

Hazardous Materials Sites

An online database search was conducted to identify reported hazardous materials spills and releases within the Study Area. Environmental databases reviewed include the Department of Toxic Substances Control (DTSC) EnviroStor and the State Water Resources Control Board (SWRCB) GeoTracker. The results of the database search are illustrated in Figure 4.5-2. A complete listing of properties in which historic or on-going activities have resulted in a reported release of hazardous materials into soil and groundwater, as identified by DTSC and SWRCB, are presented in Appendix G of this SPEIR. These sites are located throughout the Study Area; however, it is important to note that listed properties do not necessarily pose a risk to properties within the Study Area and, in many instances, require no further action (Appendix G of this SPEIR).

Figure 4.5-1. Fire Hazard Severity Zones

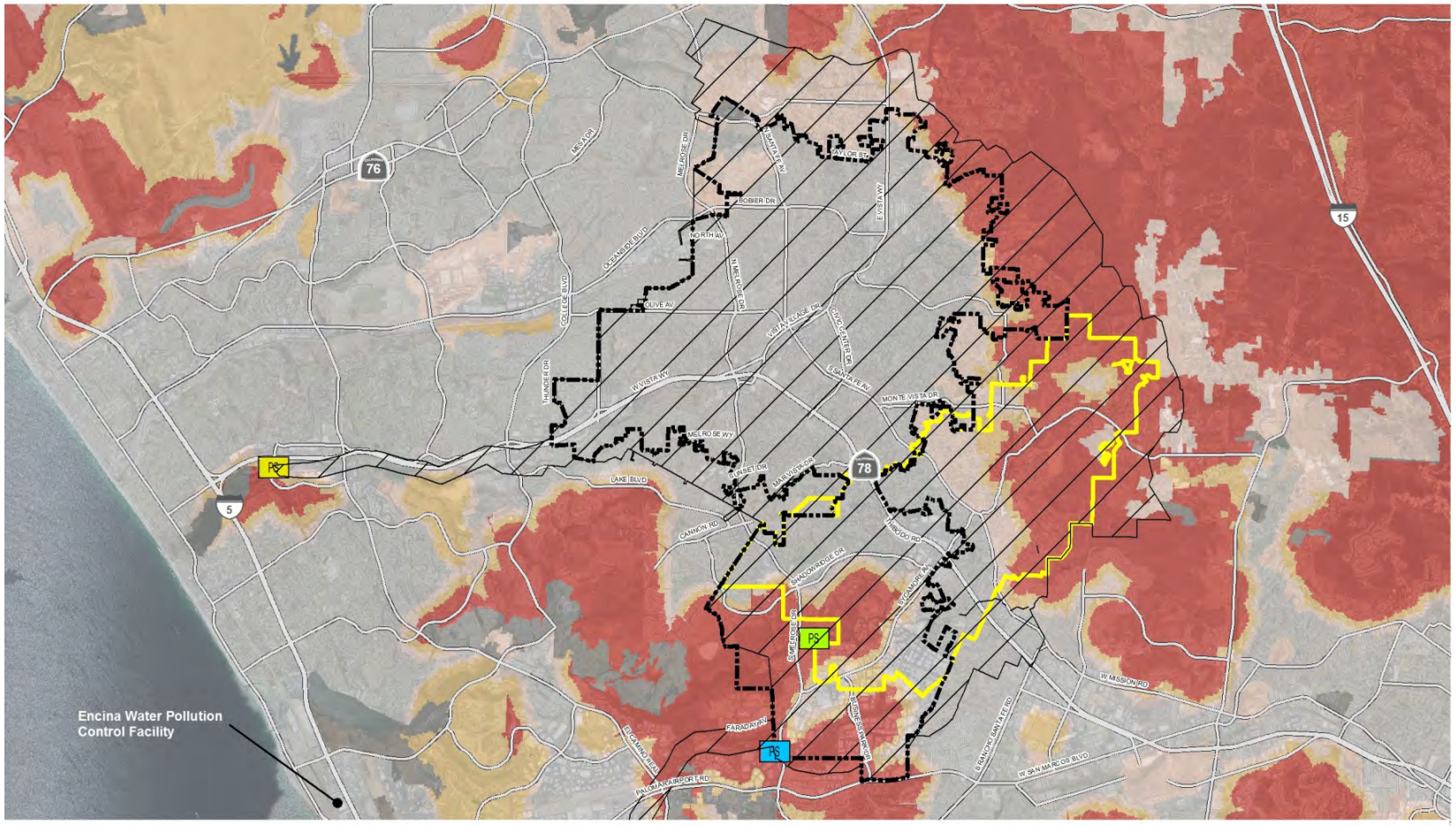
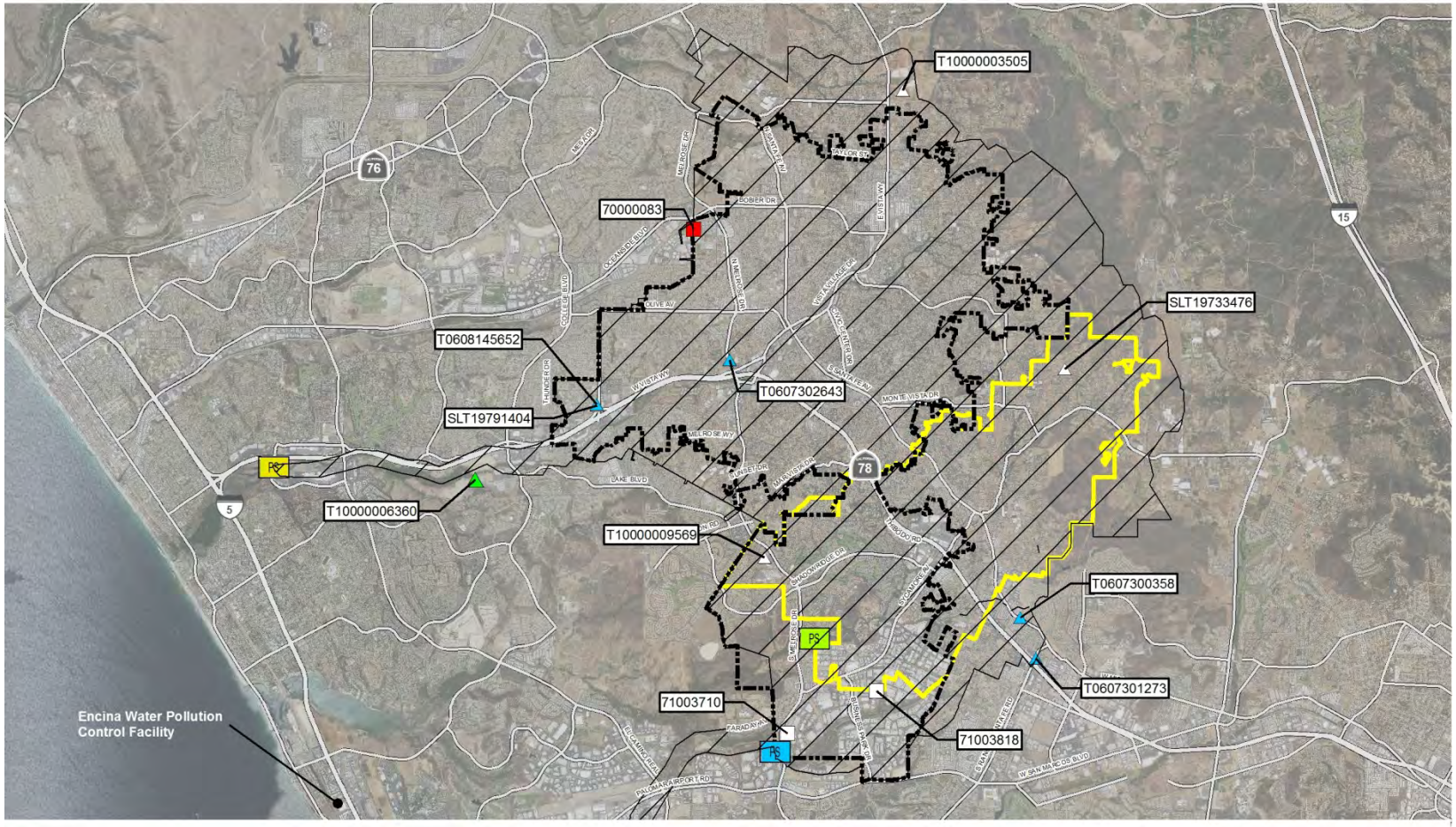


Figure 4.5-2. EnviroStor and Geotracker Database Results



The EnviroStor (2017) database identifies sites that have known contamination or sites for which there may be reasons to investigate further. Specifically, it lists the following site types: Federal Superfund sites (National Priority List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. Sites that are in the Hazardous Waste and Substances Site List - Site Cleanup (Cortese List)[1] are also identified. Twenty-one hazardous material sites were identified by the DTSC EnviroStor Database out of 121 total sites within the Study Area (see Appendix G). Out of the 21 sites, 18 sites require no further action. The remaining three are illustrated in Figure 4.5-2.

The GeoTracker database provides regulatory data regarding sites with leaking underground fuel tanks, fuel pipelines, and public drinking water supplies. The SWRCB Geotracker identifies 158 sites within the Study Area. These sites are primarily leaking underground storage tanks (LUST) and cleanup program sites. Out of the 158 sites, cleanup of 150 sites have been completed and those cases have been closed. They do not require additional soil and/or groundwater remediation, and thus, are not considered a threat to future land uses. There are currently seven sites open at the site assessment stage as illustrated in Figure 4.5-2 (and listed in Appendix G); one site Quarry Creek (T10000006360) is currently subject to a clean up mitigation program.

Existing Hazardous Materials and Waste Management

The California Environmental Protection Agency (Cal EPA), DTSC regulates the generation, transportation, treatment, storage, and disposal of hazardous waste. Cal EPA has authorized DTSC to enforce hazardous waste laws and regulations in California. State requirements assign “cradle-to-grave” responsibility for hazardous waste and hazardous waste generators. Generators must ensure that their waste is disposed of properly, and legal requirements dictate the disposal requirements for many waste streams (e.g., banning many types of hazardous wastes from landfills). All hazardous waste generators must certify that, at a minimum, they make a good faith effort to minimize their waste and select the best waste management method available. Hazardous waste laws and regulations are enforced locally by the Vista Fire Department and the San Diego County Department of Environmental Health (SDCDEH).

In San Diego County, remediation of contaminated sites is performed under the oversight of SDCDEH with the cooperation of the San Diego RWQCB. At sites where contamination is suspected or known to occur, the project sponsor is required to perform a site investigation and develop a remediation plan, if necessary. For typical municipal infrastructure projects, actual site remediation is done either before or during the construction phase of the project. Site remediation or development may be subject to regulation by other agencies. For example, if dewatering of a hazardous waste site were required during construction, subsequent discharge to the sewer collection system would require a permit from the City Engineering Department and EWA, while discharge to a storm drain would require a permit from both the City Engineering Department and the San Diego RWQCB.

4.5.3 Regulatory Framework

The regulatory framework contained in Section 4.6.3 of the City 2030 General Plan Update (GP 2030 Update) is incorporated by reference. The federal, regional, and local laws that regulate activities concerning hazards and hazardous materials include, but are not limited to, the Resource Conservation and Recovery Act; Emergency Planning and Community Right-to-Know Act;

[1] Cortese List sites are those that are compiled pursuant to Government Code Section 65962.5.

Hazardous Materials Transportation Act; California Accident Release Protection Program; Department of Toxic Substances Control; San Diego County Department of Environmental Health; City Development Code; and Vista Fire Protection District Community Wildlife Protection Plan. These regulations are summarized below.

Federal

Resource Conservation and Recovery Act (RCRA)

The goal of the RCRA is the protection of human health and the environment, the reduction of waste, the conservation of energy and natural resources, and the elimination of the generation of hazardous waste as expeditiously as possible. The Hazardous and Solid Waste Amendments of 1984 significantly expanded the scope of the RCRA by adding new corrective action requirements, land disposal restrictions, and technical requirements.

Emergency Planning and Community Right-to-Know Act

This law was designated to help local communities protect public health, safety, and the environment from chemical hazards. To implement the Emergency Planning and Community Right-to-Know Act (EPCRA), EPCRA provides requirements for emergency release notification, chemical inventory reporting, and toxic release inventories for facilities that handle chemicals.

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act was passed in 1975 to provide adequate protection against the risks to life and property associated with the transportation of hazardous material by creating a regulatory framework to address potential threats to health, welfare, and safety.

State

California Department of Toxic Substances Control

The Department of Toxic Substances Control's (DTSC) mission is to restore, protect, and enhance the environment and to ensure public health, environmental quality, and economic vitality by regulating hazardous waste, conducting and overseeing cleanups, and developing and promoting pollution prevention. The DTSC regulates hazardous waste in California primarily under the authority of the federal RCRA of 1976, the California Health and Safety Code, and other laws that affect hazardous waste specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

California Accident Release Protection Program

The purpose of the California Accident Release Protection (CalARP) program is to prevent the accidental releases of regulated substances and to minimize the risk that hazardous substances could cause harm to the public and /or environment. CalARP requires that an owner or operator of a business handling more than the threshold quantity of any one of more than 350 regulated substances evaluate the use of the substance to determine the potential for and impacts of an accidental release.

Regional

San Diego County Department of Environmental Health

SDCDEH regulates and enforces state UST and aboveground storage tank (AST) installation and monitoring requirements, including permitting and inspecting, for businesses within the county, including those in Vista. The County operates a Site Assessment Mitigation program to mitigate the release of contaminant materials. The SDCDEH is also responsible for administering the state's Leaking Underground Fuel Tank program. The purpose of the program is to oversee the proper assessment and remediation of contaminants released from USTs.

San Diego County Air Pollution Control District

The San Diego County Air Pollution Control District (SDAPCD) maintains air quality and develops and implements cost-effective programs meeting state and federal mandates. The Asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP), 40 Code of Federal Regulations (CFR) 61, Subpart M is enforced locally under San Diego Air Pollution Control District Regulation XI, Subpart M – Rule 361.145). This regulation requires the owner or operator of a demolition or renovation to submit surveys for asbestos containing materials (ACMs) and lead based paint (LBP) prior to issuance of any demolition permit and an Asbestos Demolition or Renovation Operational Plan at least 10 working days before any asbestos stripping or removal work begins (such as, site preparation that would break up, dislodge, or similarly disturb asbestos containing material).

Local

City of Vista Development Code, Title 18, Zoning Ordinance

The Vista Community Development Department, Planning Division, enforces zoning ordinances as part of the development entitlement and permitting processes. The zoning ordinance helps ensure that incompatible land uses are appropriately separated geographically. The Community Development Department, Building Division, requires projects to undergo plan reviews and /or building inspections prior to issuance of building permits or certificates of occupancy in order to determine that structures meets minimum safety, health, and fire standards.

City of Vista Development Code, Chapter 16.40, Uniform Fire Code

The City Council and VFPD Board of Directors adopted by reference the 2016 California Fire Code, including appendices I and N of the 2015 International Fire Code, and the National Fire Protection Association Standards 13, 13-R, and 13-D, 2016 Editions, with certain amendments or revisions.

Vista Fire Protection District Community Wildfire Protection Plan

The Vista Fire Protection District (VFPD) Community Wildfire Protection Plan (CWPP) is a comprehensive, scientifically-based assessment of the wildfire hazards and risks within the Wildland Urban Interface (WUI) zones of VFPD. For planning purposes, the CWPP subdivided the Vista Fire Department (VFD) into 19 communities, and each community was evaluated for their relative wildfire hazard in the WUI zone through the Community Wildfire Hazard Rating system and identified values at risk. Based on the community assessments, the CWPP determined that the majority of the VFPD is at a very high risk for wildfires. Mitigation measures were recommended through the

establishment of Fire Management Units. These units reflect a particular function, such as a geographic treatment area with related fuel modification (or reduction) projects.

4.5.4 Project Impacts

Methodology

This impact analysis presents a program-level analysis that evaluates the potential impacts of implementing the 2017 CSMP Update on existing environmental conditions. Based on the existing conditions described above and incorporated by reference from the 2008 PEIR, the impact analysis programmatically and qualitatively assesses the direct, indirect, and cumulative impacts on hazards and hazardous materials as a consequence of implementing the 2017 CSMP categories described in Section 4.0.1.

Because compliance with applicable existing laws, regulations, and ordinances is mandatory, the analysis assumes that future projects covered under the 2017 CSMP would comply with all applicable regulations related to hazards and hazardous materials as described in Section 4.5.3.

Thresholds of Significance

As defined in Appendix G of the CEQA Guidelines, project impacts to hazards and hazardous materials would be considered significant if the project was determined to:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- 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;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school;
- Be located on a site which is located on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
- For a project located within 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 result in a safety hazard for people residing or working in the Study Area;
- For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the Study Area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent or urbanized areas or where residences are intermixed with wildlands.

Impact Analysis

IMPACT 4.5-1	Would the 2017 CSMP create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

CATEGORIES 1, 2, 3, and 4

Direct Effects - Construction: Impacts associated with the routine transport, use, or disposal of hazardous materials would be similar to those previously identified in the 2008 SMPU PEIR. Potentially toxic substances such as fuels, oils, and lubricants would be used during construction of proposed improvements. These materials would generally be used for excavation equipment, generators, and other construction equipment and would be contained within vessels engineered for safe storage. Additionally, these activities would be subject to federal, state, and local regulations and requirements regarding hazardous materials.

A Hazardous Materials Business Plan is required by the state and federal governments for uses that would involve a substantial amount of hazardous materials. On the regional level, the SDCDEH requires the preparation of Hazardous Material Business Plans (HMBPs) for businesses within the county, including those in Vista that use, store, or handle 55 gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of a compressed gas at standard temperature and pressure that are considered hazardous. HMBPs must be prepared prior to facility operation and are reviewed and updated biennially (or within 30 days of a material change). Since the improvements included in the 2017 CSMP Update would be subject to these existing regulations, the 2017 CSMP Update would not create significant hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials. Similar to the 2008 SMPU PEIR, impacts would be less than significant.

Direct Effects - Operations: Operation of the underground components of the 2017 CSMP would not require the use of any hazardous materials and continued compliance with the Vista's SSMP (2014) would minimize the potential hazardous materials to be discharged into the collection system. Similar to existing conditions, the pump stations would be equipped with emergency standby generators. Diesel, contained within vessels engineered for safe storage, would be required for operation of the generators. Because the generators would be operated for short periods during weekly testing and during emergencies, only minor amounts of hazardous materials would likely be stored onsite. Additionally, because these generators would be operated for a shortly duration during regular testing, high-frequency, routine transport or use of this material would be subject to Vista's existing HMBP. This is considered a less than significant impact.

Indirect Effects: Implementation of the 2017 CSMP Update would involve the routine transport, use, or disposal of hazardous materials, similar to existing conditions, to facilitate short-term construction and long-term maintenance activities. These activities are unlikely to indirectly pose an adverse, indirect effect to adjacent land uses. For this reason, the impact is less than significant.

IMPACT 4.5-2	Would the 2017 CSMP 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?

CATEGORIES 1, 2, and 4

Direct Effects – Construction: Impacts associated with hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment would be similar to those previously identified in the 2008 SMPU PEIR. Sites with historical or current contamination are identified in Appendix G. Construction of new conveyance facilities or access road reconstruction would involve excavation and grading activities, which could encounter documented and unreported contaminated soils and groundwater during excavation activities. Encountered, contaminated materials may be classified as a hazardous waste, a designated waste, or a special waste, depending on the type and degree of contamination. If hazardous substances were encountered during construction of the proposed project and if materials were improperly managed or disposed, workers and the public would be potentially exposed to contaminated materials. The degree of any public health impact associated with the hazardous substances would depend on the nature and extent of any hazardous substances encountered and the subsequent handling and management of those materials. This is considered a significant impact. Mitigation Measure HWQ-1, which would require the preparation of a project-specific SWPPP for each improvement (disturbing greater than 1 acre) and a corresponding spill response and containment plan. Mitigation Measure HAZ-1 would be required to address any undocumented sources of containment encountered during construction.

Direct Effects – Operation: The 2017 CSMP Update includes conveyance improvements that, once constructed, would minimize the potential for pipeline leaks, ruptures, and/or sanitary overflow events that could create a significant hazard to the public or the environment. As a result, the implementation of the 2017 CSMP Update would entail desirable benefits and the impact is considered less than significant.

Indirect Effects: Similar to the discussion of direct impacts, the potential indirect effects of implementing the 2017 CSMP Update could include an accidental release of hazardous materials during construction or future operations. During construction, future improvements would be subject to Mitigation Measures HAZ-1 and HWQ-1 to address potential indirect impacts to water quality and sensitive habitat areas. Once operational, continued compliance with the City's adopted SSMP (2014) would minimize the potential for long-term, indirect impacts to water quality and sensitive habitat areas.

CATEGORY 3

Direct Effects – Construction: If demolition is required for the reconstruction of pump station sites, there is a potential to expose the public and the environment to lead based paint, asbestos, and or/other hazardous materials.

There is a potential for friable and non-friable asbestos containing materials (ACMs), and lead based paint (LBP) to be present in any structure constructed prior to 1978. Lead is a highly toxic metal that was used until 1978 in paint and other products found in and around residences. Lead may cause a range of health effects, from behavioral problems and learning disabilities, to seizures and death.

LBP has been banned since 1978, but many older structures still have this paint on walls, woodwork, siding, windows, and doors. Construction and demolition workers can be exposed to lead contamination by cutting, scraping, sanding, heating, burning, or blasting LBP from building components. Asbestos was used extensively from the 1940s until the late 1970s. Although asbestos is usually safe when it is undisturbed and the ACMs are in good condition, once disturbed (such as during remodeling or demolition) the fibers can become airborne. The EPA has determined that there is no safe exposure level to asbestos. Demolition or operations that involve asbestos-containing materials must conform to SDAPCD Rules 361.140 - 361.156. To ensure that proper procedures are followed to control the emissions of asbestos into the atmosphere, the SDAPCD will review and approve surveys for ACMs and LBP prior to issuance of any demolition permit and must be notified in writing at least 10 days in advance of any demolition and 10 days in advance of any demolition that exceeds threshold amounts, regardless of whether ACMs or LBP are present or not. Mitigation Measure HAZ-2 would minimize impacts associated with ACMs and LBP to less than significant levels.

Direct Effects – Operation: The 2017 CSMP Update includes an O&M Program and related improvements, that once constructed, would minimize the potential for pipeline leaks, ruptures, and/or sanitary overflow events that could create a significant hazard to the public or the environment. Once operational, continued compliance with the City's adopted SSMP (2014) would minimize the potential for accidental releases. As a result, the implementation of the 2017 CSMP Update would entail desirable benefits and the impact is considered less than significant.

Indirect Effects: The potential indirect effects of implementing the 2017 CSMP Update could include an accidental release of hazardous materials during construction or future operations. Once operational, continued compliance with the City's adopted SSMP (2014) would minimize the potential for long-term, indirect impacts to water quality and sensitive habitat areas and the impact would be less than significant.

IMPACT 4.5-3	Would the 2017 CSMP emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

CATEGORIES 1, 2, and 3

Direct Effects – Construction: Impacts associated with the emission of hazardous emissions or handling hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school would be similar to those previously identified in the 2008 SMPU PEIR. According to the GP 2030 Update Draft PEIR, there are 32 schools in the City limits: 16 elementary schools, four middle schools, five high schools, two alternative education schools, two magnet schools, one adult school, and two charter schools. Several of these schools are located within 0.25 mile of one or more improvements contemplated under the 2017 CSMP Update. Risks associated with hazardous materials use would be less than significant with adherence to all applicable local, state, and federal regulations governing the transport, use, and storage of hazardous materials.

Direct Effects – Operations: Conveyance improvements would not require the use of any hazardous materials during operational activities. As such, these individual projects would not emit or require the handling of hazardous materials. Operation and maintenance of the conveyance

improvements as part of the long term O&M Program would be carried out consistent with the adopted SSMP (2014) and would not result in any safety impacts to the public or nearby schools. This impact is less than significant.

Indirect Effects: No adverse, indirect effects to schools were identified.

CATEGORY 4

Direct Effects – Construction: There are no schools located within 0.25 miles of proposed out-of-service area project(s) improvements. Therefore, no impact would occur.

Direct Effects – Operations: Operation of the access road improvements would not generate hazardous emissions within a quarter mile of a school. No impact would result.

Indirect Effects: No adverse, indirect effects to schools were identified.

IMPACT 4.5-4	Would the 2017 CSMP be located on a site which is located on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment?

CATEGORIES 1, 2, 3, and 4

Direct Effect – Construction: The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies and developers to comply with the CEQA requirements in providing information about the location of hazardous materials release sites. Based on a review of the Cortese List, of the 21 hazardous material sites that were identified by the DTSC EnviroStor Database within the Study Area, none are listed on the Cortese List. Therefore, construction of the improvements included in the 2017 CSMP Update would not encounter hazardous sites pursuant to Government Code Section 65962.5 (Cortese List).

Construction of proposed pipelines, pump stations, and access road improvements would involve excavation and grading activities, which could encounter documented and unreported contaminated soils and groundwater during excavation activities. Encountered, contaminated materials may be classified as a hazardous waste, a designated waste, or a special waste, depending on the type and degree of contamination. If hazardous substances were encountered during construction of a project and if materials were improperly managed or disposed, workers and the public would be potentially exposed to contaminated materials. The degree of any public health impact associated with the hazardous substances would depend on the nature and extent of any hazardous substances encountered and the subsequent handling and management of those materials.

Direct Effects – Operations: Once constructed, improvements are not anticipated to result in any impacts related to the disturbance of documented and unreported hazardous materials sites. This is considered a less than significant impact.

Indirect Effects: No adverse, indirect impacts associated with hazardous materials sites have been identified.

IMPACT 4.5-5	For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport, public use airport, or private air strip, would the 2017 CSMP result in a safety hazard for people residing or working in the Study Area?

CATEGORIES 1 and 2

Direct Effect – Construction: Impacts associated with safety hazards due to proximity of a public airport would be similar to those previously identified in the 2008 SMPU PEIR. Future projects identified in the 2017 CSMP Update do not involve "intensive development" involving large groups of people. Due to the nature of the projects proposed in the CSMP, aircraft activities at the McClellan-Palomar Airport would be unaffected. Therefore, impacts would be less than significant.

Direct Effects – Operations: Once constructed, the proposed conveyance improvements would be installed underground. Due to the nature of the projects proposed in the CSMP, aircraft activities at the McClellan-Palomar Airport would be unaffected. Therefore, no impacts would occur.

Indirect Effects: No adverse, indirect impacts to public airports or private air strip were identified.

CATEGORIES 3 and 4

Direct Effect – Construction: A construction crane may be required during reconstruction of the RPS and the Buena Creek Interceptor access road. Based on a review of Exhibit II-3 of the McClellan-Palomar Airport Land Use Compatibility Plan (ALUCP), these improvements are located within the Federal Aviation Administration's (FAA) Height Notification Boundary. Pursuant to Policy 3.5.3 of the McClellan-Palomar ALUCP (San Diego County Regional Airport Authority 2011):

> *"Proponents of a project containing structures or other objects that may exceed the height standards defined in Part 77, Subpart C, as applied to the Airport must submit notification of the proposal to the FAA where required by the provisions of Part 77 Subpart B, and by the California Public Utilities Code, sections 21658 and 21659. (Notification to the FAA under Part 77, Subpart B, is required even for certain proposed construction that does not exceed the height limits allowed by Subpart C of the regulations. See Appendix B of this Compatibility Plan for the complete text of Part 77. The boundaries of the FAA notification area for the Airport are shown on Exhibit III-3.) The FAA will conduct an "aeronautical study" of the object(s) and determine whether the object(s) would be of a height that would constitute a hazard to air navigation. These requirements apply to all objects including structures, antennas, trees, mobile objects, and temporary objects, such as construction cranes."*

Therefore, FAA notification will be required for the use of temporary construction cranes. Compliance with the mandatory FAA notification requirement will ensure that the use of temporary construction cranes would not result in a hazard to air navigation. Therefore, impacts would be less than significant.

Direct Effects – Operations: Proposed pump station retrofits would match existing conditions in terms of building height and would not impact aircraft activities at McClellan-Palomar Airport. Furthermore, operation of the access road improvements would not impact aircraft activities at the McClellan-Palomar Airport. No impacts would occur.

Indirect Effects: No adverse, indirect effects to public airports or private air strip were identified.

IMPACT 4.5-6	Would the 2017 CSMP impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

CATEGORIES 1, 2, 3, and 4

Direct Effect – Construction: As discussed in Section 4.9 (Transportation and Circulation) of this SPEIR, construction of the individual conveyance improvements under the 2017 CSMP Update would occur within mainly public roadway ROW. As construction progresses, access for emergency vehicles could be impaired as result of reduced roadway widths (or capacity) and increased volumes of construction-related traffic and/or re-distributed traffic. In the absence of mitigation, this impact could be significant. Mitigation Measure TR-1 is proposed to reduce potential impacts to emergency response to a less than significant level.

Direct Effects – Operations: As discussed in Section 4.9 (Transportation and Circulation) of this SPEIR, once constructed, the proposed conveyance improvements would be installed underground. As a result, the proposed conveyance improvements would not impact emergency response operations over the long-term.

Indirect Effects: Once operational, these improvements would not interfere with emergency access and no indirect impact would result.

IMPACT 4.5-7	Would the 2017 CSMP expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent or urbanized areas or where residences are intermixed with wildlands?

CATEGORY 1

Direct Effect – Construction: The proposed CIP capacity and condition projects located within urbanized areas along public ROWs are generally devoid of dried vegetation and, therefore, the corresponding risk of wildland fire is considered low. The presence of paved surfaces and existing structures substantially reduces the risk of construction equipment accidentally igniting surrounding vegetation. This is considered a less than significant impact.

Direct Effects – Operations: Once constructed, the proposed conveyance improvements would be installed underground. As a result, the proposed conveyance improvements would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires.

Indirect Effects: Once operational, the proposed conveyance improvements would be installed underground and would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires.

CATEGORIES 2, 3, and 4

Impacts associated with wildland fires would be similar to those previously identified in the 2008 SMPU PEIR. As shown in Figure 4.5-1, moderate, high, and very high fire hazard severity zones occur in the southern, eastern, and northeastern portions of the Study Area. There are

CIP Capacity and Condition Projects (Cross-Country Environs), out-of-service area access roads, and pump stations located within fire hazard severity zones. Furthermore, a majority of these improvements are located on undeveloped land and potentially flammable materials such as brush, grass, or trees could pose a risk of wildland fires during construction. Mitigation Measures HAZ-3 and HAZ-4 would require construction areas to be clear of combustible materials and to ensure that sufficient fire suppression equipment is available during construction activities. Implementation of Mitigation Measures HAZ-3 and HAZ-4 would minimize this impact to a less than significant level.

Direct Effects – Operations: Once constructed, the proposed conveyance improvements would be installed underground. As a result, the proposed conveyance improvements would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires.

Indirect Effects: These improvements would not indirect increase local wildfire hazards through new land use encroachments or changes in planned land uses. No impact would result.

4.5.5 Cumulative Impacts

Cumulative impacts related to hazards and hazardous materials would be similar to those previously identified in the 2008 SMPU PEIR. Each cumulatively considerable project would also be subject to comply with all applicable regulations related to hazards and hazardous materials, thereby eliminating the need for concern of region-wide hazards.

Cumulative projects in the region will result in the use and transport of incrementally more oils, greases, and petroleum products for operational purposes. Although these could be subject to accidental spillage, there is no quantifiable cumulative effect since accidents are indiscriminate events, not related or contributory to one another. Furthermore, individual projects would be required to adhere to current laws governing storage, transportation, and handling of hazardous materials. Therefore, the 2017 CSMP Update's incremental contribution to cumulative hazard and hazardous materials impacts from past, present, and reasonably foreseeable future projects would be less than cumulatively considerable.

4.5.6 Mitigation Measures

Implementation of the following mitigation measures would reduce significant impacts identified for 2017 CSMP Categories 1, 2, and 4 as identified under Impact 4.5-1. The proposed mitigation would replace applicable project design features and construction measures identified in the 2008 PEIR for hazards and hazardous materials and apply to 2017 CSMP Categories 1, 2, and 4.

HAZ-1 **Halt Construction Work if Potentially Hazardous Materials are Encountered**. All construction contractors shall immediately stop all surface or subsurface activities in the event that potentially hazardous materials are encountered, an odor is identified, or considerably stained soil is visible. Contractors shall follow all applicable local, state, and federal regulations regarding discovery, response, disposal, and remediation for hazardous materials encountered during the construction process. These requirements shall be included in the contractor specifications.

HAZ-2 **Hazardous Materials Surveys.** Prior to the issuance of a building permit that includes demolition of on-site structures and prior to commencement of demolition or rehabilitation activities, a Hazardous Materials Assessment (surveys) would be

performed to determine the presence or absence of ACMs/LBP located in the structure(s) to be demolished. Suspect materials that would be disturbed by the demolition or rehabilitation activities would be sampled and analyzed for asbestos content, or assumed to be asbestos containing. All lead containing materials scheduled for demolition must comply with applicable regulations for demolition methods and dust suppression. Lead containing materials shall be managed in accordance with applicable regulations. The ACM survey would be conducted by a person certified by the California Division of Occupational Safety and Health (Cal/OSHA). The LBP survey would be conducted by a person certified by the California Department of Health Services. Copies of the surveys would be provided to SDCDEH and SDCAPCD once completed.

HAZ-3 **Keep Construction Area Clear of Combustible Materials.** During construction, construction contractors shall ensure that staging areas, welding areas, or areas slated for construction using spark-producing equipment shall be cleared of combustible vegetation or other materials that could serve as fire fuel. All vegetation clearing shall be coordinated with a qualified biologist and any required permits prior to removal. The contractor shall keep these areas clear of combustible materials in order to maintain a firebreak. Any construction equipment that normally includes a spark arrester shall be equipped with an arrester in good working order. This includes, but is not limited to, vehicles, heavy equipment, and chainsaws.

HAZ-4 **Provide Accessible Fire Suppression Equipment.** Work crews shall be required to have sufficient fire suppression equipment readily available to ensure that any fire resulting from construction activities is immediately extinguished. All off-road equipment using internal combustion engines shall be equipped with spark arrestors.

Implementation of Mitigation Measure TR-1 (See Section 4.9) to prepare a Traffic Control Plan would reduce construction related effects to emergency response and access.

Implementation of Mitigation Measure HWQ-1 (See Section 4.6) to prepare a SWPPP would reduce construction related effects to water quality and sensitive habitat areas located adjacent to construction work areas.

4.5.7 Significant and Unavoidable Impacts

As provided in the analysis above, implementation of the proposed 2017 CSMP would not result in a significant and unavoidable hazard or hazardous materials impact.

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4.6 Hydrology and Water Quality

4.6.1 Introduction

This section of the SPEIR provides an update to the existing conditions described in Section 4.7 of the 2008 Sewer Master Plan Update (SMPU) Program EIR (PEIR), including changes to applicable Federal, state, and local regulations. The impact analysis considers these updates in the context of the proposed 2017 CSMP, as described in Chapter 3; the prior 2008 PEIR analysis, which is incorporated by reference; and current hydrology and water quality mitigation avoidance and minimization practices, as reflected in the updated San Diego Regional Municipal (MS4) Permit, the City of Vista's (City) Best Management Plan (BMP) Design Manual (2016), and Stormwater Standards Manual (2015).

4.6.2 Existing Conditions

Section 4.7 of the 2008 PEIR provides a description of existing conditions for the Study Area, including descriptions of hydrology, surface water quality and groundwater. Descriptions of existing conditions for the San Diego Hydrologic Region and related surface water features in the Study Area, groundwater resources, and areas subject to potential flooding, tsunamis, and seiches in the Study Area are incorporated by reference from the 2008 PEIR. The following sections supplement the descriptions provided in the 2008 PEIR and provide updates, where applicable, based on current conditions.

Hydrology

The Study Area is located within the San Diego Hydrologic Region (SDHR). Hydrologic conditions as described in the 2008 PEIR remains similar in 2017, including the descriptions and hydrologic boundaries of the Agua Hedionda Creek, Buena Vista Creek, San Luis Rey River, and San Marcos Creek watersheds. Figure

Surface Water Quality

Surface water quality in the SDHR, as broadly described in the 2008 PEIR, remains similar in 2017. Similar to the 2008 PEIR, common surface water quality contaminants detected in local receiving waters include coliform bacteria, sediments, trace metals, nutrients, and pesticides. Table 4.6-1 lists the impaired waterways and water bodies that were updated in the 2012 Integrated Report (State Water Resources Control Board [SWRCB] 2014.

Table 4.6-1. Updated 303(d) Listing for Water Sources in Study Area

Water Source	Pollutant	Listing Decision
Agua Hedionda Creek	Benthic Community Effects	TMDL completion: 2019
	Total Dissolved Solids	
	Phosphorus	
	Manganese	
	Fecal Coliform	
	Enterococcus	
	Total Nitrogen as N	
	Toxicity	
	Selenium	
Buena Vista Creek	Sediment Toxicity	TMDL completion: 2019
	Selenium	
Buena Vista Lagoon	Indicator Bacteria	TMDL completion: 2008
	Nutrients	TMDL completion: 2019
	Sedimentation/Siltation	TMDL completion: 2019
San Luis Rey River	Chloride	TMDL completion: 2019
	Enterococcus	TMDL completion: 2021
	Fecal Coliform	TMDL completion: 2021
	Total Dissolved Solids	TMDL completion: 2019
	Total Nitrogen as N	TMDL completion: 2021
	Toxicity	TMDL completion: 2021
San Marcos Creek	DDE (Dichlorodiphenyldichloroethylene)	TMDL completion: 2019
	Phosphorus	
	Sediment Toxicity	
	Selenium	TMDL completion: 2021

Source: SWRCB 2012

Groundwater

The groundwater information, broadly described in the 2008 PEIR, remains essentially unchanged, and therefore no updates to this section are necessary. The project components of the 2017 CSMP are not located within a groundwater basin; however, the San Marcos Area basin and San Luis Rey basin are located southeast and northeast of the plan area.

4.6.3 Regulatory Framework

The basic regulatory framework remains substantially similar as described in the 2008 PEIR, except for policy updates found in the City's GP 2030 Update. Policies with respect to groundwater extraction discharges have been updated to reflect more stringent permitting requirements, requiring that all groundwater extraction discharges to waters in the San Diego Region be subject to waste discharge requirements (WDRs), minimizing contamination.

Federal

Federal laws and regulations governing the protection of water resources, including the Federal Water Pollution Control Act (or Clean Water Act) remain similar to those described in the 2008 PEIR.

State

State laws and regulations governing the protection of water resources, including the Porter-Cologne Water Quality Control Act (or Porter-Cologne) remain similar to those described in the 2008 PEIR.

Regional

San Diego County General Plan Update

The San Diego County General Plan Update was adopted in 2011 by the County of San Diego Board of Supervisors. The update to the County General Plan provides policies to guide planning efforts for population growth and plan for infrastructure needs, development and resource protection. The Conservation and Open Space Element of the update establishes the conservation and efficiency of water use and protects the groundwater aquifer, water bodies, and water course located throughout the San Diego region. Policies include the use of drought efficient landscaping, maximization of storm water filtration, minimizing impervious surfaces, and protection of areas downslope of development.

Nitrate/Onsite Wastewater Treatment Systems (OWTS) Policy Basin Plan Amendment

The Water Quality Control Plan for the San Diego Basin (Basin Plan) designates beneficial uses for water bodies in the San Diego Region, and establishes water quality objectives and implementation plans to protect those beneficial uses. Changes made to the plan require a Basin Plan amendment, subject to full public participation and hearing process prior to adoption by the San Diego Regional Water Quality Control Board (RWQCB). The Nitrate/OWTS Policy Basin Plan amendment was approved by the RWQCB in 2015 and includes changes to water quality objectives for nitrate in groundwater basins, incorporating the State Water Quality Control Policy for Siting, Designing, Operation, and Maintenance of Onsite Wastewater Treatment Systems, and added implementation measures for areas where surface and groundwater are interconnected.

Dewatering Requirements

San Diego RWQCB National Pollution Discharge Elimination System (NPDES) Permit No. CAG919003, Order R9-2015-0013 regulates groundwater extraction discharges related to construction dewatering, trench and ditch dewatering, well monitoring and testing, permanent groundwater drainage and seepage control projects to surface waters other than San Diego Bay, and other similar activities. If subject to the permit, the application requirements include a treatment facility certification report, disposal alternative analysis, reasonable potential analysis, and a monitoring and reporting program. Discharges would be subject to WDRs and effluent limitations depending on discharge location.

Phase I MS4 General Permit

Information regarding municipal separate storm sewer systems (MS4s) is similar to the 2008 SMPU. MS4s are defined as a conveyance or system of conveyances designed or used for collecting or conveying storm water in the United States. Under the Phase I MS4 General Permit, the RWQCB has adopted the National Pollutant Discharge Elimination System General Permit (NPDES) storm water permits for large municipalities. These permits require the discharger to develop and implement a Storm Water Management Plan/Program with the goal of reducing the discharge of pollutants to the maximum extent practicable (MEP), as specified in Section 402(p) of the Clean Water Act. The management programs specify what best management practices (BMPs) will be used to address certain program areas, such as public education and public outreach, illicit discharge detection and elimination, and construction and post-construction monitoring.

The Regional MS4 Permit (Order No. R9-2013-0001) was adopted on May 8, 2013 to cover the San Diego County Copermittees. The City's Jurisdictional Runoff Management Program (JRMP) document describes strategies and activities the City will implement to comply with the permit. In 2017, the City updated its JRMP to be consistent with RWQCB-approved changes made to the Water Quality Improvement Plan (WQIP) for the Carlsbad Watershed Management Area (WMA).

Local

Vista General Plan 2030 Update

The City council adopted the GP 2030 Update on February 28, 2012. The update adopts six general plan elements, including Resource Conservation and Sustainability, in order to guide planning efforts for development and natural resource protection over a twenty year planning period. The update addresses efforts to protect and enhance water resources through water conservation and water quality improvement. The update emphasizes that new development and rehabilitation projects use water conservation techniques, including a storm water management strategy known as Low Impact Development (LID). By mimicking a project site's natural hydrology, capturing runoff, controlling its volume and velocity of flow, and directing it to vegetated areas or areas with soils that promote infiltration, runoff will naturally filter out pollutants. LID would protect surface and groundwater quality, minimize flooding and reduce habitat degradation.

City of Vista Stormwater Standards Manual (2015)

Compliance with the updated Regional MS4 Permit requires each Copermittee to create an area specific BMP program. The City of Vista prepared the Stormwater Standards Manual, establishing minimum stormwater management requirements and controls to address the highest priority water quality conditions in the WQIPs for the San Luis Rey and Carlsbad WMAs. BMPs are described in the manual to reduce the amount of pollutants discharged to the City's MS4. The manual is used to inform contractors, developers, and City staff about what is necessary to meet the City's stormwater requirements.

City of Vista Best Management Practice Design Manual (2016)

The City of Vista BMP Design Manual replaces the City's 2011 Standard Urban Stormwater Mitigation Plan (SUSMP), which is part of the City's Stormwater Standards Manual, in compliance with the updated Regional MS4 Permit. The BMP Design Manual addresses updated onsite post-construction stormwater requirements for Standard Projects and Priority Development Projects, and provides procedures for planning, preliminary design, selection, and design of permanent storm water BMPs based on the performance standards presented in the MS4 Permit. The manual is for the use of project applicants, their representatives for preparation of Stormwater Quality Management Plans (SWQMP) and the City's personnel responsible for review of these plans.

City of Carlsbad General Plan Update and Climate Action Plan

On September 22, 2015, the Carlsbad City Council approved an update to the General Plan and a Climate Action Plan. In the context of water quality, the update serves to emphasize the protection and preservation of surface water, storm water and non-storm water flows, prevention of water pollutants. The update highlights the use of best management practices (BMPs) to mitigate or reduce the projected increases in pollutant loads, structural control changes to the storm water conveyance system, and other storm water pollution management plans.

San Marcos 2013 General Plan

The San Marcos 2013 General Plan Update establishes the City's long-range planning policies that protect and restore surface water and groundwater beneficial uses and promoting the development of effective and efficient watershed protection programs for surface water and groundwater quality.

City of Vista Grading and Erosion Control Ordinance (Development Code Title 17, Subdivisions, Chapter 17.56)

The Grading and Erosion Control Ordinance (or Grading Ordinance), contained in Title 17 of the City's Development Code (as amended through 2016) was revised in 2015 to be consistent with SDRWQCB Order No. R9-2015-0001. The Grading Ordinance identifies City permit requirements, grading requirements during construction, conditions of approval, and design standards.

City of Vista Flood Area Construction Regulations (Development Code Title 16, Buildings, Chapter 16.48)

The Flood Area Construction Regulations, contained in Title 16 of the City's Development Code (as amended through 2011) were originally issued in 1997 and revised in 2007. Section 16.48.170 requires new or replacement sanitary sewer systems to minimize or eliminate infiltration if floodwaters into the system and discharges from such systems into floodwaters.

4.6.4 Project Impacts

Methodology

This impact analysis presents a program-level analysis that evaluates the potential impacts of implementing the 2017 CSMP on existing environmental conditions. Based on the existing conditions described above and incorporated by reference from the 2008 PEIR, the impact analysis qualitatively assesses the direct, indirect, and cumulative impacts on hydrology and water quality as a consequence of implementing the 2017 CSMP. To facilitate the analysis, the City has attempted to broadly characterize a probable disturbance area for each of the improvement categories covered under the proposed 2017 CSMP Update. This categorization is described in Section 4.0.1. Similarly, because precise construction information is not available for future projects at this stage, the programmatic analysis of probable water quality impacts is applied generically, and discusses typical sources of water pollution from the construction methods identified in Chapter 3.

This analysis assumes that future projects covered under the proposed 2017 CSMP Update would comply with all applicable existing laws, regulations, and ordinances. Applicable regulations are noted in the impact analysis below as they apply, and Section 4.6.3, “Regulatory Framework,” is referenced as needed.

Thresholds of Significance

As defined in Appendix G of the CEQA Guidelines, project impacts to hydrology and water quality would be considered significant if the project was determined to:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- 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;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows;

- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam;
- Result in inundation by seiche, tsunami, or mudflow.

Criteria Requiring No Further Analysis

Criteria listed above that are not applicable to actions associated with the 2107 CSMP Update are identified below along with a supporting rational as to why further consideration is unnecessary and a no impact determination is appropriate.

- The 2017 CSMP Update is comprised of sanitary sewer conveyance improvements and do not include new structures for human occupation. Therefore, the implementation of the 2017 CSMP would not result in the placement of new housing within a 100-year flood hazard area. Based on these circumstances, a no impact determination is appropriate.
- The Study Area is sufficiently elevated and distant from the Pacific Ocean and associated lagoons to avoid tsunami or seiche run-up inundation. In addition, underground conveyance pipelines would be situated in existing roadways and easements and outside associated landslide hazard zones. For this reason, 2017 CSMP related improvements would not be affected by mudflow hazards and no impact would occur.

Impact Analysis

IMPACT 4.6-1	Would the proposed 2017 CSMP violate any water quality standards or waste discharge requirements?

CATEGORIES 1 and 3

Direct Effects – Construction: Potential impacts to water quality and applicable beneficial uses as a result of construction activities associated with the proposed 2017 CSMP would be similar to those previously identified in the 2008 SMPU PEIR. Construction activities associated with the proposed conveyance and O&M projects would require a combination of demolition, excavation/trenching, grading and stockpiling of soils, re-paving, and, potentially, removal of ornamental vegetation. Hardscape construction would generally take place on paved public rights-of-ways or developed sites (e.g. parking lots) and construction related run off would be discharged into the local storm drain systems. As discussed in the 2008 PEIR, individual projects would be subject to the NPDES General Construction Permit if disturbing greater than 1 acre, which requires the preparation of a stormwater pollution prevention plan (SWPPP). If under 1 acre, the project would be subject to local erosion control and grading standards for the applicable jurisdiction. Compliance with these regulations is mandatory and would minimize the potential for construction-related contaminants to enter local storm drains and receiving waters, which result in impacts that would be less than significant.

Direct Effects – Operations: Operations and maintenance activities would include continuation of the existing condition assessment program and no-dig rehabilitation of the pipeline and pump station facilities. Minimal ground disturbing activities are expected and are unlikely to contribute to water quality contamination. Facilities would be improved, such as new generators or flow meters, valves, and pumps, increasing the efficiency and usability of the pump stations. The improvements would be

pre-tested to guarantee that the new pumps, motors, monitoring and communication equipment are functional and able to meet design standards.

Once constructed, pipeline facilities may include blow-offs and other appurtenances that would result in the periodic release of potable water to surface waters. In addition, discharge of potable water associated with periodic maintenance of conveyance pipelines and pump stations may also be required. These activities would be conducted in compliance with the City's SSMP; therefore, impacts to water quality would be less than significant.

Indirect Effects: The 2017 CSMP would rehabilitate or replace deteriorating pipelines and/or increase their diameter thereby correcting existing sources of water quality degradation. The 2017 2017 CSMP would help to sustain a more desirable water quality for the Study Area. Therefore, indirect impacts to water quality would be less than significant.

CATEGORIES 2 and 4

Direct Effects – Construction: Similar to the prior discussion, projects with cross-country segments or that cross or closely parallel waterways would be subject to the NPDES General Construction Permit or local grading ordinances. Beyond the standardized regulatory requirements, these project types may require special considerations based on localized conditions including close proximity of sensitive habitats or receiving waters, shallow groundwater, and/or water crossings. Unlike hardscape environs, these projects would be constructed in or adjacent to natural and open space areas, and could result in greater disturbance areas, vegetation removal, deeper excavations, and/or construction dewatering and associated temporary containment and/or treatment. Excavated soils that are suitable would be stockpiled and reused for backfilling the trench. Unusable soil would be hauled off-site for disposal. Precipitation during construction would likely increase the amount of sedimentation in surface runoff. Vegetation removal would result in the exposure of bare ground to the precipitation and wind movement, changing the velocity and amount of surface runoff.

Trenchless construction methods as described in Chapter 3 would be employed where practical, and would require less ground surface disturbance; thereby minimizing the extent of ground disturbance and potential for degradation of water quality. In practice, these methods requires an entry and exit pit to be dug on either side of the pipeline segment subject to replacement and rehabilitation, typically 1 to 15 feet wide and 50 feet long. Depth of the pits would depend on a combination of factors including the depths of the facility being replaced and the feature(s) being avoided.

Trenchless construction activities (such as Horizontal Directional Drilling or Microtunneling) may require the use a mixture of bentonite (an inert clay) and petroleum as a lubricant for the drilling mechanism. Drilling near the ground surface or close to the bed of a surface water body introduces the potential for an unplanned "frac-out", in which the pressure of the bentonite or other drilling lubricant generates a surface rupture, causing a release of bentonite to the ground surface or water column. Although bentonite is not toxic, it can smother aquatic habitat and increase turbidity and suspended sediments in the water column.

Trenching and trenchless construction activities associated with pipeline installation could encounter the water table, thereby forming a pathway for contaminants to enter the groundwater system. Similarly, if construction is initiated in an area with direct contact with surface water, then the potential exists for contaminants to enter local receiving waters, such as Agua Hedionda or Buena Vista Creeks. In these project locations, dewatering and isolation of work areas may be required to

facilitate placement of infrastructure underground. Depending on the anticipated quality and location of discharge, groundwater extraction and discharge activities may subject to the San Diego RWQCB NPDES Order R9-2015-0013. In the absence of a comprehensive permitting strategy for these locations, construction dewatering could result in a significant water quality impact. Mitigation Measure HWQ-1 is proposed to address the range of potential water quality concerns at the individual project-level to maximize opportunities for effective BMPs, including containment, treatment, and disposal alternatives, a monitoring and reporting requirements, and water quality performance standards.

Direct Effects – Operations: Once constructed, pipeline facilities may include blow-offs and other appurtenances that would result in the periodic release of potable water to surface waters. In addition, discharge of potable water associated with periodic maintenance of conveyance pipelines and pump stations may also be required. These activities would be conducted in compliance with the City's SSMP and, therefore, impacts to water quality would be less than significant.

Indirect Effects: As stated above, the 2017 CSMP would rehabilitate or replace old and deteriorating pipelines and, in some areas, replace pipelines with larger diameter pipes. Any existing sources of contaminants and pollutants associated with deteriorating pipes would decrease as a consequence of the 2017 CSMP. Therefore, indirect impacts to water quality would be less than significant.

IMPACT 4.6-2	Would the 2017 CSMP substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

CATEGORIES 1, 2, 3, and 4

Direct Effects – Construction: Impacts associated with groundwater supplies would be similar to those previously identified in the 2008 SMPU PEIR. The construction of the proposed improvements to the City's sanitary sewer collection system would not involve the use groundwater as a potable water source. Existing municipal supplies would be used to facilitate hydrostatic testing water needs. Dewatering of the construction area(s) may be required at selected sites; however, potential impacts to groundwater supplies would be temporary and would be required to comply with the appropriate permits (NPDES No. CAG919003). Therefore, impacts to groundwater supplies would be less than significant.

Direct Effect's – Operation: The 2017 CSMP improvements do not include new wells and associated pumping facilities, which could otherwise contribute to withdraw of regional or local groundwater resources. No impact would occur.

Indirect Effects: The 2017 CSMP improvements would not result in a substantial increase in impervious surface areas and, therefore would not otherwise contribute to net reductions in groundwater recharge. No impact would occur.

IMPACT 4.6-3	Would the 2017 CSMP substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in flooding on- or off-site or substantial erosion or siltation on- or off-site? Would the 2017 CSMP place within a 100-year flood hazard area structures which would impede or redirect flood flows?

CATEGORIES 1 and 3

Direct Effects – Construction: Impacts associated with potential construction activities at waterways were addressed in the 2008 PEIR, including concerns related to substantial erosion and siltation or off-site flooding as a result of alterations to existing drainage patterns. As described in Chapter 3, these improvements would be constructed in existing roads rights-of-way and/or developed sites (e.g. existing pump stations). These facilities would avoid local waterways and areas subject to flooding during the 100-year event. Temporary, minor alterations in drainage patterns may occur during construction and would be addressed through compliance with the NPDES General Construction Permit or the local grading ordinance. As a result, these projects are unlikely to result in substantial alterations to the existing drainage patterns, including the alteration of the course of a stream or river, in a manner which would result in flooding on- or off-site or substantial erosion or siltation on- or off-site. In this context, impacts to drainage would be less than significant.

Direct Effects – Operation: Pump station improvements would entail the replacement or rehabilitation of existing pump station facilities and, therefore, are unlikely to result in substantial changes to existing drainage patterns. Once constructed, conveyance improvements would be located underground and the ground surface restored to pre-construction conditions. As a result, impacts to drainage patterns are considered less than significant.

Indirect Effects: As previously discussed, these project types are unlikely to result in substantial changes to existing drainage patterns. As a result, indirect effects, such as on- or off-site flooding or erosion would be less than significant; similar to those previously identified in the 2008 SMPU PEIR.

CATEGORIES 2 and 4

Direct Effects – Construction: Depending on the location of the project, cross-country construction may require vegetation removal and grading and excavation activities. Removal of vegetation could expose the ground to rainfall events and wind, possibly increasing the amount of sediment in surface runoff. Grading activities would also disturb the ground surface, thereby resulting in compaction of the surface, and potentially temporarily increasing the rate of runoff and chance of erosion and sediment transport. Excavated soils would be temporarily stockpiled outside the limits of the 100-year flood zone to the extent feasible.

Access road improvements would involve grading, re-surfacing, and/or vegetation trimming or removal activities. Grading activities within the City would be required to comply with the City's Grading Ordinance (Development Code Chapter 17.56) or equivalent for adjacent jurisdictions. This will require the approval of grading plans and inspections during construction.

Small segments of the new (or replaced) conveyance pipelines and access roads may require the crossing of local floodways. Table 4.6-2 lists the CIP and O&M projects that intersect 100-year flood areas. These crossings would be completed using in-channel or trenchless construction techniques

and would be installed at sufficient depth below existing and/or planned flood control facilities and placed in suitable bedding materials. Additionally, construction of these facilities would generally be restricted to the summer months based on current environmental regulations and be of limited duration.

Table 4.6-2. 2017 CSMP Facilities Intersecting Limits of the 100-Year Flood

2008 SMPU CIP No.	2017 CSMP CIP No.	2017 CSMP O&M Project
V4 - Broadway/Main/Sante Fe Upsize	Vista BO-V1	--
V8 - Monte Vista/S. Sante Fe Phase 2 Upsize	Vista BO-V2	--
V7 - Vista South Sante Fe Phase 1 Upsize	Vista BO-V3	--
V2 - Hacienda/Vista Village Upsize	Vista BO-V5	--
V5 - Eucalyptus Upsize	Vista EX-V1	--
V8 - Monte Vista/S. Sante Fe Phase 2 Upsize	Vista EX-V2	--
--	--	Buena Vista Pump Station
--	--	V/C Interceptor Access Road

Based on the multiple projects included in the 2017 CSMP that would be implemented in a 100-year flood zone, these improvements could be subjected to related flood hazards. Additionally, construction activities occurring within the channel and delineated 100-year flood zone would likely require the passage or diversion of flow through the active construction area, if present. The duration of in-channel construction would be dependent on the individual improvement or channel in question, but in general could be up to 3 to 6 months. Construction crews and equipment would require access to and from the channel over this duration. Although in-channel construction would be required to comply with conditions of the local flood district, which covers construction, operation, and maintenance, a crossing-specific diversion plan may be required to ensure the integrity and safety of construction personnel during construction. Therefore, this impact is potentially significant. Mitigation Measures HWQ-1 and HWQ-2 are proposed to mitigate impacts related to flooding and potential indirect effects during construction.

Direct Effects – Operations: Once constructed, the proposed conveyance facilities would be installed underground and construction areas would be restored to pre-construction conditions, minimizing changes to existing drainage patterns. Therefore, impacts would be less than significant.

Indirect Effects: As discussed above, these project types carry the potential to result in temporary changes to existing drainage patterns during construction. These changes could result in increased erosion and sedimentation to local water ways. As a result, these indirect effects are considered significant and Mitigation Measures HWQ-1 and HWQ are proposed to minimize potential impacts to channel flow and associated water quality.

IMPACT 4.6-4	Would the 2017 CSMP 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 otherwise degrade water quality?

CATEGORIES 1, 2, 3, and 4

Direct Effects – Construction: Refer to discussion provided under Impact 4.6-1.

Direct Effects – Operations: One of the primary functions of a sanitary sewer collection system is to protect public health and the environment through the collection, treatment, and proper disposal of wastewater. Implementation of the 2017 CSMP would further facilitate this goal through the rehabilitation of collection facilities nearing the end of the design expectancy or increase in capacity for undersized conveyance pipelines. Similarly, the upgrade of the existing pump stations and access roads would facilitate compliance with the City's adopted SSMP. Site improvements made as part of the pump station upgrades and/or access roads improvements would be subject to the City's JRMP or Carlsbad's WQIP. Therefore, the 2017 CSMP would entire desirable benefits as it relates to polluted runoff and the impact is less than significant.

Indirect Effects: Refer to discussion provided under Impact 4.6-1.

IMPACT 4.6-5	Would the 2017 CSMP expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

CATEGORIES 1 and 2

Direct Effects – Construction and Operations: Impacts associated with the risk of loss, injury or death involving flooding would be similar to those previously identified in the 2008 SMPU PEIR. The 2017 CSMP does not include any features that would be inhabited. Additionally, these project components of the 2017 CSMP would be located underground and the surface condition would be returned to pre-construction conditions following construction. Therefore, impacts would be less than significant.

Indirect Effects: Refer to discussion provided under Impact 4.6-3.

CATEGORIES 3 and 4

Direct Effects – Construction and Operations: The proposed pump station improvements and access road improvements are existing facilities located in areas subject to dam failure inundation. The improvements would be required to comply with the Flood Area Construction Regulations (Vista Development Code Section 16.48), as well as applicable provisions in the City's Grading Ordinance. Since the 2017 CSMP would maintain the current locations of these facilities and existing topographical grades would be maintained, it is unlikely these facilities would adversely affect existing flood flows or flooding elevations. Therefore, impacts would be less than significant.

Indirect Effects: Following completion of the individual improvements, the threat of flooding to these facilities would be similar to existing conditions. No impact would result.

4.6.5 Mitigation Measures

No mitigation is required for 2017 CSMP Categories 1 and 3. Implementation of the following mitigation measures would reduce significant impacts identified for 2017 CSMP Categories 2 and 4 as identified under Impacts 4.6.1 and 4.6.3. The proposed mitigation would replace the mitigation measures adopted in the 2008 PEIR for hydrology and water quality and apply to 2017 CSMP Categories 2 and 4.

HWQ-1 **Assess Project Risk, Receiving Water Vulnerability, and Implement a Water Quality Protection Strategy:** The construction contractor will assess the receiving water vulnerability and develop a SWPPP that complies with the requirements of the NPDES General Construction Permit (Order 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-006-DWQ) based on the project-specific risk level subject to the City Engineer's approval. The SWPPP shall identify specific actions and BMPs relating to the prevention of stormwater pollution from project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by the City Engineer prior to commencement of work.

The SWPPP shall be prepared by a qualified SWPPP developer with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. BMPs for soil stabilization and erosion control practices and sediment control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (e.g., inadvertent petroleum release) is required to determine adequacy of the measure.

The SWPPP shall also address other project-specific water quality threats, as required for individual improvements including but not limited to, temporary dewatering, hydrostatic testing, and other resources permits as required under the Federal Clean Water Act and State Fish and Game Code.

HWQ-2 **Prepare and Implement a Flow Diversion Plan For Construction.** The construction contractor shall develop a Flow Diversion Plan(s) for in-channel construction activities. The contractor shall incorporate measures to minimize changes to flood flow elevation(s) during construction, address accumulation of floating debris, provide measures that minimize sedimentation to surface waters, and include contingency measures in the event of substantial rainfall.

4.6.6 Cumulative Impacts

The 2017 CSMP in conjunction with other local and regional plans considered in the cumulative analysis and described in Section 4.0.2 would be developed within an urban environment with the majority of CSMP-related improvements generally avoiding direct impacts to local waterways. As provided in the program analysis, the 2017 CSMP would not substantially alter existing drainage patterns to the extent that substantial flooding, erosion, or siltation would occur within or outside the Study Area. As a result, the 2017 CSMP is not expected to contribute to cumulative drainage

impacts within the City. In this context, the contribution of individual 2017 CSMP improvements to cumulative hydrology and flooding impacts would not be considerable.

Mitigation measures prescribed in the program level analysis set forth requirements and performance standards for 2017 CSMP-related construction to minimize indirect, adverse effects to surface and groundwater quality. This mitigation combined with compliance with the City's design standards and NPDES permit requirements would minimize the potential for water quality impacts at the individual project-level to the extent that they would be rendered less than significant. Development from other projects in the area would be subject to existing state and federal regulations, including TMDL development for impairments to help identify pollutant sources and establish waste discharge requirements that would improve water quality. Operational impacts to water quality would be less than significant and insignificant when compared to other cumulative projects considered in this analysis.

Based on the project-specific impact findings, the 2017 CSMP improvements would result in less than significant or no impacts to existing groundwater supplies and existing flooding hazards and, therefore, would not be cumulatively considerable.

4.6.7 Significant and Unavoidable Impacts

Following the application of the proposed mitigation, the proposed 2017 CSMP would not result in a significant and unavoidable impact on hydrology, flooding, or water quality.

4.7 Land Use and Planning

4.7.1 Introduction

This section includes an update to the existing land use conditions described in the 2008 SMPU Program EIR (2008 PEIR), including changes to applicable planning policies, guidelines, and rules and regulations, as adopted. As described in Chapter 3, the Study Area includes the City of Vista (City) and portions of neighboring cities including Oceanside, Carlsbad, and San Marcos, and unincorporated areas in the County of San Diego (see Figure 4.7-1). Land use and planning changes since 2008 include updates to the General Plans for the cities of Vista, Carlsbad and San Marcos and County of San Diego, and adoption of the City's Climate Action Plan.

The impact analysis considers these updates in the context of the 2017 CSMP, as described in Chapter 3 and the prior environmental analysis, which is incorporated by reference from Section 4.8 of the 2008 PEIR.

4.7.2 Existing Conditions

Section 4.8 of the 2008 PEIR provides a description of existing conditions for the Study Area, including descriptions of land use. The following sections supplement the descriptions provided in the 2008 PEIR and provide updates, where applicable, based on current conditions.

Existing Land Uses

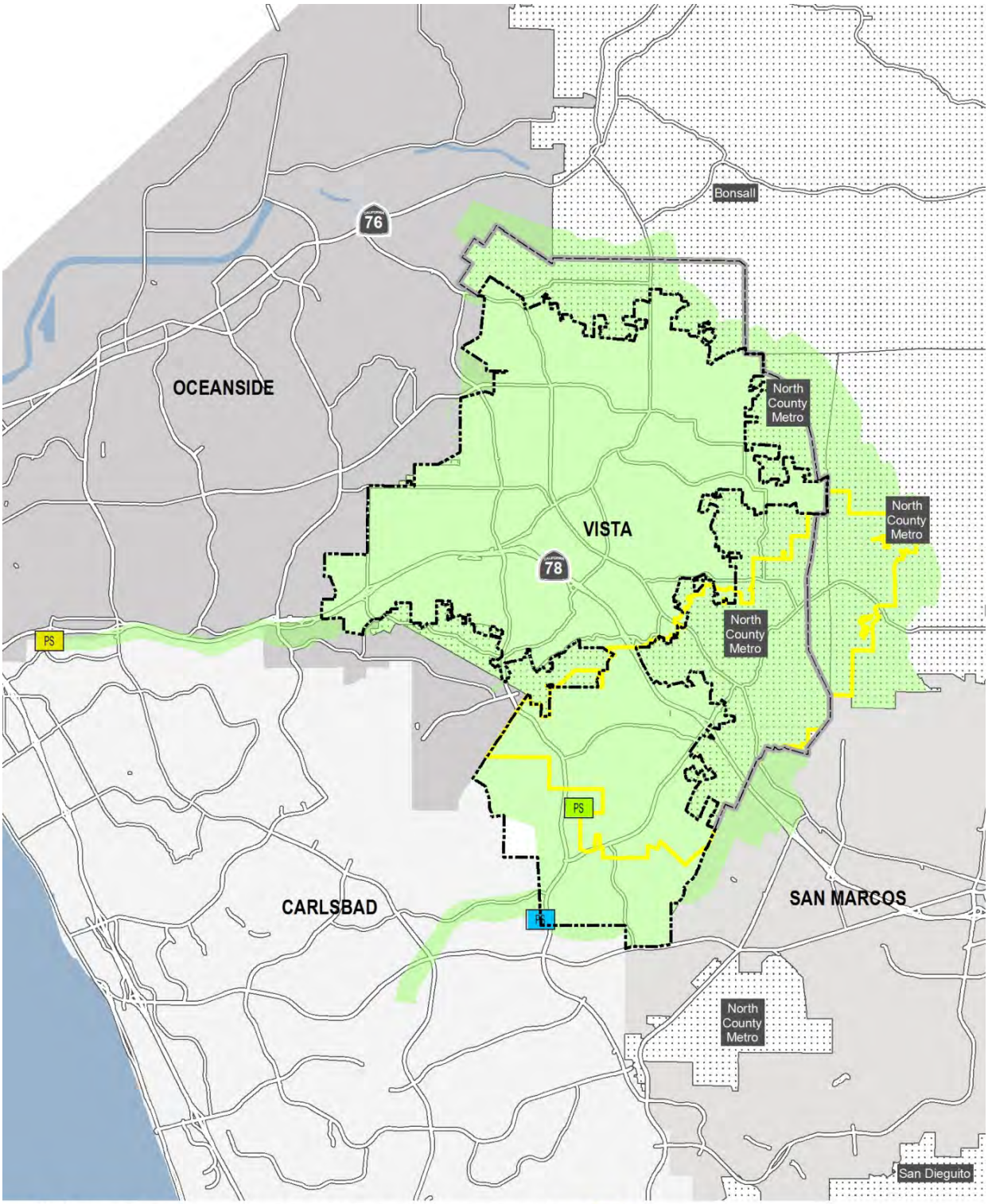
City of Vista

The City is nearly built out with approximately 6 percent of its land uses remaining undeveloped, excluding those areas set aside for open space. A large portion of the City (approximately 48 percent) is characterized by single-family residential homes on larger rural residential lots (City of Vista 2011). Commercial and office land uses make up about 6 percent of the City and are focused within a central business district along South Santa Fe Avenue and Vista Village Drive, although several smaller scale neighborhood-serving commercial and office developments occur throughout Vista. Industrial uses, including the Vista Business Park located in the southern portion of Vista, cover about 10 percent of the City. Natural features and habitats, including streams and large open space areas have been preserved and make up approximately 12 percent of the land area (City of Vista 2011).

City of Carlsbad

As explained in Chapter 3, Project Description, the Study Area includes a portion of Carlsbad and comprises two linear areas extending west of the City's service area through Carlsbad (see Figure 4.7-1). The geographically dominant land use in Carlsbad is single-family residential, with neighborhoods distributed throughout the city. Residential uses account for 27 percent of the city's land area, with the largest share attributable to single-family homes (20 percent) (City of Carlsbad 2015).

Figure 4.7-1. Jurisdictions in the Study Area



Non-residential uses, including commercial, industrial and hotels, account for 8 percent of the City's land area. Commercial and industrial uses are primarily concentrated along Palomar Airport Road. Public and quasi-public uses, including city buildings and utilities, account for 6 percent of the city's total acreage. Natural vegetation remains in and around the three lagoons and on the higher, steeper-sloped, inland portions of the city. In fact, open space uses constitute the largest proportion of land use in Carlsbad. Eight percent of Carlsbad's land area is used for parks and recreation, 4 percent for agriculture and 25 percent as other open space or natural areas. Nine percent of land is undeveloped or vacant, excluding the undeveloped areas designated as open space (City of Carlsbad 2015).

The area of Carlsbad that is also within the Study Area is comprised primarily of industrial and open space land use designations.

City of Oceanside

Oceanside occasionally contributes sewer flow to the Vista drainage basin primarily along the westerly edge of the City. Generally, Oceanside encompasses approximately 42 square miles of land and a population of nearly 175,000 residents. Oceanside is bordered by the U.S. Marine Corps Base Camp Pendleton to the north. The area of Oceanside adjacent to the City and District boundaries is composed primarily of estate, single-family detached, and medium-density residential with a small amount of commercial, open space, light industrial and private institutional land use designations (City of Oceanside 2009).

City of San Marcos

San Marcos abuts Vista along the southeastern edge of the city and sewage flows from a small area of San Marcos into the Buena Sanitation District service area. The most prevalent existing land uses in San Marcos are residential, consisting of approximately 31 percent of the area encompassing the corporate city limits and sphere of influence; vacant lands, consisting of approximately 25 percent; and, parks, recreation facilities, trails, and open space, consisting of approximately 14 percent. Agricultural uses make up approximately 10 percent. The predominately residential land use pattern in San Marcos reflects the city's history of transition from an early agricultural settlement surrounding a train depot to a community of distinct residential neighborhoods and supporting businesses, industrial employment, and commercial services. The area of San Marcos that borders the City and District has mostly residential, with some commercial, light industrial, and planned park land use designations (City of San Marcos 2012).

North County Metro Area of San Diego County

The North County Metro Subregion of unincorporated San Diego County is comprised of many non-contiguous "island" areas interspersed among the cities of Escondido, San Diego, San Marcos, Vista and Oceanside with the most easterly portion adjacent to Valley Center (see Figure 4.7-1). The North County Metro Subregion is developing rapidly and contains large areas of developable land with many basic urban services available or located nearby. The portions of the North County Metro area that are within and adjacent to the Study Area are composed largely of the village residential land use designation, which is designed to accommodate single- and multi-family housing, as well as the semi-rural land use designation, which may accommodate crops in addition to low-density residential uses. There is also a lesser amount of general commercial, limited-impact industrial, rural, and open space land use designations (San Diego County 2011).

Planned Land Uses

Section 2.3 of the 2017 CSMP provides a description of planned land use for the Study Area, including land within Vista and land within unincorporated San Diego County. As explained in the 2017 CSMP Update, although the City is approaching buildout, it is expected to add nearly 14,775 residents by 2030. The majority of this growth is anticipated to be accommodated by infill of vacant sites and redevelopment of underused sites. Figure 4.7-2 illustrates the City's 2030 Land Use Plan. In general, much of the growth expected to contribute to future sewer flows is in response to future development of vacant parcels, the provision of sewer service for areas currently served by septic systems, and areas where allowable densities have increased since the 2008 SMPU.

As explained in the 2017 CSMP, the 2011 San Diego County General Plan directs future growth towards the western portions of the unincorporated County where there is greater opportunity for connection to existing public services. Figure 4.7-3 in the 2017 CSMP illustrates the planned land uses surrounding the city in the 2017 CSMP Study Area in unincorporated San Diego County. Planned land uses are primarily low density residential developments, slightly increasing in densification in areas directly adjacent to Highway 78.

The 2017 CSMP used the information on planned growth from the Vista General Plan 2030 Update and the North County Metro Community Plan to develop and project sewer collection system flows for the Study Area. See Section 2.3 of the 2017 CSMP for further detail.

The City and District, in order to track and predict the future rate of growth and development in their service areas, maintain a database to project the amount of planned, approved, and implemented future growth. The data is assembled from SANDAG growth and population forecasts and the Vista General Plan. The City and District also consider planning forecasts from other affected jurisdictions, including Vista, Carlsbad, San Marcos, Oceanside and unincorporated North San Diego County Metro Area.

4.7.3 Regulatory Framework

Several state, regional, and local laws have been established to regulate activities concerning land use and planning. This section lists regulations that apply to these issues and the impact analysis that follow considers these regulations as they pertain to the proposed program.

This section serves to update the regulatory framework described in the 2008 PEIR. Refer to the 2008 PEIR for a description of the Oceanside General Plan, which has not been altered since 2008. Oceanside's General Plan was adopted by the City Council in 1986 and was reformatted in 2002 to improve readability. It is currently undergoing a comprehensive update, referred to as "Onward Oceanside."

There are numerous policies, programs, codes, and ordinances that regulate land use development, housing and planning. In order to simplify the volume and complexity of these regulations, this section focuses on policies that directly affect land use and planning. Policies and regulations that indirectly affect land use planning, such as traffic, water quality, and air quality regulations, are included in other sections of Chapter 4 of this SPEIR.

Figure 4.7-2. City of Vista – General Plan 2030 Update Land Use Map

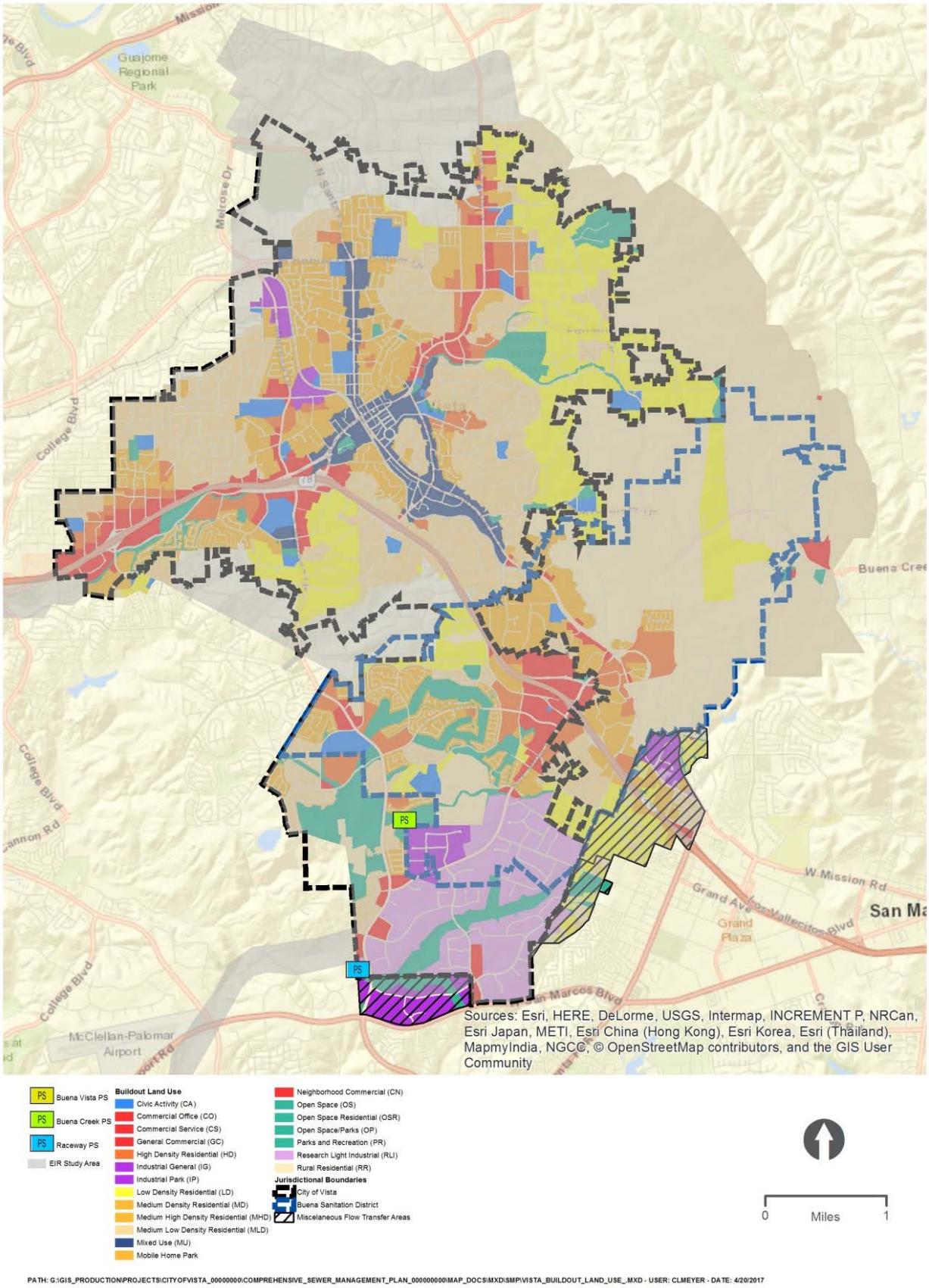
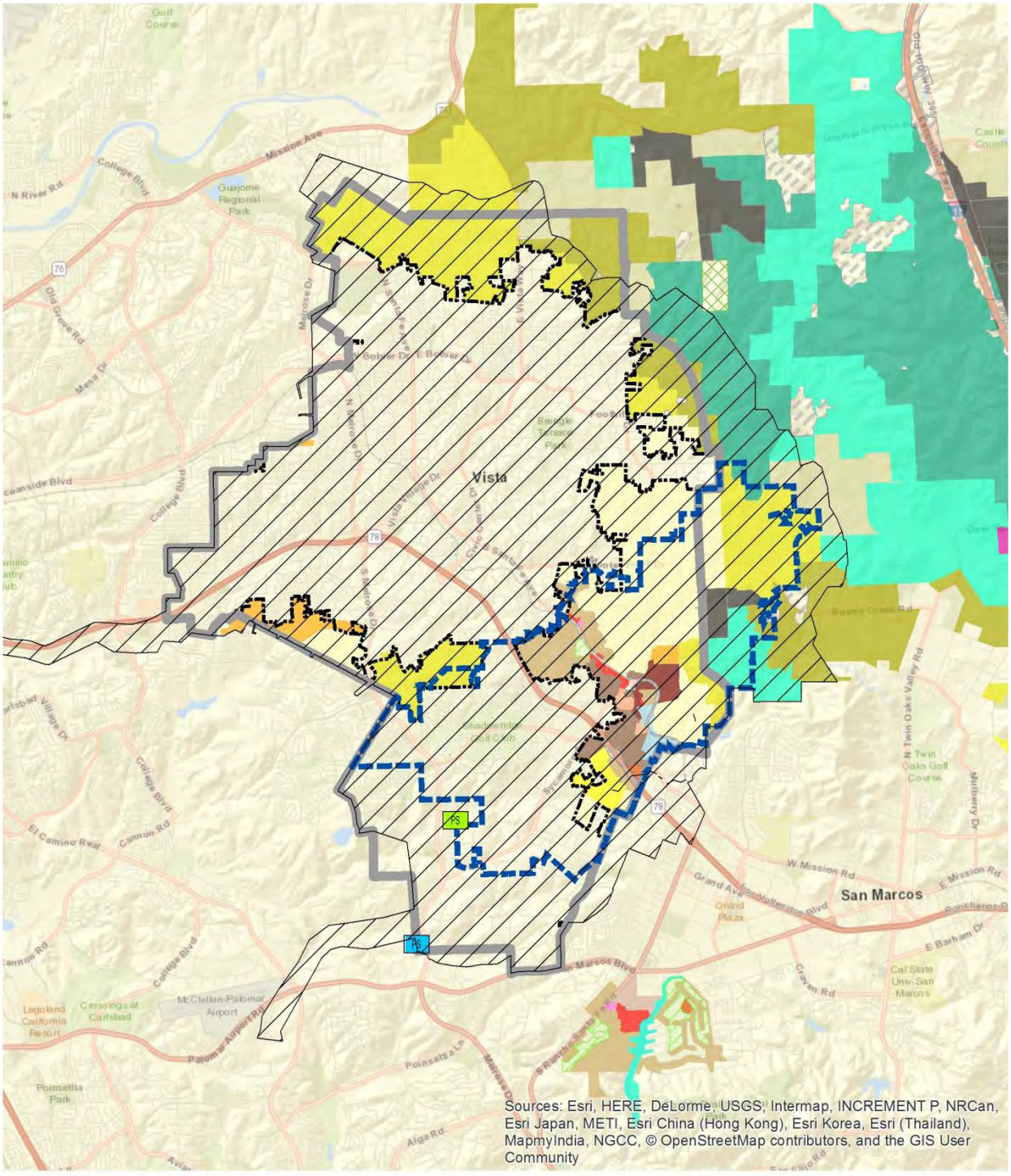


Figure 4.7-3. Planned Land Uses in Adjacent Jurisdictions



Specifically, the San Diego Air Basin Regional Air Quality Strategy plan is described in Section 4.1, Air Quality. The San Diego Multiple Habitat Conservation Program (MHCP) and the San Diego County Multiple Species Conservation Program (MSCP) are both described in Section 4.2, Biological Resources. The City's Climate Action Plan is described in Section 4.4, Greenhouse Gases and Energy. The Regional Water Quality Control Board Basin Plan for the San Diego Basin; the San Luis Rey River Watershed Urban Runoff Management Program; the Carlsbad Watershed Urban Runoff Management Program; and the Agua Hedionda Watershed Management Plan are described in Section 4.6, Hydrology and Water Quality. San Diego Association of Governments (SANDAG) programs, including San Diego Forward: The Regional Plan; the 2030 Regional Transportation Plan: Pathways for the Future; and the Congestion Management Plan are described in Section 4.9, Traffic and Transportation.

Federal

Uniform Relocation Act

The Uniform Relocation Act was passed by the U.S. Congress in 1970 to establish minimum standards for federally funded residential projects requiring the acquisition of housing or the relocation of housing. The following general provisions were taken from the U.S. Department of Housing and Development:

Provide uniform, fair, and equitable treatment of persons whose real property is acquired or who are displaced in connection with federally funded projects.

- Ensure relocation assistance is provided to displaced persons to lessen the emotional and financial impact of displacement.
- Ensure that no individual or family is displaced unless decent, safe, and sanitary (DSS) housing is available within the displaced person's financial means.
- Help improve the housing conditions of displaced persons living in substandard housing.
- Encourage and expedite acquisition by agreement and without coercion.

In the event of real property acquisition, the following provisions must be obeyed:

- Appraise property before negotiations
- Invite the property owner to accompany the appraiser during the property inspection
- Provide the owner with a written offer of just compensation and a summary of what is being acquired
- Pay for property before possession
- Reimburse expenses resulting from the transfer of title (HUD 2017).

State

California Relocation Assistance Act

The California State Legislature adopted the California Relocation Assistance Act in 1970, requiring public entities to provide procedural protections and benefits when they displace businesses, homeowners, and tenants in the process of implementing public projects for public benefit. The state

law was patterned after the federal Uniform Relocation Assistance and Real Property Acquisition Act. Policy implications of the relocation law include:

- If a public entity undertakes a rehabilitation or demolition program and, as a result, a person or business is displaced from privately owned property, the public entity shall provide assistance and benefits. (25 CCR § 6036).
- Public entities shall notify each individual tenant to be displaced as well as each owner-occupant. No person shall be required to move without at least 90 days written notice from the public entity requiring the displacements. (25 CCR § 6042).

California Coastal Act

As described in Chapter 3, Project Description, the Study Area comprises two linear areas extending west of the City service area to include the Buena Vista Pump Station (BVPS) and Buena Creek Pump Station (BCPS) and related interceptor access roads. While the Study Area extends into the coastal zone, as defined below, there are no specific 2017 CSMP projects proposed within the coastal zone.

The California Coastal Act of 1976 (Public Resources Code 30000 et. seq.) authorizes the State of California to regulate land use within the Coastal Zone, defined as the area from the Oregon border to the border of the Republic of Mexico, extending seaward to the state's outer limit of jurisdiction, including all offshore islands, and extending inland generally 1,000 yards from the mean high tide line of the sea. The basic goals of the Coastal Act are to: (a) Protect, maintain, and where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and artificial resources; (b) Assure orderly, balanced utilization and conservation of coastal zone resources taking into account the social and economic needs of the people of the state; (c) Maximize public access to and along the coast and maximize public recreational opportunities in the coastal zone consistent with sound resources conservation principles and constitutionally protected rights of private property owners; (d) Assure priority for coastal-dependent and coastal-related development over other development on the coast; and (e) Encourage state and local initiatives and cooperation in preparing procedures to implement coordinated planning and development for mutually beneficial uses, including educational uses, in the coastal zone.

The Coastal Act requires that individual jurisdictions adopt local coastal programs (LCP) to implement the Coastal Act. Carlsbad and Oceanside each have a LCP with which development in those City's Coastal Zones must comply.

Regional

San Diego County General Plan

The County General Plan was updated and adopted on August 3, 2011. The General Plan establishes future growth and development patterns for the unincorporated areas of the county, including the North County Metro community adjacent to the City. The plan focuses population growth in the western areas of the county where infrastructure and services, including sanitary sewer services, are available. The County General Plan update (San Diego County 2011) improved the previous plan by balancing the need to accommodate growth with the needs to control traffic congestion, protect environmental habitat, and ease the strain on essential services such as water supplies, sewer service, and fire protection. Higher density land use designations are concentrated

in the western areas near the incorporated cities, including Vista. Goals and policies in the San Diego County General Plan that are related to planning for and providing adequate wastewater infrastructure are identified in Table 4.7-1.

North County Metro Subregional Plan

Each planning area in the unincorporated county has a community or subregional plan, including North County Metro. Each community plan or subregional plan supplements the County General Plan by focusing on a particular planning area. Community and subregional plans contain information and policies concerning land use, housing, circulation, conservation, public facilities and services, recreation, and community character. Other issues may be addressed depending on the circumstances in a particular community. The North County Metro Community Planning Area covers areas of the unincorporated county surrounding Vista (see Table 4.7-1). As described in Table 4.7-1, the Sewer Service section of the Policy section of the North County Metro Subregional Plan has a stated policy (Policy 13) of improving sewer service within the urban area.

Table 4.7-1. Land Use Policy Consistency

Document	Policy/Goal	Proposed 2017 CSMP Consistency
San Diego County General Plan (2011)	San Diego County General Plan Land Use Element Goal LU-12 Infrastructure and Services Supporting Development. Adequate and sustainable infrastructure, public facilities, and essential services that meet community needs and are provided concurrent with growth and development.	Yes
	San Diego County General Plan Land Use Element Policy LU-12.3 Infrastructure and Services Compatibility. Provide public facilities and services that are sensitive to the environment with characteristics of the unincorporated communities. Encourage the collocation of infrastructure facilities, where appropriate.	Yes
	San Diego County General Plan Land Use Element Policy LU-12.4 Planning for Compatibility. Plan and site infrastructure for public utilities and public facilities in a manner compatible with community character, minimize visual and environmental impacts, and whenever feasible, locate any facilities and supporting infrastructure outside preserve areas.	Yes
	San Diego County General Plan Land Use Element Goal LU-14: Adequate wastewater disposal that addresses potential hazards to human health and the environment.	Yes
	San Diego County General Plan Land Use Element Policy LU-14.1 Wastewater Facility Plans. Coordinate with wastewater agencies and districts during the preparation or update of wastewater facility master plans and/or capital improvement plans to provide adequate capacity and assure consistency with the County's land use plans.	Yes
	San Diego County General Plan Land Use Element Policy LU-14.3 Wastewater Treatment Facilities. Require wastewater treatment facilities serving more than one private property owner to be operated and maintained by a public agency. Coordinate the planning and design of such facilities with the appropriate agency to be consistent with applicable sewer master plans	Yes
	San Diego County General Plan Land Use Element Policy LU-14.4 Sewer Facilities. Prohibit sewer facilities that would induce unplanned growth. Require sewer systems to be planned, developed, and sized to serve the land use pattern and densities depicted on the Land Use Map.	Yes

Table 4.7-1. Land Use Policy Consistency

Document	Policy/Goal	Proposed 2017 CSMP Consistency
	San Diego County General Plan Land Use Element Policy COS-4.4 Groundwater Contamination. Require land uses with a high potential to contaminate groundwater to take appropriate measures to protect water supply sources. Potential sources of groundwater contamination include, but are not limited to, landfills, fertilizer, pesticide, manure storage and sales, petroleum product storage tanks, manufacturing plants, and on-site wastewater treatment systems.	Yes
North County Metro Subregional Plan of the San Diego County General Plan	Policy 13, Sewer Service: Improve sewer service within the urban area. Wherever feasible, provide sewer service inside the County Water Authority boundary and to existing developed areas outside the County Water Authority boundary, where high rates of septic tank failures have been experienced.	Yes
Vista General Plan (2011)	Vista GP 2030 Update Public Safety, Facilities, and Services Element Goal PSFS 9: Continue to provide sanitary sewer facilities to accommodate the safe, efficient, and cost-effective disposal of waste, commensurate with existing and proposed development.	Yes
	Vista GP 2030 Update Public Safety, Facilities, and Services Element Policy PSFS 9.1: Periodically update the Sewer Master Plan when necessitated by changes in District conditions and/or State regulations.	Yes
	Vista GP 2030 Update Public Safety, Facilities, and Services Element Policy PSFS 9.2: Utilize updated management tools to efficiently manage O&M and capital improvement projects, and more equitably assess rates and connection fees.	Yes
	Vista GP 2030 Update Public Safety, Facilities, and Services Element Policy PSFS 9.3: Implement prioritized projects for inclusion in the CIP within the recommended time frames to address all known deficiencies and minimize sanitary sewer overflows.	Yes
	Vista GP 2030 Update Public Safety, Facilities, and Services Element Goal PSFS 16: Provide and maintain public infrastructure and utilities that support existing and planned land uses and development in a cost-effective and responsible manner.	Yes
	Vista GP 2030 Update Public Safety, Facilities, and Services Element Policy PSFS 16.1: Determine public infrastructure and utility needs to implement the General Plan and prioritize them through the City's CIP.	Yes
	Vista GP 2030 Update Public Safety, Facilities, and Services Element Policy PSFS 16.2: Evaluate existing public infrastructure and utilities to determine deficiencies and identify ongoing maintenance and/or replacement needs, and prioritize and implement them through the CIP and O&M investment.	Yes
	Vista GP 2030 Update Public Safety, Facilities, and Services Element Policy PSFS 16.3: Ensure that capital improvements and public facilities and services required to accommodate planned future growth are provided without unduly adding to the burden borne by taxpayers and that the improvements built will directly benefit the new users.	Yes
	Vista GP 2030 Update Land Use and Community Identity Element Policy LUCI 1.6: Encourage undergrounding of utilities, and discourage new electric and communications lines to be added to existing aboveground utility systems.	Yes

Table 4.7-1. Land Use Policy Consistency

Document	Policy/Goal	Proposed 2017 CSMP Consistency
	Vista GP 2030 Update Resources Conservation and Sustainability Element Policy RCS 4.4: Promote practices and programs that integrate the various disciplines of water resources management, recognizing and fostering the interconnectedness of water quality (including surface, stormwater, and waste water management), water supply, and natural resources.	Yes
Carlsbad General Plan (2015)	Carlsbad General Plan Land Use & Community Design Element Chapter 2.6 Growth Management: The Growth Management Plan requires adequate public facilities be provided concurrent with new growth.	Yes
	Carlsbad General Plan Land Use & Community Design Element Policy 2-P.58: Require compliance with Growth Management Plan public facility performance standards, as specified in the Citywide Facilities and Improvements Plan, to ensure that adequate public facilities are provided prior to or concurrent with development.	Yes
	Carlsbad General Plan Land Use & Community Design Element Policy 2-P.59: Coordinate future development with the Capital Improvement Program (CIP) to ensure adequate funding for needed facilities and services; and prioritize the funding of CIP projects to provide facilities and services to infill areas, in transit priority or planned smart growth areas, and areas where existing deficiencies exist.	Yes
	Carlsbad General Plan Land Use & Community Design Element Policy 2-P.60: Maintain the Growth Management monitoring and annual reporting program, which: a) monitors the number of existing and future dwelling units compared to the growth management dwelling unit limitations, and b) measures the city's public service requirements against the rate of physical growth. Use this information to establish priorities for capital improvement funding, and when considering development requests.	Yes
San Marcos General Plan (2012)	San Marcos General Plan Land Use and Community Design Element Goal LU-14 Wastewater: Ensure an adequate wastewater system for existing and future development.	Yes
	San Marcos General Plan Land Use and Community Design Element Policy LU-14.1: Work closely with local service providers to ensure an adequate wastewater system for existing and future development is in place.	Yes
Oceanside General Plan	Oceanside General Plan Community Facilities Element Community Facilities Management Objective: Ensure that adequate public facilities and services are provided to serve existing and future residential, commercial, and industrial development throughout Oceanside.	Yes
	Oceanside General Plan Community Facilities Element Policy 0.2: A thorough review of all social, economic, and environmental factors shall be conducted before major extensions of facilities or services are made by the city in order to evaluate land use impacts.	Yes
	Oceanside General Plan Community Facilities Element Policy 0.6: The city shall strive to establish control over the quality, distribution, and rate of growth of the city in order to, among other things, protect the open space of the city; prevent further significant deterioration in the local air quality; and ensure adequate water and sanitary sewage systems.	Yes

Table 4.7-1. Land Use Policy Consistency

Document	Policy/Goal	Proposed 2017 CSMP Consistency
	Oceanside General Plan Community Facilities Element Water and Sewer Systems Objective: Provide an adequate sanitary sewage collection and treatment system to serve Oceanside's existing and future growth requirements in an efficient and cost effective manner. Encourage a more compact and sequenced development pattern through the phased extension of sewer systems while meeting all Federal and State mandated programs.	Yes
	Oceanside General Plan Community Facilities Element Policy 5.3: Within the San Luis Rey Wastewater Service Area, the city shall construct adequate sewer mains and lift stations as required to meet existing needs and future growth requirements and will increase the capacity of the Oceanside outfall line by constructing a parallel line to serve the future needs of the community.	Yes

Sources: San Diego County 2011; City of Vista 2011; City of Carlsbad 2015; City of San Marcos 2012; and City of Oceanside 1989.

Local

City of Vista General Plan 2030 Update

Vista's General Plan (GP 2030 Update) (2011) includes an organized set of goals and policies that guide both the distribution of land uses and the way land is developed (or redeveloped) and used. The GP 2030 Update is comprised of the following elements: Land Use and Community Identity; Circulation; Resource Conservation and Sustainability; Healthy Vista; Noise; Public Safety, Facilities, and Services; and Housing. The Public Safety, Facilities, and Services Element seeks to ensure that public facilities and services support the existing and planned future development within Vista, and are provided in an efficient, cost-effective, and environmentally sustainable manner. Additional goals and policies in the GP 2030 Update that are related to planning for and providing adequate wastewater infrastructure are identified in Table 4.7-1.

Carlsbad General Plan

The Carlsbad City Council approved an update to its General Plan on September 22, 2015 with a year 2035 time horizon. The General Plan serves several purposes, including to outline a vision for Carlsbad's long-term physical and economic development and community enhancement; to allow city departments, other public agencies, and private developers to design projects that will enhance the character of the community, preserve and enhance important environmental resources, and minimize hazards; and to provide the basis for establishing priorities for implementing plans and programs, such as the Zoning Ordinance, the Capital Improvements Program, facilities plans, and specific and area plans. Goals and policies in the Carlsbad General Plan that are related to planning for and providing adequate public facilities, including wastewater infrastructure, are identified in Table 4.7-1.

The Growth Management Plan requires adequate public facilities be provided concurrent with new growth. To ensure this, the Growth Management Plan identifies performance standards for 11 public facilities – city administration, library, wastewater treatment, parks, drainage, circulation, fire, open space, schools, sewer collection, and water distribution. Compliance with the Growth Management Plan occurs through the Citywide Facilities and Improvements Plan, which identifies the performance

standards for each of the 11 public facilities, divides the city into 25 local facility management zones (LFMZ) and identifies the city's ultimate public facility needs. Individual development projects must comply with the Citywide Facilities and Improvement Plan and the applicable local facilities management plan, which ensures that adequate public facilities are provided concurrent with development. The northern linear portion of the Study Area that extends into Carlsbad is overlaid by LMFZs 1, 2, and 25 while the southern linear portion of the Study Area that extends into Carlsbad overlaps with LMFZs 5 and 16.

San Marcos General Plan

In the fall of 2009, San Marcos began a comprehensive update of its General Plan. The updated General Plan was adopted by the City Council in February 2012. The San Marcos General Plan is organized into the following elements: Land Use and Community Design; Mobility; Conservation and Open Space; Parks, Recreation, and Community Health; Safety; Noise; and Housing. In the Land Use and Community Design Element, San Marcos recognizes the importance of continuing to coordinate with Vallecitos Water District (VWD), and appropriate wastewater providers, to ensure adequate wastewater treatment is available for San Marcos through the development review process. In addition, the city states it will continue to work with VWD and all the local water districts to plan and maintain wastewater collection facilities serving residents and business owners. Goals and policies in the San Marcos General Plan that are related to planning for and providing adequate wastewater infrastructure are identified in Table 4.7-1.

4.7.4 Project Impacts

Methodology

Planned land use information was obtained from applicable planning documents within the affected jurisdictions. The proposed 2017 CSMP Update was evaluated relative to these applicable planning documents. Additional land use related topics are evaluated in the following sections: Air Quality, Section 4.1; Greenhouse Gases Section 4.4; Noise and Vibration, Section 4.8; and Traffic, Transportation and Circulation, Section 4.9, and cross-referenced, as appropriate.

This section provides an analysis of the components proposed in the 2017 CSMP and project categories as described in Section 4.0.1.

Thresholds of Significance

The City adopted threshold criteria, which are derived from Appendix G of the CEQA Guidelines. Impacts to land use, planning, and zoning would be significant if the proposed action would:

1. Physically divide an established community;
2. Conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or
3. Conflict with any applicable habitat conservation plan or natural community conservation plan.

Impact Analysis

IMPACT 4.7-1	Would the 2017 CSMP Update physically divide an established community?

CATEGORIES 1 and 2

Direct Effects – Construction: A project could result in impacts related to the physical division of an established community if new or widened roads would traverse an established community; if new development would block existing connections within an established community; if redevelopment would disrupt the physical arrangement of an existing community by shifting existing development from one land use to another; if the project would impact existing street and sidewalk patterns; or if the project would preclude development of surrounding parcels.

Future conveyance improvement projects (Hardscape and Cross-Country Environs) identified in the 2017 CSMP may result in temporary disturbances to established communities during construction activities. The proposed capacity- and condition-related pipeline projects would be installed mostly in existing rights-of-way and would be completely re-buried following construction. Nearly all of the 14 proposed capacity-related CIP projects would involve the replacement and upsizing of existing sewer collection pipelines in the same location. Ninety percent of the approximately 85,045 linear feet of proposed condition-related projects would involve rehabilitation of existing pipelines, while 10 percent would involve replacing existing or constructing new pipelines. None of these improvements would physically divide an established community.

For capacity- and condition-related conveyance improvements located beyond existing rights-of-way or in instances where the relocation of an existing sewer easement would improve functionality or long-term maintenance, the City's ROW agents would coordinate with affected property owners and tenants to minimize disruptions to existing uses. In the event new easements are required, the City would comply with policies in the federal Uniform Relocation Act and state Relocation Assistance Act. Temporary displacements, such as existing fences, would be replaced and, if required, temporarily stabilized until completion of construction activities. Therefore, the proposed 2017 CSMP would not physically divide an established community and the impact would be less than significant.

Direct Effects – Operations: Once constructed, the conveyance improvements would be buried underground. These features would result in the division of an established community and no impact would result.

Indirect Effects: Implementation of the 2017 CSMP would not induce growth or result in secondary effects that could result in division of an established community. No impact would result.

CATEGORIES 3 AND 4

Direct Effects – Construction and Operations: The City's proposed O&M Program would consist primarily of the continuation of existing routine maintenance, inspection, and emergency repair activities. The O&M Program also includes the proposed upgrade of the City's existing pump stations facilities and existing access road. The 2017 CSMP would occur within existing easements. No impact would result.

Indirect Effects: Implementation of the 2017 CSMP would not induce growth or result in secondary effects that could result in division of an established community. No impact would result.

IMPACT 4.7-2	Would the 2017 CSMP Update conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect?

CATEGORIES 1 and 2

Direct Effects – Construction: Land uses adjacent to the proposed 2107 CSMP improvements include commercial, manufacturing and warehousing, single-family and multi-family residential, schools, and mixed uses. Construction would occur primarily within or adjacent to established roadway ROWs and could temporarily disrupt local circulation and neighborhood access. Potential impacts from construction-related activities could include traffic delays, public safety hazards, stormwater runoff, dust, habitat degradation, and increased noise; these are addressed in more detail in other sections of Chapter 4.

The proposed project would be consistent with the general plans of Vista, Carlsbad, Oceanside, San Marcos, and the County of San Diego in that those plans do not preclude construction of new or updated sewer facilities. Furthermore, the proposed project would reduce the potential environmental harm that could be caused by the failure of old and degraded sewer infrastructure. For these reasons, project construction would not conflict with plans and polices of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating for adverse environmental effects. This impact is considered less than significant.

Direct Effects – Operations: The improvements contemplated in the 2017 CSMP are based on current population and development projections and corresponding estimates of future capacity demands based on local planning documents (e.g. GP 2030 Update). Specifically, the 2017 CSMP is based on the latest regional growth forecasts developed by SANDAG, consistent with the adopted land uses defined in the City's GP 2030 Update, and current land use plans of other adjacent jurisdictions within the City and District service area boundaries (e.g. North San Diego County Metro Areas).

The 2017 CSMP would not conflict with the goals and policies of the Public Safety, Facilities, and Services Element as contained in the GP 2030 Update. As provided in Table 4.7-1, the 2017 CSMP was designed to provide the City with orderly plans for the development of sewer utilities to meet the present and future needs of the City and District. Therefore, the improvements contemplated in the 2017 CSMP are consistent with the stated goal (Goal PSFS 9) of providing sanitary sewer facilities to accommodate the safe, efficient, and cost-effective disposal of waste, commensurate with existing and proposed development. The 2017 CSMP would also be consistent with stated policies in the Land Use and Community Identity Element (Policy LUCI 1.6) and the Resource Conservation and Sustainability Element (Policy RCS 4.4), such as undergrounding utility lines and protecting water resources.

The components of the 2017 CSMP would serve future growth in western portions of unincorporated San Diego County that are included within the City and District service areas (see Figure 4.7-1). In this way, the 2017 CSMP would not conflict with the San Diego County General Plan. The proposed 2017 CSMP would be consistent with the stated County General Plan goals (Goal LU-12 and LU-14)

of providing adequate public infrastructure and wastewater disposal, as identified in Table 4.7-1. The 2017 CSMP would also improve sewer service within the urban area and, therefore, not conflict with the North County Metro Subregional Plan (Policy 13).

Likewise, the 2017 CSMP would facilitate the provision of adequate sewer services in local jurisdictions outside the City, but within the Study Area. Therefore, it would not conflict with the General Plans of Carlsbad (Policy 2-P.58), Oceanside (the Water and Sewer Systems Objective), or San Marcos (Goal LU-14).

For other development approval by local jurisdictions outside the City, but within the City's service areas, project design engineers are required to coordinate the design with the respective jurisdiction, thereby conforming to policy LU-14.1 of the San Diego County General Plan and policy LU-14.1 of the San Marcos General Plan, as described in Table 4.7-1. These future improvement projects might also require discretionary permits if new easements are required, or if permit authorizations are required by one or more agencies, such as the RWQCB. Future permit approvals or new easements would be determined and evaluated once project-specific designs are available.

As explained in Section 4.4, Greenhouse Gases and Energy, the City adopted a Climate Action Plan (CAP) in 2013 to reduce greenhouse gas (GHG) emissions in accordance with Assembly Bill 32 and Senate Bill 97. The City adopted interim guidance for evaluating discretionary projects under CEQA in compliance with AB 32 in April 2016, in light of recently-decided court cases. The proposed project was analyzed against the numerical "Bright Line" significance threshold adopted in the 2016 interim guidance to determine individual projects' contribution towards achieving the goals of AB 32. As described in Section 4.4, the proposed project was determined to have a less-than-significant impact associated with generation of GHG emissions. Therefore, the 2017 CSMP Update would not conflict with the interim guidance or CAP.

The 2017 CSMP Update would be consistent with San Diego Forward: The Regional Plan prepared by SANDAG. Future sewer flows in the 2017 CSMP were derived from Vista's Zoning Map and SANDAG's San Diego Forward: The Regional Plan. As such, future conveyance projects identified in the 2017 CSMP are designed to serve the projected service populations of the City and District consistent with SANDAG projections.

From a standpoint of local land use designations and zoning, all future projects identified in the 2017 CSMP Update are either compatible with local land use regulations or would be compatible, subject to use permit limitations. The majority of project components are linear, underground pipelines that would not be visible once construction is complete. Construction of the improvements would not preclude the existing land uses on surrounding properties, nor future development of surrounding parcels for urban (re)development. The improvements contemplated under the 2017 CSMP would generally not conflict with the density, scale, and character of the existing land uses currently within the Study Area. Therefore, land use and zoning impacts would be less than significant.

Indirect Effects: The 2017 CSMP would not encourage new, unplanned development within the Study Area or a change in existing or planned land use. For this reason, indirect effects attributable to the 2017 CSMP would be less than significant.

CATEGORIES 3 and 4

Direct Effects – Construction: Pump station upgrades and improvements to existing access roads would be confined to their existing site locations and easements. In this context, the discussion provided for the proposed conveyance improvements would also apply to O&M Program improvements as contemplated under the 2017 CSMP. The exception would occur when improvements or upgrades occur within the Coastal Zone.

Beyond the potential requirements identified for the conveyance improvements, 2017 CSMP-related improvements located in the Coastal Zone may be subject to approval from the California Coastal Commission. Depending on the improvements identified and the resources affected within the Coastal Zone, the improvement(s) may require a Coastal Development Permit (CDP) or a coastal consistency determination. All projects in the coastal zone would require review for consistency with the applicable Local Coastal Program (LCP) and California Coastal Act prior to issuance of a CDP or a coastal consistency determination. The future review and approval by the Coastal Commission of individual infrastructure projects, particularly those located outside of public rights-of-way or property and in sensitive areas, would maintain consistency with the LCP. In this context, no conflicts with the LCP would occur and the impact would be less than significant.

Direct Effects – Operations: Ongoing maintenance and inspection activities would support jurisdictions' goals of providing adequate, safe wastewater service. In this context, the discussion provided for the proposed conveyance improvements would also apply to O&M Program improvements as contemplated under the 2017 CSMP. Therefore, the 2017 CSMP would not conflict with any applicable plan, policy or regulation adopted for the purpose of mitigating or avoiding an environmental effect. No impact would occur.

Indirect Effects: The 2017 CSMP O&M Program would not encourage new, unplanned development within the Study Area or a change in existing or planned land use. For this reason, indirect effects attributable to the 2017 CSMP would be less than significant.

IMPACT 4.7-3	Would the 2017 CSMP Update conflict with a habitat conservation plan or natural community conservation plan?

CATEGORIES 1, 2, 3, and 4

Direct Effects – Construction and Operations: As explained in Section 4.2 Biological Resources, portions of the Study Area are within the San Diego MHCP and the San Diego County MSCP. The City's Subarea Plan for the San Diego MHCP has not been adopted yet. Neither has the County of San Diego North County MSCP, which covers portions of the Study Area. The 2017 CSMP would not conflict with either of these plans and would not preclude either of these plans from being finalized and adopted.

The BVPS is located across Jefferson Street from one of the Carlsbad Habitat Management Plan preserve areas, the Buena Vista Lagoon Wildlife Ecological Preserve (City of Carlsbad 2017). As such, the BVPS is not within the boundaries of the Buena Vista Lagoon Wildlife Ecological Preserve and the proposed project would not conflict with the Carlsbad Habitat Management Plan. Section 4.2 provides additional discussion.

The 2017 CMSP Update's consistency with other applicable regional plans and policies are analyzed in the respective sections of this SPEIR. The project's consistency with the Regional Air Quality Strategy is discussed in Section 4.1, Air Quality. The project's consistency with the San

Diego MHCP and the San Diego County MSCP is discussed under Impact 4.7-3 below, and in Section 4.2, Biological Resources.

Indirect Effects: The 2017 CSMP O&M Program would not encourage new, unplanned development within the Study Area or a change in existing or planned land use, which could otherwise conflict with the San Diego MHCP and the San Diego County MSCP. For this reason, indirect effects attributable to the 2017 CSMP would be less than significant.

4.7.5 Mitigation Measures

Implementation of the 2017 CSMP Update would not result in significant impacts associated with land use and planning. As a result, mitigation measures are not required.

4.7.6 Cumulative Impacts

Facilities and improvements proposed in the 2017 CSMP are based on growth and population projections derived from existing and planned land uses as if they were developed to the highest zoning of the property. The source of the land use categories used to develop sewage flow generation was based on the City's Zoning Map and SANDAG's San Diego Forward: The Regional Plan. The location, capacity, and phasing of projects in the 2017 CSMP conform to existing and planned land uses. The 2017 CSMP does not affect land use in the various jurisdictions, but is designed to provide the necessary level of wastewater infrastructure in support of planned land uses.

Adoption of the 2017 CSMP, when considered together with the general plans and other planning documents for the affected jurisdictions, including Vista, Carlsbad, San Marcos, Oceanside and unincorporated North San Diego County Metro Area, as well as the latest regional growth forecasts developed by SANDAG and San Diego Forward: The Regional Plan, would not result in cumulatively significant land use impacts. Rather, the 2017 CSMP would support the jurisdictions' planned land uses and development in conformance with adopted plans. Therefore, the 2017 CSMP would not contribute to a cumulative impact related to conflicts with plans and polices adopted for the purposes of avoiding or minimizing a significant environmental effect.

4.7.7 Significant and Unavoidable Impacts

Implementation of the proposed 2017 CSMP would not result in any significant and unavoidable impacts to land use and planning.

planned land uses. The 2017 CSMP does not affect land use in the various jurisdictions, but is designed to provide the necessary level of wastewater infrastructure in support of planned land uses.

Adoption of the 2017 CSMP, when considered together with the general plans and other planning documents for the affected jurisdictions, including Vista, Carlsbad, San Marcos, Oceanside and unincorporated North San Diego County Metro Area, as well as the latest regional growth forecasts developed by SANDAG and San Diego Forward: The Regional Plan, would not result in cumulatively significant land use impacts. Rather, the 2017 CSMP would support the jurisdictions' planned land uses and development in conformance with adopted plans. Therefore, the 2017 CSMP would not contribute to a cumulative impact related to conflicts with plans and polices adopted for the purposes of avoiding or minimizing a significant environmental effect.

4.7.7 Significant and Unavoidable Impacts

Implementation of the proposed 2017 CSMP would not result in any significant and unavoidable impacts to land use and planning.

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4.8 Noise and Vibration

4.8.1 Introduction

This section provides an update to the existing noise conditions described in the 2008 PEIR for the Study Area, including changes to applicable rules and regulations, as adopted. These changes include updates to the San Diego County General Plan and Noise Ordinance and updates to the cities of Vista and Carlsbad General Plans, respectively. The impact analysis considers these updates in the context of the 2017 CSMP, as described in Chapter 3; the prior environmental analysis, which is incorporated by reference from Section 4.9 of the 2008 SMPU PEIR; and current noise mitigation practices.

4.8.2 Existing Conditions

Section 4.9 of the 2008 PEIR provides a description of existing conditions for the Study Area, including descriptions of noise characteristics and existing noise conditions in Vista and surrounding jurisdictions. The following sections supplement the descriptions provided in the 2008 SMPU PEIR and provide updates, where applicable, based on current conditions. Unless otherwise noted, information in this section is derived from the City of Vista (City) 2030 General Plan Update PEIR (GP 2030 Update).

Characteristics of Noise and Vibration

Section 4.9.2 of the 2008 PEIR provides an explanation of typical noise definitions, including ambient noise level, decibels (dB), A-weighted sound level (dBA), community noise equivalent level (CNEL), and time-average sound level (e. g. 1 hour sound level equivalent [L_{eq}] and 24-hour sound level equivalent [L_{dn}][1]). Table 4.9-2 of the 2008 SMPU PEIR shows typical sound levels measured in the environment, such as light traffic, vacuum cleaners, and lawn mowers. The following information from the GP 2030 Update supplements the information presented in the 2008 PEIR.

Fundamentals of Noise

When evaluating noise increases in the environment, the following relationships to quantifiable increases are used as a basis for assessing impacts:

- A change of 1 dBA is difficult to perceive in the outside environment.
- In the outside environment, a 3 dBA change is considered noticeable and is typically used as the significance threshold for increases in noise levels.
- An increase of 5 dBA is readily noticeable to most individuals and is the typical noise level that would cause a change in community reaction.
- A 10 dBA increase is perceived as a doubling of loudness.

[1] A 10 dbA penalty is applied for noise generated during nighttime hours (7 p.m. to 7 a.m.).

Because of the logarithmic scale of the decibel unit, sound levels cannot be added or subtracted arithmetically. If a sound's physical intensity is doubled, the sound level increases by 3 dB, regardless of the initial sound level. For example, the 60 dB sound of one activity in addition to another 60 dB sound equals 63 dB; 80 dB added to 80 dB equals 83 dB. As mentioned earlier, however, a perception of doubling of sound level requires about a 10-decibel increase.

Noise levels generated by a point source decrease at a rate of approximately 6 dBA per doubling of distance from the source. Therefore, if a particular point source generates average noise levels of 89 dBA at 50 feet, the equivalent sound level (Leq) would be 83 dBA at 100 feet, 77 dBA at 200 feet, 71 dBA at 400 feet, and so on. This calculated reduction in noise level is based on the loss of energy resulting from the geometric spreading of the sound wave as it leaves the source and travels outward.

For example, to characterize noise levels associated with construction activities, it is important to understand the highest level of noise generated by the construction equipment. The Federal Highway Administration (FHWA) has produced estimates of the L_{max} of typical construction equipment. Table 4.8-1 provides the noise levels for typical construction equipment at distances of 50 and 200 feet.

Table 4.8-1. Typical Construction Equipment Noise Levels

Equipment Type	L_{max} at 50 feet (dBA)	L_{max} at 200 feet (dBA)
Tractors	86	70
Graders	87	71
Trucks	76	60
Water Truck	76	60
Haul Truck	78	62
Concrete Trucks	81	65
Flatbed Trucks	76	60
Generator	83	67
Air Compressor	80	64
Paving Machine	79	63
Roller	82	66

Source: FHWA Roadway Construction Noise Model 2006.

Fundamentals of Environmental Vibration

Ground-borne vibration is a small, rapidly fluctuating motion transmitted through the ground. The strength of ground-borne vibration diminishes (or attenuates) rapidly over distance. Some soil types transmit vibration quite efficiently; other types (primarily sandy soils) do not. There are several basic measurement units commonly used to describe the intensity of ground vibration. The descriptors used by the Federal Transit Administration (FTA) are peak particle velocity (PPV), in units of inches per second, and the velocity decibel (VdB).

The velocity parameter (instead of acceleration or displacement) best correlates with human perception of vibration. Thus, the response of humans, buildings, and sensitive equipment to vibration is described in this section in terms of the root-mean square (RMS) velocity level in VdB units relative to 1 micro-inch per second. As a point of reference, the average person can just barely perceive vibration velocity levels below 70 VdB (typically in the vertical direction).

A comparison of common ground-borne vibration levels is shown in Table 4.8-2. Typical background vibration levels are between 50 and 60 VdB, whereas the levels for minor cosmetic damage to fragile buildings or blasting are generally 100 VdB.

Table 4.8-2. Common Ground-borne Vibration Levels

Velocity Level[a]	Human/Structural Response	Typical Sources (50 feet from source)
100	Threshold, minor cosmetic damage to fragile buildings	Blasting from construction projects
Between 90 and 100	Difficulty with tasks such as reading a video display terminal (VDT) screen	Bulldozers and other heavy-tracked construction equipment
Between 80 and 90	Residential annoyance, infrequent events (e.g. commuter rail)	Commuter rail, upper range Rapid transit, upper range
Between 70 and 80	Residential annoyance, frequent events (e.g. rapid transit)	Commuter rail, typical Bus or truck over bump Rapid transit, typical
Between 60 and 70	Limit for vibration-sensitive equipment Approximate threshold for human perception of vibration	Bus or truck, typical
Between 50 and 60	--	Typical background vibration

Source: GP 2030 Update Figure 4.9-1

[a] RMS Vibration Velocity Level in VdB relative to 10^{-6} inches/second.

Noise Sensitive Land Uses

Noise sensitive land uses are generally defined as places of frequent human use. Examples of sensitive land uses within the Study Area include residential land uses, restaurants with outside eating areas, hotels, churches, and parks or recreation areas.

Vibration Sensitive Land Uses

Vibration sensitive land uses include buildings where vibration would interfere with operations within the building, such as vibration-sensitive research and manufacturing, hospitals with vibration-sensitive equipment, and university research operations. Residential uses and other buildings where people sleep, such as hotels and hospitals, are also sensitive to excessive levels of regular or intermittent vibration.

Existing Noise Conditions

The following section updates the description of existing noise conditions in the 2008 PEIR with current information from the GP 2030 Update. Please see the 2008 PEIR for a description of existing noise conditions in other local jurisdictions within the Study Area (i.e., Carlsbad, Oceanside, San Marcos and unincorporated San Diego County). Land in surrounding jurisdictions that borders the

Study Area, similar to land within Vista, is mostly built-out and existing noise conditions are largely unchanged since 2008.

City of Vista

TRANSPORTATION NOISE SOURCES

Roadways

Roadway traffic is the most prevalent source of noise within Vista. A heavily used transportation corridor, SR-78, traverses the City from east to west, and is the loudest single source of noise in the City because of the high traffic volumes. Major arterials within the City, such as Melrose Drive and East and West Vista Way, contribute to the noise environment, as well.

Aviation

The nearest airport to the Study Area is the McClellan-Palomar Airport, which is a public-use facility, located 2 miles southwest of Vista in Carlsbad. The Oceanside Municipal Airport is also in the vicinity, located approximately 6.5 miles to the west. The City boundaries lie outside of all current 60 dBA CNEL airport noise contours as designated by the Airport Land Use Compatibility Plans (ALUCPs) of the McClellan-Palomar and Oceanside Municipal Airports. However, a small portion of the Study Area near Raceway Pump Station (RPS) within Carlsbad is inside the 60 dBA CNEL airport noise contour of McClellan-Palomar Airport.

Railways

The North County Transit District's (NCTD) SPRINTER, which provides commuter rail service between Escondido and Oceanside and uses the existing rail alignment within Vista, is source of transit noise in the Study Area. The SPRINTER rail line has two stations in the City (and Study Area):

- Vista Transit Center at 240 N. Santa Fe Avenue
- Civic Center Drive at 810 Phillips Street.

The SPRINTER operates approximately 35 daily weekday trips and 25 daily weekend trips in each direction between Oceanside and Escondido. The existing rail alignment is also used for freight service a few times each week, which also contributes to background noise levels.

STATIONARY NOISE SOURCES

Other stationary noise sources are those typical of an urbanized area, such as schools, recreational activities, and industrial land uses. Vista does not have large-scale industrial or manufacturing land uses, but it does have light industrial and small-scale manufacturing uses, particularly within the Vista Business Park in the southern portion of the City.

Typical noise for an urbanized environment includes ringing bells, public address systems, and children playing associated with schools; and Heating, Ventilation, and Air Conditioning (HVAC) systems and onsite loading and unloading of trucks and equipment associated with industrial land uses.

EXISTING NOISE LEVELS

An ambient noise survey was conducted for the GP 2030 Update on July 28 and 29, 2009 to quantify the noise environment at representative source locations. A total of 16 measurements were taken, including 14 short-term (15 minutes) and two long-term (24-hours). LT-1 is located along the existing SPRINTER line just south of Los Angeles Drive. At LT-1, noise levels ranged from approximately 38 dBA hourly energy-averaged L_{eq} at 2 a.m. to a high of approximately 62 dBA hourly L_{eq} at 9 a.m. LT-2 is located at 1057 Sycamore Avenue at a residential property that had been converted to a commercial establishment. The hourly L_{eq} at LT-2 ranged from approximately 56.5 dBA at 11 p.m. to approximately 69 dBA at 6 a.m. In the GP 2030 Update PEIR, Table 4.9-2 summarizes the short-term ambient noise level data at the time of the measurements and Figure 4.9-3 illustrates the noise contours under existing conditions. The loudest ambient noise levels were registered near busy roadways, while residential areas and parks were relatively quiet.

4.8.3 Regulatory Framework

This section updates the description of the federal, state, and local regulatory framework adopted for the purposes of managing noise as identified in the 2008 PEIR.

A description of the following regulations, which have not substantively changed since 2008, can be found in the 2008 PEIR: the Oceanside General Plan Noise Element, the Oceanside Noise Control Ordinance (Oceanside Code of Ordinances Chapter 38, Article III), and the San Marcos Noise Ordinance (San Marcos Municipal Code Chapter 10.24).

Federal

Federal Aviation Administration Standards (Title 14)

Enforced by the Federal Aviation Administration (FAA), Title 14, Part 150 prescribes the procedures, standards and methodology governing the development, submission, and review of airport noise exposure maps and airport noise compatibility programs, including the process for evaluating and approving or disapproving those programs. Title 14 also identifies those land uses that are normally compatible with various levels of exposure to noise by individuals. It provides technical assistance to airport operators, in conjunction with other local, state, and federal authorities, to prepare and execute appropriate noise compatibility planning and implementation programs. The FAA establishes a 65 dBA CNEL as the noise standard associated with aircraft noise. This standard is also generally applied to railroad noise.

Federal Noise Control Act of 1972 (Code of Federal Regulations, Title 40)

Section 204 of the Federal Noise Control Act of 1972 regulates noise emissions from the operation of construction equipment and facilities. It establishes noise emissions standards for construction equipment and other categories of equipment, and provides standards for the testing, inspection, and monitoring of such equipment. The act also gives states and municipalities primary responsibility for noise control.

Environmental Protection Agency, Levels of Environmental Noise

In 1974, the EPA published a document titled Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. This document

provides information for state and local governments to use in developing their own ambient noise standards. EPA determined that an L_{dn} of 55 dBA protects the public from indoor and outdoor activity interference. The published levels are recommendations only and are not binding.

U.S. Department of Housing and Urban Development (CFR, Title 24)

CFR Title 24, Section 51 sets environmental noise criteria and standards for projects receiving HUD funding assistance, subsidy, or insurance. It establishes an interior noise level of 45 dBA L_{dn}.

Federal Highway Administration Standards (CFR, Title 23)

Title 23, Part 772 sets procedures for the abatement of highway traffic noise and construction noise. The purpose of this regulation is to provide procedures for noise studies and noise abatement measures to help protect the public health and welfare, to supply noise abatement criteria, and to establish requirements for information to be given to local officials for use in the planning and design of highways. All highway projects which are developed in conformance with this regulation shall be deemed to be in conformance with the DOT FHWA Noise Standards. Part 772 establishes noise abatement criteria for federally funded highway projects for various land use types (e.g., 67 dBA hourly L_{eq} for exterior residential land uses, 52 dBA hourly L_{eq} for interior residential land uses, etc.).

Federal Transit Administration and Federal Railroad Administration Standards

Although the FTA standards are intended for federally funded mass transit projects, the impact assessment procedures and criteria included in the FTA Transit Noise and Vibration Impact Assessment Manual (FTA-VA-90-1003-06, May 2006) are routinely used for projects proposed by local jurisdictions. FTA and the Federal Railroad Administration have published guidelines for assessing the impacts of ground-borne vibration associated with rail projects, which have been applied by other jurisdictions to other types of projects. The FTA measure of the threshold of architectural damage for conventional sensitive structures is 0.2 inches/second PPV.

State

California Division of Aeronautics Noise Standards (Title 21, Subchapter 6 - Noise Standards)

These standards establish a procedure for defining a noise impact area around airports. They also establish 65 dBA CNEL as the level acceptable to a reasonable person residing in the vicinity of an airport.

California Noise Control Act of 1973 (Health and Safety Code, Division 28)

The California Noise Control Act declared that excessive noise is a serious hazard to public health and welfare. It also established the California Office of Noise Control, which is responsible for setting standards for noise exposure in cooperation with local governments or the state Legislature.

Regional

Land Use Compatibility Plans, McClellan-Palomar and Oceanside Municipal Airports

ALUCPs are plans that guide property owners and local jurisdictions in determining what types of proposed new land uses are appropriate around airports. They are intended to protect the safety of people, property and aircraft on the ground and in the air in the vicinity of the airport. ALUCPs are

based on a defined area around an airport known as the Airport Influence Area (AIA). ALUCPs include policies that address noise compatibility issues associated with airports and their respective AIA. The ALUCP for the McClellan-Palomar Airport was adopted by the San Diego County Airport Land Use Commission on January 25, 2010 and amended on March 4, 2010 and December 1, 2011. The Oceanside Municipal Airport ALUCP was adopted by the San Diego County Airport Land Use Commission on January 25, 2010 and amended December 20, 2010.

Local

City of Vista General Plan

The Noise Element of the GP 2030 Update seeks to protect people who live, work, and recreate in the City from unwarranted and excessive levels of noise, with special emphasis on protecting residential neighborhoods from intrusive noise.

The noise/land use compatibility matrix in the GP 2030 Update is intended to be used at the general plan or zoning levels of approval, as well as for CEQA analysis. The matrix acts as criteria for assessing the compatibility of proposed land uses in corresponding land use designations. An L_{dn} of 60 or lower is considered "normally acceptable" for single-family residential land uses, while an L_{dn} in the range of 55 to 70 is considered "conditionally acceptable." For Civic Activity land uses, including municipal storage yards, an L_{dn} in the range of 55 to 70 is considered acceptable.

The GP 2030 Update Noise Element updated the maximum desirable interior noise levels for various types of uses and developments. The maximum interior CNEL for residential uses is 45 dBA. For commercial land use, a maximum CNEL of 50 dBA is specified, and for retail the maximum is 60 dBA. For manufacturing, an interior noise level of 65 dBA CNEL is specified (City of Vista 2011).

City of Vista Noise Ordinance

The Vista Noise Control Ordinance (Vista Municipal Code Chapter 8.32) was most recently amended in March 2014 through Ordinance Number 2014-7 (City of Vista 2017). However, the quantitative noise level limits, as described in the 2008 PEIR, have remain unchanged.

City of Carlsbad General Plan

The Carlsbad General Plan Noise Element establishes goals, policies, and standards to minimize noise generation and mitigated impacts, especially on noise-sensitive uses such as homes and schools. The city's Noise Element presents a community noise exposure matrix, which establishes criteria for the city to use in evaluating land use compatibility based on noise emanating from all sources. The noise exposure matrix establishes standards to help the city determine the appropriateness of locating specific uses in noise-prone environments. An L_{dn} of 50 to 60 dB is considered normally acceptable for single-family residential and an L_{dn} of 50 to 65 is considered normally acceptable for multi-family residential land uses. Land uses such as schools, libraries, churches, hospitals, nursing homes, playgrounds, and parks have a normally acceptable L_{dn} range of 50 to 70 dB.

The Noise Element also provides standards for noise from non-transportation noise sources, such as industrial facilities and equipment yards. These standards apply to the noise sources themselves, as measured at the edge of the property line. The hourly L_{eq} threshold is 55 dB between 7 a.m. and 10 p.m. and 45 dB at night. The maximum L_{eq} threshold is 75 dB between 7 a.m. and 10 p.m. and 65 dB at night. (City of Carlsbad 2015).

City of Carlsbad Noise Ordinance

Chapter 8.48, Noise, of the Carlsbad Municipal Code was recently updated in 2013. Under this code, construction activities are prohibited after 6 p.m. and before 7 a.m. weekdays, before 8 a.m. on Saturdays, and at any time on Sundays and federal holidays.

City of San Marcos General Plan

The San Marcos General Plan Noise Element aims to protect residents' quality of life by reducing excessive or harmful noise. This includes reducing the community's overall ambient noise by minimizing point source (e.g., construction activities), transportation related (e.g., vehicle, railroad, aircraft traffic) and stationary (e.g., air conditioner units, loading docks) noise sources.

San Marcos relies on the San Diego County Noise standards to regulate land use noise compatibility, transportation noise, and non-transportation noise. Land use compatibility noise exposure limits are generally established as 60 dBA CNEL/L_{dn} for exterior spaces at a majority of land use designations throughout the City; and 65 dBA CNEL/L_{dn} for multiple-family housing and housing in mixed-use contexts. Construction activities are limited to Monday through Friday between 7 a.m. and 6 p.m., or on Saturdays between 8 a.m. and 5 p.m. (City of San Marcos 2012).

County of San Diego General Plan

The County of San Diego General Plan was updated in 2011. However, the limitations on noise levels established in the updated Noise Element of the San Diego County General Plan are substantively the same as they were in 2008 (San Diego County 2011) and are described in the 2008 SMPU PEIR.

County of San Diego Noise Control Ordinance

The 2008 PEIR describes the County Noise Ordinance, which was most recently amended by Ordinance Number 9962, effective January 9, 2009. According to the current County Noise Ordinance, the average sound level for construction equipment is to be measured over an 8-hour period, as opposed to a 1-hour average sound level. Otherwise, the description of the County Noise Ordinance in the 2008 PEIR is current.

4.8.4 Project Impacts

Methodology

The impact analysis is a program-level analysis that evaluates a reasonably foreseeable level of noise generation from implementation of the 2017 CSMP. Construction noise is evaluated using typical construction equipment noise levels from the FHWA 2006 Roadway Construction Noise Model. Ground-borne vibration and noise levels are evaluated using information in the 2006 FTA Transit Noise and Vibration Impact Assessment. Assumptions about construction methods and equipment needs are based on the information in Chapter 3. The analysis considers each of the project categories identified in Section 4.0.1.

Thresholds of Significance

Based on the State CEQA Guidelines Appendix G and existing City policies and regulations, a project would result in a significant noise and vibration impact if it would:

- Expose people to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- Expose people to or generate excessive ground-borne vibration or ground-borne noise levels;
- For a project located within 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, expose people residing or working in the Study Area to excessive noise levels; or
- For a project within the vicinity of a private airstrip, expose people residing or working in the Study Area to excessive noise levels.

Impact Analysis

IMPACT 4.8-1	Would the 2017 CSMP temporarily or permanently expose people to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

CATEGORIES 1, 2, 3, and 4

Direct Effects – Construction: As described in Chapter 3, Project Description, construction activities would involve the use of heavy-duty machinery for surface preparation, trench excavation and shoring, surface restoration, and for trenchless construction methods. The main pieces of equipment that may be used at any one time during construction include: track-mounted excavators, backhoes, graders, a crane, scrapers, a boring machine, compactors, end and bottom dump trucks, front-end loaders, water trucks, a paver and a roller, flat-bed delivery trucks, forklifts, concrete trucks, and compressors/jack hammers. The transport of workers and equipment to the construction areas would also incrementally increase noise levels along roadways leading to and from the construction work areas.

For the purposes of this analysis, the most intense construction activities are assumed to occur during periods when multiple CIP projects are undergoing concurrent construction, which is expected to occur in 2018 through 2019. During peak excavation and earthwork activities, each individual capacity- and/or conditional-related improvement project contemplated under the 2017 CSMP could involve up to two construction crews working simultaneously.

Construction activities associated with the proposed conveyance projects, pump station rehabilitations, and access road improvements identified in the 2017 CSMP would result in a temporary increase in ambient noise levels above existing conditions. Sound levels of individual pieces of typical construction equipment range from 70 dBA to 90 dBA at 50 feet from the source, as shown in Table 4.8-1. When multiple pieces of equipment are operating simultaneously, the combined noise levels are higher. For example, the noise from one tractor at a distance of 50 feet (86 dB) added to another tractor would equal approximately 89 dB. These noise levels would attenuate with increasing distance from the source.

Therefore, construction-related noise associated with the 2017 CSMP has the potential to exceed the thresholds established in the City Noise Control Ordinance and the County of San Diego Noise Control Ordinance of 75 dBA for more than 8 hours during any 24 hour period; measured at the property line where the noise source is located or on any occupied property where the noise is being received. Construction and rehabilitation efforts for the project components would result in noise impacts to various types of sensitive receptors near the project sites including residences, businesses, schools, and libraries. The associated construction activities would increase the ambient noise levels above existing conditions, which could be perceived as annoying to sensitive receptors in the area. Therefore, short-term noise impacts associated with construction of the 2017 CSMP improvements could potentially be significant. Mitigation Measure NV-1 is proposed to minimize construction noise, where construction activities occur within 200 feet of noise sensitive land uses.

Construction traffic associated with the 2017 CSMP is anticipated to be minimal. As explained in Chapter 3, assuming an average crew size of 15, including inspectors, construction activities could generate up to 60 round-trip personal automobile trips per day. Compared to the tens of thousands of vehicle trips that occur on major arterial, collector, and local roadways within the City every day, the noise generated by construction traffic associated with the 2017 CSMP would not be discernable.

Construction-related noise impacts to wildlife are discussed in Section 4.2, Biological Resources.

Direct Effects – Operations: Potential noise-generating activities associated with operation of the projects identified in the 2017 CSMP include City and District vehicles driving to and from sites to continue to perform routine inspections and maintenance. After the two access roads projects are constructed, (i.e., grading, re-surfacing, and vegetation trimming or removal), ongoing maintenance activities along these roads would likely be quieter than existing levels. Once the conveyance projects are constructed, operational noise levels would be minimal, as the flow of wastewater through underground pipes does not generate audible noise.

Once the pump station improvements are constructed, operational noise levels would be similar to existing conditions. The proposed pump station improvements would not involve capacity upgrades that would permanently increase noise levels above existing conditions. Any new noise-generating mechanical equipment (e.g. exhaust fans, pumps, scrubbers) would be similar to existing equipment. Emergency repair work may generate excessive noise from construction equipment; however, noise generated from such activities would be temporary and sporadic, and not substantially different than existing emergency repair activities.

Thus, operation of the 2017 CSMP project components is unlikely to generate noise in excess of established thresholds or expose sensitive receptors to excessive noise. The continuation of routine inspections and maintenance would occur largely in easements and rights-of-way away from sensitive receptors. Therefore, long-term operational noise impacts are anticipated to be less than significant.

Indirect Effects: The proposed capacity- and condition-related pipeline projects, O&M program operations, and access road improvements would not result in future growth that could otherwise indirectly increase noise levels.

IMPACT 4.8-2	Would the 2017 CSMP expose people to or generate excessive ground-borne vibration or ground-borne noise levels?

CATEGORIES 1, 2, 3, and 4

Direct Effects – Construction: Excessive ground-borne vibration and noise can result from numerous construction activities, such as trenching, uses of vibratory rollers, or blasting. Conventional construction techniques, such as earth movement by trucks, also have the potential to generate ground-borne vibration and noise. Typically, vibration levels equal to or greater than 0.2 PPV, or 94 VdB, are considered significant because that is the level at which building damage may occur to fragile non-engineered timber and masonry structures (FTA 2006).

The need for blasting is determined by excavation depth, location, equipment used, and desired rate of production. Based on the required excavation depths, construction-related excavations for the proposed conveyance projects should be achievable using standard heavy excavators in good-working order with experienced operators and that the underlying geology would not necessitate blasting. Therefore, sensitive receptors would not be exposed to excessive ground-borne vibration or noise levels from blasting.

Furthermore, most construction-related vibration levels would be below the 0.2 PPV significance threshold at a distance of 25 feet. For example, at a distance of 25 feet, large bulldozers typically generate vibration levels of 0.089 PPV, loaded trucks generate vibration levels of 0.076 PPV, and jackhammers generate vibration levels of 0.035 PPV (FTA 2006). Vibratory rollers can generate ground-borne vibration at 0.210 at a distance of 25 feet (FTA 2006); however, the vibration level would dissipate to below the threshold by adding only 1 additional foot of separation from the source. Therefore, impacts associated with construction equipment would be less than significant given how quickly ground-borne vibration and noise dissipate from the source.

Direct Effects – Operations: Operation of the projects identified in the 2017 CSMP, including maintenance and operation of facilities, conveyance pipeline operations, pump station operations, and emergency repairs would not generate noticeable levels of ground-borne vibration. Wastewater flowing through underground pipes, mechanical equipment operating at pump stations, and light-duty trucks driving on maintenance roads are not typical sources of ground-borne vibration or noise. Therefore, long-term operational ground-borne vibration and noise impacts would be less than significant.

Indirect Effects: The proposed capacity- and condition-related pipeline projects, O&M program operations, and access road improvements would not result in secondary activities that could otherwise indirectly generate ground-borne vibration and noise; therefore, no impact would occur.

IMPACT 4.8-3	Would the 2017 CSMP result in the exposure of people residing or working in the Study Area to excessive noise levels from public or private aircraft?

CATEGORIES 1, 2, 3, and 4

Direct Effects – Construction: The 60 dBA noise contour for McClellan-Palomar Airport overlaps a small corner of the 2017 CSMP Study Area near the RPS (San Diego County Airport Land Use Commission 2010). However, construction improvements at the facility and related access and

conveyance improvements would be short-term and construction workers would be required to comply with OSHA safety standards, including hearing protection. No temporary structures would be occupied by people within the airport influence area that is regularly subjected to aircraft noise. Therefore, impacts would be less than significant.

Direct Effects Operations: There are no private airstrips within 2 miles of the Study Area. As discussed in Section 4.5, Hazards and Hazardous Materials, a limited number of conveyance, pump station, and access road improvements would be located within 2 miles of and within the Airport Influence Area of the McClellan-Palomar Airport. However, once constructed, there would be no permanent occupancy of the project facilities, and no significant impacts would occur.

Indirect Effects: Implementation of the 2017 CSMP would not result in secondary effects, such as changes in existing or planned land use that would otherwise result in the exposure of noise sensitive land uses to excessive noise from public or private airport operations. No impact would result.

4.8.5 Mitigation Measures

Implementation of the following mitigation measures would reduce significant noise impacts associated with 2017 CSMP Categories 1, 2, 3, and 4 as identified under Impact 4.8-1, to a less than significant level. The proposed mitigation would replace the project design features and construction measures identified in the 2008 PEIR for noise and vibration and apply to 2017 CSMP Categories 1, 2, 3, and 4.

NV-1 **Construction Noise Reduction Measures.** The Construction Contractor shall demonstrate to the satisfaction of the City Engineer that the following noise control techniques are implemented during the clearing, demolition, grading and construction phases of projects identified in the 2017 CSMP within 200 feet of noise-sensitive land uses.

- Heavy equipment repair and contractor staging shall be conducted at sites as far as practical from nearby residences.
- Construction equipment, including vehicles, generators and compressors, shall be maintained in proper operating condition and shall be equipped with manufacturers' standard noise control devices or better (e.g., mufflers, acoustical lagging, and/or engine enclosures).
- Temporary sound barriers (or curtains), stockpiles of excavated materials, or other effective shielding or enclosure techniques shall be used where construction noise would exceed 90 dBA within less than 50 feet from a noise sensitive receptor.
- Construction work, including on-site equipment maintenance and repair, shall be limited to the hours specified in the noise ordinance of the affected jurisdiction(s).
- Electrical power shall be supplied from commercial power supply, wherever feasible, in order to avoid or minimize the use of engine-driven generators.
- Electrically powered equipment shall be used instead of pneumatic or internal-combustion powered equipment, where feasible.
- Unnecessary idling of internal combustion engines (i.e., in excess of 5 minutes) shall be prohibited.

- Operating equipment shall be designed to comply with all applicable local, state, and federal noise regulations.
- Construction site and access road speed limits shall be established and enforced during the construction period.
- If lighted traffic control devices are to be located within 500 feet of residences, the devices shall be powered by batteries, solar power, or similar sources, and not by an internal combustion engine.
- The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only.
- No project-related public address or music system shall be audible at any adjacent sensitive receptor.
- The construction contractors shall provide advance notice, between 2 and 4 weeks prior to construction, by mail to all residents or property owners within 200 feet of the alignment. The announcement shall state specifically where and when construction will occur in the area. If construction delays of more than 7 days occur, an additional notice shall be made, either in person or by mail. The City shall publish a notice of impending construction on the City website, stating when and where construction will occur.
- The construction contractors shall identify and provide a public liaison person before and during construction to respond to concerns of neighboring residents about noise and other construction disturbance. The construction contractors shall also establish a program for receiving questions or complaints during construction and develop procedures for responding to callers. Procedures for reaching the public liaison officer via telephone or in person shall be included in notices distributed to the public in accordance with the information above.

4.8.6 Cumulative Impacts

Noise is localized in nature and decreases exponentially with distance. Specifically, noise levels decrease by 6 dB for every doubling of distance. Therefore, the area for the cumulative impact analysis for noise would be only those projects within the immediate vicinity of the projects contemplated by the 2017 CSMP.

Potential construction noise from cumulative projects in the Study Area would not likely occur simultaneously in the same location as the 2017 CSMP project components because 2017 CSMP projects would take place throughout the City and District over multiple years. In addition, construction noise for cumulative projects would be subject to the noise standards within the affected jurisdiction. After applying Mitigation Measure NV-1, construction noise impacts under the 2017 CSMP would be reduced to a less than significant level. Cumulative projects would be required to implement similar mitigation measures to reduce impacts. Thus, the 2017 CSMP, in combination with other cumulative projects, would not result in a cumulatively significant increase in temporary ambient noise levels.

Potential operational noise impacts from cumulative projects would be localized in nature, and all cumulative projects would be required to comply with the noise standards for the jurisdiction in which they are located. As explained in Section 4.8.4, Impact 4.8-1, ongoing operational activities associated with the 2017 CSMP would involve maintenance and inspection of existing and future

sewer infrastructure, and occasional emergency repairs. Transportation noise increases from maintenance and inspection trips are expected to be minimal. Emergency work would be sporadic and geographically dispersed. Noise from operation of the pump stations would not be greater than existing conditions, and noise from operation of the pipelines would be negligible. The 2017 CSMP, in combination with other cumulative projects, would not result in a cumulatively significant increase in permanent ambient noise levels.

Ground-borne vibration is also a localized phenomenon and decreases progressively as the distance from the source increases. Thus, the area for the cumulative impact analysis for ground-borne vibration would also only be those projects within the immediate vicinity of the 2017 CSMP projects. It is unlikely that cumulative construction projects would occur at the same time in the same location. As discussed in Section 4.8.4, Issue 2, implementation of the 2017 CSMP would not result in significant ground-borne vibration impacts. The 2017 CSMP, in combination with cumulative projects, would not result in a cumulatively significant impact from ground-borne vibration and noise.

4.8.7 Significant and Unavoidable Impacts

Noise and vibration effects associated with the proposed 2017 CSMP improvement categories would be minimized or avoided by the proposed mitigation and would not result in significant and unavoidable impacts.

4.9 Transportation and Circulation

4.9.1 Introduction

This section provides an update to the existing conditions described in 2008 for transportation and traffic in the Study Area, including changes to applicable state and local rules and regulations. The environmental setting and analysis provided in Section 4.10.2 Traffic and Transportation, of the 2008 PEIR is incorporated by reference.

4.9.2 Existing Conditions

This section supplements the descriptions provided in the 2008 PEIR and provides updated information, where applicable, to reflect existing conditions.

Roadways

Section 4.10.2 of the 2008 PEIR identifies the major roadways traversing the Study Area. This information is supplemented by traffic data obtained from Vista's General Plan Update and Program EIR (2011), which indicates that 11 roadway segments operate at level of service (LOS) E or F and considered deficient:

- Vista Village Drive, between N. Santa Fe Avenue and Civic Center Drive (LOS E).
- E. Vista Way, between Civic Center Drive and Vale Terrace Drive (LOS F).
- E. Vista Way, between Vale Terrace Drive and Bobier Drive (LOS F).
- E. Vista Way, north of Bobier Drive (LOS F).
- W. Vista Way, between Emerald Drive and N. Melrose Drive (LOS F).
- Civic Center Drive, between SR-78 Westbound Ramps and S. Santa Fe Avenue (LOS F).
- Civic Center Drive, between S. Santa Fe Avenue and E. Vista Way (LOS F).
- Emerald Drive, between Olive Avenue and West Drive (LOS F).
- Emerald Drive, between West Drive and Hacienda Drive (LOS F).
- La Mirada Drive, between Sycamore Avenue and Poinsettia Avenue (LOS F).
- Monte Vista Drive, between S. Santa Fe Avenue and Cypress Road (LOS E).

In addition to roadway segments above, four additional roadway segments are forecast to operate at LOS E or F with implementation of the Vista and Carlsbad General Plan Updates, respectively:

- Civic Center Drive between SR-78 Westbound Ramps to S. Santa Fe Avenue (LOS E)
- Civic Center Drive between S. Santa Fe Avenue and E. Vista Way (LOS E)
- Emerald Drive between Olive Avenue and West Drive (LOS E)

- Palomar Airport Road between El Camino Real and Melrose Drive (LOS F)

In addition to the roadway segments above, the following two intersections currently operate at deficient LOS (LOS E or F) during either the a.m. or p.m. peak period, or both peak periods:

- N. Melrose Drive/W. Vista Way (a.m. LOS E; p.m. LOS E).
- S. Melrose Drive/Shadowridge Drive (a.m. LOS E).

At build out of the General Plan (2030), an additional 12 intersections are forecasted to operate at LOS E or F (City of Vista 2011):

- Emerald Drive/Olive Avenue (a.m. LOS E)
- Emerald Drive/Hacienda Drive (p.m. LOS E)
- N. Melrose Drive/Olive Avenue (a.m. LOS E; p.m. LOS F)
- Civic Center Drive/Eucalyptus Avenue (p.m. LOS F).
- Civic Center Drive/S. Santa Fe Avenue (p.m. LOS F)
- Mar Vista Drive/Thibido Road (a.m. LOS F; p.m. LOS F)
- S. Melrose Drive/Sunset Drive (a.m. LOS F)
- S. Melrose Drive/Live Oak–Longhorn Road (a.m. LOS E)
- S. Melrose Drive/Sycamore Avenue (a.m. LOS F)
- S. Melrose Drive/Park Center Drive (a.m. LOS F)
- Sycamore Avenue/Hibiscus Avenue (p.m. LOS E)
- Sycamore Avenue/La Mirada Drive (p.m. LOS E)

Transit Service

Multiple forms of public transit exist within the Study Area. The North County Transit District (NCTD) operates fixed-route bus and light rail (LRT) service within the Study Area. Local LRT service, also known as the “SPRINTER,” extends 22-miles from the City of Oceanside east to the City of Escondido. The Sprinter serves 15 stations along the State Route (SR) 78 corridor, four of which are located in the Study Area: Melrose Drive, Vista Transit Center, Civic Center-Vista Station, and Buena Creek.

NCTD operates fixed route bus service, also known as the “BREEZE,” with the following routes intersecting the Study Area: 302, 303, 305, 306, 315, 318, 323,325, 332, 334, and 335. In addition, NCTD and City of Vista provide dial-a-ride services within their jurisdiction.

Non-Motorized Transportation

Non-motorized forms of transportation consist of dedicated bikeways and sidewalks for pedestrian movements. Bicycle facilities fall into one of three categories: dedicated bicycle paths (Class I), dedicated bicycle lanes (Class II), and bicycle routes (Class III). Pedestrian facilities within the Study Area are comprised of sidewalks and pedestrian paths and trails; sidewalks are commonly located in most residential and commercial areas.

The cities of Vista, Carlsbad, Oceanside, San Marcos, and unincorporated County pockets contain Class II and III bikeway facilities. Table 4.9-1 identifies the bicycle facilities within Study Area.

Table 4.9-1. Existing Bike Facilities in Study Area

Jurisdiction	Street	Class I	Class II	Class III
Vista	W. Vista Way		X	
Vista	Vista Village Drive		X	
Vista	E. Vista Way		X	
Vista	Bobier Drive		X	
Vista	Olive Avenue		X	
Vista	N. Santa Fe Avenue		X	
Vista	S. Santa Fe Avenue		X	
Vista	Melrose Drive		X	
Vista	Sycamore Avenue		X	
Vista	Shadowridge Drive		X	
Vista	Longhorn Drive		X	
Vista	Live Oak Road		X	
Vista	Lupine Hills Drive		X	
Oceanside	Oceanside Boulevard		X	
Oceanside	Rancho Del Oro Drive		X	
Oceanside	North Santa Fe Avenue		X	
Oceanside	College Boulevard		X	
Oceanside	Lake Boulevard		X	
Oceanside	El Camino Real		X	
Oceanside	Coast Highway		X	
Oceanside	Vista Way		X	
San Marcos	Rancho Santa Fe Road	X[a]	X	
San Marcos	Mission Road		X[a]	
San Marcos	Sprinter Corridor	X		
San Marcos	S. Santa Fe Avenue		X[a]	
Carlsbad	Palomar Airport Road		X	
Carlsbad	Faraday Avenue		X	
Carlsbad	Melrose Drive		X	

Source: City of Vista General Plan Update (2011); City of Oceanside Bicycle Proposed Program (2008), City of San Marcos General Plan (2012), City of Carlsbad General Plan Update (2015)

[a] Planned facility.

4.9.3 Regulatory Framework

This section updates the description of the federal, state, and local regulatory framework that are applicable to the Project.

Federal

No federal regulations relating to transportation are relevant to the proposed 2017 CSMP.

State

California Department of Transportation

The California Department of Transportation (Caltrans) has jurisdiction over State-designated routes including SR 78. Any encroachment within the State's right-of-way (ROW) of a state highway or route would be subject to Caltrans regulations, including issuance of an encroachment permit and the provision of temporary traffic control systems.

Local

2050 Regional Transportation Plan

The San Diego Association of Governments (SANDAG) adopted the 2050 San Diego Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) in 2011. The RTP/SCS serves as a blueprint to coordinate the regional transportation system by creating a vision for transportation investment throughout the region and identifying regional transportation and land use strategies to address mobility needs. The RTP/SCS intends to balance future land use, housing, and transportation planning.

Congestion Management Plan

The Congestion Management Plan (CMP) was adopted by SANDAG in 1991 and updated in November 2008. The purpose of the CMP is to integrate land use and transportation planning, monitor level of service (LOS) and develop programs that address congestion. The CMP requires an Enhanced CEQA Review for projects that are expected to generate more than 2,400 average daily trips (ADT) or more than 200 peak hour trips.

San Diego County General Plan Update

The County of San Diego Board of Supervisors adopted the General Plan Update in 2011. Chapter 4 of the updated General Plan contains the Circulation Element. The Circulation Element defines current and future transportation needs. Applicable goals and policies from the County General Plan are provided below.

City of Vista General Plan

The City of Vista adopted the 2030 General Plan in 2012. Chapter 3 of the General Plan, Circulation Element, is based on a set of circulation-related goals and policies which acknowledge the changing economic, social, and environmental conditions in the City and surrounding. The circulation goals and policies are organized in eight categories: Local Transportation Routes, Truck Circulation, Regional Transportation, Public Transportation, Bicycle and pedestrian facilities, scenic roads, parking, and design.

4.9.4 Project Impacts

Methodology

This section provides a programmatic assessment of probable transportation-related impacts resulting from the implementation of the 2017 CSMP. According to City policies and consistent with the CMP, a transportation impact analysis (TIA) is required for all projects that generate more than 2,400 ADT or 200 peak hour trips. However, since the 2017 CSMP improvements are not a specific development project and operational effects for the combined improvements would generate less than 100 peak-hour trips, a TIA was not prepared in support of this analysis. Rather, this analysis primarily focuses on construction-related transportation impacts to the local roadway network as a result of the 2017 CSMP improvements. Measures to mitigate (avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion.

Level of Service (LOS) is a qualitative measure used to describe the condition of traffic flow, ranging from excellent conditions at LOS A to overloaded conditions at LOS F. The CMP, City of Carlsbad, and City of Oceanside allow an intersection to operate at LOS E; however, the City of Vista requires a more stringent LOS D. In this analysis, minimum acceptable intersection operating conditions follow the City guidelines for all intersections. Intersections operating at LOS E or F are considered unsatisfactory. The definitions for the range of levels of service for signalized and STOP sign-controlled intersections under the Highway Capacity Manual (HCM) are listed in Table 4.9-2 and Table 4.9-3, respectively.

Table 4.9-2. Level of Service (LOS) Definitions for Signalized Intersections

LOS	Definition/Interpretation	Signalized Intersection Delay (seconds per vehicle)
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	≤10
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.	>10 and ≤20
C	Good operation. Occasionally drivers may have to wait for more than 60 seconds and backups may develop behind turning vehicles. Most drivers feel somewhat restricted.	>20 and ≤35
D	Fair operation. Cars are sometimes required to wait for more than 60 seconds during short peaks. There are no long-standing traffic queues. This level is typically associated with design practice for peak periods.	>35 and ≤55
E	Poor operation. Some long-standing vehicular queues develop on critical approaches.	>55 and ≤80
F	Forced flow. Represents jammed conditions. Backups from locations downstream or on the cross street may restrict or prevent movements of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop and go type traffic flow.	>80

Source: Highway Capacity Manual, Special Report 209. Transportation Research Board, Washington, DC.

Table 4.9-3. Level of Service Definition for STOP Sign-Controlled Intersections

LOS	Unsignalized Intersection Delay (seconds per vehicle)
A	≤10
B	>10 and ≤15
C	>15 and ≤25
D	>25 and ≤35
E	>35 and ≤50
F	≥50

Source: Transportation Research Board, Highway Capacity Manual

Thresholds of Significance

Significance thresholds for traffic and transportation-related impacts are based on the City of Vista's Impacts Significance Criteria and Appendix G of the CEQA Guidelines. Transportation and traffic impacts would be significant if the proposed 2017 CSMP would result in any of the following:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

e) Result in inadequate emergency access?

f) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

Impact Analysis

Criteria Requiring No Further Evaluation

The following criteria were determined to result in no effect or are otherwise inapplicable to the actions associated with the proposed 2017 CSMP.

Conflict with an Applicable Congestion Management Program. The proposed 2017 CSMP improvements are limited to new sanitary sewer infrastructure. In this context, the implementation of the proposed 2017 CSMP would not involve any activities that could conflict with the County's adopted CMP or applicable LOS standards and travel demand measures policies. No impact would occur.

Air Traffic Patterns. The proposed 2017 CSMP and related improvements would not require a change in local air traffic patterns. For this reason, no impact would occur.

IMPACT 4.9-1	Would the 2017 CSMP conflict with applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standard established by the county congestion management agency for designated roads or highways?

CIP CAPACITY AND CONDITION PROJECTS (HARDSCAPE ENVIRONS), CIP CAPACITY and CONDITION PROJECTS (CROSS-COUNTRY ENVIRONS), and OUT-OF-SERVICE AREA ACCESS

Direct Effects-Construction. Construction-related activities and traffic associated with the proposed 2017 CSMP could result in a temporary and intermittent decrease in the level of service capacity of public streets due to pipe line work that may require partial or full street closures. Individual CIP projects would also have the potential to cause temporary disruption of access to residences and businesses along the construction route. During construction, the City would maintain, to the extent feasible, continuous, unobstructed, safe and adequate pedestrian and vehicular access to and from public facilities (e.g., public utility stations and community centers). If normal access to these facilities is blocked by construction, an alternative access route would need to be provided. Although isolated, these impacts could be locally significant; especially if work occurs at one or more roadway segments or intersections currently or projected to operate at LOS E or F. Mitigation Measure TR-1 is proposed to address temporary, construction-related impacts to the circulation network through the preparation of a project-specific traffic control plan.

During construction activities for individual CIP projects or access improvements, traffic would be generated from two sources: truck trips to and from the work area and commute trips for the work crew. Based on the trip generation characteristics described in Chapter 2, up to two construction crews averaging 15 persons each could generate up to 60 personal automobile round trips per day. In addition, during peak construction activities, each individual CIP project could require up to 10 daily haul truck trips to accommodate the delivery of construction materials and equipment and/or soil import/export. Based on this estimated trip generation, the individual CIP projects would not result in significant impacts to roadway operations or capacity. For this reason, a less than significant impact would result.

Direct Effect-Operations. Following the installation of the individual conveyance improvements, affected roadways and driveways would be restored to pre-project conditions. A temporary asphalt material may be installed to allow traffic to use the roadway immediately after construction; followed by a permanent overlay. Once operational, the individual CIP improvements would not result in any significant, long-term impacts to the local roadway network. For this reason, the impact is less than significant.

Indirect Effects. During construction, the potential for temporary lessening of roadway capacity (e.g., lane closures) or temporary closures may result in the re-distribution of traffic along existing roadways. Depending on the roadways affected (e.g. Vista Way), the redistribution of traffic could result in additional delay at one or more roadway segments or intersections. This impact could be significant. Mitigation Measure TR-1 is proposed to reduce this impact to less than significant.

O&M PROGRAM OPERATIONS

Direct Effects-Construction. The implementation of the City's O&M Program would involve a continuation of the City's existing maintenance activities throughout the existing sanitary sewer collection system. These activities would include ongoing condition assessments of the pipeline network and rehabilitation (or replacement) of existing pumping facilities. These activities would generally be restricted to existing facility locations and are unlikely to affect roadway operations. Maintenance trips generated in conjunction with the O&M Program would also be limited. For these reasons, construction-related impacts are less than significant.

Direct Effect-Operations. A small number of vehicle trips would potentially be generated by workers traveling to and from proposed facilities (i.e., conveyance pipelines, valves, storage tank and pump station) for routine operation and maintenance. These trips would not be substantial in relation to existing traffic loads or roadway capacity and are unlikely to cause long-term increases in traffic delay. For these reasons, the O&M Program would result in a less than significant impact to the local roadway network.

Indirect Effects. Given that the O&M Program would be limited to existing facilities, the potential for indirect effects, such as traffic re-distribution along existing roadways is unlikely. This impact is considered less than significant.

IMPACT 4.9-2	Would the 2017 CSMP substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?

CIP CAPACITY AND CONDITION PROJECTS (HARDSCAPE ENVIRONS), CIP CAPACITY and CONDITION PROJECTS (CROSS-COUNTRY ENVIRONS), and OUT-OF-SERVICE AREA ACCESS

Direct Effects-Construction. A majority of the improvements contemplated under the proposed 2017 CSMP would be installed within or adjacent to public road ROWs. Pipeline installation would occur within roadways in a variety of land uses, including residential, commercial, and industrial uses and could affect visibility from adjacent driveways. These roadways may also include bicycle facilities and/or accommodate transit routes. Likewise, access improvements would be required to maintain safe connections to adjacent public roadways.

Potential impacts resulting from these activities could include direct disruption of traffic flows and street operations (including the use of bus stops), and restriction of bicycle and pedestrian access to adjacent land uses and streets. Access for emergency vehicles could also be impaired from the reduced roadway widths associated with temporary construction easements, as well as the increased volume of construction-related traffic on the roads. These impacts could be locally significant. To minimize safety hazards, Mitigation Measure TR-1 is proposed to reduce this impact to a less than significant level.

Direct Effect-Operations. Once operational, the proposed conveyance and access improvements would function similar to existing conditions. No new traffic would be generated once constructed. For these reasons, the operation of these facilities would not create new safety or design hazards and the impact is less than significant.

Indirect Effects. The proposed 2017 CSMP improvements do not include the installation of any roadway design features (e.g., sharp curves or dangerous intersections) or incompatible uses that would increase safety hazards. However, construction of the individual improvements within public ROWs could increase the interaction of construction-related traffic, vehicles (including buses), bicycles, and pedestrians, thus temporarily increasing potential safety hazards and restricting or delaying access to adjacent land uses. In addition, construction activities could temporarily affect the use of bike lanes/routes and/or existing trail networks throughout the Study Area. Mitigation Measure TR-1 is proposed to reduce potential safety hazards by requiring the preparation of a project-specific TCP prior to the start of construction.

O&M PROGRAM OPERATIONS

Direct Effect-Construction. Construction of the O&M Program improvements would generally be limited to existing facilities. For this reason, no new design hazards would be likely to result and the impact is considered less than significant.

Direct Effect-Operations. Once operational, the proposed O&M Program improvements would function similar to existing conditions. No new traffic would be generated once constructed. For these reasons, the operation of these facilities would not create new safety or design hazards and the impact is less than significant.

Indirect Effects. Implementation of the O&M Program improvements would be limited to existing facilities and site locations (e.g. BVPS). For this reason, these improvements are unlikely to indirectly affect existing roadways hazards or create new ones. This impact is less than significant.

IMPACT 4.9-3	Would the 2017 CSMP result in inadequate emergency access?

CIP CAPACITY AND CONDITION PROJECTS (HARDSCAPE ENVIRONS) and CIP CAPACITY AND CONDITION PROJECTS (CROSS-COUNTRY ENVIRONS)

Direct Effects-Construction. Construction of the individual conveyance improvements under the proposed 2017 CSMP would occur within mainly public roadway ROW. As construction progresses, access for emergency vehicles could be impaired as result of reduced roadway widths (or capacity) and increased volumes of construction-related traffic and/or re-distributed traffic. In the absence of mitigation, this impact could be significant. Mitigation Measure TR-1 is proposed to reduce potential impacts to emergency response to a less than significant level.

Direct Effect-Operations. Once constructed, the proposed conveyance improvements would be installed underground. As a result, the proposed conveyance improvements would not impact emergency response operations over the long-term.

Indirect Effects. Once operational, these improvements would not interfere with emergency access and no indirect impact would result.

O&M PROGRAM OPERATIONS and OUT-OF-SERVICE AREA ACCESS

Direct Effects-Construction. Construction of the O&M Program and access improvements under the proposed 2017 CSMP would mainly occur outside public roadway ROW. For this reason, these improvements are unlikely to impact emergency access and considered less than significant.

Direct Effect-Operations. Once constructed, the proposed O&M improvements would be installed at the existing facility locations. As a result, the proposed O&M Program improvements would not impact emergency response operations over the long-term.

Indirect Effects. Once operational, these improvements would not interfere with emergency access and no indirect impact would result.

IMPACT 4.9-4	Would the 2017 CSMP conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

CIP CAPACITY AND CONDITION PROJECTS (HARDSCAPE ENVIRONS), CIP CAPACITY and CONDITION PROJECTS (CROSS-COUNTRY ENVIRONS), O&M PROGRAM OPERATIONS, and OUT-OF-SERVICE AREA ACCESS

Construction Impacts. Because pipeline construction would require sufficient space (e.g. up to 60-foot construction zone) to accommodate open trenches/pits and additional room for the placement of material and equipment, the travel width of roadways (and sidewalks) would be reduced. As such, alternative transportation and circulation patterns in the vicinity of work zones would temporarily be disrupted. Specifically, impacts could include direct disruption of bus service, changes to pedestrian movements, or restrictions to bicycle access to adjacent land uses and streets. These impacts could be locally significant. Mitigation Measure TR-1 is proposed to address temporary access for alternative transportation modes such that the impact would be less than significant.

Direct Effect-Operations. Once operational, the improvements covered under the proposed 2017 CSMP would function and operate similar to existing conditions. No impacts to alternative transportation modes would result.

Indirect Effects. The proposed 2017 CSMP would result in no indirect impacts alternative transportation n modes.

4.9.5 Mitigation Measures

Implementation of the following mitigation is required for CIP Capacity and Condition Projects (Hardscape and Cross-Country Environs) in order to reduce significant impacts identified under Impacts 4.9-1 through 4.9-4. The proposed mitigation would replace applicable project design features and construction measures identified in the 2008 PEIR for traffic and transportation and apply to 2017 CSMP Categories 1, 2, and 4.

Mitigation Measure TR-1: Prepare and Implement a Traffic Control Plan. The construction contractor shall prepare a Traffic Control Plan for roadways and intersections affected by individual 2017 CSMP improvements for approval by the City Engineer. The Traffic Control Plan will comply

with local agency requirements (e.g., Vista, Carlsbad, Caltrans, etc.) with jurisdiction over project construction. The Traffic Control Plan will include, but not be limited to, the following elements based on local site and roadway conditions:

- Provide street layout showing location of construction activity and surrounding streets to be used as detour routes, including "special signage." Post a minimum 72-hour advance warning of construction activities within affected roadways to allow motorists to select alternative routes.
- Restrict delivery of construction materials to non-peak travel periods (9 a.m. – 3 p.m.) as appropriate. Weekend and night work shifts will be allowed in non-residential areas only.
- Maintain the maximum travel-lane capacity during non-construction periods and provide flagger-control at construction sites to manage traffic control and flows.
- Limit the construction work zone in each block to a width that, at a minimum, maintains alternate one-way traffic flow past the construction zone.
- Maintain access for driveways and private roads, except for brief periods of construction, in which case property owners will be notified.
- Require temporary steel-plate trench crossings, as needed, to maintain reasonable access to homes, businesses, and streets. When required by the applicable encroachment permit, maintain the existing lane configuration during nonworking hours by covering the trench or jack pit with steel plates or by using temporary backfill.
- Require appropriate warning signage and safety lighting for construction zones.
- Access for emergency vehicles shall be maintained at all times. Police, fire, and emergency services shall be notified of the timing, location, and duration of construction activities that could hinder and/or delay emergency access through the construction period.
- Coordinate with NCTD to plan, as needed, for the temporary relocation of bus stops and/or detour of transit routes on affected pipeline alignments.
- Identify detours, where available, for bicyclists and pedestrians in areas potentially affected by project construction.
- Provide adequate off-street parking locations for workers' vehicles and construction equipment in those areas where on-street parking availability is insufficient.
- Repair or restore the roadway ROW to its original condition or better upon completion of work.

Cumulative Impacts

Cumulative development projects, including proposed high-density developments within Downtown Vista are expected to substantially alter future traffic flows and patterns within the Study Area. The inhabitants of these new developments would add to the long-term traffic volumes such that the capacities of some local roadways and intersections are projected to decline from existing levels. Potential traffic-related impacts associated with these other projects would be considered cumulatively significant.

The proposed 2017 CSMP would involve the construction of sanitary sewer facilities that would result in temporary traffic increases and safety hazards during construction. An estimated 60 personal peak hour trips and up to 10 round-trip general delivery, concrete delivery, and/or soil import/export truck trips per day. Operation of the Master Plan Updates would result in minimal traffic volumes associated with maintenance of project facilities. Where traffic impacts associated with construction activities would occur, Mitigation Measure TR-1 would also reduce these temporary impacts to a level less than significant.

Once operational, the 2017 CSMP would result in minimal traffic volumes associated with maintenance of project facilities. Where traffic impacts associated with construction activities would occur, Mitigation Measure TR-1 would also reduce these temporary LOS impacts to a level less than significant. Additionally, to mitigate anticipated cumulative impacts of new development traffic on future deficient intersections, local municipalities will require development projects to pay their fair share of the traffic improvement costs. However, because LOS conditions on some City roadways are so poor, the temporary traffic delays caused by construction of the individual improvements covered under the 2017 2017 CSMP. These cumulatively affected roadways could include the following:

- Vista Village Drive;
- E. and W. Vista Way;
- Civic Center Drive;
- Emerald Drive;
- La Mirada Drive; and
- Monte Vista Drive.

Implementation of Mitigation Measure TR-1 would reduce the impact to a level less than significant. Following construction of the individual improvements covered under the 2017 CSMP at roadways and intersections operating at or below acceptable LOS, the long-term impacts to traffic operations would be less than significant and not cumulatively considerable.

4.9.6 Significant and Unavoidable Impacts

No project-specific significant and unavoidable impacts to transportation and traffic would result from the proposed 2017 CSMP. Once operational, no cumulatively significant traffic impacts would result.

5 Effects Determined Not to be Significant

5.1 Introduction

Section 15128 of the CEQA Guidelines requires that an EIR contain a brief statement disclosing the reasons why various possible significant effects of a proposed project were found not to be significant and, therefore, would not be discussed in detail in the EIR. The environmental issue areas not expected to have a significant impact as a result of the 2017 CSMP include Aesthetics, Geology and Soils, Mineral Resources, Recreation, Public Services, and Utilities and Service Systems. These resource areas were determined to have no or a less than significant impact in the 2008 PEIR. The following discussions provide the basis for this determination in the context of the 2017 CSMP.

5.1.1 Aesthetics

Section 4.1 of the 2008 PEIR is incorporated by reference and provides a description of the existing visual resources conditions within each of the jurisdictions comprising the Study Area. This includes the description of the California Department of Transportation (Caltrans) Scenic Highway Program (1963) and the respective city and county General Plans.

According to Caltrans Scenic Highway Mapping System, no designated State scenic highways are located in the vicinity of the Study Area. Therefore, implementation of the individual improvements included in the 2017 CSMP would not substantially damage scenic resources within a State scenic highway. No impact would occur.

A majority of the conveyance improvements proposed in the 2017 CSMP are located along existing road rights-of-way and involve below-ground installations. Construction activities would primarily consist of trench and backfill (i.e., below ground) activities, soil stockpiling, and the presence of construction vehicles and equipment. For improvements located beyond existing roadway rights-of-way, in landscaped areas, or where native vegetation exists, short-term visual effects could result. However, any vegetation that is removed would be replaced, or in the case of natural areas, re-vegetated consistent with regulatory agency requirements. All disturbed areas would be returned to pre-construction conditions and would blend with adjacent areas, similar to existing conditions. The proposed above-ground work associated with the O&M Program (i.e., access roads and pump stations) would include maintenance and upgrade to existing facility locations. Therefore, no scenic views would be affected in the long-term and no permanent visual effects on a scenic vista are anticipated. This is considered a less than significant impact.

The visual character of the Study Area and its surroundings would not be adversely affected once construction is completed and the disturbed surfaces are restored to pre-construction conditions. As indicated above, the majority of the improvements proposed in the 2017 CSMP would be installed below grade and therefore would not substantially degrade the existing visual character of the Study Area and its surroundings. As a result, the 2017 CSMP would result in a less than significant impact.

The improvements included in the 2017 CSMP do not propose the construction, operation, or use of infrastructure that would create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. Construction of individual improvements included in the 2017 CSMP may require outdoor flood lighting for emergency nighttime work, which would occur under rare circumstances. There would be no operational lighting resulting from the underground pipelines. Existing lighting sources would be maintained at the three pump station sites. Because

2017 CSMP-related lighting would be short-term, and no additive lighting sources would be constructed and in place after the construction period, impacts would be less than significant.

5.1.2 Geology and Soils

Section 4.5 of the 2008 PEIR provides a description of existing conditions for the Study Area as it relates to local soils, faulting, and seismicity. As provided, the Study Area is located within a seismically active region of southern California. Based on information produced by the California Geological Survey (CGS 2010), the Study Area is situated within ten miles of multiple fault sources, including the Rose Canyon Fault, which is capable for triggering a seismic event.

There are no known active faults or mapped Alquist-Priolo Earthquake Fault Zones traversing the Study Area. Surface rupture as a result of seismic activity is therefore unlikely. The improvements included in the 2017 CSMP may be locally subject to seismically induced secondary effects related to liquefaction, lateral spreading, local subsidence of soil, and vibrational damage. Individual improvements may also encounter unstable soil and rock conditions or expansive soil materials. Notwithstanding these considerations, City engineering requirements during the planning and design of individual improvements would require a geotechnical investigation prior to approval of final plans. Each improvement included in the 2017 CSMP would be required to comply with the recommendations in a project-specific geotechnical investigation report in addition to complying with existing state and local regulations. This is considered a less than significant impact.

A majority of the conveyance improvements would be located within roadways and existing rights-of-way and, therefore, would not result in substantial land disturbance or alteration. Construction activities are regulated under the National Pollution Discharge Elimination System (NPDES) General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit, NPDES Order No. 2012-0006-DWQ), which covers stormwater runoff requirements for projects where the total amount of ground disturbance during construction exceeds one acre. Coverage under a General Construction Permit requires the preparation of a Storm Water Pollution Prevention Plan (SWPPP) and submittal of a Notice of Intent (NOI) to the Regional Water Quality Control Board (RWQCB) to comply with the General Construction Permit. A SWPPP is required to include a description of best management practices (BMPs) to minimize the discharge of pollutants from the sites during construction. Where improvements result in disturbance to less than one acre, the City would comply with the grading ordinance and/or erosion control requirements of the local jurisdiction. General BMPs include erosion controls, sediment controls, tracking controls, wind erosion control, non-storm water management, and materials and water management. Compliance with these existing regulations would minimize the potential for erosion during construction. This impact is less than significant.

The 2017 CSMP by nature entails pipeline replacement, relocation, and rehabilitation of existing sewer components. Alternative wastewater disposal systems and septic tanks are not a component of the proposed 2017 CSMP. Therefore, no impact would occur.

5.1.3 Mineral Resources

Section 4.5 of the 2008 PEIR provides a description of existing mineral resources conditions for the Study Area, including the description of Mineral Resource Zone (MRZ) categories. According to CGS 1996, the Study Area is entirely within a MRZ-3 Zone. The project components along the

Buena Vista Creek are situated north of a region classified as a MRZ-2 zone. No mineral resource impacts would occur as a result of the 2017 CSMP.

5.1.4 Recreation

Section 8 of the 2008 PEIR is incorporated by reference and identifies effects found not to be significant, including issues related to recreation. Implementation of the 2017 CSMP is unlikely to result in conflicts with existing parks or recreation uses. The 2017 CSMP does not propose the construction of new or expanded recreational facilities, which could result in adverse physical effects to the environment. Further, implementation of the 2017 CSMP would not directly induce population growth, which could otherwise increase the use of existing neighborhood and regional parks. Although the 2017 CSMP improvements help to serve planned population growth in the City, new development would be conditioned by the City's GP 2030 Update, which supports new recreational facilities for new residents.

Potential disruptions to existing recreational trails and bike paths within the Study Area are addressed in Section 4.9 in the context of alternative transportation. In instances, where improvement projects are located adjacent to such uses, access would be maintained during construction. As a result, the 2017 CSMP would result in a less than significant impact and no mitigation is required.

5.1.5 Public Services

Section 8 of the 2008 PEIR is incorporated by reference and identifies effects found not to be significant, including issues related to public services. Implementation of the improvements included in the proposed 2017 CSMP would not require new services for fire protection, police protection, schools, and parks. Emergency access would not be significantly impacted, as discussed in Section 4.9 of this SPEIR; nor would the improvements trigger the need for new police or fire facilities or decrease response times. The 2017 CSMP would not generate substantial population growth resulting in increased demand on local schools. Lastly, the improvements contemplated under the 2017 CSMP would not generate additional population resulting in increased demand on park facilities. These impacts are considered less than significant.

5.1.6 Utilities and Service Systems

Section 4.11 of the 2008 PEIR is incorporated by reference and identifies the existing public utility provides within the Study Area for sanitary sewer, potable water, solid waste, utilities, and energy use. Issues related to energy use are addressed in Section 4.4, Greenhouses Gases and Energy Use.

The proposed 2017 CSMP is intended to enhance sanitary sewer service as described in Chapter 3 of this SPEIR. Goals of the proposed 2017 CSMP are to reduce the potential for sewer overflows, implement capacity improvements, where required, and restore, maintain, and/or enhance existing sewer service consistent with the City adopted SSMP (2014).

The improvements associated with the 2017 CSMP would convey wastewater to the Encina Wastewater Authority's Water Pollution Control Facility (WPCF); similar to existing conditions. No improvements are proposed to the WPCF as part of the 2017 CSMP since adequate capacity exists to accommodate existing and projected flows (through 2037). Although periodic maintenance flushing of conveyance pipelines would result in disposal of wastewater in the WPCF, such

discharges are anticipated and existing contracts are in place to ensure adequate collection and treatment. Based on these circumstances, the 2017 CSMP would not contribute to violations of the WPCF WDRs or require an expansion of the facility, which could otherwise result in environmental effects. No impact would occur.

The 2017 CSMP would not require the expansion or construction of new water treatment facilities which could otherwise cause significant environmental effects. The environmental effects related to the construction of sanitary sewer collection water improvements are addressed throughout this SPEIR. Therefore, there would be no impact.

All utility lines and cables that would be disrupted during construction would be identified during the design phase for individual 2017 CSMP improvements as part of an underground service alert. Design for each 2017 CSMP project would include a detailed engineering and construction plan, which would thoroughly describe construction techniques and protective measures for minimizing impacts to utilities. Reasonable efforts would be made to provide temporary bypass around the affected utilities during construction so interruptions in service are eliminated or minimized.

Accidental disruption of utilities would be possible in conjunction with any of the 2017 CSMP improvements, most notably along all conveyance pipeline alignments. Temporary and accidental impacts to small utility lines, such as telephone or cable lines, would be considered a nuisance, but not significant, because the affected area and duration of the impacts would be limited. Major utility lines, such as natural gas or sewer lines, would be identified as part of a project-specific underground services alert. As a result, this impact would be less than significant.

The 2017 CSMP would generate a limited amount of solid waste during construction, such as material packaging and construction debris. These materials would be sorted and recycled in compliance with solid waste disposal and diversion requirements. In addition, construction of individual improvements covered under the 2017 CSMP may involve soil export. If required, soil materials would be removed from individual sites and exported to local material recovery sites or land disposal facilities for reuse. Overall, solid waste generated by construction of the 2017 CSMP improvements would not generate significant quantities of solid waste. Where generated, the City would comply with existing solid waste diversion programs during implementation of the 2017 CSMP improvements. For these reason, this impact is considered less than significant.

6 Alternatives

6.1 Introduction

CEQA requires the consideration of alternatives to the proposed project and an analysis of the potential impacts associated with those alternatives. Through comparison of these alternatives to the 2017 CSMP, the advantages of each can be weighed and analyzed. Section 15126.6(a) of the State CEQA Guidelines requires that an EIR "*describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project, and to evaluate the comparative merits of the alternatives*."

Additionally, Section 15126.6) of the CEQA Guidelines states:

- The specific alternative of "no project" shall also be evaluated along with its impact. If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives (Section 15126.6 (e)).
- The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice (Section 15126.6(a)). The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision-making.

Pursuant to the CEQA Guidelines stated above, a range of alternatives to the 2017 CSMP is considered and evaluated in this SPEIR. The discussion in the section provides:

- A description of alternatives considered;
- An analysis of whether the alternatives meet most of the objectives of the 2017 CSMP (described in Chapter 3 of this SPEIR); and
- A comparative analysis of the alternatives under consideration and the 2017 CSMP. The focus of this analysis is to determine if alternatives are capable of eliminating or reducing the significant environmental effects of the 2017 CSMP to a less than significant level. Table 6-2 provides a summary of this analysis.

6.2 Criteria for Alternative Analysis

In developing the alternatives to be addressed in this SPEIR, the potential alternatives were evaluated in terms of their ability to meet the basic project objectives, while reducing or avoiding the environmental impacts of the 2017 CSMP identified in Chapter 4 of this SPEIR. As discussed in Chapter 3, the following objectives have been identified for the 2017 CSMP:

- Reduce the potential for sanitary sewer overflows consistent with State requirements;
- Implement facility improvements based on age, material, and condition related infrastructure;
- Maintain and/or enhance existing sanitary sewer collection service;

- Prioritize a list of CIP projects for capacity, replacement, and rehabilitation improvements and implementation of these improvements; and
- Prioritize a list of projects and activities for inclusion in the O&M Program and implementation of these projects and activities.

6.3 Alternatives Eliminated from Detailed Consideration

In addition to specifying that the EIR evaluate a "range of reasonable alternatives" to the project, Section 15126.6(c) of the CEQA Guidelines requires that an EIR identify any alternatives that were considered but were rejected as infeasible. During the City of Vista's (City's) consideration of the components for inclusion in the 2017 CSMP, the City considered excluding certain components, including one or more capacity and access road improvements. These potential alternatives that were initially considered by the City, but not carried forward for consideration in the SPEIR are discussed below.

6.3.1 No Out-of-Service Area Projects

The City considered the removal of the proposed Out-of-Service Area Projects from the 2017 CSMP. This would include the removal of the Buena and V/C Interceptor Access Road improvements, which are proposed to facilitate long term maintenance. In the absence of these improvements, the City would be unable to maintain the existing interceptor facilities. In the absence of sufficient access for standard maintenance and future condition assessments, the risk of pipeline deterioration would increase. This risk is considered unacceptable and would be inconsistent with the City's Sanitary Sewer Management Plan (SSMP 2012). For these reasons, this potential alternative was eliminated from further consideration.

6.3.2 No Conveyance Capacity-Related Projects

Under this potential alternative, the conveyance capacity-related projects proposed in the 2017 CSMP, as described in Tables 3-4 and 3-5 of Chapter 3, would not be constructed. Rather than increasing pipeline capacity, the improvements to the conveyance pipelines identified in Tables 3-4 and 3-5, would be limited to rehabilitation and replacement according to their existing diameter, as deemed necessary, by the current and future condition assessments.

This potential alternative was eliminated because it would not meet the stated objectives of the 2017 CSMP. Under this potential alternative, the conveyance facilities within the existing sewer system currently or projected to experience deficiencies in sewer capacity would not be up-sized. Without the proposed capacity-related sewer collection improvements, this alternative could result in an increased potential for sanitary sewer overflows as build out occurs and would be inconsistent with the City's GP 2030 Update. Based on these considerations, this alternative was considered to be infeasible and was eliminated from further consideration.

6.3.3 No Build

A No Build Alternative would preclude adoption of the proposed 2017 CSMP. Future sewer improvement projects would be completed as needed on a project by project basis. A No Build alternative was rejected from further consideration since this potential alternative would be inconsistent the City's GP 2030 Update including goals and policies regarding safe and efficient accommodation of sanitary sewer facilities in compliance with the updated Sewer Master Plan and

District conditions and/or State regulations. Further, this potential alternative would be inconsistent with goals and policies of City's GP 2030 Update including the following:

- Goal PSFS 9: Continue to provide sanitary sewer facilities to accommodate the safe, efficient, and cost-effective disposal of waste, commensurate with existing and proposed development.
- Policy PSFS 9.1: Periodically update the Sewer Master Plan when necessitated by changes in District conditions and/or State regulations.
- Policy PSFS 9.3: Implement prioritized projects for inclusion in the CIP within the recommended time frames to address all known deficiencies and minimize sanitary sewer overflows.
- Goal PSFS 16: Provide and maintain public infrastructure and utilities that support existing and planned land uses and development in a cost-effective and responsible manner.
- Policy PSFS 16.1: Determine public infrastructure and utility needs to implement the GP 2030 Update and prioritize them through the City's CIP.
- Policy PSFS 16.2: Evaluate existing public infrastructure and utilities to determine deficiencies and identify ongoing maintenance and/or replacement needs, and prioritize and implement them through the CIP and O&M investment.

Additionally, this alternative would delay the approval of odor control improvements to BVPS, which would be implemented separately in the future.

Based on these considerations, this potential alternative was rejected because it would not meet the stated objectives of the City's GP 2030 Update or State requirements. In addition, this potential alternative would result in greater impacts related to plan consistency than the proposed 2017 CSMP.

6.4 Evaluation of Alternatives

6.4.1 No Project (2008 SMPU) Alternative

Under the No Project (2008 SMPU) Alternative, the 2017 CSMP would not be adopted and the City would continue implementation of the adopted 2008 SMPU. Under this alternative, capacity and condition improvements proposed under the 2008 SMPU would be implemented as defined in Chapter 3 of the 2008 PEIR, including the condition improvements identified in Figure 3-6, which are not proposed under the 2017 CSMP. This alternative would exclude the proposed O&M Program and Out of Service Area Projects as described in Chapter 3. These improvements would be undertaken on an individual basis in the future, separate from the 2008 SMPU. Projects covered under the 2008 PEIR would be subject to the City's adopted MMRP, as provided in Appendix C of this document.

Air Quality

The No Project (2008 SMPU) Alternative would result in similar constructed-related impacts to local air quality as those described for the 2017 CSMP. Operational emissions would be reduced due to the exclusion of the O&M Program. Odor control improvements to BVPS would be implemented

separately. Similar to the 2017 CSMP, air quality impacts resulting from this alternative would be less than significant. However, since the implementation of odor control improvements would be delayed at BVPS until some point in the future, air quality impacts under this alternative would be greater than the proposed 2017 CSMP.

Biological Resources

Under this alternative, direct and indirect construction-related impacts to biological resources would be similar to the 2017 CSMP. Unlike the 2017 CSMP, the O&M Program, including maintenance access improvements, would be implemented separately and incrementally. Construction related impacts identified for the No Project (2008 SMPU) Alternative could be significant, and similar to the proposed project, Mitigation Measures BIO-1, BIO-2, and BIO-3 would be required. The impact to biological resources associated with this alternative would be similar to the proposed 2017 CSMP.

Cultural Resources

This alternative would result in similar impacts to cultural resources as the 2017 CSMP. Construction of the conveyance improvements under the No Project (2008 SMPU) Alternative could result in similar impacts to unidentified archaeological resources and known archaeological resources documented within 100 feet. These impacts could be significant. As a result, Mitigation Measures CULT-1, CULT-2, CULT-3, and CULT-4 as proposed for the 2017 CSMP would also apply to the 2008 SMPU Alternative. The impact to cultural resources associated with this alternative would be similar to the proposed 2017 CSMP.

Greenhouse Gases and Energy

Under the No Project (2008 SMPU) Alternative, GHGs generated by construction would be similar to the 2017 CSMP. Opportunities for energy efficiencies at existing pump stations would be implemented incrementally in the future and O&M activities would be implemented separately from the 2017 CSMP. GHG impacts resulting from this alternative would be less than significant. The GHG impacts associated with this alternative would be similar to the proposed 2017 CSMP.

Hazards and Hazardous Materials

Construction of the conveyance pipelines under the No Project (2008 SMPU) Alternative could expose construction workers, the general public, and the environment to pre-existing hazardous materials contamination and risks of wildlife in high risk areas. These impacts could be significant. Mitigation measures identified for the 2017 CSMP would also apply to this alternative. The hazards and hazardous materials impact associated with this alternative would be similar to the proposed 2017 CSMP.

Hydrology and Water Quality

The components constructed under the No Project (2008 SMPU) Alternative would be similar to those associated with the 2017 CSMP. Similar impacts to local drainage patterns, water quality and flooding hazards would be expected. Mitigation prescribed for the 2017 CSMP would still apply to this alternative and impacts to water quality within local receiving waters, including Agua Hedionda Creek and Buena Vista Creek, following mitigation would be less than significant. Therefore, impacts and associated mitigation would be similar to those identified for the 2017 CSMP. The hydrology and water quality impact associated with this alternative would be similar to the proposed 2017 CSMP.

Land Use and Planning

Similar to the 2017 CSMP, this alternative would generally be consistent with local plans and policies. Temporary land use conflicts and property encroachments similar to those identified for the 2017 CSMP would apply to this alternative. As a result, similar to the proposed project, this alternative would have a less than significant impact to land use and planning.

Indirectly, this alternative could be in conflict with the City's GP 2030 Update by potentially creating excess capacity by applying a higher EDU. Creating excess capacity within the collection system in locations that no longer require upsizing based on planned land use would unnecessarily increase costs and potentially encourage land use changes not contemplated in the GP 2030 Update. In this context, impacts related to plan consistency would be greater under this alternative.

Noise and Vibration

Construction noise impacts would be similar under this alternative when compared to the 2017 CSMP. Mitigation measures proposed for the 2017 CSMP would also apply to this alternative, thereby reducing the impact to a less than significant level. As with the 2017 CSMP, no operational noise impacts would occur under this alternative.

Potential vibration impacts to historic structures as a result of the close proximity of construction requirement would be similar to the 2017 CSMP, including the proposed mitigation. The noise and vibration impact would be similar to the proposed 2017 CSMP.

Transportation and Circulation

In general, the No Project (2008 SMPU) Alternative would result in similar impacts to roadway systems, pedestrian and bicycle circulation, and traffic and transit patterns as the 2017 CSMP. As with the proposed 2017 CSMP, Mitigation Measures TR-1 would apply to this alternative.

6.4.2 Alternative 1 - Near Term Capacity Improvements

Under the Near Term Capacity Improvements Alternative, the proposed near term capacity projects in the 2017 CSMP, as presented in Table 6-1, would be implemented. The main differentiating feature between this alternative and the 2017 CSMP is the exclusion of Build-out (future) capacity projects (see Tables 3-4 and 3-5). Condition projects proposed under the 2017 CSMP and identified in Appendix B would be constructed; similar to the proposed 2017 CSMP. This alternative would also include the proposed O&M program and Out of Service Area projects as described for the 2017 CSMP.

Table 6-1. Alternative 1- Near Term Capacity Improvements

CIP (Near Term) No.	Linear Feet
Vista EX_V1	1,379
Vista EX_V2	69
Buena EX_B1	5,079
Buena EX_B2	1,768
Buena EX_B3	863
Buena EX_B4	916

Note: Additional component details are provided in Tables 3-4 and 3-5 in Chapter 3.

Air Quality

Similar to the analysis provided for the 2017 CSMP, impacts to air quality would not conflict with any Federal, State or local plan or regulation. Construction and operational activities and related emissions would be below the significance thresholds for all criteria air pollutants and, therefore, this alternative would have a less than significant effect on air quality. Under this alternative, the amount of pollutants would be slightly reduced in the future due to the exclusion of multiple future (build out) capacity projects.

Biological Resources

Under this alternative, impacts to biological resources would be similar to those identified for the 2017 CSMP. Several of the capacity related projects excluded from this alternative are located in cross-country environs (e.g. BO-V5 and BO-B1) and, as a result of their removal, this alternative provides a greater opportunity to avoid biological habitats, including suitable habitat for special status wildlife and plants. This alternative would also incorporate the use of trenchless construction methods, where feasible, to reduce the disturbance area affected and avoid sensitive resources. Nonetheless, this alternative would continue to include Category 2 and 4 improvements, which would traverse cross country environs and result in potential impacts to special status plant and animal species and/or their habitats that could be significant. Once constructed the project features would be contained entirely underground and within existing easements or existing site locations (e.g., BVPS). Similar to the proposed 2017 CSMP, this alternative would require compliance with Mitigation Measures BIO-1, BIO-2, and BIO-2 to minimize these potential impacts to a less than significant level.

Cultural Resources

This alternative would result in similar impacts to cultural resources as the 2017 CSMP; however, the exclusion of certain capacity build out projects would reduce the areas subject to construction-related impacts and land disturbance. Nonetheless, construction of the remaining conveyance improvements under this alternative could result in similar impacts to unidentified archaeological resources and known archaeological resources documented within 500 feet of the

proposed improvements. These potential impacts could be significant. Mitigation Measures CULT-1, CULT-2, CULT-3, CULT-4, and CULT-5 as proposed for the 2017 CSMP would also be required for construction and operation activities associated with this alternative. The impact to cultural resources associated with this alternative would be similar to the proposed 2017 CSMP.

Greenhouse Gases and Energy

Under this alternative, emissions of greenhouse gases and energy usage would be similar to the 2017 CSMP. Construction and operations activities would result in the direct emission of GHGs; however, the quantities generated would be below the threshold defined in the City's Bright Line threshold. Therefore, impacts related to GHG emissions and energy would be less than significant. Under this alternative, construction related GHGs emissions would be slightly reduced when compared to the 2017 CSMP due to the exclusion of the build out capacity projects.

Hazards and Hazardous Materials

Impacts to hazards and hazardous materials would be similar to those analyzed in the 2017 CSMP under this alternative. Construction and operations hazards could be potentially significant and would require the implementation of Mitigation Measures HAZ-1, HAZ-2, HAZ-3, and HAZ-4. As proposed in the 2017 CSMP. Under this alternative, these impacts would be similar to the 2017 CSMP.

Hydrology and Water Quality

This alternative would result in similar impacts to hydrology and water quality as the 2017 CSMP. Construction through hardscape environs would have a less than significant effect on hydrology and water quality due to the location and methods of construction. Similar to the 2017 CSMP, construction activities through cross country environs could result in impacts to hydrology and water quality due to the close proximity of surface water features. Mitigation Measures HWQ-1 and HWQ-2 as proposed for the 2017 CSMP would be required for this alternative. Potential impacts to water quality and hydrology under this alternative would be similar to the 2017 CSMP.

Land Use and Planning

Under this alternative, impacts to land use and planning would be similar to those analyzed in the 2017 CSMP. This alternative would be subject to applicable land use plans, policies and regulations and would have a less than significant impact on planned land use. Similar to the 2017 CSMP, temporary encroachments into adjacent properties or the acquisition of new easements would be would be conducted in accordance with Federal and State law. Under this alternative, certain build out capacity-related conveyance improvements would be excluded from the CSMP. The need for these capacity upgrades would be evaluated further in future master planning updates. Similar to the 2017 CSMP, this alternative would not result in a conflict with policies adopted for the purpose of avoiding or mitigating an adverse environmental effect would result.

Noise and Vibration

Under this alternative, impacts to noise and vibration would be similar to those analyzed in the 2017 CSMP. Construction activities have the potential of creating excessive noise and vibration associated with the use of heavy-duty machinery, including excavators, backhoes, graders, and a

crane. Construction work has the potential of exceeding thresholds set by the City of Vista and County of San Diego Noise Control Ordinances but activities would be short term. Operation effects on noise and vibration would be similar to existing conditions. Mitigation Measure NV-1 as proposed for the 2017 CSMP would be required for this alternative to reduce construction impacts.

Transportation and Circulation

Under this alternative, impacts to transportation and circulation would be similar to those analyzed in the 2017 CSMP. Compliance with Mitigation Measures TR-1 as proposed for the 2017 CSMP would be required for this alternative.

6.4.3 Environmentally Superior Alternative

The No Project Alternative would maintain the current 2008 SMPU and related CIP and, therefore, would not avoid the potential environmental effects associated with construction of the 2017 CSMP improvements. By virtue that the 2017 CSMP includes the improvements identified in the 2008 SMPU, but decreases the total number of improvements included under the 2008 SMPU, the No Project Alternative would not reduce the level of construction-related impacts that would otherwise result from the proposed 2017 CSMP. Further, the No Project Alternative could conflict with the City's General Plan (GP 2030 Update), Goal PSFS 9, by not providing for the cost-effective delivery of sanitary sewer and installing excess sewer capacity, which could otherwise result in unplanned growth. As a result, the No Project Alternative would not be environmentally superior.

As discussed in Section 6.4.2, Alternative 1 would result in similar impacts as the 2017 CSMP (Table 6-2) across most resources topics; although, the exclusion of certain build out projects would result in fewer construction-related impacts over the long-term (and related environmental effects). No feasible alternatives were identified that are capable completely avoiding one or more or the significant environmental impacts identified for the 2017 CSMP. As discussed, the alternatives considered would result in similar and/or greater environmental effects. In the case of Alternative 1, the mere exclusion of multiple capacity improvements would provide the greatest opportunities for avoidance. Based on these considerations, Alternative 1, Near Term Capacity Improvements, is considered environmentally superior when compared to the No Project Alternative and proposed 2017 CSMP.

Table 6-2. Comparison of Alternatives to 2017 CSMP

Environmental Issue Area	Proposed 2017 CSMP	No Project (2008 SMPU) Alternative	Alternative 1 - Near Term Capacity Improvements
Air Quality	NSI	Greater	Similar
Biological Resources	LTSM	Similar	Similar
Cultural Resources	LTSM	Similar	Similar
Greenhouse Gases and Energy	NSI	Similar	Similar
Hazards and Hazardous Materials	LTSM	Similar	Similar

Table 6-2. Comparison of Alternatives to 2017 CSMP

Environmental Issue Area	Proposed 2017 CSMP	No Project (2008 SMPU) Alternative	Alternative 1 - Near Term Capacity Improvements
Hydrology and Water Quality	LTSM	Similar	Similar
Land Use and Planning	NSI	Greater	Similar
Noise and Vibration	LTSM	Similar	Similar
Transportation and Circulation	LTSM	Similar	Similar

Source: HDR
Notes: NSI = No significant impact identified associated with 2017 CSMP.
LTSM = Less than significant impact with mitigation.
Avoid = Impacts under this alternative avoided as compared to impacts for the 2017 CSMP.
Reduced = Impacts under this alternative reduced as compared to impacts for the 2017 CSMP.
Similar = Impacts under this alternative similar to impacts for the 2017 CSMP.
Greater = Impacts under this alternative greater to impacts for the 2017 CSMP.

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7 Growth Inducing Impacts of the Project

Section 15126.2(d) of the CEQA Guidelines requires that an Environmental Impact Report (EIR) "discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." A project would be considered to have a direct impact on growth should it require the construction of new housing. A project would be considered to have an indirect impact on growth if it would involve a substantial construction effort with short or long-term employment requirements such as the building of a new commercial complex. A project may also be considered growth-inducing if it removed an obstacle to additional growth development, such as the creation of new utilities or service facilities which would create an excess of resources that could eventually be filled by new development.

The elimination of either physical or regulatory obstacles to population growth is considered to be a growth-inducing impact. A physical obstacle to population growth typically involves the lack of public service infrastructure. The extension of public service infrastructure including roadways, water mains, and sewer lines into areas not currently provided with these services is expected to support new development. Similarly, the elimination of, or change to, a regulatory obstacle, including existing growth and development policies, can result in new population growth.

Growth inducing impacts would be similar to those previously identified in the 2008 PEIR. As described in Section 6.0 of the 2008 PEIR, the construction and operation of the 2017 CSMP would not affect the employment patterns in the Study Area. Construction would be temporary, and the majority of workers would come from the San Diego area. Contractors who live outside the County would stay at existing local hotels during construction. Project operation and maintenance would be accomplished by current City employees, and would not necessitate the creation of new jobs. The 2017 CSMP would not increase demand for new housing, or result in induced growth.

Planning for the 2017 CSMP is based on the latest regional growth forecasts developed by the San Diego Association of Governments (SANDAG) and is consistent with the adopted land uses defined in the City of Vista 2030 General Plan (GP 2030 Update) and the current land use plans of other jurisdictions within the sewer service area boundaries (e.g. San Diego County). Future build-out flows were derived based on the highest density zoning allowed for each parcel within the City of Vista's and Buena Sanitation District's service areas.

Proposed condition-related replacement and rehabilitation improvements would maximize the integrity of the existing sewer collection system. These non-capacity related improvements would not directly or indirectly induce growth, but rather minimize risk of upset of the sewer system while accommodating the demands of the population, consistent with the City of Vista's and adjacent jurisdictions zoning and SANDAG Designated Land Uses.

The 2017 CSMP includes capacity-related improvements, which would involve the replacement and upsizing of existing sewer collection pipelines to meet existing and future (projected) capacity deficiencies. Capacity deficiencies of the existing sewer system may result due to changes in discharges from existing users, and/or can be in part due to growth and addition of new discharges. The objective and intent of the 2017 CSMP is to reduce the potential for sewer overflows consistent with State requirements and the City's adopted Sanitary Sewer Management Plan, and to maintain

and/or enhance existing sanitary sewer collection service. Based on these considerations, no direct or indirect growth inducing impacts are associated with the adoption of the 2017 CSMP.

8 Significant Irreversible Changes

Section 15126.2(c) of the CEQA Guidelines requires an EIR to address any significant irreversible environmental changes that may occur as a result of project implementation. Implementation of the 2017 CSMP would require irreversible commitment of natural resources including construction materials; labor; and energy required for construction, operation, and maintenance. Commitment of nonrenewable natural resources used in construction would include gravel, petroleum products, steel, and others. Commitment of energy resources for construction would include fuel oil, natural gas, and gasoline for heavy machinery. Operation and maintenance of the 2017 CSMP would result in further commitment of energy resources in the form of fossil fuels.

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9 Document Preparation

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John Hamilton, AICP	Environmental Planner

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Eric Scherch, P. E.	Condition Assessment
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Appendix A. NOP and Comment Letters

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City of Vista

NOTICE OF PREPARATION
SUPPLEMENTAL PROGRAM ENVIRONMENTAL IMPACT REPORT
FOR CITY OF VISTA AND BUENA SANITATION DISTRICT
2017 COMPREHENSIVE SEWER MASTER PLAN
STATE CLEARINGHOUSE NUMBER: 2007091072

MARCH 24, 2017

The City of Vista (City) is preparing a Supplemental Program Environmental Impact Report (EIR) for its 2017 Comprehensive Sewer Master Plan (CSMP) Update in accordance with the California Environmental Quality Act (CEQA) Guidelines. The City will serve as the lead agency for the preparation of the EIR, which will supplement the City's previously certified Program EIR.

This notice is issued pursuant to Section 15082 of the State CEQA Guidelines. It is intended to inform those persons and organizations that may be concerned with the environmental effects of the CSMP Update. Those public agencies with specific statutory responsibilities are requested to indicate their specific role in the CEQA review and/or approval process.

Because of the time limits mandated by state law, responses should be sent at the earliest possible date, but no later than 30 days after receipt of this notice. Please send your response in by April 24, 2017 (5:00 pm) to:

City of Vista
Engineering Department
200 Civic Center Drive
Vista, CA 92084

Attn: Elmer Alex, Principal Engineer
Phone: (760) 643-5416
E-mail: ealex@cityofvista.com

INTRODUCTION

The City is responsible for maintenance, operation, and management of both the City's and Buena Sanitation District's (District) wastewater (or sanitary sewer) collection systems. The City Council is the governing body over the City and District's sewer collection system(s) per County Resolution No. 98-289 (County of San Diego 1998). The City's Department of Public Works (DPW) is specifically tasked with the operation and maintenance of the sewer collection system, which serves approximately 23,070 permitted connections and conveys an annual average flow of 5.4 million gallons per day (MGD) from Vista and 1.5 MGD from the District. Table 1 provides the total annual flow for 2015 and 2016. All sewage collected within the City's system is conveyed to the Encina Wastewater Authority (EWA) for treatment and disposal.

Table 1: Annual Sanitary Sewer Flows

Year	City of Vista Avg. Annual Flow (MGD)	Buena Sanitation District Avg. Annual Flow (MGD)	Total Combined Avg. Annual Flow (MGD)
2015	4.89	1.98	6.87
2016	5.36	1.48	6.84

In 2008, the City certified a Final Program EIR (SCH No. 2007091072) for the City's 2008 Sewer Master Plan Update (SMPU). The Program EIR addressed the environmental impacts associated with the 2008 SMPU, which was an update to *the City of Vista and Buena Sanitation District Infrastructure Review Summary and Wastewater Master Plan Update* prepared in July 2001/2003. The purpose of the 2008 SMPU was to update and identify a prioritized Capital Improvement Program (CIP) that addressed the capacity and condition-related improvement projects necessary to maintain a safe and reliable operation of the sanitary sewer collection system consistent with State regulations. The 2008 SMPU CIP recommended improvement projects over a 20-year planning period. The previously certified Program EIR addressed the potential environmental consequences of implementing the 2008 SMPU CIP.

In 2016, the City proceeded with an update to its 2008 SMPU. The current update includes revised hydraulic modeling of all sewer collection facilities combined with a condition assessment analysis. The 2017 CSMP provides a set of recommended projects for inclusion in the City's overall CIP and identifies a number of projects from the 2008 SMPU that are no longer needed. The 2017 CSMP projects include improvements resulting from the condition assessment, such as pipeline replacements and/or rehabilitation, and capacity-related upgrades (e.g. pipe up-sizing). Additionally, the CSMP identifies operations and maintenance (O&M) activities that would be implemented in conjunction with the CSMP over the next 20 years.

PROJECT LOCATION

The City is located in the northwestern part of San Diego County, California (see Figure 1). The geographic area covered by the proposed CSMP is similar to that covered in the 2008 SMPU and includes areas within the City limits, portions of neighboring cities, including Oceanside, Carlsbad, and San Marcos, and unincorporated areas in the County of San Diego (see Figure 2). The proposed Study Area for the EIR is illustrated in Figure 2 and includes the City and District's service area and two areas in the vicinity of the Vista/Carlsbad and Buena Interceptors; west of the City's service area.

PROJECT GOALS AND OBJECTIVES

The proposed CSMP is intended to update the City's 2008 SMPU. The City's goal in preparing the 2017 CSMP is to update and refine the prioritized CIP projects that address the capacity and condition-related improvements necessary to maintain a safe and reliable sanitary sewer collection system. The 2017 CSMP will also include prioritization of improvements included in the City's O&M Program. The following objectives have been identified for the CSMP:

- Reduce the potential for sewer overflows consistent with State requirements;
- Implement facility improvements based on age, material, and condition-related infrastructure;
- Maintain and/or enhance existing sanitary sewer collection service;

- Prioritize a list of CIP projects for capacity, replacement, and rehabilitation; and
- Prioritize a list of projects and activities for inclusion in the O&M projects.

PROJECT DESCRIPTION

The 2017 CSMP builds on and refines the previous 2008 SMPU by providing a set of recommended projects for inclusion in the City's CIP and O&M Program. The CIP component of the CSMP includes a combination of capacity improvements to address undersized pipelines and replacement/rehabilitation improvements to address pipelines in poor condition. Additionally, where feasible alternatives exist, the City may consider alternate alignments for existing facilities located in waterways or restricted by poor access. The timing for construction for individual projects identified in the CIP and O&M Program would occur over a 20 year period (through 2037), contingent on available funding.

Capacity-Related CIP Projects. The City has identified a total of 14 capacity-related projects in the CSMP, 7 within the City and 7 within the District; which is a decrease from the 20 projects previously identified in the 2008 SMPU. These projects are further prioritized for near-term or future construction based on localized capacity needs. All capacity-related CIP projects include the replacement and upsizing of existing sewerage collection pipelines. These improvements would be installed via traditional trenching methods except in instances where sensitive biological or cultural resources are present. In these instances, trenchless construction methods may be employed.

Non-Capacity-Related CIP Projects. Similar to the 2008 SMPU, the CSMP includes the rehabilitation or replacement of all ductile iron pipe (DIP) and non-vitrified clay pipe (VCP) or polyvinyl chloride (PVC) pipes along with pipes over 45 years in age. City standards also require the replacement of all 6-inch pipes with 8-inch pipes. Under the proposed CSMP, approximately 85,045 linear feet (or 16.1 miles) of existing pipe are proposed for rehabilitation or replacement with no corresponding increase in capacity. Installation methods for these improvements would be similar to the capacity improvements.

O&M Program. The O&M Program provides a continuation of the City's existing condition assessment program consistent with the City's adopted Sanitary Sewer Management Plan (SSMP, 2014). The condition assessment program is a combination of wet-weather flow measurement, televised inspections, smoke testing, and aboveground inspections on a 5- to 10-year program basis.

The City's O&M Program consists of the operation and maintenance of the existing (and upgraded) sanitary sewer collection system. Typical activities include routine patrolling, inspections, and emergency repair. The City's Wastewater Maintenance Division would continue to be responsible for cleaning all small diameter sewer mains annually and trunk sewer every five years via cleaning and flushing activities to reduce the potential for sanitary sewer overflows (SSOs) or spills.

Other components of the O&M Program include the replacement/rehabilitation of the City's existing pumping stations, including the Buena Vista, Buena Creek, and Raceway pumping facilities. In addition, the repair, upgrade, and rehabilitation of existing access roads would occur under the O&M Program on an as-needed basis.

ENVIRONMENTAL DOCUMENT

In accordance with CEQA and the CEQA Guidelines, the City will prepare a Supplemental Program EIR for the 2017 CSMP. The Supplemental Program EIR will focus its analysis (per CEQA Guidelines Sections 15163) on how the CSMP recommended improvements may result in new significant impacts or a substantial increase in the severity of a significant impact previously identified in the 2008 Program EIR. Additionally, the Supplemental Program EIR may consider new or updated mitigation measures adopted as part of the City's General Plan Update, completed in 2012.

POTENTIALLY SIGNIFICANT EFFECTS

In accordance with CEQA Guidelines 15163, a Lead Agency may choose to prepare a supplement to an EIR if: (1) any of the conditions described in Section 15162 would require the preparation of a subsequent EIR, and (2) only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation. Further, the supplement to an EIR need contain only the information necessary to make the previous EIR adequate for the project as revised. Based on these requirements, the environmental issues considered in the Supplemental Program EIR will include the following:

- Air Quality
- Biological Resources
- Cultural Resources
- Greenhouse Gases
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Transportation and Circulation

Environmental issue areas that were previously addressed in the 2008 Program EIR and require no further analysis include the following:

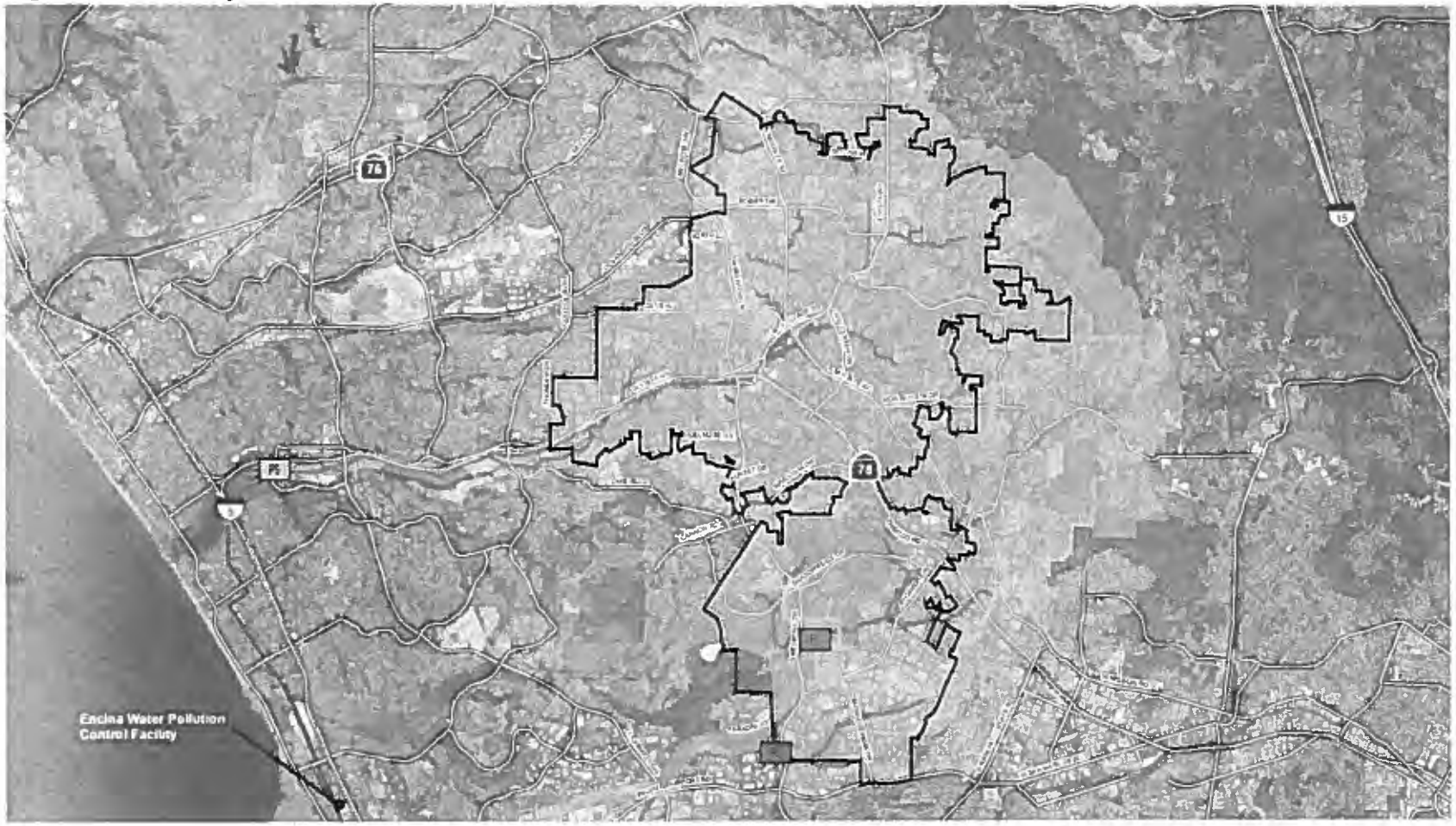
- Aesthetics
- Geology and Soils
- Mineral Resources
- Recreation
- Public Services
- Utilities and Service Systems

Level of Environmental Review

The proposed CSMP will be analyzed at a program level. Subsequent (or second-tier) activities and projects within the scope of the proposed CSMP will be evaluated to determine whether project-level impacts are adequately covered in the programmatic analysis or if additional CEQA review is necessary.

Figure 1: Regional Map

Figure 2: EIR Study Area



2017 Comprehensive Sewer Master Plan

Summary of NOP Comments

Name of Commenter	Issues Raised
Native American Heritage Commission	• Project compliance with Assembly Bills 18 and 52.
San Diego County Parks and Recreation	• Potential impacts to Rancho Guajome Adobe County Park.
Department of Toxic Substances Control	• Requests that the EIR identify and determine whether current or historic uses at the project site may have resulted in any release of hazardous wastes/substances. • If any recognized environmental conditions are in the project area, then proper investigation, sampling and remedial actions shall be overseen by appropriate regulatory agencies prior to any new development or construction. • Lead-based paints, mercury, and asbestos containing materials shall be addressed in accordance with all applicable laws and regulations if buildings are modified/demolished. • Proper evaluation is required if project development involves soil export/import. • Potential requirement to obtain a National Pollutant Discharge Elimination System permit from the Regional Water Quality Control Board. • Requests that the EIR identify how any required investigation and/or remediation will be conducted, and the appropriate agency to provide regulatory oversight.
Preserve Calavera	• Potential impacts to Buena Vista Creek Valley. • Integration of planning for sewer lines and trails. • Minimize impacts of sewer lines through habitat. • Recommends looking at alternative transportation as opportunities to improve the project and provide additional public benefits.
California Department of Transportation	• Any worked performed within Caltrans right-of-way will require discretionary review and approval by Caltrans and an encroachment permit will be required for any work within the Caltrans right-of-way prior to construction.
Rincon Band of Luiseño Indians	• Project is located within the historic Luiseno territory and within Rincon's specific area of cultural interest.

	• Recommends that the EIR include a mitigation measure that a Native American Monitor be present for all ground disturbing activities.

STATE OF CALIFORNIA
NATIVE AMERICAN HERITAGE COMMISSION
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Edmund G. Brown Jr., Governor

March 30, 2017

Elmer Alex
City of Vista, Engineering Department
200 Civic Center Drive
Vista, CA 92084

sent via e-mail:
ealex@cityofvista.com

RE: SCH# 2007091072; Comprehensive Sewer Master Plan Project, Notice of Preparation for Draft Environmental Assessment, San Diego County, California

Dear Mr. Alex:

The Native American Heritage Commission has received the Notice of Preparation (NOP) for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000 et seq.), specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, § 15064.5 (b) (CEQA Guidelines Section 15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared. (Pub. Resources Code § 21080 (d); Cal. Code Regs., tit. 14, § 15064 subd.(a)(1) (CEQA Guidelines § 15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a **separate category of cultural resources**, "tribal cultural resources" (Pub. Resources Code § 21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment (Pub. Resources Code § 21084.2). Please reference California Natural Resources Agency (2016) "Final Text for tribal cultural resources update to Appendix G: Environmental Checklist Form," http://resources.ca.gov/ceqa/docs/ab52/Clean-final-AB-52-App-G-text-Submitted.pdf. Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code § 21084.3 (a)). **AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. § 800 et seq.) may also apply.

The NAHC recommends **lead agencies consult with all California Native American tribes** that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments. **Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.**

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a **lead agency** shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
    a. A brief description of the project.
    b. The lead agency contact information.
    c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code § 21080.3.1 (d)).

d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code § 21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A **lead agency** shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code § 21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or environmental impact report. (Pub. Resources Code § 21080.3.1(b)).
   a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18). (Pub. Resources Code § 21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
   a. Alternatives to the project.
   b. Recommended mitigation measures.
   c. Significant effects. (Pub. Resources Code § 21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
   a. Type of environmental review necessary.
   b. Significance of the tribal cultural resources.
   c. Significance of the project's impacts on tribal cultural resources.
   d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code § 21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 6254 (r) and 6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code § 21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
   a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
   b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code section 21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code § 21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:
   a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
   b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code § 21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code section 21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code section 21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code § 21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code section 21084.3 (b). (Pub. Resources Code § 21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:
    i. Planning and construction to avoid the resources and protect the cultural and natural context.
    ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
    i. Protecting the cultural character and integrity of the resource.
    ii. Protecting the traditional use of the resource.
    iii. Protecting the confidentiality of the resource.
c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
d. Protecting the resource. (Pub. Resource Code § 21084.3 (b)).
e. Please note that a federally recognized California Native American tribe or a nonfederally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code § 815.3 (c)).
f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code § 5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An environmental impact report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
    a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 21080.3.2.
    b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
    c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code section 21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code § 21082.3 (d)).

    This process should be documented in the Cultural Resources section of your environmental document.

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires **local governments** to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code § 65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code § 65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code section 65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code sections 5097.9 and 5097.993 that are within the city's or county's jurisdiction. (Gov. Code § 65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason,

we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
   - **a.** If part or all of the APE has been previously surveyed for cultural resources.
   - **b.** If any known cultural resources have been already been recorded on or adjacent to the APE.
   - **c.** If the probability is low, moderate, or high that cultural resources are located in the APE.
   - **d.** If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
   - **a.** The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
   - **b.** The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   - **a.** A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   - **b.** A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   - **a.** Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, section 15064.5(f) (CEQA Guidelines section 15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   - **b.** Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   - **c.** Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5, subdivisions (d) and (e) (CEQA Guidelines section 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

Please contact me if you need any additional information at gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton, M.A., PhD.
Associate Governmental Program Analyst

cc: State Clearinghouse

Elmer,

Do you happen to have the location of the potential projects? We want to make sure there are no potential impacts to Rancho Guajome Adobe County Park, which is located in the northwest corner of the City of Vista.

Thanks in advance for your help.

Thank you,
Marcus Lubich, MPA
Park Project Manager
San Diego County Parks and Recreation
5500 Overland Avenue, Suite 410
San Diego, CA 92123
(858) 966-1348 office | (858)378-3878 cell
(858) 495-5841 fax www.sdparks.org

From: Vertino, Timothy
Sent: Wednesday, March 29, 2017 10:09 AM

Subject: IJN Review - Comprehensive Sewer Master Plan - City of Vista

Interjurisdictional Notice		
	Comments Due to Timothy Vertino by 04/13/2017	
04/13/2017	**NOTICE OF PREPARATION SUPPLEMENTAL PROGRAM ENVIRONMENTAL IMPACT REPORT, City of Vista and Buena Sanitation District 2017 Comprehensive Sewer Master Plan** **Lead Agency:** City of Vista **NOTICE:** http://www.cityofvista.com/home/showdocument?id=10434 **Project Location:** The geographic area covered by the proposed CSMP is similar to that covered in the 2008 SMPU and includes areas within the City limits, portions of neighboring cities, including Oceanside, Carlsbad, and San Marcos, and unincorporated areas in the County of San Diego (see Figure 2 - attached). **Project Description:** The 2017 CSMP builds on and refines the previous 2008 SMPU by providing a set of recommended projects for inclusion in the City's Capital Improvement Plan (CIP) and Operation and Maintenance (O&M) Program. The CIP component of the CSMP includes a combination of capacity improvements to address undersized pipelines and replacement/rehabilitation improvements to address pipelines in poor condition. Additionally, where feasible alternatives exist, the City may consider alternate alignments for existing facilities located in waterways or restricted by poor access. The timing for construction for individual projects identified in the CIP and O&M Program would occur over a 20 year period, contingent on available funding. **IJN Accela Code:** PDS2016-MISC-16-047 **Guidance for Responses:** To maximize the value of your input, please consider the following: • In your comments, please clearly identify the specific issues on which you are commenting. If you are commenting on a particular word, phrase, or sentence, please provide the page number and paragraph citation. • Also, please note: if there any impacts in the unincorporated county, in your comments please distinguish if the impacts are to: o Privately-owned lands in the unincorporated county, and/or County-owned lands/resources etc.	City of Vista

Timothy Vertino
Land Use/Environmental Planner, Advance Planning
County of San Diego - Planning & Development Services
5510 Overland Avenue Suite 310
San Diego, CA 92123
858-495-5468

Department of Toxic Substances Control

Matthew Rodriquez
Secretary for
Environmental Protection

Barbara A. Lee, Director
5796 Corporate Avenue
Cypress, California 90630

Edmund G. Brown Jr.
Governor

April 4, 2017

Mr. Elmer Alex
Principal Engineer
Engineering Department
City of Vista
200 Civic Center Drive
Vista, California 92084

NOTICE OF PREPARATION (NOP) FOR A DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) FOR COMPREHENSIVE SEWER MASTER PLAN PROJECT (SCH# 2007091072)

Dear Mr. Alex:

The Department of Toxic Substances Control (DTSC) has reviewed the subject NOP. The following project description is stated in the NOP: "The 2017 CSMP builds on and refines the previous 2008 SMPU by providing a set of recommended projects for inclusion in the City's CIP and O&M Program. The CIP component of the CSMP includes a combination of capacity improvements to address undersized pipelines and replacement/rehabilitation improvements to address pipelines in poor condition. Additionally, where feasible alternatives exist, the City may consider alternate alignments for existing facilities located in waterways or restricted by poor access. The timing for construction for individual projects identified in the GIP and O&M Program would occur over a 20 year period (through 2037), contingent on available funding."

Based on the review of the submitted document DTSC has the following comments:

1. The EIR should identify and determine whether current or historic uses at the project site may have resulted in any release of hazardous wastes/substances. A Phase I Environmental Site Assessment may be appropriate to identify any recognized environmental conditions.

2. If there are any recognized environmental conditions in the project area, then proper investigation, sampling and remedial actions overseen by the appropriate regulatory agencies should be conducted prior to the new development or any construction.

3. If the proposed project involves the demolition of existing structures, lead-based paints or products, mercury, and asbestos containing materials (ACMs) should be addressed in accordance with all applicable and relevant laws and regulations if buildings are modified/demolished.

4. If the project development involves soil export/import, proper evaluation is required. If soil contamination is suspected or observed in the project area, then excavated soil should be sampled prior to export/disposal. If the soil is contaminated, it should be disposed of properly in accordance with all applicable and relevant laws and regulations. In addition, if imported soil was used as backfill onsite and/or backfill soil will be imported, DTSC recommends proper evaluation/sampling is necessary to ensure the backfill material is free of contamination.

5. If the project plans include discharging wastewater to a storm drain, you may be required to obtain an NPDES permit from the overseeing Regional Water Quality Control Board (RWQCB).

6. If during construction/demolition of the project, soil and/or groundwater contamination is suspected, construction/demolition in the area should cease and appropriate health and safety procedures should be implemented. If it is determined that contaminated soil and/or groundwater exist, the SEIR should identify how any required investigation and/or remediation will be conducted, and the appropriate government agency to provide regulatory oversight.

If you have any questions regarding this letter, please contact me at (714) 484-5476 or email at Johnson.Abraham@dtsc.ca.gov.

Sincerely,

for Johnson P. Abraham
Project Manager
Brownfields Restoration and School Evaluation Branch
Brownfields and Environmental Restoration Program - Cypress

kl/sh/ja

cc: See next page.

cc: Governor's Office of Planning and Research (via e-mail)
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044
State.clearinghouse@opr.ca.gov

Mr. Guenther W. Moskat, Chief (via e-mail)
Planning and Environmental Analysis Section
CEQA Tracking Center
Department of Toxic Substances Control
Guenther.Moskat@dtsc.ca.gov

Mr. Dave Kereazis (via e-mail)
Office of Planning & Environmental Analysis
Department of Toxic Substances Control
Dave.Kereazis@dtsc.ca.gov

Mr. Shahir Haddad, Chief (via e-mail)
Schools Evaluation and Brownfields Cleanup
Brownfields and Environmental Restoration Program - Cypress
Shahir.Haddad@dtsc.ca.gov

CEQA# 2007091072

From: Diane Nygaard [mailto:dnygaard3@gmail.com]
Sent: Monday, April 24, 2017 12:11 PM
To: Elmer Alex <ealex@ci.vista.ca.us>
Subject: Comments on NOP 2017 Comprehensive Sewer Master Plan

Hi Mr. Alex

Our comments on the NOP for this project include the following:

- Buena Vista Creek Valley

The old shared sewer line along Buena Vista Creek extends outside the city limits through the Buena Vista Creek Valley. Part of the valley was acquired for conservation in 2007 (Buena Vista Creek Ecological Reserve) just before the last update of the master plan. Since then substantial additional hardline habitat has been added. This valley includes a priceless combination of natural, cultural and historic resources. It is a major concern of ours that the last sewer spill in this area (that we are aware of) occurred in December of 2010- and the required mitigation for the impacts to the biological resources has yet to be done.

The old line through this valley should be a high priority for replacement and hopefully will be done early in the schedule. But we are concerned about assurances about mitigation for this 2010 sewer spill, others that might occur between now and completion of a new line, and the assumed temporary impacts from replacing the rest of this old line.

In addition the CA Department of Fish and Wildlife has special conditions associated with impacts to the BVCER- they must include funding for in perpetuity management of any on-site mitigation. This is an unusual condition- but one that should be specifically noted in your project bio assessment and mitigation measures.

- integration of planning for sewer lines and trails

In the areas where this makes sense we encourage you to look for opportunities to plan sewer lines as public trails. This can be an important way to increase the use of alternative transportation without causing any increased impacts to habitat. Since Buena Vista Creek is identified as a focus area in the General Plan update there may be some particular areas to increase connectivity that also support the GP and improved circulation.

- minimizing impacts of sewer lines through habitat

Since many old sewer lines were gravity flow they often follow or cross creeks where spills can be very damaging. Wetlands protection requires first avoid impacts, then minimize then mitigate. We would like to see robust efforts to actually avoid impacts.

- Recreation

This was identified as not being included in the CEQA evaluation for this update. We encourage you to actually look at alternative transportation, including what might just otherwise be

considered recreational trails - as opportunities to improve this project and provide additional public benefits- as well as reducing community GHG. A more robust project should be providing for enhanced transportation/recreation and in that circumstance might add some impacts.

Diane Nygaard
Preserve Calavera

Sanchez Rangel, Rogelio@DOT

From: Sanchez Rangel, Rogelio@DOT
Sent: Monday, April 24, 2017 1:41 PM
To: 'ealex@cityofvista.com'
Cc: Armstrong, Jacob M@DOT (jacob.armstrong@dot.ca.gov)
Subject: SR-78 Vista Sewer Master Plan
Attachments: SR.78.Vista.Sewer.Master.Plan.pdf

Hi Elmer,

Attached please find a copy of the comment letter for the Sewer Master Plan Project.

Thank you

Roger Sanchez
Caltrans D11
Development Review Branch
roger.sanchez-rangel@dot.ca.gov
Tel (619) 688-6494

DEPARTMENT OF TRANSPORTATION
DISTRICT 11
PLANNING DIVISION
4050 TAYLOR STREET, M.S. 240
SAN DIEGO, CA 92110
PHONE (619) 688-6960
FAX (619) 688-4299
TTY 711

Serious drought.
Help save water!

April 24, 2017

11-SD-78
PM VAR
SCH 2007091072
Comprehensive Sewer Master Plan

Mr. Elmer Alex
City of Vista, Engineering Department
200 Civic Center Drive
Vista, CA 92084

Dear Mr. Alex:

The California Department of Transportation (Caltrans) appreciates the opportunity to review the Notice of Preparation (NOP) for the Vista Comprehensive Sewer Master Plan.

Any work performed within Caltrans right-of-way (R/W) will require discretionary review and approval by Caltrans and an encroachment permit will be required for any work within the Caltrans R/W prior to construction.

If you have any questions, please contact Roger Sanchez, of the Caltrans Development Review Branch, at (619) 688-6494.

Sincerely,

JACOB ARMSTRONG, Chief
Development Review Branch

From: Vincent Whipple [mailto:vwhipple@RinconTribe.org]
Sent: Monday, April 24, 2017 5:15 PM
To: Elmer Alex <ealex@ci.vista.ca.us>
Subject: Supplemental Program EIR for City of Vista and Buena Sanitation District, 2017 Comprehensive Sewer Master Plan (2007091072) [heur]

RE: Supplemental Program EIR for City of Vista and Buena Sanitation District, 2017 Comprehensive Sewer Master Plan (2007091072)

Dear Elmer Alex:

This message is sent on behalf of the Rincon Band of Luiseno Indians. We have received the notice of March 24, 2017 regarding the above named project. The identified project location is within the historic Luiseno Territory and it is also situated within Rincon's specific area of cultural interest. Embedded in the Luiseno Territory are Rincon's history, culture, and identity.

The project is in our Traditional Use Area, and we believe there is the potential for cultural findings, including the possibility of inadvertent discoveries. Due to the likelihood of ground disturbances during the project's construction, we recommend as a mitigation measure that a Native American Monitor be present for all ground disturbing activities.

Thank you for the opportunity to comment and to protect and preserve our Luiseno cultural heritage.

Vincent Whipple
Cultural Resources Manager
Rincon Band of Luiseno Indians
760-297-2635

Appendix B. Condition Project Categories

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Table 1 - Hardscape

2017 Condition CIP Projects	Project Category	Length	Insp_Date2
B01019-B01020	Hardscape	477	2012
B01090-B01091	Hardscape	96	2009
B02080-B02081	Hardscape	300	2007
B03060-B03061	Hardscape	397	2008
B03128-B03129	Hardscape	277	2011
B03156-B03157	Hardscape	183	2011
B03157-B03166.F0	Hardscape	123	2011
B04032-B04033	Hardscape	171	2008
B04047-B04048	Hardscape	280	2007
B04054.J0-B04054.K0	Hardscape	47	2009
B08030-B08032	Hardscape	365	2008
B08065.D0-B08065	Hardscape	54	2010
B09002-B09003	Hardscape	269	2009
B09074-B09075	Hardscape	113	2009
B09077-B09078	Hardscape	326	2009
B10020-B10021	Hardscape	225	2008
B11077-B11078	Hardscape	163	2008
B11095-B11096	Hardscape	160	2009
B13043-B13222.B0	Hardscape	317	2008
B13103.E0-B13103.G0	Hardscape	202	2010
B13105.A0-B13105	Hardscape	162	2011
B13189-B13190	Hardscape	165	2010
B13213-B13214	Hardscape	217	2011
B14078-B14079	Hardscape	343	2012
B14095-B14097	Hardscape	263	2009
B14171-B14172	Hardscape	73	2008
B14183-B14184	Hardscape	50	2014
OV4004-OV4005	Hardscape	5	2011
OV4028.A0-OV4028	Hardscape	75	2011
V01006-V01007	Hardscape	201	2008
V01024-V01050	Hardscape	326	2009
V02010-V02011	Hardscape	325	2008
V02011-V02014	Hardscape	259	2010
V02012.A0-V02012.B0	Hardscape	345	2008
V02012.H0-V02012.L0	Hardscape	152	2008
V02059-V02062	Hardscape	321	2007
V03017-V03019	Hardscape	320	2015
V03055-V03060	Hardscape	179	2008
V03062-V03063	Hardscape	250	2008
V03065-V03072	Hardscape	225	2008
V03086-V03088	Hardscape	248	2008
V03088-V03096	Hardscape	336	2008
V03095-V03096	Hardscape	126	2008
V03153.C0-V03153	Hardscape	217	2008

V03157-V03158	Hardscape	236	2008
V03166.B0-V03166	Hardscape	413	2008
V03172-V03173	Hardscape	332	2010
V03174-V03175	Hardscape	257	2009
V03177-V03180	Hardscape	181	2008
V03182-V03183	Hardscape	243	2009
V04001-V04002	Hardscape	159	2013
V04005-V04006	Hardscape	263	2013
V04023-V04024	Hardscape	293	2013
V04026-V04031	Hardscape	98	2013
V04028.D0-V04030.C0	Hardscape	293	2007
V04033-V04034	Hardscape	172	2013
V04044-V04060	Hardscape	350	2013
V04078-V04079	Hardscape	223	2013
V05026.A0-V05026	Hardscape	141	2012
V05026-V05027	Hardscape	163	2009
V05038-V05039	Hardscape	100	2008
V05039-V05040	Hardscape	312	2008
V05040-V05041	Hardscape	28	2008
V05041.A0-V05041.B0	Hardscape	189	2008
V05052-V05057	Hardscape	252	2008
V05074.A0-V05074	Hardscape	100	2014
V05105-V05106	Hardscape	201	2008
V06005-V06008	Hardscape	130	2011
V06009-V06017	Hardscape	94	2011
V06011-V06014	Hardscape	353	2012
V06014-V06015	Hardscape	306	2012
V06016-V06017	Hardscape	290	2012
V06030-V06031	Hardscape	337	2008
V06043-V06045	Hardscape	366	2008
V06044-V06045	Hardscape	341	2015
V06068-V06069	Hardscape	183	2006
V06072-V06074	Hardscape	50	2006
V06075-V06089	Hardscape	175	2006
V06078-V06079	Hardscape	183	2011
V07014-V07015	Hardscape	328	2008
V07052-V07053	Hardscape	124	2008
V07053-V07054	Hardscape	301	2008
V08001-V08002	Hardscape	180	2011
V08004.A0-V08004	Hardscape	270	2011
V08035-V08036	Hardscape	202	2006
V08037-V08134	Hardscape	290	2011
V08040-V08042	Hardscape	221	2011
V08045-V08049	Hardscape	260	2009
V08047-V08048	Hardscape	200	2011
V08048-V08049	Hardscape	250	2011
V08061-V08138	Hardscape	144	2011

V08081-V08084	Hardscape	465	2008
V08085-V08089	Hardscape	377	2007
V08086-V08087	Hardscape	300	2011
V08087-V08088	Hardscape	209	2011
V08088-V08089	Hardscape	341	2011
V08089-V08090	Hardscape	333	2011
V08105-V08109	Hardscape	323	2011
V08136-V08137	Hardscape	257	2008
V09009-V09010	Hardscape	349	2011
V09014-V09015	Hardscape	199	2011
V09015-V09016	Hardscape	239	2009
V09022-V09023	Hardscape	348	2011
V09028-V09029	Hardscape	428	2011
V09030-V09031	Hardscape	148	2011
V09044-V09045	Hardscape	225	2011
V09051-V09052	Hardscape	460	2011
V09052-V09053	Hardscape	455	2011
V10003-V10006	Hardscape	348	2008
V10010-V10011	Hardscape	270	2009
V10015-V10016	Hardscape	350	2010
V10046-V10047	Hardscape	308	2010
V10055-V10056	Hardscape	307	2010
V10056-V10058	Hardscape	270	2010
V10058-V10060	Hardscape	60	2010
V10059-V10060	Hardscape	131	2010
V10060-V10061	Hardscape	276	2010
V10111-V10113.A0	Hardscape	200	2009
V10112-V10113	Hardscape	330	2009
V10118-V10119	Hardscape	141	2009
V10123-V10124	Hardscape	237	2009
V10129-V10130	Hardscape	257	2013
V11008-V11009	Hardscape	225	2008
V11011-V11013	Hardscape	406	2009
V11014-V11015	Hardscape	291	2009
V11064-V11065	Hardscape	315	2008
V11088.A0-V11088	Hardscape	301	2008
V11106-V11107	Hardscape	324	2009
V11123-V10141.A0	Hardscape	308	2007
V12002-V12003	Hardscape	72	2010
V12008-V12013	Hardscape	265	2009
V12009-V12011	Hardscape	150	2015
V12021-V12022	Hardscape	420	2006
V12022.B0-V12022	Hardscape	399	2008
V12032-V12034	Hardscape	256	2015
V12036-V12037	Hardscape	161	2012
V12040.A0-V12040	Hardscape	230	2008
V12040-V12041	Hardscape	96	2008

V12059-V12060	Hardscape	196	2008
V12066-V12067	Hardscape	304	2008
V12067-V12068	Hardscape	399	2008
V12080-V12081	Hardscape	116	2009
V12092-V12093	Hardscape	131	2011
V12106-V12108	Hardscape	306	2015
V12114-V12115	Hardscape	174	2009
V12125-V12057	Hardscape	229	2008
V13014-V13015	Hardscape	181	2009
V13026-V13027	Hardscape	113	2008
V13029-V13030	Hardscape	224	2009
V13031-V13032	Hardscape	92	2009
V13032-V13033	Hardscape	214	2009
V13035-V13036	Hardscape	100	2008
V13046-V13047	Hardscape	162	2010
V13047-V13049	Hardscape	79	2010
V13050-V13051	Hardscape	308	2009
V13057-V13058	Hardscape	83	2008
V13059-V13060	Hardscape	131	2010
V13066-V13067	Hardscape	20	2010
V13069-V13070	Hardscape	160	2010
V13079-V13080	Hardscape	183	2008
V13091-V13092	Hardscape	290	2008
V13102-V13103	Hardscape	245	2010
V13108-V13109	Hardscape	328	2010
V13109-V13110.A0	Hardscape	248	2010
V13119-V13120	Hardscape	240	2010
V13124-V13125	Hardscape	163	2010
V13134-V13135	Hardscape	460	2010
V14001-V14002	Hardscape	113	2009
V14002-V14003	Hardscape	70	2009
V14011-V14012	Hardscape	133	2010
V14019-V14020	Hardscape	230	2008
V14023-V14024	Hardscape	159	2009
V14077.B0-V14077.C0	Hardscape	319	2009
V14084-V14085	Hardscape	337	2009
V14106-V14107	Hardscape	250	2008
V14122.B0-V14122.A0	Hardscape	324	2008
V15050-V15076	Hardscape	115	2008
V15077-V15078	Hardscape	249	2008
V15084-V15085	Hardscape	206	2008
V15090-V15091	Hardscape	309	2009
V15110-V15134	Hardscape	166	2010
V15116-V15117	Hardscape	399	2010
V15118-V15119	Hardscape	330	2010
V15134-V15111	Hardscape	176	2010
V16022-V16023	Hardscape	191	2008

V16028-V16029	Hardscape	133	2015
V16029-V16031	Hardscape	150	2015
V16039-V16050	Hardscape	53	2008
V16049-V16050	Hardscape	66	2008
V17015-V17016	Hardscape	270	2008
V17050-V17051	Hardscape	325	2008
V19087-V19088	Hardscape	350	2008
V19090-V19091	Hardscape	126	2008
V20003-V20004	Hardscape	248	2006
V20005-V20007	Hardscape	325	2008
V20014-V20015	Hardscape	248	2009
V20037-V20040	Hardscape	243	2008
V21189-V21190	Hardscape	231	2009
V22017-V22018	Hardscape	115	2012
V22033-V22034	Hardscape	188	2008
V22039-V22040	Hardscape	130	2008
V22058-V22059	Hardscape	119	2011
V22059-V22060	Hardscape	73	2011
V22066-V22067	Hardscape	77	2011
V22070-V22071	Hardscape	179	2007
V22082-V22083	Hardscape	102	2011
V22088-V22089	Hardscape	306	2011
V22089-V22091	Hardscape	225	2011
V22091-V22092	Hardscape	235	2011
V22113-V22114	Hardscape	221	2008
V22118-V22119	Hardscape	280	2011
V22120-V22121	Hardscape	103	2011
V22123-V22124	Hardscape	364	2011
V22129-V22130	Hardscape	177	2011
V22131-V22132	Hardscape	403	2011
V22132-V22133	Hardscape	139	2009
V22136-V22144	Hardscape	388	2011
V22141-V22142	Hardscape	300	2011
V22142-V22143	Hardscape	152	2011
V22144-V22145	Hardscape	307	2007
V23002-V23003	Hardscape	72	2010
V23007-V23008	Hardscape	256	2008
V23026-V23027	Hardscape	118	2010
V23029-V23030	Hardscape	120	2008
V23040-V23067	Hardscape	309	2008
V23060-V23061	Hardscape	112	2008
V23061-V23062	Hardscape	267	2008
V23068-V23086	Hardscape	155	2008
V23093.J0-V23093	Hardscape	135	2010
V23097-V23099	Hardscape	203	2010
V23101-V23102	Hardscape	256	2008
V23103-V23105	Hardscape	261	2008

V23104-V23105	Hardscape	164	2008
V23105-V23132	Hardscape	270	2008
V23108-V23109	Hardscape	387	2008
V23120-V23121	Hardscape	217	2008
V23123-V23124	Hardscape	195	2009
V23124-V23126	Hardscape	222	2009
V23140-V23141	Hardscape	273	2008
V23146-V23147	Hardscape	158	2008
V23147-V23153	Hardscape	382	2008
V23152-V23153	Hardscape	309	2008
V23161-V23162	Hardscape	196	2009
V23164-V23165	Hardscape	325	2008
V23165-V23169	Hardscape	129	2008
V23171-V23172	Hardscape	247	2006
V23177-V23178	Hardscape	208	2010
V23178-V23179	Hardscape	300	2010
V23185-V23186	Hardscape	239	2009
V23204-V23205	Hardscape	210	2010
V23207-V23208	Hardscape	215	2010
V23210-V23211	Hardscape	379	2010
V24001-V24004	Hardscape	80	2014
V24014-V24015	Hardscape	250	2014
V24015-V24016	Hardscape	717	2014
V24019-V24020	Hardscape	107	2014
V24020-V24021.A0	Hardscape	126	2014
V24021.A0-V24021	Hardscape	145	2014
V24021-V24025	Hardscape	121	2014
V24024-V24025	Hardscape	179	2009
V24029-V24030	Hardscape	29	2013
V24030-V24031	Hardscape	188	2011
V24032-V24033	Hardscape	179	2014
V24034-V24035	Hardscape	473	2014
V24038.A0-V24038	Hardscape	255	2014
V24042-V24043	Hardscape	225	2014
V24054.G0-V24054.K0	Hardscape	130	2014
V24054.H0-V24054.I0	Hardscape	79	2007
V24063-V24064.A0	Hardscape	208	2012
V24064-V24066	Hardscape	257	2014
V24076-V24077	Hardscape	209	2010
V24078-V24081	Hardscape	210	2008
V24081-V24082	Hardscape	316	2014
V25051-V25052	Hardscape	321	2012
V26057-V26058	Hardscape	187	2011
V26065-V26066	Hardscape	85	2011
V26075-V26076	Hardscape	222	2008
V26084-V26085	Hardscape	375	2011
V26085-V26086	Hardscape	190	2011

V26088-V26089	Hardscape	3	2011
V26098-V26099	Hardscape	142	2011
V26120-V26121	Hardscape	207	2011
V26128-V26129	Hardscape	152	2011
V26141-V26142	Hardscape	45	2011
V26146-V26147.F0	Hardscape	43	2011
V26202-V26203	Hardscape	255	2011
V26207-V26208	Hardscape	130	2007
V26210-V26213	Hardscape	117	2011
V26223-V26225	Hardscape	125	2011
V26226-V26227	Hardscape	74	2011
V26234-V26235	Hardscape	364	2011
V28023-V28037	Hardscape	287	2012
V28026-V28027	Hardscape	163	2013
V28028-V28029	Hardscape	55	2013
V28037-V28038	Hardscape	345	2013
V28063-V28064	Hardscape	38	2013
V28068-V28069	Hardscape	108	2007
V28078-V28079	Hardscape	128	2013
V28082-V28083	Hardscape	140	2013
V28128-V28129	Hardscape	210	2007
V28134-V28135	Hardscape	373	2013
V29023-V29024	Hardscape	216	2008
V29024-V29031	Hardscape	250	2008
V29056-V29063	Hardscape	281	2008
V29064-V29065	Hardscape	329	2008
V29067-V29068	Hardscape	308	2009
V29069-V29071	Hardscape	12	2008
V29070-V29071	Hardscape	345	2008
V29075-V29077	Hardscape	157	2008
V29083-V29084	Hardscape	241	2008
V29092-V29093	Hardscape	254	2007
V29094-V29095	Hardscape	162	2007
V29098-V29099	Hardscape	236	2008
V29099-V29100	Hardscape	117	2014
V29102-V29103	Hardscape	79	2008
V29103-V29104	Hardscape	390	2008
V29106-V29109	Hardscape	161	2008
V30016-V30017	Hardscape	300	2011
V30024-V30025	Hardscape	196	2009
V30026-V30027.E0	Hardscape	335	2009
V30044-V30050	Hardscape	363	2007
V30055-V30056.A0	Hardscape	152	2008
V31006-V31007	Hardscape	251	2016
V31023-V31024	Hardscape	178	2015
V31024-V31025	Hardscape	294	2015
V31028-V31030	Hardscape	213	2015

V31034-V31035	Hardscape	90	2007
V31041-V31042	Hardscape	266	2007
V31043-V31044	Hardscape	42	2007
V31045-V31047	Hardscape	178	2007
V31046-V31047	Hardscape	100	2007
V31048-V31049	Hardscape	235	2015
V31068-V31070	Hardscape	107	2009
V31070-V31071	Hardscape	182	2012
V31071-V31072	Hardscape	77	2012
V31102-V31106	Hardscape	391	2008
V31107-V31108	Hardscape	285	2016
V31109-V31110	Hardscape	362	2016
V31111-V31116.F0	Hardscape	342	2016
V31138-V31139	Hardscape	103	2015
V32032-V32033	Hardscape	196	2008
V33135-V33143	Hardscape	135	2008

Table 2 - Cross-Country

2017 Condition CIP Projects	Project Category	Length	Insp_Date2
B09088-B09089	Cross-Country	293	2009
B10025-B10026	Cross-Country	364	2009
B11034-B11035	Cross-Country	335	2008
V01061-V32153	Cross-Country	380	2008
V02025.C0-V02025	Cross-Country	158	2007
V03117-V03118	Cross-Country	349	2007
V09003-V09004	Cross-Country	337	2006
V17005-V17006	Cross-Country	347	2009
V17064-V17065	Cross-Country	83	2006
V18021-V18022	Cross-Country	330	2009
V18023.F0-V18023	Cross-Country	149	2008
V19054-V19055	Cross-Country	390	2006
V26019-V26020	Cross-Country	156	2011
V26067-V26068	Cross-Country	217	2011
V29040-V29041	Cross-Country	309	2008
V29043-V29044	Cross-Country	242	2008
V29044-V29045.C0	Cross-Country	376	2008
V29049-V29145	Cross-Country	303	2008
V29129-V29139	Cross-Country	357	2008
V30062-V30078	Cross-Country	291	2009
V31033-V31034	Cross-Country	290	2015
V32027-V32029	Cross-Country	290	2009
V32049-V32162	Cross-Country	52	2008
V32122-V32170	Cross-Country	312	2009
V33144-V33146	Cross-Country	346	2008

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Appendix C. 2008 MMRP

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Biological Resources	
BIO-1	Construction monitoring shall be conducted in order to avoid unintended impacts to sensitive resources. A qualified biologist shall review construction techniques including the Storm Water Pollution Prevention Plan (SWPPP) and related Best Management Practices (BMPs), lighting, and construction timing in relation to breeding seasons. Marking of construction area limits with single-strand wire, high-visibility plastic construction fencing or high-visibility construction tape shall be included where sensitive biological resources are present. Marking devices shall be passable by wildlife if it is located within a wildlife corridor. Equipment laydown areas, vehicle turn-around areas, pads for the placement of large equipment and similar areas designated for construction activity shall be included within the marked disturbance area. A qualified biologist shall attend the pre-construction meeting, monitor construction on an as-needed basis, and shall have the authority to stop construction if permit conditions are not met. The biologist shall provide a construction monitoring report to the City within 90 days of completion of construction.
BIO-2	~~Avoidance of~~ Impacts to special-status species and habitats potentially supporting special-status species shall be avoided and minimized to the maximum extent practicable through project relocation, redesign, or specific construction techniques. Both permanent and temporary impacts shall be avoided or minimized; thus permanent access roads shall be located in the least environmentally damaging, practicable location and shall be of a minimum width. Construction techniques shall be selected based on both direct and indirect impacts to special-status biological resources are avoided or minimized to the maximum extent practicable, to the satisfaction of the City of Vista Planning Department.
BIO-3	For projects with the potential of impacting seasonally detectable plant species listed by the USFWS or CDFG, covered by a local HCP/NCCP, or listed by CNPS as List 1 or 2, focused surveys for such species shall be conducted at the appropriate time of year, depending on the species. Where feasible, avoidance and minimization of impacts to rare, threatened, or endangered plants will be employed. If avoidance and/or minimization of impacts cannot be achieved, tunneling and/or boring underneath sensitive plant populations shall be analyzed at the project level as potential mitigation measures to avoid or minimize impacts to sensitive plant species. Indirect impacts to plant species, including depletion of water and hydrologic regime quality, shall be avoided through the use of BMPs, including strict limitations for all construction and maintenance activities within the identified impact area. For unavoidable impacts, translocation or propagation of sensitive plant species shall be conducted. If translocation is not feasible, then offsite conservation of the sensitive plant species at a 4:1 ratio shall be implemented. Conservation shall include recordation of a conservation easement and implementation of a long-term management plan.
BIO-4	The Biological Resources Technical Report for a specific project component may suggest further study as to the presence/absence of threatened, endangered or otherwise sensitive species. Focused surveys shall occur in accordance with USFWS/CDFG protocols; impacts shall be documented in a report. This focused survey report shall include an analysis of impacts, both direct (*i.e.*, removal of habitat or species) and indirect (*i.e.*, noise disturbances), avoidance and minimization mechanisms, and mitigation measures. Mitigation for the identified direct impacts can be achieved through habitat replacement, as identified in mitigation

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	measures under Threshold of Significance No. 2. In addition to like habitat replacement, additional mitigation shall be required in order to reduce impacts to specific state- and federally-listed threatened or endangered species to below a level of significance. It should be noted that due to the state and/or federal listing status of the following species, a take authorization permit per the state and/or federal Endangered Species Act shall be necessary for project construction (unless the area of impact is within a jurisdiction with an adopted HCP/NCCP that includes take authorization for the species; if so, see mitigation measures under Threshold of Significance No. 5). Mitigation measures for state- or federally-listed species with a moderate to high likelihood to occur within some portion of the sewer master plan study area include the following: • ***California gnatcatcher:*** Should the biological resources technical report suggest California gnatcatcher habitat exists onsite, additional surveys, in accordance with federal protocols, shall be required to determine the exact location of nesting and foraging habitat. Survey results shall be documented in a focus species survey report which shall also include recommendations for avoidance of impacts, minimization of impacts and mitigation. All impacts to the federally-threatened California gnatcatchers shall be mitigated at a minimum 1:1 ratio (based on number of pairs impacted) and a 2:1 ratio (based on acreage of habitat impacted) (i.e. habitat that supports gnatcatchers must be mitigated through the conservation of like habitat at a minimum 2:1 ration and conserved habitat mustthat also supports the at least the same number of gnatcatcher pairs as being impacted All clearing and grubbing within suitable habitat shall occur outside the breeding season of the California gnatcatcher (*i.e.*, between February 15 and August 31) unless nesting surveys conducted within 72 hours confirm lack of breeding activity. In addition, prior to construction activities, a qualified biologist shall survey the preserved habitat areas adjacent to the project site (up to 500 feet) to determine if any gnatcatcher nests are within a distance potentially affected by noise from these activities. If no nesting gnatcatchers are located, no additional measures need to be taken to mitigate indirect impacts. However, if nesting coastal California gnatcatcher are observed, no activity shall occur without noise attenuation (e.g., noise barriers) to ensure that noise levels within occupied habitat do not exceed 60 dBA Leq. • ***Western snowy plover, peregrine falcon, California brown pelican, Belding's savannah sparrow, golden eagle, white-tailed kite, light-footed clapper rail, California least tern, southwestern willow flycatcher and least Bell's vireo:*** Should the Biological Resources Technical Report suggest applicable habitat for these species exists onsite, additional nesting bird surveys, in accordance with federal protocol, shall be required in the year that project grading or construction commences. Survey results shall be documented in a focus species survey report which shall also include recommendations for avoidance of impacts, minimization of impacts and mitigation. If any of these species are found, avoidance through appropriate construction techniques and facility maintenance activities shall be required (*i.e.*, avoidance of construction during nesting season or reduction of all noise impacts to a level below 60 CNEL in construction areas during the breeding season). Further, any permanent loss of nesting habitat for these bird species shall be mitigated at a 1:1 ratio of occupied habitat including the replacement of like habitat. Should purchase of off-

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[illegible]	MITIGATION MEASURES
	site habitat be the only option for mitigation, purchase shall occur in areas that supports at least a 1:1 ratio of the impacted species. The same noise mitigation described for the California gnatcatcher shall apply for indirect impacts to these nesting bird species within 500 feet of construction. • ***Other State- of Federally-listed Wildlife Species***: All other state- or federally-listed wildlife species are considered to have low potential to occur within the sewer master plan study area due to lack of current documented occurrences in or near the study area. If any of these species is found within a project component site, avoidance of impacts will likely be required because the locality will likely represent an expansion in the range of highly threatened species and therefore would be a high priority for conservation.
BIO-5	For unavoidable temporary impacts to sensitive natural communities or riparian habitat, the habitat area shall be restored and conserved at a 1:1 ratio. Temporary impacts include areas where no future maintenance is required. A Conceptual Habitat Restoration Plan shall be prepared prior to construction. Such a plan shall be prepared by persons with expertise in southern California ecosystems and native plant revegetation techniques. Each plan shall include, at a minimum: (a) assessment of the impact site and conservation potential (b) the plant species to be used (c) a schematic depicting the mitigation area (d) time of year that planting will occur (e) a description of the irrigation methodology (f) measures to control exotic vegetation on site (g) success criteria (h) a detailed monitoring and maintenance program (I) contingency measures shall be the success criteria not be met (j) identification of the entity(ies) that will guarantee achieving the success criteria and provide for conservation of the mitigation site in perpetuity
BIO-6	For unavoidable permanent impacts to sensitive natural upland communities, the habitat area shall be mitigated through the conservation (i.e., placement of conservation easement and implementation of long-term management plan) in accordance with the ratios below (unless specified differently in an adopted HCP/NCCP in the applicable jurisdiction): (a) Coastal sage scrub (including disturbed coastal sage scrub and other associated upland scrub species): 2:1 (b) Southern Mixed Chaparral: 2:1 (c) Native Grasslands: 3:1 (d) Non-native Grasslands: 0.5:1 (e) Oak Woodlands: 3:1 (f) Maritime Succulent Scrub/Maritime Chaparral: 3:1

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	For project segments that are constructed in jurisdictions where an HCP/NCCP Subarea Plan has yet to be adopted, impacts to moderate or high-value coastal sage scrub habitat occupied by the coastal California gnatcatcher will require an Interim Habitat Loss Permit (HLP) in accordance with Section 4(d) of the federal Endangered Species Act (ESA). Impacts to unoccupied, low-value habitat of less than 1.0 acre, will require and HLP Exemption. Either scenario requires mitigation through one or more of the following options: acquisition and preservation of habitat, dedication of lands, management agreements, habitat restoration, payment of fees, transfer of development rights or other measures approved by CDFG or USFWS. Mitigation by off-site land acquisition must meet the following criteria: **(1)** contains existing coastal sage/maritime succulent scrub of sufficient size and habitat quality to match or exceed the value of the area to be affected; **(2)** is located adjacent to or in close proximity to publicly owned/preserve natural lands or planned natural open space; **(3)** contributes to the implementation of the applicable MHCP/NCCP and applicable conservation planning goals; **(4)** contains sensitive plant and animal taxa in numbers approximating those that will be affected and **(5)** is predominantly undisturbed in nature. The City of Vista's first priority or preference is to ensure that the conservation area(s) is/are within the City or its unincorporated areas. For lands within the City of Vista, credit authorization will be required from the City if CSS is affected. The City does not possesses credit under Section 4(d) of the ESA for the MHCP, which allocated interim take credits of CSS until the Subarea Plan is adopted. Therefore credits must be allocated by the County of San Diego through an exchange process administered by the County. This process generally involves payment of habitat acquisition fees or purchase of conservation of land in the County. However, based on a November 2, 2007, letter, the USFWS has suspended interim take allowance under Section 4(d) for all MHCP participants, except the City of Oceanside. Based on this current suspension, interim take under Section 4(d), including take that involves that allocation of credits from the County of San Diego, is not allowed within the City of Vista. Until such time as interim take in reinstated or a subregional HCP/NCCP is adopted, any loss of coastal sage scrub would require evaluation under Section 7 or Section 10 of the federal ESA. Based on that evaluation, a Biological Opinion or Habitat Conservation Plan may be required.
BIO-7	For projects affecting riparian areas or wetlands, mitigation for unavoidable permanent impacts shall be developed prior to project implementation pursuant to consultation and permitting requirements of the ACOE, RWQCB and CDFG for issuance of federal Clean Water Act Section 404/401 permits and state Section 1600 Streambed Alteration Agreements. Mitigation will be provided through habitat creation/restoration (at a minimum 1:1 ratio) and additional habitat creation/restoration or enhancement, as required. Habitat creation/restoration and/or enhancement will be outlined in a Conceptual Wetlands Mitigation and Monitoring Plan that shall include, at a minimum the following components: (a) assessment of the mitigation site and conservation potential (b) the plant species to be used (c) a schematic depicting the mitigation area (d) time of year that planting will occur (e) a description of the irrigation methodology

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	(f) measures to control exotic vegetation on site (g) success criteria (h) a detailed monitoring and maintenance program (I) contingency measures shall be the success criteria not be met (j) identification of the entity(ies) that will guarantee achieving the success criteria and provide for conservation of the mitigation site in perpetuity k) preparation of a cost estimate for installation (typically a 120-day period), initial maintenance and monitoring (typically a 5-year period), and long-term maintenance, monitoring, and management (in perpetuity) for the mitigation site Unless specified differently in an adopted HCP/NCCP in the applicable jurisdiction, the following mitigation ratios (including a minimum 1:1 habitat creation/restoration, with the remainder satisfied through creation/restoration or enhancement) shall apply to each type of disturbed habitat (ACOE or CDFG may require additional mitigation through the permitting process): (a) Intertidal, tidal, tidal marsh, and mudflats: 4:1 (b) Southern willow scrub, southern sycamore-alder riparian, southern riparian scrub, southern cottonwood-willow riparian, south coast live oak riparian and other woody-riparian habitats: 3:1 (c) Mulefat scrub and alkali marsh:2:1 (d) Freshwater marsh, unvegetated stream channels, open water: 1:1
BIO-8	If a project component is located within a wildlife movement corridor, construction shall be timed in such a manner as to reduce potential impacts to wildlife. Depending on the species using the area, construction hours may be restricted, noise may be capped at 60 dB during peak movement periods or in cases where the entire corridor is temporarily blocked, an alternative passage route will be established. Design of these mitigation measures shall occur through the consultation of a qualified biologist.
BIO-9	Currently the only local policy or ordinance protecting biological resources is within the City of Carlsbad through the HMP Implementation Ordinance. As such, project components with the HMP area shall demonstrate compliance with the HMP conservation provisions and acquire an HMP permit from the City of Carlsbad.
BIO-10	Biological Resources Technical Reports for project components that may affect natural vegetation shall evaluate affects on the adopted MHCP. Although the cities of Vista, Oceanside and San Marcos have not adopted Subarea Plan or received take authorization, project components shall be designed in a manner which does not preclude the assemblage of regional preserves in compliance with the adopted MHCP. Project components may require redesign or limited permanent access routes in order to meet MHCP regional preserve design goals and objectives.
Cultural Resources	
CULT-1	An archaeological survey of each project component identified in *Table S-1* shall be completed by a qualified archaeologist. This survey shall include a review of records information or an updated records search to locate all previously recorded archaeological sites within the project area. Any historic or prehistoric sites identified during the survey shall be recorded at the South Coastal Information Center, or, if already recorded, updated forms shall be submitted.
CULT-2	If the pipeline or related construction activities will potentially impact an archaeological site, a testing program shall be required to

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	fully record the resources, and to evaluate the site. The testing program shall include mapping of all site features and artifacts, and subsurface excavations (shovel test pits or test units) to search for subsurface deposits of cultural materials and assess the content of the deposits. Related laboratory work shall be conducted to treat the materials that are recovered from any archaeological investigations.
CULT-3	A technical report shall be prepared that presents all of the information gathered from the survey and any site investigations. The report shall identify any significant cultural resources and evaluate the potential impacts to those resources. If any site evaluated as significant will be impacted by a proposed project, additional mitigation measures shall be required to reduce the level of impacts. These mitigation measures shall include one of the following: • A data recovery program to recover sufficient cultural materials to exhaust the research potential of the site such that construction will no longer represent a source of adverse impacts; or, • Demonstration that the construction corridor can be relocated away from the significant cultural site(s), thereby avoiding significant effects.
CULT-4	Implementation of mitigation measures must be part of the conditions of approval of any pipeline or facilities improvement project that is identified as potentially impacting significant cultural resources. Data recovery shall be employed whenever a grading or trenching project will directly impact an archaeological site. This process shall include the excavation of a sufficiently large percentage of a subsurface deposit that the research potential of the deposit will be exhausted. Typically, a 5 to 15 percent sample within the trench corridor will be required to complete the data recovery process. Laboratory analysis and research will also be conducted to catalog and analyze all materials and to interpret the data.
CULT-5	Indirect impacts may be identified for pipeline projects where the actual grading and trenching are situated adjacent to a significant resource. In cases where construction activities intrude into sites by construction equipment, impacts may be mitigated by placing a temporary fence around the site to curtail any intrusions into the site area. Indirect impacts must be addressed during the initial archaeological survey and testing phase of work, with measures adopted as conditions of approval.
CULT-6	Project components that pass through or near recorded archaeological sites or which will be constructed through areas where resources may be encountered shall require archaeological monitoring. Monitoring of construction grading and trenching will facilitate the identification of any unrecorded resources uncovered by the excavation process. In the event that such resources are discovered, work at that location shall be suspended while the archaeological deposit is evaluated. If this evaluation process confirms the deposit is significant, mitigation measures will be required to complete a data recovery program. Any mitigation measures must be approved by the City before implementation.
CULT-7	If human remains are encountered on the project site, all work must stop in the immediate vicinity of the discovered remains and the County Coroner and a qualified archaeologist must be notified immediately so that an evaluation can be performed. If the remains are deemed to be Native American and prehistoric, the Native American Heritage Commission must be contacted by the Coroner so that a Most Likely Descendant can be designated.

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Hydrology and Water Quality	
WQ-1	The mitigation measure listed below shall be implemented in order to reduce impacts to 303(d) listed water bodies • Potential water quality impacts to 303(d) listed water bodies will be assessed as part of project level water quality analyses for each individual project component with a potential to affect these water bodies.
WQ-2	Mitigation measures listed below shall be implemented in order to reduce impacts to jurisdictional waters • Prior to construction, the City of Vista shall obtain all necessary permits to comply with the federal Clean Water Act, state discharge permitting requirements, and local grading ordinances. Copies of each permit shall be maintained at the project site for the duration of construction. • Biological Resources mitigation measure BIO-7 provides mitigation for projects affecting federally protected wetlands. This mitigation measure also applies in order to reduce impacts to jurisdictional waters. See *Section 4.3, Biological Resources.*
WQ-3	For projects proposed within the 100-year floodplain, a scour analysis of the floodplains associated with the Buena Vista and Agua Hedionda Creeks shall be completed during final project design to determine the likelihood for washout of a pipeline or project facility during a flood event. Design and construction specification of the pipeline will incorporate recommendation from the report to ensure that potential impacts from scouring do not comprise the integrity of the pipeline.

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Appendix D. AQ-GHG Outputs

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Vista 2017 CSMP

San Diego Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	14.22	1000sqft	0.33	14,221.00	0
Other Asphalt Surfaces	7.75	Acre	7.75	337,590.00	0
Other Non-Asphalt Surfaces	1.06	Acre	1.06	46,173.60	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2019
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Vista 2017 CSMP - San Diego Air Basin, Summer

Project Characteristics -

Land Use -

Construction Phase - Assume pipeline construction fleet operates all year. Info needs indicate two simultaneous projects. Assume PS takes place first half of year, access road in second.

Off-road Equipment - Assume pipeline fleet without trench equipment

Off-road Equipment -

Off-road Equipment - Due to small active construction area relative to fleet size for construction projects, it is assumed each individual piece of equipment would operate an average of 4 hours per day.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Trips and VMT - PS Building construction vendor trips adjusted from 65 default. Avg daily trips rate on page 23 is 426. ADT = 30 (15 workers, one two-way trip per worker). 10 two way hauling trips * 2 = 20 haul trips per day

Demolition - Demolition - 14,221 sf (BVPS)

Grading - Material imported/exported=0, covered by truck trips. Total acres disturbed: pipelines (7.75 acres), unrefrigerated warehouse for PS (14,221 sf/0.33 acres), non-asphalt parking lot for access road (1.06 acre) = total 9.14 acres

Architectural Coating - Exterior coating surface assumes 2 coats on each of four exterior walls. Based on total square footage of 14,221 feet and height of 38 feet, it is assumed each wall is 4,560 sf of area to be coated

Vehicle Trips - Long term maintenance: Up to 15 crew (30 daily trips) for existing and proposed facilities (includes maintenance, landscaping, inspections, etc.). average trip length - 15 miles

Energy Use - The new emergency generators are relocated from another facility as part of another project, so no increase as a result of this project.

Water And Wastewater - pump stations = no indoor water use

Solid Waste - pump stations = no solid waste generation

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	7,111.00	36,480.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	21,332.00	0.00
tblArchitecturalCoating	ConstArea_Parking	23,026.00	0.00
tblConstructionPhase	NumDays	20.00	18.00
tblConstructionPhase	NumDays	230.00	26.00

Vista 2017 CSMP - San Diego Air Basin, Summer

tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	20.00	261.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	20.00	45.00
tblEnergyUse	LightingElect	1.70	0.00
tblEnergyUse	NT24E	1.11	0.00
tblEnergyUse	NT24NG	0.11	0.00
tblEnergyUse	T24E	0.92	0.00
tblEnergyUse	T24NG	1.57	0.00
tblGrading	AcresOfGrading	261.00	7.75
tblGrading	AcresOfGrading	21.50	0.33
tblGrading	AcresOfGrading	67.50	1.06
tblLandUse	BuildingSpaceSquareFeet	14,220.00	14,221.00
tblLandUse	LandUseSquareFeet	14,220.00	14,221.00
tblOffRoadEquipment	HorsePower	402.00	158.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2018	2019

tblSolidWaste	SolidWasteGenerationRate	13.37	0.00
tblTripsAndVMT	HaulingTripNumber	65.00	20.00
tblTripsAndVMT	HaulingTripNumber	0.00	20.00
tblTripsAndVMT	HaulingTripNumber	0.00	20.00
tblTripsAndVMT	HaulingTripNumber	0.00	20.00
tblTripsAndVMT	HaulingTripNumber	0.00	20.00
tblTripsAndVMT	VendorTripNumber	65.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	30.00
tblTripsAndVMT	WorkerTripNumber	45.00	30.00
tblTripsAndVMT	WorkerTripNumber	15.00	30.00
tblTripsAndVMT	WorkerTripNumber	167.00	30.00
tblTripsAndVMT	WorkerTripNumber	33.00	30.00
tblTripsAndVMT	WorkerTripNumber	35.00	30.00
tblVehicleTrips	CC_TL	7.30	15.00
tblVehicleTrips	CNW_TL	7.30	15.00
tblVehicleTrips	CW_TL	9.50	15.00
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	1.68	2.11
tblWater	IndoorWaterUseRate	3,288,375.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	28.8584	113.3532	64.0090	0.1255	15.6137	5.2902	20.9038	8.4149	4.8791	13.2940	0.0000	12,585.3434	12,585.3434	3.6762	0.0000	12,677.2493
Maximum	**28.8584**	**113.3532**	**64.0090**	**0.1255**	**15.6137**	**5.2902**	**20.9038**	**8.4149**	**4.8791**	**13.2940**	**0.0000**	**12,585.3434**	**12,585.3434**	**3.6762**	**0.0000**	**12,677.2493**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	28.8584	113.3532	64.0090	0.1255	15.6137	5.2902	20.9038	8.4149	4.8791	13.2940	0.0000	12,585.3434	12,585.3434	3.6762	0.0000	12,677.2492
Maximum	**28.8584**	**113.3532**	**64.0090**	**0.1255**	**15.6137**	**5.2902**	**20.9038**	**8.4149**	**4.8791**	**13.2940**	**0.0000**	**12,585.3434**	**12,585.3434**	**3.6762**	**0.0000**	**12,677.2492**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6039	2.0000e-005	2.3700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.0400e-003	5.0400e-003	1.0000e-005		5.3800e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0829	0.3832	1.1936	4.0000e-003	0.3241	4.3000e-003	0.3284	0.0866	4.0500e-003	0.0907		405.1115	405.1115	0.0208		405.6305
Total	**0.6868**	**0.3832**	**1.1960**	**4.0000e-003**	**0.3241**	**4.3100e-003**	**0.3284**	**0.0866**	**4.0600e-003**	**0.0907**		**405.1165**	**405.1165**	**0.0208**	**0.0000**	**405.6359**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6039	2.0000e-005	2.3700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.0400e-003	5.0400e-003	1.0000e-005		5.3800e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0829	0.3832	1.1936	4.0000e-003	0.3241	4.3000e-003	0.3284	0.0866	4.0500e-003	0.0907		405.1115	405.1115	0.0208		405.6305
Total	**0.6868**	**0.3832**	**1.1960**	**4.0000e-003**	**0.3241**	**4.3100e-003**	**0.3284**	**0.0866**	**4.0600e-003**	**0.0907**		**405.1165**	**405.1165**	**0.0208**	**0.0000**	**405.6359**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Pump Station Demolition	Demolition	1/1/2018	2/28/2018	5	43	
2	Pipelines	Grading	1/1/2018	12/31/2018	5	261	
3	Pump Station Grading	Grading	3/1/2018	4/30/2018	5	43	
4	PS Building Construction	Building Construction	5/1/2018	6/5/2018	5	26	
5	PS Architectural Coating	Architectural Coating	6/6/2018	6/30/2018	5	18	
6	Access Road	Grading	7/1/2018	8/31/2018	5	45	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 8.81

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 36,480; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pump Station Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Pump Station Demolition	Excavators	3	8.00	158	0.38
Pump Station Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Pipelines	Bore/Drill Rigs	1	4.00	221	0.50

Pipelines	Cement and Mortar Mixers	1	4.00	9	0.56
Pipelines	Concrete/Industrial Saws	1	4.00	81	0.73
Pipelines	Cranes	1	4.00	231	0.29
Pipelines	Excavators	1	4.00	158	0.38
Pipelines	Graders	2	4.00	187	0.41
Pipelines	Off-Highway Trucks	2	4.00	402	0.38
Pipelines	Pavers	1	4.00	130	0.42
Pipelines	Rollers	1	4.00	80	0.38
Pipelines	Rubber Tired Dozers	2	4.00	247	0.40
Pipelines	Scrapers	1	4.00	367	0.48
Pipelines	Tractors/Loaders/Backhoes	3	4.00	97	0.37
Pipelines	Trenchers	1	4.00	78	0.50
Pump Station Grading	Excavators	1	8.00	158	0.38
Pump Station Grading	Graders	1	8.00	187	0.41
Pump Station Grading	Rubber Tired Dozers	1	8.00	247	0.40
Pump Station Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
PS Building Construction	Cranes	1	7.00	231	0.29
PS Building Construction	Forklifts	3	8.00	89	0.20
PS Building Construction	Generator Sets	1	8.00	84	0.74
PS Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
PS Building Construction	Welders	1	8.00	46	0.45
PS Architectural Coating	Air Compressors	1	6.00	78	0.48
Access Road	Cement and Mortar Mixers	1	6.00	9	0.56
Access Road	Excavators	1	8.00	158	0.38
Access Road	Graders	2	6.00	187	0.41
Access Road	Off-Highway Trucks	2	6.00	158	0.38
Access Road	Pavers	1	6.00	130	0.42

Access Road	Rollers	1	6.00	80	0.38
Access Road	Rubber Tired Dozers	2	6.00	247	0.40
Access Road	Scrapers	1	6.00	367	0.48
Access Road	Tractors/Loaders/Backhoes	3	6.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Pump Station Demolition	6	30.00	0.00	20.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pipelines	18	30.00	0.00	20.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pump Station Grading	6	30.00	0.00	20.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
PS Building Construction	9	30.00	0.00	20.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
PS Architectural Coating	1	30.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Access Road	14	30.00	0.00	20.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Pump Station Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3296	0.0000	0.3296	0.0499	0.0000	0.0499			0.0000			0.0000
Off-Road	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048		3,871.7665	3,871.7665	1.0667		3,898.4344
Total	**3.7190**	**38.3225**	**22.3040**	**0.0388**	**0.3296**	**1.9386**	**2.2682**	**0.0499**	**1.8048**	**1.8547**		**3,871.7665**	**3,871.7665**	**1.0667**		**3,898.4344**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.2600e-003	0.1479	0.0305	3.7000e-004	8.1300e-003	5.8000e-004	8.7100e-003	2.2300e-003	5.6000e-004	2.7800e-003		40.6863	40.6863	3.5900e-003		40.7759
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1277	0.0920	1.0270	2.7000e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		269.1674	269.1674	9.2100e-003		269.3976
Total	**0.1320**	**0.2399**	**1.0575**	**3.0700e-003**	**0.2546**	**2.3500e-003**	**0.2569**	**0.0676**	**2.2000e-003**	**0.0698**		**309.8536**	**309.8536**	**0.0128**		**310.1736**

3.2 Pump Station Demolition - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3296	0.0000	0.3296	0.0499	0.0000	0.0499			0.0000			0.0000
Off-Road	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048	0.0000	3,871.7665	3,871.7665	1.0667		3,898.4344
Total	**3.7190**	**38.3225**	**22.3040**	**0.0388**	**0.3296**	**1.9386**	**2.2682**	**0.0499**	**1.8048**	**1.8547**	**0.0000**	**3,871.7665**	**3,871.7665**	**1.0667**		**3,898.4344**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.2600e-003	0.1479	0.0305	3.7000e-004	8.1300e-003	5.8000e-004	8.7100e-003	2.2300e-003	5.6000e-004	2.7800e-003		40.6863	40.6863	3.5900e-003		40.7759
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1277	0.0920	1.0270	2.7000e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		269.1674	269.1674	9.2100e-003		269.3976
Total	**0.1320**	**0.2399**	**1.0575**	**3.0700e-003**	**0.2546**	**2.3500e-003**	**0.2569**	**0.0676**	**2.2000e-003**	**0.0698**		**309.8536**	**309.8536**	**0.0128**		**310.1736**

3.3 Pipelines - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0536	0.0000	6.0536	3.3136	0.0000	3.3136			0.0000			0.0000
Off-Road	4.8197	53.3361	28.1089	0.0596		2.4566	2.4566		2.2714	2.2714		5,973.4654	5,973.4654	1.7851		6,018.0922
Total	**4.8197**	**53.3361**	**28.1089**	**0.0596**	**6.0536**	**2.4566**	**8.5102**	**3.3136**	**2.2714**	**5.5850**		**5,973.4654**	**5,973.4654**	**1.7851**		**6,018.0922**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.0000e-004	0.0244	5.0300e-003	6.0000e-005	1.3400e-003	1.0000e-004	1.4300e-003	3.7000e-004	9.0000e-005	4.6000e-004		6.7031	6.7031	5.9000e-004		6.7179
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1277	0.0920	1.0270	2.7000e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		269.1674	269.1674	9.2100e-003		269.3976
Total	**0.1284**	**0.1163**	**1.0320**	**2.7600e-003**	**0.2478**	**1.8700e-003**	**0.2497**	**0.0657**	**1.7300e-003**	**0.0675**		**275.8705**	**275.8705**	**9.8000e-003**		**276.1155**

3.3 Pipelines - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0536	0.0000	6.0536	3.3136	0.0000	3.3136			0.0000			0.0000
Off-Road	4.8197	53.3361	28.1089	0.0596		2.4566	2.4566		2.2714	2.2714	0.0000	5,973.4654	5,973.4654	1.7851		6,018.0922
Total	**4.8197**	**53.3361**	**28.1089**	**0.0596**	**6.0536**	**2.4566**	**8.5102**	**3.3136**	**2.2714**	**5.5850**	**0.0000**	**5,973.4654**	**5,973.4654**	**1.7851**		**6,018.0922**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.0000e-004	0.0244	5.0300e-003	6.0000e-005	1.3400e-003	1.0000e-004	1.4300e-003	3.7000e-004	9.0000e-005	4.6000e-004		6.7031	6.7031	5.9000e-004		6.7179
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1277	0.0920	1.0270	2.7000e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		269.1674	269.1674	9.2100e-003		269.3976
Total	**0.1284**	**0.1163**	**1.0320**	**2.7600e-003**	**0.2478**	**1.8700e-003**	**0.2497**	**0.0657**	**1.7300e-003**	**0.0675**		**275.8705**	**275.8705**	**9.8000e-003**		**276.1155**

3.4 Pump Station Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0302	0.0000	6.0302	3.3111	0.0000	3.3111			0.0000			0.0000
Off-Road	2.7733	30.6725	16.5770	0.0297		1.5513	1.5513		1.4272	1.4272		2,988.0216	2,988.0216	0.9302		3,011.2769
Total	**2.7733**	**30.6725**	**16.5770**	**0.0297**	**6.0302**	**1.5513**	**7.5815**	**3.3111**	**1.4272**	**4.7383**		**2,988.0216**	**2,988.0216**	**0.9302**		**3,011.2769**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.2600e-003	0.1479	0.0305	3.7000e-004	8.1300e-003	5.8000e-004	8.7100e-003	2.2300e-003	5.6000e-004	2.7800e-003		40.6863	40.6863	3.5900e-003		40.7759
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1277	0.0920	1.0270	2.7000e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		269.1674	269.1674	9.2100e-003		269.3976
Total	**0.1320**	**0.2399**	**1.0575**	**3.0700e-003**	**0.2546**	**2.3500e-003**	**0.2569**	**0.0676**	**2.2000e-003**	**0.0698**		**309.8536**	**309.8536**	**0.0128**		**310.1736**

3.4 Pump Station Grading - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0302	0.0000	6.0302	3.3111	0.0000	3.3111			0.0000			0.0000
Off-Road	2.7733	30.6725	16.5770	0.0297		1.5513	1.5513		1.4272	1.4272	0.0000	2,988.0216	2,988.0216	0.9302		3,011.2769
Total	**2.7733**	**30.6725**	**16.5770**	**0.0297**	**6.0302**	**1.5513**	**7.5815**	**3.3111**	**1.4272**	**4.7383**	**0.0000**	**2,988.0216**	**2,988.0216**	**0.9302**		**3,011.2769**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.2600e-003	0.1479	0.0305	3.7000e-004	8.1300e-003	5.8000e-004	8.7100e-003	2.2300e-003	5.6000e-004	2.7800e-003		40.6863	40.6863	3.5900e-003		40.7759
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1277	0.0920	1.0270	2.7000e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		269.1674	269.1674	9.2100e-003		269.3976
Total	**0.1320**	**0.2399**	**1.0575**	**3.0700e-003**	**0.2546**	**2.3500e-003**	**0.2569**	**0.0676**	**2.2000e-003**	**0.0698**		**309.8536**	**309.8536**	**0.0128**		**310.1736**

3.5 PS Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**		**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.0400e-003	0.2447	0.0505	6.2000e-004	0.0134	9.6000e-004	0.0144	3.6800e-003	9.2000e-004	4.6000e-003		67.2888	67.2888	5.9300e-003		67.4371
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1277	0.0920	1.0270	2.7000e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		269.1674	269.1674	9.2100e-003		269.3976
Total	**0.1347**	**0.3366**	**1.0774**	**3.3200e-003**	**0.2599**	**2.7300e-003**	**0.2626**	**0.0691**	**2.5600e-003**	**0.0716**		**336.4562**	**336.4562**	**0.0151**		**336.8347**

3.5 PS Building Construction - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**	**0.0000**	**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.0400e-003	0.2447	0.0505	6.2000e-004	0.0134	9.6000e-004	0.0144	3.6800e-003	9.2000e-004	4.6000e-003		67.2888	67.2888	5.9300e-003		67.4371
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1277	0.0920	1.0270	2.7000e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		269.1674	269.1674	9.2100e-003		269.3976
Total	**0.1347**	**0.3366**	**1.0774**	**3.3200e-003**	**0.2599**	**2.7300e-003**	**0.2626**	**0.0691**	**2.5600e-003**	**0.0716**		**336.4562**	**336.4562**	**0.0151**		**336.8347**

3.6 PS Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	23.4840					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	**23.7826**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.1171**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1277	0.0920	1.0270	2.7000e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		269.1674	269.1674	9.2100e-003		269.3976
Total	**0.1277**	**0.0920**	**1.0270**	**2.7000e-003**	**0.2464**	**1.7700e-003**	**0.2482**	**0.0654**	**1.6400e-003**	**0.0670**		**269.1674**	**269.1674**	**9.2100e-003**		**269.3976**

3.6 PS Architectural Coating - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	23.4840					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
Total	**23.7826**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.1171**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1277	0.0920	1.0270	2.7000e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		269.1674	269.1674	9.2100e-003		269.3976
Total	**0.1277**	**0.0920**	**1.0270**	**2.7000e-003**	**0.2464**	**1.7700e-003**	**0.2482**	**0.0654**	**1.6400e-003**	**0.0670**		**269.1674**	**269.1674**	**9.2100e-003**		**269.3976**

3.7 Access Road - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.0581	0.0000	9.0581	4.9680	0.0000	4.9680			0.0000			0.0000
Off-Road	5.3679	59.6674	33.8119	0.0600		2.8293	2.8293		2.6038	2.6038		6,027.9621	6,027.9621	1.8687		6,074.6803
Total	**5.3679**	**59.6674**	**33.8119**	**0.0600**	**9.0581**	**2.8293**	**11.8874**	**4.9680**	**2.6038**	**7.5719**		**6,027.9621**	**6,027.9621**	**1.8687**		**6,074.6803**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.0700e-003	0.1414	0.0292	3.6000e-004	7.7700e-003	5.6000e-004	8.3200e-003	2.1300e-003	5.3000e-004	2.6600e-003		38.8780	38.8780	3.4300e-003		38.9637
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1277	0.0920	1.0270	2.7000e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		269.1674	269.1674	9.2100e-003		269.3976
Total	**0.1318**	**0.2333**	**1.0561**	**3.0600e-003**	**0.2542**	**2.3300e-003**	**0.2565**	**0.0675**	**2.1700e-003**	**0.0697**		**308.0454**	**308.0454**	**0.0126**		**308.3613**

3.7 Access Road - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.0581	0.0000	9.0581	4.9680	0.0000	4.9680			0.0000			0.0000
Off-Road	5.3679	59.6674	33.8119	0.0600		2.8293	2.8293		2.6038	2.6038	0.0000	6,027.9621	6,027.9621	1.8687		6,074.6802
Total	**5.3679**	**59.6674**	**33.8119**	**0.0600**	**9.0581**	**2.8293**	**11.8874**	**4.9680**	**2.6038**	**7.5719**	**0.0000**	**6,027.9621**	**6,027.9621**	**1.8687**		**6,074.6802**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.0700e-003	0.1414	0.0292	3.6000e-004	7.7700e-003	5.6000e-004	8.3200e-003	2.1300e-003	5.3000e-004	2.6600e-003		38.8780	38.8780	3.4300e-003		38.9637
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1277	0.0920	1.0270	2.7000e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		269.1674	269.1674	9.2100e-003		269.3976
Total	**0.1318**	**0.2333**	**1.0561**	**3.0600e-003**	**0.2542**	**2.3300e-003**	**0.2565**	**0.0675**	**2.1700e-003**	**0.0697**		**308.0454**	**308.0454**	**0.0126**		**308.3613**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0829	0.3832	1.1936	4.0000e-003	0.3241	4.3000e-003	0.3284	0.0866	4.0500e-003	0.0907		405.1115	405.1115	0.0208		405.6305
Unmitigated	0.0829	0.3832	1.1936	4.0000e-003	0.3241	4.3000e-003	0.3284	0.0866	4.0500e-003	0.0907		405.1115	405.1115	0.0208		405.6305

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	30.00	0.00	0.00	109,141	109,141
Total	30.00	0.00	0.00	109,141	109,141

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	15.00	15.00	15.00	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.581689	0.044135	0.186694	0.113515	0.018244	0.005600	0.015197	0.022573	0.001888	0.002088	0.006279	0.000742	0.001357
Other Asphalt Surfaces	0.581689	0.044135	0.186694	0.113515	0.018244	0.005600	0.015197	0.022573	0.001888	0.002088	0.006279	0.000742	0.001357
Other Non-Asphalt Surfaces	0.581689	0.044135	0.186694	0.113515	0.018244	0.005600	0.015197	0.022573	0.001888	0.002088	0.006279	0.000742	0.001357

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6039	2.0000e-005	2.3700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.0400e-003	5.0400e-003	1.0000e-005		5.3800e-003
Unmitigated	0.6039	2.0000e-005	2.3700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.0400e-003	5.0400e-003	1.0000e-005		5.3800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1634					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4403					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.3000e-004	2.0000e-005	2.3700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.0400e-003	5.0400e-003	1.0000e-005		5.3800e-003
Total	**0.6039**	**2.0000e-005**	**2.3700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**5.0400e-003**	**5.0400e-003**	**1.0000e-005**		**5.3800e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1634					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4403					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.3000e-004	2.0000e-005	2.3700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.0400e-003	5.0400e-003	1.0000e-005		5.3800e-003
Total	**0.6039**	**2.0000e-005**	**2.3700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**5.0400e-003**	**5.0400e-003**	**1.0000e-005**		**5.3800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Vista 2017 CSMP

San Diego Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	14.22	1000sqft	0.33	14,221.00	0
Other Asphalt Surfaces	7.75	Acre	7.75	337,590.00	0
Other Non-Asphalt Surfaces	1.06	Acre	1.06	46,173.60	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2019
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Assume pipeline construction fleet operates all year. Info needs indicate two simultaneous projects. Assume PS takes place first half of year, access road in second.

Off-road Equipment - Assume pipeline fleet without trench equipment

Off-road Equipment -

Off-road Equipment - Due to small active construction area relative to fleet size for construction projects, it is assumed each individual piece of equipment would operate an average of 4 hours per day.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Trips and VMT - PS Building construction vendor trips adjusted from 65 default. Avg daily trips rate on page 23 is 426. ADT = 30 (15 workers, one two-way trip per worker). 10 two way hauling trips * 2 = 20 haul trips per day

Demolition - Demolition - 14,221 sf (BVPS)

Grading - Material imported/exported=0, covered by truck trips. Total acres disturbed: pipelines (7.75 acres), unrefrigerated warehouse for PS (14,221 sf/0.33 acres), non-asphalt parking lot for access road (1.06 acre) = total 9.14 acres

Architectural Coating - Exterior coating surface assumes 2 coats on each of four exterior walls. Based on total square footage of 14,221 feet and height of 38 feet, it is assumed each wall is 4,560 sf of area to be coated

Vehicle Trips - Long term maintenance: Up to 15 crew (30 daily trips) for existing and proposed facilities (includes maintenance, landscaping, inspections, etc.). average trip length - 15 miles

Energy Use - The new emergency generators are relocated from another facility as part of another project, so no increase as a result of this project.

Water And Wastewater - pump stations = no indoor water use

Solid Waste - pump stations = no solid waste generation

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	7,111.00	36,480.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	21,332.00	0.00
tblArchitecturalCoating	ConstArea_Parking	23,026.00	0.00
tblConstructionPhase	NumDays	20.00	18.00
tblConstructionPhase	NumDays	230.00	26.00

Vista 2017 CSMP - San Diego Air Basin, Winter

tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	20.00	261.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	20.00	45.00
tblEnergyUse	LightingElect	1.70	0.00
tblEnergyUse	NT24E	1.11	0.00
tblEnergyUse	NT24NG	0.11	0.00
tblEnergyUse	T24E	0.92	0.00
tblEnergyUse	T24NG	1.57	0.00
tblGrading	AcresOfGrading	261.00	7.75
tblGrading	AcresOfGrading	21.50	0.33
tblGrading	AcresOfGrading	67.50	1.06
tblLandUse	BuildingSpaceSquareFeet	14,220.00	14,221.00
tblLandUse	LandUseSquareFeet	14,220.00	14,221.00
tblOffRoadEquipment	HorsePower	402.00	158.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2018	2019

tblSolidWaste	SolidWasteGenerationRate	13.37	0.00
tblTripsAndVMT	HaulingTripNumber	65.00	20.00
tblTripsAndVMT	HaulingTripNumber	0.00	20.00
tblTripsAndVMT	HaulingTripNumber	0.00	20.00
tblTripsAndVMT	HaulingTripNumber	0.00	20.00
tblTripsAndVMT	HaulingTripNumber	0.00	20.00
tblTripsAndVMT	VendorTripNumber	65.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	30.00
tblTripsAndVMT	WorkerTripNumber	45.00	30.00
tblTripsAndVMT	WorkerTripNumber	15.00	30.00
tblTripsAndVMT	WorkerTripNumber	167.00	30.00
tblTripsAndVMT	WorkerTripNumber	33.00	30.00
tblTripsAndVMT	WorkerTripNumber	35.00	30.00
tblVehicleTrips	CC_TL	7.30	15.00
tblVehicleTrips	CNW_TL	7.30	15.00
tblVehicleTrips	CW_TL	9.50	15.00
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	1.68	2.11
tblWater	IndoorWaterUseRate	3,288,375.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	28.8915	113.3776	63.9059	0.1252	15.6137	5.2902	20.9039	8.4149	4.8791	13.2940	0.0000	12,551.6486	12,551.6486	3.6755	0.0000	12,643.5356
Maximum	**28.8915**	**113.3776**	**63.9059**	**0.1252**	**15.6137**	**5.2902**	**20.9039**	**8.4149**	**4.8791**	**13.2940**	**0.0000**	**12,551.6486**	**12,551.6486**	**3.6755**	**0.0000**	**12,643.5356**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	28.8915	113.3776	63.9059	0.1252	15.6137	5.2902	20.9039	8.4149	4.8791	13.2940	0.0000	12,551.6486	12,551.6486	3.6755	0.0000	12,643.5356
Maximum	**28.8915**	**113.3776**	**63.9059**	**0.1252**	**15.6137**	**5.2902**	**20.9039**	**8.4149**	**4.8791**	**13.2940**	**0.0000**	**12,551.6486**	**12,551.6486**	**3.6755**	**0.0000**	**12,643.5356**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6039	2.0000e-005	2.3700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.0400e-003	5.0400e-003	1.0000e-005		5.3800e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0810	0.3993	1.1442	3.7900e-003	0.3241	4.3200e-003	0.3284	0.0866	4.0700e-003	0.0907		384.3878	384.3878	0.0205		384.9011
Total	**0.6849**	**0.3993**	**1.1466**	**3.7900e-003**	**0.3241**	**4.3300e-003**	**0.3284**	**0.0866**	**4.0800e-003**	**0.0907**		**384.3928**	**384.3928**	**0.0205**	**0.0000**	**384.9065**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6039	2.0000e-005	2.3700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.0400e-003	5.0400e-003	1.0000e-005		5.3800e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0810	0.3993	1.1442	3.7900e-003	0.3241	4.3200e-003	0.3284	0.0866	4.0700e-003	0.0907		384.3878	384.3878	0.0205		384.9011
Total	**0.6849**	**0.3993**	**1.1466**	**3.7900e-003**	**0.3241**	**4.3300e-003**	**0.3284**	**0.0866**	**4.0800e-003**	**0.0907**		**384.3928**	**384.3928**	**0.0205**	**0.0000**	**384.9065**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Pump Station Demolition	Demolition	1/1/2018	2/28/2018	5	43	
2	Pipelines	Grading	1/1/2018	12/31/2018	5	261	
3	Pump Station Grading	Grading	3/1/2018	4/30/2018	5	43	
4	PS Building Construction	Building Construction	5/1/2018	6/5/2018	5	26	
5	PS Architectural Coating	Architectural Coating	6/6/2018	6/30/2018	5	18	
6	Access Road	Grading	7/1/2018	8/31/2018	5	45	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 8.81

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 36,480; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pump Station Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Pump Station Demolition	Excavators	3	8.00	158	0.38
Pump Station Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Pipelines	Bore/Drill Rigs	1	4.00	221	0.50

Pipelines	Cement and Mortar Mixers	1	4.00	9	0.56
Pipelines	Concrete/Industrial Saws	1	4.00	81	0.73
Pipelines	Cranes	1	4.00	231	0.29
Pipelines	Excavators	1	4.00	158	0.38
Pipelines	Graders	2	4.00	187	0.41
Pipelines	Off-Highway Trucks	2	4.00	402	0.38
Pipelines	Pavers	1	4.00	130	0.42
Pipelines	Rollers	1	4.00	80	0.38
Pipelines	Rubber Tired Dozers	2	4.00	247	0.40
Pipelines	Scrapers	1	4.00	367	0.48
Pipelines	Tractors/Loaders/Backhoes	3	4.00	97	0.37
Pipelines	Trenchers	1	4.00	78	0.50
Pump Station Grading	Excavators	1	8.00	158	0.38
Pump Station Grading	Graders	1	8.00	187	0.41
Pump Station Grading	Rubber Tired Dozers	1	8.00	247	0.40
Pump Station Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
PS Building Construction	Cranes	1	7.00	231	0.29
PS Building Construction	Forklifts	3	8.00	89	0.20
PS Building Construction	Generator Sets	1	8.00	84	0.74
PS Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
PS Building Construction	Welders	1	8.00	46	0.45
PS Architectural Coating	Air Compressors	1	6.00	78	0.48
Access Road	Cement and Mortar Mixers	1	6.00	9	0.56
Access Road	Excavators	1	8.00	158	0.38
Access Road	Graders	2	6.00	187	0.41
Access Road	Off-Highway Trucks	2	6.00	158	0.38
Access Road	Pavers	1	6.00	130	0.42

Access Road	Rollers	1	6.00	80	0.38
Access Road	Rubber Tired Dozers	2	6.00	247	0.40
Access Road	Scrapers	1	6.00	367	0.48
Access Road	Tractors/Loaders/Backhoes	3	6.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Pump Station Demolition	6	30.00	0.00	20.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pipelines	18	30.00	0.00	20.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pump Station Grading	6	30.00	0.00	20.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
PS Building Construction	9	30.00	0.00	20.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
PS Architectural Coating	1	30.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Access Road	14	30.00	0.00	20.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Pump Station Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3296	0.0000	0.3296	0.0499	0.0000	0.0499			0.0000			0.0000
Off-Road	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048		3,871.7665	3,871.7665	1.0667		3,898.4344
Total	**3.7190**	**38.3225**	**22.3040**	**0.0388**	**0.3296**	**1.9386**	**2.2682**	**0.0499**	**1.8048**	**1.8547**		**3,871.7665**	**3,871.7665**	**1.0667**		**3,898.4344**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.3800e-003	0.1495	0.0328	3.7000e-004	8.1300e-003	6.0000e-004	8.7200e-003	2.2300e-003	5.7000e-004	2.8000e-003		40.0111	40.0111	3.7200e-003		40.1041
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1443	0.1033	0.9742	2.5400e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		252.6982	252.6982	8.7600e-003		252.9171
Total	**0.1486**	**0.2528**	**1.0070**	**2.9100e-003**	**0.2546**	**2.3700e-003**	**0.2569**	**0.0676**	**2.2100e-003**	**0.0698**		**292.7093**	**292.7093**	**0.0125**		**293.0212**

3.2 Pump Station Demolition - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3296	0.0000	0.3296	0.0499	0.0000	0.0499			0.0000			0.0000
Off-Road	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048	0.0000	3,871.7665	3,871.7665	1.0667		3,898.4344
Total	**3.7190**	**38.3225**	**22.3040**	**0.0388**	**0.3296**	**1.9386**	**2.2682**	**0.0499**	**1.8048**	**1.8547**	**0.0000**	**3,871.7665**	**3,871.7665**	**1.0667**		**3,898.4344**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.3800e-003	0.1495	0.0328	3.7000e-004	8.1300e-003	6.0000e-004	8.7200e-003	2.2300e-003	5.7000e-004	2.8000e-003		40.0111	40.0111	3.7200e-003		40.1041
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1443	0.1033	0.9742	2.5400e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		252.6982	252.6982	8.7600e-003		252.9171
Total	**0.1486**	**0.2528**	**1.0070**	**2.9100e-003**	**0.2546**	**2.3700e-003**	**0.2569**	**0.0676**	**2.2100e-003**	**0.0698**		**292.7093**	**292.7093**	**0.0125**		**293.0212**

3.3 Pipelines - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0536	0.0000	6.0536	3.3136	0.0000	3.3136			0.0000			0.0000
Off-Road	4.8197	53.3361	28.1089	0.0596		2.4566	2.4566		2.2714	2.2714		5,973.4654	5,973.4654	1.7851		6,018.0922
Total	**4.8197**	**53.3361**	**28.1089**	**0.0596**	**6.0536**	**2.4566**	**8.5102**	**3.3136**	**2.2714**	**5.5850**		**5,973.4654**	**5,973.4654**	**1.7851**		**6,018.0922**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.2000e-004	0.0246	5.4000e-003	6.0000e-005	1.3400e-003	1.0000e-004	1.4400e-003	3.7000e-004	9.0000e-005	4.6000e-004		6.5919	6.5919	6.1000e-004		6.6072
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1443	0.1033	0.9742	2.5400e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		252.6982	252.6982	8.7600e-003		252.9171
Total	**0.1450**	**0.1279**	**0.9796**	**2.6000e-003**	**0.2478**	**1.8700e-003**	**0.2497**	**0.0657**	**1.7300e-003**	**0.0675**		**259.2901**	**259.2901**	**9.3700e-003**		**259.5243**

3.3 Pipelines - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0536	0.0000	6.0536	3.3136	0.0000	3.3136			0.0000			0.0000
Off-Road	4.8197	53.3361	28.1089	0.0596		2.4566	2.4566		2.2714	2.2714	0.0000	5,973.4654	5,973.4654	1.7851		6,018.0922
Total	**4.8197**	**53.3361**	**28.1089**	**0.0596**	**6.0536**	**2.4566**	**8.5102**	**3.3136**	**2.2714**	**5.5850**	**0.0000**	**5,973.4654**	**5,973.4654**	**1.7851**		**6,018.0922**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.2000e-004	0.0246	5.4000e-003	6.0000e-005	1.3400e-003	1.0000e-004	1.4400e-003	3.7000e-004	9.0000e-005	4.6000e-004		6.5919	6.5919	6.1000e-004		6.6072
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1443	0.1033	0.9742	2.5400e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		252.6982	252.6982	8.7600e-003		252.9171
Total	**0.1450**	**0.1279**	**0.9796**	**2.6000e-003**	**0.2478**	**1.8700e-003**	**0.2497**	**0.0657**	**1.7300e-003**	**0.0675**		**259.2901**	**259.2901**	**9.3700e-003**		**259.5243**

3.4 Pump Station Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0302	0.0000	6.0302	3.3111	0.0000	3.3111			0.0000			0.0000
Off-Road	2.7733	30.6725	16.5770	0.0297		1.5513	1.5513		1.4272	1.4272		2,988.0216	2,988.0216	0.9302		3,011.2769
Total	**2.7733**	**30.6725**	**16.5770**	**0.0297**	**6.0302**	**1.5513**	**7.5815**	**3.3111**	**1.4272**	**4.7383**		**2,988.0216**	**2,988.0216**	**0.9302**		**3,011.2769**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.3800e-003	0.1495	0.0328	3.7000e-004	8.1300e-003	6.0000e-004	8.7200e-003	2.2300e-003	5.7000e-004	2.8000e-003		40.0111	40.0111	3.7200e-003		40.1041
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1443	0.1033	0.9742	2.5400e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		252.6982	252.6982	8.7600e-003		252.9171
Total	**0.1486**	**0.2528**	**1.0070**	**2.9100e-003**	**0.2546**	**2.3700e-003**	**0.2569**	**0.0676**	**2.2100e-003**	**0.0698**		**292.7093**	**292.7093**	**0.0125**		**293.0212**

3.4 Pump Station Grading - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0302	0.0000	6.0302	3.3111	0.0000	3.3111			0.0000			0.0000
Off-Road	2.7733	30.6725	16.5770	0.0297		1.5513	1.5513		1.4272	1.4272	0.0000	2,988.0216	2,988.0216	0.9302		3,011.2769
Total	**2.7733**	**30.6725**	**16.5770**	**0.0297**	**6.0302**	**1.5513**	**7.5815**	**3.3111**	**1.4272**	**4.7383**	**0.0000**	**2,988.0216**	**2,988.0216**	**0.9302**		**3,011.2769**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.3800e-003	0.1495	0.0328	3.7000e-004	8.1300e-003	6.0000e-004	8.7200e-003	2.2300e-003	5.7000e-004	2.8000e-003		40.0111	40.0111	3.7200e-003		40.1041
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1443	0.1033	0.9742	2.5400e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		252.6982	252.6982	8.7600e-003		252.9171
Total	**0.1486**	**0.2528**	**1.0070**	**2.9100e-003**	**0.2546**	**2.3700e-003**	**0.2569**	**0.0676**	**2.2100e-003**	**0.0698**		**292.7093**	**292.7093**	**0.0125**		**293.0212**

3.5 PS Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**		**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.2400e-003	0.2473	0.0543	6.1000e-004	0.0134	9.9000e-004	0.0144	3.6800e-003	9.4000e-004	4.6300e-003		66.1722	66.1722	6.1500e-003		66.3261
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1443	0.1033	0.9742	2.5400e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		252.6982	252.6982	8.7600e-003		252.9171
Total	**0.1515**	**0.3506**	**1.0284**	**3.1500e-003**	**0.2599**	**2.7600e-003**	**0.2627**	**0.0691**	**2.5800e-003**	**0.0716**		**318.8704**	**318.8704**	**0.0149**		**319.2432**

3.5 PS Building Construction - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**	**0.0000**	**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.2400e-003	0.2473	0.0543	6.1000e-004	0.0134	9.9000e-004	0.0144	3.6800e-003	9.4000e-004	4.6300e-003		66.1722	66.1722	6.1500e-003		66.3261
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1443	0.1033	0.9742	2.5400e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		252.6982	252.6982	8.7600e-003		252.9171
Total	**0.1515**	**0.3506**	**1.0284**	**3.1500e-003**	**0.2599**	**2.7600e-003**	**0.2627**	**0.0691**	**2.5800e-003**	**0.0716**		**318.8704**	**318.8704**	**0.0149**		**319.2432**

3.6 PS Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	23.4840					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	**23.7826**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.1171**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1443	0.1033	0.9742	2.5400e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		252.6982	252.6982	8.7600e-003		252.9171
Total	**0.1443**	**0.1033**	**0.9742**	**2.5400e-003**	**0.2464**	**1.7700e-003**	**0.2482**	**0.0654**	**1.6400e-003**	**0.0670**		**252.6982**	**252.6982**	**8.7600e-003**		**252.9171**

3.6 PS Architectural Coating - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	23.4840					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
Total	**23.7826**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.1171**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1443	0.1033	0.9742	2.5400e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		252.6982	252.6982	8.7600e-003		252.9171
Total	**0.1443**	**0.1033**	**0.9742**	**2.5400e-003**	**0.2464**	**1.7700e-003**	**0.2482**	**0.0654**	**1.6400e-003**	**0.0670**		**252.6982**	**252.6982**	**8.7600e-003**		**252.9171**

3.7 Access Road - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.0581	0.0000	9.0581	4.9680	0.0000	4.9680			0.0000			0.0000
Off-Road	5.3679	59.6674	33.8119	0.0600		2.8293	2.8293		2.6038	2.6038		6,027.9621	6,027.9621	1.8687		6,074.6803
Total	**5.3679**	**59.6674**	**33.8119**	**0.0600**	**9.0581**	**2.8293**	**11.8874**	**4.9680**	**2.6038**	**7.5719**		**6,027.9621**	**6,027.9621**	**1.8687**		**6,074.6803**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.1800e-003	0.1429	0.0314	3.5000e-004	7.7700e-003	5.7000e-004	8.3400e-003	2.1300e-003	5.4000e-004	2.6700e-003		38.2328	38.2328	3.5600e-003		38.3217
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1443	0.1033	0.9742	2.5400e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		252.6982	252.6982	8.7600e-003		252.9171
Total	**0.1484**	**0.2462**	**1.0055**	**2.8900e-003**	**0.2542**	**2.3400e-003**	**0.2566**	**0.0675**	**2.1800e-003**	**0.0697**		**290.9310**	**290.9310**	**0.0123**		**291.2388**

3.7 Access Road - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.0581	0.0000	9.0581	4.9680	0.0000	4.9680			0.0000			0.0000
Off-Road	5.3679	59.6674	33.8119	0.0600		2.8293	2.8293		2.6038	2.6038	0.0000	6,027.9621	6,027.9621	1.8687		6,074.6802
Total	**5.3679**	**59.6674**	**33.8119**	**0.0600**	**9.0581**	**2.8293**	**11.8874**	**4.9680**	**2.6038**	**7.5719**	**0.0000**	**6,027.9621**	**6,027.9621**	**1.8687**		**6,074.6802**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.1800e-003	0.1429	0.0314	3.5000e-004	7.7700e-003	5.7000e-004	8.3400e-003	2.1300e-003	5.4000e-004	2.6700e-003		38.2328	38.2328	3.5600e-003		38.3217
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1443	0.1033	0.9742	2.5400e-003	0.2464	1.7700e-003	0.2482	0.0654	1.6400e-003	0.0670		252.6982	252.6982	8.7600e-003		252.9171
Total	**0.1484**	**0.2462**	**1.0055**	**2.8900e-003**	**0.2542**	**2.3400e-003**	**0.2566**	**0.0675**	**2.1800e-003**	**0.0697**		**290.9310**	**290.9310**	**0.0123**		**291.2388**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0810	0.3993	1.1442	3.7900e-003	0.3241	4.3200e-003	0.3284	0.0866	4.0700e-003	0.0907		384.3878	384.3878	0.0205		384.9011
Unmitigated	0.0810	0.3993	1.1442	3.7900e-003	0.3241	4.3200e-003	0.3284	0.0866	4.0700e-003	0.0907		384.3878	384.3878	0.0205		384.9011

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	30.00	0.00	0.00	109,141	109,141
Total	30.00	0.00	0.00	109,141	109,141

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	15.00	15.00	15.00	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.581689	0.044135	0.186694	0.113515	0.018244	0.005600	0.015197	0.022573	0.001888	0.002088	0.006279	0.000742	0.001357
Other Asphalt Surfaces	0.581689	0.044135	0.186694	0.113515	0.018244	0.005600	0.015197	0.022573	0.001888	0.002088	0.006279	0.000742	0.001357
Other Non-Asphalt Surfaces	0.581689	0.044135	0.186694	0.113515	0.018244	0.005600	0.015197	0.022573	0.001888	0.002088	0.006279	0.000742	0.001357

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6039	2.0000e-005	2.3700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.0400e-003	5.0400e-003	1.0000e-005		5.3800e-003
Unmitigated	0.6039	2.0000e-005	2.3700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.0400e-003	5.0400e-003	1.0000e-005		5.3800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1634					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4403					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.3000e-004	2.0000e-005	2.3700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.0400e-003	5.0400e-003	1.0000e-005		5.3800e-003
Total	**0.6039**	**2.0000e-005**	**2.3700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**5.0400e-003**	**5.0400e-003**	**1.0000e-005**		**5.3800e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1634					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4403					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.3000e-004	2.0000e-005	2.3700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.0400e-003	5.0400e-003	1.0000e-005		5.3800e-003
Total	**0.6039**	**2.0000e-005**	**2.3700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**5.0400e-003**	**5.0400e-003**	**1.0000e-005**		**5.3800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Vista 2017 CSMP

San Diego Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	14.22	1000sqft	0.33	14,221.00	0
Other Asphalt Surfaces	7.75	Acre	7.75	337,590.00	0
Other Non-Asphalt Surfaces	1.06	Acre	1.06	46,173.60	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2019
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Assume pipeline construction fleet operates all year. Info needs indicate two simultaneous projects. Assume PS takes place first half of year, access road in second.

Off-road Equipment - Assume pipeline fleet without trench equipment

Off-road Equipment -

Off-road Equipment - Due to small active construction area relative to fleet size for construction projects, it is assumed each individual piece of equipment would operate an average of 4 hours per day.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Trips and VMT - PS Building construction vendor trips adjusted from 65 default. Avg daily trips rate on page 23 is 426. ADT = 30 (15 workers, one two-way trip per worker). 10 two way hauling trips * 2 = 20 haul trips per day

Demolition - Demolition - 14,221 sf (BVPS)

Grading - Material imported/exported=0, covered by truck trips. Total acres disturbed: pipelines (7.75 acres), unrefrigerated warehouse for PS (14,221 sf/0.33 acres), non-asphalt parking lot for access road (1.06 acre) = total 9.14 acres

Architectural Coating - Exterior coating surface assumes 2 coats on each of four exterior walls. Based on total square footage of 14,221 feet and height of 38 feet, it is assumed each wall is 4,560 sf of area to be coated

Vehicle Trips - Long term maintenance: Up to 15 crew (30 daily trips) for existing and proposed facilities (includes maintenance, landscaping, inspections, etc.). average trip length - 15 miles

Energy Use - The new emergency generators are relocated from another facility as part of another project, so no increase as a result of this project.

Water And Wastewater - pump stations = no indoor water use

Solid Waste - pump stations = no solid waste generation

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	7,111.00	36,480.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	21,332.00	0.00
tblArchitecturalCoating	ConstArea_Parking	23,026.00	0.00
tblConstructionPhase	NumDays	20.00	18.00
tblConstructionPhase	NumDays	230.00	26.00

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tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	20.00	261.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	20.00	45.00
tblEnergyUse	LightingElect	1.70	0.00
tblEnergyUse	NT24E	1.11	0.00
tblEnergyUse	NT24NG	0.11	0.00
tblEnergyUse	T24E	0.92	0.00
tblEnergyUse	T24NG	1.57	0.00
tblGrading	AcresOfGrading	261.00	7.75
tblGrading	AcresOfGrading	21.50	0.33
tblGrading	AcresOfGrading	67.50	1.06
tblLandUse	BuildingSpaceSquareFeet	14,220.00	14,221.00
tblLandUse	LandUseSquareFeet	14,220.00	14,221.00
tblOffRoadEquipment	HorsePower	402.00	158.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2018	2019

tblSolidWaste	SolidWasteGenerationRate	13.37	0.00
tblTripsAndVMT	HaulingTripNumber	65.00	20.00
tblTripsAndVMT	HaulingTripNumber	0.00	20.00
tblTripsAndVMT	HaulingTripNumber	0.00	20.00
tblTripsAndVMT	HaulingTripNumber	0.00	20.00
tblTripsAndVMT	HaulingTripNumber	0.00	20.00
tblTripsAndVMT	VendorTripNumber	65.00	0.00
tblTripsAndVMT	WorkerTripNumber	15.00	30.00
tblTripsAndVMT	WorkerTripNumber	45.00	30.00
tblTripsAndVMT	WorkerTripNumber	15.00	30.00
tblTripsAndVMT	WorkerTripNumber	167.00	30.00
tblTripsAndVMT	WorkerTripNumber	33.00	30.00
tblTripsAndVMT	WorkerTripNumber	35.00	30.00
tblVehicleTrips	CC_TL	7.30	15.00
tblVehicleTrips	CNW_TL	7.30	15.00
tblVehicleTrips	CW_TL	9.50	15.00
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	1.68	2.11
tblWater	IndoorWaterUseRate	3,288,375.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	1.1666	10.1468	5.7258	0.0116	1.1838	0.4806	1.6644	0.6306	0.4446	1.0752	0.0000	1,051.6435	1,051.6435	0.2983	0.0000	1,059.1013
Maximum	**1.1666**	**10.1468**	**5.7258**	**0.0116**	**1.1838**	**0.4806**	**1.6644**	**0.6306**	**0.4446**	**1.0752**	**0.0000**	**1,051.6435**	**1,051.6435**	**0.2983**	**0.0000**	**1,059.1013**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	1.1666	10.1468	5.7258	0.0116	1.1838	0.4806	1.6644	0.6306	0.4446	1.0752	0.0000	1,051.6423	1,051.6423	0.2983	0.0000	1,059.1001
Maximum	**1.1666**	**10.1468**	**5.7258**	**0.0116**	**1.1838**	**0.4806**	**1.6644**	**0.6306**	**0.4446**	**1.0752**	**0.0000**	**1,051.6423**	**1,051.6423**	**0.2983**	**0.0000**	**1,059.1001**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
3	10-12-2017	1-11-2018	0.1667	0.1667
4	1-12-2018	4-11-2018	1.2352	1.2352
5	4-12-2018	7-11-2018	0.8029	0.8029
		Highest	1.2352	1.2352

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1102	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.1000e-004	4.1000e-004	0.0000	0.0000	4.4000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0103	0.0519	0.1481	5.0000e-004	0.0411	5.6000e-004	0.0417	0.0110	5.3000e-004	0.0116	0.0000	45.7035	45.7035	2.4100e-003	0.0000	45.7638
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1205**	**0.0519**	**0.1483**	**5.0000e-004**	**0.0411**	**5.6000e-004**	**0.0417**	**0.0110**	**5.3000e-004**	**0.0116**	**0.0000**	**45.7039**	**45.7039**	**2.4100e-003**	**0.0000**	**45.7642**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1102	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.1000e-004	4.1000e-004	0.0000	0.0000	4.4000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0103	0.0519	0.1481	5.0000e-004	0.0411	5.6000e-004	0.0417	0.0110	5.3000e-004	0.0116	0.0000	45.7035	45.7035	2.4100e-003	0.0000	45.7638
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1205**	**0.0519**	**0.1483**	**5.0000e-004**	**0.0411**	**5.6000e-004**	**0.0417**	**0.0110**	**5.3000e-004**	**0.0116**	**0.0000**	**45.7039**	**45.7039**	**2.4100e-003**	**0.0000**	**45.7642**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Pump Station Demolition	Demolition	1/1/2018	2/28/2018	5	43	
2	Pipelines	Grading	1/1/2018	12/31/2018	5	261	
3	Pump Station Grading	Grading	3/1/2018	4/30/2018	5	43	
4	PS Building Construction	Building Construction	5/1/2018	6/5/2018	5	26	
5	PS Architectural Coating	Architectural Coating	6/6/2018	6/30/2018	5	18	
6	Access Road	Grading	7/1/2018	8/31/2018	5	45	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 8.81

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 36,480; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pump Station Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Pump Station Demolition	Excavators	3	8.00	158	0.38
Pump Station Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Pipelines	Bore/Drill Rigs	1	4.00	221	0.50
Pipelines	Cement and Mortar Mixers	1	4.00	9	0.56
Pipelines	Concrete/Industrial Saws	1	4.00	81	0.73
Pipelines	Cranes	1	4.00	231	0.29
Pipelines	Excavators	1	4.00	158	0.38
Pipelines	Graders	2	4.00	187	0.41
Pipelines	Off-Highway Trucks	2	4.00	402	0.38

Pipelines	Pavers	1	4.00	130	0.42
Pipelines	Rollers	1	4.00	80	0.38
Pipelines	Rubber Tired Dozers	2	4.00	247	0.40
Pipelines	Scrapers	1	4.00	367	0.48
Pipelines	Tractors/Loaders/Backhoes	3	4.00	97	0.37
Pipelines	Trenchers	1	4.00	78	0.50
Pump Station Grading	Excavators	1	8.00	158	0.38
Pump Station Grading	Graders	1	8.00	187	0.41
Pump Station Grading	Rubber Tired Dozers	1	8.00	247	0.40
Pump Station Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
PS Building Construction	Cranes	1	7.00	231	0.29
PS Building Construction	Forklifts	3	8.00	89	0.20
PS Building Construction	Generator Sets	1	8.00	84	0.74
PS Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
PS Building Construction	Welders	1	8.00	46	0.45
PS Architectural Coating	Air Compressors	1	6.00	78	0.48
Access Road	Cement and Mortar Mixers	1	6.00	9	0.56
Access Road	Excavators	1	8.00	158	0.38
Access Road	Graders	2	6.00	187	0.41
Access Road	Off-Highway Trucks	2	6.00	158	0.38
Access Road	Pavers	1	6.00	130	0.42
Access Road	Rollers	1	6.00	80	0.38
Access Road	Rubber Tired Dozers	2	6.00	247	0.40
Access Road	Scrapers	1	6.00	367	0.48
Access Road	Tractors/Loaders/Backhoes	3	6.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Pump Station Demolition	6	30.00	0.00	20.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pipelines	18	30.00	0.00	20.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pump Station Grading	6	30.00	0.00	20.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
PS Building Construction	9	30.00	0.00	20.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
PS Architectural Coating	1	30.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Access Road	14	30.00	0.00	20.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Pump Station Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.0900e-003	0.0000	7.0900e-003	1.0700e-003	0.0000	1.0700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0800	0.8239	0.4795	8.3000e-004		0.0417	0.0417		0.0388	0.0388	0.0000	75.5168	75.5168	0.0208	0.0000	76.0369
Total	**0.0800**	**0.8239**	**0.4795**	**8.3000e-004**	**7.0900e-003**	**0.0417**	**0.0488**	**1.0700e-003**	**0.0388**	**0.0399**	**0.0000**	**75.5168**	**75.5168**	**0.0208**	**0.0000**	**76.0369**

3.2 Pump Station Demolition - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.0000e-005	3.2500e-003	6.8000e-004	1.0000e-005	1.7000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7880	0.7880	7.0000e-005	0.0000	0.7898
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7600e-003	2.1800e-003	0.0209	6.0000e-005	5.1700e-003	4.0000e-005	5.2100e-003	1.3700e-003	4.0000e-005	1.4100e-003	0.0000	4.9780	4.9780	1.7000e-004	0.0000	4.9823
Total	**2.8500e-003**	**5.4300e-003**	**0.0216**	**7.0000e-005**	**5.3400e-003**	**5.0000e-005**	**5.3900e-003**	**1.4200e-003**	**5.0000e-005**	**1.4700e-003**	**0.0000**	**5.7660**	**5.7660**	**2.4000e-004**	**0.0000**	**5.7721**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.0900e-003	0.0000	7.0900e-003	1.0700e-003	0.0000	1.0700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0800	0.8239	0.4795	8.3000e-004		0.0417	0.0417		0.0388	0.0388	0.0000	75.5167	75.5167	0.0208	0.0000	76.0368
Total	**0.0800**	**0.8239**	**0.4795**	**8.3000e-004**	**7.0900e-003**	**0.0417**	**0.0488**	**1.0700e-003**	**0.0388**	**0.0399**	**0.0000**	**75.5167**	**75.5167**	**0.0208**	**0.0000**	**76.0368**

3.2 Pump Station Demolition - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.0000e-005	3.2500e-003	6.8000e-004	1.0000e-005	1.7000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7880	0.7880	7.0000e-005	0.0000	0.7898
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7600e-003	2.1800e-003	0.0209	6.0000e-005	5.1700e-003	4.0000e-005	5.2100e-003	1.3700e-003	4.0000e-005	1.4100e-003	0.0000	4.9780	4.9780	1.7000e-004	0.0000	4.9823
Total	**2.8500e-003**	**5.4300e-003**	**0.0216**	**7.0000e-005**	**5.3400e-003**	**5.0000e-005**	**5.3900e-003**	**1.4200e-003**	**5.0000e-005**	**1.4700e-003**	**0.0000**	**5.7660**	**5.7660**	**2.4000e-004**	**0.0000**	**5.7721**

3.3 Pipelines - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7900	0.0000	0.7900	0.4324	0.0000	0.4324	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.6290	6.9604	3.6682	7.7800e-003		0.3206	0.3206		0.2964	0.2964	0.0000	707.1843	707.1843	0.2113	0.0000	712.4676
Total	**0.6290**	**6.9604**	**3.6682**	**7.7800e-003**	**0.7900**	**0.3206**	**1.1106**	**0.4324**	**0.2964**	**0.7288**	**0.0000**	**707.1843**	**707.1843**	**0.2113**	**0.0000**	**712.4676**

3.3 Pipelines - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.0000e-005	3.2500e-003	6.8000e-004	1.0000e-005	1.7000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7880	0.7880	7.0000e-005	0.0000	0.7898
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0167	0.0133	0.1271	3.3000e-004	0.0314	2.3000e-004	0.0316	8.3400e-003	2.1000e-004	8.5600e-003	0.0000	30.2150	30.2150	1.0400e-003	0.0000	30.2411
Total	**0.0168**	**0.0165**	**0.1278**	**3.4000e-004**	**0.0316**	**2.4000e-004**	**0.0318**	**8.3900e-003**	**2.2000e-004**	**8.6200e-003**	**0.0000**	**31.0030**	**31.0030**	**1.1100e-003**	**0.0000**	**31.0309**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7900	0.0000	0.7900	0.4324	0.0000	0.4324	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.6290	6.9604	3.6682	7.7800e-003		0.3206	0.3206		0.2964	0.2964	0.0000	707.1835	707.1835	0.2113	0.0000	712.4667
Total	**0.6290**	**6.9604**	**3.6682**	**7.7800e-003**	**0.7900**	**0.3206**	**1.1106**	**0.4324**	**0.2964**	**0.7288**	**0.0000**	**707.1835**	**707.1835**	**0.2113**	**0.0000**	**712.4667**

3.3 Pipelines - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.0000e-005	3.2500e-003	6.8000e-004	1.0000e-005	1.7000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7880	0.7880	7.0000e-005	0.0000	0.7898
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0167	0.0133	0.1271	3.3000e-004	0.0314	2.3000e-004	0.0316	8.3400e-003	2.1000e-004	8.5600e-003	0.0000	30.2150	30.2150	1.0400e-003	0.0000	30.2411
Total	**0.0168**	**0.0165**	**0.1278**	**3.4000e-004**	**0.0316**	**2.4000e-004**	**0.0318**	**8.3900e-003**	**2.2000e-004**	**8.6200e-003**	**0.0000**	**31.0030**	**31.0030**	**1.1100e-003**	**0.0000**	**31.0309**

3.4 Pump Station Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1297	0.0000	0.1297	0.0712	0.0000	0.0712	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0596	0.6595	0.3564	6.4000e-004		0.0334	0.0334		0.0307	0.0307	0.0000	58.2798	58.2798	0.0181	0.0000	58.7334
Total	**0.0596**	**0.6595**	**0.3564**	**6.4000e-004**	**0.1297**	**0.0334**	**0.1630**	**0.0712**	**0.0307**	**0.1019**	**0.0000**	**58.2798**	**58.2798**	**0.0181**	**0.0000**	**58.7334**

3.4 Pump Station Grading - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.0000e-005	3.2500e-003	6.8000e-004	1.0000e-005	1.7000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7880	0.7880	7.0000e-005	0.0000	0.7898
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7600e-003	2.1800e-003	0.0209	6.0000e-005	5.1700e-003	4.0000e-005	5.2100e-003	1.3700e-003	4.0000e-005	1.4100e-003	0.0000	4.9780	4.9780	1.7000e-004	0.0000	4.9823
Total	**2.8500e-003**	**5.4300e-003**	**0.0216**	**7.0000e-005**	**5.3400e-003**	**5.0000e-005**	**5.3900e-003**	**1.4200e-003**	**5.0000e-005**	**1.4700e-003**	**0.0000**	**5.7660**	**5.7660**	**2.4000e-004**	**0.0000**	**5.7721**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1297	0.0000	0.1297	0.0712	0.0000	0.0712	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0596	0.6595	0.3564	6.4000e-004		0.0334	0.0334		0.0307	0.0307	0.0000	58.2797	58.2797	0.0181	0.0000	58.7333
Total	**0.0596**	**0.6595**	**0.3564**	**6.4000e-004**	**0.1297**	**0.0334**	**0.1630**	**0.0712**	**0.0307**	**0.1019**	**0.0000**	**58.2797**	**58.2797**	**0.0181**	**0.0000**	**58.7333**

3.4 Pump Station Grading - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.0000e-005	3.2500e-003	6.8000e-004	1.0000e-005	1.7000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7880	0.7880	7.0000e-005	0.0000	0.7898
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7600e-003	2.1800e-003	0.0209	6.0000e-005	5.1700e-003	4.0000e-005	5.2100e-003	1.3700e-003	4.0000e-005	1.4100e-003	0.0000	4.9780	4.9780	1.7000e-004	0.0000	4.9823
Total	**2.8500e-003**	**5.4300e-003**	**0.0216**	**7.0000e-005**	**5.3400e-003**	**5.0000e-005**	**5.3900e-003**	**1.4200e-003**	**5.0000e-005**	**1.4700e-003**	**0.0000**	**5.7660**	**5.7660**	**2.4000e-004**	**0.0000**	**5.7721**

3.5 PS Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0348	0.3041	0.2286	3.5000e-004		0.0195	0.0195		0.0183	0.0183	0.0000	30.9097	30.9097	7.5700e-003	0.0000	31.0991
Total	**0.0348**	**0.3041**	**0.2286**	**3.5000e-004**		**0.0195**	**0.0195**		**0.0183**	**0.0183**	**0.0000**	**30.9097**	**30.9097**	**7.5700e-003**	**0.0000**	**31.0991**

3.5 PS Building Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.0000e-005	3.2500e-003	6.8000e-004	1.0000e-005	1.7000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7880	0.7880	7.0000e-005	0.0000	0.7898
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6700e-003	1.3200e-003	0.0127	3.0000e-005	3.1300e-003	2.0000e-005	3.1500e-003	8.3000e-004	2.0000e-005	8.5000e-004	0.0000	3.0099	3.0099	1.0000e-004	0.0000	3.0125
Total	**1.7600e-003**	**4.5700e-003**	**0.0133**	**4.0000e-005**	**3.3000e-003**	**3.0000e-005**	**3.3300e-003**	**8.8000e-004**	**3.0000e-005**	**9.1000e-004**	**0.0000**	**3.7980**	**3.7980**	**1.7000e-004**	**0.0000**	**3.8023**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0348	0.3041	0.2286	3.5000e-004		0.0195	0.0195		0.0183	0.0183	0.0000	30.9097	30.9097	7.5700e-003	0.0000	31.0990
Total	**0.0348**	**0.3041**	**0.2286**	**3.5000e-004**		**0.0195**	**0.0195**		**0.0183**	**0.0183**	**0.0000**	**30.9097**	**30.9097**	**7.5700e-003**	**0.0000**	**31.0990**

3.5 PS Building Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.0000e-005	3.2500e-003	6.8000e-004	1.0000e-005	1.7000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7880	0.7880	7.0000e-005	0.0000	0.7898
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6700e-003	1.3200e-003	0.0127	3.0000e-005	3.1300e-003	2.0000e-005	3.1500e-003	8.3000e-004	2.0000e-005	8.5000e-004	0.0000	3.0099	3.0099	1.0000e-004	0.0000	3.0125
Total	**1.7600e-003**	**4.5700e-003**	**0.0133**	**4.0000e-005**	**3.3000e-003**	**3.0000e-005**	**3.3300e-003**	**8.8000e-004**	**3.0000e-005**	**9.1000e-004**	**0.0000**	**3.7980**	**3.7980**	**1.7000e-004**	**0.0000**	**3.8023**

3.6 PS Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2114					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6900e-003	0.0181	0.0167	3.0000e-005		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	2.2979	2.2979	2.2000e-004	0.0000	2.3034
Total	**0.2141**	**0.0181**	**0.0167**	**3.0000e-005**		**1.3500e-003**	**1.3500e-003**		**1.3500e-003**	**1.3500e-003**	**0.0000**	**2.2979**	**2.2979**	**2.2000e-004**	**0.0000**	**2.3034**

3.6 PS Architectural Coating - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1500e-003	9.1000e-004	8.7600e-003	2.0000e-005	2.1700e-003	2.0000e-005	2.1800e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	2.0838	2.0838	7.0000e-005	0.0000	2.0856
Total	**1.1500e-003**	**9.1000e-004**	**8.7600e-003**	**2.0000e-005**	**2.1700e-003**	**2.0000e-005**	**2.1800e-003**	**5.8000e-004**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**2.0838**	**2.0838**	**7.0000e-005**	**0.0000**	**2.0856**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2114					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6900e-003	0.0181	0.0167	3.0000e-005		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	2.2979	2.2979	2.2000e-004	0.0000	2.3034
Total	**0.2141**	**0.0181**	**0.0167**	**3.0000e-005**		**1.3500e-003**	**1.3500e-003**		**1.3500e-003**	**1.3500e-003**	**0.0000**	**2.2979**	**2.2979**	**2.2000e-004**	**0.0000**	**2.3034**

3.6 PS Architectural Coating - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1500e-003	9.1000e-004	8.7600e-003	2.0000e-005	2.1700e-003	2.0000e-005	2.1800e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	2.0838	2.0838	7.0000e-005	0.0000	2.0856
Total	**1.1500e-003**	**9.1000e-004**	**8.7600e-003**	**2.0000e-005**	**2.1700e-003**	**2.0000e-005**	**2.1800e-003**	**5.8000e-004**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**2.0838**	**2.0838**	**7.0000e-005**	**0.0000**	**2.0856**

3.7 Access Road - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2038	0.0000	0.2038	0.1118	0.0000	0.1118	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1208	1.3425	0.7608	1.3500e-003		0.0637	0.0637		0.0586	0.0586	0.0000	123.0407	123.0407	0.0381	0.0000	123.9943
Total	**0.1208**	**1.3425**	**0.7608**	**1.3500e-003**	**0.2038**	**0.0637**	**0.2675**	**0.1118**	**0.0586**	**0.1704**	**0.0000**	**123.0407**	**123.0407**	**0.0381**	**0.0000**	**123.9943**

3.7 Access Road - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.0000e-005	3.2500e-003	6.8000e-004	1.0000e-005	1.7000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7880	0.7880	7.0000e-005	0.0000	0.7898
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8800e-003	2.2800e-003	0.0219	6.0000e-005	5.4100e-003	4.0000e-005	5.4500e-003	1.4400e-003	4.0000e-005	1.4800e-003	0.0000	5.2095	5.2095	1.8000e-004	0.0000	5.2140
Total	**2.9700e-003**	**5.5300e-003**	**0.0226**	**7.0000e-005**	**5.5800e-003**	**5.0000e-005**	**5.6300e-003**	**1.4900e-003**	**5.0000e-005**	**1.5400e-003**	**0.0000**	**5.9975**	**5.9975**	**2.5000e-004**	**0.0000**	**6.0038**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2038	0.0000	0.2038	0.1118	0.0000	0.1118	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1208	1.3425	0.7608	1.3500e-003		0.0637	0.0637		0.0586	0.0586	0.0000	123.0406	123.0406	0.0381	0.0000	123.9941
Total	**0.1208**	**1.3425**	**0.7608**	**1.3500e-003**	**0.2038**	**0.0637**	**0.2675**	**0.1118**	**0.0586**	**0.1704**	**0.0000**	**123.0406**	**123.0406**	**0.0381**	**0.0000**	**123.9941**

3.7 Access Road - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.0000e-005	3.2500e-003	6.8000e-004	1.0000e-005	1.7000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7880	0.7880	7.0000e-005	0.0000	0.7898
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8800e-003	2.2800e-003	0.0219	6.0000e-005	5.4100e-003	4.0000e-005	5.4500e-003	1.4400e-003	4.0000e-005	1.4800e-003	0.0000	5.2095	5.2095	1.8000e-004	0.0000	5.2140
Total	**2.9700e-003**	**5.5300e-003**	**0.0226**	**7.0000e-005**	**5.5800e-003**	**5.0000e-005**	**5.6300e-003**	**1.4900e-003**	**5.0000e-005**	**1.5400e-003**	**0.0000**	**5.9975**	**5.9975**	**2.5000e-004**	**0.0000**	**6.0038**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0103	0.0519	0.1481	5.0000e-004	0.0411	5.6000e-004	0.0417	0.0110	5.3000e-004	0.0116	0.0000	45.7035	45.7035	2.4100e-003	0.0000	45.7638
Unmitigated	0.0103	0.0519	0.1481	5.0000e-004	0.0411	5.6000e-004	0.0417	0.0110	5.3000e-004	0.0116	0.0000	45.7035	45.7035	2.4100e-003	0.0000	45.7638

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	30.00	0.00	0.00	109,141	109,141
Total	30.00	0.00	0.00	109,141	109,141

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	15.00	15.00	15.00	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.581689	0.044135	0.186694	0.113515	0.018244	0.005600	0.015197	0.022573	0.001888	0.002088	0.006279	0.000742	0.001357
Other Asphalt Surfaces	0.581689	0.044135	0.186694	0.113515	0.018244	0.005600	0.015197	0.022573	0.001888	0.002088	0.006279	0.000742	0.001357
Other Non-Asphalt Surfaces	0.581689	0.044135	0.186694	0.113515	0.018244	0.005600	0.015197	0.022573	0.001888	0.002088	0.006279	0.000742	0.001357

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1102	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.1000e-004	4.1000e-004	0.0000	0.0000	4.4000e-004
Unmitigated	0.1102	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.1000e-004	4.1000e-004	0.0000	0.0000	4.4000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0298					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0804					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.1000e-004	4.1000e-004	0.0000	0.0000	4.4000e-004
Total	**0.1102**	**0.0000**	**2.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**4.1000e-004**	**4.1000e-004**	**0.0000**	**0.0000**	**4.4000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0298					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0804					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.1000e-004	4.1000e-004	0.0000	0.0000	4.4000e-004
Total	**0.1102**	**0.0000**	**2.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**4.1000e-004**	**4.1000e-004**	**0.0000**	**0.0000**	**4.4000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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Appendix E. Biological Database Search Results 2017

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Appendix E - Biological Database Search Results

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Carlsbad Fish and Wildlife Office
2177 SALK AVENUE - SUITE 250
CARLSBAD, CA 92008
PHONE: (760)431-9440 FAX: (760)431-5901
URL: www.fws.gov/carlsbad/

Consultation Code: 08ECAR00-2017-SLI-0538 March 09, 2017
Event Code: 08ECAR00-2017-E-01090
Project Name: City of Vista

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: City of Vista

Official Species List

Provided by:

Carlsbad Fish and Wildlife Office
2177 SALK AVENUE - SUITE 250
CARLSBAD, CA 92008
(760) 431-9440
http://www.fws.gov/carlsbad/

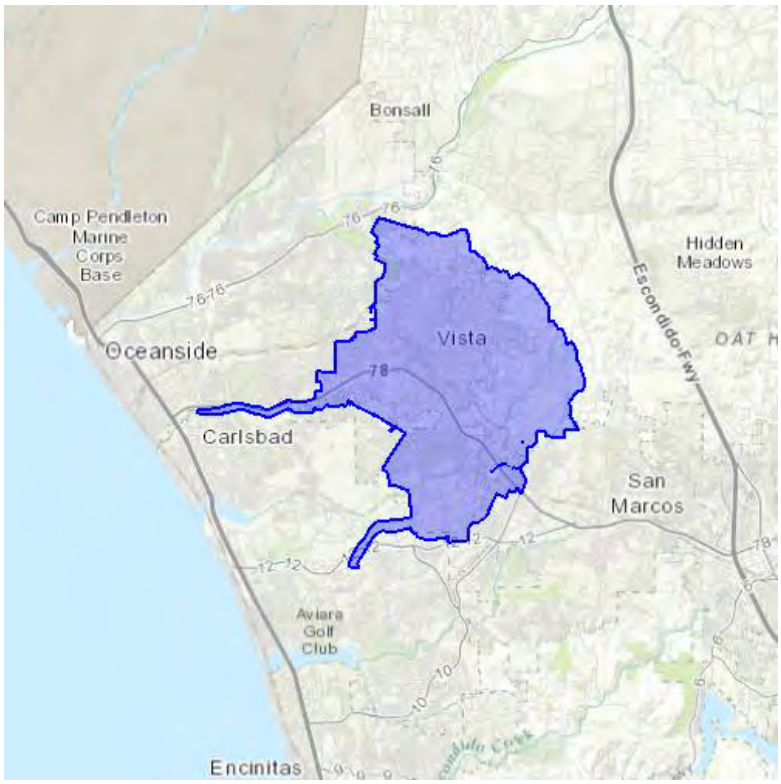
Consultation Code: 08ECAR00-2017-SLI-0538
Event Code: 08ECAR00-2017-E-01090

Project Type: WASTEWATER PIPELINE

Project Name: City of Vista
Project Description: Sewer project.

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.

Project Location Map:



Project Coordinates: The coordinates are too numerous to display here.

Project Counties: San Diego, CA

Endangered Species Act Species List

There are a total of 22 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Amphibians	**Status**	**Has Critical Habitat**	**Condition(s)**
arroyo toad *(Anaxyrus californicus)* Population: Wherever found	Endangered	Final designated	
Birds			
California Least tern *(Sterna antillarum browni)* Population: Wherever found	Endangered		
Coastal California gnatcatcher *(Polioptila californica californica)* Population: Wherever found	Threatened	Final designated	
Least Bell's vireo *(Vireo bellii pusillus)* Population: Wherever found	Endangered	Final designated	
Light-Footed Clapper rail *(Rallus longirostris levipes)* Population: Wherever found	Endangered		
Southwestern Willow flycatcher *(Empidonax traillii extimus)* Population: Wherever found	Endangered	Final designated	

western snowy plover *(Charadrius nivosus ssp. nivosus)* Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast)	Threatened	Final designated	
Crustaceans			
Riverside fairy shrimp *(Streptocephalus woottoni)* Population: Wherever found	Endangered	Final designated	
San Diego fairy shrimp *(Branchinecta sandiegonensis)* Population: Wherever found	Endangered	Final designated	
Vernal Pool fairy shrimp *(Branchinecta lynchi)* Population: Wherever found	Threatened	Final designated	
Fishes			
Tidewater goby *(Eucyclogobius newberryi)* Population: Wherever found	Endangered	Final designated	
Flowering Plants			
California Orcutt grass *(Orcuttia californica)* Population: Wherever found	Endangered		
Del Mar manzanita *(Arctostaphylos glandulosa ssp. crassifolia)* Population: Wherever found	Endangered		
Encinitas baccharis *(Baccharis vanessae)* Population: Wherever found	Threatened		

Orcutt's spineflower *(Chorizanthe orcuttiana)* Population: Wherever found	Endangered		
San Diego ambrosia *(Ambrosia pumila)* Population: Wherever found	Endangered	Final designated	
San Diego button-celery *(Eryngium aristulatum var. parishii)* Population: Wherever found	Endangered		
San Diego thornmint *(Acanthomintha ilicifolia)* Population: Wherever found	Threatened	Final designated	
Spreading navarretia *(Navarretia fossalis)* Population: Wherever found	Threatened	Final designated	
Thread-Leaved brodiaea *(Brodiaea filifolia)* Population: Wherever found	Threatened	Final designated	
Mammals			
Pacific Pocket mouse *(Perognathus longimembris pacificus)* Population: Wherever found	Endangered		
Stephens' kangaroo rat *(Dipodomys stephensi)* Population: Wherever found	Endangered		

Critical habitats that lie within your project area

The following critical habitats lie fully or partially within your project area.

Birds	**Critical Habitat Type**
Coastal California gnatcatcher *(Polioptila californica californica)* Population: Wherever found	Final designated
Southwestern Willow flycatcher *(Empidonax traillii extimus)* Population: Wherever found	Final designated
Flowering Plants	
San Diego thornmint *(Acanthomintha ilicifolia)* Population: Wherever found	Final designated
Thread-Leaved brodiaea *(Brodiaea filifolia)* Population: Wherever found	Final designated

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Query Criteria: Taxonomic Group IS (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects OR Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes)
 AND Quad IS (Bonsall (3311732) OR Encinitas (3311713) OR Escondido (3311711) OR Morro Hill (3311733) OR Pala (3311731) OR Rancho Santa Fe (3311712) OR San Luis Rey (3311723) OR San Marcos (3311722) OR Valley Center (3311721))

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Abronia villosa var. aurita chaparral sand-verbena	G5T2T3 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive USFS_S-Sensitive	65 145	95 S:5	0	0	0	0	0	5	0	5	5	0	0
Acanthomintha ilicifolia San Diego thorn-mint	G1 S1	Threatened Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	140 1,250	84 S:26	1	8	3	5	8	1	12	14	18	4	4
Accipiter cooperii Cooper's hawk	G5 S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	240 600	108 S:3	0	1	0	0	0	2	0	3	3	0	0
Acmispon prostratus Nuttall's acmispon	G1G2 S1	None None	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture	20 22	38 S:4	0	1	1	0	1	1	1	3	3	0	1
Adolphia californica California adolphia	G3 S2	None None	Rare Plant Rank - 2B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	40 1,100	124 S:47	1	11	4	1	3	27	11	36	44	1	2
Agelaius tricolor tricolored blackbird	G2G3 S1S2	None Candidate Endangered	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_EN-Endangered NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	50 600	949 S:5	0	0	0	0	2	3	5	0	3	2	0
Aimophila ruficeps canescens southern California rufous-crowned sparrow	G5T3 S3	None None	CDFW_WL-Watch List	40 1,320	213 S:38	3	9	3	1	0	22	12	26	38	0	0
Ambrosia pumila San Diego ambrosia	G1 S1	Endangered None	Rare Plant Rank - 1B.1	70 400	56 S:10	0	1	4	0	3	2	3	7	7	2	1

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Anaxyrus californicus arroyo toad	G2G3 S2S3	Endangered None	CDFW_SSC-Species of Special Concern IUCN_EN-Endangered	60 400	137 S:12	0	3	2	2	0	5	2	10	12	0	0
Antrozous pallidus pallid bat	G5 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	90 1,610	407 S:4	0	0	0	0	0	4	4	0	4	0	0
Aquila chrysaetos golden eagle	G5 S3	None None	BLM_S-Sensitive CDF_S-Sensitive CDFW_FP-Fully Protected CDFW_WL-Watch List IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	1,000 1,660	312 S:2	1	0	0	0	0	1	1	1	2	0	0
Arctostaphylos glandulosa ssp. crassifolia Del Mar manzanita	G5T2 S2	Endangered None	Rare Plant Rank - 1B.1	100 1,200	56 S:27	0	6	2	2	0	17	8	19	27	0	0
Arctostaphylos rainbowensis Rainbow manzanita	G2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive USFS_S-Sensitive	395 1,247	89 S:5	0	1	0	0	0	4	2	3	5	0	0
Arizona elegans occidentalis California glossy snake	G5T2 S2	None None	CDFW_SSC-Species of Special Concern	54 477	218 S:11	0	0	0	0	0	11	8	3	11	0	0
Artemisia palmeri San Diego sagewort	G3G4 S3?	None None	Rare Plant Rank - 4.2	65 1,100	36 S:10	1	5	2	0	0	2	7	3	10	0	0
Artemisiospiza belli belli Bell's sage sparrow	G5T2T4 S3	None None	CDFW_WL-Watch List USFWS_BCC-Birds of Conservation Concern	320 800	60 S:4	0	1	0	0	0	3	0	4	4	0	0
Aspidoscelis hyperythra orange-throated whiptail	G5 S2S3	None None	CDFW_WL-Watch List IUCN_LC-Least Concern USFS_S-Sensitive	20 1,560	354 S:45	7	10	3	3	1	21	28	17	44	1	0
Aspidoscelis tigris stejnegeri coastal whiptail	G5T5 S3	None None	CDFW_SSC-Species of Special Concern	210 1,340	125 S:15	1	2	2	0	0	10	4	11	15	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Athene cunicularia burrowing owl	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	600 600	1932 S:1	0	0	0	0	0	1	1	0	1	0	0
Atriplex coulteri Coulter's saltbush	G3 S1S2	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	40 250	102 S:5	0	0	2	0	0	3	0	5	5	0	0
Atriplex pacifica south coast saltscale	G4 S2	None None	Rare Plant Rank - 1B.2	45 300	96 S:8	0	0	0	0	0	8	3	5	8	0	0
Baccharis vanessae Encinitas baccharis	G1 S1	Threatened Endangered	Rare Plant Rank - 1B.1	200 1,200	30 S:17	1	6	1	2	3	4	7	10	14	0	3
Bloomeria clevelandii San Diego goldenstar	G2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive	300 600	115 S:9	0	0	0	1	1	7	3	6	8	1	0
Bombus crotchii Crotch bumble bee	G3G4 S1S2	None None		50 50	233 S:1	0	0	0	0	0	1	1	0	1	0	0
Branchinecta lynchi vernal pool fairy shrimp	G3 S3	Threatened None	IUCN_VU-Vulnerable	200 200	755 S:1	0	0	0	0	0	1	0	1	1	0	0
Branchinecta sandiegonensis San Diego fairy shrimp	G2 S2	Endangered None	IUCN_EN-Endangered	40 530	120 S:10	0	0	0	2	0	8	0	10	10	0	0
Brodiaea filifolia thread-leaved brodiaea	G2 S2	Threatened Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	130 900	131 S:46	4	9	10	8	9	6	9	37	37	5	4
Brodiaea orcuttii Orcutt's brodiaea	G2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive USFS_S-Sensitive	100 1,700	132 S:31	0	3	4	2	5	17	11	20	26	2	3
Buteo swainsoni Swainson's hawk	G5 S3	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	30 950	2425 S:7	0	0	0	0	7	0	7	0	0	7	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Campylorhynchus brunneicapillus sandiegensis coastal cactus wren	G5T3Q S3	None None	CDFW_SSC-Species of Special Concern USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	75 1,200	153 S:39	0	17	3	0	17	2	36	3	22	5	12
Caulanthus simulans Payson's jewelflower	G4 S4	None None	Rare Plant Rank - 4.2 USFS_S-Sensitive		31 S:1	0	0	0	0	0	1	1	0	1	0	0
Ceanothus verrucosus wart-stemmed ceanothus	G3 S2	None None	Rare Plant Rank - 2B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	100 1,150	67 S:31	2	4	3	2	0	20	7	24	31	0	0
Centromadia parryi ssp. australis southern tarplant	G3T2 S2	None None	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	40 650	87 S:5	0	1	1	0	0	3	2	3	5	0	0
Centromadia pungens ssp. laevis smooth tarplant	G3G4T2 S2	None None	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	20 340	117 S:6	0	0	0	0	0	6	2	4	6	0	0
Chaenactis glabriuscula var. orcuttiana Orcutt's pincushion	G5T1T2 S1	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden	20 150	36 S:10	0	0	2	0	3	5	4	6	7	3	0
Chaetodipus californicus femoralis Dulzura pocket mouse	G5T3 S3	None None	CDFW_SSC-Species of Special Concern	100 900	54 S:9	0	1	2	0	0	6	9	0	9	0	0
Chaetodipus fallax fallax northwestern San Diego pocket mouse	G5T3T4 S3S4	None None	CDFW_SSC-Species of Special Concern	60 900	94 S:11	0	6	3	1	0	1	5	6	11	0	0
Charadrius alexandrinus nivosus western snowy plover	G3T3 S2S3	Threatened None	CDFW_SSC-Species of Special Concern NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	3 10	125 S:4	0	1	0	0	1	2	3	1	3	0	1
Choeronycteris mexicana Mexican long-tongued bat	G4 S1	None None	CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened WBWG_H-High Priority	300 300	14 S:1	0	0	0	0	0	1	1	0	1	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Chorizanthe orcuttiana Orcutt's spineflower	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	190 320	13 S:3	0	0	1	0	1	1	2	1	2	1	0
Chorizanthe polygonoides var. longispina long-spined spineflower	G5T3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden	341 341	130 S:1	0	0	0	0	0	1	0	1	1	0	0
Cicindela senilis frosti senile tiger beetle	G2G3T1T3 S1	None None		20 20	9 S:1	0	0	0	0	1	0	1	0	0	0	1
Circus cyaneus northern harrier	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	25 25	48 S:1	0	0	0	0	0	1	1	0	1	0	0
Clarkia delicata delicate clarkia	G3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	700 700	95 S:2	0	0	0	0	0	2	1	1	2	0	0
Coccyzus americanus occidentalis western yellow-billed cuckoo	G5T2T3 S1	Threatened Endangered	BLM_S-Sensitive NABCI_RWL-Red Watch List USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	200 700	155 S:2	0	0	0	0	1	1	1	1	1	0	1
Comarostaphylis diversifolia ssp. diversifolia summer holly	G3T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden	100 1,600	106 S:51	3	6	4	4	2	32	23	28	49	2	0
Corethrogyne filaginifolia var. linifolia Del Mar Mesa sand aster	G4T1T2Q S1S2	None None	Rare Plant Rank - 1B.1	50 450	43 S:17	1	1	1	1	1	12	8	9	16	1	0
Corynorhinus townsendii Townsend's big-eared bat	G3G4 S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	580 700	625 S:2	0	0	0	0	0	2	2	0	2	0	0
Crotalus ruber red-diamond rattlesnake	G4 S3	None None	CDFW_SSC-Species of Special Concern USFS_S-Sensitive	100 1,000	185 S:8	3	1	2	0	1	1	6	2	7	0	1

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Cryptantha wigginsii Wiggins' cryptantha	G2 S1	None None	Rare Plant Rank - 1B.2	160 240	10 S:5	0	3	1	0	0	1	0	5	5	0	0
Danaus plexippus pop. 1 monarch - California overwintering population	G4T2T3 S2S3	None None	USFS_S-Sensitive	20 300	378 S:5	0	1	1	0	2	1	0	5	3	2	0
Dipodomys stephensi Stephens' kangaroo rat	G2 S2	Endangered Threatened	IUCN_EN-Endangered	100 714	220 S:10	0	1	4	1	4	0	8	2	6	0	4
Dudleya blochmaniae ssp. blochmaniae Blochman's dudleya	G3T2 S2	None None	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	120 350	79 S:5	1	1	0	0	1	2	1	4	4	1	0
Dudleya multicaulis many-stemmed dudleya	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden USFS_S-Sensitive	116 400	147 S:3	0	0	0	0	0	3	2	1	3	0	0
Dudleya variegata variegated dudleya	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	300 900	108 S:11	0	0	0	0	2	9	3	8	9	0	2
Dudleya viscida sticky dudleya	G2 S2	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	75 370	31 S:8	0	0	0	0	0	8	2	6	8	0	0
Elanus leucurus white-tailed kite	G5 S3S4	None None	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern	80 350	162 S:4	0	0	0	0	0	4	2	2	4	0	0
Empidonax traillii extimus southwestern willow flycatcher	G5T2 S1	Endangered Endangered	NABCI_RWL-Red Watch List	30 370	70 S:15	1	9	2	0	0	3	1	14	15	0	0
Emys marmorata western pond turtle	G3G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	85 1,480	1217 S:5	1	0	0	0	0	4	5	0	5	0	0
Eremophila alpestris actia California horned lark	G5T4Q S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	380 380	90 S:1	0	0	0	0	0	1	0	1	1	0	0
Ericameria palmeri var. palmeri Palmer's goldenbush	G4T2? S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive	20 20	34 S:2	0	0	0	0	0	2	1	1	2	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Eryngium aristulatum var. parishii San Diego button-celery	G5T1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	50 620	79 S:11	0	3	1	1	2	4	6	5	9	2	0
Eucyclogobius newberryi tidewater goby	G3 S3	Endangered None	AFS_EN-Endangered CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	10 10	117 S:3	0	0	0	0	3	0	3	0	0	3	0
Eumops perotis californicus western mastiff bat	G5T4 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern WBWG_H-High Priority	30 1,100	293 S:8	0	0	0	0	0	8	5	3	8	0	0
Euphorbia misera cliff spurge	G5 S2	None None	Rare Plant Rank - 2B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	10 300	40 S:7	0	0	3	1	0	3	1	6	7	0	0
Ferocactus viridescens San Diego barrel cactus	G3? S2S3	None None	Rare Plant Rank - 2B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	40 800	240 S:20	0	4	2	0	3	11	5	15	17	3	0
Gila orcuttii arroyo chub	G2 S2	None None	AFS_VU-Vulnerable CDFW_SSC-Species of Special Concern USFS_S-Sensitive	110 110	49 S:1	0	0	0	0	0	1	1	0	1	0	0
Harpagonella palmeri Palmer's grapplinghook	G4 S3	None None	Rare Plant Rank - 4.2 SB_RSABG-Rancho Santa Ana Botanic Garden	100 490	57 S:14	0	3	1	0	2	8	13	1	12	2	0
Hazardia orcuttii Orcutt's hazardia	G1 S1	None Threatened	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	20 275	5 S:5	0	0	2	0	0	3	0	5	5	0	0
Heterotheca sessiliflora ssp. sessiliflora beach goldenaster	G4T2T3 S1	None None	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden		13 S:1	0	0	0	0	0	1	0	1	1	0	0
Horkelia cuneata var. puberula mesa horkelia	G4T1 S1	None None	Rare Plant Rank - 1B.1 USFS_S-Sensitive	880 880	103 S:2	0	0	0	0	0	2	1	1	2	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Horkelia truncata Ramona horkelia	G3 S3	None None	Rare Plant Rank - 1B.3 SB_RSABG-Rancho Santa Ana Botanic Garden USFS_S-Sensitive	1,250 1,920	49 S:5	0	0	0	0	0	5	1	4	5	0	0
Icteria virens yellow-breasted chat	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	40 540	95 S:11	0	5	0	0	0	6	2	9	11	0	0
Isocoma menziesii var. decumbens decumbent goldenbush	G3G5T2T3 S2	None None	Rare Plant Rank - 1B.2	350 800	102 S:9	0	0	0	1	0	8	5	4	9	0	0
Iva hayesiana San Diego marsh-elder	G3 S2	None None	Rare Plant Rank - 2B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	10 540	113 S:25	0	2	3	0	0	20	4	21	25	0	0
Ixobrychus exilis least bittern	G5 S2	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	260 260	10 S:1	0	0	0	0	0	1	0	1	1	0	0
Lasiurus cinereus hoary bat	G5 S4	None None	IUCN_LC-Least Concern WBWG_M-Medium Priority		235 S:4	0	0	0	0	0	4	4	0	4	0	0
Lasiurus xanthinus western yellow bat	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern WBWG_H-High Priority	50 700	58 S:3	0	0	0	0	0	3	2	1	3	0	0
Lasthenia glabrata ssp. coulteri Coulter's goldfields	G4T2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden	3 3	97 S:3	1	0	0	0	1	1	2	1	2	1	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Laterallus jamaicensis coturniculus California black rail	G3G4T1 S1	None Threatened	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_NT-Near Threatened NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern		244 S:1	0	0	0	0	0	1	1	0	1	0	0
Lepechinia cardiophylla heart-leaved pitcher sage	G3 S2S3	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden USFS_S-Sensitive	527 527	22 S:1	0	1	0	0	0	0	0	1	1	0	0
Lepidium virginicum var. robinsonii Robinson's pepper-grass	G5T3 S3	None None	Rare Plant Rank - 4.3	20 1,200	142 S:11	1	2	2	0	0	6	2	9	11	0	0
Leptonycteris yerbabuenae lesser long-nosed bat	G4 S1	Endangered None	IUCN_VU-Vulnerable WBWG_H-High Priority	50 50	2 S:1	0	0	0	0	0	1	1	0	1	0	0
Leptosyne maritima sea dahlia	G2 S1	None None	Rare Plant Rank - 2B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	50 600	40 S:13	1	0	0	0	1	11	7	6	12	1	0
Lepus californicus bennettii San Diego black-tailed jackrabbit	G5T3T4 S3S4	None None	CDFW_SSC-Species of Special Concern	100 670	102 S:4	0	0	1	0	0	3	0	4	4	0	0
Monardella hypoleuca ssp. intermedia intermediate monardella	G4T2? S2?	None None	Rare Plant Rank - 1B.3	650 650	38 S:1	0	0	0	0	0	1	0	1	1	0	0
Monardella hypoleuca ssp. lanata felt-leaved monardella	G4T3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive USFS_S-Sensitive	1,670 1,670	55 S:3	0	0	0	0	0	3	3	0	3	0	0
Myosurus minimus ssp. apus little mousetail	G5T2Q S2	None None	Rare Plant Rank - 3.1		24 S:1	0	0	0	0	0	1	1	0	1	0	0
Myotis yumanensis Yuma myotis	G5 S4	None None	BLM_S-Sensitive IUCN_LC-Least Concern WBWG_LM-Low-Medium Priority	30 530	262 S:9	0	0	0	0	0	9	6	3	9	0	0
Nama stenocarpa mud nama	G4G5 S1S2	None None	Rare Plant Rank - 2B.2		22 S:1	0	0	0	0	0	1	1	0	1	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Navarretia fossalis spreading navarretia	G2 S2	Threatened None	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	60 620	74 S:7	0	1	1	0	3	2	4	3	4	3	0
Nemacaulis denudata var. denudata coast woolly-heads	G3G4T2 S2	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	10 15	37 S:5	0	1	0	0	0	4	3	2	5	0	0
Nemacaulis denudata var. gracilis slender cottonheads	G3G4T3? S2	None None	Rare Plant Rank - 2B.2	15 15	24 S:1	0	0	0	0	1	0	1	0	0	1	0
Neotoma lepida intermedia San Diego desert woodrat	G5T3T4 S3S4	None None	CDFW_SSC-Species of Special Concern	200 1,100	116 S:13	0	7	2	1	0	3	10	3	13	0	0
Nolina cismontana chaparral nolina	G3 S3	None None	Rare Plant Rank - 1B.2 SB_RSABG-Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden USFS_S-Sensitive	460 900	49 S:3	0	0	0	0	0	3	2	1	3	0	0
Nyctinomops femorosaccus pocketed free-tailed bat	G4 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern WBWG_M-Medium Priority	30 650	90 S:5	0	0	0	0	0	5	4	1	5	0	0
Nyctinomops macrotis big free-tailed bat	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern WBWG_MH-Medium-High Priority	530 650	32 S:2	0	0	0	0	0	2	1	1	2	0	0
Orcuttia californica California Orcutt grass	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden	50 50	37 S:1	0	0	0	0	0	1	0	1	1	0	0
Orobanche parishii ssp. brachyloba short-lobed broomrape	G4?T4 S3	None None	Rare Plant Rank - 4.2	20 20	26 S:1	0	0	0	0	1	0	1	0	0	1	0
Passerculus sandwichensis beldingi Belding's savannah sparrow	G5T3 S3	None Endangered		10 20	36 S:5	0	1	2	1	0	1	2	3	5	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Perognathus longimembris pacificus Pacific pocket mouse	G5T1 S1	Endangered None	CDFW_SSC-Species of Special Concern	200 200	14 S:1	0	0	0	0	0	1	1	0	1	0	0
Phrynosoma blainvillii coast horned lizard	G3G4 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	160 1,640	754 S:31	4	5	1	1	1	19	17	14	30	1	0
Plegadis chihi white-faced ibis	G5 S3S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	10 700	20 S:3	0	0	0	0	0	3	2	1	3	0	0
Plestiodon skiltonianus interparietalis Coronado skink	G5T5 S2S3	None None	BLM_S-Sensitive CDFW_WL-Watch List	400 850	35 S:7	0	1	2	1	0	3	3	4	7	0	0
Polioptila californica californica coastal California gnatcatcher	G4G5T2Q S2	Threatened None	CDFW_SSC-Species of Special Concern NABCI_YWL-Yellow Watch List	10 1,400	821 S:140	6	44	12	1	2	75	62	78	138	2	0
Pseudognaphalium leucocephalum white rabbit-tobacco	G4 S2	None None	Rare Plant Rank - 2B.2	82 82	62 S:1	0	0	0	0	0	1	0	1	1	0	0
Quercus dumosa Nuttall's scrub oak	G3 S3	None None	Rare Plant Rank - 1B.1 USFS_S-Sensitive	50 700	165 S:41	3	4	2	0	0	32	6	35	41	0	0
Rallus longirostris levipes light-footed clapper rail	G5T1T2 S1	Endangered Endangered	CDFW_FP-Fully Protected NABCI_RWL-Red Watch List	3 100	31 S:6	0	2	1	0	1	2	1	5	5	0	1
Riparia riparia bank swallow	G5 S2	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern	65 65	297 S:1	0	0	0	0	1	0	1	0	0	0	1
Salvadora hexalepis virgultea coast patch-nosed snake	G5T4 S2S3	None None	CDFW_SSC-Species of Special Concern	472 900	25 S:2	1	0	0	1	0	0	0	2	2	0	0
Salvia munzii Munz's sage	G2 S2	None None	Rare Plant Rank - 2B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	164 164	43 S:1	0	0	0	0	0	1	0	1	1	0	0
Setophaga petechia yellow warbler	G5 S3S4	None None	CDFW_SSC-Species of Special Concern USFWS_BCC-Birds of Conservation Concern	80 260	66 S:6	0	4	0	0	0	2	0	6	6	0	0

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Sidalcea neomexicana Salt Spring checkerbloom	G4 S2	None None	Rare Plant Rank - 2B.2 USFS_S-Sensitive		30 S:1	0	0	0	0	0	1	1	0	1	0	0
Spea hammondii western spadefoot	G3 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	460 1,150	450 S:6	0	1	2	1	0	2	2	4	6	0	0
Stemodia durantifolia purple stemodia	G5 S2	None None	Rare Plant Rank - 2B.1	170 245	21 S:2	0	0	0	0	0	2	1	1	2	0	0
Sternula antillarum browni California least tern	G4T2T3Q S2	Endangered Endangered	CDFW_FP-Fully Protected NABCI_RWL-Red Watch List	3 100	68 S:5	0	0	0	1	1	3	5	0	4	0	1
Streptocephalus woottoni Riverside fairy shrimp	G1G2 S1S2	Endangered None	IUCN_EN-Endangered	55 500	82 S:6	0	0	0	1	0	5	0	6	6	0	0
Suaeda esteroa estuary seablite	G3 S2	None None	Rare Plant Rank - 1B.2	5 20	39 S:3	0	0	0	0	0	3	1	2	3	0	0
Taxidea taxus American badger	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	560 720	533 S:3	0	0	0	0	0	3	3	0	3	0	0
Tetracoccus dioicus Parry's tetracoccus	G3? S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden USFS_S-Sensitive	450 1,100	46 S:13	1	4	0	0	0	8	4	9	13	0	0
Thamnophis hammondii two-striped gartersnake	G4 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive	400 444	156 S:4	0	0	0	0	0	4	1	3	4	0	0
Thamnophis sirtalis ssp. south coast gartersnake	G5T1T2 S1S2	None None	CDFW_SSC-Species of Special Concern	35 35	3 S:1	0	0	1	0	0	0	0	1	1	0	0
Tryonia imitator mimic tryonia (=California brackishwater snail)	G2 S2	None None	IUCN_DD-Data Deficient	3 10	39 S:4	0	0	0	0	2	2	3	1	2	0	2

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Vireo bellii pusillus least Bell's vireo	G5T2 S2	Endangered Endangered	IUCN_NT-Near Threatened NABCI_YWL-Yellow Watch List	0 1,300	474 S:50	8	16	6	0	1	19	7	43	49	1	0

CNPS California Native Plant Society Rare and Endangered Plant Inventory

Plant List

58 matches found. Click on scientific name for details

Search Criteria

Rare Plant Rank is one of [1A, 1B, 2A, 2B], Found in 9 Quads around 33117B2

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
Abronia villosa var. aurita	chaparral sand-verbena	Nyctaginaceae	annual herb	1B.1	S2	G5T2T3
Acanthomintha ilicifolia	San Diego thorn-mint	Lamiaceae	annual herb	1B.1	S1	G1
Acmispon prostratus	Nuttall's acmispon	Fabaceae	annual herb	1B.1	S1	G1G2
Adolphia californica	California adolphia	Rhamnaceae	perennial deciduous shrub	2B.1	S2	G3
Ambrosia pumila	San Diego ambrosia	Asteraceae	perennial rhizomatous herb	1B.1	S1	G1
Arctostaphylos glandulosa ssp. crassifolia	Del Mar manzanita	Ericaceae	perennial evergreen shrub	1B.1	S2	G5T2
Arctostaphylos rainbowensis	Rainbow manzanita	Ericaceae	perennial evergreen shrub	1B.1	S2	G2
Atriplex coulteri	Coulter's saltbush	Chenopodiaceae	perennial herb	1B.2	S1S2	G3
Atriplex pacifica	South Coast saltscale	Chenopodiaceae	annual herb	1B.2	S2	G4
Atriplex parishii	Parish's brittlescale	Chenopodiaceae	annual herb	1B.1	S1	G1G2
Baccharis vanessae	Encinitas baccharis	Asteraceae	perennial deciduous shrub	1B.1	S1	G1
Bloomeria clevelandii	San Diego goldenstar	Themidaceae	perennial bulbiferous herb	1B.1	S2	G2
Brodiaea filifolia	thread-leaved brodiaea	Themidaceae	perennial bulbiferous herb	1B.1	S2	G2
Brodiaea orcuttii	Orcutt's brodiaea	Themidaceae	perennial bulbiferous herb	1B.1	S2	G2
Calochortus dunnii	Dunn's mariposa lily	Liliaceae	perennial bulbiferous herb	1B.2	S2S3	G2G3
Ceanothus verrucosus	wart-stemmed ceanothus	Rhamnaceae	perennial evergreen shrub	2B.2	S2	G3
Centromadia parryi ssp. australis	southern tarplant	Asteraceae	annual herb	1B.1	S2	G3T2
Centromadia pungens ssp. laevis	smooth tarplant	Asteraceae	annual herb	1B.1	S2	G3G4T2
Chaenactis glabriuscula var. orcuttiana	Orcutt's pincushion	Asteraceae	annual herb	1B.1	S1	G5T1T2
Chorizanthe orcuttiana	Orcutt's spineflower	Polygonaceae	annual herb	1B.1	S1	G1
Chorizanthe polygonoides var. longispina	long-spined spineflower	Polygonaceae	annual herb	1B.2	S3	G5T3
Clarkia delicata	delicate clarkia	Onagraceae	annual herb	1B.2	S3	G3
Comarostaphylis diversifolia ssp.	summer holly	Ericaceae	perennial evergreen	1B.2	S2	G3T2

diversifolia			shrub			
Corethrogyne filaginifolia var. incana	San Diego sand aster	Asteraceae	perennial herb	1B.1	S1	G4T1Q
Corethrogyne filaginifolia var. linifolia	Del Mar Mesa sand aster	Asteraceae	perennial herb	1B.1	S1S2	G4T1T2Q
Cryptantha wigginsii	Wiggins' cryptantha	Boraginaceae	annual herb	1B.2	S1	G2
Dudleya blochmaniae ssp. blochmaniae	Blochman's dudleya	Crassulaceae	perennial herb	1B.1	S2	G3T2
Dudleya multicaulis	many-stemmed dudleya	Crassulaceae	perennial herb	1B.2	S2	G2
Dudleya variegata	variegated dudleya	Crassulaceae	perennial herb	1B.2	S2	G2
Dudleya viscida	sticky dudleya	Crassulaceae	perennial herb	1B.2	S2	G2
Ericameria palmeri var. palmeri	Palmer's goldenbush	Asteraceae	perennial evergreen shrub	1B.1	S2	G4T2?
Eryngium aristulatum var. parishii	San Diego button-celery	Apiaceae	annual / perennial herb	1B.1	S1	G5T1
Eryngium pendletonense	Pendleton button-celery	Apiaceae	perennial herb	1B.1	S1	G1
Euphorbia misera	cliff spurge	Euphorbiaceae	perennial shrub	2B.2	S2	G5
Ferocactus viridescens	San Diego barrel cactus	Cactaceae	perennial stem succulent	2B.1	S2S3	G3?
Hazardia orcuttii	Orcutt's hazardia	Asteraceae	perennial evergreen shrub	1B.1	S1	G1
Heterotheca sessiliflora ssp. sessiliflora	beach goldenaster	Asteraceae	perennial herb	1B.1	S1	G4T2T3
Horkelia cuneata var. puberula	mesa horkelia	Rosaceae	perennial herb	1B.1	S1	G4T1
Horkelia truncata	Ramona horkelia	Rosaceae	perennial herb	1B.3	S3	G3
Isocoma menziesii var. decumbens	decumbent goldenbush	Asteraceae	perennial shrub	1B.2	S2	G3G5T2T3
Iva hayesiana	San Diego marsh-elder	Asteraceae	perennial herb	2B.2	S2	G3
Lasthenia glabrata ssp. coulteri	Coulter's goldfields	Asteraceae	annual herb	1B.1	S2	G4T2
Lepechinia cardiophylla	heart-leaved pitcher sage	Lamiaceae	perennial shrub	1B.2	S2S3	G3
Leptosyne maritima	sea dahlia	Asteraceae	perennial herb	2B.2	S1	G2
Monardella hypoleuca ssp. intermedia	intermediate monardella	Lamiaceae	perennial rhizomatous herb	1B.3	S2?	G4T2?
Monardella hypoleuca ssp. lanata	felt-leaved monardella	Lamiaceae	perennial rhizomatous herb	1B.2	S3	G4T3
Nama stenocarpa	mud nama	Namaceae	annual / perennial herb	2B.2	S1S2	G4G5
Navarretia fossalis	spreading navarretia	Polemoniaceae	annual herb	1B.1	S2	G2
Nemacaulis denudata var. denudata	coast woolly-heads	Polygonaceae	annual herb	1B.2	S2	G3G4T2
Nolina cismontana	chaparral nolina	Ruscaceae	perennial evergreen shrub	1B.2	S3	G3
Orcuttia californica	California Orcutt grass	Poaceae	annual herb	1B.1	S1	G1
Pinus torreyana ssp. torreyana	Torrey pine	Pinaceae	perennial evergreen tree	1B.2	S1	G1T1
Pseudognaphalium leucocephalum	white rabbit-tobacco	Asteraceae	perennial herb	2B.2	S2	G4
Quercus dumosa	Nuttall's scrub oak	Fagaceae	perennial evergreen	1B.1	S3	G3

			shrub			
Salvia munzii	Munz's sage	Lamiaceae	perennial evergreen shrub	2B.2	S2	G2
Stemodia durantifolia	purple stemodia	Plantaginaceae	perennial herb	2B.1	S2	G5
Suaeda esteroa	estuary seablite	Chenopodiaceae	perennial herb	1B.2	S2	G3
Tetracoccus dioicus	Parry's tetracoccus	Picrodendraceae	perennial deciduous shrub	1B.2	S2	G3?

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Appendix F1. Historical Resources

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Table 4.3-1. Previously Recorded Historical Resources (from Vista 2030 GP Update)	
Address	**Description**
Included in the California Historical Resources Information System Database	
640 Alta Vista Drive[1]	Rancho Buena Vista Adobe built in stages from 1854-1904 (P-37-027667)
1812-30 Anna Lane	Church of Christ complex consisting of three former single-family residences built in the 1940s (P-37-018218)
1823 Anna Lane	Historic residence built in 1946 (P-37-018219)
112 Cedar Road	Historic residence built in 1944 (P-37-025143)
106 Copper Avenue	Historic residence built in 1954 (P-37-025152)
1365 Clarence Drive	Historic residence built in 1947 (P-37-027643)
1367 Clarence Drive	Historic residence built in 1933 (P-37-027644)
110 El Valle Opulento	Historic residence built in 1935 (P-37-018205)
111 El Valle Opulento	Historic residence built in 1945 (P-37-018206)
124 Estrelita Drive	Historic residence built in 1940 (P-37-018186)
134 Grapevine Road	Historic residence built in the late 1920s (P-37- 025145)
144 Grapevine Road	Historic residence built in 1942 (P-37-025146)
152 Grapevine Road	Historic residence built in 1942 (P-37-025147)
104 Hill Drive	Historic residence built in 1947 (P-37-025149)
116 Hannalei Drive	Historic residence built in 1952 (P-37-018223)
138 Hesmay Drive	Historic multi-family residence built circa (c.) 1955 (P-37-018216)
231 Poinsettia Avenue	Historic residence built in 1932 (P-37-018200)
2140 Primrose Avenue	Historic residence built in 1955 (P-37-018203)
2184 Primrose Avenue	Historic residence built in 1940 (P-37-018202)
206 Robelini Avenue	Historic residence built in 1930 (P-37-018204)
101 Santa Clara Drive	Historic barn built in 1923 (P-37-025151)
1750 S. Santa Fe Avenue	Historic residence built in 1939 (P-37-018185)
1904 S. Santa Fe Avenue	Historic residence built in 1940 (P-37-018215)
1922 S. Santa Fe Avenue	Historic commercial building built c. 1950 (P-37-018214)
1964 S. Santa Fe Avenue	Historic residence turned commercial building built c. 1946 (P-37-018213)
1968 S. Santa Fe Avenue	Historic commercial building built in 1943 (P-37-018212)
1972 S. Santa Fe Avenue	Historic residence turned commercial building built in 1945 (P-37-018211)
1974 S. Santa Fe Avenue	Historic residence turned commercial building built c. 1946 (P-37-018210)
1984 S. Santa Fe Avenue	Historic residence turned commercial building built c. 1950 (P-37-018209)
1988 S. Santa Fe Avenue	Historic residence turned commercial building built c. 1950 (P-37-018208)
1990 S. Santa Fe Avenue	Historic commercial building built c. 1950–1955 (P-37-018207)

Table 4.3-1. Previously Recorded Historical Resources	
Address	**Description**
2357 S. Santa Fe Avenue	Historic residence built in 1927 (P-37-018201)
2550 S. Santa Fe Avenue	Historic industrial building built c. 1950 (P-37-018187)
2553 S. Santa Fe Avenue	Historic industrial building built c. 1950–1955 (P-37-018199)
2570 S. Santa Fe Avenue	Historic industrial building built c. 1940 (P-37-018188)
2577 S. Santa Fe Avenue	Historic commercial building built c. 1950–1955 (P-37-018198)
2600 S. Santa Fe Avenue	Historic industrial building built c. 1950 (P-37-018189)
2625 S. Santa Fe Avenue	Historic commercial building built in 1948 (P-37-018192)
1547 Sunbury Court	Historic residence built in 1935 (P-37-018184)
761 W. Vista Way	Historic residence turned commercial building built in the 1950s (P-37-025153)
777A W. Vista Way	Historic residence turned commercial building built in the 1952 (P-37-025154)
1341 W. Vista Way	Historic residence built in 1948 (P37-025150)
1565 W. Vista Way	Historic commercial building built in the 1940s (P-37-025148)
2440 E. Vista Way	Historic residence built in 1937 (P-37-028779)
101 Woodland Drive	Historic commercial building built c. 1950 (P-37-018222)
109 Woodland Drive	Historic residence built in 1946 (P-37-018220)
111 Woodland Drive	Historic residence built c. 1950, possibly moved (P-37-018221)
114 Woodland Drive	Historic residence built c. 1950 (P-37-018217)
Buildings Recorded in the 1987 Historic Resources Survey for Vista (Year Built)	
640 Alta Vista Drive	Rancho Buena Vista Adobe (c. 1845)
1260 Alta Vista Drive	McCurdy-Morton House (1928)
1540 Alta Vista Drive	James Armstrong House (1936)
2376 Alta Vista Drive	Spanish Colonial Home
128 S. Beaumont Ave	Neva Clement House (1932)
2261 Edgehill Road	English Gentry House and Barn (c. 1884, c. 1905)
1155 Foothill Drive	Delpy House (1927)
2317 Foothill Drive	Rancho Minerva (1931–1932)
1030 Heather Drive/ Alta Vista Drive	“S.O.S.” Smith House (c. 1928)
160 Recreation Way	Recreation Center (1941)
1624 San Luis Rey Avenue	Old Adobe Home (1900)
321 S. Santa Fe Avenue	American Legion Post #365 (1948)
211 E. Vista Way	Vista First National Bank (1928)
224 E Vista Way/Main Street	Sheffields Department Store (c. 1948)
226 E. Vista Way/Main Street	Dutch Bakery (1940)
303 E. Vista Way	AVO Theater (1948)

Table 4.3-1. Previously Recorded Historical Resources	
Address	**Description**
2240 E. Vista Way	Mary Helen Ranch (1937)
W Vista Way and Alta Vista Drive	Wildwood Park (est.1925)
790 Vale View Drive	Braun House (1929)
207 Washington Street	Santa Fe Railway Depot (1913)
SCIC Database Historic Address Entries	
200 E. Broadway	Hane's Building
217 E. Broadway	Connie's Hairport
317 Cedar Road	Suzanne Render Residence
404 N. Citrus Avenue	
952 N. Citrus Avenue	
333 Poinsettia Avenue	
2210 N. Santa Fe Avenue	Rancho Guajome
240 N. Santa Fe Avenue	Bittner's Restaurant Supply
1017 Torole Circle	
100 W. Vista Way	Peto's Farm Supplies
156 W. Vista Way	Amigos Restaurant
202 W. Vista Way	
216 W. Vista Way	Wongs Bail Bonds
220 W. Vista Way	Wong residence
260 W. Vista Way	Rassel Chiropractic Center
123 E. Vista Way	Sundowner
240 E. Vista Way	Aloha Stationers

[1]Italicized addresses appear in multiple lists/databases.

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Appendix F2. Table 4.0-1 (Modified)

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The following provides a list of project components resulting in potential impacts to historical and archaeological resources. This list is adapted from *Table 4.0-1, Pipeline ID in Archaeological Site Vicinities,* as presented in the Cultural Resources Evaluation (Appendix B of the 2008 PEIR).

Cultural Resources Impact Table

Sub-Basin	DESCRIPTOR	Presence of Recorded Site within 100'	Presence of Recorded Site within 500'	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
B01	B01070.00-B01071.00		x	SDI-5779		x
B01	B01111.A0-B01111.B0		x	SDI-5785H	x	
B01	B01076.00-B01079.00		x	SDI-5787H		x
B01	B01074.00-B01075.00	x		SDI-5787H		x
B01	B01070.00-B01071.00		x	SDI-5787H		x
B01	B01108.00-B01109.00		x	SDI-5787H		x
B01	B01118.00-B01119.00		x	SDI-5792		x
B01	B01017.00-B01018.00		x	SDI-5792		x
B01	B01111.A0-B01111.B0		x	SDI-5792		x
B01	B01016.00-B01017.00		x	SDI-5792		x
B01	B01015.00-B01016.00		x	SDI-5792		x
B01	B01076.00-B01079.00		x	SDI-5792		x
B01	B01074.00-B01075.00		x	SDI-5792		x
B01	B01118.00-B01119.00		x	SDI-5792		x
B01	B01070.00-B01071.00		x	SDI-5792		x
B01	B01117.00-B01118.00		x	SDI-5792		x
B01	B01031.E0-B01031.F0	x		SDI-5792		x
B01	B01108.00-B01109.00		x	SDI-5792		x
B01	B01037.00-B01038.00		x	SDI-5792		x
B01	B01036.00-B01037.00		x	SDI-5792		x
B01	B01035.00-B01036.00	x		SDI-5792		x
B01	B01034.00-B01035.00	x		SDI-5792		x
B01	B01032.00-B01033.00	x		SDI-5792		x
B01	B01028.00-B01030.00		x	SDI-5792		x
B01	B01013.00-B01014.00		x	SDI-5792		x
B01	B01011.00-B01013.00		x	SDI-5792		x
B01	B01009.00-B01010.00	x		SDI-5792		x
B01	B01113.B0-B01113.C0		x	SDI-5792		x
B01	B01007.00-B01010.00	x		SDI-5792		x
B01	B01006.00-B01007.00	x		SDI-5792		x

Sub-Basin	DESCRIPTOR	Presence of Recorded Site within 100’	Presence of Recorded Site within 500’	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
B01	B01005.00-B01006.00		x	SDI-5792		x
B01	B01003.00-B01004.00		x	SDI-5792		x
B01	B01001.00-B01003.00		x	SDI-5792		x
B01	B01028.00-B01030.00		x	SDI-8091	x	
B01	B01031.E0-B01031.F0	x		SDI-8092	x	
B01	B01032.00-B01033.00		x	SDI-8092	x	
B01	B01118.00-B01119.00	x		SDI-8735		x
B01	B01117.00-B01118.00		x	SDI-8735		x
B01	B01108.00-B01109.00		x	SDI-8735		x
B01	B01113.B0-B01113.C0		x	SDI-8735		x
B01	B01118.00-B01119.00		x	SDI-9582		x
B01	B01117.00-B01118.00		x	SDI-9582		x
B01-A-30	B01115.00-B01116.00	x		SDI-5792		x
B01-A-30	B01115.00-B01116.00		x	SDI-8735		x
B01-A-33	B01120.00-B01121.00		x	SDI-5792		x
B01-A-33	B01120.00-B01121.00		x	SDI-8735		x
B01-A-33	B01120.00-B01121.00	x		SDI-9582		x
B01-A-35	B01122.00-B01123.00		x	SDI-5791H	x	
B01-A-35	B01122.00-B01123.00	x		SDI-5792		x
B01-A-35	B01122.00-B01123.00	x		SDI-9582		x
B02	B02005.00-B02006.00		x	SDI-5792		x
B07/B01-D-1	B01073.00-B01074.00	x		SDI-5787H		x
B07/B01-D-1	B01073.00-B01074.00	x		SDI-5792		x
B08	B08051.00-B08052.00		x	I-401	x	
B08	B08030.00-B08032.00		x	I-401	x	
B08	B08021.00-B08028.00	x		I-402	x	
B08	B08019.00-B08020.00		x	I-402	x	
B08	B08022.00-B08024.00	x		I-402	x	
B08	B08030.00-B08032.00	x		I-402	x	
B08	B08013.00-B08014.00		x	I-403	x	
B08	B08043.00-B08048.00		x	P-018224		x
B08	B08051.00-B08052.00	x		P-018224		x
B08	B08070.00-B08071.00		x	P-018224		x
B08	B08064.00-B08066.00		x	P-018224		x
B08	B08062.00-B08063.00		x	P-018224		x
B08	B08030.00-B08032.00	x		SDI-12,520 H	x	
B08	B08018.00-B08019.00		x	SDI-12,521	x	
B08	B08018.A0-B08018.B0	x		SDI-12,521	x	
B08	B08011.00-B08012.00		x	SDI-12,521	x	
B08	B08043.00-B08048.00	x		SDI-13,009	x	

Sub-Basin	DESCRIPTOR	Presence of Recorded Site within 100’	Presence of Recorded Site within 500’	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
B08	B08051.00-B08052.00	x		SDI-13,009	x	
B09	B09088.00-B09089.00	x		I-402	x	
B12	B12003.W0-B12003.X0		x	P-025154		x
B14	B14282.00-B14300.00	x		SDI-8250 A		x
B14	B14282.00-B14300.00	x		SDI-8250 B		x
B14	B14301.00-B14302.00	x		SDI-8250 C		x
B14	B14282.00-B14300.00	x		SDI-8250 C		x
B15	B15051.00-B15052.00		x	P-024185		x
B15	B15070.00-B15071.00		x	P-024185		x
B15	B15066.00-B15067.00		x	P-024185		x
B15	B15054.00-B15055.00		x	P-024185		x
B15	B15063.00-B15064.00	x		P-024185		x
B15	B15059.00-B15062.00		x	P-024185		x
B15	B15264.00-B15265.00	x		SDI-5634		x
B15	B15270.00-B15278.00	x		SDI-5634		x
B15	B15258.00-B15259.00	x		SDI-5634		x
B15	B15253.00-B15254.00		x	SDI-5634		x
B15	B15247.00-B15251.00		x	SDI-5634		x
B15	B15260.00-B15263.00	x		SDI-5634		x
B15	BTPFM01-BTPFM02	x		SDI-5635		x
B15	BTP001.00-BTP002.00		x	SDI-5637		x
B15	BTPFM01-BTPFM02		x	SDI-5637		x
B15	B15308.00-B15307.00		x	SDI-5779		x
B15	B15306.00-B15305.00		x	SDI-5779		x
B15	B15329.00-B15330.00	x		SDI-5788H		x
B15	B15321.00-B15322.00		x	SDI-5788H		x
B15	B15318.00-B15329.00		x	SDI-5788H		x
B15	B15303.00-B15304.00		x	SDI-5788H		x
B15	B15312.00-B15313.00		x	SDI-5788H		x
B15	B15287.00-B15288.00		x	SDI-5788H		x
B15	B15328.A0-B15328.B0		x	SDI-5788H		x
B15	B15328.E0-B15328.F0		x	SDI-5788H		x
B15	BTPFM01-BTPFM02		x	SDI-5789H, A		x
B15	BTPFM01-BTPFM02		x	SDI-5791H	x	
B15	B15002.00-B15009.00	x		SDI-5792		x
B15	B15329.00-B15330.00		x	SDI-5792		x
B15	B15321.00-B15322.00		x	SDI-5792		x
B15	B15318.00-B15329.00	x		SDI-5792		x

Sub-Basin	DESCRIPTOR	Presence of Recorded Site within 100’	Presence of Recorded Site within 500’	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
B15	B15303.00-B15304.00	x		SDI-5792		x
B15	B15324.00-B15325.00		x	SDI-5792		x
B15	B15314.00-B15315.00		x	SDI-5792		x
B15	B15312.00-B15313.00		x	SDI-5792		x
B15	B15308.00-B15307.00		x	SDI-5792		x
B15	B15306.00-B15305.00	x		SDI-5792		x
B15	B15297.00-B15298.00		x	SDI-5792		x
B15	B15287.00-B15288.00	x		SDI-5792		x
B15	B15285.00-B15286.00		x	SDI-5792		x
B15	B15241.00-B15242.00	x		SDI-5792		x
B15	B15045.00-B15050.00		x	SDI-5792		x
B15	B15328.A0-B15328.B0	x		SDI-5792		x
B15	B15328.E0-B15328.F0	x		SDI-5792		x
B15	B15010.B0-B15010.C0	x		SDI-5792		x
B15	B15001.B0-B15001.C0	x		SDI-5792		x
B15	B15070.00-B15071.00		x	SDI-5792		x
B15	B15010.00-B15011.00	x		SDI-5792		x
B15	B15004.00-B15005.00		x	SDI-5792		x
B15	B15001.00-B15002.00	x		SDI-5792		x
B15	BTPFM01-BTPFM02	x		SDI-5792		x
B15	BTPFM01-BTPFM02	x		SDI-8347	x	
B15	B15116.00-B15117.00	x		SDI-9503	x	
B15	B15127.00-B15128.00		x	SDI-9503	x	
B15	B15114.00-B15127.00	x		SDI-9503	x	
B15/V33-D-1	V33137.00-V33140.00			SDI-5779		x
B15/V33-D-1	V33142.00-V33143.00	x		SDI-5779		x
B15/V33-D-1	V33136.00-V33137.00		x	SDI-5790H		x
B15/V33-D-1	V33136.00-V33137.00	x		SDI-5792		x
B15-A-3	B15109.00-B15110.00		x	SDI-5792		x
B15-A-4	B15110.00-B15111.00		x	SDI-5792		x
B15-A-5	B15111.00-B15112.00	x		SDI-5792		x
OV2	OV2025.A0-OV2025.B0	x		SDI-637	x	
OV5	OV5037.00-OV5039.00		x	P-024949		x
OV5	OV5151.00-OV5152.00		x	SDI-13,182		x
OV5	OV5149.00-OV5150.00		x	SDI-13,182		x
OV5	OV5080.00-OV5081.00		x	SDI-14,730H		x
OV5	OV5149.00-OV5150.00	x		SDI-5992		x
OV5	OV5124.00-OV5125.00		x	SDI-6091	x	
OV5	OV5132.00-OV5133.00	x		SDI-6091	x	

Sub-Basin	DESCRIPTOR	Presence of Recorded Site within 100’	Presence of Recorded Site within 500’	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
OV5	OV5143.00-OV5144.00	x		SDI-8241	x	
OV5	OV5141.00-OV5142.00		x	SDI-8241	x	
V01	V01005.00-V01006.00		x	P-025143		x
V01	V01021.B0-V01021.C0		x	P-025143		x
V02	V02091.00-V02092.00		x	P-025144		x
V02	V02095.00-V02096.00		x	P-025144		x
V02	V02082.00-V02083.A0		x	P-025144		x
V02	V02082.00-V02083.A0		x	P-025145		x
V02	V02082.00-V02083.A0		x	P-025146		x
V02	V02082.00-V02083.A0		x	P-025147		x
V02	V02082.00-V02083.A0		x	P-025148		x
V03	V03166.00-V03167.00	x		P-025145		x
V03	V03164.00-V03165.00		x	P-025145		x
V03	V03154.00-V03155.00		x	P-025145		x
V03	V03166.00-V03167.00	x		P-025146		x
V03	V03164.00-V03165.00		x	P-025146		x
V03	V03166.00-V03167.00	x		P-025147		x
V03	V03164.00-V03165.00		x	P-025147		x
V03	V03185.G0-V03185.00		x	P-025148		x
V03	V03180.00-V03181.00	x		P-025149		x
V03	V03174.A0-V03174.B0		x	P-025150		x
V03	V03185.B0-V03185.D0		x	P-025150		x
V03	V03180.00-V03181.00	x		P-025150		x
V03-A-10	V03172.00-V03173.00		x	P-025149		x
V03-A-10	V03172.00-V03173.00		x	P-025150		x
V03-A-10	V03172.00-V03173.00	x		SDI-8246	x	
V03-A-82	V03166.B0-V03166.00		x	P-025145		x
V03-A-82	V03166.B0-V03166.00		x	P-025146		x
V03-A-82	V03166.B0-V03166.00		x	P-025147		x
V03-A-82	V03166.B0-V03166.00		x	P-025148		x

Sub-Basin	DESCRIPTOR	Presence of Recorded Site within 100’	Presence of Recorded Site within 500’	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
V04	V04080.00-V04081.00		x	P-025151		x
V04	V04076.00-V04077.00		x	P-025151		x
V04	V04071.00-V04072.00		x	P-025151		x
V04	V04020.00-V04021.00		x	P-025152		x
V04	V04028.D0-V04028.00	x		P-025153		x
V04	V04028.D0-V04028.00		x	P-025154		x
V05	V05088.00-V05092.00		x	P-025154		x
V08	V08072.C0-V08072.A0	x		SDI-14,324H		x
V08	V08072.CB-V08072.CD	x		SDI-14,324H		x
V09	V09035.00-V09046.00		x	SDI-14,323H		x
V10	V10010.00-V10011.00		x	SDI-5345	x	
V10	V10020.00-V10021.00		x	SDI-5345	x	
V12	V12064.00-V12065.00		x	SDI-650	x	
V12	V12045.A0-V12045.B0	x		SDI-652	x	
V13	V13040.00-V13041.00		x	SDI-651		x
V13-B-38	V13043.00-V13044.00		x	SDI-651		x
V14	V14103.C0-V14103.D0	x		SDI-654	x	
V14	V14103.D0-V14103.00	x		SDI-654	x	
V16	V16042.00-V16043.00	x		SDI-17,786		x
V16	V16043.00-V16044.00	x		SDI-17,786		x
V16	V16042.00-V16043.00		x	SDI-655	x	
V18-A-11	V18011.00-V18012.00		x	SDI-658	x	
V19-B-10	V19114.00-V19115.00		x	SDI-17,779		x
V20	V20007.00-V20013.00	x		SDI-660		x
V20	V20001.00-V20002.00	x		SDI-660		x
V20-A-2	V20014.00-V20015.00		x	SDI-660		x

Sub-Basin	DESCRIPTOR	Presence of Recorded Site within 100’	Presence of Recorded Site within 500’	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
V21	V21188.B0-V21188.C0	x		SDI-648	x	
V21	V21188.B0-V21188.C0	x		SDI-649	x	
V21	V16050.00-V21192.00		x	SDI-653	x	
V21	V21045.00-V21058.00		x	SDI-661	x	
V21	V21056.00-V21057.00		x	SDI-661	x	
V21/V22-D-1	V22148.00-V22149.00		x	SDI-650	x	
V22	V22123.00-V22124.00		x	SDI-647	x	
V28	V28095.00-V28097.00	x		SDI-646	x	
V28-B-10	V28144.00-V28145.00		x	SDI-646	x	
V29	V29043.B0-V29043.C0		x	SDI-646	x	
V30	V30048.00-V30049.00	x		SDI-11,629	x	
V30	V30050.B0-V30050.C0	x		SDI-11,629	x	
V30	V30044.00-V30050.00	x		SDI-11,629	x	
V30	V30051.A0-V30051.B0	x		SDI-11,629	x	
V32	V32006.00-V32007.00		x	P-025154		x
V32	V32114.00-V32115.00		x	SDI-638 A		x
V32	V32120.00-V32121.00	x		SDI-638 B		x
V32	V32021.00-V32022.00	x		SDI-643	x	
V32	V32019.00-V32020.00	x		SDI-643	x	
V32	V32018.00-V32020.00	x		SDI-643	x	
V32	V32029.00-V32030.00		x	SDI-644	x	
V32	V32002.00-V32003.00		x	SDI-644	x	
V32T	V32T060.00-V32T059.00		x	P-025143		x
V32T	V32T059.00-V32T058.00		x	P-025143		x
V32T	V32T065.00-V32T064.00		x	P-025144		x
V32T	V32T064.00-V32T063.00		x	P-025144		x
V32T	V32T067.00-V32T066.00		x	P-025145		x
V32T	V32T066.00-V32T065.00		x	P-025145		x
V32T	V32T067.00-V32T066.00	x		P-025148		x
V32T	V32T073.00-V32T072.00		x	P-025149		x
V32T	V32T069.00-V32T068.00		x	P-025149		x
V32T	V32T082.00-V32T081.00		x	P-025152		x
V32T	V32T083.00-V32T083.A0		x	P-025153		x
V32T	V32T082.00-V32T081.00		x	P-025153		x
V32T	V32T083.00-V32T083.A0		x	P-025154		x
V32T	V32T082.00-V32T081.00		x	P-025154		x
V32T	FM		x	SDI-5783H		x

Sub-Basin	DESCRIPTOR	Presence of Recorded Site within 100’	Presence of Recorded Site within 500’	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
V32T	FM		x	SDI-5793		x
V32T	EE		x	SDI-5793		x
V32T	V32T076.00-V32T075.00		x	SDI-640	x	
V32T	V32T076.00-V32T075.00		x	SDI-641	x	
V32T-D-1	V32T084.00-V32T083.00		x	P-025154		x
V33	V33165.00-V33166.00		x	SDI-5635		x
V33	V33163.00-V33164.00	x		SDI-5635		x
V33	V33160.00-V33161.00		x	SDI-5635		x
V33	V33163.00-V33164.00		x	SDI-5636	x	
V33	V33160.00-V33161.00	x		SDI-5636	x	
V33	V33163.00-V33164.00		x	SDI-5637		x
V33	V33160.00-V33161.00		x	SDI-5637		x
V33	V33086.00-V33087.00	x		SDI-5775		x
V33	V33082.00-V33083.00		x	SDI-5775		x
V33	V33010.00-V33011.00		x	SDI-5775		x
V33	V33105.00-V33106.00		x	SDI-5775		x
V33	V33100.00-V33101.00		x	SDI-5775		x
V33	V33099.00-V33102.00	x		SDI-5775		x
V33	V33092.00-V33103.00	x		SDI-5775		x
V33	V33082.00-V33083.00		x	SDI-5776		x
V33	V33013.00-V33118.00		x	SDI-5776		x
V33	V33010.00-V33011.00		x	SDI-5776		x
V33	V33121.00-V33123.00		x	SDI-5776		x
V33	V33107.00-V33108.00		x	SDI-5776		x
V33	V33105.00-V33106.00	x		SDI-5776		x
V33	V33100.00-V33101.00		x	SDI-5776		x
V33	V33099.00-V33102.00		x	SDI-5776		x
V33	V33092.00-V33103.00		x	SDI-5776		x
V33	V33121.00-V33123.00		x	SDI-5777		x
V33	V33109.00-V33110.00		x	SDI-5777		x
V33	V33107.00-V33108.00		x	SDI-5777		x
V33	V33105.00-V33106.00		x	SDI-5777		x
V33	V33100.00-V33101.00		x	SDI-5777		x
V33	V33099.00-V33102.00		x	SDI-5777		x
V33	V33092.00-V33103.00		x	SDI-5777		x
V33	V33130.00-V33131.00		x	SDI-5778 A	x	
V33	V33057.00-V33080.00		x	SDI-5778 A	x	
V33	V33069.C0-V33069.E0		x	SDI-5778 A	x	
V33	V33069.00-V33080.A0		x	SDI-5778 A	x	
V33	V33080.C0-V33080.D0	x		SDI-5778 A	x	

Sub-Basin	DESCRIPTOR	Presence of Recorded Site within 100’	Presence of Recorded Site within 500’	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
V33	V33036.00-V33037.00		x	SDI-5778 B	x	
V33	V33144.00-V33146.00		x	SDI-5779		x
V33	V33057.00-V33080.00		x	SDI-5779		x
V33	V33076.00-V33077.00		x	SDI-5779		x
V33	V33069.00-V33080.A0		x	SDI-5779		x
V33	V33149.00-V33150.00		x	SDI-5781H		x
V33	V33148.00-V33149.00	x		SDI-5781H		x
V33	V33146.00-V33148.00		x	SDI-5781H		x
V33	V33169.00-V33171.00		x	SDI-5788H		x
V33	V33165.00-V33166.00	x		SDI-5789H, A		x
V33	EE	x		SDI-5789H, A		x
V33	V33165.00-V33166.00	x		SDI-5789H, B		x
V33	EE	x		SDI-5789H, B		x
V33	EE		x	SDI-5791H	x	
V33	V33169.00-V33171.00		x	SDI-5792		x
V33	V33165.00-V33166.00	x		SDI-5792		x
V33	V33156.00-V33173.00		x	SDI-5792		x
V33	EE	x		SDI-5792		x
V33	V33072.B0-V33072.00		x	SDI-5792		x
V33	V33076.00-V33077.00		x	SDI-5792		x
V33	V33086.00-V33087.00		x	SDI-5793		x
V33	V33082.00-V33083.00	x		SDI-5793		x
V33	V33010.00-V33011.00	x		SDI-5793		x
V33	V33008.00-V33009.00		x	SDI-5793		x
V33	V33006.00-V33007.00	x		SDI-5793		x
V33	V33004.00-V33005.00	x		SDI-5793		x
V33	V33001.00-V33002.00	x		SDI-5793		x
V33	V33105.00-V33106.00		x	SDI-5793		x
V33	V33100.00-V33101.00	x		SDI-5793		x
V33	V33099.00-V33102.00	x		SDI-5793		x
V33	V33092.00-V33103.00	x		SDI-5793		x
V33	V33149.00-V33150.00		x	SDI-7271		x
V33	V33086.00-V33087.00		x	SDI-7273	x	
V33	V33097.00-V33098.00		x	SDI-7273	x	
V33	V33093.00-V33095.00	x		SDI-7273	x	
V33	V33163.00-V33164.00		x	SDI-8347	x	
V33	V33080.B0-V33080.H0		x	SDI-8735		x
V33	V33151.00-V33152.00		x	SDI-9250		x
V34	V34062.C0-V34062.D0		x	SDI-11,038	x	
V34	V34084.00-V34085.00		x	SDI-5783H		x

Sub-Basin	DESCRIPTOR	Presence of Recorded Site within 100’	Presence of Recorded Site within 500’	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
V34	V34078.00-V34079.00		x	SDI-5783H		x
V34	V34100.00-V34101.00		x	SDI-5783H		x
V34	EE		x	SDI-5783H		x
V34	EE	x		SDI-5783H		x
V34	V34027.00-V34028.00		x	SDI-5785H	x	
V34	V34024.00-V34025.00		x	SDI-5785H	x	
V34	V34019.00-V34020.00		x	SDI-5785H	x	
V34	V34017.00-V34018.00	x		SDI-5785H	x	
V34	V34004.00-V34006.00		x	SDI-5785H	x	
V34	EE		x	SDI-5785H	x	
V34	V34012.00-V34013.00		x	SDI-5786H	x	
V34	V34038.00-V34039.00		x	SDI-5787H		x
V34	V34038.00-V34039.00		x	SDI-5792		x
V34	V34084.00-V34085.00		x	SDI-5793		x
V34	V34078.00-V34079.00	x		SDI-5793		x
V34	V34076.00-V34077.00	x		SDI-5793		x
V34	V34070.00-V34071.00		x	SDI-5793		x
V34	V34063.00-V34065.00		x	SDI-5793		x
V34	V34057.00-V34058.00	x		SDI-5793		x
V34	V34105.A0-V34105.00	x		SDI-5793		x
V34	V34105.00-V34106.00	x		SDI-5793		x
V34	V34100.00-V34101.00		x	SDI-5793		x
V34	V34055.00-V34056.00		x	SDI-5793		x
V34	V34052.00-V34053.00		x	SDI-5793		x
V34	V34033.00-V34034.00	x		SDI-5793		x
V34	V34031.00-V34032.00	x		SDI-5793		x
V34	EE	x		SDI-5793		x
V34	EE	x		SDI-5793		x
V34	FM	x		SDI-5793		x
V34	FM	x		SDI-5793		x
V34	V34017.00-V34018.00		x	SDI-6934		x
V34	V34008.00-V34009.00		x	SDI-6934		x
V34	V34007.00-V34008.00	x		SDI-6934		x
V34	V34003.00-V34015.00	x		SDI-6934		x
V34	V34001.00-V34002.00		x	SDI-6934		x
V34	FM		x	SDI-6934		x
V34	EE		x	SDI-6934		x
V34	V34057.00-V34058.00		x	SDI-6935		x
V34	V34052.00-V34053.00	x		SDI-6935		x
V34	V34033.00-V34034.00		x	SDI-6935		x

Sub-Basin	DESCRIPTOR	Presence of Recorded Site within 100’	Presence of Recorded Site within 500’	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
V34	V34031.00-V34032.00	x		SDI-6935		x
V34	V34084.00-V34085.00	x		SDI-9044	x	
V34	V34078.00-V34079.00		x	SDI-9044	x	
V34	V34076.00-V34077.00	x		SDI-9044	x	
V34	EE		x	SDI-9044	x	
V34	FM		x	SDI-9044	x	
V35	V35149.00-V35204.00		x	SDI-10,552		x
V35	V35205.00-V35206.00	x		SDI-10,552		x
V35	V35207.00-V35208.00		x	SDI-10,552		x
V35	V35203.00-V35204.00		x	SDI-10,552		x
V35	V35204.00-V35205.00	x		SDI-10,552		x
V35	V35061.00-V35063.00		x	SDI-10,782 A	x	
V35	V35056.00-V35057.00		x	SDI-10,782 A	x	
V35	V35064.00-V35065.00		x	SDI-10,782 A	x	
V35	V35024.00-V35025.00		x	SDI-10,782 A	x	
V35	V35047.00-V35048.00		x	SDI-10,782 A	x	
V35	V35037.00-V35038.00		x	SDI-10,782 A	x	
V35	V35061.00-V35063.00		x	SDI-10,782 B	x	
V35	V35024.00-V35025.00	x		SDI-10,782 B	x	
V35	V35022.00-V35023.00		x	SDI-10,782 B	x	
V35	V35044.00-V35045.00		x	SDI-10,782 B	x	
V35	V35037.00-V35038.00		x	SDI-10,782 B	x	
V35	V35035.00-V35036.00		x	SDI-10,782 B	x	
V35	V35037.A0-V35037.B0		x	SDI-10,782 B	x	
V35	V35120.00-V35121.00	x		SDI-11,037		x
V35	V35109.00-V35125.00		x	SDI-11,037		x
V35	V35108.00-V35109.00		x	SDI-11,037		x
V35	V35101.00-V35102.00		x	SDI-11,037		x
V35	V35098.00-V35099.00		x	SDI-11,037		x
V35	V35054.00-V35055.00		x	SDI-5792		x
V35	V35087.00-V35088.00		x	SDI-8091	x	
V35	V35120.00-V35121.00		x	SDI-8734		x
V35	V35112.00-V35114.00	x		SDI-8734		x
V35	V35110.00-V35111.00		x	SDI-8734		x
V35	V35109.00-V35125.00		x	SDI-8734		x
V35	V35184.00-V35186.00		x	SDI-8734		x
V35	V35182.00-V35183.00		x	SDI-8734		x
V35	V35126.00-V35144.00		x	SDI-8734		x
V35	V35061.00-V35063.00	x		SDI-8736		x
V35	V35056.00-V35057.00		x	SDI-8736		x

Sub-Basin	DESCRIPTOR	Presence of Recorded Site within 100’	Presence of Recorded Site within 500’	Site Number	Disturbed/ Developed	Undisturbed or Partially Disturbed
V35	V35024.00-V35025.00	x		SDI-8736		x
V35	V35047.00-V35048.00		x	SDI-8736		x
V35	V35037.00-V35038.00	x		SDI-8736		x
V35	V35033.00-V35037.00		x	SDI-8736		x
V35	V35037.A0-V35037.B0		x	SDI-8736		x
V35	V35203.00-V35204.00		x	SDI-9042		x
V35	V35202.K0-V35202.L0	x		SDI-9042		x
V35	V35202.I0-V35202.J0		x	SDI-9042		x
V35	V35205.00-V35206.00	x		SDI-9043		x
V35	V35207.00-V35208.00		x	SDI-9043		x
V35	V35204.00-V35205.00		x	SDI-9043		x
V35	V35205.00-V35206.00		x	SDI-9045		x
V35	V35213.00-V35214.00		x	SDI-9045		x
V35	V35211.00-V35212.00		x	SDI-9045		x
V35	V35207.00-V35208.00		x	SDI-9045		x
V35	V35211.00-V35212.00		x	SDI-9047 (I-4)		x
V35	V35213.00-V35214.00		x	SDI-9047 (I-4)		x
V35-A-2	V35089.00-V35091.00		x	SDI-8091	x	

Appendix G. Hazardous Materials Database

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Appendix F - Hazardous Materials Databases

Geotracker Sites - Study Area Wide

GLOBAL_ID	BUSINESS_N	STREET_N	STREET_NAM	CITY	CASE_TYPE	STATUS_DAT	RB_CASE_N	LOC_CASE_N	POTENTIAL_	POTENTIAL1
T0607356291	7-ELEVEN FOOD STORE #24	900	N SANTA FE AV	VISTA	LUST Cleanup Site	7/24/2009		H20979-002	Gasoline	Aquifer used for drinking water supply
T0608126493	COLLEGE BLVD EXXON	3401	COLLEGE BL	OCEANSIDE	Cleanup Program Site	7/25/1994		H12485-006	Gasoline	Under Investigation
T0607301612	MOBIL SERVICE STATION (C	410	W VISTA WY	VISTA	LUST Cleanup Site	7/10/1996	9UT2852	H12928-003		
T0607300822	MOBIL SERVICE STATION (C	410	W VISTA WY	VISTA	LUST Cleanup Site	10/9/1991	9UT2052	H12928-002	Gasoline	Soil
T0607302358	U S RENTALS	240	W VISTA WY	VISTA	Cleanup Program Site	12/8/1999	9UT3590	H20029-001		
T0607302375	CRANE DIVERSIFIED RETAIL	145	EMERALD DR	VISTA	LUST Cleanup Site	12/31/2014	9UT3607	H03232-002	Gasoline	Aquifer used for drinking water supply
T10000001083	CITY OF VISTA CIVIC CENTE	600	EUCALYPTUS AV	Vista	Cleanup Program Site	10/15/2009		H39737-001		
T0608149867	EAST VISTA WAY EXXON	911	E VISTA WY	VISTA	Cleanup Program Site	3/13/1992		H05743-001	Gasoline	Under Investigation
T0608133767	COLLEGE BLVD EXXON	3401	COLLEGE BL	OCEANSIDE	Cleanup Program Site	5/17/1991		H12485-002	Gasoline	Under Investigation
L10003823743	SYCAMORE BUSINESS CENT	2312	LA MIRADA DRIVE	VISTA	Land Disposal Site	3/17/2005	9 000470N			
T10000005060	Paseo Pointe	325	South Santa Fe Avenu	Vista	Cleanup Program Site	10/23/2013		DEH2013-LSAM-		
T10000003505	RANCHO LOMAS VERDES	2461	EAST VISTA WAY	VISTA	Cleanup Program Site	1/24/2012		H39783-001		
SLT19797474	GREEN OAK VILLAS	1052	SYCAMORE AV	VISTA	Cleanup Program Site	8/23/2007		H39710-001		Soil
T0607397170	VISTA IRRIGATION DISTRIC	202	CONNECTICUT AV	VISTA	Cleanup Program Site	8/8/2003		H03025-002	Gasoline	Soil
T0607301475	VISTA ACADEMY SCHOOL	600	N SANTA FE AV	VISTA	LUST Cleanup Site	12/4/2001	9UT2721	H32292-002	Heating Oil / Fuel Oil	Aquifer used for drinking water supply
T0607300068	MELROSE TEXACO	210	S MELROSE DR	VISTA	LUST Cleanup Site	10/29/2013	9UT1055	H05275-001	Gasoline	Aquifer used for drinking water supply
T10000002948	VILLA DEL NORTE APARTM	1610	NORTH SANTA FE AVE	VISTA	Cleanup Program Site	3/29/2011		2008-153-001		
T0608172116	CITY OF VISTA	1165	E TAYLOR ST	VISTA	Cleanup Program Site	6/8/1992		H06268-002	Diesel	Under Investigation
T0607300121	PAINE OIL CO	1045	N SANTA FE AV	VISTA	LUST Cleanup Site	4/7/1989	9UT1113	H05560-001	Waste Oil / Motor / Hy	Soil
T0607302551	VISTA CARDLOCK - SKS INC	620	S SANTA FE AV	VISTA	LUST Cleanup Site	7/22/2010	9UT3788	H24755-002	Diesel, Gasoline	Aquifer used for drinking water supply
SLT19733476	AHLSWEDE WHOLESALE NI	717	ORA AVO DR	VISTA	Cleanup Program Site	10/6/2006		H21893-002		Soil
T0607399207	VISTA PROPOSED TRANSIT	100	OLIVE AV	VISTA	LUST Cleanup Site	4/4/2003	9UT3992	H38428-001	Heating Oil / Fuel Oil	Soil
SLT9S0214243	BROADWAY VISTA CENTER	312	WEST BROADWAY	VISTA	Cleanup Program Site	9/17/2007	SLT90021			Aquifer used for drinking water supply
T0607302402	COLSYL CORP	122	W VISTA WY	VISTA	LUST Cleanup Site	9/27/1999	9UT3634	H04379-002	Diesel	Aquifer used for drinking water supply
T0608176744	BUIE COMMUNITIES	1385	SYCAMORE AV	VISTA	Cleanup Program Site	7/23/2003		H08299-004		
T0607300671	CLARK SELF SERVICE	1516	S SANTA FE AV	VISTA	LUST Cleanup Site	6/6/1996	9UT1890	H03428-001	Gasoline	Soil
T10000005623	East Vista Way Property	2019	East Vista Way	Vista	Cleanup Program Site	9/28/2015		DEH2014-LSAM-	Chlordane, Other Insec	Soil
SLT19791404	EMERALD MOBIL	170	N EMERALD DR	VISTA	Cleanup Program Site	6/14/2007		H05446-003		
T0607399179	EAST VISTA WAY EXXON	911	E VISTA WY	VISTA	LUST Cleanup Site	2/11/2015	9UT3952	H05743-002	Gasoline	Aquifer used for drinking water supply
T0607300358	GOURMET LIQUOR 100944	2966	S SANTA FE AV	SAN MARC	LUST Cleanup Site	1/8/2008	9UT154	H20986-001	Gasoline	Aquifer used for drinking water supply
T0608196689	SEXSMITH PARCEL	360	W BROADWAY	VISTA	Cleanup Program Site	9/27/1999		H38277-001	Gasoline	Soil
T0607302215	HANSON AGGREGATES PAC	3701	HAYMAR DR	CARLSBAD	LUST Cleanup Site	8/28/2012	9UT3452	H02509-001	Diesel, Gasoline, Waste	Aquifer used for drinking water supply
T0608121417	SANCHEZ AUTO REPAIR	2285	S SANTA FE AV	VISTA	Cleanup Program Site	7/31/2013		H26201-001		
T0607300960	INLAND OIL SERVICE STATI	620	SANTA FE AVE S	VISTA	LUST Cleanup Site	7/28/1993	9UT219	NONE5	Diesel	Other Groundwater (uses other than drinking water)
T0607301662	NATIONAL UNIVERSITY	2022	UNIVERSITY DR	VISTA	LUST Cleanup Site	10/9/1989	9UT29	H06093-002	Diesel	Aquifer used for drinking water supply
T0607301079	INDUSTRIAL ASPHALT	1309	SYCAMORE AV	VISTA	LUST Cleanup Site	7/31/2000	9UT2310	H19291-001	Diesel	Soil
T0607300259	EAST VISTA WAY SHELL	2131	E VISTA WY	VISTA	LUST Cleanup Site	12/19/2014	9UT1428	H00665-001	Gasoline	Aquifer used for drinking water supply
T0607302931	CIRCLE K STORES INC #270	967	E VISTA WY	VISTA	LUST Cleanup Site	1/7/2004	9UT664	H05830-001	Gasoline	Aquifer used for drinking water supply
T0607300048	MOBIL SERVICE STATION (C	410	W VISTA WY	VISTA	LUST Cleanup Site	10/4/1991	9UT1032	H12928-001	Waste Oil / Motor / Hy	Soil
T0607301232	VISTA ACADEMY SCHOOL	600	N SANTA FE AV	VISTA	LUST Cleanup Site	12/4/2001	9UT2473	H32292-001	Heating Oil / Fuel Oil	Aquifer used for drinking water supply
T0607399280	BRIGGS TREE	1111	POINSETTIA AV	VISTA	LUST Cleanup Site	9/26/2008	9UT4032	H29341-001	Gasoline	Soil
T0607391313	VENTURE PLATINUM LLC	625	SYCAMORE AV	VISTA	LUST Cleanup Site	3/7/2005		H20993-001	Gasoline	Aquifer used for drinking water supply
T0608175092	GOLDEN STATE GASOLINE I	730	S SANTA FE AV	VISTA	Cleanup Program Site	4/14/2000		H16203-002	Gasoline	Under Investigation
T0607302453	BARNICLE'S EXPRESS	845	E VISTA WY	VISTA	LUST Cleanup Site	1/10/2017	9UT3686	H21002-001	Benzene, Toluene, Xyle	Aquifer used for drinking water supply
T0608124877	ULTRAMAR STATION #1-74	505	N SANTA FE AV	VISTA	Cleanup Program Site	7/21/1992		H03331-001	Gasoline	Under Investigation
T0608188575	VISTA SUNSET	800	SUNSET DR BLOCK	VISTA	Cleanup Program Site	12/3/1997		H36438-001		Soil

T0607301951	GOLDEN STATE GASOLINE I	730	S SANTA FE AV	VISTA	LUST Cleanup Site	9/25/1997	9UT3185	H16203-001	Waste Oil / Motor / Hy	Soil
T0607302066	JERRY MITCHELL'S AUTO CI	835	N SANTA FE AV	VISTA	LUST Cleanup Site	8/28/2001	9UT331	H05195-001	Gasoline	Aquifer used for drinking water supply
T0607302463	PEP BOYS TRI-CITY #742	3752	PLAZA DR	OCEANSIDE	LUST Cleanup Site	7/9/2004	9UT3695	H24763-001	Waste Oil / Motor / Hy	Aquifer used for drinking water supply
T10000004230	Glazer Family Trust	151	NETTLETON ROAD	VISTA	LUST Cleanup Site	8/27/2014		H16527-001	Diesel, Naphthalene	
T0607300904	DAUD'S TEXACO	900	E VISTA WY	VISTA	LUST Cleanup Site	8/13/1992	9UT2135	H05274-003	Waste Oil / Motor / Hy	Soil
T0607300872	TED'S AUTO REPAIR	727	E VISTA WY	VISTA	LUST Cleanup Site	5/10/1994	9UT2101	H13489-001	Waste Oil / Motor / Hy	Soil
T0608120610	VISTA IRRIGATION DISTRIC	202	W CONNECTICUT AV	VISTA	Cleanup Program Site	10/1/1993		H03025-001	Diesel	Soil
T0608119495	FORMER STATE FARM SER\	145	N MELROSE DR	VISTA	LUST Cleanup Site	2/14/2014		H02858-001	Diesel	Aquifer used for drinking water supply
T0607300225	SHELL/SOUTHERN CA RETA	3502	COLLEGE BL	OCEANSIDE	LUST Cleanup Site	4/16/2001	9UT1385	H04104-001	Gasoline	Aquifer used for drinking water supply
T0608137327	AMERICAN PACIFIC PROPEI	30	Main Street	VISTA	Cleanup Program Site	10/30/1995		H35323-001		
T0607391322	MOBIL OIL CORP	710	SYCAMORE AV	VISTA	LUST Cleanup Site	12/27/2000		H21499-001	Gasoline	Soil
T0608132776	TONY COFFIN INC	801	S SANTA FE AV	VISTA	Cleanup Program Site	6/30/1992		H05447-002	Gasoline	Under Investigation
T0608125138	BUIE COMMUNITIES	1385	E SYCAMORE AV	VISTA	Cleanup Program Site	2/28/2002		H08299-003	Gasoline	Soil
T0607391302	ARCO PRODUCTS CO #535(	3804	PLAZA DR	OCEANSIDE	LUST Cleanup Site	10/13/2005		H20645-001	Diesel	Aquifer used for drinking water supply
T0607300169	TONY COFFIN INC	801	S SANTA FE AV	VISTA	LUST Cleanup Site	9/7/1990	9UT1211	H05447-001	Waste Oil / Motor / Hy	Soil
T0607391311	RBV 76	1590	S MELROSE DR	VISTA	LUST Cleanup Site	11/8/2002		H26493-001	Gasoline	Aquifer used for drinking water supply
T0608184748	BREEZE HILL RANCH CONST	333	S MELROSE DR	VISTA	LUST Cleanup Site	12/15/2014		H23549-001	Gasoline	Aquifer used for drinking water supply
T0608173023	COLSYL CORP	122	W VISTA WY	VISTA	Cleanup Program Site	11/13/1990		H04379-001		
T0607302984	MITSU/FUDOSAN USA INC	500	LA MIRADA DR	VISTA	Cleanup Program Site	2/12/1988	9UT718	H21433-001		
T0607300421	SANTA FE CHEVRON	126	S SANTA FE AV	VISTA	LUST Cleanup Site	12/24/2001	9UT1600	H05710-001	Gasoline	Aquifer used for drinking water supply
T0607301514	PETER J WINN INC	930	OSBORNE ST	VISTA	LUST Cleanup Site	1/18/1995	9UT2758	H32321-001	Diesel	Soil
T0619786897	EQUILON	400	SYCAMORE AVE	VISTA	LUST Cleanup Site	11/14/2008		137443-001	Gasoline	Other Groundwater (uses other than drinking water)
T0608174887	SUNBURST HOMES CORP	None	EMERALD & OLIVE-NE	OCEANSIDE	Cleanup Program Site	3/27/1993		H29609-001		
T0608156561	MR. SHERMAN CALVERT	1316	INDEPENDENCE WY	VISTA	Cleanup Program Site	5/13/1992		H25896-001	Gasoline	Soil
T0607391323	BUIE COMMUNITIES	1385	SYCAMORE AV	VISTA	LUST Cleanup Site	12/12/2001		H08299-002	Waste Oil / Motor / Hy	Soil
T10000002788	MARK ALLEN LEIDLE	526	MAR VISTA DRIVE	VISTA	Cleanup Program Site	12/10/2007		2007-004		
T0608179500	VISTA FIRESTONE BRAKE &	711	S SANTA FE AV	VISTA	Cleanup Program Site	9/23/1993		H12311-001	Waste Oil / Motor / Hy	Under Investigation
T0607302384	RANCHO TREE SERVICE	425	REDLANDS ST	VISTA	LUST Cleanup Site	11/13/2001	9UT3615	H37564-001	Gasoline	Aquifer used for drinking water supply
T0608138435	PRESTIGE STATION #616	745	S SANTA FE AV	VISTA	Cleanup Program Site	6/2/1988		H20983-001		
T0607302362	GREEN OAK RANCH	1237	GREEN OAK RD	VISTA	LUST Cleanup Site	10/14/2009	9UT3594	H20969-001	Diesel, MTBE / TBA / C	Aquifer used for drinking water supply, Other Groundwater
T0607340025	FORMER TOWER (CASCADI	1580	S MELROSE DR	VISTA	Cleanup Program Site	6/29/2005		H29357-001	* Chlorinated Hydroca	Soil
T0607300445	SECURITY CHEVROLET	1100	E VISTA WY	VISTA	LUST Cleanup Site	4/24/1991	9UT1629	H03623-002		
T0607301939	VISTA UNIFIED SCHOOL DIS	1222	ARCADIA AV	VISTA	LUST Cleanup Site	8/29/2006	9UT3171	H03953-001	Diesel	Aquifer used for drinking water supply
T0608173537	CHEVRON PRODUCTS	2500	EL CAMINO REAL	CARLSBAD	Cleanup Program Site	3/3/1992		H05724-003	Gasoline	Under Investigation
T0608120963	BRIGGS TREE CO INC	1111	POINSETTIA AV	VISTA	Cleanup Program Site	6/2/1992		H99212-001	Gasoline	Under Investigation
T0608153321	VISTA SHOPPING CENTER	None	W BROADWAY	VISTA	Cleanup Program Site	7/9/1991		H24663-001		
T0608156223	AHLSWEDE WHOLESALE NI	717	ORA AVO DR	VISTA	Cleanup Program Site	2/12/1999		H21893-001		Soil
T0607302926	APRO #30	485	N MELROSE DR	VISTA	LUST Cleanup Site	1/6/2011	9UT65	H12524-001	Gasoline	Aquifer used for drinking water supply
T0608159342	SECURITY CHEVROLET	1100	E VISTA WY	VISTA	Cleanup Program Site	4/24/1991		H03623-001		
T0607301273	GLENN YOUNG ARCO #620	125	N RANCHO SANTA FE	SAN MARC	LUST Cleanup Site	1/1/1994	9UT2527	H05181-004	Gasoline	Aquifer used for drinking water supply
T10000004912	Santa Fe Crossroads	1450	North Santa Fe Avenu	Vista	Cleanup Program Site	4/16/2014		DEH2013-LSAM-	Tetrachloroethylene (F	Soil Vapor
T0607300973	ALLEN'S AUTO REPAIR	718	E VISTA WY	VISTA	LUST Cleanup Site	11/15/2011	9UT2208	H05194-001	Gasoline, Waste Oil / M	Aquifer used for drinking water supply
T0607302954	CHEVRON PRODUCTS	2500	EL CAMINO REAL	CARLSBAD	LUST Cleanup Site	7/19/2006	9UT685	H05724-001	Gasoline	Aquifer used for drinking water supply
T0607301989	COLLEGE BLVD EXXON	3401	COLLEGE BL	OCEANSIDE	LUST Cleanup Site	3/25/1996	9UT3236	H12485-007	Gasoline	Aquifer used for drinking water supply
T0607300580	ROCCO BRUNO CHEVRON	224	EMERALD DR	VISTA	LUST Cleanup Site	10/12/1990	9UT1789	H05682-001	Gasoline	Soil
T0607301559	EMERALD MOBIL	170	N EMERALD DR	VISTA	LUST Cleanup Site	1/21/1987	9UT280	H05446-001		
T0607302785	CRANE DIVERSIFIED RETAIL	145	EMERALD DR	VISTA	Cleanup Program Site	1/23/1986	9UT483	H03232-001		

T0607300332	FOOTHILL CHEVRON	1211	E VISTA WY	VISTA	LUST Cleanup Site	1/29/2001	9UT1512	H05676-001		
T0607303075	TEXACO REFINING & MARK	221	N EMERALD DR	VISTA	LUST Cleanup Site	1/19/2016		H20965-001	Gasoline	Aquifer used for drinking water supply
T06019746316	UNOCAL SVC STATION #70	960	CIVIC CENTER DRIVE	Vista	LUST Cleanup Site	7/18/2012		H20966-003	Gasoline	Aquifer used for drinking water supply
T10000005650	Paseo Pointe Open Space	123	South Santa Fe Avenu	Vista	Cleanup Program Site	7/20/2015		DEH2014-LSAM-		
T0608116960	OCHS ENTERPRISES INC.	1321	DISTRIBUTION WY	VISTA	LUST Cleanup Site	3/27/2007		H22862-001	Diesel	Soil
T0619761135	REFLECT SHINE CAR WASH	3528	COLLEGE BL	OCEANSIDE	LUST Cleanup Site	3/29/2007		126589-002	Diesel	Soil
T0608139529	NORMAN LEVINE	1120	N MELROSE DR	VISTA	Cleanup Program Site	11/30/2011		H25235-001		
T06019774905	REFLECT SHINE CAR WASH	3528	COLLEGE BL	OCEANSIDE	LUST Cleanup Site	3/29/2007		126589-001	Diesel	Soil
T0607300122	WELLS FARGO BANK	315	S SANTA FE AV	VISTA	LUST Cleanup Site	1/11/2007	9UT1114	H26618-001	Gasoline	Aquifer used for drinking water supply
T0608185217	DAUD'S TEXACO	900	E VISTA WY	VISTA	Cleanup Program Site	10/22/1991		H05274-002	Gasoline	Under Investigation
T10000009569	Plaza Cleaners	1605	South Melrose Drive	Vista	Cleanup Program Site	11/1/2016		DEH2016-LSAM-		
T0607300602	BRIDGESTONE- FIRESTONE	2545	EL CAMINO REAL	CARLSBAD	LUST Cleanup Site	10/23/2013	9UT1813	H20076-002	Waste Oil / Motor / Hy	Aquifer used for drinking water supply
T0608171796	CHEVRON PRODUCTS	2500	EL CAMINO REAL	CARLSBAD	Cleanup Program Site	7/30/1990		H05724-002	Diesel	Under Investigation
T0608142935	COLLEGE BLVD EXXON	3401	COLLEGE BL	OCEANSIDE	Cleanup Program Site	7/25/1994		H12485-004	Gasoline	Under Investigation
T06019759161	BOOMERS	1525	W VISTA WY	VISTA	LUST Cleanup Site	2/23/2007		130559-001	Diesel	Soil
T0607300769	VISTA CARDLOCK - SKS INC	620	S SANTA FE AV	VISTA	LUST Cleanup Site	9/18/1991	9UT1996	H24755-001	Waste Oil / Motor / Hy	Soil
T10000002708	AZTEC TECHNOLOGY CORP	2620	SOUTH SANTA FE AVE	SAN MARC	Cleanup Program Site	8/10/2011		H39759-001	Chromium, Lead	
T0608166130	DAUD'S TEXACO	900	E VISTA WY	VISTA	Cleanup Program Site	3/4/1987		H05274-001	Gasoline	Under Investigation
T0608109336	WEARDCO CONSTRUCTION	739	OLIVE AV	VISTA	Cleanup Program Site	3/9/1990		H19811-001	Diesel	Soil
T0608120167	USPS VISTA STATION	960	POSTAL WY	VISTA	Cleanup Program Site	6/3/1991		H01158-001	Gasoline	Under Investigation
T0608133717	MARY PETRIZZI	1261	GRANDVIEW RD	VISTA	Cleanup Program Site	6/1/1992		H26526-001		Soil
T10000003138	443 SUNSET DRIVE (METH	443	SUNSET DRIVE	VISTA	Cleanup Program Site	1/16/2013		2011-298-001		
T0607366998	SUMMERVIEW	2691	EMERALD DR	OCEANSIDE	Cleanup Program Site	10/24/2013		H39623-001	Waste Oil / Motor / Hy	Soil
T0607302813	7-ELEVEN FOOD STORE #13	470	N MELROSE DR	VISTA	LUST Cleanup Site	7/14/1992	9UT519	H20975-001	Gasoline	Aquifer used for drinking water supply
T0607302643	CITY OF VISTA FIRE STATIO	175	N MELROSE DR	VISTA	LUST Cleanup Site	3/24/1999	9UT3882	H04826-001	Diesel	Aquifer used for drinking water supply
T0607301879	GOLDEN STATE GAS	535	N SANTA FE AV	VISTA	LUST Cleanup Site	4/29/2010	9UT3112	H13150-001	Gasoline	Aquifer used for drinking water supply
T0607301658	PAULEY EQUIPMENT RENT,	348	N SANTA FE AV	VISTA	LUST Cleanup Site	3/27/2001	9UT2896	H20982-001	Diesel	Soil
T0607399057	SUPERIOR READY MIX LP	1385	SYCAMORE AV	VISTA	LUST Cleanup Site	8/7/2000	9UT3998	H24433-002	Diesel	Soil
T0607301060	ULTRAMAR STATION #1-74	505	N SANTA FE AV	VISTA	LUST Cleanup Site	8/27/2004	9UT2293	H03331-002	Diesel	Aquifer used for drinking water supply
T0607301269	PRESTIGE STATION #616	745	S SANTA FE AV	VISTA	LUST Cleanup Site	9/27/2005	9UT2523	H20983-002	Gasoline	Aquifer used for drinking water supply
T0607300147	BRIDGESTONE- FIRESTONE	2545	EL CAMINO REAL	CARLSBAD	LUST Cleanup Site	10/23/2013	9UT117	H20076-001	Gasoline	Aquifer used for drinking water supply
T0608177726	BUIE COMMUNITIES	1385	SYCAMORE AV	VISTA	Cleanup Program Site	12/1/1993		H08299-001	Waste Oil / Motor / Hy	Soil
T10000002939	City of Oceanside Sanitary		N. Haymar Drive	Oceanside	Cleanup Program Site	8/16/2012	2090047		Other inorganic / salt	Surface water
T0608195995	PETOS INC	122	W VISTA WY	VISTA	Cleanup Program Site	9/27/1999		H28665-001	Diesel	Under Investigation
T0607301411	7-ELEVEN FOOD STORE #24	900	N SANTA FE AV	VISTA	LUST Cleanup Site	7/20/1995	9UT2663	H20979-001	Gasoline	Soil
T0608164335	SHELL/SOUTHERN CA RETA	3502	COLLEGE BL	OCEANSIDE	Cleanup Program Site	10/9/1992		H04104-002	Gasoline	Under Investigation
T06019731621	USPS VISTA STATION	960	POSTAL WY	VISTA	LUST Cleanup Site	7/31/2009		H01158-002	Gasoline	Aquifer used for drinking water supply
T0607399238	ROCCO BRUNO CHEVRON	224	EMERALD DR	VISTA	LUST Cleanup Site	12/10/2013	9UT4044	H05682-002	Gasoline	Aquifer used for drinking water supply
T0608192490	COLLEGE BLVD EXXON	3401	COLLEGE BL	OCEANSIDE	Cleanup Program Site	7/25/1994		H12485-005	Gasoline	Under Investigation
T0607327286	QUALITY AUTO RECYCLING	1661	W VISTA WY	VISTA	Cleanup Program Site	11/13/2002		H13827-001	Waste Oil / Motor / Hy	Soil
T0607399064	GOLDEN STATE GASOLINE I	730	S SANTA FE AV	VISTA	LUST Cleanup Site	3/2/2011	9UT4029	H16203-003	Gasoline	Aquifer used for drinking water supply
T0608128158	HAPPY CLEANERS	312	W BROADWAY	VISTA	Cleanup Program Site	4/24/2001		H11083-001	* Chlorinated Hydroca	Aquifer used for drinking water supply
T0607302303	SHADOWRIDGE GOLF CLUE	1980	GATEWAY DR	VISTA	LUST Cleanup Site	10/29/2002	9UT3534	H20967-001	Diesel	Aquifer used for drinking water supply
T0608104084	AGRICULTURE PROPERTY L	2465	N SANTA FE AV	VISTA	Cleanup Program Site	4/5/1990		H29871-001		
T0608145652	MOBIL 18-GCX	170	N EMERALD	VISTA	LUST Cleanup Site	5/7/2010		H05446-002	Gasoline	Well used for drinking water supply
T0608195265	NATIONAL UNIVERSITY	2022	UNIVERSITY DR	VISTA	Cleanup Program Site	1/19/1988		H06093-001		
T0608107853	COUNTY OF SD GEN SVCS C	325	S MELROSE DR	VISTA	Cleanup Program Site	4/28/1992		H14739-001	Diesel	Under Investigation

T0608135068	CITY OF VISTA	1165	E TAYLOR ST	VISTA	Cleanup Program Site	3/30/1990		H06268-001	Diesel	Under Investigation
T0607302651	PRUDENTIAL OVERALL SUP	2485	ASH ST	VISTA	LUST Cleanup Site	8/15/2007	9UT3890	H26574-001	Gasoline	Soil
T06019720262	COLLEGE BLVD EXXON	3401	COLLEGE BL	OCEANSIDE	LUST Cleanup Site	5/19/2014		H12485-008	Benzene, Diesel, MTBE	Aquifer used for drinking water supply
T10000000927	TONY COFFIN INC	801	S SANTA FE AV	VISTA	LUST Cleanup Site	8/7/2009		H05447-003	Gasoline	
T0608167485	3 R TRUCKING	129	OLIVE AV	VISTA	Cleanup Program Site	9/3/1991		H19951-001	Waste Oil / Motor / Hy	Soil
T0607302386	COUNTY OF SD GEN SVCS C	325	S MELROSE DR	VISTA	LUST Cleanup Site	11/6/2001	9UT3618	H14739-002	Gasoline	Soil
T0607301426	CITY OF VISTA	400	N SANTA FE AV	VISTA	LUST Cleanup Site	2/22/1995	9UT2677	H32319-001	Gasoline	Soil
T0608179023	ULTRAMAR STATION #1-74	505	N SANTA FE AV	VISTA	Cleanup Program Site	8/16/1995		H03331-003	Gasoline	Under Investigation
T0607301416	VISTA FIRESTONE BRAKE &	711	S SANTA FE AV	VISTA	LUST Cleanup Site	10/19/2000	9UT2668	H12311-002	Gasoline	Aquifer used for drinking water supply
T0608145333	UNOCAL SVC STATION #70	976	ESCONDIDO AV	VISTA	Cleanup Program Site	3/4/1996		H20966-001	Gasoline	Under Investigation
T06019793621	RICHARDSON PROPERTY	2405	N SANTA FE AV	VISTA	Cleanup Program Site	6/24/2004		H39647-001	Waste Oil / Motor / Hy	Soil
T0607391341	SHADOWRIDGE 76	636	SYCAMORE AV	VISTA	LUST Cleanup Site	3/9/2001		H20990-001	Waste Oil / Motor / Hy	Soil
T0607303184	PALMER CONCRETE	430	OLIVE AV	VISTA	LUST Cleanup Site	8/7/1989	9UT950	H04943-001	Gasoline	Soil
T0608157474	DAY & NIGHT CLEANERS	2540	EL CAMINO REAL	CARLSBAD	Cleanup Program Site	9/11/2000		H01788-001	* Chlorinated Hydroca	Soil
T0608108958	COLLEGE BLVD EXXON	3401	COLLEGE BL	OCEANSIDE	Cleanup Program Site	10/3/1994		H12485-003	Waste Oil / Motor / Hy	Under Investigation
T0607303229	SUPERIOR READY MIX LP	1385	SYCAMORE AV	VISTA	LUST Cleanup Site	9/9/1988	9UT995	H24433-001	Diesel	Soil
T0607301481	UNOCAL SVC STATION #70	976	ESCONDIDO AV	VISTA	LUST Cleanup Site	3/8/1996	9UT2727	H20966-002		
T0607391335	CIRCLE SHELL SERVICE	648	S SANTA FE AV	VISTA	LUST Cleanup Site	1/14/2014		H20994-001	Gasoline	Aquifer used for drinking water supply

ENVIROSTOR - Clean Up Sitee

PROJECT_NA	ADDRESS	CITY	STATE	ZIP	SITE_TYPE	LEAD_AGENC	ENVIROSTOR	STATUS	STATUS_DAT	POTENTIAL1	RESTRICTED
OLEANDER AVENUE ES #2	Oleander Avenue/Poinsettia Avenu	San Marcos	CA	92083	School Investigation	SMBRP	60000082	No Action Required	4/23/2005	NMA	NO
SIGNS BY ROUSE (2)	333 OLIVE	VISTA	CA	92083	Historical	NONE SPECIFIED	37730290	Refer: Other Agency	8/21/1995	NONE SPECIFIED	NO
HANNALEI SCHOOL SITE	118/130 Hannalei Drive	Vista	CA	92083	School Investigation	SMBRP	37990002	No Further Action	9/18/2000	SOIL	NO
MELROSE/GOLD SCHOOL	Melrose Drive/Gold Drive	Vista	CA	92084	School Investigation	SMBRP	37520001	No Further Action	4/15/2005	SOIL	NO
Redevelopment & Housing Depa	Site bounded by North Santa fe, Or	Vista	CA	92083	Evaluation	SMBRP	60000990	No Further Action	2/8/2011	NONE SPECIFIED	NO
K-8 SCHOOL SITE	Melrose Drive/Sycamore Avenue	Vista	CA	92084	School Investigation	DTSC	37000052	No Action Required	6/14/2002	SOIL	NO
VISTA COMMUNITY CLINIC	1000 VALE TERRACE DRIVE	VISTA	CA	92084	Calmortgage	SMBRP	37800065	No Action Required	1/4/1995	NMA	NO
OAK ELEMENTARY	Foothill Boulevard/Oak Drive/Mont	Vista	CA	92084	School Investigation	DTSC	37820002	No Action Required	11/7/2000	NMA	NO
North Santa Fe & Orange Site	300 Block of North Santa Fe Avenu	Vista	CA	92083	Voluntary Cleanup	SMBRP	60001573	No Further Action	8/29/2012	SOIL, SV	NO
Vista Industrial Products	1395 Park Center Drive	Vista	CA	92083	Tiered Permit	NONE SPECIFIED	71003710	Inactive - Needs Evalua	<Null>	NONE SPECIFIED	NO
COPPER/IRON SCHOOL	Copper Drive/Iron Drive	Vista	CA	92083	School Investigation	SMBRP	60000012	No Further Action	6/29/2007	SOIL	NO
CAMINO LARGO ELEMENTARY S	North Santa Fe Avenue/Osborne St	Vista	CA	92084	School Investigation	SMBRP	37010049	Inactive - Withdrawn	9/22/2003	NONE SPECIFIED	NO
Vista Burn Dump	1300 Lee Drive	Oceanside	CA	92054	Voluntary Cleanup	SMBRP	70000083	Certified / Operation &	12/17/2013	OTH, SOIL, SV	YES
BAE Systems, Advanced Ceramic	991 Park center Dr	Vista	CA	92081	Tiered Permit	NONE SPECIFIED	71003818	Inactive - Needs Evalua	<Null>	NONE SPECIFIED	NO
MARYLAND DRIVE ELEM. SCHOC	North Avenue/Maryland Drive	Vista	CA	92056	School Investigation	SMBRP	37010014	No Further Action	6/7/2002	SOIL	NO
BUENA VISTA ELEMENTARY SCH	1430, 1516, 1554, 1558 Buena Vist	Vista	CA	92084	School Investigation	SMBRP	37010015	Inactive - Withdrawn	2/28/2003	NONE SPECIFIED	NO
RIVIERA SCHOOL	Barsby Street/Riviera Drive	Vista	CA	92084	School Investigation	SMBRP	37010027	Inactive - Withdrawn	9/16/2004	NONE SPECIFIED	NO
RICHARDSON PROPERTY	2405 N. SANTA FE AVENUE	VISTA	CA	92084	Evaluation	NONE SPECIFIED	37000019	Refer: 1248 Local Ager	3/24/2004	NONE SPECIFIED	NO
RANCHO SANTA LUNA SCHOOL	Santa Luna Hills	San Marcos	CA	92069	School Investigation	DTSC	37010030	No Action Required	5/25/2002	NMA	NO
KAWANO HIGH SCHOOL	East Vista Way/Mason Road	Vista	CA	92084	School Investigation	SMBRP	37010035	Inactive - Withdrawn	9/5/2002	NONE SPECIFIED	NO
HI HOPE RANCH HIGH SCHOOL	Melrose Drive/Highway 76	Oceanside	CA	92057	School Investigation	SMBRP	37010040	No Further Action	4/29/2004	SOIL	NO

ENVIROSTOR ID	PROJECT NAME	STATUS	PROJECT TYPE	ADDRESS	CITY
37000021	Poinsettia Elementary School	Certified	School Cleanup	2445 Mica Road	Carlsbad
60000061	SOUTHEAST ELEMENTARY SCHOOL	Inactive - Needs Evaluation	School Investigation	Poinsettia Lane	Carlsbad
CAD084239987	HUGHES AIRCRAFT CO.-JVC TECHNOLOGY	CLOSED	Non-Operating	6155 EL CAMINO REAL	CARLSBAD
71003091	Melles Griot, Inc., Laser Div.	Inactive - Needs Evaluation	Tiered Permit	2251 Rutherford Road	Carlsbad
37000006	CALAVERA HILLS ELEMENTARY	No Action Required	School Investigation	College Boulevard/Tamarack Avenue	Carlsbad
37150009	CANTERBURY	Refer: 1248 Local Agency	Evaluation	5175 EL CAMINO REAL	CARLSBAD
60000505	Proposed High School at College and Cannon	Certified	School Cleanup	Cannon Road & College Boulevard	Carlsbad
37010017	PACIFIC RIM ELEMENTARY SCHOOL	No Further Action	School Investigation	1100 Camino De Las Ondas	Carlsbad
37500038	HANSON AGGREGATES CARLSBAD PLANT	Refer: 1248 Local Agency	Evaluation	3701 HAYMAR DRIVE	CARLSBAD
37830019	KINDERCARE LEARNING CENTERS	Refer: 1248 Local Agency	Evaluation	1200 PLUM TREE ROAD	CARLSBAD
37720035	SUNNY FRESH CLEANERS	Refer: 1248 Local Agency	Evaluation	7040 AVENIDA ENCINAS, B-112	CARLSBAD
80000224	CARLSBAD VHF STATION SKI	Inactive - Needs Evaluation	Military Evaluation		Carlsbad
71002325	Crown Circuits, Inc.	Inactive - Needs Evaluation	Tiered Permit	6070 Avenuenida Encinas	Carlsbad
80001398	BURROUGHS CORP	Refer: RWQCB	Corrective Action	5600 AVENIDA ENCINAS	CARLSBAD
CAD047784871	BURROUGHS CORP	CLOSED	Non-Operating	5600 AVENIDA ENCINAS	CARLSBAD
60000946	Carlsbad High School	No Further Action	School Investigation	3557 Monroe Street	Carlsbad
37010021	CARLSBAD VILLAGE ACADEMY	No Further Action	School Investigation	1640 Magnolia Avenue	Carlsbad
37880013	CARLSBAD HIGH SCHOOL EXPANSION	Certified	School Cleanup	3305, 3325, 3355, 3357 Monroe Street	Carlsbad
71003500	Cabrillo Power I, LLC	No Action Required	Tiered Permit	4600 Carlsbad Boulevard	Carlsbad
37000049	OWNER'S RESIDENCE	Refer: 1248 Local Agency	Evaluation	391 TAMARACK AVE.	CARLSBAD
60000253	Otay Ranch Village 7	No Further Action	School Investigation	Southeast of Birch Road and Magdalena Avenue	Chula Vista
37840001	SAN DIEGO WILD ANIMAL PARK	Refer: 1248 Local Agency	Evaluation	15500 SAN PASQUAL VALLEY ROAD	ESCONDIDO
37010024	VALLEY HIGH SCHOOL	No Further Action	School Investigation	Washington Avenue/East Valley Parkway	Escondido
37750010	FEDCO, INC. PROPERTY (FORMER)	Refer: 1248 Local Agency	Evaluation	1475 EAST VALLEY PARKWAY	ESCONDIDO
37010019	FIG/FARR ELEMENTARY	No Further Action	School Investigation	Lincoln Avenue/Fig Street	Escondido
37000038	VACANT LOT	Refer: 1248 Local Agency	Evaluation	1401 SOUTH ESCONDIDO BLVD.	ESCONDIDO
37590002	CARSON CLEANERS	Refer: RWQCB	Evaluation	224 WEST 13TH AVENUE	ESCONDIDO
37000026	VACANT LOT	Refer: 1248 Local Agency	Evaluation	304 EAST GRAND AVE.	ESCONDIDO
80000213	CAMP ESCONDIDO	Inactive - Needs Evaluation	Military Evaluation		Escondido
37150011	MISSION ESCONDIDO MALL	Refer: 1248 Local Agency	Evaluation	205 W. MISSION AVENUE	ESCONDIDO
71002785	Palomar Plating Co., Inc.	Refer: Other Agency	Tiered Permit	722 W. Fourth Avenue	Escondido
37010002	SPRINGTIME/REIDY CREEK ELEMENTARY	No Further Action	School Investigation	2747 North Broadway	Escondido
37150008	PARKWAY PLACE	Refer: 1248 Local Agency	Evaluation	649 WEST MISSION	ESCONDIDO
37000060	TULIP STREET	Refer: 1248 Local Agency	Evaluation	440 N. TULIP ST.	ESCONDIDO
60000750	Eddie's Smog Service	Refer: 1248 Local Agency	Evaluation	944 West Mission Ave	Escondido
60001967	Amanda Lane	Active	Voluntary Cleanup	2115 Amanda Lane	Escondido
71003443	Escondido Plating	Inactive - Needs Evaluation	Tiered Permit	860 Metcalf	Escondido
60001151	Citracado High School	No Further Action	School Investigation	West Valley Parkway/Citracado Parkway	Escondido
80001842	GALLADE CHEMICAL, INC	* Inactive	Corrective Action	1510 INDUSTRIAL AVE	ESCONDIDO
CAT080012651	GALLADE CHEMICAL INC	PROTECTIVE FILER	Non-Operating	1510 INDUSTRIAL AVE	ESCONDIDO
71002680	U S Circuit, Inc.	Inactive - Action Required	Tiered Permit	1526 Sterling Ct	Escondido
37990004	BENTON BURN DUMP	Refer: Other Agency	Evaluation	END OF STILL WATER GLEN	ESCONDIDO
71002818	A & D Plating, Inc.	Inactive - Needs Evaluation	Tiered Permit	2265-A Micro Place	Escondido
71003809	North County Plating Metal Polishing	Inactive - Needs Evaluation	Tiered Permit	1188 Industrial Ave.	Escondito
37010040	HI HOPE RANCH HIGH SCHOOL	No Further Action	School Investigation	Melrose Drive/Highway 76	Oceanside
70000083	Vista Burn Dump	Certified / Operation & Maintenanc	Voluntary Cleanup	1300 Lee Drive	Oceanside

SITE NAME	GLOBAL ID	SITE_TYPE	STATUS	ADDRESS	CITY	LATITUDE	LONGITUDE
CAMP PENDLETON MARINE CORPS BASE (MCB) - 21 ARE	T0608190809	MILITARY UST SITE	COMPLETED - CASE CLOSED	BLDG 210533	CAMP PENDLETON	33.21403	-117.383
CAMP PENDLETON MARINE CORPS BASE (MCB) - RFA SI	T10000000917	MILITARY CLEANUP SITE	COMPLETED - CASE CLOSED	BLDG 20006 MCB	CAMP PENDLETON	33.22181	-117.386
CAMP PENDLETON MARINE CORPS BASE (MCB) - 21 ARE	T0608178180	MILITARY UST SITE	COMPLETED - CASE CLOSED	BLDG 210713	CAMP PENDLETON	33.21577	-117.381
CAMP PENDLETON MARINE CORPS BASE (MCB) - OU 3 -	DOD100037700	MILITARY CLEANUP SITE	OPEN - VERIFICATION MONITORING	VANDEGRIFT BLVD	CAMP PENDLETON	33.23534	-117.381
CAMP PENDLETON MARINE CORPS BASE (MCB) - 21 ARE	T0608156866	MILITARY UST SITE	COMPLETED - CASE CLOSED	BLDG 21620	CAMP PENDLETON	33.21362	-117.384
QUARRY CREEK	T10000006360	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	3701 HAYMAR DRIVE	CARLSBAD	33.17803	-117.302
PETERSON RANCH	SLT19708229	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	5056 EL CAMINO REAL	CARLSBAD	33.15434	-117.303
HAWTHORNE RENT-IT SERVICE	T0607300406	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2530 STATE ST	CARLSBAD	33.16473	-117.353
BRIDGESTONE- FIRESTONE	T0607300602	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2545 EL CAMINO REAL	CARLSBAD	33.1799	-117.327
CARLSBAD CHEVRON	T0607301561	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1044 CARLSBAD VILLAGE DR	CARLSBAD	33.16306	-117.343
BUENA VISTA PUMP STATION	T0607301725	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2140 JEFFERSON AV	CARLSBAD	33.17853	-117.341
TOSCO CORP #2705723	T0607302933	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	880 CARLSBAD VILLAGE DR	CARLSBAD	33.16198	-117.345
CITY OF CARLSBAD	T0607303062	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1200 CARLSBAD VILLAGE DR	CARLSBAD	33.16402	-117.341
CARLSBAD CHEVRON	T0608103750	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1044 CARLSBAD VILLAGE DR	CARLSBAD	33.16306	-117.343
TOSCO CORP #2705723	T0608107632	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	880 CARLSBAD VILLAGE DR	CARLSBAD	33.162	-117.345
QAMAR TAMARACK TEXACO	T0608179717	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	810 TAMARACK AV	CARLSBAD	33.15208	-117.338
HANSON AGGREGATES PAC SO REGIO	T10000002854	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	3701 HAYMAR DRIVE	CARLSBAD	33.17837	-117.303
HANSON CARLSBAD FACILITY	T10000004417	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	3701 HAYMAR ROAD	CARLSBAD	33.17889	-117.303
CITY OF CARLSBAD UTILITIES	T0607300725	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	405 OAK AV	CARLSBAD	33.15811	-117.348
QAMAR TAMARACK TEXACO	T0607301841	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	810 TAMARACK AV	CARLSBAD	33.15203	-117.338
JOES TRANSMISSION & AUTO REPR	T0607302409	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2995 STATE ST	CARLSBAD	33.15961	-117.349
CARLSBAD CHEVRON	T0608115847	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1044 CARLSBAD VILLAGE DR	CARLSBAD	33.16288	-117.343
CARLSBAD SHELL	T0608170198	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1145 CARLSBAD VILLAGE DR	CARLSBAD	33.16357	-117.341
CONOCO PHILLIPS	T10000000289	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	895 TAMARACK E	CARLSBAD	33.15147	-117.337
CARLSBAD CHEVRON	T10000000793	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1044 CARLSBAD VILLAGE DR	CARLSBAD	33.17143	-117.324
PROPOSED RESIDENTIAL DEVELOPMENT	T10000004183	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	0 VALLEY STREET	CARLSBAD	33.1657	-117.335
LANAI II	T10000010048	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	1833 BUENA VISTA WAY	CARLSBAD	33.16927	-117.335
BAN'S CLEANERS	SL0607374149	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	981 TAMARACK AVENUE	CARLSBAD	33.15214	-117.334
CARLSBAD CHEVRON	T0607300022	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1044 CARLSBAD VILLAGE DR	CARLSBAD	33.16306	-117.343
CARLSBAD UNIFIED SCHOOL DIST	T0607300090	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	801 PINE AV	CARLSBAD	33.15917	-117.344
AUTO CARE AMERICA	T0607301806	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2615 STATE ST	CARLSBAD	33.16375	-117.352
CITY OF CARLSBAD	T0607301829	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2779 STATE ST	CARLSBAD	33.16161	-117.35
CARLSBAD SHELL	T0607303180	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1145 CARLSBAD VILLAGE DR	CARLSBAD	33.16357	-117.341
FOXES LANDING LIFT STATION	T0608142931	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	4155 HARRISON ST	CARLSBAD	33.14875	-117.333
HANSON AGGREGATES PAC SO REGIO	T0608165282	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	3701 HAYMAR DR	CARLSBAD	33.17837	-117.303
LOCKETT RESIDENCE	T0608168988	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	391 TAMARACK AV	CARLSBAD	33.14923	-117.342
ROBERTSON RANCH - PARCEL 1	T0608180707	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	EL CAMINO REAL	CARLSBAD	33.16189	-117.29
ARCO #82363	T10000004130	LUST CLEANUP SITE	OPEN - SITE ASSESSMENT	810 TAMARACK AVENUE	CARLSBAD	33.15199	-117.338
ROBERT UHLINGER	T0607300077	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2501 STATE ST	CARLSBAD	33.1648	-117.354
CHEVRON #93320	T0607302569	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	970 TAMARACK AV	CARLSBAD	33.15298	-117.335
NCTD - N OF CARLSBAD COASTER STATION	T0607331951	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2701 STATE ST	CARLSBAD	33.16238	-117.351
CARLSBAD GAS & PROPANE, INC	T0607399182	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1089 CARLSBAD VILLAGE DR	CARLSBAD	33.1627	-117.343
PAC. SCENE FINANCIAL PROPERTY	T0608163841	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	NONE MAGNOLIA AV	CARLSBAD	33.16035	-117.329
CHEVRON PRODUCTS	T0608173537	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2500 EL CAMINO REAL	CARLSBAD	33.18031	-117.327
CARLSBAD FIREHOUSE #1	T0607300144	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1275 CARLSBAD VILLAGE DR	CARLSBAD	33.1645	-117.34
ROBERTSON RANCH, PARCEL 3	T0607377031	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	4300 COLLEGE BL	CARLSBAD	33.1549	-117.287

QAMAR TAMARACK TEXACO	T0608105835	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	810 TAMARACK AV	CARLSBAD	33.15203	-117.338
DAY & NIGHT CLEANERS	T0608157474	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2540 EL CAMINO REAL	CARLSBAD	33.17993	-117.327
RANCHO COSTERA	T10000002941	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	0 TAMARACK/EL CAMINO REAL	CARLSBAD	33.15419	-117.31
MILES PACIFIC	T10000005043	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2373 PIO PICO	CARLSBAD	33.1725	-117.346
TAMARACK EXXON	T06019723735	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	945 TAMARACK AV	CARLSBAD	33.15244	-117.335
CARLSBAD VILLAGE RENTALS	T0607300894	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	505 OAK AV	CARLSBAD	33.15845	-117.347
GASCO	T0607301478	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	920 CARLSBAD VILLAGE DR	CARLSBAD	33.16232	-117.344
CARLSBAD BY THE SEA	T0607302017	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2855 CARLSBAD BL	CARLSBAD	33.15922	-117.353
HANSON AGGREGATES PAC SO REGIO	T0607302215	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	3701 HAYMAR DR	CARLSBAD	33.18054	-117.302
QAMAR TAMARACK TEXACO	T0607374353	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	810 TAMARACK AV	CARLSBAD	33.15208	-117.338
CARLSBAD CHEVRON	T0608196199	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1044 CARLSBAD VILLAGE DR	CARLSBAD	33.16288	-117.343
TOSCO CORP #2705723	T10000000288	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	880 CARLSBAD VILLAGE DR	CARLSBAD	33.162	-117.345
2-BUILDING COMMERCIAL SHOP PROPERTY	T10000007812	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2725 STATE STREET	CARLSBAD	33.16201	-117.351
ROBERTSON RANCH WEST	SLT19778269	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	5056 EL CAMINO REAL	CARLSBAD	33.15434	-117.303
ALLIED MOVING & STORAGE	T0607300203	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2742 STATE ST	CARLSBAD	33.162	-117.35
CAMINO SHELL	T0607301006	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2590 EL CAMINO REAL	CARLSBAD	33.17844	-117.326
CHEVRON PRODUCTS	T0607302954	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2500 EL CAMINO REAL	CARLSBAD	33.18099	-117.327
CANTARINI RANCH	T0607370235	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	3008 EL CAMINO REAL	CARLSBAD	33.17427	-117.325
OCEANSIDE GLASSTILE CO.	T0608112271	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	3235 TYLER ST	CARLSBAD	33.15676	-117.346
CONTINENTAL BAKING CO	T0608136287	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	571 CARLSBAD VILLAGE DR	CARLSBAD	33.15965	-117.348
HAWTHORNE RENT-IT SERVICE	T0608162416	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2530 STATE ST	CARLSBAD	33.16462	-117.353
CARLSBAD HIGH SCHOOL	T0607300067	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	3557 MONROE ST	CARLSBAD	33.16237	-117.327
BRIDGESTONE- FIRESTONE	T0607300147	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2545 EL CAMINO REAL	CARLSBAD	33.17986	-117.329
CONTINENTAL BAKING CO	T0607301363	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	571 CARLSBAD VILLAGE DR	CARLSBAD	33.15991	-117.348
TAMARACK EXXON	T0607301786	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	945 TAMARACK AV	CARLSBAD	33.15242	-117.335
CHESTNUT HOMES (VAP CASE)	T0608101734	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	NONE CHESTNUT AV	CARLSBAD	33.16067	-117.333
R.F. WHITE FUEL TRUCK SPILL	T0608155271	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	NONE HY 5 AT S-78	CARLSBAD	33.17695	-117.351
CARLSBAD FIREHOUSE #1	T0608169353	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1275 CARLSBAD VILLAGE DR	CARLSBAD	33.16495	-117.339
CHEVRON PRODUCTS	T0608171796	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2500 EL CAMINO REAL	CARLSBAD	33.18031	-117.327
ACACIA APARTMENTS	T10000002789	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	382 ACACIA AVENUE	CARLSBAD	33.15809	-117.351
RESIDENTIAL APARTMENT COMPLEX	T10000002803	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	847 LAGUNA DRIVE	CARLSBAD	33.165	-117.348
CIRCLE R RANCH TRADING POST	T0607301442	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	8751 OLD CASTLE RD	ESCONDIDO	33.25101	-117.15
ARCO	T0607318250	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	26915 MESA ROCK RD	ESCONDIDO	33.19729	-117.127
UNDEVELOPED PROPERTY	SLT19715791	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2401 NUTMEG STREET	ESCONDIDO	33.15719	-117.109
CHAMPAGNE TEXACO	T0607301337	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	8808 LAWRENCE WELK DR	ESCONDIDO	33.23283	-117.144
VACANT LOT	T0608172656	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	26845 MOUNTAIN MEADOW RD	ESCONDIDO	33.19897	-117.12
EL NORTE PARKWAY PLAZA	T10000005890	CLEANUP PROGRAM SITE	OPEN - REMEDIATION	1032 WEST EL NORTE PARKWAY	ESCONDIDO	33.14846	-117.107
SHELL GAS STATION	T0607302509	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	780 W EL NORTE PY	ESCONDIDO	33.14671	-117.103
UNOCAL #257309	T0619778483	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1062 W. EL NORTE PY	ESCONDIDO	33.14758	-117.107
CONOCO PHILLIPS	T10000000299	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1061 W EL NORTE PKY	ESCONDIDO	33.14683	-117.108
ESCONDIDO COUNTRY CLUB MAINT.	T0607300665	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1800 COUNTRY CLUB LN	ESCONDIDO	33.15677	-117.124
MEADOW LAKE COUNTRY CLUB	T0607303026	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	10333 E MEADOW GLEN WY	ESCONDIDO	33.21341	-117.106
ESCONDIDO COUNTRY CLUB MAINT.	T0607300534	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1800 COUNTRY CLUB LN	ESCONDIDO	33.15677	-117.124
BARNWELL PROPERTIES	T06019782368	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	337 S BARNWELL	OCEANSIDE	33.20332	-117.347
ROWLEY CHEVRON	T06019784060	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2191 VISTA WY	OCEANSIDE	33.18315	-117.34
SEASIDE AUTO BODY	T0607300059	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	901 S CLEVELAND ST	OCEANSIDE	33.18662	-117.374
OCEANSIDE TEXACO	T0607300155	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1660 OCEANSIDE BL	OCEANSIDE	33.18925	-117.364

COAST SAVINGS & LOAN	T0607300223	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	NONE MCNEIL ST	OCEANSIDE	33.20238	-117.375
OCEANSIDE UNIF SCHOOL DISTRICT	T0607300290	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2070 MISSION AV	OCEANSIDE	33.20717	-117.362
COLLEGE BLVD EXXON	T0607300508	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	3401 COLLEGE BL	OCEANSIDE	33.18312	-117.297
UNOCAL SVC STATION #5940-31030	T0607300676	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	502 S EL CAMINO REAL	OCEANSIDE	33.21804	-117.332
ETERNAL HILLS MEMORIAL PARK	T0607300707	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1999 EL CAMINO REAL	OCEANSIDE	33.19262	-117.328
MICHAEL O HARA	T0607300767	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	523 S CLEVELAND ST	OCEANSIDE	33.18913	-117.376
7-ELEVEN FOOD STORE #18891	T0607301452	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1927 N MISSION AV	OCEANSIDE	33.20375	-117.364
G & M CO., INC #53	T0607301931	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	601 N COAST HY	OCEANSIDE	33.19935	-117.383
GOLDEN STATE GAS INC	T0607302720	LUST CLEANUP SITE	OPEN - REMEDIATION	1943 S COAST HY	OCEANSIDE	33.17215	-117.36
U.S. SILICA	T0607302937	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	3231 OCEANSIDE BL	OCEANSIDE	33.20116	-117.316
HARVEST TIME PRODUCE	T0607302960	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	303 VIA DEL MONTE	OCEANSIDE	33.21333	-117.352
MISSION LINEN SUPPLY	T0607303010	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2727 INDUSTRY ST	OCEANSIDE	33.20013	-117.342
NAKANO NURSERY	T060739629	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1730 DIXIE ST	OCEANSIDE	33.2007	-117.365
OLD CORPORATION YARD PARCEL B	T0608103452	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	501 N CLEVELAND ST	OCEANSIDE	33.19738	-117.383
OCEANSIDE MOBIL	T0608104176	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1407 MISSION AV	OCEANSIDE	33.20091	-117.37
COLLEGE BLVD EXXON	T0608126493	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	3401 COLLEGE BL	OCEANSIDE	33.18159	-117.297
TEXACO	T0608127535	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1227 VISTA WY	OCEANSIDE	33.17599	-117.352
MR GOODWASH 76, NPJ INC	T0608128167	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2315 VISTA WY	OCEANSIDE	33.18172	-117.338
GREENBRIER SQUARE SHOPPING CTR	T0608144771	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1950 OCEANSIDE BL	OCEANSIDE	33.19463	-117.354
OCEANSIDE GOLF COURSE	T0608160283	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	825 DOUGLAS DR	OCEANSIDE	33.25197	-117.322
T & R AUTO REPAIRS	T0608166478	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	323 S CLEVELAND ST	OCEANSIDE	33.19113	-117.378
SHELL SERVICE STATION	T0608176410	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1435 MISSION AV	OCEANSIDE	33.2011	-117.369
NORTH RIVER VILLAGE	T0619764331	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	490 VANDEGRIFT BL	OCEANSIDE	33.2538	-117.299
FORMER MR. BEST CLEANERS	T10000005704	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	2015 MISSION AVENUE	OCEANSIDE	33.20374	-117.363
305 WISCONSIN AVENUE	T10000005561	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	305 WISCONSIN AVENUE	OCEANSIDE	33.18759	-117.374
FIRE MOUNTAIN ESTATES	T06019758233	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1728 YUCCA RD	OCEANSIDE	33.19122	-117.339
OCEANSIDE MOBIL	T0607300120	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1701 OCEANSIDE BL	OCEANSIDE	33.19037	-117.361
ATCHISON TOPEKA & SANTA FE RR	T0607300224	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	117 CLEVELAND ST	OCEANSIDE	33.19307	-117.38
EXPRESS GAS #29	T0607300730	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1720 OCEANSIDE BL	OCEANSIDE	33.19183	-117.36
OCEANSIDE MOBIL	T0607300847	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1701 OCEANSIDE BL	OCEANSIDE	33.19037	-117.361
OCEANSIDE IMPORTS VOLKSWAGEN	T0607300983	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1426 S COAST HY	OCEANSIDE	33.18166	-117.367
FRMR. CHEVRON, CIVIC CTR. PLAZA	T0607301057	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	401 N COAST HY	OCEANSIDE	33.1979	-117.382
PRESTIGE STATIONS INC 774	T0607301329	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1522 MISSION AV	OCEANSIDE	33.2023	-117.368
RITE AID	T0607301407	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1201 S COAST HY	OCEANSIDE	33.18347	-117.369
PHIL NAUGLER	T0607301507	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	407 TOPEKA ST	OCEANSIDE	33.1934	-117.378
COLLEGE BLVD EXXON	T0607301989	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	3401 COLLEGE BL	OCEANSIDE	33.18159	-117.297
HOLIDAY INN EXPRESS	T0607301990	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	937 N COAST HY	OCEANSIDE	33.2027	-117.385
ARCO FACILITY #9749	T0607302350	LUST CLEANUP SITE	OPEN - REMEDIATION	802 N COAST HY	OCEANSIDE	33.20124	-117.384
ECONO LUBE 'N TUNE	T0607302447	LUST CLEANUP SITE	OPEN - REMEDIATION	1942 S COAST HY	OCEANSIDE	33.1731	-117.36
TRI-CITY MEDICAL CENTER	T0607302613	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	4002 VISTA WY	OCEANSIDE	33.18405	-117.296
GARY'S AUTO/RV SERVICE	T0607302642	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1540 SOUTH COAST HIGHWAY	OCEANSIDE	33.17957	-117.366
SEASHELL OIL & CHEMICAL CO	T0607302660	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	423 N CLEVELAND ST	OCEANSIDE	33.1968	-117.383
NORTH COUNTY AUTO SERVICE	T0607302668	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1520 S COAST HY	OCEANSIDE	33.18025	-117.366
K MART	T0607302968	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1547 MISSION AV	OCEANSIDE	33.20177	-117.368
TOSCO STATION #06973	T0607399196	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2255 EL CAMINO REAL	OCEANSIDE	33.18409	-117.329
ASTLEFORD PROPERTY	T0608114521	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	NONE 08TH & NEVADA	OCEANSIDE	33.19713	-117.377
MISSION SQUARE SHOPPING CENTER	T0608120766	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1002 MISSION AV	OCEANSIDE	33.19856	-117.376

OCEANSIDE TEXACO	T0608134350	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1660 OCEANSIDE BL	OCEANSIDE	33.1893	-117.364
TEXACO USA INC.	T0608134453	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1444 MISSION AV	OCEANSIDE	33.20189	-117.369
K MART	T0608166939	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1547 MISSION AV	OCEANSIDE	33.20204	-117.368
NAKANO NURSERY	T0608170753	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1730 DIXIE ST	OCEANSIDE	33.20122	-117.364
TOSCO STATION #06973	T0608174171	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2255 EL CAMINO REAL	OCEANSIDE	33.18422	-117.329
OCEANSIDE MOBIL	T0608180575	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1701 OCEANSIDE BL	OCEANSIDE	33.19041	-117.361
PRESTIGE STATIONS INC 774	T0608181500	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1522 MISSION AV	OCEANSIDE	33.20236	-117.368
GOLDEN STATE GAS INC	T0608181875	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1943 S COAST HY	OCEANSIDE	33.1722	-117.36
MR GOODWASH 76, NPJ INC	T0608184992	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2315 VISTA WY	OCEANSIDE	33.18173	-117.338
PSI #1862/ARCO #1862	T0608188283	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1990 OCEANSIDE BL	OCEANSIDE	33.19545	-117.354
COLLEGE BLVD EXXON	T0608192490	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	3401 COLLEGE BL	OCEANSIDE	33.18159	-117.297
AGRI CHEMICAL & SUPPLY INC.	T10000001471	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2010 OCEANSIDE BLVD	OCEANSIDE	33.19587	-117.353
UNOCAL 76 #31292-257288	T10000001918	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	4181 OCEANSIDE BLVD	OCEANSIDE	33.20662	-117.286
AGRI CHEMICAL AND SUPPLY	T10000002619	LUST CLEANUP SITE	OPEN - SITE ASSESSMENT	2002 OCEANSIDE BL	OCEANSIDE	33.19583	-117.353
TEXACO USA INC.	T06019738009	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1444 MISSION AV	OCEANSIDE	33.20189	-117.369
UNOCAL #5940-31030	T06019740561	LUST CLEANUP SITE	OPEN - ELIGIBLE FOR CLOSURE	502 S EL CAMINO REAL	OCEANSIDE	33.21808	-117.332
DEUTSCH CO	T0607300291	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	250 EDDIE JONES WY	OCEANSIDE	33.21779	-117.356
MISSION ELEMENTARY SCHOOL	T0607300306	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2100 N MISSION AV	OCEANSIDE	33.20717	-117.362
DATA PROPERTIES	T0607300604	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2372 INDUSTRY RD	OCEANSIDE	33.19853	-117.348
RANCH	T0607301221	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	4466 PALA RD	OCEANSIDE	33.23801	-117.302
MISSION CAR WASH	T0607301522	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1414 01ST ST	OCEANSIDE	33.20054	-117.369
EXPRESS GAS #29	T0607301968	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1720 OCEANSIDE BL	OCEANSIDE	33.19114	-117.361
CITY OF OCEANSIDE-PHHWCF	T0607302273	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2880 INDUSTRY ST	OCEANSIDE	33.20102	-117.339
CLEVELAND ST HOUSING PROJECT	T0607302692	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	400 N CLEVELAND ST (400 BLOCK)	OCEANSIDE	33.19698	-117.383
HERZOG CONTRACTING	T0607302786	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1833 OCEANSIDE BL	OCEANSIDE	33.19137	-117.358
DANS MOBIL	T0607303025	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1742 S COAST HY	OCEANSIDE	33.17567	-117.362
MARKSTEIN BEVERAGE CO	T0607303149	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2511 INDUSTRY RD	OCEANSIDE	33.199	-117.344
FRMR. CHEVRON, CIVIC CTR. PLAZA	T0607342465	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	401 N COAST HY	OCEANSIDE	33.19762	-117.381
UNOCAL 76 #31292-257288	T0607399068	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	4181 OCEANSIDE BL	OCEANSIDE	33.20674	-117.286
TMI	T0608107511	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	4079 CALLE PLATINO	OCEANSIDE	33.20591	-117.292
IVEY RANCH INC	T0608133124	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	NONE MESA DR	OCEANSIDE	33.215	-117.316
EAGLE'S CROSSING	T0608141959	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	NONE MISSION AV EAST I 15	OCEANSIDE	33.20563	-117.367
ATCHISON TOPEKA & SANTA FE RR	T0608142815	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	117 CLEVELAND ST	OCEANSIDE	33.19378	-117.381
COLLEGE BLVD EXXON	T0608142935	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	3401 COLLEGE BL	OCEANSIDE	33.18159	-117.297
LARWIN-ROSEDALE PROPERTIES	T0608145235	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	16255 VENTURA BL	OCEANSIDE	33.19405	-117.315
MOBIL 18-AED	T0608147532	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	3945 MISSION AV	OCEANSIDE	33.22839	-117.323
OCEANSIDE REGULATOR STATION	T0608149065	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	601 S CLEVELAND ST	OCEANSIDE	33.18869	-117.376
EXPRESS GAS #29	T0608156373	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1720 OCEANSIDE BL	OCEANSIDE	33.19182	-117.36
SUNBURST HOMES CORP	T0608174887	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	NONE EMERALD & OLIVE-NEC	OCEANSIDE	33.20467	-117.279
K MART	T0608175607	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1547 MISSION AV	OCEANSIDE	33.2017	-117.368
SHELL	T0619702586	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	660 DOUGLAS DR	OCEANSIDE	33.24492	-117.322
NORTHWEST DEALERCO HOLDINGS, LLC	T10000006222	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2003 MISSION AVENUE	OCEANSIDE	33.20425	-117.364
HERZOG CONTRACTING	T06019713768	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1833 OCEANSIDE BL	OCEANSIDE	33.19258	-117.358
OCEANSIDE GOLF COURSE	T0607300020	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	825 DOUGLAS DR	OCEANSIDE	33.25382	-117.317
B & R BUGGIES	T0607300119	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1523 S COAST HY	OCEANSIDE	33.18016	-117.367
SEVEN DAY TIRE AND BRAKE	T0607300151	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2001 OCEANSIDE BL	OCEANSIDE	33.19535	-117.353
OCEANSIDE UNIF SCHOOL DISTRICT	T0607300303	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2070 MISSION AV	OCEANSIDE	33.20717	-117.362

JEFFERSON JUNIOR HIGH SCHOOL	T0607300314	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	823 ACACIA AV	OCEANSIDE	33.20834	-117.364
FRANK MATTHEWS	T0607300461	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	263 S COAST HY	OCEANSIDE	33.19315	-117.377
ONE STOP AVIATION, INC.	T0607300462	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1119 S CLEVELAND ST	OCEANSIDE	33.18369	-117.372
CALIF ST HIGHWAY PATROL	T0607301482	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1888 OCEANSIDE BL	OCEANSIDE	33.19223	-117.359
MISSION EXXON	T0607302482	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	3865 MISSION AV	OCEANSIDE	33.22679	-117.328
NORTH COUNTY TRANSIT DISTRICT	T0607302537	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	303 VIA DEL NORTE	OCEANSIDE	33.21296	-117.352
MISSION SAN LUIS REY PARISH	T0607302733	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	4070 MISSION AV	OCEANSIDE	33.23242	-117.317
VAN DER LINDEN ELECTRIC	T0607302966	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1007 S CLEVELAND ST	OCEANSIDE	33.18553	-117.373
EDWIN FRAZEE INC	T0607303222	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2511 OCEANSIDE BL	OCEANSIDE	33.1998	-117.345
SUMMERVIEW	T0607366998	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2691 EMERALD DR	OCEANSIDE	33.19564	-117.279
HILL STREET TEXACO	T0608137198	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	801 N COAST HY	OCEANSIDE	33.2011	-117.384
ENERTRON	T0608177086	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	305 AIRPORT RD	OCEANSIDE	33.21574	-117.351
OCEANSIDE UNIF SCHOOL DISTRICT	T0608178371	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2070 MISSION AV	OCEANSIDE	33.2058	-117.364
CITY OF OCEANSIDE PS GARAGE	T0608190385	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	4925 OCEANSIDE BL	OCEANSIDE	33.21759	-117.267
USPS OCEANSIDE STATION	T0608190431	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	211 S BROOKS ST	OCEANSIDE	33.19917	-117.369
CONOCOPHILLIPS	T10000001096	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2003 MISSION E	OCEANSIDE	33.20425	-117.364
FUTURE STARBUCKS COFFEE	T10000008094	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1702 MISSION AVENUE	OCEANSIDE	33.20296	-117.367
1125 SOUTH CLEVELAND STREET	T10000008306	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1125 SOUTH CLEVELAND STREET	OCEANSIDE	33.18334	-117.372
FIRE MOUNTAIN CLEANERS	T10000009530	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	2530-A VISTA WAY	OCEANSIDE	33.18388	-117.333
FORMER OCEANSIDE DRIVE IN THEATRE	SLT19752423	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	3480 W MISSION AV	OCEANSIDE	33.22169	-117.336
FORMER MAX CLEANERS	SLT19781199	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	3529 CANNON RD	OCEANSIDE	33.17255	-117.254
VACANT LOT/RANCHO VISTA SR. COMMUN.	T06019726976	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	0 SAN DIMAS	OCEANSIDE	33.22245	-117.322
REFLECT SHINE CAR WASH	T06019774905	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	3528 COLLEGE BL	OCEANSIDE	33.18012	-117.295
OCEANSIDE CITY OF/WATER UTILIT	T0607300179	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	110 JONES RD	OCEANSIDE	33.21107	-117.353
OCEANSIDE CITY GARAGE	T0607300180	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	304 04TH ST	OCEANSIDE	33.19677	-117.383
TEXACO USA INC.	T0607300299	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1444 MISSION AV	OCEANSIDE	33.20187	-117.369
JOHNS TEXACO	T0607300354	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	380 N EL CAMINO REAL	OCEANSIDE	33.23078	-117.327
OCEANSIDE ICE CO	T0607300472	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	421 S CLEVELAND ST	OCEANSIDE	33.19024	-117.377
OCEANSIDE CITY OF/WATER UTILIT	T0607300656	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	110 JONES RD	OCEANSIDE	33.21124	-117.354
TRI-CITY MEDICAL CENTER	T0607301001	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	4002 VISTA WY	OCEANSIDE	33.18405	-117.296
NORTH COUNTY TRANSIT DISTRICT	T0607301277	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	303 VIA DEL NORTE	OCEANSIDE	33.2128	-117.352
SOLUS WESTERN PORTFOLIO	T0607301285	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	3520 MISSION AV	OCEANSIDE	33.22164	-117.337
TRUSTEE OF THE PROCOPIO TRUST	T0607302479	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	102 N COAST HY	OCEANSIDE	33.19539	-117.379
CHEVRON #92838	T0607303023	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2601 OCEANSIDE BL	OCEANSIDE	33.2007	-117.344
COLLEGE BLVD EXXON	T0608108958	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	3401 COLLEGE BL	OCEANSIDE	33.18159	-117.297
CALIF ST HIGHWAY PATROL	T0608148876	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1888 OCEANSIDE BL	OCEANSIDE	33.1936	-117.357
CLEVELAND ST HOUSING PROJECT	T0608160644	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	400 N CLEVELAND ST (400 BLOCK)	OCEANSIDE	33.19714	-117.383
CITY OF OCEANSIDE-PHHWCF	T0608172161	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2880 INDUSTRY ST	OCEANSIDE	33.20105	-117.339
OCEANSIDE COMMUNITY DEVELOPMNT	T0608193376	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	NONE 01ST & MYERS	OCEANSIDE	33.19354	-117.382
CITY OF OCEANSIDE SANITARY SEWER COLLECTION SYST	T10000002939	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	N. HAYMAR DRIVE	OCEANSIDE	33.17962	-117.318
SANDAG COASTAL RAIL PHASE 2B	T10000004803	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	0 SOUTH MYERS STREET	OCEANSIDE	33.18262	-117.372
MISSION SQUARE	T10000007779	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	1002-1070 MISSION AVENUE	OCEANSIDE	33.19979	-117.375
SHELL/SOUTHERN CA RETAIL DSTRC	T0607300225	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	3502 COLLEGE BL	OCEANSIDE	33.18133	-117.296
UNOCAL SERV STATION #4220	T0607300412	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1802 S COAST HY	OCEANSIDE	33.17497	-117.362
RASHID SOUTHHILL SHELL	T0607300423	LUST CLEANUP SITE	OPEN - SITE ASSESSMENT	1202 S COAST HY	OCEANSIDE	33.18358	-117.369
OCEANSIDE CITY GARAGE	T0607300874	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	304 04TH ST	OCEANSIDE	33.19677	-117.383
MISSION SAN LUIS REY RETREAT C	T0607300985	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	4050 MISSION AV	OCEANSIDE	33.23046	-117.319

ARCO AM/PM MINI MARKET #6021	T0607301115	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1801 S COAST HY	OCEANSIDE	33.17514	-117.362
SAN DIEGO AUTO AUCTION	T0607301707	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	4051 OCEANSIDE BL	OCEANSIDE	33.2039	-117.293
PEP BOYS #667	T0607301744	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2041 MISSION AV	OCEANSIDE	33.20714	-117.362
SATURN OF WEST 78	T0607302226	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2205 VISTA WY	OCEANSIDE	33.18231	-117.339
ECONO LUBE N TUNE #23	T0607302663	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1618 MISSION AV	OCEANSIDE	33.20288	-117.367
CHEVRON USA- 1442	T0607303124	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	3204 MISSION AV	OCEANSIDE	33.21378	-117.348
FORMER WINSTON TIRE	T0608103264	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1106 S COAST HY	OCEANSIDE	33.18514	-117.37
U.S. SILICA	T0608103792	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	3231 OCEANSIDE BL	OCEANSIDE	33.20116	-117.316
SEASHELL OIL & CHEMICAL CO	T0608114045	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	423 N CLEVELAND ST	OCEANSIDE	33.19696	-117.383
FOSTER METAL PRODUCTS INC	T0608116723	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	3045 INDUSTRY ST	OCEANSIDE	33.20028	-117.336
OCEANSIDE UNIF SCHOOL DISTRICT	T0608120790	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2070 MISSION AV	OCEANSIDE	33.20564	-117.364
SATURN OF WEST 78	T0608127737	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2205 VISTA WY	OCEANSIDE	33.1827	-117.336
COLLEGE BLVD EXXON	T0608133767	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	3401 COLLEGE BL	OCEANSIDE	33.18159	-117.297
OCEANSIDE CITY OF/POLICE DEPT	T0608151787	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1617 MISSION AV	OCEANSIDE	33.20183	-117.367
B & R BUGGIES	T0608166466	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1523 S COAST HY	OCEANSIDE	33.1802	-117.367
MCCLINTON TRUCKING COMPANY INC	T0608170002	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	3231 OCEANSIDE BL	OCEANSIDE	33.19922	-117.32
SEASHELL OIL & CHEMICAL CO	T0608175764	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	423 N CLEVELAND ST	OCEANSIDE	33.19696	-117.383
ROSALIE KOPP	T0608176002	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1740 BROADWAY	OCEANSIDE	33.17489	-117.364
TRI CITY PLATING INC	T0608186223	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1307 S COAST HY	OCEANSIDE	33.18237	-117.368
CATTELLUS DEVELOPMENT	T0608192195	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	119 N CLEVELAND ST	OCEANSIDE	33.19478	-117.381
OCEANSIDE CITY GARAGE	T0608192254	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	304 04TH ST	OCEANSIDE	33.19661	-117.382
HILL STREET TEXACO	T0608199839	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	801 N COAST HY	OCEANSIDE	33.20108	-117.384
REFLECT SHINE CAR WASH	T0619761135	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	3528 COLLEGE BL	OCEANSIDE	33.18012	-117.295
WALGREEN'S #13052	T10000002644	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	4181 OCEANSIDE BL	OCEANSIDE	33.20664	-117.286
TOWN CLEANERS	T10000007746	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	835 COLLEGE BOULEVARD	OCEANSIDE	33.24049	-117.294
COLLEGE BLVD EXXON	T06019720262	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	3401 COLLEGE BL	OCEANSIDE	33.18159	-117.297
WASTE MANAGEMENT INC NORH CO	T0607300341	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2141 OCEANSIDE BL	OCEANSIDE	33.19705	-117.35
PSI #1862/ARCO #1862	T0607301067	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1990 OCEANSIDE BL	OCEANSIDE	33.19548	-117.354
U.S. SILICA	T0607301195	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	3231 OCEANSIDE BL	OCEANSIDE	33.20116	-117.316
BUCK'S TEXACO	T0607302015	LUST CLEANUP SITE	OPEN - REMEDIATION	628 S COAST HY	OCEANSIDE	33.18881	-117.373
H A LAVEZZI DIST	T0607302018	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2515 INDUSTRY RD	OCEANSIDE	33.19903	-117.344
HILL STREET TEXACO	T0607302222	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	801 N COAST HY	OCEANSIDE	33.20108	-117.384
PEP BOYS TRI-CITY #742	T0607302463	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	3752 PLAZA DR	OCEANSIDE	33.18251	-117.295
MOHSEN OIL	T0607302646	LUST CLEANUP SITE	OPEN - ELIGIBLE FOR CLOSURE	3213 MISSION AV	OCEANSIDE	33.21367	-117.348
F FASHIONS	T0607302669	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1414 S TREMONT ST	OCEANSIDE	33.18203	-117.369
7-ELEVEN FOOD STORE #25818	T0607302729	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2255 MISSION AV	OCEANSIDE	33.20817	-117.359
EMERALD ISLE GOLF COURSE	T0607303001	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	660 S EL CAMINO REAL	OCEANSIDE	33.21391	-117.332
HOLIDAY INN EXPRESS	T0607359602	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	937 N COAST HY	OCEANSIDE	33.20271	-117.385
ARCO FACILITY #9749	T0608101838	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	802 N COAST HY	OCEANSIDE	33.2013	-117.384
D&L AUTO REPAIR	T0608127020	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1302 S TREMONT ST	OCEANSIDE	33.18225	-117.369
CITY OF OCEANSIDE AIRPORT	T0608135412	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	480 AIRPORT RD	OCEANSIDE	33.21629	-117.351
EL CAMINO COUNTRY CLUB	T0608150002	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	3202 VISTA WY	OCEANSIDE	33.18562	-117.32
MR BEST CLEANERS	T0608163877	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2015 MISSION AV	OCEANSIDE	33.20455	-117.364
SHELL/SOUTHERN CA RETAIL DSTRC	T0608164335	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	3502 COLLEGE BL	OCEANSIDE	33.18134	-117.296
H A LAVEZZI DIST	T0608186131	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2515 INDUSTRY RD	OCEANSIDE	33.19904	-117.344
CITY OF OCEANSIDE PROPERTY	T10000002816	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	0 AIRPORT RD	OCEANSIDE	33.21842	-117.372
ENERTRON	T06019739436	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	305 AIRPORT RD	OCEANSIDE	33.21574	-117.351

BUBBLE BATH CAR WASH	T0607300748	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1621 S COAST HY	OCEANSIDE	33.1774	-117.364
OCEANSIDE CITY OF/POLICE DEPT	T0607301109	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1617 MISSION AV	OCEANSIDE	33.20225	-117.368
U HAUL OF OCEANSIDE	T0607301842	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	802 S COAST HY	OCEANSIDE	33.18852	-117.373
SHELL SERVICE STATION	T0607301941	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1435 MISSION AV	OCEANSIDE	33.20101	-117.369
OCEANSIDE UNIF SCHOOL DISTRICT	T0607302173	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2070 MISSION AV	OCEANSIDE	33.20717	-117.362
MOBIL 18-GCL	T0607310631	LUST CLEANUP SITE	OPEN - SITE ASSESSMENT	1742 S COAST HY	OCEANSIDE	33.17559	-117.362
ARCO PRODUCTS CO #5350	T0607391302	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	3804 PLAZA DR	OCEANSIDE	33.18188	-117.294
PLAVAN PETROLEUM	T0607391331	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	575 AIRPORT RD	OCEANSIDE	33.21549	-117.356
TEXACO	T0608121547	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1227 VISTA WY	OCEANSIDE	33.17599	-117.352
ATCHISON TOPEKA & SANTA FE RR	T0608127790	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	117 CLEVELAND ST	OCEANSIDE	33.19368	-117.38
OCEANPLACE CINEMAS/V.A.P. CASE	T0608138593	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	401-423 MISSION AV	OCEANSIDE	33.195	-117.38
JENCO INC/MANAGING PARTNER	T0608142404	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	NONE N CLEVELAND ST	OCEANSIDE	33.19651	-117.382
JENCO INC/MANAGING PARTNER	T0608185877	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	NONE N CLEVELAND ST	OCEANSIDE	33.19759	-117.383
NATIONAL METAL TECHNOLOGIES	T0608189337	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	4040 CALLE PLATINO	OCEANSIDE	33.20625	-117.295
MOBIL AUTOMOTIVE LUBE INC	T0608191948	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2420 INDUSTRY ST	OCEANSIDE	33.19944	-117.346
CONOCOPHILLIPS	T0619777990	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	3361 MISSION AV	OCEANSIDE	33.21794	-117.341
CONOCOPHILLIPS	T10000000292	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	3350 COLLEGE BL	OCEANSIDE	33.18577	-117.296
7-ELEVEN	T10000005750	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2255 MISSION AVENUE	OCEANSIDE	33.20825	-117.359
H. G. FENTON	T10000007751	LUST CLEANUP SITE	OPEN - SITE ASSESSMENT	1517 S. COAST HWY.	OCEANSIDE	33.18063	-117.367
TESORO 42339	T10000008626	LUST CLEANUP SITE	OPEN - SITE ASSESSMENT	1920 MISSION AVE.	OCEANSIDE	33.20433	-117.365
PIONEER MILLS	T0607300032	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1329 W MISSION RD	SAN MARCOS	33.14886	-117.19
SAN MARCOS HDQTRS/DIVISION II	T0607302282	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1579 OSAGE ST	SAN MARCOS	33.1484	-117.198
GLENN YOUNG ARCO #6200	T0607301273	LUST CLEANUP SITE	OPEN - REMEDIATION	125 N RANCHO SANTA FE RD	SAN MARCOS	33.15093	-117.198
ABES TOWING	T0607301340	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2020 N TWIN OAKS VALLEY RD	SAN MARCOS	33.17877	-117.158
SAN MARCOS HDQTRS/DIVISION II	T0607302697	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1579 OSAGE ST	SAN MARCOS	33.14752	-117.197
SAN MARCOS GAS	T0607383730	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1290 W MISSION RD	SAN MARCOS	33.14861	-117.188
MIDWAY CONTAINER	T0608147295	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	664 N TWIN OAKS VALLEY RD	SAN MARCOS	33.15053	-117.162
PALOMAR COMMUNITY COLLEGE	T0607301391	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1140 W MISSION RD	SAN MARCOS	33.14731	-117.185
COCA COLA ENTERPISES	T0608184290	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	NONE LAS POSAS/ARMORLITE	SAN MARCOS	33.14626	-117.19
FIVE STAR TEXACO SERVICE CNTR	T0607302827	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	105 RANCHO SANTA FE RD	SAN MARCOS	33.14871	-117.199
PALM SPRINGS OIL CO (CHEVRON)	T0607303122	LUST CLEANUP SITE	OPEN - REMEDIATION	110 S RANCHO SANTA FE RD	SAN MARCOS	33.14866	-117.199
GLENN YOUNG ARCO #6200	T0608153478	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	125 N RANCHO SANTA FE RD	SAN MARCOS	33.15083	-117.197
FOOTHILL TERRACE SITE	T0608165279	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	909 RICHLAND RD	SAN MARCOS	33.15717	-117.14
HOLLANDIA DAIRY	T06019708064	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	400 EAST MISSION HILLS COURT	SAN MARCOS	33.14625	-117.147
T.E.R.I., INC., CENTER FOR LIFE PLANNING	T06019752990	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	555 DEER SPRINGS RD	SAN MARCOS	33.19227	-117.152
GLENN YOUNG ARCO #6200	T0608148767	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	125 N RANCHO SANTA FE RD	SAN MARCOS	33.15083	-117.197
HOLLANDIA DAIRY	T0607302357	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	622 E MISSION RD	SAN MARCOS	33.14625	-117.147
CIRCLE K STORES DC 36 #2969	T0607399218	LUST CLEANUP SITE	OPEN - REMEDIATION	202 S RANCHO SANTA FE RD	SAN MARCOS	33.14598	-117.201
AZTEC TECHNOLOGY CORP.	T10000002708	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2620 SOUTH SANTA FE AVENUE	SAN MARCOS	33.16285	-117.204
RANCHO SANTA FE EXXON	T0607302478	LUST CLEANUP SITE	OPEN - REMEDIATION	112 N RANCHO SANTA FE RD	SAN MARCOS	33.14956	-117.199
FIVE STAR TEXACO SERVICE CNTR	T0608107669	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	105 RANCHO SANTA FE RD	SAN MARCOS	33.14888	-117.199
HOLLANDIA DAIRY	T0608166186	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	622 E MISSION RD	SAN MARCOS	33.14625	-117.147
FORMER CONTINENTAL CLEANERS	T10000005844	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	109 SOUTH RANCHO SANTA FE RC	SAN MARCOS	33.1484	-117.198
SAN DIEGO UNION TRIBUNE	T0607300256	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1152 ARMORLITE DR	SAN MARCOS	33.14619	-117.186
PALOMAR COMMUNITY COLLEGE	T0607300263	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1140 W MISSION RD	SAN MARCOS	33.14731	-117.185
GLENN YOUNG ARCO #6200	T0607300398	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	125 N RANCHO SANTA FE RD	SAN MARCOS	33.15083	-117.197
RANCHO SANTA FE EXXON	T0619784179	LUST CLEANUP SITE	OPEN - SITE ASSESSMENT	112 N.RANCHO SANTA FE RD	SAN MARCOS	33.14961	-117.199

FIVE STAR TEXACO SERVICE CNTR	T0607301309	LUST CLEANUP SITE	OPEN - REMEDIATION	105 RANCHO SANTA FE RD	SAN MARCOS	33.14871	-117.199
GOURMET LIQUOR 100944	T0607300358	LUST CLEANUP SITE	OPEN - VERIFICATION MONITORING	2966 S SANTA FE AV	SAN MARCOS	33.15726	-117.201
OCHS ENTERPRISES INC.	T0608116960	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1321 DISTRIBUTION WY	VISTA	33.15083	-117.236
BUIE COMMUNITIES	T0608125138	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1385 E SYCAMORE AV	VISTA	33.15241	-117.226
UNOCAL SVC STATION #7009-31271	T0608145333	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	976 ESCONDIDO AV	VISTA	33.19129	-117.237
443 SUNSET DRIVE (METH CLEANUP CASE)	T10000003138	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	443 SUNSET DRIVE	VISTA	33.18779	-117.241
PASEO POINTE	T10000005060	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	325 SOUTH SANTA FE AVENUE	VISTA	33.19999	-117.243
PLAZA CLEANERS	T10000009569	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	1605 SOUTH MELROSE DRIVE	VISTA	33.16634	-117.248
FOOTHILL CHEVRON	T0607300332	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1211 E VISTA WY	VISTA	33.21739	-117.226
SANTA FE CHEVRON	T0607300421	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	126 S SANTA FE AV	VISTA	33.20111	-117.243
CLARK SELF SERVICE	T0607300671	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1516 S SANTA FE AV	VISTA	33.1826	-117.218
INDUSTRIAL ASPHALT	T0607301079	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1309 SYCAMORE AV	VISTA	33.14934	-117.23
UNOCAL SVC STATION #7009-31271	T0607301481	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	976 ESCONDIDO AV	VISTA	33.19196	-117.236
BARNICLE'S EXPRESS	T0607302453	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	845 E VISTA WY	VISTA	33.20996	-117.234
CIRCLE K STORES INC #2705192	T0607302931	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	967 E VISTA WY	VISTA	33.21139	-117.23
MITSU/FUDOSAN USA INC	T0607302984	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	500 LA MIRADA DR	VISTA	33.15198	-117.233
CIRCLE SHELL SERVICE	T0607391335	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	648 S SANTA FE AV	VISTA	33.1956	-117.237
EAST VISTA WAY EXXON	T0607399179	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	911 E VISTA WY	VISTA	33.21102	-117.231
VISTA PROPOSED TRANSIT CENTER	T0607399207	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	100 OLIVE AV	VISTA	33.20204	-117.245
BRIGGS TREE	T0607399280	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1111 POINSETTIA AV	VISTA	33.14613	-117.216
AGRICULTURE PROPERTY LOCADE	T0608104084	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2465 N SANTA FE AV	VISTA	33.23723	-117.259
FORMER STATE FARM SERVICE CENTER (LOWEN PROPEI	T0608119495	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	145 N MELROSE DR	VISTA	33.19681	-117.255
AMERICAN PACIFIC PROPERTIES/ VISTA VILLAGE	T0608137327	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	30 MAIN STREET	VISTA	33.20027	-117.245
MOBIL 18-GCX	T0608145652	LUST CLEANUP SITE	OPEN - SITE ASSESSMENT	170 N EMERALD	VISTA	33.18999	-117.28
EAST VISTA WAY EXXON	T0608149867	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	911 E VISTA WY	VISTA	33.21078	-117.232
AHLSWEDE WHOLESALE NURSERY	T0608156223	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	717 ORA AVO DR	VISTA	33.19623	-117.193
3 R TRUCKING	T0608167485	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	129 OLIVE AV	VISTA	33.20287	-117.245
COLSYL CORP	T0608173023	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	122 W VISTA WY	VISTA	33.19319	-117.269
EQUILON	T0619786897	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	400 SYCAMORE AVE	VISTA	33.16773	-117.213
ALLEN'S AUTO REPAIR	T0607300973	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	718 E VISTA WY	VISTA	33.20809	-117.236
ULTRAMAR STATION #1-745	T0607301060	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	505 N SANTA FE AV	VISTA	33.20647	-117.245
VISTA FIRESTONE BRAKE & SMOG	T0607301416	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	711 S SANTA FE AV	VISTA	33.19496	-117.237
CRANE DIVERSIFIED RETAILERS	T0607302375	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	145 EMERALD DR	VISTA	33.18957	-117.279
FORMER TOWER (CASCADE) DRYCLEAN	T0607340025	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1580 S MELROSE DR	VISTA	33.16789	-117.247
RBV 76	T0607391311	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1590 S MELROSE DR	VISTA	33.16501	-117.246
MOBIL OIL CORP	T0607391322	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	710 SYCAMORE AV	VISTA	33.16507	-117.216
ROCCO BRUNO CHEVRON	T0607399238	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	224 EMERALD DR	VISTA	33.18763	-117.279
VISTA VALLEY COUNTRY CLUB	T0608104302	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	29354 VISTA VALLEY DR	VISTA	33.24736	-117.194
USPS VISTA STATION	T0608120167	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	960 POSTAL WY	VISTA	33.19171	-117.233
ULTRAMAR STATION #1-745	T0608124877	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	505 N SANTA FE AV	VISTA	33.2065	-117.245
TONY COFFIN INC	T0608132776	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	801 S SANTA FE AV	VISTA	33.19418	-117.236
NORMAN LEVINE	T0608139529	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1120 N MELROSE DR	VISTA	33.21217	-117.255
VISTA SHOPPING CENTER	T0608153321	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	NONE W BROADWAY	VISTA	33.18618	-117.281
CITY OF VISTA CIVIC CENTER	T10000001083	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	600 EUCALYPTUS AV	VISTA	33.20246	-117.236
SANTA FE CROSSROADS	T10000004912	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1450 NORTH SANTA FE AVENUE	VISTA	33.22045	-117.245
EMERALD MOBIL	SLT19791404	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	170 N EMERALD DR	VISTA	33.18981	-117.28
GREEN OAK VILLAS	SLT19797474	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1052 SYCAMORE AV	VISTA	33.15856	-117.222

RICHARDSON PROPERTY	T06019793621	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2405 N SANTA FE AV	VISTA	33.23576	-117.256
MOBIL SERVICE STATION (08-FX2)	T0607300048	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	410 W VISTA WY	VISTA	33.19752	-117.249
VISTA CARDLOCK - SKS INC	T0607300769	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	620 S SANTA FE AV	VISTA	33.19606	-117.238
INLAND OIL SERVICE STATION	T0607300960	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	620 SANTA FE AVE S	VISTA	33.19606	-117.238
VISTA ACADEMY SCHOOL	T0607301232	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	600 N SANTA FE AV	VISTA	33.20749	-117.245
PRESTIGE STATION #616	T0607301269	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	745 S SANTA FE AV	VISTA	33.1951	-117.237
MOBIL SERVICE STATION (08-FX2)	T0607301612	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	410 W VISTA WY	VISTA	33.19752	-117.249
NATIONAL UNIVERSITY	T0607301662	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2022 UNIVERSITY DR	VISTA	33.17295	-117.221
VISTA CARDLOCK - SKS INC	T0607302551	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	620 S SANTA FE AV	VISTA	33.19599	-117.238
SUPERIOR READY MIX LP	T0607399057	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1385 SYCAMORE AV	VISTA	33.14836	-117.233
COUNTY OF SD GEN SVCS OPER.	T0608107853	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	325 S MELROSE DR	VISTA	33.1913	-117.254
SANCHEZ AUTO REPAIR	T0608121417	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2285 S SANTA FE AV	VISTA	33.16879	-117.207
HAPPY CLEANERS	T0608128158	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	312 W BROADWAY	VISTA	33.19716	-117.247
BUIE COMMUNITIES	T0608176744	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1385 SYCAMORE AV	VISTA	33.15241	-117.226
BREEZE HILL RANCH CONSTRUCTION	T0608184748	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	333 S MELROSE DR	VISTA	33.19085	-117.254
PETOS INC	T0608195995	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	122 W VISTA WY	VISTA	33.19319	-117.269
PASEO POINTE OPEN SPACE	T10000005650	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	123 SOUTH SANTA FE AVENUE	VISTA	33.20059	-117.243
EMERALD MOBIL	T0607301559	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	170 N EMERALD DR	VISTA	33.1899	-117.28
GREEN OAK RANCH	T0607302362	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1237 GREEN OAK RD	VISTA	33.15783	-117.227
COLSYL CORP	T0607302402	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	122 W VISTA WY	VISTA	33.19297	-117.269
7-ELEVEN FOOD STORE #13625	T0607302813	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	470 N MELROSE DR	VISTA	33.20447	-117.255
PALMER CONCRETE	T0607303184	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	430 OLIVE AV	VISTA	33.20447	-117.251
SUPERIOR READY MIX LP	T0607303229	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1385 SYCAMORE AV	VISTA	33.14836	-117.233
BUIE COMMUNITIES	T0607391323	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1385 SYCAMORE AV	VISTA	33.14836	-117.233
BOOMERS	T06019759161	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1525 W VISTA WY	VISTA	33.19194	-117.274
MELROSE TEXACO	T0607300068	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	210 S MELROSE DR	VISTA	33.19365	-117.254
DAUD'S TEXACO	T0607300904	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	900 E VISTA WY	VISTA	33.21128	-117.232
7-ELEVEN FOOD STORE #24085	T0607301411	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	900 N SANTA FE AV	VISTA	33.21207	-117.246
PETER J WINN INC	T0607301514	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	930 OSBORNE ST	VISTA	33.2378	-117.229
GOLDEN STATE GASOLINE INC	T0607301951	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	730 S SANTA FE AV	VISTA	33.19507	-117.236
JERRY MITCHELL'S AUTO CENTER	T0607302066	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	835 N SANTA FE AV	VISTA	33.21113	-117.245
RANCHO TREE SERVICE	T0607302384	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	425 REDLANDS ST	VISTA	33.20549	-117.246
COUNTY OF SD GEN SVCS OPER.	T0607302386	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	325 S MELROSE DR	VISTA	33.1908	-117.254
BRIGGS TREE CO INC	T0608120963	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1111 POINSETTIA AV	VISTA	33.14609	-117.216
MARY PETRIZZI	T0608133717	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1261 GRANDVIEW RD	VISTA	33.2173	-117.21
DAUD'S TEXACO	T0608166130	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	900 E VISTA WY	VISTA	33.21145	-117.232
BUIE COMMUNITIES	T0608177726	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1385 SYCAMORE AV	VISTA	33.15241	-117.226
ULTRAMAR STATION #1-745	T0608179023	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	505 N SANTA FE AV	VISTA	33.2065	-117.245
VISTA FIRESTONE BRAKE & SMOG	T0608179500	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	711 S SANTA FE AV	VISTA	33.19498	-117.237
VISTA SUNSET	T0608188575	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	800 SUNSET DR BLOCK	VISTA	33.18196	-117.241
NATIONAL UNIVERSITY	T0608195265	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2022 UNIVERSITY DR	VISTA	33.17265	-117.221
SEXSMITH PARCEL	T0608196689	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	360 W BROADWAY	VISTA	33.19755	-117.248
MARK ALLEN LEIDLE	T10000002788	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	526 MAR VISTA DRIVE	VISTA	33.18039	-117.233
RANCHO LOMAS VERDES	T10000003505	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	2461 EAST VISTA WAY	VISTA	33.23958	-117.223
BROADWAY VISTA CENTER	SLT9S0214243	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	312 WEST BROADWAY	VISTA	33.19745	-117.247
MOBIL SERVICE STATION (08-FX2)	T0607300822	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	410 W VISTA WY	VISTA	33.19752	-117.249
VISTA UNIFIED SCHOOL DISTRICT	T0607301939	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1222 ARCADIA AV	VISTA	33.22491	-117.224

SHADOWRIDGE 76	T0607391341	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	636 SYCAMORE AV	VISTA	33.16558	-117.216
VISTA IRRIGATION DISTRICT	T0607397170	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	202 CONNECTICUT AV	VISTA	33.20573	-117.247
SECURITY CHEVROLET	T0608159342	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1100 E VISTA WY	VISTA	33.21548	-117.229
DAUD'S TEXACO	T0608185217	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	900 E VISTA WY	VISTA	33.21145	-117.232
VILLA DEL NORTE APARTMENT COMPLEX (METH CASE)	T10000002948	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1610 NORTH SANTA FE AVENUE	VISTA	33.2235	-117.247
GLAZER FAMILY TRUST	T10000004230	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	151 NETTLETON ROAD	VISTA	33.18891	-117.282
AHLSWEDE WHOLESALE NURSERY	SLT19733476	CLEANUP PROGRAM SITE	OPEN - SITE ASSESSMENT	717 ORA AVO DR	VISTA	33.19623	-117.193
USPS VISTA STATION	T06019731621	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	960 POSTAL WY	VISTA	33.19171	-117.233
TONY COFFIN INC	T0607300169	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	801 S SANTA FE AV	VISTA	33.19416	-117.236
EAST VISTA WAY SHELL	T0607300259	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2131 E VISTA WY	VISTA	33.23292	-117.226
CITY OF VISTA	T0607301426	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	400 N SANTA FE AV	VISTA	33.20515	-117.245
VISTA ACADEMY SCHOOL	T0607301475	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	600 N SANTA FE AV	VISTA	33.19633	-117.238
GOLDEN STATE GAS	T0607301879	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	535 N SANTA FE AV	VISTA	33.20667	-117.245
SHADOWRIDGE GOLF CLUB	T0607302303	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1980 GATEWAY DR	VISTA	33.16943	-117.234
U S RENTALS	T0607302358	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	240 W VISTA WY	VISTA	33.19781	-117.248
CITY OF VISTA FIRE STATION #1	T0607302643	LUST CLEANUP SITE	OPEN - SITE ASSESSMENT	175 N MELROSE DR	VISTA	33.19714	-117.255
TEXACO REFINING & MARKETING	T0607303075	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	221 N EMERALD DR	VISTA	33.19019	-117.279
CITY OF VISTA	T0608135068	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1165 E TAYLOR ST	VISTA	33.22709	-117.224
MR. SHERMAN CALVERT	T0608156561	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1316 INDEPENDENCE WY	VISTA	33.21759	-117.215
CITY OF VISTA	T0608172116	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1165 E TAYLOR ST	VISTA	33.22709	-117.224
GOLDEN STATE GASOLINE INC	T0608175092	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	730 S SANTA FE AV	VISTA	33.19499	-117.236
UNOCAL SVC STATION #7009-31271	T06019746316	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	960 CIVIC CENTER DRIVE	VISTA	33.19129	-117.237
PAINE OIL CO	T0607300121	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1045 N SANTA FE AV	VISTA	33.21373	-117.245
WELLS FARGO BANK	T0607300122	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	315 S SANTA FE AV	VISTA	33.1999	-117.242
SECURITY CHEVROLET	T0607300445	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	1100 E VISTA WY	VISTA	33.21548	-117.229
ROCCO BRUNO CHEVRON	T0607300580	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	224 EMERALD DR	VISTA	33.19064	-117.28
TED'S AUTO REPAIR	T0607300872	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	727 E VISTA WY	VISTA	33.20809	-117.235
PAULEY EQUIPMENT RENTAL INC	T0607301658	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	348 N SANTA FE AV	VISTA	33.20438	-117.245
PRUDENTIAL OVERALL SUPPLY	T0607302651	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	2485 ASH ST	VISTA	33.14994	-117.219
CRANE DIVERSIFIED RETAILERS	T0607302785	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	145 EMERALD DR	VISTA	33.18959	-117.279
APRO #30	T0607302926	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	485 N MELROSE DR	VISTA	33.20435	-117.254
QUALITY AUTO RECYCLING	T0607327286	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	1661 W VISTA WY	VISTA	33.18998	-117.277
7-ELEVEN FOOD STORE #24085	T0607356291	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	900 N SANTA FE AV	VISTA	33.212	-117.245
VENTURE PLATINUM LLC	T0607391313	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	625 SYCAMORE AV	VISTA	33.16574	-117.216
GOLDEN STATE GASOLINE INC	T0607399064	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	730 S SANTA FE AV	VISTA	33.19499	-117.236
WEARDCO CONSTRUCTION	T0608109336	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	739 OLIVE AV	VISTA	33.20606	-117.257
VISTA IRRIGATION DISTRICT	T0608120610	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	202 W CONNECTICUT AV	VISTA	33.20573	-117.247
PRESTIGE STATION #616	T0608138435	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	745 S SANTA FE AV	VISTA	33.19482	-117.236
VISTA VALLEY COUNTRY CLUB	T0608189956	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	29354 VISTA VALLEY DR	VISTA	33.24578	-117.193
TONY COFFIN INC	T10000000927	LUST CLEANUP SITE	COMPLETED - CASE CLOSED	801 S SANTA FE AV	VISTA	33.19418	-117.236
EAST VISTA WAY PROPERTY	T10000005623	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED	2019 EAST VISTA WAY	VISTA	33.23074	-117.224

71002365	Allfast Fastening Systems, Inc.	Inactive - Needs Evaluation	Tiered Permit	2640 Vista Pacific Drive	Oceanside
37010023	NORTHEAST VALLEY HIGH SCHOOL SITE	Inactive - Needs Evaluation	School Investigation	255 Stallion Drive	Oceanside
71002729	Tri-City Medical Center	Inactive - Needs Evaluation	Tiered Permit	4002 Vista Way	Oceanside
CAD982414146	SMM USA, INC.	PROTECTIVE FILER	Non-Operating	4055 CALLE PLATINO	OCEANSIDE
80001491	SMM USA, INC.	No Action Required	Corrective Action	4055 CALLE PLATINO	OCEANSIDE
37820016	DEL RIO ELEMENTARY	No Action Required	School Investigation	5207 East Parker Street	Oceanside
71003419	National Metal Tech	No Further Action	Tiered Permit	4040 Calle Platino	Oceanside
37010007	MORROW HILLS ELEMENTARY	No Further Action	School Investigation	El Mirlo Drive	Oceanside
37820031	PACIFICA ELEMENTARY SCHOOL	No Action Required	School Investigation	4991 Macario Street	Oceanside
37010029	MURRAY BRIDGE MIDDLE SCHOOL	No Further Action	School Investigation	Frazee Road/Gardenia Street	Oceanside
37000004	NICHOLS ELEMENTARY SCHOOL SITE	No Action Required	School Investigation	4100 Via Rio	Oceanside
37820009	EL CAMINO HIGH SCHOOL ADDITION	No Action Required	School Investigation	400 Rancho Del Oro Drive	Oceanside
37010026	PALA WEST SCHOOL	No Further Action	School Cleanup	Pala Road/Douglas Drive	Oceanside
37340140	FOSTER METAL PRODUCTS	Refer: 1248 Local Agency	Evaluation	3045 INDUSTRY ST.	OCEANSIDE
37990005	ENERTRON	Refer: 1248 Local Agency	Evaluation	305 B AIRPORT ROAD	OCEANSIDE
37820001	OCEANSIDE HIGH SCHOOL EXPANSION	No Further Action	School Investigation	100 South Horne Street	Oceanside
37820003	LINCOLN MIDDLE SCHOOL EXPANSION	Certified	School Cleanup	2000 California Street	Oceanside
71002309	Deutsch E C D	No Action Required	Tiered Permit	250 Eddie Jones Way	Oceanside
37820015	SOUTH OCEANSIDE ELEMENTARY	No Action Required	School Investigation	1806 South Horne Street	Oceanside
37820006	JEFFERSON MIDDLE SCHOOL	No Further Action	School Investigation	823 Acacia Avenue	Oceanside
37820018	DITMAR ELEMENTARY SCHOOL	No Action Required	School Investigation	1125 Ditmar Street	Oceanside
37340034	TRI-CITY PLATING, INCORPORATED	Active	State Response	1307 South Coast Highway	OCEANSIDE
37820021	OCEANSIDE HIGH SCHOOL GYM & WOODSHOP	No Action Required	School Investigation	Seagaze Drive/Horne Street	Oceanside
37820014	LAUREL ELEMENTARY SCHOOL	No Action Required	School Investigation	1410 Laurel Street	Oceanside
80000339	OCEANSIDE RADAR SITE	Inactive - Needs Evaluation	Military Evaluation		Oceanside
80001121	OCEANSIDE MUNICIPAL AIRPORT	Inactive - Needs Evaluation	Military Evaluation		Oceanside
37010004	ROCKWOOD ROAD SCHOOL	No Action Required	School Investigation	Rockwood Road/Cloverdale Road	San Diego
80000919	CAMP PENDLETON	No Further Action	State Response	In Orange County, along border of Sand Diego County, just east/	San Diego
37010016	STACCO HIGH SCHOOL	Inactive - Withdrawn	School Investigation	East Vista Way/Mission Avenue	San Luis Rey
71003428	Price Club #416	Inactive - Needs Evaluation	Tiered Permit	725 Center Drive	San Marcos
60001479	Proposed Twin Oaks Elementary School Expansion	No Action Required	School Investigation	203 Olive Street	San Marcos
60001023	Sycamore Drive & Olive Street East School	No Action Required	School Investigation	Sycamore Drive & Olive Street East	San Marcos
71003210	Midway Container	Inactive - Needs Evaluation	Tiered Permit	664 N. Twin Oaks Valley Road	San Marcos
60001480	Proposed Foothill High School Southeast Site	No Action Required	School Investigation	140 W. San Marcos Boulevard	San Marcos
37010042	NORTH COUNTY REGIONAL LEARNING CENTER	No Further Action	School Investigation	Mission Road/Pico Avenue	San Marcos
60001078	Future Foothills High School	No Further Action	School Investigation	West San Marcos Boulevard, 1 Lot east of Pico Avenue	San Marcos
60001892	San Marcos K-8 School	No Further Action	School Cleanup	South of San Elijo Rd/Twin Oaks Valley Rd Transition	San Marcos
60001752	PK-8 School #1 - Rancho Coronado Area	Inactive - Action Required	School Investigation	West of S. Twin Oaks Valley Rd / South of Village Drive	San Marcos
60000126	SAN MARCOS ELEMENTARY SCHOOL	No Further Action	School Investigation	300 W. San Marcos Blvd.	San Marcos
37650004	SAN MARCOS ACADEMY ADDITION	No Further Action	School Investigation	300 W. San Marcos Boulevard	San Marcos
37010031	SAN ELIJO HILLS MIDDLE SCHOOL	No Action Required	School Investigation	Elfin Forest Road/Questhaven Road	San Marcos
37010009	MISSION HILLS HS AKA HOLLANDIA DAIRY	No Further Action	School Investigation	800/900 East Mission Road	San Marcos
37000068	670 SAN MARCOS BLVD.	Refer: 1248 Local Agency	Evaluation	670 SAN MARCOS BLVD.	SAN MARCOS
80001570	SIGNET ARMORLITE INC	Refer: RWQCB	Corrective Action	1001 ARMORLITE DR	SAN MARCOS
CAD008362634	SIGNET ARMORLITE INC	CLOSED	Non-Operating	1001 ARMORLITE DR	SAN MARCOS
71002362	Hues Metal Finishing, Inc.	Inactive - Needs Evaluation	Tiered Permit	977 Linda Vista Drive	San Marcos
37650018	SAN ELIJO ELEMENTARY SCHOOL	No Action Required	School Investigation	0 Schoolhouse Way	San Marcos

37010030	RANCHO SANTA LUNA SCHOOL	No Action Required	School Investigation	Santa Luna Hills	San Marcos
71002510	Napp Systems, Inc.	Inactive - Needs Evaluation	Tiered Permit	360 S. Pacific Street	San Marcos
CAD046589305	BAE SYSTEMS IESI	CLOSED	Non-Operating	1370 W SAN MARCOS BLVD	SAN MARCOS
80001395	BAE SYSTEMS AEROSPACE INC	Refer: RWQCB	Corrective Action	1370 SAN MARCOS BLVD	SAN MARCOS
71003390	Hughes Circuits, Inc.	Inactive - Needs Evaluation	Tiered Permit	540 S. Pacific	San Marcos
60001024	San Marcos High School Ag Site	No Further Action	School Investigation	1615 San Marcos Boulevard	San Marcos
60000082	OLEANDER AVENUE ES #2	No Action Required	School Investigation	Oleander Avenue/Poinsettia Avenue	San Marcos
71003161	BOC Gases	Inactive - Needs Evaluation	Tiered Permit	1970 Diamond Street	San Marcos
80000338	OCEANSIDE CP SITE	Inactive - Needs Evaluation	Military Evaluation		Santa Margarita
37010008	LILAC ROAD ELEMENTARY	No Further Action	School Investigation	30109 Lilac Road	Valley Center
80001086	CAMP VISTA	Inactive - Action Required	Military Evaluation	1237 Green Oak Road	Vista
37010049	CAMINO LARGO ELEMENTARY SCHOOL	Inactive - Withdrawn	School Investigation	North Santa Fe Avenue/Osborne Street	Vista
37820002	OAK ELEMENTARY	No Action Required	School Investigation	Foothill Boulevard/Oak Drive/Monte Mar Road	Vista
37010027	RIVIERA SCHOOL	Inactive - Withdrawn	School Investigation	Barsby Street/Riviera Drive	Vista
37520001	MELROSE/GOLD SCHOOL	No Further Action	School Investigation	Melrose Drive/Gold Drive	Vista
37010035	KAWANO HIGH SCHOOL	Inactive - Withdrawn	School Investigation	East Vista Way/Mason Road	Vista
37010014	MARYLAND DRIVE ELEM. SCHOOL (PRESSEY)	No Further Action	School Investigation	North Avenue/Maryland Drive	Vista
37990002	HANNALEI SCHOOL SITE	No Further Action	School Investigation	118/130 Hannalei Drive	Vista
71003818	BAE Systems, Advanced Ceramics, Inc.	Inactive - Needs Evaluation	Tiered Permit	991 Park center Dr	Vista
37000052	K-8 SCHOOL SITE	No Action Required	School Investigation	Melrose Drive/Sycamore Avenue	Vista
71003710	Vista Industrial Products	Inactive - Needs Evaluation	Tiered Permit	1395 Park Center Drive	Vista
60001573	North Santa Fe & Orange Site	No Further Action	Voluntary Cleanup	300 Block of North Santa Fe Avenue	Vista
60000990	Redevelopment & Housing Department City of Vista	No Further Action	Evaluation	Site bounded by North Santa fe, Orange Street, an alley, and Wa	Vista
37010015	BUENA VISTA ELEMENTARY SCHOOL	Inactive - Withdrawn	School Investigation	1430, 1516, 1554, 1558 Buena Vista Drive	Vista
CAD982512386	ALLISON X-RAY COMPANY	CLOSED	Non-Operating	950 S MELROSE DR	VISTA
37000019	RICHARDSON PROPERTY	Refer: 1248 Local Agency	Evaluation	2405 N. SANTA FE AVENUE	VISTA
60000012	COPPER/IRON SCHOOL	No Further Action	School Investigation	Copper Drive/Iron Drive	Vista
37010012	HUNTALAS SCHOOL SITE	No Further Action	School Investigation	2317/2355 Foothill Drive	Vista