INITIAL STUDY

SANTA CLARA RIVER LEVEE IMPROVEMENTS DOWNSTREAM OF UNION PACIFIC RAILROAD (SCR-3) PROJECT

Lead Agency:

VENTURA COUNTY
WATERSHED PROTECTION DISTRICT
800 South Victoria Avenue
Ventura, CA 93009

Prepared By:

Aspen Environmental Group

February 2015

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for the

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List of Acronyms

APNs	Assessor Parcel Numbers
AQMP	Air Quality Management Plan
AWPF	Advanced Water Purification Facility
BACT	Best available control technology
BMPs	Best Management Practices
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
cfs	Cubic feet per second
CHL	California Historical Landmarks
CLOMR	Conditional Letter of Map Revision
CMB	Crushed miscellaneous base
CNDDB	CDFW California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon monoxide
CRHR	California Register of Historic Resources
CRPR	California Rare Plant Rank
CUP	Conditional Use Permit
CUPA	Certified Unified Program Agency
CY	Cubic yards
dBA	A-weighted decibels
DB	decibels
DFIRM	Digital Flood Insurance Rate Maps
DOC	Department of Conservation
DPR	Department of Parks and Recreation
DPS	Distinct population segment
DWR	Department of Water Resources
EDR	Environmental Data Resources
EHD	Environmental Health Division
EIR	Environmental Impact Report
ESHA	Environmental Sensitive Habitat Areas
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study

FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
GHGs	Greenhouse Gases
GMA	Groundwater Management Agency
GREAT	Groundwater Recovery Enhancement and Treatment
GWP	Global Warming Potential
HFCs	Hydrofluorocarbons
HRI	Historic Resources Inventory
IWMD	Integrated Waste Management Division
LARWQCB	Los Angeles Regional Water Quality Control Board
LLAP	Local Levee Assistance Program
LOMR	Letter of Map Revision
LOS	Level of Service
MBTA	Migratory Bird Treaty Act
MCL	Maximum Contaminant Level
MLD	Most likely descendant
MOE	Measure of effectiveness
MRP	Mineral Resource Protection
MRZ	Mineral Resource Zone
NAHC	Native American Heritage Commission
NAVD	North American Vertical Datum
NFIP	National Flood Insurance Program
NPDES	National Pollutant Discharge Elimination System
NRCS	National Resources Conservation Service
NRHP	National Register of Historic Places
O&M	Operations and Maintenance
PAL	Provisionally Accredited Levee
PCSMP	Post Construction Stormwater Management Plan
PFCs	Perfluorocarbons
PM10	Particulate matter 10 microns in diameter
PM2.5	Particulate matter 2.5 microns in diameter
PPV	Peak particle velocity
PSD	Prevention of Significant Deterioration
RMS	Root mean square
RWQCB	Regional Water Quality Control Board
SCRT	Santa Clara River Trail
SFHA	Special Flood Hazard Areas
SHPO	State Historic Preservation Office
SR	State Rankings
SRP	Scenic Resource Protection
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TDS	Total dissolved solids
UPRR	Union Pacific Rail Road
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

VCFD	Ventura County Fire Department
VCFPD	Ventura County Fire Protection District
VCTC	Ventura County Transportation Commission
VCWPD	Ventura County Watershed Protection District
VRSD	Ventura Regional Sanitation District
WDRs	Waste Discharge Requirements
WMP	Water Management Plan

A. PROJECT DESCRIPTION

A.1 PROJECT TITLE

Santa Clara River Levee Improvements Downstream of Union Pacific Railroad (SCR-3) Project

A.2 LEAD AGENCY NAME AND ADDRESS

Ventura County Watershed Protection District
800 South Victoria Avenue
Ventura, California 93009-1610

A.3 INITIAL STUDY CONTACT PERSON

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A.4 DESCRIPTION OF PROPOSED PROJECT

A.4.1 Project Location

The Santa Clara River Levee Improvements Downstream of Union Pacific Railroad (SCR-3) Project (SCR-3 Project or proposed project) is located in unincorporated Ventura County generally along the southern bank of the Santa Clara River, with components of the project also located within the City of Oxnard, Ventura County, California. Project activities would extend along the existing Santa Clara River levee system (SCR-3), which is owned and operated by the Ventura County Watershed Protection District (VCWPD), generally north of and parallel to the Bailard Landfill, Coastal Landfill, Ventura Regional Sanitation District (VRSD) Flare, the City of Oxnard River Ridge Golf Course and golf maintenance yard, and Santa Clara Landfill, and then continue northeast parallel to N. Ventura Road, 40 feet northeast of the Union Pacific Rail Road (UPRR) crossing. Flood protection from this point to the Highway 101 crossing would be addressed by The Village Specific Plan development (Tentative Tract No. 5745 development project on the existing Wagon Wheel site) (see Figure A-1, Project Location).

The existing rock rip rap-faced levee extends from the northeast corner of the Bailard Landfill upstream approximately 10,725 feet to the UPRR bridge, about 750 feet west of Highway 101 and the west end of the existing Santa Clara River levee system located upstream of Highway 101 (SCR-1). From the UPRR bridge downstream (southwestward) approximately 813 feet, the existing levee is located along the land side of N. Ventura Road. The remainder of the levee is located on the river side of N. Ventura Road, with 200 feet of overlap between the land and river side levees. In this overlap area, the road elevation is high enough to match the adjacent levee heights, thus providing complete protection at the time it was constructed in 1966. There are currently no existing levees in the approximately 750 feet between the UPRR bridge and the SCR-1 levee, which represents a break in the line of flood protection provided to the City of Oxnard. This area is generally referred to by the VCWPD as the “gap.”

Aspen Environmental Group

Source: RBF, 2014.

Figure A-1

Project Location
Definition of Levee Reaches

For purposes of analysis, the VCWPD has divided SCR-3 into four reaches. Reach 1 extends from the northeast corner of the Bailard Landfill upstream to the Coastal Landfill (just east of Victoria Avenue) (Station 128+75 to 150+00). Reach 2 extends along the Coastal Landfill to a point just west of N. Ventura Road (Station 150+00 to 202+00). Reach 3 extends from Reach 2 to the point where N. Ventura Road turns easterly and parallel to the Santa Clara River, approximately 2,600 feet west of Highway 101 (Station 202+00 to 217+50). Reach 4 of the SCR-3 Project would extend to approximately 40 feet northeast of the UPRR embankment, which corresponds to the southern limit of the proposed Village development (Station 217+50 to 236+50). Closure of a "gap" in flood protection that exists from the south end of The Village development to the Highway 101 crossing would be addressed by The Village development (Wagon Wheel site), for which the City of Oxnard would act as lead agency.

An existing crushed miscellaneous base (CMB) maintenance road follows the river side of the Bailard Landfill from Station 107+00 to the upstream end of the landfill (Station 130+00). The road rises from an elevation of approximately 42 feet to 50 feet along the landfill. The existing levee (Reach 1) from this point (Station 130+00) to a point 400 feet west of Victoria Road has a top width of approximately 60 feet, where the maintenance road is located on the top of the levee. At this point, the levee top width narrows to 20 feet and “ties” into the approach embankment to the Victoria Avenue Bridge. Between Station 142+00 and 152+00 there is a paved access road that passes under the bridge. The levee top remains at elevations of 50-52 feet except in the vicinity of Victoria Avenue (Station 142+00 to 152+00) where it ramps up to match Victoria Avenue at an elevation of 60 feet.

There are no significant levees within Reach 2. The maintenance road follows the base of the Coastal Landfill/River Ridge Golf Course (landfill) for the entire reach. There are two low sections of the River Ridge Golf Course landfill where the maintenance road acts as a levee (approximately Station 160+00 to 163+00 and 179+00 to 184+00).

In Reach 3 there is a low (2-4 feet high) levee upstream of the River Ridge Golf Course high ground that extends upstream to N. Ventura Road (approximately Station 207+00 to 217+50). This levee supports a continuation of the maintenance road until it joins a flat area adjacent to N. Ventura Road, where the maintenance road bends away from the Santa Clara River.

There is no levee or maintenance road along Reach 4 (approximately Station 217+50 to 236+50).

A.4.2 Project Background

Project Area History

The Santa Clara River is one of the largest river systems (and the largest free flowing) in southern California. It flows from the headwater at Pacifico Mountain in the San Gabriel Mountains approximately 84 miles to the Pacific Ocean between the Ventura Harbor and McGrath State Beach. Over the last several decades, a series of large flow events on the Santa Clara River have resulted in damage to the Santa Clara River levee system. SCR-3 has been damaged on multiple occasions in association with high flows ranging from 81,400 to 136,000 cubic feet per second (cfs). During the 35-year period beginning 1978 and ending 2012, the VCWPD has expended approximately $7.5 million in flood damage repair work specifically for the SCR-3 levee system.

The VCWPD has implemented various measures over the years to protect the existing levee bank and levee toe from erosion and scour, specifically in the area of the SCR-3 bend (see Figure A-1). For example, VCWPD constructed two 2-ton rock groins in 1982 and constructed six additional 2-ton groins

in 1992. Approximately 80 percent of five groins were damaged by 1998 flood flows (84,000 cfs peak), with additional damage in 2005 (136,000 cfs peak). In 2006, the VCWPD constructed three "emergency" groins under expedited conditions to prevent further bank erosion and protect the decommissioned landfill located beneath the River Ridge Golf Course. To further prevent erosion of the southern bank of the Santa Clara River, in 2009 the VCWPD proposed as part of the Santa Clara River Bendway Weir Field Project the addition of four bendway weirs west of the existing 2006 groins, and approximately 1,300 linear feet of rock riprap slope protection along the SCR-3 bend, among other riverbank improvements. The majority of these improvements were installed in 2011 with final project completion in March 2012 (Padre, 2012).

The currently effective Federal Emergency Management Agency (FEMA) one percent annual chance (formerly known as 100-year) peak flow for SCR-3 was established at 161,000 cfs in 1985 (Wood Rodgers, 2013). In its current configuration, SCR-3 does not meet the Federally-mandated levee certification regulations found in the Code of Federal Regulations (44 CFR §65.10), and therefore SCR-3 is not currently certified (see discussion below under "FEMA Flood Hazard Mapping"). Since 2009 the VCWPD has been actively working to evaluate SCR-3 certification deficiencies and develop an improvement plan to both provide the required flood protection and meet regulatory requirements (see "Engineering Evaluation of the SCR-3 Levee System" discussion below).

The SCR-3 Project, as proposed by the VCWPD, includes various modifications and improvements of SCR-3 to provide adequate protection from a one percent annual chance flood event for approximately 3,800 structures in North Oxnard (Tetra Tech, 2014 – Economic Appendix). These improvements would eliminate the National Flood Insurance Program (NFIP) regulatory requirement for property owners with federally-backed mortgages in this area to purchase flood insurance. Details of the proposed project are provided below in Section A.4.5.

FEMA Flood Hazard Mapping

FEMA has estimated the boundaries of 100-year floodplains, or Flood Hazard Areas, which are shown on Flood Insurance Rate Maps (also known as FIRMs) produced under the NFIP. Each Flood Insurance Rate Map identifies the predicted area of land anticipated to be inundated during a 100-year storm event, or the storm with a one percent chance of occurring each year. The NFIP, implemented by the Congress of the United States in 1968 through the National Flood Insurance Act of 1968, enables participating communities to purchase flood insurance (FEMA, 2011). As a condition of participation in the NFIP, communities must adopt regulations for floodplain development intended to reduce flood damage for new development through such measures as flood proofing, elevation on fill, or floodplain avoidance.

FEMA manages flood risk on the national level, and has initiated a five-year plan to update the nation's flood hazard maps. FEMA requires levee owners, such as the VCWPD, to certify that their levees meet the design criteria of 44 CFR §65.10, titled "Mapping of Areas Protected by Levee Systems", which provides the minimum design necessary to show "evidence that adequate design and operation and maintenance systems are in place to provide reasonable assurance that protection from the base flood exists."

Downstream of the UPRR, the existing SCR-3 levee system is composed of four reaches. Along the proposed Village development between the UPRR and the Highway 101 Bridge, there is currently a 750-foot-long "gap" in flood protection. The remaining four downstream reaches (Reaches 1-4) were built by different agencies over many years, with different sections completed at different times for different

purposes. As such, SCR-3 has neither a unifying design nor a specific design capacity to protect properties in the City of Oxnard during high flow events. In its current configuration, SCR-3 does not meet the Federally-mandated levee certification regulations found in 44 CFR §65.10. Specifically, SCR-3 is incapable of withstanding the one percent flood event along the entirety of Reach 1, at the existing drainage swale located within the River Ridge Golf Course at the mid-point of Reach 2 (otherwise the majority of Reach 2 is sufficient), and along the entirety of Reaches 3 and 4. In 2009, the VCWPD began a detailed evaluation of the SCR-3 certification deficiencies and development of an improvement plan to meet regulatory requirements.

In order for the proposed project to be certified by FEMA in accordance with 44 CFR §65.10, evidence must be submitted to demonstrate that the system meets current design, construction, maintenance, and operation standards to provide protection from the one percent flood event. If a levee system cannot be certified as providing protection from the one percent flood event, FEMA will not accredit the levee system; levee systems that were previously shown as providing the sufficient level of flood protection on a NFIP Flood Insurance Rate Map will be de-accredited and the landward areas of these levee systems will be re-mapped as high-risk areas, referred to as Special Flood Hazard Areas (SFHA). Flood insurance purchase would be mandatory for owners with federally-backed mortgages within the SFHA. A levee that FEMA has previously accredited with providing sufficient flood protection and for which FEMA is awaiting data and/or documentation to demonstrate the levee's compliance with 44 CFR §65.10 may be recognized by FEMA as a "Provisionally Accredited Levee," or "PAL." This program was developed to allow agencies time to acquire/assemble documentation showing that the levee fully complies with 44 CFR §65.10, and allows agencies two years to submit the required documentation.

Based on active communication between VCWPD and FEMA between 2007 and 2009, the gap in levee protection between Reach 3 and the SCR-1 levee rendered the SCR-3 levee system ineligible for designation as a PAL. Therefore, beginning in August 2009, the VCWPD partnered with Wood Rodgers, Inc. (Wood Rodgers) to identify existing levee deficiencies in SCR-3 Reaches 1-3, develop strategies to correct those deficiencies in compliance with 44 CFR §65.10, and evaluate alternative solutions to "closing the gap" in flood protection in Reach 4 (see "Engineering Evaluation of the SCR-3 Levee System" discussion below). Evidence that a levee had been constructed in Reach 4 in 1966 was discovered in 2014, and until that time the "gap" was thought to extend from Reach 3 to Highway 101. After thoroughly investigating a number of alternatives over a four-year period, the engineering evaluation study was completed in March 2013. On November 15, 2011, the District received Ventura County Board of Supervisors approval to apply for grant funding for the SCR-3 levee system and eight other levee rehabilitation projects from the Local Levee Assistance Program (LLAP) administered by the California Department of Water Resources (DWR). By agreement signed February 14, 2013, the District accepted a Local Levee Critical Repair Grant in the amount of $5.4 million to be applied toward planning, design, and construction of the SCR-3 project.

The current effective FEMA digital FIRMs (DFIRMs) for the Santa Clara River in the vicinity of SCR-3 were issued January 20, 2010, but revised the next day by Letter of Map Revision (LOMR) to revert to the previously effective map based on 1985 data and analyses (VCWPD, 2014). The reason for this was to move forward with release of new digital maps for Ventura County as a whole, while delaying updates to the areas along SCR-3 until after completion of a revised Santa Clara River Flood Insurance Study (FIS), which is still in progress. The lands adjacent to SCR-3 and the gap between SCR-3 and SCR-1 are currently designated as moderate risk areas, or Zone X (shaded), and property owners are not required to purchase flood insurance at this time (FEMA, 2009). Without implementation of SCR-3 levee

improvements and closure of the gap, it is expected that property owners with federally backed mortgages would need to purchase flood insurance if located within Zone A on the future map revision.

In order for SCR-3 to be recognized by FEMA as compliant with the flooding regulations described above, the VCWPD will submit to FEMA a Conditional Letter of Map Revision (CLOMR) which will provide a preliminary request for revision of the effective NFIP map, along with evidence of adequate design and operation and maintenance systems that can provide protection from the base flood. The VCWPD intends to submit the 50-percent design plans for the SCR-3 Project in support of the CLOMR. Upon approval and implementation of the proposed project, the VCWPD would then submit to FEMA a LOMR, which will reflect the official request for revision of the effective NFIP map. The LOMRs are issued in place of the physical revision and republication of the NFIP map. If possible, VCWPD intends to submit the CLOMR and LOMR in conjunction with the City of Oxnard and The Village Specific Plan development (Tentative Tract No. 5745 – if a floodwall is proposed) to ensure simultaneous FEMA review and approval. If The Village development is constructed on building pads elevated above 78.5 feet North American Vertical Datum (NAVD), then a CLOMR and LOMR may not be required for that development.

Engineering Evaluation of the SCR-3 Levee System

On behalf of the VCWPD, Wood Rodgers performed an evaluation of the SCR-3 levee system, which was documented in the "Santa Clara River (SCR-3) Levee Reaches 1-4 Evaluation and Design Report" (Wood Rodgers, 2013). A design flow in the Santa Clara River of 250,000 cfs, which is approximately ten percent greater than the best available estimate of the 100-year peak flow (which is consistent with estimates of future flows after further development of the watershed), was used in the evaluation and as a basis for design improvements to SCR-3. The additional ten percent is factored in to address the inherent uncertainty of estimating 100-year peak flows, thereby building a reasonable measure of resiliency into the project design. Climate change (potential for fewer but more extreme storms), sea level rise, and possible regulatory changes in the required level of flood protection (e.g., increase from 100-year to 200-year storm protection) are all examples of uncertainty.

The results of the Wood Rodgers evaluation concluded that the existing levee in Reaches 1-3 does not have sufficient freeboard to convey the estimated 100-year peak flows in the Santa Clara River and therefore will require construction improvements. The evaluation indicated that Reach 1 and the lower portions of Reach 2 (Stations 152+00 to 170+00 – current starting point of Station 150+00 differs from Wood Rodgers definition) meet bank protection requirements, but embankment protection is deficient along the middle and upper portions of Reach 2 (Station 170+00 to 202+00 – ending point of Station 202+00 differs from Wood Rodgers definition). Construction and implementation of the Bendway Weir Project has since remediated these deficiencies along the upper portion of Reach 2 (Station 190+00 to 202+00). For Reach 3, the evaluation indicated that the existing embankment protection within the lower portion (Station 202+00 to 216+00), coupled with the weirs constructed in 2006, are sufficient to meet the requirements of 44 CFR §65.10. However, within the upper portion of Reach 3 (Station 216+00 to 221+00 – Note: End point for Reach 3 was later adjusted to 217+50 as a result of the design of Reach 4) embankment protection is deficient. Additionally, based on the analysis of the existing interior drainage system, Wood Rodgers determined that while the interior drainage system was mostly sufficient for FEMA certification, some improvements are required including the addition of proper positive closure devices (automatic gates) at several of the outfalls (storm drain or pipe openings) located along Reaches 1-4. At the time of the Wood Rodgers study, it was concluded that there were no

levees or floodwalls in Reach 4, but since then the VCWPD has located 1966 design drawings documenting the construction of a levee on the river side and land side of what is now N. Ventura Road to the UPRR, and connected by a high point in the road itself. As in Reaches 1-3, the Reach 4 levee is currently insufficient to protect against the one percent annual chance flood. Upstream of the UPRR, no levee or floodwall connects to the SCR-1 levee system, thus representing a "gap" in flood protection. In the Wood Rodgers report, Reach 4 was defined as extending from the upstream end of Reach 3 to the Highway 101 Bridge. This project defines Reach 4 as extending from the upstream end of Reach 3 to the UPRR, with the segment from UPRR to the Highway 101 Bridge being the "gap" in flood protection to be addressed separately by The Village development at the Wagon Wheel site.

Wood Rodgers also examined the continuity of protection along Reaches 1-3 by determining whether the levee was above or below the 100-year water surface elevation. The analysis identified that the water surface exceeded the height of the levee just upstream of Victoria Avenue (Reach 1), at each end and in the middle of Reach 2, at the upstream end of Reach 3, and in Reach 4. The absence of any flood protection in the "gap" also indicates lack of continuity.

Following the Wood Rodgers evaluation, in October 2013 the VCWPD commissioned RBF Consulting (RBF) to carry the project from 30 percent to 100 percent design. RBF completed a detailed review of the previous work completed by Wood Rodgers and prepared numerous additional technical studies in support of the SCR-3 design, including detailed hydraulics, scour calculations, geotechnical investigations, review of FEMA certification requirements, and a type selection report for the floodwall design. As a result of these studies, the recommended improvements to SCR-3 were revised. Specifically, the geotechnical investigations performed by Kleinfelder on behalf of RBF provided new information on the existing bank protection in Reach 2. The previous Wood Rodgers evaluation had indicated that the existing riprap in the middle portion of Reach 2 (Station 170+00 to 190+00) may be inadequate. This determination was based on the available information at the time. The subsequent geotechnical testing revealed that the toe down depths and riprap gradation are similar to other sections in Reach 2 and appear to be adequate (RBF, 2014). Therefore, improvements to the existing embankment protection in Reach 2 are no longer required to meet the certification requirements and have been removed from the scope of the proposed project improvements. A complete description of the proposed improvements as a result of the design assessment completed by RBF and in consultation with the VCWPD is provided in Section A.4.5.

A.4.3 Project Objectives

As noted above, the existing SCR-3 levee system is composed of four reaches built by different agencies over many years, with different sections completed at different times for different purposes, and the section between the UPRR and the Highway 101 Bridge has a 750-foot-long "gap" in flood protection. As such, SCR-3 has neither a unifying design nor a specific design capacity to protect properties in the City of Oxnard during high flow events. Over 3,800 structures and roadways located in the northern portion of the City of Oxnard are currently subject to flooding due to existing deficiencies in the SCR-3 levee system. The objectives of the proposed project are described below.

- Construct new, upgrade existing, and maintain the SCR-3 structures to provide continuous flood protection to properties in the City of Oxnard that would otherwise require flood insurance under the NFIP and do so in a cost-effective manner prior to FEMA revision of adjacent FIRMs.

- Achieve compliance with FEMA levee certification requirements as identified in 44 CFR §65.10 through implementation of structural improvements to the SCR-3 levee system capable of withstanding a one percent annual chance flood event.
- Design flood protection structures that accommodate a future bikeway along N. Ventura Road in support of the City of Oxnard Santa Clara River Trail Master Plan.

A.4.4 Project Benefits

The primary recipients of benefits of the proposed project include residents of the City of Oxnard that are currently located within the inundation area on the landward side of SCR-3 (not yet represented on the effective FEMA DFIRMs). People who own property within this area would also benefit from the flood hazard protection that would be introduced with the proposed project. According to the land use inventory and economic analysis prepared for the Santa Clara River Levee, over 3,800 structures are within the floodplain protected by SCR-3, where damages from the one percent annual flood event have been estimated at approximately $345,534,000 (Tetra Tech, 2014). By improving SCR-3 to provide flood protection to the City of Oxnard for the one percent annual flood event, the VCWPD would be able to submit to FEMA a LOMR for the project area and achieve FEMA levee certification in compliance with 44 CFR §65.10. The regulatory requirement for property owners in the northern area of the City of Oxnard with federally-backed mortgages to purchase flood insurance would be eliminated.

A.4.5 Proposed Project

The proposed project consists of implementing improvements to SCR-3 between the northeast end of the Bailard Landfill and the proposed Village development generally following the southern bank of the Santa Clara River near the City of Oxnard, California. Project improvements would occur along an approximately 2.0-mile (10,775-foot) stretch of the SCR-3 levee system (includes the southern portion of the "gap"). As noted above, for purposes of analysis, the VCWPD has divided the SCR-3 levee system into four reaches, as follows:

- Reach 1 – Extends approximately 2,125 feet from the northeast corner of the Bailard Landfill upstream to the Coastal Landfill (just east of Victoria Avenue) (Station 128+75 to 150+00).
- Reach 2 - Extends approximately 5,200 feet along the Coastal Landfill to a point just west of N. Ventura Road (Station 150+00 to 202+00).
- Reach 3 – Extends approximately 1,550 feet from Reach 2 to the point where N. Ventura Road turns easterly and is parallel to the Santa Clara River, approximately 2,600 feet west of Highway 101 (Station 202+00 to 217+50).
- Reach 4 – Extends approximately 1,900 feet from Reach 3 (Station 217+50) upstream to the northeast side of the UPRR crossing (Station 217+50 to Station 236+50). The gap between the UPRR and the Highway 101 Bridge will be addressed by The Village development.

Levee Reaches 1-3

Within Reaches 1-3, VCWPD is considering two design options, both of which would fully protect residential and commercial properties at risk during a one percent annual chance flood event. The first option (Option 1A) provides a continuous raised earthen levee, reducing the need for landfill tie-ins, and provides the highest level of flood protection. The second option (Option 1B), which provides for an estimated saving of approximately $2 million, takes advantage of the existing high ground located along

stretches of the existing levee, essentially eliminating levee improvements in Reach 2 in place of filling the existing City of Oxnard River Ridge Golf Course swale (i.e., low-lying or depressed and often wet stretch of land on a golf course). VCWPD intends to submit a CLOMR for Option 1B. Option 1A would also be carried forward for full impact analysis due to uncertainty over FEMA approval of the greater number of landfill tie-ins associated with Option 1B. Each of these options is described in more detail below.

Option 1A – Full Levee System

Within Reaches 1-3 Option 1A would provide for a continuous raised earthen levee on top of the existing levee for the full limits of the project improvements (Station 128+75 to 217+50, approximately 8,875 feet), while minimizing tie-ins to the existing landfills, as shown in Figure A-2. To raise the levee, approximately 28,500 cubic yards (CY) of the existing levee material would be excavated to prepare the foundation, along with removal of general debris, vegetation (see discussion below), and abandoned facilities within the construction limits. It is anticipated that excavated soils would be reused on-site, whereas other materials would be managed in accordance with Ventura County Ordinance #4421, which requires submittal of a recycling plan (Form B) prior to beginning construction; compliance with the plan during construction; and submittal of a Form C report, and receipts upon conclusion of work documenting that at least 60 percent of materials generated by the project were recycled and reused. Approximately 91,000 CY of new fill material and 3,000 CY of ¼-ton riprap would then be placed to raise and protect the existing levee.

One landfill tie-in to the Bailard Landfill would be required. A floodwall, approximately 375-feet long along the levee roadway, would also be required to continue the levee adjacent to the City of Oxnard River Ridge Golf Course maintenance yard. The floodwall would be installed in lieu of raising the earthen levee in this segment, as a taller earthen levee would bury a portion of the maintenance yard, but would provide comparable flood protection. Additionally, gas monitoring or collection system lines associated with the landfills, which are currently located along the landside of the levee, would be relocated in those areas where the landside fills are being constructed in close proximity.

Within Reaches 1-3, the design of the raised levee would include a 12-foot wide CMB maintenance road along the top of the levee. The restored maintenance road would extend approximately 8,700-feet from the northeast corner of the Bailard Landfill to N. Ventura Road. Access to the levee and associated maintenance road would remain restricted following completion of the proposed project, as is the case under existing conditions. Six-foot chain link fencing (approximately 1,800 feet) and three “swing” gates would be added to maintain security. However, public access may be permitted after the City of Oxnard completes its Santa Clara River Trail (SCRT).

Sheet pile would be installed along approximately 400 feet of Reach 3 from Station 214+00 to 217+50 and would tie into the Reach 4 improvements. The sheet pile provides scour protection, thereby eliminating the need for additional bendway weirs in the area.

This design will provide for full flood protection along Reaches 1-3, including protecting the VRSD flare, City of Oxnard River Ridge Golf Course maintenance yard, and existing closed landfills located immediately adjacent to SCR-3.

Option 1B – Minimum Levee System

Option 1B reduces the extent of levee improvements. It includes an earthen raised levee within Reach 1 between Stations 128+75 and 150+00 (approximately 2,125 feet) that ties into the existing closed Bailard and Coastal Landfills as high ground, as well as raising the levee within Reach 3 between Stations 203+00 and 217+50 (approximately 1,450 feet), with a tie-in at the downstream end to the Santa Clara Landfill, as shown in Figure A-3. To raise the levee, approximately 6,090 CY of the existing levee material would be excavated to prepare the foundation. Approximately 13,840 CY of new fill material and 2,040 CY of ¼-ton riprap would then be placed to raise and protect the existing levee. As noted above for Option 1A, excavated soils would be reused on-site, whereas other materials (e.g., general debris, vegetation, and abandoned facilities) would be managed in accordance with Ventura County Ordinance #4421 to the extent practicable. Additionally, gas monitoring or collection system lines associated with the landfills would be relocated in those areas where the landside fills are being constructed in close proximity.

No improvements to the existing levee would occur in Reach 2, such that no flood protection would be provided to the VRSD flare or the City of Oxnard River Ridge Golf Course maintenance yard. Instead, the existing golf course drainage swale, located at the mid-point of Reach 2, would be filled in to close a potential path for floodwater to escape from the Santa Clara River and reach residential areas located south of the golf course. A pipe would be installed beneath the fill to convey flows that currently pass through the swale to the river; a flap gate would be installed over the end of the pipe to prevent river flows from entering it during floods. Filling the golf course swale would essentially eliminate Reach 2 (Station 150+00 to 203+00, or approximately 5,300 feet) as a levee system, and avoid the construction requirements to improve the levee to meet FEMA criteria. Approximately 15,500 CY of fill material would be imported to fill the golf course swale.

Within Reaches 1 and 3, the design of the raised levee portions would include a 12-foot wide CMB maintenance road along the top of the levee totaling approximately 3,600 feet in length. Access to the levee and associated maintenance road would remain restricted following completion of the proposed project, as is the case under existing conditions. Six-foot chain link fencing (approximately 1,800 feet) and three “swing” gates would be added to maintain security. However, public access may be permitted after the City of Oxnard completes its SCRT. The entire CMB access road would remain in its existing condition (non-asphalted) and thus may require further modification by the City of Oxnard during its future development of the SCRT.

As with Option 1A, sheet pile would be installed along approximately 400 feet of Reach 3 from Station 214+00 to 217+50 and would tie into the Reach 4 improvements.

This design provides for full flood protection along Reaches 1-3 for the residential and commercial properties at risk during the one percent annual chance flow event. It does not, however, protect the existing VRSD flare and City of Oxnard River Ridge Golf Course maintenance yard in Reach 2, or provide additional river bank protection for the existing closed landfills. The existing Reach 2 levee access road would also not be raised above the 100-year water surface elevation. As such, additional inspections and other actions would be required for long-term maintenance and operations of this design. A comprehensive operations and maintenance plan would be required to monitor the levee bank and provide corrective measures if significant bank failures were to occur.

Levee Reach 4

Within Reach 4, VCWPD is considering a new floodwall along N. Ventura Road to improve the existing SCR-3 levee segment constructed in 1966. In conjunction with improvements to be constructed in support of The Village development, the floodwall would provide flood protection for properties downstream of the UPRR and southeast of the Santa Clara River. Flood protection between the UPRR and Highway 101 (the Wagon Wheel site) would be provided as part of The Village Specific Plan development (Tentative Tract No. 5745 – Not part of the SCR-3 Project), with the City of Oxnard acting as lead agency for that component. This may take the shape of simply elevating all building pads above 78.5 feet NAVD prior to construction, or a combination involving elevated building pads with a floodwall to achieve protection of sufficient height (78.5 feet NAVD). Currently, Phase 1 of The Village development, which is located near Oxnard Boulevard, is under construction. One affordable housing apartment complex has been built, and construction of additional buildings is expected to continue. Each phase would be required to comply with the City's floodplain management ordinance. If the developer proposes a floodwall, both SCR-3 and The Village flood protection designs may be submitted simultaneously to FEMA for accreditation in accordance with the NFIP requirements. Accreditation associated with The Village development may not be necessary if flood improvements at the site were to consist entirely of building pads elevated above 78.5 feet NAVD.

The proposed project in Reach 4 would include construction of a floodwall on the river side of N. Ventura Road for approximately 950 feet, as shown in Figure A-4. The floodwall would have a visible height of approximately six feet. The floodwall would be located approximately 17.5 feet from the existing roadway pavement of N. Ventura Road. This distance would accommodate the future bikeway (16-feet wide), planned as part of the SCRT Master Plan (see list of cumulative projects provided in introduction to Section C), and a curb and gutter along the roadway. Where curb and gutter already exist, the floodwall would be offset by 16 feet. On the river side of the floodwall, a 15-foot-wide soil cement maintenance access road would be installed along the toe of the slope adjacent to the floodwall to permit regular facility inspections. Rock riprap would be placed on the slope to protect the floodwall from scour.

The floodwall would then split across N. Ventura Road at the high point in the road (Station 227+00). A six-foot-high flood gate would be installed at this roadway crossing. The flood gate is proposed to be a FloodBreak Automatic Floodgate system (or equal). The system would include a steel floating panel that hinges into a recess in the pavement along N. Ventura Road. In its normal position, the gate would be flat and act as the roadway surface. It can be used in automatic and manual operation. In the automatic mode, when flood waters rise and approach the flood gate, the gate floats and rotates upward. As the water rises, the gate continues to rise until it reaches the full height. The hydrostatic pressure of the flood water activates the self-sealing rubber flange against the concrete abutments, which would be installed on both sides of N. Ventura Road to provide the closure with the gate. In manual mode, the gate is manually raised to the desired position. Construction of the gate requires modifications to N. Ventura Road and installation of the concrete abutments on each side of the gate. The concrete abutments would be tied directly into the adjacent proposed floodwalls.

The installation of the flood gate in N. Ventura Road requires the relocation of numerous utilities under the roadway impacted by the gate. These utilities include existing gas, water, and sewer lines, as well as storm drains. In general, the utilities would be lowered to provide adequate room for installation of the flood gate. If the gate is used in the automatic mode, interconnected signals would be installed to close

the street prior to the gate starting to rise. Once the flood waters recede, the gate would be lowered and the street re-opened. Following a flood event exceeding a discharge of 175,000 cfs, it is anticipated that approximately one week could be required to clean any sediment and debris deposited on the roadway as a result of the flood event.

The floodwall would continue along the top of the existing slope on the south side (land side) of N. Ventura Road for approximately 860 feet, then transition to a 40-foot-long earthen embankment abutting and perpendicular to the south UPRR embankment. A similar 40-foot-long earthen embankment would be constructed on UPRR land northeast of the railroad embankment to tie into the flood protection structure to be constructed by The Village development. The floodwall would vary in height from six feet down to four feet near the El Rio Drain. Placement of the floodwall along the south side of N. Ventura Road would impact the landscaping and concrete path that currently exists in this area; therefore, it has been estimated that approximately 14,000 square-feet of landscaping and 8,400 square-feet of concrete trail improvements would be required to essentially maintain the character and function of the landscaping and path following construction.

At the El Rio Drain crossing, to accommodate the new floodwall, the existing outlet structure and bridge crossing would be reconstructed, and a flap gate added to the channel section that discharges directly under N. Ventura Road. Northeast and southwest of the UPRR embankment, approximately 1,600 CY of fill material would be added to complete the SCR-3 improvements. This fill material essentially provides the upstream abutment or terminus of the concrete floodwall at the existing railroad embankment. The fill is required to avoid impacting the railroad infrastructure and to provide sufficient distance from the active railroad for the floodwall construction.

To prepare the site for installation of the floodwall, approximately 0.9-acre of existing vegetation along the Santa Clara River (northwest side of N. Ventura Road) and 0.3 acre of landscaping (southeast side of N. Ventura Road) would be cleared along the alignment, four high-pressure gas valves would be relocated, and approximately 1,700 CY of riprap would be removed and replaced within the western limits of the floodwall area and along the land side floodwall. Upon completion of the floodwall, approximately 200 feet of six-foot chain link fencing and a swing gate would be added at the tie-in to Reach 3 to restrict access to SCR-3. Public access would be restricted until the City of Oxnard installs its SCRT.

Vegetation Removal

Vegetation would be removed to prepare the project site for the proposed improvements. Within Reaches 1-3, approximately 7.0 acres of vegetation clearing and grubbing is anticipated for Option 1A (Full Levee System), and approximately 6.3 acres for Option 1B (Minimum Levee System).

To improve levee inspection and maintenance, vegetation along the existing SCR-3 levee (Reaches 1-3) would also be removed based on the requirements of the DWR Levee Vegetation Policy, which provides for the integration of woody vegetation for existing levees. Trees within 20 feet of the top of the levee, on the waterside slope, would be trimmed up five feet above ground and thinned enough for visibility and access. Brush, weeds, or other vegetation (ground cover) up to a height of 5 feet high blocking visibility and access would be trimmed, thinned, mowed, dragged, or otherwise removed in an allowed manner. Anticipated removal methods include hand cutting with a chainsaw, loppers, and weed whip and then placing cut material in a loader bucket to transfer to a truck for removal. Within Reaches 1-3, it is estimated that approximately 2.8 acres of vegetation thinning would occur under Option 1A (Full

Levee System), and under Option 1B (Minimum Levee System) would be reduced to approximately 1.1 acres.

Within Reach 4, vegetation removal activities would be more limited in scope, and would be done specifically to allow for installation of the floodwall. Approximately 0.9 acre of clearing and grubbing is anticipated along the Santa Clara River (northwest side of N. Ventura Road) and 0.3 acre of landscaping would be cleared on the southeast side of N. Ventura Road along the floodwall alignment.

Interior Drainage System

In order to comply with Title 44 CFR §65.10 (b)(2), all openings (e.g., storm drain outlets) along SCR-3 must be provided with closure devices that are structural parts of the system during operation and designed according to sound engineering practices. The closure requirement precludes the use of sand bags or other temporary devices that must be put in place prior to a flood event. Based on generally accepted practices, modifications may include the addition of automatic flap or duckbill gates on small existing openings up to 48-inch diameter and installation of both an automatic flap or duckbill gate and a manual slide-type gate on larger existing openings. Within Reaches 1-4, there are nine existing gravity drain outlets (openings) that outfall into the Santa Clara River, as shown in Figure A-5 and detailed in Table A-1.

Table A-1. Existing Levee Openings and Closure Devices

Station	Type of Opening	Opening Size	Closure Device
Reach 1			
131+80	Pipe	48" RCP	Flap Gate
134+30	Pipe	24" RCP	*None*
144+95	Box Culvert	6' x 6' RCB	Flap and Slide Gates
Reach 2			
181+05	Pipe	66" RCP	*None*
Reach 3			
207+10	3 Pipes	2 - 72" and 1 - 66" RCP	Flap Gates
213+50	Pipe	24" CMP	Flap Gate
Reach 4			
227+55	Double Box Culvert	2 - 6' x 7' RCB	*None*
233+70	Box Culvert	8' x 2' RCB	*None*
235+55	Pipe	24" RCP	Flap Gate

Source: Wood Rodgers, 2013 (Table 6). *Table does not include small golf course slope drains.
Acronyms: RCP=Reinforced Concrete Pipe; RCB=Reinforced Concrete Box; CMP=Corrugated Metal Pipe

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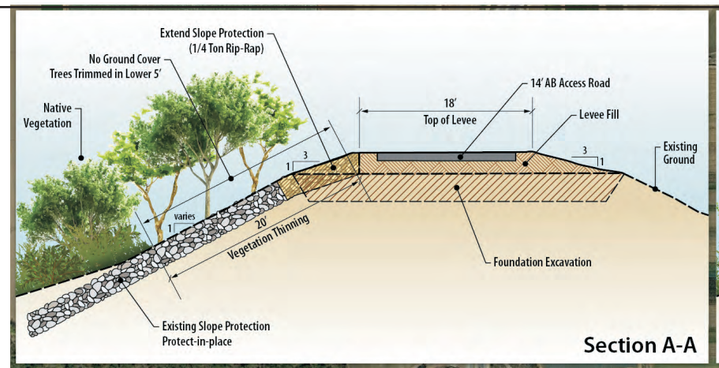
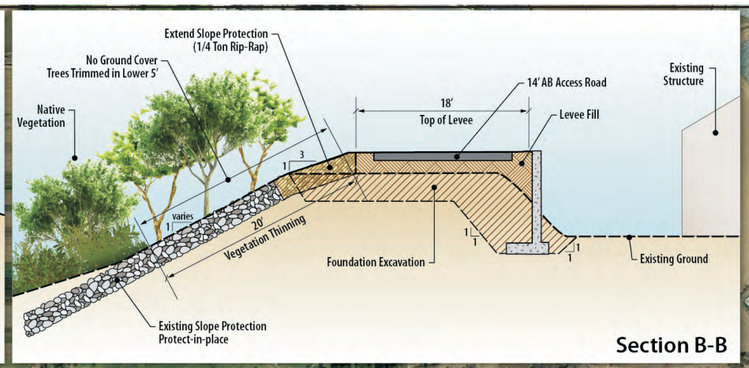


Section A-A

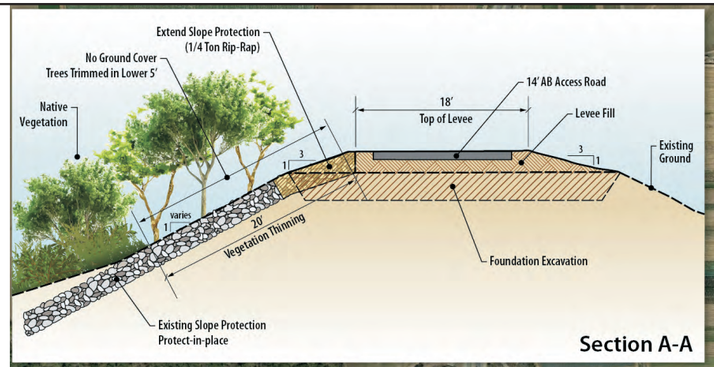


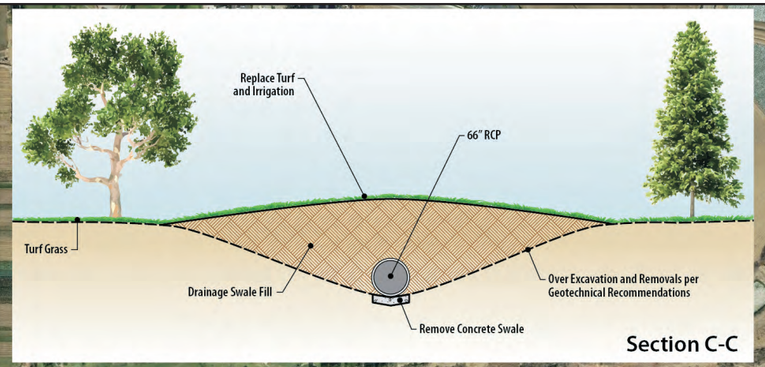
Section B-B

Source: RBF, 2014

Figure A-2

Reaches 1-3, Option 1A
Structural Improvements

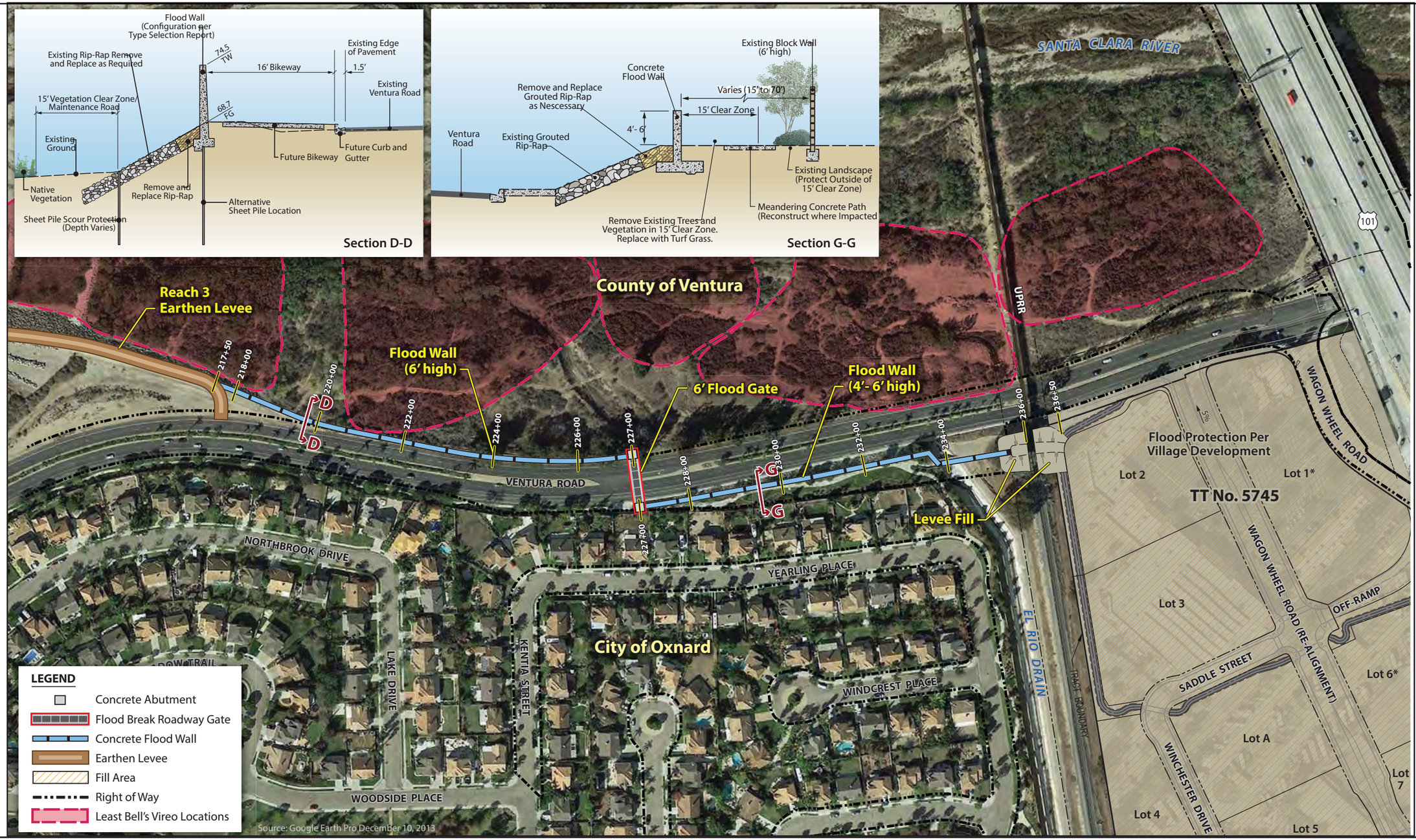




Source: RBF, 2014

Figure A-3

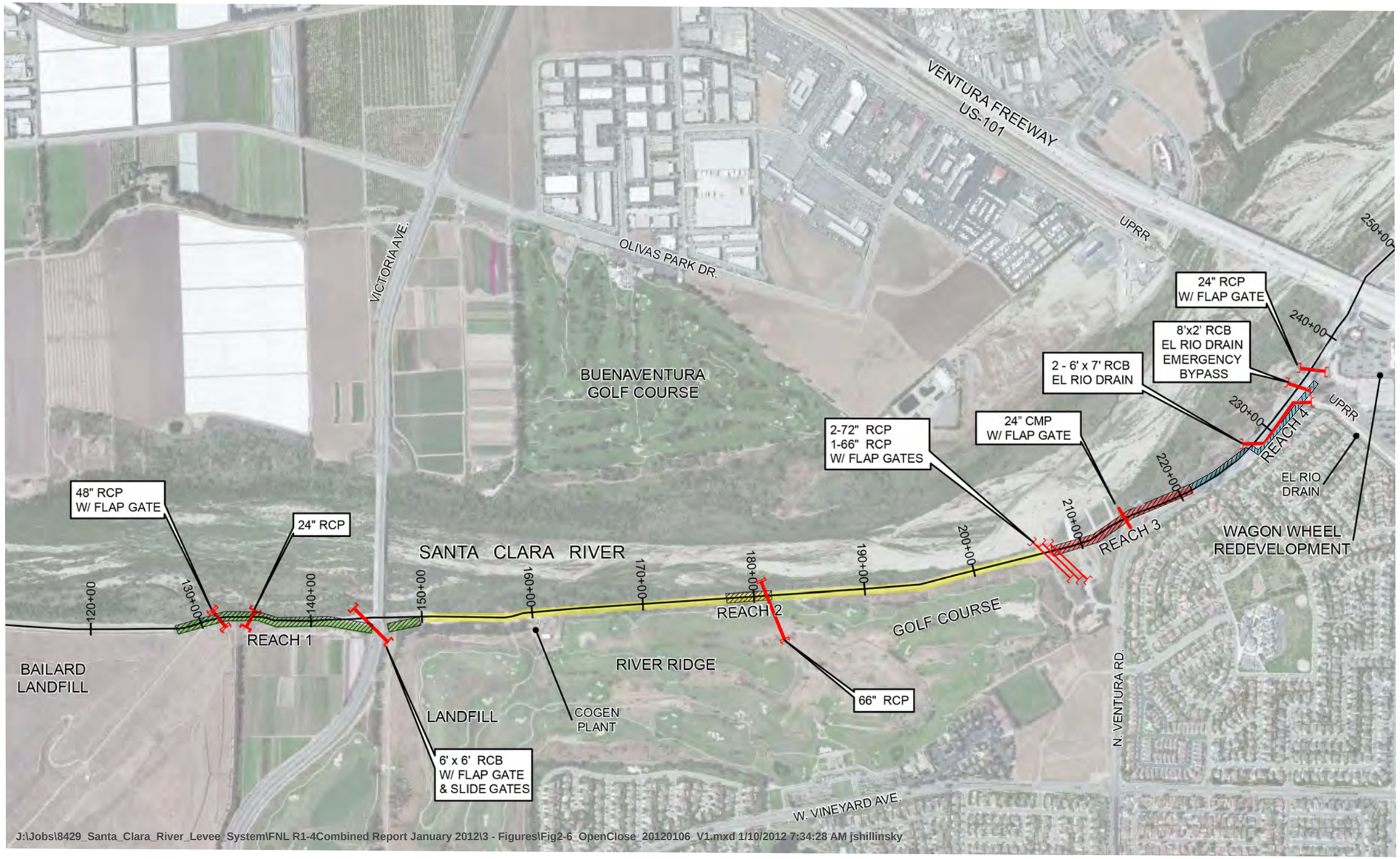
Reaches 1-3, Option 1B Structural Improvements



Source: RBF, 2014

0 200'

Figure A-4
Reach 4
Structural Improvements



Source: Wood Rodgers, 2013; Figure 2-6
Revised based on field inspection by VCWPD (December 2014).

0 500 1,000
Feet

Reach 1 · Reach 2 · Reach 3 · Reach 4 · Existing Levee · Existing Opening & Closure Devices

Figure A-5
Existing Levee Openings and Closure Devices, Reaches 1-4

As part of the proposed project, new or replacement flap gates and slide gates would be installed on all openings along Reaches 1-4 to meet FEMA certification requirements. In addition, along the floodwall in Reach 4, a new reinforced concrete drain would be installed along with a flap gate. These closure devices will prevent possible backflow into the interior drainage watershed during high flood conditions within the Santa Clara River.

Construction

Schedule and Phasing. Construction of the proposed project is anticipated to occur over a 27-month period, beginning in 2016. Construction would occur sequentially, starting within Reaches 1-3 (Phase 1) followed by Reach 4 (Phase 2), as funding is secured, with concurrent work occurring as necessary to meet schedule demands. Construction activities would occur between 7:00 a.m. and 7:00 p.m., Monday through Friday. No construction is expected on weekends or holidays. No daytime lighting would be required during construction of the project, including at the staging area(s), however nighttime lighting would be required if the contractor chooses to work after sunset until 7:00 p.m. during the fall and winter.

Staging Areas. Two areas have been identified by the VCWPD for staging of construction vehicles, equipment, and materials. The first potential staging area would be located within a 75.9-acre parcel (APN 138-0-190-290) located in the northeast corner of the Bailard Landfill immediately west of the western end of SCR-3 levee Reach 1. It is adjacent to and within an existing transmission line right-of-way, which is otherwise undeveloped. Access to this staging area would occur off of Victoria Avenue utilizing the existing dirt road located less than 100 feet south of the Victoria Avenue bridge crossing of the Santa Clara River. This road currently provides access to the agricultural lands located between the Bailard Landfill and Victoria Avenue as well as to SCR-3 and is a controlled access point (i.e., locked gate). The second staging area is a currently undeveloped, graded 9.5-acre parcel (APN 179-0-070-265) located immediately east of the City of Oxnard River Ridge Golf Course/Santa Clara Landfill near the eastern end of SCR-3 levee Reach 3. Access to this staging area would occur off of N. Ventura Road utilizing an existing dirt road located approximately 0.7 miles west of the Highway 101 overpass. This road currently provides access to SCR-3 and is also a controlled access point.

Materials and Waste. Construction of the proposed project would require compacted earthen fill, riprap, concrete, and CMB, among other materials. Material would be excavated for preparing the levee foundation in Reaches 1-3 (Option 1A=28,500 CY; Option 1B=6,090 CY), along with vegetation removal of approximately 2.8 acres. Most or all of these excavated materials would be reused on-site as levee fill. Asphalt and concrete rubble would be recycled. Clear and grub green wastes generated during construction would be hauled to the nearest green waste recycling facility.

An on-site raw material excavation and re-use/export plan will be implemented for each work task. Solid waste generated during construction of the project would be managed in accordance with Ventura County 4421, which requires submittal of a recycling plan (Form B) prior to beginning construction, compliance with the plan during construction, and submittal of a Form C report and receipts upon conclusion of work documenting that at least 60 percent of materials generated by the project were recycled and reused. The VCWPD will incorporate the requirements of this ordinance into the project's contract specifications requirements.

Tables A-2 and A-3 provide estimates of the types and quantities of materials associated with construction of the project.

Earthen fill and riprap materials required for the project will likely be obtained from local sources in Ventura County within approximately 30 miles of the project site. Other materials such as concrete and fencing would be obtained from vendors within a 30-mile radius of the proposed project site.

Water for soil compaction and dust suppression during construction would be supplied by the City of Oxnard, via a water meter placed on a local fire hydrant closest to the location of active construction at any given time. A water tank truck would be used to transport water to the project site. It is estimated that approximately 1/16 inch of water coverage per acre of exposed work area per day would be required to provide dust control on the entire length of SCR-3 (a maximum of approximately 10 acres if all four reaches are constructed simultaneously, and Option 1A is selected rather than Option 1B in Reaches 1-3). As mentioned above, concrete would be obtained from a vendor located within 30 miles of the project; therefore, a water source for concrete manufacturing is not anticipated to be necessary. Portable toilets would be provided at the construction staging areas throughout the construction period.

Vehicles and Equipment The types and quantities of construction vehicles and equipment associated with the proposed project are described in Tables A-2 and A-3. During the construction period, one operator would be required for each piece of equipment specified in Tables A-2 and A-3 and one overall construction foreman. It is anticipated that there would be up to five heavy equipment operators on-site per day, with a peak of 15 other workers (e.g., laborers) per day. Additionally, there would be one construction inspector on site daily, and one biological monitor on site periodically.

Construction vehicles and equipment would be re-fueled onsite within the staging areas, designated work area on the levee, or on the landside of the levee. It is unlikely that on-site fuel storage would occur under the project; however, the selected construction contractor may choose to do so at one of the staging areas.

Construction would require a minimal amount of electricity for minor form work, an electric saw, a grinder for work on the floodwall, and lighting for a construction management trailer. Electricity would be obtained from a local source.

Table A-2. Construction Equipment and Preliminary Material Quantities (Reaches 1-3)

Task	Material	Duration Option 1A/1B	Equipment	Material Quantities	
	Reaches 1-3			**Option 1A**	**Option 1B**
1	Mobilization	4 weeks	Delivery Truck, Crew Truck	---	---
2	Clearing and Grubbing	12 / 5 weeks	Chainsaw, Wood Chipper, Backhoe, Dump Truck	7.0 acres	6.3 acres
3	Demolition & Removals	2 weeks	Dump Truck, Backhoe	Lump Sum	---
4	Water Pollution Control	1 week	Excavator, Dump Truck, Backhoe	---	As Needed
5	Traffic Control	2 weeks	Delivery Truck, Truck, Crew Truck	Lump Sum	---
6	Foundation Excavation	2 / 1 weeks	Dump Truck, Crew Truck, Loader/ Excavator, Backhoe, Compactor, Water Truck, Dozer	28,500 CY	6,090 CY
7	Golf Course Fill	2 weeks	Dump Truck, Loader/Excavator, Backhoe, Compactor, Water Truck	---	15,500 CY
8	Levee Embankment Fill	12 / 2 weeks	Loader/Excavator, Dump Truck, Water Truck, Backhoe, Compactor	91,000 CY	13,840 CY
9	Landfill Tie-In (Excavation & Backfill)	1 / 2 weeks	Dump Truck, Loader/Excavator, Compactor, Water Truck	1 tie-in	3 tie-ins
10	Rock Riprap (1/4-Ton)	3 / 2 weeks	Dump Truck, Loader/Excavator	3,000 CY	2,040 CY
11	Sheet Pile (Station 214+00 to 217+50)	3 weeks	55-Ton Crane, Loader, 3/4-Ton Utility Truck, Generator	Lump Sum Item	Lump Sum Item
12	Concrete Retaining Wall	3 weeks	Dump Truck, Loader/Excavator, Concrete Pump, Truck (to supply steel/forms/lumber), Forklift, Concrete Truck, Concrete Vibrator, Compactor, Portable Generator, Water Truck	375 feet	---
13	Structural Excavation & Backfill	2 weeks	Excavator, Dump Truck, Water Truck	500 CY	---
14	Concrete Slide Gate Structures (Cut & Fill)	2 days	Dump Truck, Loader/Excavator, Concrete Pump, Truck (to supply steel/forms/lumber), Forklift , Concrete Truck, Concrete Vibrator, Compactor, Portable Generator, Water Truck	125 CY	125 CY
15	66-Inch RC Pipe	2 weeks	3/4-Ton Utility Truck, Generator, Backhoe, Excavator, Delivery Truck, Water Truck	---	350 feet
16	Flap Gate – 24", 66"	2 days	Crew Truck, Excavator	Each 1-24", 2-66"	Each, 1-24", 2-66"
17	Slide Gate – 24", 48", 66", & 72"	2 days	Crew Truck, Excavator	2-24", 2-48", 2-66", 2-72"	2-24", 2-48", 2-66", 2-72"
18	Utility Relocations	1 week	Crew Truck, Excavator, Compactor, Backhoe	300 feet	300 feet
19	CMB Access Road (12' wide x 6" thick)	2 / 1 week	Backhoe, 10-Wheel Dump Truck	8,700 feet; 11,600 sq yards	3,500 feet; 4,667 sq yards
20	6' Chain Link Fence	2 weeks	Crew Truck, Delivery Truck, Bobcat	1,800 feet	1,800 feet
21	Chain Link Gate	2 days	Crew Truck, Welder/Generator, Delivery Truck, Bobcat	3 gates	3 gates
22	Hydroseeding (slopes)	1 day	Hydro-Mulching Truck	3 acres	1.0 acre
23	Vegetation Thinning	1 week	Chainsaw, Dump Truck, Backhoe	2.8 acres	1.1 acres

Table A-3. Construction Equipment and Preliminary Material Quantities (Reach 4)

Task	Material	Duration	Equipment	Material Quantities
1	Mobilization	4 weeks	Delivery Truck, Crew Truck	--
2	Clearing and Grubbing	5 weeks	Chainsaw, Wood Chipper, Backhoe, Dump Truck, Skip Loader	1.2 acres
3	Stormwater Pollution Prevention	2 week	Delivery Truck, Backhoe	As Needed Throughout Project
4	Diversion & Control of Water	1 week	Excavator, Dump Truck, Backhoe, Skip Loader	200 feet of 12-inch diversion pipe
5	Traffic Control	1 week	Pickup Truck	As Needed
6	Flood Wall Foundation	2 weeks	Drilling Truck, Crane Truck, Concrete Truck, Caterpillar, Crew Truck	530 CY
7	RC Flood Wall – Type A2	3 weeks	Concrete Truck, Truck (supply steel/forms), Fuel Truck, Pump Truck, Loader/Excavator, Backhoe, Water Truck, Crew Truck	600 feet
8	RC Flood Wall – Type C2	2 weeks	Concrete Truck, Truck (supply steel/forms), Pump Truck, Loader/Excavator, Backhoe, Water Truck	350 feet
9	RC Flood Wall – Land Side to UPRR	3 weeks	Concrete Truck, Truck (supply steel/forms), Pump Truck, Loader/Excavator, Backhoe, Water Truck	860 feet
10	UPRR Embankment Fill	2 weeks	Delivery Truck, Backhoe, Water Truck, Track Dozer, Compactor Roller	1,600 CY
11	El Rio Drain Channel Modification	3 weeks	Concrete Truck, Water Truck, Excavator, Backhoe	Lump Sum Item
12	Riprap Removal & Replacement	2 days	Delivery Truck, Backhoe, Excavator, Water Truck, Concrete Truck	1,700 CY
13	6' Chain Link Fence	4 days	Crew Truck, Delivery Truck, Bobcat with Drill	200 feet
14	Chain Link Gate	2 days	Crew Truck, Welder/Generator, Delivery Truck Bobcat	1 gate
15	RC Drain Channel & Flap Gate	2 days	Crew Truck, Delivery Truck, Bobcat	1
16	HP Gas Valve Relocations	1 day	Crew Truck, Backhoe	4
17	Landscaping	1 week	Backhoe, Water Truck	14,000 sq feet
18	Concrete Trail	2 weeks	Concrete Truck, Excavator, Pump Truck, Backhoe	8,400 sq feet
19	Flood Break Gate System	2 days	Backhoe, 10-Wheel Dump Truck, Backhoe, Excavator	1 system
20	Concrete Abutments	2 weeks	Concrete Truck, Truck (supply steel/forms), Pump Truck, Loader/ Excavator, Backhoe, Water Truck	2
21	Street Modifications	1 week	Paver Truck, Backhoe	1,300 sq yards
22	Utility Relocations	1 week	Backhoe, Crew Truck	500 feet

Access and Parking. Construction access would be provided at both ends of the existing SCR-3 levee. From Victoria Avenue, access to the west end of SCR-3 (Reach 1) would occur in a similar fashion as accessing the western staging area. Vehicles would turn off of Victoria Avenue utilizing the existing dirt road located less than 100 feet south of the Victoria Avenue Bridge crossing of the Santa Clara River. This road currently provides access to the agricultural lands located between the Bailard Landfill and Victoria Avenue as well as to SCR-3, and is a controlled access point (i.e., locked gate). Vehicles would then travel under Victoria Avenue on an existing dirt road to access the levee from the west. Approximately 14 to 15 feet of clearance is available under this road crossing for vehicles and equipment. Alternately, the maintenance road east of the Victoria Avenue bridge can be accessed via a gate on the east shoulder of Victoria Avenue to avoid the restricted clearance beneath the bridge.

From N. Ventura Road, access to the east end of SCR-3 (Reach 3) and access to Reach 4 are both available off of the northwest side of N. Ventura Road approximately 0.5 mile from the Highway 101 overpass. Access to the existing SCR-3 levee is an established controlled or gated access point with an existing CMB maintenance road running in a westerly direction. Access to the east end of Reach 3 may also occur through the eastern staging area located off of N. Ventura Road via an existing CMB maintenance road located approximately 0.7 miles west of the Highway 101 overpass (see "Staging Areas" above). Access to the east end of the river side floodwall in Reach 4 would occur from N. Ventura Road, with a ramp down to the river side of the proposed floodwall (east end), where the new 15-foot-wide soil cement access road would be located. A turnaround would be provided at the west end of the access road. Access to Reach 4 would also occur directly from N. Ventura Road. These access points would be used for importing equipment and materials to the site.

One pair of lanes on either north- or south-bound N. Ventura Road would be closed to public traffic temporarily (lanes immediately adjacent to the proposed river side and land side floodwalls) to permit safe construction access. For example, both south-bound lanes would be closed during construction of the river side floodwall and the flood gate across these lanes, and the existing two north-bound lanes converted to one north-bound and one south-bound lane. In this case, bicycle traffic would be directed to the south shoulder, and pedestrian traffic to the south sidewalk. This method would be reversed for construction of the land side floodwall and flood gate across the north-bound lanes. Access would be restricted for about six months on each side of the road.

Parking during construction would occur at the construction staging areas, along the length of the existing levee access road throughout Reaches 1-3, as well as at the City of Oxnard River Ridge Golf Course maintenance yard (Reach 2).

Public access to the active construction work area along SCR-3, including Reaches 1-4, shall be prohibited in order to maintain public safety.

Environmental Commitments. This section describes the environmental commitments that would be implemented as part of the proposed project. The environmental commitments discussed below would decrease the severity of any short-term or temporary project-related construction impacts on resources. The environmental commitments described in this section are not legally binding and do not constitute a mitigation requirement.

Air Quality

AQ-1: Best Management Practices (BMPs) would be applied to disturbed soil to protect against erosion and fugitive dust. Standard practices include water application during earthwork, application of a surface tackifier such as quar or polyacrylaminde, temporary vegetation, rolled erosion control products (e.g., straw matting or coconut fiber), and weather-triggered work stoppages (during high winds or extreme storm events). Any of these or a combination thereof may be used to ensure compliance with regulations to reduce or eliminate erosion and fugitive dust emissions.

Fire Hazards

FR-1: Construction contracts shall provide standard measures for fire safety in compliance with the applicable sections of the California Uniform Fire Code and adopted Ventura County Fire Protection ordinances, standards and regulations. Measures may include, but not be limited to, the following:

- Materials that are susceptible to spontaneous ignition, such as oily rags, would be stored in appropriate containers and safeguards would be taken to minimize the risk of exposing combustible materials to unintended sources of ignition;
- Smoking would be prohibited except in approved areas;
- Leaking equipment would be immediately repaired and/or taken out of service, and leaked materials cleaned up;
- Fire protection equipment, including fire extinguishers, would be kept on site and inspected/maintained in accordance with applicable manufacturer recommendations;
- Readily accessible emergency telephone facilities would be provided to all work crews to immediately report fire ignition to “911” emergency response services;
- Internal-combustion-powered construction equipment would be located so that exhausts do not discharge against combustible material, equipment would not be refueled while in operation, and fuel for equipment would be stored in appropriate areas (if the contractor opts to store fuel on site); and
- Combustible debris, rubbish and waste material would be removed and/or appropriately stored at the end of each workday and would not be disposed of by burning.

Water Resources

WR-1: Work on existing drainage facilities would be completed outside of the rainy season, or measures will be taken to maintain the flood carrying capacity if work occurs during the rainy season.

WR-2: All BMPs associated with the SWPPP may include but are not limited to the following: General Site Design Control Measures (Conserve Natural Areas / Protect Slopes and Channels / Control Peak Stormwater Runoff Discharge Rates / Minimize Impervious Area); Site-Specific Source Control Measures (Storm Drain Message and Signage / Outdoor Material Storage Area Design / Outdoor Trash Storage Area Design / Fueling Area Design); and Treatment Control Measures (Grass Strip Filter / Grass Swale Filter / Detention Basin / Porous Landscape Detention / Infiltration Trench).

Public Health and Safety

PS-1: The contractor shall employ appropriate signaling and signage to accommodate interruptions in existing traffic flows. These measures shall be defined in the Traffic Control Plan.

PS-2: Prior to implementation of the project, relevant fire, police, and other emergency service agencies of the proposed work areas shall be notified of potential congestion, and traffic management methods to be used to ensure access at all times.

PS-3: On-site re-fueling of construction equipment would be accomplished at least 50 feet away from flowing water and with the use of liners. Best Management Practices (BMPs) would be used and include such actions as having hazardous waste clean-up equipment and spill kits staged on-site, using the appropriate size and gauge drip pans and absorbent diapers. Spill kits shall be in close proximity to the fuel truck in case of fuel or other fluid spills. All equipment would be checked for leaks prior to operation and repaired as necessary.

PS-4: Fluids released because of spills, equipment failure (broken hose, punctured tank) or refueling would be immediately controlled, contained, and cleaned-up per Federal, State, and local regulations. All contaminated materials would be disposed of promptly and properly to prevent contamination of the site. Someone would be present to monitor refueling activities to ensure that spillage from overfilling, nozzle removal, or other action does not occur.

Traffic and Transportation

T-1: Haul routes shall be designed to minimize distances to the work site and avoid heavily congested areas or large residential communities to the maximum extent feasible.

T-2: The contractor shall submit a Traffic Control Plan to the County of Ventura for review and approval at least 30 days prior to the onset of construction. The Traffic Control Plan shall demonstrate practices and safety precautions designed to minimize temporary traffic impacts, including but not limited to the signage requirements required per environmental commitment PS-1.

T-3: If damage to roads occurs, the contractor shall coordinate repairs with the affected public agencies to ensure that any impacts to area roads are adequately repaired. Roads disturbed by trucks or equipment shall be properly restored to ensure long-term protection of road surfaces. Such repairs shall occur as part of the active construction period.

T-4: The contractor shall obtain all applicable permits and clearances from appropriate agencies for transporting and hauling equipment and debris.

Operations and Maintenance

Operation and maintenance (O&M) of the proposed project would include routine inspections and repair, as needed over the lifetime of the project (50 years). It is anticipated that the intensity of post-construction operations and maintenance activities would increase from pre-construction (existing) conditions. With implementation of the project, additional vegetation thinning activities would occur along the top 20 feet of the levee in Reaches 1-3 to maintain visibility and access. Maintenance activities would also occur along Reach 4, where an entirely new facility would be constructed as part of the project. No daytime or nighttime lighting would be required during operation of the project. Operational and maintenance activities associated with the proposed project are described below.

- *Facilities Maintenance and Reconstruction.* Facilities deteriorate over time and may require repair or reconstruction, particularly after a winter with high flood flows. Maintenance activities will occur throughout the year on an as-needed basis, such as gate and fence repair, and repair of bank protection damaged from flood flows, including grouted and ungrouted riprap. In general, the same type of bank protection is used for the repair or replacement, and the length

of bank protection is similar to the original condition. The amount of earthwork depends on the length of the bank protection to repair and depth of the erosion (VCWPD, 2008).

- *Access Roads.* Compacted gravel surface roads require periodic resurfacing due to normal deterioration from use and from erosion. Resurfacing roads generally occurs in the winter when there is better crew availability but can occur any time of the year. Base aggregate is placed on the road and compacted with heavy equipment (VCWPD, 2008).
- *Vegetation Maintenance.* As described in Section A.4.5, the project includes vegetation removal activities that meet the requirements of the DWR Levee Vegetation Policy. Trees within 20 feet of the top of the levee, on the waterside slope, shall be trimmed up five feet above ground and thinned enough for visibility and access; brush, weeds, or other vegetation (ground cover) over up to a height of 5 feet blocking visibility and access shall be removed. During operation and maintenance of the project, maintenance of the vegetation will include periodic herbicide application. No operational changes pertaining to brush clearance would occur along the portions of Reach 3 containing the weir field and emergency groins as a result of implementing the proposed project. Vegetation management along the remainder of Reaches 1-3 and Reach 4 does not currently occur, and would be increased as a result of project implementation.
- *Rodent Control.* Burrowing activities of California ground squirrels (*Spermophilus beecheyi*) and, to a lesser extent, pocket gophers (*Thomomys bottae*) can cause structural damage to flood control facilities. The California Division of Safety of Dams has a zero tolerance policy for ground squirrel and other rodent infestations at critical facilities where failure would affect public safety. The VCWPD has an ongoing rodent control program for critical facilities. Under this program, VCWPD maintains anticoagulant bait stations throughout the year. Depending on the density of the ground squirrel population, bait stations are checked every 14 to 30 days (VCWPD, 2008).
- *Storm Related Emergency Activities.* During the winter season, VCWPD personnel are continually monitoring flow conditions in channels and inspecting facilities for identification of problem areas. Work conducted during storm events is usually not routine maintenance, but instead, is considered emergency activity. The nature, scope, and extent of emergency actions cannot be predicted but could range from minor actions (clearing a storm drain outlet) to major (repair of eroded bank threatening a road or structure under flood conditions) (VCWPD, 2008).
- *Scour surveys.* During the life of the project, long-term continued sediment deposition in the river may alter the flood protection in the future, and annual scour surveys are recommended to monitor the condition of sediment deposition adjacent to the levee.
- *Flap gate inspections.* The flap gates must be regularly inspected and cleared of debris such as vegetation and refuse that may get trapped in the gate, particularly during low flow events. Periodic inspection and cleaning should be scheduled when the water flowing through the flap gate carries sediment, trash, and/or debris.
- *Graffiti removal.* Graffiti on the floodwall would be removed as a part of regular maintenance. The VCWPD promptly removes graffiti with obscene comments or scenes; less offensive graffiti, such as tags, are removed as the VCWPD's budget allows. The VCWPD also implements a Graffiti Abatement Program, which works with volunteers to locate and remove graffiti from property owned by VCWPD (VCWPD, 2013). Under this program, the Graffiti Abatement

Coordinator works with non-profit organizations and neighbors to address graffiti throughout the County by forming neighborhood graffiti patrols; working with the respective city's law enforcement; and recruitment and training of volunteers to assist with graffiti reporting and removal in their own neighborhoods (VCWPD, 2013).

The VCWPD implements best management practices (BMPs) during routine maintenance activities such as those described above. Following is a summary list of existing BMPs which are typically used during routine maintenance activities.

- The minimum size/type of equipment is employed to complete the activity to minimize potential impacts;
- The minimum strength required to achieve the goal for each chemical product is used and staff follows specific pesticide protocols;
- Gates, fences, and "no trespassing" signs are kept in working order to discourage dumping and vandalism;
- Silt fencing, k-rail, sandbag barriers, and straw wattles are routinely installed and maintained during work to prevent soil from leaving work areas and entering streams or channels;
- Silt fencing or other barriers are placed around temporary soil stockpile sites to contain material;
- Soil stockpiles are maintained free of non-native vegetation;
- Water diversions are routinely used to prevent soil and concrete from entering surface waters adjacent to maintenance work areas;
- Plastic-lined sandbag concrete wash out pits stationed in uplands are required for each site where concrete pouring occurs;
- Pipe and pump station flushing activities are conducted with a vacuum system to avoid release of materials into channels or surface waters;
- Rumble strips, street sweepers, and wattles over storm drain inlets are employed to prevent soil from entering streets and storm drains; and
- Local fire abatement requirements are met by conducting annual brush clearance in District right of way adjacent to residential areas (VCWPD, 2008).

A.5 PROJECT SITE ASSESSOR'S PARCEL NUMBERS, ZONING, AND GENERAL PLAN LAND USE DESIGNATIONS

The proposed project would occur on parcels along the existing SCR-3 levee owned by the VCWPD, on lands within unincorporated Ventura County and in the City of Oxnard along the Santa Clara River. N. Ventura Road would be affected by Reach 4 of the proposed project. Adjacent parcels, or portions thereof, owned by the City of Oxnard and the County of Ventura (VRSD) would also potentially be affected in Reaches 1-3. These properties are identified by the Assessor Parcel Numbers (APNs) listed in Table A-4.

Table A-4. Assessor's Parcel Numbers (APNs)

APN	Owner	Size (Acres)
138-0-190-280	Ventura County Watershed Protection District	25.9
138-0-190-300	Ventura County Watershed Protection District	25.9
138-0-190-290	Ventura Regional Sanitation District	75.9
138-0-190-335	Ventura County Watershed Protection District	6.1
138-0-190-345	Ventura Regional Sanitation District	2.4
138-0-190-155	Ventura Regional Sanitation District	26.4
138-0-190-315	Ventura County Watershed Protection District	6.9
138-0-190-325	Ventura Regional Sanitation District	2.7
138-0-190-230	Ventura Regional Sanitation District	69.3
179-0-070-080	Ventura County Watershed Protection District	9.3
179-0-070-255	City of Oxnard	162.9
179-0-050-050	Montalvo Municipal Improvement District	26.3
179-0-050-105	Ventura County Watershed Protection District	33.4
179-0-070-265	City of Oxnard	9.5
139-0-010-365	Borchard M Christine et al	0.4
139-0-010-305	Ventura County Watershed Protection District	54.4
139-0-010-480	Southern Pacific Transportation Company	4.7
139-0-010-275	Kaufman and Broad Land Co.	0.1
139-0-010-470	Southern Pacific Transportation Company	0.4
139-0-010-460	Southern Pacific Transportation Company	0.5
139-0-010-285	Ventura County Watershed Protection District	0.4

As noted above, SCR-3 is located on unincorporated County of Ventura lands adjacent to the City of Oxnard, and parallels the Bailard Landfill, Coastal Landfill, River Ridge Golf Course, Santa Clara Landfill, and N. Ventura Road. Levee improvements would have the potential to impact these parcels of land as well as N. Ventura Road. Therefore, the proposed project is subject to the management direction of the City of Oxnard General Plan and the Ventura County General Plan. Each plan contains goals, policies, and programs that are used to evaluate proposed projects within the City and County. The General Plan programs are a coordinated set of measures to be implemented by City and County staff and other public agencies to carry out the goals and policies. Per the Ventura County General Plan, the proposed project site, with the exception of those elements on and south of N. Ventura Road (City of Oxnard), is zoned as Open Space (Ventura County, 2010). The project site is not located within any County Area Plan (Ventura County, 2008). The Reach 4 floodwall would cross N. Ventura Road at the high point in the road (Station 227+00), which is when the project would be within the City of Oxnard. The six-foot flood gate and the portion of the floodwall on the south side of N. Ventura Road would be located within or adjacent to the City's roadway until the floodwall ends just northeast of the UPRR embankment. The most relevant goals and policies of the applicable General Plans are listed below. The proposed project does not conflict with implementation of the General Plan programs, and the proposed project is considered to be consistent with all of the General Plan goals and policies.

Ventura County General Plan (Ventura County, 2013)

- Hazards Goals, Section 2.1.1

  (2) Protect public health, safety and general welfare from identified hazards and potential disasters.

(3) Shield public and private property and *essential facilities* from identified hazards and potential disasters.

(4) Minimize loss of life, injury, damage to structures, and economic and social dislocations resulting from identified hazards and potential disasters.

City of Oxnard General Plan (City of Oxnard, 2011)

- Infrastructure and Community Services Goals and Policies, Section 4

ICS-13: Stormwater Drainage – Adequately sized storm drain systems and discharge treatment, certified levees, and implementation of appropriate National Pollutant Discharge Elimination System (NPDES) permits and regulations.

ICS-13.1: 100-year Floodplain – Discourage development, major infill, and structural improvements (except for flood control purposes) within the 100-year floodplain as regulated by FEMA. Recreational activities that do not conflict with habitat uses may be permitted within the floodplain.

ICS-13.5: FEMA-Certified Levees – Work expeditiously with County, State, and Federal agencies and the private sector to achieve full certification of Santa Clara River Levees that impact Oxnard and the Planning Area.

ICS-15: Landfill Compatibility – Manage development adjacent to closed landfill areas that mitigate health and safety hazards.

ICS-15.3: Development Near Bailard Landfill – Ensure that development within 1,000 feet of the Bailard Landfill site undergoes appropriate environmental review to ensure that proposed land uses do not impinge on the post-construction activities of the landfill. Input from the Ventura Regional Sanitation District shall be included in the review process.

ICS-19: Law Enforcement – Adequate and effective law enforcement and the incorporation of crime prevention features in developments.

ICS-19.5: Incorporating Security Design Principles – Encourage crime prevention and defensible space through design principals such as those employed through the National Crime Prevention Through Environmental Design program, Neighborhood Watch Program, and/or other appropriate methods to enhance public safety.

ICS-20: Fire Protection – Protect the public through effective fire protection services and the incorporation of fire safety features in new development.

ICS-20.10: Adequate Emergency Access and Routes – Require that new development provide access for emergency vehicles, particularly firefighting equipment, and evacuation routes, as appropriate.

- Safety & Hazards Goals and Policies, Section 6

SH-3: New Development Mitigations – New development required to take necessary precautions prior to any construction to mitigate hazards and protect the health and safety of the inhabitants.

SH-4: Emergency Preparedness – Emergency preparedness through the provision of adequate fire and police protection, infrastructure, emergency supply stockpiling, public education, Emergency Operations Center planning and procedures, and outreach programs.

A.6 LEAD AND PARTICIPATING AGENCIES NAMES AND ADDRESSES

SCR-3 is operated and maintained by the VCWPD, which is a branch of the Ventura County Public Works Agency. The VCWPD is the CEQA Lead Agency for the proposed project. VCWPD would work in coordination with the City of Oxnard and the Federal Emergency Management Agency (FEMA) to implement the proposed project. The VCWPD would finalize the design and construct the proposed levee improvements. Provided below is the contact information for the lead and participating agencies.

Ventura County Watershed Protection District
800 South Victoria Avenue
Ventura, California 93009-1610

City of Oxnard
City Hall
305 West Third Street - Third Floor
Oxnard, CA 93030

A.7 OTHER AGENCY APPROVALS THAT MAY BE REQUIRED

Based on the results of the jurisdictional delineation, the following agency approvals/permits may be required:

- U.S. Army Corps of Engineers Section 404 Permit (Clean Water Act);
- California Department of Fish and Wildlife Section 1600 Streambed Alteration Agreement (California Fish and Game Code);
- Los Angeles Regional Water Quality Control Board Section 401 Water Quality Certification (Clean Water Act); and
- Endangered Species Act authorization from U.S. Fish and Wildlife Service and possibly the National Marine Fisheries Service.

Ventura County Environmental Health Division. The Ventura County Environmental Health Division is responsible for ensuring conformance with State laws and County ordinances pertaining to the protection of public health, including programs related to food protection, hazardous materials, hazardous waste, individual sewage disposal systems, land use, medical waste, ocean water quality monitoring, recreational health, solid waste, underground fuel tanks, and vector control.

Prior to the start of construction, the VCWPD would contact the Ventura County Environmental Health Division to establish if any type of permit or approval is required, and would acquire the permit if needed.

City of Oxnard. Approval may be required from the City of Oxnard for project activities in N. Ventura Road. Prior to the start of construction, the VCWPD would coordinate with the City of Oxnard to determine if a permit is required, and would acquire the permit if needed.

UPRR Encroachment Permit. An encroachment permit would be required from UPRR to implement the Reach 4 improvements, which include placement of embankment fill to complete SCR-3.

B. INITIAL STUDY CHECKLIST

	ISSUE (Responsible Department)	PROJECT IMPACT DEGREE OF EFFECT*				CUMULATIVE IMPACT DEGREE OF EFFECT*			
		N	LS	PS-M	PS	N	LS	PS-M	PS
RESOURCES:	1. Air Quality (APCD)				X				X
	2. Water Resources (PWA):								
	A. Groundwater Quantity		X			X			
	B. Groundwater Quality	X				X			
	C. Surface Water Quantity		X			X			
	D. Surface Water Quality		X				X		
	3. Mineral Resources (Plng.):								
	A. Aggregate		X				X		
	B. Petroleum		X				X		
	4. Biological Resources				X				X
	5. Agricultural Resources:								
	A. Soils (Plng.)	X				X			
	B. Land Use Incompatibility (Ag. Dept.)		X				X		
	6. Scenic Resources (Plng.)				X				X
	7. Paleontological Resources	X				X			
	8. Cultural Resources:								
	A. Archaeological			X				X	
	B. Historical (Plng.)			X				X	
	9. Coastal Beaches and Sand Dunes	X				X			
HAZARDS:	10. Fault Rupture (PWA)	X				X			
	11. Ground Shaking (PWA)		X			X			
	12. Liquefaction (PWA)				X	X			
	13. Seiche & Tsunami Hazards (PWA)	X				X			
	14. Landslide/Mudflow (PWA)	X				X			
	15. Expansive Soils (PWA)	X				X			
	16. Subsidence (PWA)		X			X			

	ISSUE (Responsible Department)	PROJECT IMPACT DEGREE OF EFFECT*				CUMULATIVE IMPACT DEGREE OF EFFECT*			
		N	LS	PS-M	PS	N	LS	PS-M	PS
HAZARDS (CONT.)	17. Hydraulic Hazards:								
	A. Non-FEMA (PWA)		X				X		
	B. FEMA (WPD)		X				X		
	18. Fire Hazards (Fire)	X				X			
	19. Aviation Hazards (Airports)	X				X			
	20. Hazardous Materials/Waste:								
	A. Hazardous Materials (EH/Fire)	X				X			
	B. Hazardous Waste (EH)				X		X		
	21. Noise and Vibration				X				X
	22. Daytime Glare			X				X	
	23. Public Health (EH)				X				X
	24. Greenhouse Gases (APCD)		X				X		
PUBLIC FACILITIES/ SERVICES:	25. Community Character (Plng.)		X				X		
	26. Housing (Plng.)	X				X			
	27. Transportation/Circulation:								
	A. Roads and Highways:								
	(1) Level of Service (PWA)				X				X
	(2) Safety/Design of Public Roads (PWA)		X				X		
	(3) Safety/Design of Private Access Roads (Fire)	X				X			
	(4) Tactical Access (Fire)	X				X			
	B. Pedestrian/Bicycle Facilities (PWA/Plng.)		X				X		
	C. Bus Transit	X				X			
	D. Railroads		X				X		
	E. Airports (Airports)	X				X			
	F. Harbors (Harbors)	X				X			
	G. Pipelines				X				X

	ISSUE (Responsible Department)	PROJECT IMPACT DEGREE OF EFFECT*				CUMULATIVE IMPACT DEGREE OF EFFECT*			
		N	LS	PS-M	PS	N	LS	PS-M	PS
	28. Water Supply:								
	C. Quality (EH)	X				X			
	D. Quantity (PWA)	X				X			
	E. Fire Flow (Fire)	X				X			
	29. Waste Treatment / Disposal:								
	A. Individual Sewage Disposal Systems (EH)	X				X			
	B. Sewage Collection/Treatment Facilities (EH)	X				X			
	B. Solid Waste Management (PWA)		X				X		
	C. Solid Waste Facilities (EH)	X				X			
	30. Utilities				X				X
	31. Flood Control / Drainage:								
	A. WPD Facilities/Watercourses (WPD)				X				X
	B. Other Facilities/Watercourses (PWA)		X				X		
	32. Law Enforcement/Emergency Svs. (Sheriff)		X				X		
	33. Fire Protection (Fire):								
	A. Distance/Response Time	X				X			
	B. Personnel/Equipment/Facilities	X				X			
	34. Education:								
	A. Schools	X				X			
	B. Libraries (Lib. Agency)	X				X			
	35. Recreation (GSA)			X			X		

DEGREE OF EFFECT:
- N = No Impact
- LS = Less Than Significant
- PS-M = Potentially Significant Impact Unless Mitigation Incorporated
- PS = Potentially Significant Impact

AGENCIES:
- APCD - Air Pollution Control District
- GSA - General Services Agency
- Harbors - Harbor Department
- Lib. Agency - Library Services Agency
- Airports - Department Of Airports
- Fire – Fire Protection District
- PWA - Public Works Agency
- Plng. - Planning Division
- FCD - Flood Control District
- Sheriff - Sheriff's Department
- EH - Environmental Health Division
- Ag. Dept. - Agricultural Department

C. ENVIRONMENTAL ANALYSIS AND DISCUSSION OF IMPACTS

This section evaluates the potential environmental impacts of the proposed project. The analysis of potential impacts is consistent with methodology and impact threshold criteria presented in the Ventura County Initial Study Assessment Guidelines (Ventura County, 2011). Impact analysis is organized by environmental topic (e.g., air quality, water resources, etc.). Cumulative impacts have been assessed to determine if the project's incremental contribution would be considerable, such that an environmental impact report would be required. Cumulative impacts were considered significant if project-specific impacts would be significant. The determinations of significance for project-level and cumulative impacts are summarized in the Initial Study Checklist provided in Section B.

Appendix 1 of this Initial Study provides a list and description of pending and recently approved projects from the City of Oxnard, the City of Ventura, and the County of Ventura. Table C-1, below, provides a summary of the 59 projects located within a three-mile radius of the proposed levee improvements, and Figure C-1 maps these cumulative projects. The following projects from Table C-1 are located closest to the proposed project site. Due to proximity to the proposed project and the potential for coinciding construction times, these projects would have the greatest potential for contributing to cumulative impacts.

The Village (a.k.a. Wagon Wheel Development Project). The Village is a 63-acre property that will be developed under the City of Oxnard's Village Specific Plan that was adopted in January 2009. The development is proposed to include 120 housing units (1, 2 & 3 bedrooms), a recreation/meeting room, a tot lot (a park for small children), and landscaped pedestrian pathways. Proposed Reach 4 improvements would provide flood protection downstream of the UPRR bridge, but would not provide flood protection between the UPRR bridge and Highway 101. Flood protection improvements for The Village Specific Plan will be constructed as part of that development (Tentative Tract No. 5745 – Not part of the SCR-3 Project), and may take the shape of simply elevating all building pads above 78.5 feet North American Vertical Datum (NAVD) prior to construction or a combination involving elevated building pads with a floodwall to achieve protection of sufficient height (79.5 feet NAVD, accommodating the floodwall requirement for one foot of freeboard). Currently, Phase 1 of The Village development, which is located near Oxnard Boulevard, is under construction. One affordable housing apartment complex has been built, and construction of additional buildings is expected to continue. Each phase would be required to comply with the City's floodplain management ordinance. Construction near the proposed project site would occur under Phase 3 of the development, which would not begin until the improvements under the proposed project are underway (City of Oxnard, 2014).

Bailard Landfill Gas Field Project. The Ventura Regional Sanitation District (VRSD) is proposing a new gas pipeline on the north side of the Bailard Landfill. The alignment and schedule for this project is still conceptual at this point. The VCWPD will work closely with the VRSD to ensure no conflicts with the proposed project.

Ventura/Vineyard Homes (also known as the Casden Properties). The Ventura/Vineyard Homes project consists of 126 two-story clustered homes and 75 single-family dwellings. The project site is approximately 1,000 feet south of the proposed project site. This project has been approved by the City of Oxnard; however, the City is currently in negotiations with a new developer, so there are no immediate plans for construction (City of Oxnard, 2014).

Olivas Drive Extension. The proposed Olivas Park Drive extension would connect Johnson Drive near Highway 101 to the existing terminus of Olivas Park Drive at Perkin Avenue within the City of Ventura. This project would also include the construction of a levee/floodwall located along the southern and eastern boundaries of the project site. This project is located approximately 1,500 feet north of the proposed project site. Currently, the Final EIR is in progress. Per Draft EIR Mitigation Measure HWQ-3(b), "Adequate flood protection shall be provided for both the project area and potentially affected areas along the south side of the Santa Clara River in the City of Oxnard prior to project area construction other than the extension of Olivas Park Drive. Construction of the north and south levees shall be coordinated to the extent feasible to ensure that neither the project site nor any developed areas in Oxnard would experience an increase in surface water elevation of more than one foot during a 100-year flood event." As such, it is anticipated the levee/floodwall construction would coincide with the construction of Reach 4.

Santa Clara River Levee (SCR-1). The SCR-1 Project is 4.72 miles long and is located along the southeast bank of the Santa Clara River between Highway 101 and Saticoy within the City of Ventura. SCR-1 has been breached during high volume flows leading to the inundation of the surrounding area. As such, design alternatives for the SCR-1 levee are being evaluated to mitigate the damage during the high flows, and will be vetted through the U.S. Army Corps of Engineers (USACE), which originally completed construction of SCR-1 in April 1961. This project is currently in the early planning stages, and will later undergo an environmental review process. The SCR-1 levee improvements are not anticipated to be constructed for approximately ten years.

Santa Clara River Bridge Mitigation Planting Project. Planting will occur along both sides of the Highway 101 bridge. The Reach 4 flood wall would cross N. Ventura Road approximately 1,500 feet west of the 101 Highway bridge. There are two phases of the planting project. Under Phase I, various activities beginning with site preparation and ending with maintenance and monitoring would occur from December 2013 to December 2019. Under Phase II, various activities beginning with site preparation and ending with maintenance and monitoring would occur from December 2015 to December 2022 (VCTC, 2013).

Santa Clara River Trail Master Plan. The Santa Clara River Trail (SCRT) Master Plan evaluates a 4.87-mile multi-use trail along the southern bank of the Santa Clara River and a connection trail from the Santa Clara River at Victoria Avenue to Gonzales Road for a bikeway connection to the Pacific Ocean, and a spur connection to E. Vineyard Avenue at Central Avenue (City of Oxnard, 2012).

Label	Project Name
1	The Village (Wagon Wheel Development)
2	Ventura/Vineyard Homes (Casden Properties)
3	Oxnard Shores Mobile Home Park Expansion
4	Garcia Property
5	RiverPark: Tempo Apartments
6	RiverPark: Sonata Apartments
7	Morning View RiverPark District H-4
8	Veranda RiverPark District H-3
9	The Axis (Sienna) RiverPark District H-5
10	Westerly II RiverPark District H-2
11	RiverPark Retail
12	The Container Store
13	Redevelopment of the Food 4 Less Site (former Target site)
14	Vallarta Center
15	Third Tower
16	Oxnard Crossroads
17	Leasing Corp. of America
18	Pacifica Senior Living at East Village
19	New Single-Family Home
20	New Single-Family Home
21	New Single-Family Home
22	Single-Family Residence
23	Terraza de Las Cortes
24	Las Palmas
25	Avalon Homes Subdivision
26	Oneida Court
27	North Shore Subdivision
28	UPRR Office Building
29	Radio Lazer
30	Paseo Azteca
31	Centennial Plaza (PHASE II)
32	Rancho Victoria Plaza Shopping Center
33	Chemical Building for City of Oxnard, Public Works Department
34	Teal Club Specific Plan
35	Meta District Plan
36	Northbank
37	Allied Beverage Company
38	FPA Land Dev/Victoria Corp
39	Voov, Apex Construction
40	Broome (The Grove)
41	Sondermann-Ring
42	1010 Cuchama Ave.
43	Telegraph & Quincy City Ventures
44	Union Bank
45	Silver Bay Foods
46	Kaiser Permanente Market
47	Island View Apartments
48	Ravello Holdings
49	Existing greenhouse facility
50	Santa Clara River Bridge Mitigation Planting Project
51	Temporary outdoor events
52	Santa Clara River Levee (SCR-1)
53	Wholesale Roofing
54	Bailard Landfill Gas Project
55	Olivas Park Drive Extension Project

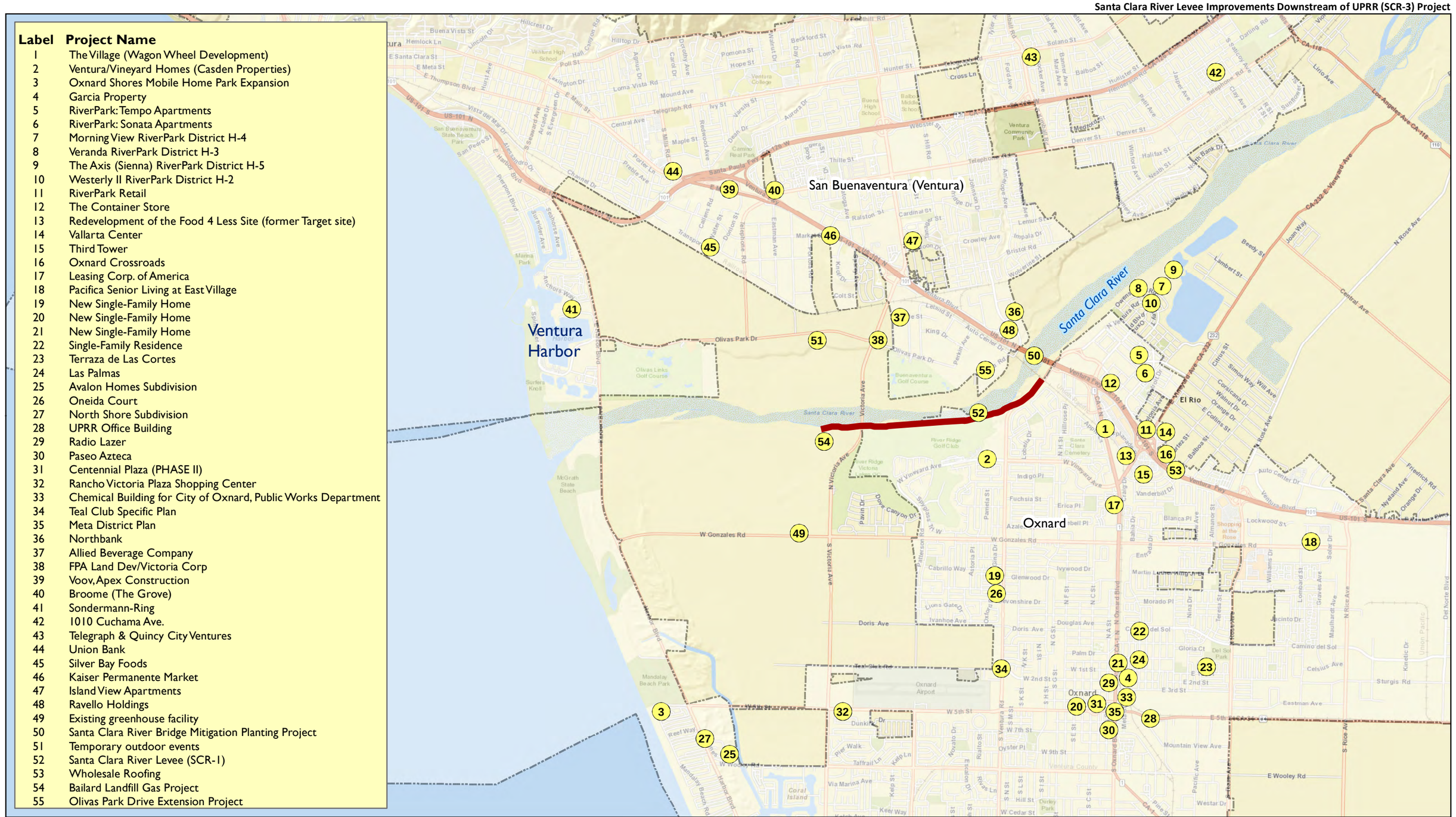


Figure C-1

Cumulative Projects Map

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Table C-1. Cumulative Projects Located within Three Miles of the SCR-3 Project

Project ID and Type	Project Name	Location	Description and Status
CITY OF OXNARD			
14-140-08 Residential	The Village (Wagon Wheel Development Project)	886 Wagon Wheel Rd.	Construction of 219 market rate apartments (1, 2 & 3 bedrooms), recreation/meeting room, tot lot, landscaped Paseos, and 16,303 square feet of commercial. Status: Approved – Proposed
06-540-01 Residential	Ventura/Vineyard Homes (Casden Properties)	1801 W. Vineyard Ave.	Proposed project to construct 152 residential dwelling units Status: Approved
14-550-01	Oxnard Shores Mobile Home Park Expansion	5540 Fifth St.	Modification of existing condition of approval to allow for the development of three new mobile home sites. Status: Approved
14-200-05	Garcia Property	144 & 146 S. Hayes Ave.	Construction of a new single-family home with a detached garage and lot merger application to merge two lots into one. Status: Approved
10-200-13 Residential	RiverPark: Tempo Apartments	SE corner Moonlight Park Ave. & Forest Park Blvd.	235 apartments (three-story buildings) with garages and recreation facilities. Status: Under Construction
10-200-11 Residential	RiverPark: Sonata Apartments	Riverpark Blvd. (NW corner of RiverPark Blvd. & Danvers Rivers Dr.)	53 apartments (3-story buildings) with garages and recreation facilities. Status: Plan Check
06-200-16 Residential	Morning View RiverPark District H-4	Tiber River Way (South of Tiber Way at N. Oxnard Blvd.)	113 detached single-family homes. Status: Under Construction
06-200-16 Residential	Veranda RiverPark District H-3	Owens River Dr. (NE corner of Owens River Dr. & Albion Dr.)	95 detached single-family homes. Status: Plan Check
06-200-16 Residential	The Axis (Sienna) RiverPark District H-5	Tiber River Way (north of Tiber River Way at N. Oxnard Blvd.)	91 detached single-family homes. Status: Under Construction
06-200-01 Residential	Westerly II RiverPark District H-2	Nile River Dr. (Oxnard Blvd., N. of Nile River Dr.)	83 single-family detached homes. Status: Plan Check
14-200-09	RiverPark Retail	Riverpark Blvd and Vineyard Ave.	Construct a single-story, 17,500 square-foot, multi-tenant commercial building featuring a drive-thru anticipated for WSS Shoe Warehouse and Krispy Kreme Doughnuts. Status: Proposed
14-140-34	The Container Store	450 Town Center Dr.	Construct a single-story, 25,000 square-foot commercial building within The Collection at RiverPark Shopping Center. Status: Proposed
12-540-01 Commercial	Redevelopment of the Food 4 Less Site (former Target site)	150 W. Esplanade Dr.	Redevelopment of the 14.47-acre Food 4 Less site, including the demolition of the former Target building, constructing of a new building to be occupied by Food 4 Less, a fuel station associated with Food 4 Less, rehabilitation of the existing on-site buildings, and two new retail buildings, for a net building area of 159,954 square feet. Status: Plan Check

Table C-1. Cumulative Projects Located within Three Miles of the SCR-3 Project

Project ID and Type	Project Name	Location	Description and Status
11-500-02 Commercial	Vallarta Center	2600 E.Vineyard Ave.	Redevelop former Home Depot site, including removal of 4,327-square-foot out building; removal of a 12,750-square-foot (approx.) garden center; and addition of parking stalls. Status: Under Construction
02-670-01 Commercial	Third Tower	E. Esplanade Dr.	Esplanade Financial Square. Proposed 15-story office tower. Approx. 300,000 square feet. Status: Approved
06-540-03 Commercial	Oxnard Crossroads	481-491 Ventura Blvd.	Two new commercial buildings. Status: Approved
12-500-07 Commercial	Leasing Corp. of America	2121 N. Oxnard Blvd.	Outdoor RV and vehicle storage facility on three acres behind an existing automobile dealership. Status: Plan Check
13-500-24 Commercial	Pacifica Senior Living at East Village	2211 E. Gonzales Rd.	15,968 square-foot addition and conversion of existing 57-room Grand Stay Hotel to 80 assisted/senior living units. The site is 2.26 acres in size and the total building area will be 54,073 square feet. Status: Plan Check
13-200-15 Residential	New Single-Family Home	1200 Gina Dr.	4,651 square-foot single-family house on a 15,273 square-foot lot with two-car garage. Status: Under Construction
13-200-11 Residential	New Single-Family Home	434 South E St.	990 square-foot single-family home above a proposed four-car garage. Status: Under Construction
13-200-02 Residential	New Single-Family Home	337 E. First St.	988 square-foot single-family house and four-car garage. Status: Proposed
13-200-07 Residential	Single-Family Residence	554 Garfield Ave.	One 1,664-square-foot single-family residence on existing 4,800 square-foot residential lot. Status: Under Construction
13-200-04 Residential	Terraza de Las Cortes	Carmelita Ct.	Four 16-unit multi-family buildings with a total of 64 affordable apartments, and one 1,080 square-foot community building, parking and landscaping on a 3.56-acre site. Status: Under Construction
11-500-06 Residential	Las Palmas	161 N. Garfield Ave.	Four 1,350 square-foot, two-story homes on vacant 9,615-square-foot lot. Status: Plan Check
11-400-01 11-300-01 Residential	Avalon Homes Subdivision	Between Dunes St. & Canal St., north of Catamaran St.	Coastal Development Permit for 64 single-family homes and a tentative tract map for 16 parcels (4 houses per parcel) on an 8.1-acre property. Status: Proposed
09-500-05 09-300-05 Residential	Oneida Court	1071 N. Ventura Rd./ Oneida Pl.	Subdivide one acre into four lots and construct four detached single-family homes. Status: Plan Check
05-300-08 05-500-04 Residential	North Shore Subdivision	198 S. Harbor Blvd.	183 single-family homes, 109 detached condos, and on-site amenities. Status: Plan Check

Table C-1. Cumulative Projects Located within Three Miles of the SCR-3 Project

Project ID and Type	Project Name	Location	Description and Status
12-500-04 Commercial	UPRR Office Building	512 E. Fifth St.	2,500-square-foot modular office building and site improvements. Status: Plan Check
06-500-02 Commercial	Radio Lazer	200 & 210 S. A St.	Seven-story office building addition with roof garden/ lounge, remodel of exterior building skin of existing adjacent four-story building and incorporation of both buildings. Status: Proposed
05-110-11 Commercial	Paseo Azteca	618 S. A St.	Multi-tenant retail building with 10 spaces. Status: Plan Check
03-500-17 Commercial	Centennial Plaza (PHASE II)	431 S. A St.	Four new retail spaces. Status: Plan Check
13-550-01, 13-300-02 Commercial	Rancho Victoria Plaza Shopping Center	3600 & 3700 W. Fifth St.	Major modification to revise the site plan and architecture for an approved shopping center, and a revision to the approved tentative subdivision map to create 11 commercial parcels. Status: Proposed
09-140-35 Industrial	Chemical Building for City of Oxnard, Public Works Department	251 S. Hayes Ave.	Construction of building to hold two chemical tanks to treat desalted water. Status: Approved
11-600-01 Community Plan	Teal Club Specific Plan	Teal Club Rd. & Ventura Rd.	990 residential units of varying density, single-family, townhomes, condominium, and apartment units; 21-acre community park; 8-acre school site; 60,000 square-foot mixed use and retail; 132,000 square-foot business research park; 1-acre fire station site. Status: Resubmitted; Draft EIR being prepared
06-700-01 Community Plan	Meta District Plan	Oxnard Blvd. & Fifth St.	Land use, streetscape, infrastructure, and circulation plan for the 14-acre area bounded by Fifth St. to the north, Seventh St. to the south, Oxnard Blvd. to the west, and the railroad track to the east. Status: Plan Development
CITY OF VENTURA			
PROJ-1805 Public Works CIP	Olivas Park Drive Extension Project	Between Golf Course Dr. & Johnson Dr.	The Olivas Park Drive extension would connect Johnson Dr. near Highway 101 to the existing terminus of Olivas Park Dr. at Perkin Avenue. The project site encompasses approximately 111.8 acres. Primarily in the City of Ventura with portions of the site in unincorporated Ventura County. Status: In Environmental Review Process
Proj-6270 Residential	Northbank	Eastern terminus of North Bank Dr.	117 single-family units, 31 affordable housing units for sale triplex/quadplex, 50 apartments. Status: In Planning Process
Proj-5097 Industrial	Allied Beverage Company	Nicolle St., between Seaborg Ave. & Golf Course Dr.	Warehouse and maintenance building. Status: Under Construction
Proj-03617 Industrial	FPA Land Dev/Victoria Corp	NE corner of Victoria Ave. & Olivas Park Dr.	Eight industrial office buildings. Status: All Planning Approvals

Table C-1. Cumulative Projects Located within Three Miles of the SCR-3 Project

Project ID and Type	Project Name	Location	Description and Status
Proj-03864 Commercial	Voov, Apex Construction	4107 Main St.	Two-story office building. Status: All Planning Approvals
Proj-00723 Residential	Broome (The Grove)	Vacant land between Copland & Telephone Rd.	198-250 townhouse, apartment, courtyard, stacked units. Status: In Planning Process
Proj-6237 Mixed Use	Sondermann-Ring	Ventura Harbor at Anchors Way & Navigator Dr.	300 apartment units, 21,000-square-foot commercial, retail, office area, private indoor and outdoor recreational facilities. Status: All Planning Approvals
Proj-7606 Residential	1010 Cuchama Ave.	1010 Cuchama Ave.	38-unit townhomes. Status: In planning process
Proj-7272 Residential	Telegraph & Quincy City Ventures	Telegraph Rd. and Quincy St.	26 single-family homes. Status: In planning process
Proj-7286 Commercial	Union Bank	NEC Mills and Main St.	4,860-square-foot bank. Status: In planning process
Proj-7318 Industrial	Silver Bay Foods	Transport St.	New fish processing building (62,000 square feet). Status: In planning process
Proj-7594 Commercial	Kaiser Permanente	Market St. at Valentine Rd.	72,000-square-foot medical office. Status: In planning process
Proj-2008 Residential	Island View Apartments	Alameda at 8th St.	154 apartments. Status: In plan check
Proj-6811 Mixed Use	Ravello Holdings	Johnson Dr. at Northbank Dr.	10,000 square feet of retail space and 306 apartments. Status: In planning process
COUNTY OF VENTURA			
Caltrans Project	Santa Clara River Bridge Mitigation Planting Project	Highway 101 Bridge, intersects Johnson Road at north end & Ventura Rd. at south end	Planting along both sides of the approx. 2,000-foot bridge. Status: Under Phase I, various activities beginning with site preparation and ending with maintenance and monitoring would occur from December 2013 to December 2019. Under Phase II, various activities beginning with site preparation and ending with maintenance and monitoring would occur from December 2015 to December 2022.
PL13-0036 CUP	Temporary outdoor events	5100 Olivas Park Dr,; approximately 0.5 mile north of the project site	Approved CUP for temporary outdoor events within a 2-acre area on a 20-acre property. Allows up to a maximum of 20 events each year, on Saturday and Sunday with wedding rehearsals and setup on Friday when needed. The events would be held between the months of April and September.
Flood Control	Santa Clara River Levee (SCR-1)	Located along the SE bank of the Santa Clara River between Hwy 101 and Saticoy	4.72-mile levee Status: The SCR-1 levee improvements are not anticipated to be constructed for approximately ten years.

Table C-1. Cumulative Projects Located within Three Miles of the SCR-3 Project

Project ID and Type	Project Name	Location	Description and Status
PL14-0173	Wholesale Roofing	567 Ventura Blvd.	Permit Adjustment to Development Permit 62 for tenant change from paint store to wholesale roofing sales and distribution. The adjustment includes landscape improvements, accessible parking improvements, a new 8' vinyl fence with 30' wide manual bypass gate, and outdoor storage of roofing supplies and circulation for trucks. An anticipated 1680 gallons of hazardous material will be stored on site as indicated on the submitted Hazardous Materials and Wastes Inventory Matrix Report. Status: Approved
LU11-0148	Existing greenhouse facility	4107 Gonzales Rd.	Major Modification to LU11-0148; proposed construction of 11,000 square feet of new greenhouse space and maintaining the right to construct approx. 208,000 sq. ft. of greenhouses that were entitled under CUP 5042 though not yet built. Status: Awaiting resubmittal

Source: Appendix 1 (City of Oxnard, 2015; City of Ventura, 2014; City of Ventura, 2015; Ventura County, 2015a; Ventura County, 2015b; Ventura County, 2015c).

C.1 AIR QUALITY

Significance Criteria. In accordance with the Ventura County Initial Study Assessment Guidelines (Ventura County, 2011), the Ventura County General Plan (Ventura County, 2013), and the Ventura County Administrative Supplement to the CEQA Guidelines (Ventura County, 2010), all County agencies, departments and special districts utilize the air quality assessment guidelines as adopted and periodically updated by the Ventura County Air Pollution Control District (APCD). The most recently adopted guidelines are Ventura County APCD's Air Quality Assessment Guidelines (VCAPCD, 2003). Using APCD's Guidelines and the CEQA Guidelines, an air quality impact would be significant if the Project would:

- Conflict with or obstruct implementation of the Ventura County APCD Air Quality Management Plan (AQMP) and emit two pounds per day or greater of ROC and NOx;
- Violate any air quality standard or contribute to an existing or projected air quality violation as demonstrated by an appropriate air dispersion modeling analysis;
- Result in a cumulatively considerable net increase of any criteria nonattainment pollutant;
- Expose the public (especially schools, day care centers, hospitals, retirement homes, convalescent facilities, and residences) to substantial pollutant concentrations, including generating fugitive dust emissions in such quantities as to cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public, or have a natural tendency to cause injury or damage to business or property;
- Create objectionable odors affecting a substantial number of people;
- Create a significant San Joaquin Valley Fever impact.

In addition to the above, within the County a net increase of ozone precursors (a nonattainment pollutant) of 25 pounds per day of reactive organic compounds or gases (ROCs or ROGs) or oxides of nitrogen (NOx) is considered substantial. However, this Ventura County APCD significance threshold is specifically defined not to be applicable to construction emissions since such emissions are temporary in nature. Nonetheless, the implementation of additional emission mitigation measures, as noted in Section 7.4.3 of the Ventura County APCD's *Air Quality Assessment Guidelines*, are recommended if construction emissions do exceed this threshold. Also applicable is compliance with *Ventura County General Plan* goals and policies, as detailed below.

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

1.2.1-1 Diligently seek and promote a level of air quality that protects public health, safety, and welfare, and seek to attain and maintain the State and Federal Ambient Air Quality standards.

1.2.1-2 Ensure that any adverse air quality impacts, both long-term and short-term, resulting from discretionary development are mitigated the maximum extent feasible.

Policies

1.2.2-1 Discretionary development that is inconsistent with the AQMP shall be prohibited, unless overriding considerations are cited by the decision-making body.

1.2.2-2 The air quality impacts of discretionary development shall be evaluated by use of the Guidelines for the Preparation of Air Quality Impact Analysis.

1.2.2-3 Discretionary development that would have a significant adverse air quality impact shall only be approved if it is conditioned with all reasonable mitigation measures to avoid, minimize or compensate (offset) for the air quality impact. Developers shall be encouraged to employ innovative methods and technologies to minimize air pollution impacts.

1.2.2-5 Development subject to APCD permit authority shall comply with all applicable APCD rules and permit requirements, including the use of best available control technology (BACT) as determined by the APCD.

C.1A Regional

Proposed Project Impacts

Construction

Construction of the proposed project is anticipated to occur over a 27-month period, beginning in the 4th Quarter 2015 and ending the 2nd Quarter 2018. Construction activities would result in short-term exhaust emissions and fugitive dust generated by on- and off-road trucks and personnel trips and off-road diesel- and gasoline-powered equipment, such as excavators, dozers, chainsaws, wood chippers, loaders, graders, rollers, and generators. Such emissions have the potential to exceed established standards for air quality priority criteria pollutants including: ozone (O_3); carbon monoxide (CO); nitrogen dioxide (NO_2); sulfur dioxide (SO_2); and particulate matter smaller than or equal to 10 microns in diameter (PM10) and particulate matter smaller than or equal to 2.5 microns in diameter (PM2.5).

Due to the potential for construction-related emissions and fugitive dust to conflict with or obstruct implementation of the Ventura County AQMP, violate air quality standards or contribute to an existing or projected air quality violation, and expose the public to substantial pollutant concentrations, these potential impacts will be fully evaluated within the project's Environmental Impact Report (EIR). The EIR analysis will quantitatively analyze air quality emissions from construction of the project against the thresholds of significance established by the Ventura County APCD.

Construction activities and equipment use may create mildly objectionable odors. However, these odors would be temporary, are not considered overly offensive, are the types of odors regularly experienced by the public, and would not significantly affect a substantial number of people due to their geographic limit to the immediate work area. Therefore, regional odor impacts from project construction are not considered significant and do not warrant further evaluation within the EIR.

The project site has been previously disturbed and project activities are not expected to encounter sediment types containing Valley Fever spores. Therefore, the risk of contracting Valley Fever in connection with project construction is considered to be low. However, Ventura County is located within

a suspected endemic area for Valley Fever (CDC, 2014). Therefore, the EIR will further analyze fugitive dust emissions and the risk of contracting Valley Fever by construction workers and adjacent residents.

Operation and Maintenance

O&M activities associated with the proposed project would include routine inspections and repair, as needed over the lifetime of the project (50 years). Proposed O&M activities would nominally differ from those currently occurring for the existing flood control facility through additional vegetation management along Reaches 1-3 and new vegetation management along Reach 4. Any emissions generated by this new O&M activity would be offset over the life of the project through the reduction of future flooding events. Without the project, criteria pollutant emissions are assumed likely from potential future flood damage cleanup and repair actions. Therefore, the project is not expected to generate any new net operational emissions over the life of the project. Additionally, as discussed in Section A.4.5 (Proposed Project), VCWPD implements BMPs during routine maintenance activities, many of which would reduce pollutant emissions and fugitive dust. However, project O&M emissions will be evaluated within the EIR for their potential to cause regionally significant impacts.

C.1B Local

Localized project impacts may be experienced by receptors sensitive to air pollution. Sensitive persons include certain types of residents, such as the very young, the elderly, and those suffering from respiratory illnesses or disabilities. Examples of sensitive land uses include schools, parks, medical and retirement facilities, and residences.

Sensitive receptors located proximate to the project area include: residences located approximately 2,000 feet south of Reaches 1-3, immediately south of Reaches 3 and 4; recreationists at River Ridge Golf Course located immediately south of Reach 2; recreationists at Ventura Municipal Golf Course located 1,000 feet north of Reach 2; students at Thurgood Marshall Elementary School located approximately 3,000 feet south of Reach 2; and students at Rio Del Norte Elementary School located 1,060 feet south of Reach 4, near Southbank Park.

Proposed Project Impacts

Construction

Nearby sensitive receptors could be exposed to emissions generated from construction activities, especially particulate matter emissions. The EIR will fully evaluate the potential for localized construction-related emissions and fugitive dust to conflict with or obstruct implementation of the Ventura County AQMP, violate any air quality standard or contribute to an existing or projected air quality violation, expose the public to substantial pollutant concentrations, or create the potential for Valley Fever impacts. In addition to evaluating the level of sensitive receptor exposure to the criteria pollutants identified in the Federal Clean Air Act, the California Clean Air Act, and the National and California Ambient Air Quality Standards, an evaluation of the exposure and impacts of toxic air contaminant emissions, specifically diesel particulate matter, will be evaluated in the EIR.

As discussed above in Section C.1A (Regional), construction equipment and activities may create mildly objectionable odors proximate to the work site. Due to the proximity of sensitive receptors, the EIR will evaluate the potential for localized odor impacts.

Operation

As discussed above in Section C.1A (Regional), no significant net O&M emissions or fugitive dust would result with implementation of the proposed project. As such, the project's O&M activities would result in less-than-significant localized air quality impacts. This issue will not be analyzed further within the EIR.

Cumulative Impacts: Based upon the potential for project construction to result in regional and localized emission and fugitive dust impacts, the EIR will evaluate the project's potential for resulting in a cumulatively considerable net increase of any criteria nonattainment pollutant. While no significant net increase in O&M emissions or fugitive dust is anticipated with implementation of the proposed project, the EIR will also evaluate cumulative operational emission impacts.

C.2 WATER RESOURCES

The following sections address potential effects of the proposed project to water resources, as related to groundwater quantity (C.2A), groundwater quality (C.2B), surface water quantity (C.2C), and surface water quality (C.2D). For each issue area, a discussion of the existing environmental setting, or baseline conditions, is provided, followed by a discussion of significance criteria that are used to characterize potential impacts of the project. Common to all issue areas, any project that is inconsistent with applicable policies or development standards of the *Ventura County General Plan Goals, Policies and Programs* or applicable Area Plan may result in an environmental impact. Cumulative impacts are also discussed for each issue area.

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

1.3.1-1 Inventory and monitor the quantity and quality of the County's water resources.

1.3.1-2 Effectively manage the water resources of the County by adequately planning for the development, conservation, and protection of water resources for present and future generations.

1.3.1-3 Maintain and, where feasible, restore the chemical, physical, and biological integrity of surface and groundwater resources.

1.3.1-4 Ensure that the demand for water does not exceed available water resources

1.3.1-6 Promote reclamation and reuse of wastewater for recreation, irrigation, and to recharge aquifers.

Policies

1.3.2-1 Discretionary development which is inconsistent with the goals and policies of the County's Water Management Plan (WMP) shall be prohibited, unless overriding considerations are cited by the decision-making body.

1.3.2-2 Discretionary development shall comply with all applicable County and State water regulations.

1.3.2-4 Discretionary development shall not significantly impact the quantity or quality of water resources within watersheds, groundwater recharge areas, or groundwater basins.

1.3.2-5 Landscape plans for discretionary development shall incorporate water conservation measures as prescribed by the County's Guide to Landscape Plans, including use of low water usage landscape plants and irrigation systems and/or low water usage plumbing fixtures and other measures designed to reduce water usage.

1.3.2-6 The use of the Santa Clara River as a multiple resource (i.e., source of supply for water, concrete aggregates, and biological habitat) shall be permitted to continue; with the use of the River as a water resource having priority over all other uses.

1.3.2-8 All discretionary development shall be conditioned for the proper drilling and construction of new oil, gas, and water wells and destruction of all abandoned wells on site.

1.3.2-9 New wells in the Oxnard Plain pressure basin shall not be allowed if they would increase seawater intrusion in the Oxnard or Mugu aquifers.

The proposed project is located in the southern portion of the Santa Clara River Watershed, and underlain by the Oxnard Plain Pressure Groundwater Basin, the Oxnard Subbasin of the Santa Clara River Valley Groundwater Basin. This area is within the jurisdiction of the Los Angeles Regional Water Quality Control Board (RWQCB), and is subject to the management direction of the Water Quality Control Plan (Basin Plan) for the Los Angeles Region, and specifically to the Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties. The Basin Plan is discussed in the following sections, as applicable to water quantity and quality management.

C.2A Groundwater Quantity

Groundwater is water that occurs beneath the land surface and fills the pore spaces of the alluvium, soil, and rock formations within which it occurs. The proposed project area is underlain by the Oxnard Subbasin of the Santa Clara River Valley Groundwater Basin. This basin has a surface area of approximately 58,000 acres (90.6 square miles), and is bounded as follows: to the north by Oak Ridge fault, to the south by the contact of permeable alluvium with semi-permeable rocks of the Santa Monica Mountains, to the east by the Pleasant Valley and Las Posas Valley Groundwater Basins, and to the west by the Pacific Ocean. Recharge to the Oxnard Subbasin occurs through the following means (DWR, 2006):

- Percolation of surface water from the Santa Clara River into the Oxnard Forebay;
- Percolation of precipitation and floodwater from the Calleguas Creek drainage into unconfined gravels near Mugu Lagoon;
- Subsurface flow from Santa Paula Subbasin, which travels over or across the Oak Ridge fault;
- Underflow from the Las Posas and Pleasant Valley Groundwater Basins; and
- Irrigation and septic system return flows.

Five aquifers are recognized in the Oxnard Subbasin, the Oxnard Aquifer being one of the primary freshwater-bearing units. The Oxnard Aquifer consists of late Pleistocene- to Holocene-age sands and gravels deposited in a coalescing alluvial fan; these sediments are coarse and permeable in the forebay, with thicker deposits of fine materials towards the coast. The specific yield of the gravels of the Oxnard Aquifer is approximately 16 percent in the forebay, with well yields averaging about 900 gallons per minute. (DWR, 2006)

Estimates of groundwater budget indicate that the Oxnard Subbasin is in overdraft, which occurs when more water leaves a basin than enters it on an annual basis. The California Department of Water Resources (DWR) reports that in 1997/1998, applied water recharge was approximately 10,200 acre-feet, while average annual extraction from the basin was approximately 65,000 acre-feet (DWR, 2006). The VCWPD also reports that the Oxnard Plain Pressure Basin is currently overdrafted (VCWPD, 2013).

Hydrographs from the Oxnard Subbasin show a range of up to 80 feet of change in groundwater elevation since 1975, with annual changes in elevation of about 20 feet, and longer-term variations following precipitation cycles. Groundwater levels were at lowest recorded levels in 1991 and 1992, recovering in 1994 and remaining relatively stable since then. The basin was estimated to be about 75 percent full in 1999. (DWR, 2006)

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, any project that meets one of the criteria listed below could result in a significant impact to groundwater quantity (Ventura County, 2011).

- Directly or indirectly decrease, either individually or cumulatively, the net quantity of groundwater in a groundwater basin that is overdrafted or creates overdraft conditions.
- In groundwater basins that are not overdrafted, or are not in hydrologic continuity with an overdrafted basin, net groundwater extraction that will individually or cumulatively cause overdrafted conditions.
- Any net increase in groundwater extraction from a groundwater basin and/or hydrologic unit which is not well known or documented but where there is evidence of overdraft based upon declining water levels in a well or wells.

In addition, any project that is inconsistent with any of the policies or development standards relating to groundwater quantity of the *Ventura County General Plan Goals, Policies and Programs* or applicable Area Plan, may result in a significant environmental impact. However, any land use or project which would result in one acre-foot or less of net annual increase in groundwater extraction is not considered to have a significant or cumulative impact on groundwater quantity. (Ventura County, 2011)

Proposed Project Impacts: As described in Section A.4.5 (see "Materials and Waste"), construction of the proposed project would include use of a water tank truck for dust abatement, and the construction water supply would be provided by the City of Oxnard, via a water meter placed on a fire hydrant in the project area. Alternately, if groundwater pumping is necessary to produce dry working conditions in excavation areas, that water may be collected into a water truck and sprayed onto land for dust control. The latter approach would require the RWQCB to issue General Waste Discharge Requirements (WDRs) for Specified Discharges to Groundwater in the Santa Clara River Basin (Order No. 93-010), and compliance with water quality standards defined therein. It is assumed that dust abatement would require the application of 1/16 inch of water per acre per day (acreage per day would vary, as not all areas would be under construction simultaneously), and that dust abatement activities would occur along the length of SCR-3. In addition to water application for dust abatement, a variety of other methods may be used to protect against erosion and fugitive dust during construction, including application of a surface tackifier (e.g., guar or polyacrylamide), temporary vegetation, rolled erosion control products (e.g., straw matting or coconut fiber), and weather-triggered work stoppages (during high winds or extreme storm events). Any or all of the aforementioned methods may be used to ensure

compliance with regulations and to reduce or eliminate erosion and fugitive dust emissions. No water supply would be required during O&M activities associated with the proposed project.

The City of Oxnard's water supply consists of imported surface water from the Calleguas Municipal Water District, imported groundwater from the United Water Conservation District, and local groundwater pumped from City wells. The City blends water from these three sources to achieve an appropriate balance between water quality, quantity, and cost. In 1999, the City launched its Groundwater Recovery Enhancement and Treatment (GREAT) program to improve water supply reliability and quality, and to reduce dependence on imported water. This program combines waste-water recycling, brackish groundwater desalination, groundwater injection, storage and recovery, and local wetland restoration to provide an additional source of water through 2030. As part of this program, the recently constructed Advanced Water Purification Facility (AWPF) can produce highly treated water to meet any future needs. (City of Oxnard, 2013). It is anticipated that water deliveries from the AWPF will begin March 2015 (Hearne, 2014).

As noted above, groundwater in the project area is understood to be overdrafted. In response to this condition, the Fox Canyon Groundwater Management Agency (GMA) was created in 1982 to address overdraft concerns, as well as seawater intrusion. The GMA has jurisdiction over groundwater pumping for all of the land which overlies approximately 185 square miles of Ventura County, including the Oxnard Plain Forebay and the Oxnard Plain Pressure Basins underlying most of the City of Oxnard. To manage groundwater extractions, the GMA has been implementing staged reductions in the allowable amount of pumping by groundwater users, including the United Water Conservation District and the City of Oxnard. (City of Oxnard, 2010).

As described above, the Oxnard Subbasin is understood to be currently affected by overdraft conditions. However, water use associated with the proposed project would be temporary, limited to the construction period, and would occur under the management direction of the Fox Canyon GMA, the purpose of which is to reduce overdraft and other adverse groundwater conditions in the area. Potential effects associated with groundwater quantity would not be significant and, therefore, will not be further addressed in the EIR.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. As discussed above, the proposed project would require a temporary water supply during the construction period, and water would be obtained from the City of Oxnard, which relies upon groundwater supplies in the Oxnard Subbasin. The proposed project's water requirements are short-term and minimal, and would not cause or contribute to adverse effects to groundwater quantity. Therefore, the proposed project would not result in a cumulatively considerable impact to groundwater quantity. No cumulative impacts to groundwater quantity would occur.

C.2B Groundwater Quality

Existing designated beneficial uses for this area, as defined in the Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, include the following: MUN (Municipal and Domestic Supply), IND (Industrial Service Supply), PROC (Industrial Process Supply), and AGR (Agricultural Supply) (LARWQCB, 2011).

Concentrations of total dissolved solids (TDS) in the Oxnard Subbasin range between approximately 160 and 1,800 milligrams per liter (mg/L), with an average concentration of 1,102 mg/L. Concentrations of nitrate exceed the State Maximum Contaminant Level of 45 mg/L in some areas. Seawater intrusion also affects the basin near Point Mugu and Port Hueneme. Elevated levels of DDT (dichloro-diphenyl-trichloroethane) and PCB (polychlorinated biphenyl) have also been detected near Point Mugu (DWR, 2006).

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, any project that meets one of the criteria listed below could result in a significant impact to groundwater quality (Ventura County, 2011).

- Individually or cumulatively degrade the quality of groundwater and cause groundwater to exceed groundwater quality objectives set by the (Los Angeles RWQCB) Basin Plan.
- Cause the quality of groundwater to fail to meet the groundwater quality objectives set by the Los Angeles RWQCB.
- Propose the use of groundwater in any capacity within two miles of the boundary of a former or current test site for rocket engines.

Proposed Project Impacts: Groundwater contamination may occur through direct contact with groundwater resources or through infiltration of potentially hazardous materials to underlying groundwater. The potential for each of these situations to occur under the proposed project is discussed below.

- *Direct Contamination.* The proposed project would include digging, trenching, and/or excavation activities to install the flood gates and utility relocations. It is not anticipated that these activities would directly encounter groundwater resources. However, if groundwater is unexpectedly encountered during project excavations, standard construction BMPs for dewatering would be implemented to ensure that groundwater quality degradation associated with direct contamination would not occur. When groundwater pumping is necessary to produce dry working conditions in excavation areas, that water may be collected into a water truck and sprayed onto land for dust control. This approach would require the RWQCB to issue General WDRs for Specified Discharges to Groundwater in the Santa Clara River Basin (Order No. 93-010). The VCWPD may also obtain from the RWQCB a General National Pollutant Discharge Elimination System (NPDES) permit under Order No. R4-2013-0095 for discharges of groundwater from construction and project dewatering to surface waters in coastal watersheds of Ventura County. Both permits establish specific water quality standards with which the VCWPD must comply before groundwater may be discharged.
- *Infiltration of Hazardous Materials.* Construction of the proposed project would include the use of motorized vehicles and equipment that require potentially hazardous materials such as motor oil, transmission fluid, and antifreeze; if such materials were to accidentally leak or spill during construction activities and were allowed to remain on the ground surface such that they could infiltrate to underlying groundwater resources, water quality degradation could occur. However, compliance with existing standards and regulations for the handling of hazardous and potentially hazardous materials would minimize the potential for an accidental spill or leak, and would ensure that if such a spill or leak occurs, it would be addressed appropriately to avoid groundwater contamination. No groundwater quality degradation associated with the infiltration of hazardous materials would occur as a result of the proposed project.

Construction and operation of the proposed project would not result in groundwater quality degradation or result in violation of a Los Angeles RWQCB groundwater quality objective. Therefore, this issue will not be further addressed in the EIR.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. Other projects in the cumulative scenario may be situated within the delineated boundaries of the underlying groundwater basin and/or hydrologically connected groundwater basins. However, as described above, the proposed project is not anticipated to result in adverse effects to groundwater quality; therefore, the project would not contribute to the cumulative scenario. No cumulative impacts to groundwater quality would occur. Therefore, this issue will not be further addressed in the EIR.

C.2C Surface Water Quantity

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, any project that meets one of the criteria listed below would result in a significant impact to surface water quantity (Ventura County, 2011).

- Increase surface water consumptive use, either individually or cumulatively, in a fully appropriated stream reach as designated by the State Water Resources Control Board (SWRCB), or where non-appropriated surface water is unavailable.
- Increase surface water consumptive use including but not limited to diversion or dewatering downstream reaches, either individually or cumulatively, resulting in an adverse impact to one or more of the beneficial uses listed in the Basin Plan.

Proposed Project Impacts: Water supply requirements associated with construction of the proposed project would be met using water obtained from City of Oxnard, which provides a blend of surface water and groundwater obtained from the Calleguas Municipal Water District, the United Water Conservation District, local City wells, and the AWPF after March 2015 (see detailed discussion above in Section C.2A). The proposed project may include use of surface water resources by nature of the proposed water supply (City of Oxnard) being a blend of surface water resources and groundwater resources; however, this use would be temporary and is not anticipated to result in adverse effects to surface water quantity. The project would not divert or dewater the Santa Clara River. Impacts to surface water quantity would not be significant. Therefore, this issue will not be further addressed in the EIR.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. The proposed project would not increase the net use of surface water in the proposed project area, and would not have potential to result in a cumulative surface water quantity impact. Therefore, this issue will not be further addressed in the EIR.

C.2D Surface Water Quality

The Clean Water Act (Section 303) requires states to develop water quality standards for all waters, and to submit to the U.S. Environmental Protection Agency (USEPA) for approval all new or revised water quality standards. In California, the SWRCB delegates this authority to the nine RWQCBs. As previously discussed, the proposed project area is located in the southern portion of the Santa Clara River Watershed, within the jurisdiction of the Los Angeles RWQCB and subject to the management direction

of the Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties. The California Water Code (Section 13241) defines water quality objectives as the maximum allowable concentrations of water quality constituents to ensure the reasonable protection of beneficial uses and the prevention of nuisance related to water quality degradation within a specific area. Water quality objectives are achieved through Waste Discharge Requirements (WDRs) and other programs outlined in the Basin Plan. (LARWQCB, 2011)

The proposed project is located along the Santa Clara River, in the southern portion of the Santa Clara River Watershed, between the Highway 101 bridge and the Santa Clara River Estuary. The following table identifies Beneficial Use designations for surface waters in this area, as defined by the Basin Plan.

Table C.2-1. Designated Surface Water Beneficial Uses for the Proposed Project Area

Surface Water	Beneficial Uses
Santa Clara River Reach 1 (Highway 101 Bridge to Estuary)	MUN (Municipal and Domestic Supply): P (Potential Beneficial Use) IND (Industrial Supply Service): E (Existing Beneficial Use) PROC (Industrial Process Supply): E AGR (Agricultural Supply): E GWR (Ground Water Recharge): E FRSH (Freshwater Replenishment): E WARM (Warm Freshwater Habitat): E COLD (Cold Freshwater Habitat): E WILD (Wildlife Habitat): E RARE (Rare, Threatened, or Endangered Species): E MIGR (Migration of Aquatic Organisms): E WET (Wetland Habitat): E
Santa Clara River Estuary (ends at Harbor Blvd.)	NAV (Navigation): E COMM (Commercial and Sport Fishing): E EST (Estuarine Habitat): E MAR (Marine Habitat): E WILD: E RARE: Ee (Existing Beneficial Use; One or more rare species utilizes all ocean, bays, estuaries, and coastal wetlands for foraging and/or nesting.) MIGR: Ef (Existing Beneficial Use; Aquatic organisms utilize all bays, estuaries, lagoons, and coastal wetlands, to a certain extent, for spawning and early development –may include migration into areas which are heavily influenced by freshwater inputs.) SPWN (Spawning, Reproduction, and/or Early Development): Ef WET: E

Source: LARWQCB, 2011.

The Basin Plan identifies the proposed project area as having no waterbody-specific water quality objectives associated with the Beneficial Uses portrayed above; this is because there is not sufficient historic data to designate objectives based on natural background conditions. The following table illustrates the mineral or nutrient quality necessary to protect different categories of beneficial uses, to be used as a guideline for establishing effluent limits in areas where waterbody-specific objectives have not been set. Protection of the most sensitive beneficial uses would be the determining criteria for the selection of effluent limits (LARWQCB, 2011).

As authorized by the federal Clean Water Act, the NPDES Permit Program controls water pollution by regulating point sources that discharge into waters of the U.S. (USEPA, 2009). In California, dischargers whose projects disturb more than one acre of land are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 99-08-DWQ), which requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) (SWRCB, 2012).

Table C.2-2. Designated Surface Water Quality Objectives for the Proposed Project Area1

Recommended Objective (mg/L)	Beneficial Use Categories				
	MUN (Drinking Water Standards)	PROC	AGR	AQ LIFE[2] (Fresh Water)	GWR
TDS	500[3]	500 – 1500	450 – 2000	-	Limits based on appropriate groundwater basin objectives and/or beneficial uses.
Chloride	250[3]	20 – 1000	100 – 355	230 (4 day avg continuous conc.)	
Sulfate	400 – 500[4]	20 – 300	350 – 600	-	
Boron	-	-	0.5 – 4.0	-	
Nitrogen	10[5]	-	-	-	

Source: LARWQCB, 2011.

Notes:

(1) All four reaches of the proposed SCR-3 levee are located along Reach 1 of the Santa Clara River, which extends between the Highway 101 bridge and the Santa Clara River Estuary.

(2) Aquatic life includes a variety of Beneficial Uses including WARM, COLD, SPWN, MIGR, and RARE.

(3) USEPA Secondary Maximum Contaminant Level (MCL)

(4) USEPA Proposed MCL

(5) USEPA MCL

The Los Angeles RWQCB has issued an NPDES Municipal Separate Storm Sewer System (MS4) Order (NPDES Permit CAS004002) for stormwater (wet weather) and non-stormwater (dry weather) discharges from the MS4 within unincorporated Ventura County and its incorporated cities (LARWQCB, 2010). To fulfill requirements of NPDES Permit CAS004002, the County of Ventura has implemented the Ventura Countywide Stormwater Quality Management Program and Ventura Countywide Post Construction Stormwater Management Plan (PCSMP) for the VCWPD, the County of Ventura, and the Cities of Ventura County (VCWPD, 2011a). Best Management Practices (BMPs) to minimize or avoid potential water quality impacts are identified in the Ventura Countywide PCSMP, as well as the County's "Technical Guidance Manual for Stormwater Quality Control Measures," which was updated in 2011 (VCWPD, 2011b). These BMPs include but are not limited to the following:

- General Site Design Control Measures (Conserve Natural Areas / Protect Slopes and Channels / Control Peak Stormwater Runoff Discharge Rates / Minimize Impervious Area);
- Site-Specific Source Control Measures (Storm Drain Message and Signage / Outdoor Material Storage Area Design / Outdoor Trash Storage Area Design / Fueling Area Design); and
- Treatment Control Measures (Grass Strip Filter / Grass Swale Filter / Detention Basin / Porous Landscape Detention / Infiltration Trench) (VCWPD, 2011b).

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, any project that meets one of the criteria listed below would result in a significant impact to surface water quality (Ventura County, 2011).

- Individually or cumulatively degrade the quality of surface water and cause it to exceed water quality objectives contained in Chapter 3 of the three Basin Plans.
- Directly or indirectly cause stormwater quality to exceed water quality objectives or standards in the applicable MS4 Permit or any other NPDES Permits.

Proposed Project Impacts: Surface water quality degradation could occur through direct release of sediment and/or pollutants into surface waters, or through the transport and delivery of sediments and/or pollutants via surface water runoff. Construction of the proposed project would include soil-disturbing activities to implement the proposed levee improvements, including installation of fill slope and the floodwall, removal of encroaching vegetation, and construction of levee features. These activities would also include the use of motorized equipment and vehicles that require the use of hazardous and potentially hazardous materials, such as vehicle fuels and oils. If an accidental spill or leak of such materials occurs, an impact to surface water quality could result.

As described in Section A.4.5 (Proposed Project: Construction), construction of the proposed project is anticipated to occur over a 27-month period, beginning in the 4th Quarter 2015 and ending the 2nd Quarter 2018. Construction activities would occur during the rainy season, where most precipitation in the project area tends to occur between January and March. If precipitation events occur during ground-disturbing activities associated with project construction, there would be potential for sediment transport and delivery to the Santa Clara River. Such an event would have increased potential to result in water quality degradation if flow is present at the time of sediment transport and delivery. Such an impact could result in localized and short-term surface water quality degradation; however, the proposed project would be implemented in accordance with all conditions and requirements of the Ventura Countywide Stormwater Quality Management Program and NPDES Permit Number CAS004002, including BMPs to minimize or avoid the potential for water quality impacts to occur. Therefore, potential surface water quality effects associated with sediment transport and delivery would not be significant. As previously mentioned, water quality impacts could also occur due to leaking vehicles and equipment; however, permit compliance and BMP implementation would minimize or avoid the potential for water quality impacts to occur due to hazardous materials contamination, and water quality effects during construction would not be significant. Therefore, this issue will not be further addressed in the EIR.

Section A.4.5 (see "Operations and Maintenance") describes activities that would or could occur during O&M; these activities would comprise ongoing maintenance activities along SCR-3, primarily the as-needed repair of flood control facilities. In addition, O&M activities would include regular inspections and vegetation thinning on the top 20 feet of the levee within Reaches 1-3 on an annual basis, or as-needed. In addition, in comparison with current/ongoing O&M activities, the proposed project would also require the inspection of the Reach 4 floodwall and flood gate, including maintenance of the access road to this project component, which would include vegetation clearing and control on the riverward access road and re-grading, as needed. It is reasonably anticipated that County vehicles are well maintained, such that the potential for water quality degradation to occur as a result of leaking fuel or other fluids would not be significant. Furthermore, these O&M activities are consistent with current operations, and therefore, do not reflect a notable change in baseline conditions.

Construction and operation of the proposed project would be in compliance with all existing water quality objectives and Total Maximum Daily Load requirements of the Los Angeles RWQCB, as listed in

Table C.2-2. Neither construction nor O&M activities associated with the proposed project would result in the violation of any water quality objectives designated by the Los Angeles RWQCB. Impacts to surface water quality would not be significant. Therefore, this issue will not be further addressed in the EIR.

Cumulative Impacts: The introduction to Chapter C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. It is reasonably assumed that other projects in the cumulative scenario would include the use of some of the same types of equipment and vehicles as the proposed project, and would have the potential to result in similar impacts to surface water quality as the proposed project. However, as described above, potential surface water quality impacts of the proposed project would be localized and of short duration; therefore, potential cumulative impacts to surface water quality would not be significant, and this issue will not be further addressed in the EIR.

C.3 MINERAL RESOURCES

The assessment of mineral resources presents an analysis of the impacts associated with aggregate and petroleum resources. Aggregate resources include construction grade sand, rock and gravel; and petroleum resources include oil and gas deposits. Impacts associated with these mineral resources involves hampering or precluding extraction of, or access to, these mineral resources.

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

1.4.1-1 Manage mineral resources in a manner which effectively plans for the access to, development and conservation of mineral resources for existing and future generations.

1.4.1-2 Identify and manage mineral resources in order to:

- Safeguard future access to the resource.
- Facilitate a long-term supply of mineral resources within the County.
- Minimize incompatibility between the extraction and production of the resource and neighboring land uses and the environment
- Provide notice to landowners and the general public of the presence of significant mineral resource deposits.

1.4.1-3 Promote the utilization of mineral resources located close to urbanized areas before their extraction is precluded by urbanization.

Policies

1.4.2-6 All General Plan amendments, zone changes, and discretionary developments shall be evaluated for their individual and cumulative impacts on access to and extraction of recognized mineral resources, in compliance with CEQA.

1.4.2-7 Mineral Resource Areas may be established, in whole or part, in accordance with the following criteria:

- Any area designated by the State Board of Mines and Geology as an area of statewide or regional significance pursuant to the provisions of the Surface Mining and Reclamation Act of 1975.
- Any area covered by a discretionary permit (e.g. CUP) for mining of aggregate minerals determined to be of Statewide or regional significance.

1.4.2-8 Discretionary development within a Mineral Resource Area shall be subject to the provisions of the Mineral Resource Protection Overlay Zone, and is prohibited if the use will significantly hamper or preclude access to or the extraction of mineral resources.

C.3A Aggregate

The County's aggregate resources are classified by the State as one of the following Mineral Resource Zone (MRZ) categories:

- **MRZ-1:** Areas where adequate information indicates that no significant mineral deposits are present or likely to be present.
- **MRZ-2:** Areas where adequate information indicates that significant mineral deposits are present, or there is a high likelihood for their presence.
- **MRZ-3:** Areas containing mineral deposits, the significance of which cannot be determined from the available data.
- **MRZ-3(a):** Areas, judged on the basis of the limited available geologic data and fieldwork, to have higher potential as sources of aggregate material suitable for Portland cement concrete than other deposits classified MRZ-3.
- **MRZ-4:** A Mineral Resource Zone where there is insufficient data to assign any other MRZ designation.

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, a project would have a significant impact on aggregate resources if it is proposed to be located on or immediately adjacent to land zoned Mineral Resource Protection (MRP) overlay zone, or adjacent to a principal access road to an existing aggregate Conditional Use Permit (CUP), and has the potential to hamper or preclude extraction of or access to the aggregate resources (Ventura County, 2011a).

Proposed Project Impacts: According to the Mineral Resources/Mining Permits Map from the Resources Appendix of the County's *General Plan*, Reach 1 and the majority of Reach 2 are within the MRZ-3(a) designation, which indicates that mineral deposits are present in this area. The eastern end of Reach 2 and all of Reaches 3 and 4 are within the MRZ-2 designation, which indicates that sources of aggregate material are present. The proposed project would not traverse land under a mining CUP (Ventura County, 2011b).

Although the proposed project would be located within MRZ designations, the proposed improvements would occur to the existing levee (Reaches 1-4) in an area that is not actively mined. As such, the proposed project would not present a new land use that would hamper or preclude the extraction of aggregate resources. In addition, as there are no CUPs in the area, the proposed project would not interrupt active mining activities. Therefore, impacts to aggregate resources would not be significant, and this issue will not be further addressed in the EIR.

Cumulative Impacts: According to the Ventura County *Initial Study Assessment Guidelines*, a project would have a cumulative impact on aggregate resources if, when considered with other pending and recently approved projects in the area, it hampers or precludes extraction or access to identified resources. The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. The proposed project would not result in significant impacts associated with aggregate resources and, therefore, the project would not make a substantial contribution to cumulative effects. This issue will not be further addressed in the EIR.

C.3B Petroleum

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, any land use that is proposed to be located on or immediately adjacent to any known petroleum resource area, or adjacent to a principal access road to an existing petroleum CUP, has the potential to hamper or preclude access to petroleum resources (Ventura County, 2011a).

Proposed Project Impacts: As identified in Figure 1.4.7 of the *Ventura County General Plan – Resource Appendix*, numerous oil fields are located along the Santa Clara River (Ventura County, 2011b). Reach 4 of the proposed project would traverse the El Rio Oil Field, which covers a 605-acre area. The majority of this oil field is within the City of Oxnard and consists of land that is occupied by commercial and residential development. The northwestern portion of the oil field is within Ventura County lands and consists of the Santa Clara River and agricultural land. In Reach 4, approximately 430 feet of the east end of the floodwall would be within the El Rio Oil Field. Construction of the floodwall would not extend to Highway 101, such that the oil field would continue to be accessible from N. Ventura Road. Therefore, impacts to the oil field would not be significant.

Based on the County's GIS data, the only active oil permit within the project site is CUP-766; CUP-482 is also within the project site, but has expired (Ventura County, 2014). All of Reach 1 and the west end of Reach 2 are within the area designated for CUP-766. Construction of the proposed improvements may temporarily preclude access to the land under this CUP; however, the proposed improvements would be limited to the existing levee and would not change the current access to the area. As such, the proposed project would not present a new land use that would permanently hamper or preclude access to the petroleum resources under this CUP. Therefore, the impacts to the permitted oil field would not be significant, and this issue will not be further addressed in the EIR.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. As addressed above, impacts to the petroleum field would not be significant and the proposed project would not make a substantial contribution to cumulative effects on petroleum resources. This issue will not be further addressed in the EIR.

C.4 BIOLOGICAL RESOURCES

As required in the Ventura County *Initial Study Assessment Guidelines*, this section contains a description of plant and wildlife communities, special-status species, and the specific criteria unique to Ventura County, followed by an assessment of potential impacts to these resources (Ventura County, 2011).

The proposed project consists of implementing improvements to the SCR-3 levee system between the northeast end of the Bailard Landfill and the UPRR right-of-way, generally following the southern bank of the Santa Clara River adjacent to the City of Oxnard, California, except for the final 950 feet, which would be located south of N. Ventura Road. Project improvements would occur along an approximately 2.0-mile (10,775-foot) stretch of SCR-3 (See Figure C.4-1).

Regional Setting

The Santa Clara River system originates in the San Gabriel Mountains and flows westward for approximately 84 miles to the Pacific Ocean where the river forms a coastal lagoon and estuary near McGrath State Beach (VCWPD and LADPW, 2005). The river supports some of the last large-scale cottonwood galleries in the region and is one of the last natural river systems in Southern California. The Santa Clara River is considered a regionally important habitat linkage for many species and provides connectivity from coastal regions to inland valleys and important tributary drainages. Principal tributaries of the Santa Clara River are Castaic Creek in Los Angeles County, and Piru, Sespe, and Santa Paula Creeks in Ventura County, with drainage areas of 197, 441, 269 and 42 square miles, respectively (VCWPD and LADPW, 2005).

Faber et al. (1989) estimated that as much as 95 to 97 percent of riparian habitats have been lost in southwestern California. In addition, most of the natural riparian vegetation in California has been lost or degraded from land use conversions to agricultural, urban, and recreational developments; channelization for flood control; sand and gravel mining; ground water pumping; water impoundments; and various other alterations. The Santa Clara River has been subject to numerous anthropogenic disturbances, yet still supports a complex association of river channel, sandy terraces, riparian forest, and upland stream terraces. Portions of the Santa Clara River are considered critical habitat for southern steelhead, and a variety of State and federally listed species are known to occur in and near the river corridor and adjacent uplands.

Local Setting

The project is located along an approximately 2.0-mile reach of the Lower Santa Clara River. Habitat in the project area includes dense riparian vegetation, broad unvegetated sand/gravel bars, and upland terraces. Riparian plant communities are dominated by stands of native willows (*Salix* spp.), cottonwood (*Populus* spp.), and occasional sycamore (*Platanus racemosa* var. *racemosa*). In some locations, thickets of invasive giant reed (*Arundo donax*) comprise the dominant vegetation. Early seral stands of willow and mulefat (*Baccharis salicifolia*) are common along the margins of the channel. In many areas, dense stands of white sweetclover (*Melilotus alba*) with pockets of western ragweed (*Ambrosia psilostachya* var. *californica*) occur. Some of the other native plant species observed within the channel include: California croton (*Croton californicus*), telegraph weed (*Heterotheca grandiflora*), and southern California locoweed (*Astragalus trichopodus*).

Figure C.4-1

Biological Resources Survey Area

The stream terrace located downstream and southwest of the U.S. Highway 101 Bridge supports a mosaic of upland and riparian woodland communities. Mature cottonwood willow riparian forest with an understory of poison oak (*Toxicodendron diversilobum*), mulefat, California sagebrush (*Artemisia californica*) and black sage (*Salvia melifera*) transition to open grasslands and riparian scrub communities. Non-native grasslands in this area are dominated by brome grasses (*Bromus* spp.), with scattered aggregations of summer mustard (*Hirshfeldia incana*), tocalote (*Centaurea melitensis*), horehound (*Marrubium vulgare*), and Russian thistle (*Salsola tragus*). In a few locations, isolated California sagebrush, black sage, and quail brush (*Atriplex* sp.) are present. An area subject to previous restoration activities occurs near the Highway 101 Bridge and is dominated by thick stands of coyote bush (*Baccharis pilularis*), with scattered mulefat and quail bush. Fennel (*Foeniculum vulgare*), tocalote, and emerging sages are present along the edge of the dirt road that spans this area. Honey bees (*Apis* sp.), an introduced species to the new world, were commonly observed in irrigation boxes used to support the restoration area. A large windrow of gum trees (*Eucalyptus* sp.) border N. Ventura Road. Scattered non-native tree tobacco (*Nicotiana glauca*), giant reed, and castor bean (*Ricinus* sp.) are also present in this area to a limited degree.

Adjacent land uses in the project area are varied. Agricultural lands are present to some degree along both sides of the river. Ventura Municipal Golf course and River Ridge Golf Course are located north and south of the project area respectively and abut the upper banks of the Santa Clara River. Commercial buildings and a residential community are located south of the project area. Bailard Landfill is located within and south of the western extent of the project area. An active rail line supporting Amtrak, Metrolink, and commercial rail uses runs parallel to Highway 101 near the upstream end of the project area. In addition a large number of homeless encampments are present within the upland terrace of the river channel.

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

1.5.1 Preserve and protect significant biological resources in Ventura County from incompatible land uses and development. Significant biological resources include endangered, threatened, or rare species and their habitats, wetland habitats, coastal habitats, wildlife migration corridors, and locally important species/communities.

Policies

1.5.2-1 Discretionary development which could potentially impact biological resources shall be evaluated by a qualified biologist to assess impacts and, if necessary, develop mitigation measures.

1.5.2-2 Discretionary development shall be sited and designed to incorporate all feasible measures to mitigate any significant impacts to biological resources. If the impacts cannot be reduced to a less-than-significant level, findings of overriding considerations must be made by the decision-making body.

1.5.2-3 Discretionary development that is proposed to be located within 300 feet of a marsh, small wash, intermittent lake, intermittent stream, spring, or perennial stream (as identified on the latest USGS 7 ½ minute quad map), shall be evaluated by a County approved biologist for potential impacts on wetland habitats. Discretionary development that would have a significant impact on significant wetland

habitats shall be prohibited, unless mitigation measures are adopted that would reduce the impact to a less-than-significant level; or for lands designated "Urban" or "Existing Community," a statement of overriding considerations is adopted by the decision-making body.

1.5.2-4 Discretionary development shall be sited a minimum of 100 feet from significant wetland habitats to mitigate the potential impacts on said habitats. Buffer areas may be increased or decreased upon evaluation and recommendation by a qualified biologist and approval by the decision-making body. Factors to be used in determining adjustment of the 100 foot buffer include soil type, slope stability, drainage patterns, presence or absence of endangered, threatened, or rare plants or animals, and compatibility of the proposed development with the wildlife use of the wetland habitat area. The requirement of a buffer (setback) shall not preclude the use of replacement as mitigation when there is no other feasible alternative to allowing a permitted use, and if the replacement results in no net loss of wetland habitat. Such replacement shall be "in kind" (i.e. same type and acreage), and provide wetland habitat of comparable biological value. On site replacement shall be preferred wherever possible. The replacement plan shall be developed in consultation with the California Department of Fish and Wildlife (CDFW).

1.5.2-5 CDFW, U.S. Fish and Wildlife Service (USFWS), National Audubon Society, and California Native Plant Society (CNPS) shall be consulted when discretionary development may affect significant biological resources.

1.5.2-6 Based on the review and recommendation of a qualified biologist, the design of road and floodplain improvements shall incorporate all feasible measures to accommodate wildlife passage.

C.4A Significance Criteria

Significance Criteria: Evaluating the significance of potential project-related impacts to biological resources depends on characterizing existing conditions at the project area and determining the direct and indirect effects to target species and their habitats. An impact that results in the long-term loss or degradation of sensitive habitat, or that adversely affects the population of a special-status species is generally considered significant.

The level of significance of project-related impacts to biological resources is based on Appendix G of the State CEQA Guidelines, which states that a proposed project would have a significant impact on the environment if it exceeds one or more of the following thresholds:

- Conflicts with adopted local, regional, State, or federal environmental plans and goals of the community where it is located;
- Substantially affects a rare or endangered species of animal or plant, or the habitat of such species;
- Interferes substantially with the movement of any native resident or migratory fish or wildlife species; or
- Substantially diminishes habitat for fish, wildlife, or plants.

Impacts are classified as unavoidable and significant, less than significant with mitigation incorporated, less than significant, or no impact, depending on the size, type, and timing of the impact and the

biological resources involved. Disturbance of habitats and/or species is considered significant if it affects biological resources in the following ways:

- Substantially reduces or eliminates species diversity or abundance;
- Substantially reduces or eliminates quantity or quality of nesting areas;
- Substantially limits reproductive capacity through loss of individuals or habitat;
- Substantially fragments, eliminates, or otherwise disrupts foraging areas and/or access to food sources;
- Substantially limits or fragments the geographic range or dispersal routes of species; or
- Substantially interferes with natural processes, such as fire or flooding, upon which the habitat depends.

The Ventura County impact threshold criteria for species (Ventura County, 2011) further states that a direct or indirect physical impact would occur if a project would directly or indirectly:

- Reduce a species' population,
- Reduce a species' habitat,
- Increase habitat fragmentation, or
- Restrict reproductive capacity.

Additionally, the following types of impacts to plant and animal species or their habitats are considered potentially significant:

- Loss of one or more individuals, occupied habitat or Critical Habitat designated by the U.S. Fish and Wildlife Service of a species officially listed as Endangered, Threatened or Rare under the federal Endangered Species Act (Title 50, Code of Federal Regulations Sections 17.11 or 17.12) or California Endangered Species Act (Sections 670.2 or 670.5, Title 14, California Code of Regulations), a *Candidate Species*, or a *California Fully Protected Species*.
- Impacts that would eliminate or threaten to eliminate one or more *element occurrences* of a *special-status species* not otherwise listed under the federal Endangered Species Act or California Endangered Species Act, or a *Candidate Species* or *California Fully Protected Species.*
- Impacts that would threaten the viability of a habitat that sustains a population of a special-status species.
- Impacts that would restrict the reproductive capacity of a special-status species.
- Take of birds protected under the California Fish and Game Code (Sections 3503.5, 3511, and 3513) and the federal Migratory Bird Treaty Act (MBTA), where take is defined in the Fish and Game Code and MBTA.
- Increases in noise and/or nighttime lighting to a level above ambient levels that would adversely affect a special-status species.
- Increases in human access, predation or competition from domestic animals, pests or exotic species, or other indirect impacts, to levels that would adversely affect special-status species.
- Impacts severe enough to substantially reduce the habitat of a wildlife species or cause a wildlife population to decline substantially or drop below self-sustaining levels, pursuant to Section 15065 of the CEQA Guidelines, Mandatory Findings of Significance.

Impacts to biological resources would not be considered significant if there is little or no importance to a given habitat or if disturbance would not create a significant impact to habitats or species.

The following types of impacts to ecological communities are considered potentially significant:

Sensitive Plant Communities

- Construction, grading, clearing, or other activities that would temporarily or permanently remove sensitive plant communities. Temporary impacts to sensitive plant communities would be considered significant unless the sensitive plant community is restored once the temporary impact is complete.
- Indirect impacts resulting from project operation at levels that would degrade the health of a sensitive plant community.

Waters and Wetlands

- Removal of vegetation; grading; obstruction or diversion of water flow; change in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; and/or any disturbance of the substratum.
- Disruptions to wetland or riparian plant communities that would isolate or substantially interrupt contiguous habitats, block seed dispersal routes, or increase vulnerability of wetland species to exotic weed invasion or local extirpation. An example would be disruption of adjacent upland vegetation to a level that would adversely affect the ecological function of the wetland, such as where such vegetation play a critical role in supporting riparian-dependent wildlife species (e.g., amphibians), or where such vegetation aids in stabilizing steep slopes adjacent to the riparian habitat, which reduces erosion and sedimentation potential.
- Interference with ongoing maintenance of hydrological conditions in a water or wetland. The hydrology of wetlands systems must be maintained if their function and values are to be preserved. Adverse hydrological changes might include altered freshwater input; changes in the watershed area or run-off quantity, quality or velocity; drawing down of the groundwater table to the detriment of groundwater-dependent habitat; substantial increases in sedimentation; introduction of toxic elements or alteration of ambient water temperature.
- The project does not provide an adequate buffer for protecting the functions and values of existing waters or wetlands. The buffer is measured from the top-of-bank or edge of wetland or riparian habitat, whichever is greater. Ventura County General Plan Policy 1.5.2-4 requires a minimum buffer of 100 feet from significant wetland habitat. In accordance with this policy, buffer areas may be increased or decreased upon evaluation and recommendation by a qualified biologist and approval by the decision-making body. Factors to be used in determining adjustment of the 100 foot buffer include soil type, slope stability, drainage patterns, presence or absence of endangered, threatened, or rare plants or animals, and compatibility of the proposed development with the wildlife use of the wetland habitat area.

Environmentally Sensitive Habitat Areas (ESHA - Applies to Coastal Zone Only)

- Construction, grading, clearing, or other activities and uses that would temporarily or permanently remove ESHA or disturb ESHA buffers. (ESHA buffers are within 100 feet of the boundary of ESHA as defined in Section 8172-1 of the Coastal Zoning Ordinance).
- Indirect impacts resulting from project operation at levels that would degrade the health of an ESHA.

C.4B Species

Southern California riparian habitats play a particularly crucial role in maintaining biodiversity because up to 80 percent of vertebrate species rely on them for at least part of their lifecycle (Knopf et al., 1988). In addition, riparian habitats play a central role in a variety of ecological functions (Fischer and Fischenich, 2000; Rottenborn, 1999). Many of these functions are associated with the structure of the vegetation communities, such as riparian habitats that provide cover and nesting habitat for songbirds and smaller birds of prey. In areas where upland habitat is too dry to support large trees, riparian forests provide important habitat for a variety of wildlife (Friedman et al., 1995). While the presence of riparian vegetation is often associated with high bird use, multiple vegetative layers such as those found in the project area provide the basis for the development of a more complex ecosystem. The riparian and upland habitats present within the project area support an abundance of wildlife.

Common Wildlife

Wildlife identified in the project area during biological surveys conducted in 2013 and 2014 include various fish, invertebrates, reptiles, amphibians, birds, and small to mid-size mammals. Several species of gastropod were found within leaf litter associated with the riparian and upland terraces. These included native and non-native snails, such as the introduced garden snail (*Helix aspersa*) and native shoulderband snails (*Helminthoglypta* spp.). Amphibians were commonly detected, and included Pacific treefrog [chorus frog] (*Pseudacris regilla*), western toad (*Anaxyrus boreas*), slender salamander (*Batrachoseps sp.*), and the non-native bullfrog (*Lithobates catesbeiana*). An African clawed frog (*Xenopus laevis*), a highly invasive species known from the watershed, was observed in a small pool located adjacent to one of the existing rock groins. Reptiles including western fence lizard (*Sceloporus occidentalis*) and sideblotch lizard (*Uta stansburiana*) were commonly observed during suitable weather conditions, and were broadly distributed across the project area. A common kingsnake (*Lampropeltis getula*) was observed along the top of the levee near the existing weir field.

Birds were commonly detected in the project area. Some of these included western kingbird (*Tyrannus verticalis*), song sparrow (*Melospiza melodia*), and Anna's hummingbird (*Calypte anna*). House sparrow (*Passer domesticus*), spotted towhee (*Pipilo maculatus*), and black phoebe (*Sayornis nigricans*) were also commonly observed. Red-tailed hawk (*Buteo jamicensis*), Cooper's hawk (*Accipiter cooperii*), and American kestrel (*Falco sparverius*) were observed either soaring over the site (red-tailed hawks) or foraging for small birds in the project area (Cooper's hawk and kestrel).

In a few locations, the presence of small rock weirs have resulted in the formation of large pools (when water is present), where shore birds and ducks prey on the many small fish that occur in these areas.

Mallard duck (*Anas platyrhynchos*), great blue heron (*Ardea herodias*), great egret (*Ardea alba*), and snowy egret (*Egretta thula*) were observed feeding in the shallow waters of the these areas.

The riparian and upland vegetation in the project area also supports a variety of small mammals. California ground squirrel (*Spermophilus beecheyi*) and Botta's pocket gopher (*Thomomys bottae*) were observed using the rocks of the levee, and woodrat middens were common throughout the densely vegetated portions of the project area. Bats were noted roosting at the Highway 101 Bridge, and numerous house cats (*Felis catus*) and domestic dogs (*Canis familiaris*) were observed. Some of these may be associated with the various homeless encampments located in the river.

Construction and operation of the project could result in significant impacts to common wildlife, due to the extent and type of work that would occur adjacent to and on the terraces of the Santa Clara River. Therefore, potential effects to these species will be analyzed in the context of an EIR.

Endangered, Threatened, or Rare Species

Special-status taxa include plant and wildlife species listed as threatened or endangered under the federal or California Endangered Species Acts, taxa proposed for listing, Species of Special Concern, plants considered by the CNPS to be rare, threatened, or endangered in California and beyond, and other taxa which have been identified by USFWS, CDFW, or local jurisdictions (i.e., Ventura County) as unique or rare and which have the potential to occur within the project area. The Ventura County *General Plan* and *Initial Study Assessment Guidelines* (Ventura County, 2013; Ventura County, 2011) have also identified Significant Biological Resources to include any of the following:

- Habitats of endangered, threatened or rare species;
- Wetland habitats;
- Coastal habitats;
- Migration corridors for fish or wildlife; or
- Locally important species/communities.

Special-Status Wildlife. Riparian systems are frequently considered one of the most productive forms of wildlife habitat in North America. Many bird species are wholly, or at least partially, dependent on riparian plant communities to perpetuate their kind (Warner et.al., 1984). Riparian habitats are also biologically productive and diverse, and are the exclusive habitat for several special-status wildlife species. Many of these species are wholly dependent on riparian habitats throughout the entirety of their life cycles, while others may utilize these habitats during certain seasons or life history phases.

The project area is known to support a suite of State and/or federally listed species. Critical habitat for southern steelhead and southwestern willow flycatcher occurs in or adjacent to the project area. Protocol surveys conducted in 2013 for the federal- and State-listed least Bell's vireo (*Vireo bellii pusillus*) identified active territories in and adjacent to the project area (VCWPD, 2013a). Protocol surveys were also conducted for the federal and State endangered southwestern willow flycatcher (*Empidonax traillii extimus*); however, this species was not detected breeding in 2013. A single willow flycatcher (*Empidonax trailii*) was observed on one occasion during the surveys, but the subspecies was not determined (VCWPD, 2013b).

Other sensitive species detected or known from the project area included western pond turtle (*Emys marmorata*), coast horned lizard (*Phrynosoma blainvillii*), double-crested cormorant (*Phalacrocorax auritus)*, white-tailed kite (*Elanus leucurus*), Cooper's hawk (*Accipiter cooperii*), merlin (*Falco columbarius*), peregrine falcon (*Falco peregrinus*), Costa's hummingbird (*Calypte costae*), Allen's hummingbird (*Selasphours sasin*), loggerhead shrike (*Lanius ludovicianus*), California horned lark (*Eremophila alpestris actia*), yellow warbler (*Setophaga petechia*), yellow-breasted chat (*Icteria virens*), and Lawrence's goldfinch (*Spinus lawrencei*).

Other special-status species, such as the silvery legless lizard (*Anniella pulchra*) and Townsend's big-eared bat (*Corynorhinus townsendii*), while not observed in the Survey Area, are known to occur in the vicinity (City of Oxnard, 2011). Burrowing owls were observed in 2012 west of the project area during surveys conducted in support of an unrelated project (City of Ventura, 2013).

The CDFW California Natural Diversity Database (CNDDB) was queried for occurrences of special-status wildlife taxa within a five-mile radius surrounding the project area, and a two-mile buffer centered on the Santa Clara River extending approximately 40 miles upstream of the project, ending just east of the Highway 126 and Interstate 5 junction (CDFW, 2013). Table C.4-1 contains a list of some of the special-status or Ventura County Locally Important Species (Ventura County, 2012a) that are known to occur in the region and have the potential to occur in the project area.

Construction and operation of the project could result in significant impacts to special-status wildlife, due to the extent and type of work that would occur adjacent to and on the terraces of the Santa Clara River. Therefore potential effects to these species will be analyzed in the context of an EIR.

Special-Status Plant Species. Botanical surveys of the project area were conducted in Spring 2014. State- or federally-listed plant species were not identified during these surveys. A single Southern California black walnut (*Juglans californica*), a California Rare Plant Rank (CRPR) list 4.2 plant, was detected on a slightly elevated alluvial terrace. However, the Santa Clara River watershed is known to support a variety of sensitive plant species and some of these may occur in or near the project. Table C.4-2 lists some of the key special-status plants, including CRPR 1 – 4 and County of Ventura locally important species (Ventura County, 2012b), that have the potential to occur in the region.

Although not detected, construction and operation of the project could result in significant impacts to special-status plants, due to the extent and type of work that would occur adjacent to and on the terraces of the Santa Clara River. Therefore, potential effects to these species will be analyzed in the context of an EIR.

Table C.4-1. Known and Potential Occurrence of Special-Status Wildlife in or near the Project Area

Status	Scientific Name	Common Name	Documented in Project Area
ST	Riparia riparia	Bank swallow	
CSC	Taxidea taxus	American badger	
CSC	Phrynosoma blainvillii	Coast horned lizard	X
WL	*Accipiter cooperii*	Cooper's hawk	X
FE, SE, BCC	Vireo bellii pusillus	Least Bell's vireo	X
SE, BCC, ABC	*Empidonax traillii*	Willow flycatcher	X
CSC	Anniella pulchra pulchra	Silvery legless lizard	
CSC	Thamnophis hammondii	Two-striped garter snake	
FE, CSC	Oncorhynchus mykiss irideus	Southern steelhead, southern California DPS	
CSC	Emys marmorata	Western pond turtle	X
CSC	Spea hammondii	Western spadefoot toad	
WL	*Eremophila alpestris actia*	California horned lark	X
FC, SE	Coccyzus americanus occidentalis	Western yellow-billed cuckoo	
CFP	Elanus leucurus	White tailed kite	X
CSC	Icteria virens	Yellow-breasted chat	X
CSC, BCC	*Setophaga petechial*	Yellow warbler	X
CSC	Antrozous pallidus	Pallid bat	
VC	Helminthoglypta traskii	Trask shoulderband snail	
FT, CSC	Rana draytonii	California red-legged frog	
CSC	Thamnophis sirtalis	South-coast garter snake	
BCC, CSC	Athene cunicularia	Burrowing owl	
CSC	Chaetura vauxi vauxi	Vaux's swift	
FE, SE	Empidonax traillii extimus	Southwestern willow flycatcher	
VC	Tantilla planiceps	Western black-headed snake	
FE, SE, CFP	Gasterosteus aculeatus williamsoni	Unarmored threespine stickleback	

Sources: CDFW, 2011; 2013; 2014; Ventura County, 2012a; and VCWPD 2013a,b.

Federal Rankings:
FE = Federally Endangered
FT = Federally Threatened
FC = Federal Candidate for Listing
BCC = USFWS Bird of Conservation Concern

County Rankings:
VC = Ventura County Locally Important Species

Other Rankings:
ABC = American Bird Conservancy: U.S. Watch List of Birds of Conservation Concern (nesting)

State Rankings:
SE= State Endangered
ST = State Threatened
CFP = California Fully Protected
SA = CDFG Special Animal
WL = CDFG Watch List
CSC = California Species of Special Concern

Table C.4-2. Known and Potential Occurrence of Special-Status Plants in or near the Project Area.

Status	Scientific Name	Common Name
VC	Amaranthus californicus	California amaranth
VC	Ammannia coccínea	Purple ammannia
SR S4, CRPR 4.2, VC	Calochortus plummerae	Plummer's mariposa-lily
SR 2, CRPR: 1B.1, VC	Centromadia parryi ssp. australis	Southern tarplant
SR S2.1, CRPR: 1B.1, VC	Horkelia cuneata ssp. puberula	Mesa horkelia
SR S2, CRPR: 2B.1, VC	Imperata brevifolia	Satintail
SR S3.2, CRPR: 4.2	Juglans californica var. californica	Southern California black walnut
VC	Mentzelia affinis	Yellow blazing star
SR S2.2, CRPR: 4.2, VC	Mucronea californica var. californica	California spineflower
SR S2S3.2, CRPR: 2B.2,VC	Pseudognaphalim leucocephalum (Gnaphalium leucocephalum)	White rabbit tobacco
VC	Ribes aureum var. gracillimum	Slender golden current
SR S3.2, CRPR: 1B.2, VC	Sagittaria sanfordii	Sanford's arrowhead
VC	Stillingia linearifolia	Narrow-leaved stillingia

Sources: CCH, 2014; CDFW, 2014; CNPS, 2014; and Ventura County, 2012b.
Federal Rankings:
END – Federally Endangered
THR – Federally Threatened
State Rankings (SR):
END – State Endangered
THR – State Threatened
S1–Less than 6 existing occurrences OR less than 100 individuals
S2–Between 6-20 existing occurrences OR between 1000-3000 individuals
S3–Between 21-100 existing occurrences OR between 3000-10,000 individuals
S4- Apparently secure within California; this rank is clearly lower than S3 but factors exist to cause some concern; i.e. there is some threat, or somewhat narrow habitat. NO THREAT RANK.
.1 – Very threatened
.2 – Threatened
.3 – No current threats known

CRPR Rankings:
CRPR 1A – Presumed extinct in California
CRPR 1B – Rare or endangered in California and elsewhere
CRPR 2A – Presumed extinct in California, more common elsewhere
CRPR 2B – Rare or endangered in California, more common elsewhere
CRPR 3 – More information needed
CRPR 4 – Limited distribution (Watch List)
0.1 = Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2 = Fairly endangered in California (20-80% occurrences threatened)
0.3 = Not very endangered in California (<20% of occurrences threatened or no current threats known)
County Rankings:
VC – Ventura County Locally Important Species

C.4C Ecological Communities

The project area supports a variety of natural and disturbed vegetation communities and land forms. In addition, large tracts of invasive non-native species dominated by giant reed have colonized portions of the area. Although riparian zones naturally account for a low percentage of the total landscape (often less than one percent), they typically accommodate a disproportionately high number of species and provide a larger degree of ecological function than surrounding upland areas (Fischer and Fischenich, 2000). According to Sawyer et al. (2009), 19 vegetation communities/habitat types were mapped within the project area. These include the following:

- Agriculture
- Arroyo willow thicket
- Black cottonwood forest
- California sagebrush scrub
- Cattail marsh
- Coyotebush scrub
- Developed
- Eucalyptus grove
- Fremont cottonwood forest
- Giant reed breaks
- Maintained landscape
- Mulefat thickets
- Myoporum stands
- Quailbush scrub
- Ruderal
- Shining willow thicket
- Sparely vegetated sandy wash
- Upland mustards
- Vegetation management zone

C.4C(1) Sensitive Plant Communities

Sensitive vegetation communities are defined by CDFW as those "...communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects" (2009). The literature review conducted for the project determined that one sensitive vegetation community, southern riparian scrub, is known to occur within or in the vicinity of the project area (CDFW, 2013).

Field surveys conducted in 2014 determined that the project area supports a variety of riparian communities that match the general habitat requirements of southern riparian scrub. These include areas mapped as arroyo willow thickets, shining willow thickets, and mulefat thickets. The habitat requirements of southern cottonwood willow riparian forest, a community considered sensitive by the CDFW, while not reported in the CNDDB as occurring in the project area, generally match portions of the site mapped as Fremont cottonwood forest and black cottonwood forest.

Construction and operation of the project could result in significant impacts to sensitive vegetation communities, due to the extent and type of work that would occur adjacent to and on the terraces of the Santa Clara River. Therefore potential effects to these communities will be analyzed in the context of an EIR.

C.4C(2) Waters and Wetlands

The Santa Clara River is known to support areas that meet the State or federal criteria for jurisdictional waters or wetlands. To evaluate the potential for these features in the project area, Aspen conducted an assessment of jurisdictional wetlands, other "waters of the U.S.," and waters of the State in February and March 2014. The project area was found to support CDFW jurisdictional waters, Corps jurisdictional wetlands, and Corps non-wetland waters. Construction and operation of the project could result in direct and indirect impacts to jurisdictional features. These impacts have the potential to be significant. Therefore, potential effects to these features will be analyzed in the context of an EIR.

C.4C(3) Coastal Zone Environmental Sensitive Habitat Areas (ESHA)

The project area does not occur within the established Coastal Zone. Therefore, impacts to areas designated as Environmental Sensitive Habitat Areas are not expected to occur, and this issue will not be further addressed in the EIR.

C.4C(4) Designated Critical Habitat

Designated and/or mapped critical habitat for the southern California steelhead trout distinct population segment (DPS) is present in the project area (CalFish, 2014). In addition, critical habitat for the southwestern willow flycatcher is present from the Santa Clara River estuary (approximately 2.0 miles downstream of the project area) upstream to Interstate 5 (USFWS, 2013). Designated critical habitat for least Bell's vireo does not occur in the project area, but is present upstream near the unincorporated town of Piru in Ventura County.

Construction and operation of the project could result in direct and indirect impacts to critical habitat, due to the extent and type of work that would occur adjacent to and on the terraces of the Santa Clara River. These impacts have the potential to be significant without mitigation. Therefore, potential effects to critical habitat will be analyzed in the context of an EIR.

C.4D Habitat Connectivity

The Ventura County *Initial Study Assessment Guidelines* (Ventura County, 2011) state that impacts to habitat connectivity could occur if a project would: (a) remove habitat within a wildlife movement corridor; (b) isolate habitat; (c) construct or create barriers that impede fish and/or wildlife movement, migration or long term connectivity; or (d) intimidate fish or wildlife via the introduction of noise, light, development or increased human presence.

Additionally, the Ventura County impact threshold criteria for impacts to habitat connectivity (Ventura County, 2011) state that the following impacts are potentially significant:

- A habitat connectivity feature (e.g., a linkage, corridor, chokepoint or stepping stone) would be severed, substantially interfered with, or potentially blocked.
- Wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction would be prevented or substantially interfered with.
- Wildlife would be forced to use routes that endanger their survival. For example, constraining a corridor for mule deer or mountain lion to an area that is not well-vegetated or that runs along a road instead of through a stream corridor or along a ridgeline.
- Lighting, noise, domestic animals, or other indirect impacts that could hinder or discourage fish and/or wildlife movement within habitat connectivity feature (e.g., a linkage, corridor, chokepoint or stepping stone) would be introduced.
- The width of linkage, corridor or chokepoint would be reduced to less than the sufficient width for movement of the target species (the species relying upon the connectivity feature). The adequacy of the width shall be based on the biological information for the target species; the quality of the habitat within and adjacent to the linkage, corridor, or chokepoint; topography; and adjacent land uses.

- For wildlife relying on visual cues for movement, visual continuity (i.e., lines-of-sight) across highly constrained wildlife corridors, such as highway crossing structures or stepping stones, would not be maintained.

The Santa Clara River corridor provides an important migratory corridor for southern California steelhead and plays an important role for resident and migratory birds. The linear configuration of riparian areas that meander through the project area create corridors for local animal movement, including travel to and from different habitat types.

Construction and operation of the project could result in direct and indirect impacts to wildlife movement in the project area, due to the extent and type of work that would occur adjacent to and on the terraces of the Santa Clara River. These impacts have the potential to be significant, and will therefore be analyzed in the context of an EIR.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. As addressed above, impacts to biological resources would have the potential to be significant and therefore would be cumulatively considerable. Cumulative impacts to biological resources will be examined further in the EIR.

C.5 AGRICULTURAL RESOURCES

The California Department of Conservation's (DOC's) Farmland Mapping and Monitoring Program (FMMP) classifies lands that have agricultural value. This system classifies land based upon the productive capabilities of the land, rather than the sole presence of ideal soil conditions. Land is divided into several categories of diminishing agricultural importance, as follows:

- **Prime Farmland and Farmland of Statewide Importance.** Areas considered to have the highest agricultural potential are classified as either Prime Farmland or Farmland of Statewide Importance. Prime Farmland is the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date. Farmland of Statewide importance is similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- **Unique Farmland or Farmland of Local Importance.** Unique Farmland is considered lesser quality soil used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date. Farmland of Local Importance consists of soils that are listed as Prime or Statewide that are not irrigated, and soils growing dryland crops–beans, grain, dryland walnuts, or dryland apricots.
- **Grazing Land, Urban and Built-up Land, or Other Farmland.** Lands that have lesser agricultural potential are classified as Grazing, Urban and Built-up Land, or Other. Grazing land is land on which the existing vegetation is suited to the grazing of livestock; Urban and Built-up Land is occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel; and Other Land is land that is not included in any other mapping

category, common examples include low density rural developments, vacant land, wetlands, and riparian areas not suitable for livestock grazing or agriculture.

The DOC's FMMP Ventura County Important Farmland 2010 map shows that the proposed project site is designated as Other Land. (DOC, 2010)

C.5A Soils

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goal

1.6.1-1 Preserve and protect irrigated agricultural lands as a nonrenewable resource to assure the continued availability of such lands for the production of food, fiber, and ornamentals.

Policy

1.6.2-1 Discretionary development located on land designated as Agricultural and identified as Prime Farmland or Farmland of Statewide Importance on the State's Important Farmland Inventory, shall be planned and designed to remove as little land as possible from potential agricultural production and to minimize impacts on topsoil.

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, any project that would result in the direct and/or indirect loss of soils designated Prime, Statewide Importance, Unique, or Local Importance would result in a significant impact if they meet or exceed the criteria shown in Table C.5-1 (Ventura County, 2011).

Table C.5-1. Significance Criteria for Agricultural Soils

General Plan Land Use Designation	Important Farmland Inventory Classification	Acres Lost
Agricultural	Prime/Statewide	5
	Unique	10
	Local	15
Open Space/Rural	Prime/Statewide	10
	Unique	15
	Local	20
All Others	Prime/Statewide	20
	Unique	30
	Local	40

Source: Ventura County, 2011.

Proposed Project Impacts: As noted above, the proposed project site involves land designated as Other Land by the FMMP, and would not permanently convert land that is used for agricultural production or activities. Consequently, the proposed project would not result in a direct and/or indirect loss of agricultural soils. No impact to agricultural soils would occur.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. At the east end of the project, the area primarily consists of Urban and Built-up Land. The proposed project is adjacent to areas of Prime Farmland and Farmland of Statewide Importance along the west end of the project. As such, there is potential for projects in the surrounding area to impact Important Farmland designated by the DOC; however, the proposed project would not contribute to adverse impacts on agricultural soils. Therefore, the project would not contribute to cumulative impacts related to agricultural soils.

C.5B Land Use Incompatibility

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

1.6.1-1 Preserve and protect irrigated agricultural lands as a nonrenewable resource to assure the continued availability of such lands for the production of food, fiber, and ornamentals.

1.6.1-2 Encourage the continuation and development of facilities and programs that enhance the marketing of County grown agricultural products.

Policies

1.6.2-6 Discretionary development adjacent to Agricultural-designated lands shall not conflict with agricultural use of those lands.

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, any project that is closer than the following distances will be considered to have a potentially significant environmental effect on agricultural resources: 300 feet, without vegetative screening, from a non-agricultural structure or use and common boundary line adjacent to classified farmland; or 150 feet, with vegetative screening, from a non-agricultural structure or use and common boundary line adjacent to classified farmland with vegetative screening (Ventura County, 2011).

Proposed Project Impacts: As noted above, the project site is designated as Other Land (DOC, 2010). Consequently, no agricultural activities occur within the project site. However, approximately 1,300 feet of Reach 1 (from the eastern boundary of the Bailard Landfill to Victoria Avenue) would parallel Prime Farmland, and the western staging area would be located at the northeast corner of the Bailard Landfill. The distance from active agricultural land is approximately 185 feet at the closest point and approximately 240 feet at the farthest point. The proposed project would not include vegetative screening along this portion of Reach 1. Construction is expected to occur over a 27-month period (beginning 4th Quarter 2015 through the 2nd Quarter 2018) and would proceed sequentially, initially starting within Reaches 1-3 (Phase 1) followed by Reach 4 (Phase 2). Construction activities including those associated with the western staging area would not be concentrated along this portion of Reach 1 for the entire 27-month period. As described in Section A.4.5 (see “Materials and Waste”), construction of the proposed project would include use of a water tank truck for dust abatement, which would prevent dust from leaving the work area and affecting adjacent active agricultural land. In addition, the improvements under the proposed project would occur to the existing levee in this area, and do not represent the introduction of new human-occupied structures to the project area. As such, the proposed project would not include a new land use that would present a disruption to or incompatibility

with agricultural lands. During the operation period, routine inspections and repairs would occur, which would be temporary activities of similar scope to current O&M activities, with the exception of additional vegetation clearing on the levee. Therefore, potential conflicts with existing agricultural land uses would be temporary, and impacts to agricultural land uses would not be significant. This issue will not be further addressed in the EIR.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. As discussed above, the proposed project would not substantially conflict with agricultural land uses. Therefore, its incremental contribution to conflicts with agricultural land uses would not be cumulatively considerable, and this issue will not be further addressed in the EIR.

C.6 SCENIC RESOURCES

The proposed project area is located along Santa Clara River near the City of Oxnard and across the river from the City of Ventura. The overall visual character of the proposed project area is characterized by urban development surrounding the river. Access for the proposed project site would be at both ends of SCR-3, using N. Victoria Avenue at the west end and N. Ventura Road at the east end. Highway 101 is considered a scenic resource since it is designated by Caltrans as an Eligible Scenic Highway. The *Ventura County General Plan* identifies the viewsheds of lakes (excluding land designated Existing Community) and State or County designated scenic highways as being worthy of special protection. These areas are designated as *Scenic Resource Areas*. As shown in the County's Resource Protection Map, the proposed project area is not within or near a *Scenic Resource Area* (Ventura County, 2010).

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

1.7.1-1 Preserve and protect the significant open views and visual resources of the County.

1.7.1-2 Protect the visual resources within the viewshed of lakes and State and County designated scenic highways, and other scenic areas as may be identified by an area plan.

Policies

1.7.2-1 Notwithstanding Policy 1.7.2-2, discretionary development which would significantly degrade visual resources or significantly alter or obscure public views of visual resources shall be prohibited unless no feasible mitigation measures are available and the decision-making body determines there are overriding considerations.

1.7.2-2 Scenic Resource Areas shall be subject to the Scenic Resource Protection (SRP) Overlay Zone provisions and standards set forth in the Non-Coastal Zoning Ordinance, which include the following:

(1) Any request for grading, structures, or vegetation removal per the standards of the SRP Overlay Zone shall be evaluated through a discretionary permit.

(2) Removal, damaging, or destruction of protected trees shall be in compliance with the County's "Tree Protection Regulations" of the Non-Coastal Zoning Ordinance.

(3) All discretionary development shall be sited and designed to:

a. Prevent significant degradation of the scenic view or vista;

b. Minimize alteration of the natural topography, physical features, and vegetation;

c. Utilize native plants indigenous to the area for re-vegetation, whenever possible;

d. Avoid silhouetting of structures on ridge tops that are within public view;

e. Use colors and materials that are designed to blend in with the natural surroundings;

f. Minimize lighting that causes glare, illuminates adjacent properties, or is directed skyward in rural areas.

(4) No on-site freestanding advertising signs in excess of four feet in height and no freestanding off-site advertising signs shall be permitted.

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, a project has the potential to create a significant impact to scenic resources if it:

- Is located within an area that has a scenic resource that is visible from a public viewing location; and,
- Would physically alter the scenic resource either individually or cumulatively when combined with recently approved, current, and reasonably foreseeable future projects; or
- Would substantially obstruct, degrade, or obscure the scenic vista, either individually or cumulatively when combined with recently approved, current, and reasonably foreseeable future projects.

In addition, a project would result in a potentially significant environmental impact if it is inconsistent with any of the applicable policies of the *Ventura County General Plan Goals, Policies and Programs*. (Ventura County, 2011)

Proposed Project Impacts: The east end of Reach 4 would end approximately 750 feet from Highway 101. Although Highway 101 is not an official scenic highway, it is eligible for the State Scenic Highway System (Caltrans, 2012). During the construction period, the construction staging area at the east end of the proposed project would be approximately 0.75 mile west of Highway 101. As such, the construction staging area would not be visible during the construction period. However, the construction activities and the new floodwall would be visible from the southbound lanes of Highway 101. The highway is raised in this area with a crossing over N. Ventura Road at the east end of the project site, so the construction activities would be temporarily visible to the public for the approximately 27-month construction period. This impact would not be significant. After construction, the floodwall would be visible to the public from Highway 101; however, the existing development surrounding Highway 101 in this area is characterized by residential and commercial. As such, the floodwall would not significantly alter the current view from Highway 101. Therefore, potential visual impacts to an Eligible State Scenic Highway would not be significant.

Construction of Reaches 1 through 3 would consist of levee improvements in an area that is immediately surrounded by agricultural lands, two golf courses and open space. As this is an existing land use, the levee improvements would not result in a dramatic difference in the existing landscape. As such, potential visual impacts within Reaches 1 through 3 would not be significant.

The area surrounding Reach 4 includes residential development south of the proposed floodwall, and the Santa Clara River and open space are located north of the floodwall. Construction of Reach 4 may result in impacts to the views of open space from the residences located on the south side of N. Ventura Road, as well as motorists, bicyclists, and recreational users of the landscaped pedestrian pathway on the south side of N. Ventura Road.

In Reach 4, a floodwall would be constructed on the river side of N. Ventura Road for approximately 950 feet. The floodwall would have a visible height of approximately six feet, and would be offset from the roadway approximately 17.5 feet to accommodate the future 16-foot-wide SCRT bikeway with adjacent curb and gutter. Where curb and gutter already exist, the floodwall would be offset by 16 feet. On the river side of the floodwall, a soil cement maintenance access road would be installed to a width of 15 feet from the base of the slope adjacent to the floodwall to permit regular facility inspections. The floodwall would then cross N. Ventura Road at the high point in the road. A six-foot high Floodbreak flood gate would be installed at this roadway crossing. The floodwall would then continue along the top of the existing slope on the south side (landside) of N. Ventura Road for approximately 860 feet, then transition to a 40-foot-long earthen embankment abutting and perpendicular to the south UPRR embankment. A similar 40-foot-long earthen embankment would be constructed on UPRR land northeast of the railroad embankment to tie into the flood protection structure to be constructed by The Village development. The floodwall would vary in height from six feet down to four feet near the El Rio Drain. To prepare the site for installation of the floodwall, approximately 1.5 acres of existing vegetation would be cleared along the alignment. A garden wall and wide landscaped sidewalk separate the homes from N. Ventura Road, providing both a noise and visual barrier between the homes and this highly traveled roadway. The garden wall varies in height from approximately six to eight feet, so it is unlikely that the floodwall would be visible from the bottom floor of these residences, but may be visible from the second floor and balconies of two-story residences. As a result of the vegetation removal and installation of floodwall, the viewshed would be altered for recreational users of the pedestrian pathway on the south side of N. Ventura Road. Although the floodwall would not exceed the height of the garden wall, potential visual impacts to local residents and recreational users of the pedestrian pathway on the south side of N. Ventura Road would occur, and a visual impact analysis will be provided in the EIR.

As discussed above, the height of the floodwall would vary from 4 to 6 feet. Graffiti on the proposed floodwall could be visible to the residences and recreational users of the pedestrian pathway located on the south side of N. Ventura Road, as well as to motorists traveling along N. Ventura Road. As discussed in Section A.4.5, graffiti on the floodwall would be removed as a part of regular maintenance. The VCWPD promptly removes graffiti with obscene comments or scenes; less offensive graffiti, such as tags, are removed as the VCWPD's budget allows. The VCWPD also implements a Graffiti Abatement Program, which works with volunteers to locate and remove graffiti from property owned by VCWPD (VCWPD, 2013). Under this program, the Graffiti Abatement Coordinator works with non-profit organizations and neighbors to address graffiti throughout the County by forming neighborhood graffiti patrols; working with the respective city's law enforcement; and recruiting and training volunteers to assist with graffiti reporting and removal in their own neighborhoods (VCWPD, 2013). Therefore, it is likely that graffiti would not immediately be removed and would present a visual impact to local residents. As such, this impact could be significant and will be discussed further in the EIR.

The proposed project's consistency with the goals and policies applicable to scenic resources is as follows: the proposed project area is not within a *Scenic Resource Area,* therefore the proposed project would not conflict with Goal 1.7.1-2 and Policy 1.7.2-2. However, the proposed project is a discretionary development that has the potential to alter or obscure views of the Santa Clara River, which may be inconsistent with Goal 1.7.1-1 and Policy 1.7.2-1. As such, consistency with the County's *General Plan* goals and policies for scenic resources will be discussed in the EIR.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. A cumulative impact to scenic vistas and highways would occur if impacts of the proposed project would combine with similar impacts of past, present, or reasonably foreseeable projects in the cumulative scenario. The closest cumulative projects to the proposed project include: The Village development, the Vineyard/Ventura Homes, Olivas Drive Extension, Santa Clara River Levee (SCR-1), Santa Clara River Bridge Mitigation Planting Project, and Santa Clara River Trail, all of which are located on the east of the proposed project area surrounding Reach 4. In addition, the Bailard Landfill Gas Field Project is located west of the project site and along the western portion of Reach 1. Construction and operation activities associated with these projects may result in temporary visual impacts due to construction, and/or structures that may permanently alter or obscure the views of the Santa Clara River area. These potential impacts may combine with the potentially significant visual impacts associated with Reach 4. This potential for the proposed project to have a cumulatively considerable impact on views of the Santa Clara River and views from Highway 101 will be analyzed in the EIR.

C.7 PALEONTOLOGICAL RESOURCES

The proposed project area is located within a flood plain of the Santa Clara River and is primarily underlain by artificial fill and Holocene aged Quaternary geologic units. The geologic units are active wash deposits of unconsolidated silt, sand, and gravel, stream terrace deposits of unconsolidated poorly sorted clayey sand and sandy clay with gravel, and alluvial deposits of unconsolidated poorly sorted clayey sand with some gravel (CGS, 2003). Reaches 1-3 of the proposed project are located along the existing SCR-3 levee, which is underlain by artificial levee fill and an unknown thickness of disturbed ground, and artificial fill related to the landfills and the existing maintenance road, which are both primarily underlain by Holocene aged stream terrace deposits. Reach 4 is located along N. Ventura Road in an area primarily underlain by river wash deposits with local artificial fill and disturbed material likely present along and below the road.

Artificial fill has zero paleontological significance due to its young age and disturbed nature (engineered placement). Furthermore, geologic units laid down in coarse sediments and high velocity environments such as river washes are unlikely to contain identifiable fossil resources, as the high energy depositional environment would likely have destroyed or damaged any fossil specimens. A search of the University of California Museum of Paleontology website indicates that no fossils have been collected from Holocene deposits within or near the project site (UCMP, 2014). Therefore, the paleontological importance of the river wash and flood plain deposits of the Santa Clara River flood plain underlying the proposed project is considered to be none to low.

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

1.8.1-1 Identify, inventory, preserve, and protect the paleontological and cultural resources of Ventura County (including archaeological, historical, and Native American resources) for their scientific, educational, and cultural value.

1.8.1-2 Enhance cooperation with cities, special districts, other appropriate organizations, and private landowners in acknowledging and preserving the County's paleontological and cultural resources.

Policies

1.8.2-1 Discretionary developments shall be assessed for potential paleontological and cultural resource impacts, except when exempt from such requirements by CEQA. Such assessments shall be incorporated into a County-wide paleontological and cultural resource database.

1.8.2-2 Discretionary development shall be designed or re-designed to avoid potential impacts to significant paleontological or cultural resources whenever possible. Unavoidable impacts, whenever possible, shall be reduced to a less-than-significant level and/or shall be mitigated by extracting maximum recoverable data. Determinations of impacts, significance, and mitigation shall be made by qualified archaeological (in consultation with recognized local Native American groups), historical, or paleontological consultants, depending on the type of resource in question.

1.8.2-3 Mitigation of significant impacts on cultural or paleontological resources shall follow the Guidelines of the State Office of Historic Preservation, the State Native American Heritage Commission, and shall be performed in consultation with professionals in their respective areas of expertise.

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, the geologic formation in which proposed projects would be located can be used to establish the likelihood of paleontological resources being present and their relative importance. Fossil remains are considered important if they are:

- well preserved
- identifiable
- type/topotypic specimens
- age diagnostic
- useful in environmental reconstruction
- represent rare and/or endemic taxa
- represent a diverse assemblage, and
- represent associated marine and non-marine taxa (Ventura County, 2011).

Vertebrate and mega-invertebrate fossils are considered highly important because they are comparatively rare and allow precise age determinations and environmental reconstructions for the strata in which they occur; micro-invertebrate fossils (microfossils) are much more abundant and, for this reason and because of their small size, would not be adversely impacted to the same degree as vertebrate and mega-invertebrate fossils (Ventura County, 2011). Direct impacts to paleontological resources include grading and excavation of fossiliferous rock, which can result in the loss of

scientifically important fossil specimens and associated geological data. Indirect impacts include increased access opportunities and unauthorized collection of fossil materials (Ventura County, 2011).

Proposed Project Impacts: Ground disturbing activities, as described in Section A.4 (Project Description) for all of the project options, could have the potential to damage paleontologic resources; however, the artificial fill and geologic units underlying the SCR-3 Project have no to low paleontologic sensitivity. The Ventura County *Initial Study Assessment Guidelines* (Ventura County, 2011) specify that when a proposed project's disturbance is located in an area of Quaternary Deposits, or units with Moderate, Low, or None paleontology sensitivity, no further assessment needs be done for the preliminary assessment and no impact shall be concluded. Additionally, mitigation measures would be required only if fossil remains are found during construction. Due to the low paleontologic importance of the river wash and flood plain deposits, the lack of any known fossils within them, and the zero potential to encounter fossils within the levee fill, no significant paleontological impacts would occur.

Cumulative Impacts: According to the Ventura County *Initial Study Assessment Guidelines*, cumulative impacts associated with paleontological resources include all projects that contribute to the progressive loss of exposed rock in Ventura County which can be studied and prospected for fossil remains. The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. Cumulatively significant impacts could occur if these projects either (1) consistently result in the discovery (and possible damage) of fossil remains, or (2) consistently occur within areas that are considered to have a "High," "Moderate to High," or "Moderate" paleontological importance. As addressed above, the proposed project would have no impact on paleontological resources. Therefore, the proposed project would not contribute to impacts related to paleontological resources in a manner that would be cumulatively considerable.

C.8 CULTURAL RESOURCES

Information presented in this section was compiled from the *Phase 1 Archaeological Study for the Santa Clara River Levee Improvements Downstream of Highway 101 (SCR-3) Project, City of Oxnard, Ventura County, California* prepared by Historical Environmental Archaeological Research Team (HEART, 2014), and the *Section 106 and CEQA Historic Resources Report for the Santa Clara River Levee Improvements Downstream of Highway 101 (SCR-3) Project, Ventura County, California* prepared by San Buenaventura Research Associates (SBVRA, 2014). Both reports are included as Appendix 2. The Phase 1 Archaeological Study, conducted in February 2014, included the following:

- Performed a record search at the South Central Coastal Information Center, California State University Fullerton (SCCIC-CSUF). The search included a review of all recorded archaeological sites within one-half mile of the proposed project area, all cultural resources reports on file with the SCCIC-CSUF, the listings of the California Register of Interest (PHI), California Historical Landmarks (CHL), and California Register of Historic Resources Inventory (HRI).
- Contacted the Native American Heritage Commission (NAHC) with regard to sites in the Sacred Lands File database.
- Conducted an on-foot surface reconnaissance of the entire project area.
- Prepared a report summarizing the results of the records search and field phases.

The Historic Resources Report was completed in September 2014 and identified the Southern Pacific (now Union Pacific) railroad trestle over the Santa Clara River as a significant historic resource within the

project site, documented the history of this structure, determined its eligibility for placement on the National and California Registers and listing as a Ventura County Landmark, and evaluated potential impacts of various project alternatives on the structure.

State Regulations

The principal State regulations relating to preserving historic and archaeological properties are Public Resources Code Section 5020 et seq., Title 14 California Code of Regulations Section 4850 et. seq., CEQA Statue Sections 21083.2 and 21084.1, and CEQA Guidelines Section 15064.5. The CEQA Statute and Guidelines include procedures for identifying, analyzing, and disclosing potential adverse impacts to historical resources, which include all resources listed in or formally determined eligible for the National Register of Historic Places (NRHP), California Register of Historic Resources (CRHR), or local registers. CEQA further defines a "historical resource" as a resource that meets any of the following criteria:

- A resource listed in, or determined eligible for listing in the NRHP or CRHR.
- A resource included in a local register of historic resources, as defined in Section 5020.1(k) of the Public Resources Code, unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- A resource identified as significant (e.g., rated 1-5) in a historical resource survey meeting the requirements of Public Resources Code Section 5024.1(g) (Department of Parks and Recreation (DPR) Form 523), 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, provided the determination is supported by substantial evidence in light of the whole record. Generally, a resource is considered "historically significant" if it meets the criteria for listing on the CRHR (CEQA Guidelines Section 15064.5).

The CRHR is a listing of State of California resources significant within the context of California's history, and includes all resources listed in or formally determined eligible for the NRHP. The CRHR is a state-wide program of similar scope to the NRHP. In addition, properties designated under municipal or county ordinances are also eligible for listing in the CRHR. A historic resource must be significant at the local, state, or national level under one or more of the following criteria defined in the California Code of Regulations Title 14, Chapter 11.5, Section 4850:

1. It is associated with events or patterns of events that made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
2. It is associated with the lives of persons important to local, California, or national history; or
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values; or
4. It has yielded, or has the potential to yield information important to the prehistory or history of the local area, California, or the nation.

In practice, unevaluated resources usually are treated as potentially significant. In addition, cultural resources must also possess integrity of location, design, setting, materials, workmanship, feeling, and association. The CRHR criteria are similar to NRHP criteria, and are tied to CEQA, as any resource that meets the above criteria is considered a historical resource under CEQA.

Under CEQA Statute Section 21083.2, a "unique" archaeological resource is an object, artifact, or site that is clearly shown to (1) contain information needed to answer important scientific research questions, and that there is a demonstrable public interest in that information; or (2) have a special and particular quality, such as the oldest of its type or the best available example of its type; or (3) is directly associated with a scientifically recognized important prehistoric or historic event or person.

Guidelines for CEQA require identification of project effects on cultural resources (historic-era and prehistoric-era archaeological sites, buildings, and traditional cultural properties) determined legally important. CEQA defines such resources as those eligible for listing in the CRHR using Criteria for Evaluating the Significance of Historical Resources (Assembly Bill 2881, signed into law on September 27, 1992).

CEQA also addresses the protection of historic and prehistoric human remains. These remains may consist of historic-period burials or cemeteries, and Native American remains that occur as isolated features or in archaeological site contexts. Native American-sanctified cemeteries, places of worship, ceremonial and religious sites, or sacred shrines situated on public property must be protected from vandalism and damage under Public Resources Code 5097.9.

Public Resources Code Sections 5097.98(b) and (e) require a landowner on whose property Native American human remains are found to limit further development activity in the vicinity until he/she confers with the NAHC-identified "most likely descendant" to consider treatment options. In the absence of a "most likely descendant" or of a treatment acceptable to all parties, the landowner is required to re-inter the remains elsewhere on the property in a location not subject to further disturbance. Public Resources Code Section 5097.99 establishes as a felony the acquisition, possession, sale, or dissection with malice or wantonness Native American remains or funerary artifacts. Finally, Section 5097.991 establishes as state policy the repatriation of Native American remains and funerary artifacts.

Local Regulations

Understandably, there is some significant overlap between the State regulations and those of Ventura County. For example, according to the Ventura County Initial Study Assessment Guidelines, and for the purposes of CEQA, a unique archaeological resource is an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria (Ventura County, 2011):

- Contains information needed to answer important scientific research question and that there is a demonstrable public interest in that information.
- Has a special and particular quality such as oldest of its type or best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.
- Identified California "VEN" site: "Ven" means Ventura; A222 indicates the recorded archaeological investigation site number.

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

1.8.1-1 Identify, inventory, preserve, and protect the paleontological and cultural resources of Ventura County (including archaeological, historical, and Native American resources) for their scientific, educational, and cultural value.

1.8.1-2 Enhance cooperation with cities, special districts, other appropriate organizations, and private landowners in acknowledging and preserving the County's paleontological and cultural resources.

Policies

1.8.2-1 Discretionary developments shall be assessed for potential paleontological and cultural resource impacts, except when exempt from such requirements by CEQA. Such assessments shall be incorporated into a Countywide paleontological and cultural resource database.

1.8.2-2 Discretionary development shall be designed or re-designed to avoid potential impacts to significant paleontological or cultural resources whenever possible. Unavoidable impacts, whenever possible, shall be reduced to a less-than-significant level and/or shall be mitigated by extracting maximum recoverable data. Determinations of impacts, significance, and mitigation shall be made by qualified archaeological (in consultation with recognized local Native American groups), historical, or paleontological consultants, depending on the type of resource in question.

1.8.2-3 Mitigation of significant impacts on cultural or paleontological resources shall follow the Guidelines of the State Office of Historic Preservation, the State Native American Heritage Commission, and shall be performed in consultation with professionals in their respective areas of expertise.

1.8.2-4 Confidentiality regarding locations of archaeological sites throughout the County shall be maintained in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts.

1.8.2-5 During environmental review of discretionary development the reviewing agency shall be responsible for identifying sites having potential archaeological, architectural, or historical significance and this information shall be provided to the County Cultural Heritage Board for evaluation.

1.8.2-6 The Building and Safety Division shall utilize the State Historic Building Code for preserving historic sites in the County.

C.8A Archaeological

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, the significance of an archaeological resource is materially impaired when a project: (1) demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of *historical resources* pursuant to Section 5020.1(k) requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not archaeologically or culturally significant; or (2) demolishes or materially alters in an adverse manner those physical characteristics of an archaeological

resource that convey its archaeological significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for purposes of CEQA (Ventura County, 2011).

Proposed Project Impacts: As discussed in Appendix 2, both a records search and on-foot field inspection indicated that no previously recorded archaeological resources that meet eligibility or significance criteria under the CRHR or the NRHP exist within the boundaries of the proposed project (HEART, 2014). Any proposed improvements or modifications within the project area would have no known adverse physical or visual impacts on known archaeological resources. However, the nature of a record search and walkover can only confidently assess the potential for encountering surface cultural resource remains; therefore, if unknown, buried resources are encountered during construction, the following mitigation measures would be implemented:

MM CUL-1 In the event that archaeological or historic resources are found during project implementation, the on-site supervisor shall contact an approved archaeological consultant immediately. Additionally, the on-site supervisor shall immediately halt all ground-disturbing activities at the discovery site and within 100 feet of it until the discovery has been evaluated by the approved archaeological consultant and all appropriate agencies have been notified. If the discovery is recommended as eligible for listing in the CRHR, mitigation of the impacts may include archaeological data recovery and/or monitoring.

MM CUL-2 If human remains are encountered during excavations associated with this project, all work must halt, and the County Coroner must be notified (Section 7050.5 of the California Health and Safety Code). The coroner will determine whether the remains are of forensic interest. If the coroner determines that the remains are subject to his or her authority and that the remains are Native American in origin, the coroner will contact the Native American Heritage Commission (NAHC). The NAHC will identify the most likely descendant (MLD), who will be responsible for the ultimate disposition of the remains, as required by Section 5097.98 of the Public Resources Code. The MLD should make his/her recommendations within 48 hours of their notification by the NAHC. This recommendation may include (A) the nondestructive removal and analysis of human remains and items associated with Native American human remains; (B) preservation of Native American human remains and associated items in place; (C) relinquishment of Native American human remains and associated items to the descendants for treatment; or (D) other culturally appropriate treatment.

With implementation of Mitigation Measures CUL-1 and CUL-2, impacts to archaeological resources would not be significant.

Cumulative Impacts: Section C of this Initial Study, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. In reviewing the list of cumulative projects provided in Table C-1, The Village (Wagon Wheel Development Project) activities would have the greatest potential to result in cumulative impacts, as these activities could occur at the same time as construction of the proposed project and adjacent to Reach 4 of the proposed project. The Bailard Landfill Gas Field Project would also have the potential for earth-disturbing activities in proximity to the proposed project and potentially at the same time. However, as addressed above, it is highly unlikely that the proposed project would affect archaeological resources and, in the event that a discovery is made, Mitigation Measures CUL-1 and CUL-2 would be implemented to ensure that potential effects are not significant. With the implementation of these measures, the proposed project's contribution to archaeological resources impacts would not be cumulatively considerable.

C.8B Historical

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, the significance of an historic resource is materially impaired when a project: (1) demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; (2) demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the Public Resources Act or its identification in a historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; (3) demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA; or (4) demolition, relocation, or alteration such that the significance of an historical resource would be impaired (Ventura County, 2011).

Proposed Project Impacts: As discussed above in Section C.8A, both a records search and on-foot field inspection of the subject property indicate that the Southern Pacific railroad trestle over the Santa Clara River appears eligible for listing in the CRHR under Criterion 1 and the NRHP under Criterion A, for its association with the establishment of the Oxnard Sugar Beet Factory and the economic development of the Oxnard Plain (SBVRA, 2014). The completion of the first section of the Montalvo Cutoff in 1898, connecting Oxnard to the north county and the main Southern Pacific line (now Union Pacific), proved to be a pivotal event in the development of the agricultural potential of the Oxnard Plain, enabling the success of the beet sugar industry in Ventura County, and ensuring the future of the Oxnard townsite. The railroad also facilitated the marketing of the other important agricultural products of the Oxnard Plain, including lima beans, barley, row crops, and citrus. Originally built as a spur line, the Montalvo Cutoff ultimately dictated the route of the main Southern Pacific Railroad connection between Los Angeles and Ventura as it was completed in 1904 through the communities of Camarillo, Somis, Moorpark, and Santa Susana (Simi Valley). The eligibility of this property under NRHP Criterion A was established through a formal concurrence process with the California State Historic Preservation Office (SHPO) in 2000.

The Southern Pacific railroad trestle may also be eligible under NRHP Criterion B and CRHR Criterion 2 for its association with the Oxnard Brothers. Few if any other extant properties in the county are more directly connected to their efforts in establishing the sugar beet industry in Ventura County and their founding of the town of Oxnard. This property may also be eligible under NRHP Criterion C and CRHR Criterion 3, as it appears to be the longest and best preserved example of steel girder bridge construction in Ventura County.

As addressed in Section A.4.5 (Proposed Project), implementation of the proposed project would not involve the modification or demolition of any existing structures, other than the SCR-3 levee system. While Reach 4 construction would involve placement of fill against the northeast and southwest sides of the railroad embankment to the southeast of the railroad bridge, this would slightly reduce the historic property's integrity of setting, but in an area already contributing minimal setting integrity due to existing encroachment of urban uses (residences, road, and commercial center). The eligibility of the

property for the NRHP, CRHR, or Ventura County Landmark designation would not be adversely impacted by this design. Therefore, the proposed improvements would not have significant physical or visual impacts on known historic archaeological resources. However, the nature of a record search and walkover can only confidently assess the potential for encountering surface cultural resource remains; therefore, if unknown, buried historical resources are encountered during construction Mitigation Measure CUL-1 would be implemented. As such, impacts to historical resources would be reduced to a less-than-significant level.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the proposed project area. These identified cumulative projects could potentially impact historic resources individually (and thus potentially cumulatively), especially considering The Village development which is located in close proximity to the CRHR-eligible Southern Pacific railroad trestle. Because the proposed project would not adversely affect historic resources, its implementation would not contribute to cumulative impacts to any known historic resources. However, as described above, it is possible that unknown, buried historical resources may be encountered during construction, necessitating the implementation of Mitigation Measure CUL-1 to avoid significant impacts if resources are encountered. With the implementation of this measure, the proposed project's impact on historic resources would not be cumulatively considerable.

C.9 COASTAL BEACHES AND SAND DUNES

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

1.10.1 Protect and conserve coastal beaches and sand dunes.

Policies

1.10.2-1 Discretionary development which would cause significant impacts to coastal beaches or sand dunes shall be prohibited unless the development is conditioned to mitigate the impacts to less-than-significant levels.

1.10.2-2 Discretionary developments which would result in the removal of dune vegetation shall be conditioned to replace the vegetation.

1.10.2-3 All shoreline protective structures which alter natural shoreline processes shall be designed to eliminate or mitigate adverse impacts on local shoreline sand supplies.

1.10.2-4 Discretionary permits for all mining activities in County streams and rivers shall incorporate all feasible measures to mitigate beach sand replenishment impacts.

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, a proposed project would have a significant environmental impact if it causes a direct or indirect adverse physical change to a coastal beach or sand dune (Ventura County, 2011).

Proposed Project Impacts: The proposed project is located approximately three miles east of the nearest coastline, which is outside of the Coastal Zone of the County's Local Coastal Program. Within

Reaches 1-3 the proposed project would raise portions of the existing earthen levee (Options 1A and 1B) and/or fill in the River Ridge Golf Course swale (Option 1B only), and in Reach 4 would include a new floodwall atop the existing levee along N. Ventura Road to the north edge of the UPRR property. In addition, vegetation clearing activities would occur along Reaches 1-4. Currently, vegetation clearing occurs in Reaches 1-3, but not at all in Reach 4. During operations, routine inspections and repairs would occur, which would be temporary activities of similar scope to current O&M activities, with the exception of the additional vegetation clearing on the levee. Construction of the proposed project, the O&M activities, and vegetation removal activities would not occur within the main river channel, and therefore, would not affect sediment within the channel or transport to the coast. As such, the proposed project would not create barriers to sand dune replenishment or disturbance of sand dune vegetation. The proposed levee improvement activities would not affect coastal beaches and sand dunes.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. The impacts associated with the proposed project would not impact coastal beaches or sand dunes; therefore, the proposed project would have no potential to combine with similar impacts of other past, present, or reasonably foreseeable projects.

C.10 FAULT RUPTURE

The proposed project is located within the seismically active southern California region that is traversed by faults of the Transverse Ranges fault systems. The Transverse Ranges fault system consists primarily of reverse and thrust faults accommodating tectonic compressional stresses in the region. The effects of this deformation include mountain building, basin development, deformation of Quaternary marine terraces, widespread regional uplift, and generation of earthquakes. Active reverse or thrust faults in the Transverse Ranges include blind[1] thrust faults responsible for the 1994 Northridge Earthquake, and the frontal faults responsible for uplift of the Santa Monica, Santa Susana, and Santa Ynez Mountains. The frontal faults include the Malibu Coast, Santa Monica-Hollywood, Santa Susana, and Santa Ynez faults. Several major active and potentially active faults zones of the Transverse Ranges fault system with potential for fault rupture traverse Ventura County in an approximate east-west direction. Two active reverse fault zones and one potentially active thrust fault are located in the project area, the Ventura-Pitas Point fault zone, Simi-Santa Rosa fault zone, and Oak Ridge fault, respectively.

Ventura-Pitas Point fault zone (onshore segment): The Ventura fault, the onshore portion of the Ventura-Pitas Point fault, is a north-dipping reverse-oblique[2] slip fault that trends east-west though the City of Ventura. The fault is approximately parallel to the project alignment and is located about 2.9 miles north of SCR-3 at its closest point. The estimated slip rate on this fault ranges from 0.2 to 1 millimeter per year (mm/yr) (Perry and Bryant, 2002) and it has an estimated magnitude (M) of M6.8 to M7.0 (CGS, 2008). The Ventura fault lies in a transition zone between two major north-dipping faults, the San Cayetano and Oak Ridge faults, and likely accommodates significant compression between the

[1] Blind faults have no surface expression and have been located using subsurface geologic and geophysical methods.

[2] A reverse-oblique fault is a fault that exhibits both reverse and strike slip movement. A reverse fault has vertical movement with the block above the fault moving up relative to the block below the fault. In a strike-slip fault, the movement of the blocks on opposite sides of a fault is horizontal.

two faults. High resolution seismic data show that it deforms upper Pleistocene and younger strata, and the fault has been mapped as having caused surface displacement within a young alluvial fan (Hubbard et. al., 2013). The Ventura fault is Alquist-Priolo zoned (CGS, 1978).

Simi-Santa Rosa fault zone: The Simi-Santa Rosa fault zone consists of active north-dipping reverse faults with a left-lateral component. The fault is approximately parallel to and east of SCR-3, located about 5 miles east of the eastern end of SCR-3. The estimated slip rate on this fault ranges from 0.2 to 1 mm/yr (Treiman, 2000) and has an estimated magnitude of M6.8 to M7.0 (CGS, 2008). It is Alquist-Priolo zoned where it is visible at the surface in the Camarillo Hills, along the northeastern edge of the Simi Valley, and along the northern edge of the Santa Rosa Valley (CGS, 1998). The surface trace of the fault disappears west of the Santa Rosa Valley, as the fault zone enters the deep sediment filled Oxnard Plain of the Ventura Basin.

Oak Ridge fault (onshore segment): The onshore segment of the Oak Ridge fault is a south dipping reverse fault that trends generally east-west from the town of Piru to the Pacific coast. The onshore segment of the Oak Ridge fault is located approximately 1.5 miles north of SCR-3. The onshore section of the fault has an estimated slip rate between 3.0 to 6.0 mm/yr (SCEDC, 2014) and an estimated magnitude of M7.1 to M7.2 (CGS, 2008). The fault is considered primarily Late Quaternary in age, however several Holocene segments have been mapped between the unincorporated community of Bardsdale and the City of Fillmore in Ventura County. Much of the onshore trace is difficult to discern due to being obscured by the course of the Santa Clara River. Although portions of the fault have been Alquist-Priolo zoned, the closest section is located almost 15 miles east of the eastern end of the proposed project (CGS, 1999).

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

2.2.1-1 Minimize the risk of loss of life, injury, collapse of habitable structures, and economic and social dislocations resulting from fault rupture.

Policies

2.2.2-1 Detailed geologic investigations performed by Certified Engineering Geologists are required for all proposed habitable structures in Earthquake Fault Hazard Zones as defined by the Alquist-Priolo Earthquake Fault Zoning Act. Development will not be allowed unless the investigation confirms that the proposed habitable structures are not subject to fault rupture hazard. Proposed developments that are located at the ends of the Earthquake Fault Hazard Zones may be required, at the discretion of the Public Works Agency Certified Engineering Geologist, to be evaluated for earthquake fault rupture hazards.

2.2.2-2 No habitable structures shall be located across or on any active fault zone as defined by the Alquist-Priolo Earthquake Fault Zoning Act. Furthermore, no habitable structures shall be located within 50 feet of the mapped trace of an active fault unless an appropriate geologic investigation and report demonstrates that the site is not subject to a fault rupture hazard.

2.2.2-3 All development projects involving construction within Earthquake Fault Hazard Zones shall be reviewed by the Public Works Agency Certified Engineering Geologist in accordance with the

requirements of the Alquist-Priolo Earthquake Fault Zoning Act and the policies and criteria established by the State pursuant to said Act.

2.2.2-4 Land in Earthquake Fault Hazard Zones and potentially active fault areas should, where feasible, be designated Open Space or Agriculture on General Land Use Maps.

2.2.2-5 Roads, streets, highways, utility conduits, and oil and gas pipelines, shall be planned to avoid crossing active faults where feasible. When such location is unavoidable, the design shall include measures to reduce the effects of any fault movement as much as possible.

2.2.2-6 No new essential facilities, special occupancy structures, or hazardous materials storage facilities shall be located within active fault zones unless it can be adequately demonstrated that the facilities are not subject to fault rupture hazard.

Significance Criteria: As described in the Ventura County *Initial Study Assessment Guidelines*, a project is potentially at risk with respect to fault rupture if it is located within: (1) a State of California designated Alquist-Priolo Special Fault Study Zone; (2) a County designated Fault Hazard Area (Ventura County, 2011). Impacts from primary fault rupture and ground displacement are generally related to damage or collapse of structures and subsequent injury to people.

Proposed Project Impacts: The SCR-3 Project and it associated components are not located within or cross a State of California designated Alquist-Priolo Special Fault Study Zone or County designated Fault Hazard Area (Ventura County, 2013). Additionally, no known active or potentially active faults cross or trend towards the proposed project; therefore, no impacts from surface fault rupture would occur along SCR-3.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. As discussed above, the proposed project does not cross any known active, potentially active, or Alquist-Priolo zoned faults and therefore no impact from fault rupture would occur to the SCR-3 Project. The proposed project would not contribute to fault rupture impacts; therefore, the project would not contribute to cumulative impacts related to fault rupture.

C.11 GROUND SHAKING

The proposed project is located within the seismically active southern California region and will likely be subject to strong ground shaking associated with earthquakes on faults of both the San Andreas and Transverse Ranges fault systems. Ground shaking results in seismic waves within the earth which are caused by the sudden release of accumulated stress and kinetic energy during an earthquake. These seismic waves can cause direct damage to structures, utilities and transportation corridors due to shaking and shearing of components; cause landslides, rockfalls and embankment failures; and induce liquefaction failure in certain cohesionless soils. Earthquake induced ground shaking commonly causes greater damage to structures than fault rupture as it occurs over a larger area and can cause poorly engineered structures to fail.

The intensity of the seismic shaking, or ground motion, during an earthquake is dependent on the distance between the project area and the epicenter of the earthquake, the magnitude of the earthquake, and the geologic conditions underlying and surrounding the project area. Earthquakes

occurring on faults closest to the project area would most likely generate the largest ground motion. The intensity of earthquake induced ground motions can be described using peak site accelerations, represented as a fraction of the acceleration of gravity (g). Data from the United States Geological Survey (USGS) National Seismic Hazard Maps was used to estimate peak ground accelerations[3] within the project area. The maps used depict peak ground accelerations with a two percent probability of exceedance in 50 years, which corresponds to a return interval of 2,475 years for a maximum considered earthquake. Peak ground accelerations within the project area range from 1.0 to 1.1g (USGS, 2014), which corresponds to a potential for strong earthquake induced ground shaking.

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

2.3.1 Minimize the risk of loss of life, injury, collapse of habitable structures, and economic and social dislocations resulting from ground shaking.

Policies

2.3.2 All structures designed for human occupancy shall incorporate engineering measures to mitigate against risk of collapse from ground shaking.

Significance Criteria: As discussed in the Ventura County *Initial Study Assessment Guidelines*, ground shaking hazards are everywhere throughout Ventura County and are accommodated by the Ventura County Building Code (Ventura County, 2011). Ground shaking hazard areas are areas that can be expected to experience intense ground shaking during a maximum probable earthquake, with the shaking intensity depending primarily on the earthquake magnitude, distance and direction from the site, soil and bedrock conditions, and depth to groundwater. The potential for the highest amplification of ground shaking in Ventura County occurs in the Oxnard Plain and the Santa Clara River Valley in the southern half of the County, and in the Lockwood, Cuyama, and Cuddy Valleys in the northern half (Ventura County, 2013).

According to the Ventura County *Initial Study Assessment Guidelines*, threshold criteria for determining whether a project is potentially susceptible to damage from seismically induced ground shaking are whether the proposed structure is designed to be built in accordance with all applicable requirements of the Ventura County Building Code, and if not then the project has the potential to expose people or other structures to potential significant adverse effects, including the risk of loss, injury or death involving ground shaking hazards; if the project will be built in accordance with all applicable requirements of the Ventura County Building Code, then the project design will reduce the adverse effects of ground shaking to a less-than–significant level.

Proposed Project Impacts: Impacts associated with earthquake induced ground shaking primarily result from damage to, or collapse of buildings or other structures. Construction for the SCR-3 Project in Reaches 1-3 would include raising the existing levee height along 8,875 feet of the levee for Option 1A (the full length of Reaches 1-3) or along 3,575 feet of the levee for Option 1B (Reaches 1 and 3); adding a

3 Peak ground acceleration is the maximum acceleration experienced by a particle on the Earth's surface during the course of an earthquake, and the units of acceleration are most commonly measured in terms of fractions of g, the acceleration due to gravity (980 cm/sec2).

375-foot-long retaining wall around the River Ridge Golf Course maintenance yard for Option 1A (Reach 2); and installation of 350 feet of sheet pile at the east end of Reach 3 for both Options 1A and 1B. Construction along Reach 4 would include an approximately 950-foot long floodwall along the river side, an 860-foot-long floodwall along the land side, approximately 80 feet of earth embankment abutting the southwest and the northeast edges of the UPRR right-of-way, and a flood gate in N. Ventura Road to connect the river and land side floodwalls. Placement of the new levee fill would be consistent with Corps requirements and the Ventura County Flood Control District Design Manual, which is more relevant to the construction of flood control facilities than the County of Ventura Building Code Requirements. Construction of the retaining wall and Reach 4 floodwall and flood gate would also follow Ventura County Flood Control District Design Manual Requirements. In addition, a geotechnical study is in progress to evaluate site conditions and special design needs for the proposed improvements in Reaches 1-4; the ultimate project design would incorporate recommendations presented in the geotechnical report related to seismic ground shaking. Proposed recommendation for identified seismic hazards within Reaches 1-3 may include slightly increasing the height of the proposed levee to compensate for anticipated seismic settlement and post-seismic event reconstruction of affected levee slopes and embankments to address lateral spread and/or slope deformation. Proposed mitigation concepts for identified seismic hazards within Reach 4 may include post-seismic event reconstruction or repair of affected wall segments. Compliance with the design manual and geotechnical recommendations would reduce the potential for damage associated with seismically-induced ground shaking along the SCR-3 Project. Therefore, although the project area would have the potential for strong ground shaking in the event of a large regional or local earthquake, impacts would not be significant.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. However, seismically induced ground shaking hazards and the potential effects of ground shaking related damage would affect each project individually so there would be no cumulative impacts. Additionally, as addressed above, ground shaking impacts associated with the proposed project would not be significant.

C.12 LIQUEFACTION

Liquefaction is the phenomenon in which saturated granular sediments temporarily lose their shear strength during periods of earthquake-induced strong ground shaking and behave for a short time as a fluid rather than a solid mass. The susceptibility of a site to liquefaction is a function of the depth, density, and water content of the granular sediments and the magnitude and frequency of earthquakes in the surrounding region. Saturated, unconsolidated silts, sands, and silty sands within 50 feet of the ground surface are most susceptible to liquefaction. Liquefaction-related phenomena include lateral spreading, ground oscillation, flow failures, loss of bearing strength, subsidence, and buoyancy effects (Youd and Perkins, 1978). A structure that is located within a liquefaction zone may lose support under its foundation, which could cause the structure to tilt or settle into the ground surface and potentially collapse (Ventura County, 2011).

The project area is located within a mapped liquefaction hazard zone, as determined by the California Geological Survey (CGS, 2002). Groundwater levels are relatively shallow beneath the SCR-3 Project area, ranging from about 10 to 20 feet below ground surface (VRSD, 2012; 2013) and the area is underlain by potentially liquefiable unconsolidated river wash and stream terrace deposits (CGS, 2003).

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

2.4.1 Minimize the risk of loss of life, injury, collapse of habitable structures, and economic and social dislocations resulting from liquefaction.

Policies

2.4.2 Prior to the issuance of building or grading permits for essential facilities, special occupancy structures, two-story single family residences, or hazardous materials storage facilities located within areas prone to liquefaction, a geotechnical report that includes a seismic analysis and evaluation of liquefaction in accordance with the State of California Guidelines shall be prepared in order to assess the liquefaction potential and provide recommendations for mitigation.

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, the threshold criteria for determining whether a proposed project will expose people or structures to potential adverse effects, including the risk of loss, injury, or death involving liquefaction, is whether it is located within a Seismic Hazards Zone (Ventura County, 2011). The State of California Seismic Hazard Zones Maps are to be utilized for all determinations for liquefaction potential. Projects located in mapped zones of required investigation for liquefaction must be evaluated for liquefaction potential in accordance with the requirements of the State of California Guidelines for Evaluating and Mitigating Seismic Hazards in California, Special Publication 117, dated 1997 (Ventura County, 2011).

Proposed Project Impacts: Although the engineered levee fill for Options 1A and 1B would not be susceptible to liquefaction, the granular river wash and flood plain sediments underlying the engineered levee fill and floodwall(s) for Reach 4 may be susceptible to liquefaction due to their unconsolidated nature and the local shallow ground water levels. The proposed project does not involve the construction or modification of any habitable structures; however, it does include construction of floodwalls in Reach 4 and a retaining wall in Reach 2 (Option 1A only) that could be susceptible to damage from liquefaction. A geotechnical study is in progress to evaluate Reaches 1-4, which will include a liquefaction evaluation. As such, potential impacts cannot be fully characterized at this time and, therefore, have been considered potentially significant. Impacts associated with liquefaction will be evaluated further in the EIR.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. However, liquefaction hazards and the potential effects of liquefaction-related damage would affect each project individually so there would be no cumulative impacts.

C.13 SEICHE AND TSUNAMI

A seiche is a series of waves caused by an earthquake within an enclosed or semi-enclosed body of water. The most common seiche experienced by Ventura County residents was in swimming pools during the 1994 Northridge earthquake. The shaking of an earthquake can result in large, destructive oscillations that can produce waves tens of feet above the normal water level in larger water bodies such as lakes or reservoirs. There is no record of a significant damaging seiche occurring in a lake, reservoir, or bay in Ventura County (Ventura County, 2011). The nearest large enclosed body of water in

the project area would be Lake Casitas; a reservoir located approximately 11.5 miles northwest of the project area.

A tsunami is a series of waves generated by an undersea disturbance, such as an earthquake or landslide. From the area of the disturbance, the waves will travel outward in all directions, much like the ripples caused by throwing a rock into a pond. The time between wave crests may be from 5 to 90 minutes, and the wave speed in the open ocean will average 450 miles per hour. As the waves approach the shallow coastal waters, they appear normal and the speed decreases. Then as the tsunami nears the coastline, it may grow to great heights and smash into the shore, causing much destruction. The worst recorded tsunami to hit California was in 1812. An earthquake occurred in the Santa Barbara Channel, and the resulting waves are reported by some disputed sources to have been up to 50 feet above sea level at Gaviota; the waves were probably at least 15 feet above sea level at Ventura (Ventura County, 2011). The proposed project site ranges from about 30 to 80 feet in elevation and is located about 2.5 miles from the coastline. According to Figure 2.6 (Tsunami Inundation Hazard Areas) of the *Ventura County General Plan Hazards Appendix* (Ventura County, 2013) and the California Emergency Management Agency Tsunami Inundation Map for Emergency Planning for the Oxnard Quadrangle (CEMA, 2009), the SCR-3 Project area is not located within a tsunami hazard or inundation area.

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

2.5.1 Minimize the risk of loss of life, injury, collapse of habitable structures, and economic and social dislocations resulting from a seiche.

2.6.1 Minimize the risk of loss of life, injury, collapse of habitable structures, and economic and social dislocations resulting from a tsunami.

Policies

2.5.2-1 The Seiche Hazard Area shall be considered during the preparation of regional and area plans and special studies, and used to guide future investigations of the hazard.

2.5.2-2 The seiche hazard shall be taken into account in the design of all development within a Seiche Hazard Area.

2.6.2 Essential facilities, special occupancy structures, and hazardous materials storage facilities should not be located in tsunami hazard areas.

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, a project area would be subject to a potential seiche hazard if it is located within 10 to 20 feet vertical elevation from an enclosed body of water such as a bay, lake, or reservoir (Ventura County, 2011). The height of hazard above the water level is dependent on the ground motion intensity, duration of shaking, and subsurface topography of the lake or reservoir and surface topography of the shoreline.

The *Initial Study Assessment Guidelines* indicate that the threshold of significance criteria for tsunami hazard is whether the proposed project is located in a mapped area of tsunami hazard as shown on the County *General Plan* maps. For most portions of the north and south coastal areas, the tsunami hazard

does not extend to areas more than 30 feet above sea level, and along the coastal plain the tsunami hazard extends inland for approximately one mile.

Proposed Project Impacts: The only large enclosed body of water in the project area is Lake Casitas, which is located approximately 11.5 miles northwest of the SCR-3 Project. As the proposed project would not be located in the vicinity of a potential seiche hazard area, no impacts would occur.

The SCR-3 Project components are located at elevations generally greater than 30 feet, are located more than one mile from the coastline, and are not mapped in a tsunami hazard or inundation zone by the County of Ventura or CEMA. Therefore, the proposed project would have no impacts associated with tsunamis.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. As discussed above, the proposed project would not be located within a seiche or tsunami hazard area. As indicated in the Ventura County *Initial Study Assessment Guidelines*, hazards from seiche and tsunami will affect each project individually; no contribution to cumulative seiche or tsunami hazards would occur.

C.14 LANDSLIDES/MUDSLIDES

In general, landslides and mudflows occur on slopes or near the base of hillsides where unstable conditions have been caused by channel erosion, weathering, and tectonic movement (Ventura County, 2011). Landslides on unstable slopes already on the verge of movement can be started by rainfall, snowmelt, changes in water level, stream erosion, changes in ground water levels or amounts, earthquakes, volcanic activity, disturbance by human activities, or any combination of these factors. Earthquake shaking and other factors can also induce landslides underwater. A particular threat of landslide/mudslide exists in all areas that have already experienced mass movement and in areas subject to changes in topography and moisture content. Important factors that affect the slope stability of an area include the steepness of the slope, the relative strength of the underlying rock material, and the thickness and cohesion of the overlying slope deposits or colluvium. The steeper the slope and/or the less strong the rock, the more likely the area is susceptible to landslides. The steeper the slope and the thicker the colluvium, the more likely the area is susceptible to debris flows. Another indication of unstable slopes is the presence of old or recent landslides or debris flows.

Generally most of the mapped landslides within Ventura County are shallow, ranging up to perhaps 100 feet in depth and generally less than 100 acres; most of the landslides in Ventura County are not presently active (moving), but have moved down slope to positions of “apparent” stability (Ventura County, 2013). The most notable and largest landslide within Ventura County is the La Conchita landslide which had two episodes of movement in 1995 and in 2005 (USGS, 2012). The La Conchita landslide is a portion of an older landslide which was reactivated in March of 1995. The 1995 landslide was a deep, coherent slump which destroyed or severely damaged 14 houses. The 2005 La Conchita landslide had little or no newly failed material involved in the landslide and consisted of a remobilization of the southeastern portion of the 1995 landslide deposit. The 2005 landslide was reported to have mobilized simultaneously and nearly instantaneously into a highly fluid, rapidly moving debris flow involving about 250,000 square yards of material. The 2005 landslide destroyed 13 houses, severely damaged 23 others, and resulted in 10 deaths in the community of La Conchita (USGS, 2012).

The SCR-3 Project area is relatively flat to gently sloping, with no hillsides in the immediate vicinity. As shown in Figure 2.7.1b of the *Ventura County General Plan Hazards Appendix*, the proposed project area would not be located within or adjacent to any mapped landslides (Ventura County, 2013). Based on a California Geological Survey report (CGS, 1971) that analyzed the mudslide risk of southern Ventura County, the SCR-3 Project is in an area of little to no mudslide risk. Additionally, the SCR-3 Project is not located within or adjacent to an earthquake induced landslide hazard area on the CGS Seismic Hazard Zones map (CGS, 2002).

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

2.7.1 Minimize the risk of loss of life, injury, collapse of habitable structures, and economic and social dislocations resulting from landslides/mudslides.

Policies

2.7.2-1 Development in mapped landslide/mudslide hazard areas shall not be permitted unless adequate geotechnical engineering investigations are performed, and appropriate and sufficient safeguards are incorporated into the project design.

2.7.2-2 In landslide/mudslide hazard areas, there shall be no alteration of the land which is likely to increase the hazard, including concentration of water through drainage, irrigation or septic systems, removal of vegetative cover, and no undercutting of the bases of slopes or other improper grading methods.

2.7.2-3 Drainage plans that direct runoff and drainage away from slopes shall be required for construction in hillside areas.

Significance Criteria: A landslide is defined by the United States Geological Survey (USGS) as "the movement of a mass of rock, debris, or earth down a slope" (USGS, 2014) and the County of Ventura defines a landslide as a natural or man-induced dislodging and fall of a mass of soil or rocks along a sloped surface, or the dislodged mass itself. The USGS definition of landslide includes any type of down slope movement or mass movement of soil and rock under the direct influence of gravity and includes events such as rock falls, topples, slides, spreads, and flows, such as debris flows commonly referred to as mudslides or mudflows. The County of Ventura further defines a mudslide individually; a mudslide is a flow of very wet rock and soil (Ventura County, 2011). For determination of landslide/mudslide hazards for the purposes of conducting environmental assessments, the County of Ventura has included a number of different slope movement and mass wasting processes that range from very slow (a few inches in a hundred years) to extremely rapid (70 or more miles per hour), which include the following phenomena: rock fall, soil creep, soil failures, dry raveling, rotational and transitional slides, flows, slumps and any complex combinations of the above phenomena (Ventura County, 2011). The hazard applies to both natural and constructed slopes.

The Ventura County *Initial Study Assessment Guidelines* distinguishes two landslide hazards that require assessment, landslide hazards from known landslides and earthquake induced landslide hazards. Landslide hazards from mapped or known landslides include landslides sourced on a variety of maps including the Dibblee Quadrangle Maps, Public Works Agency files, and the CGS Landslide Evaluation

maps. Earthquake induced landslide hazards are areas mapped by the CGS as having the potential for landslides in the event of an earthquake and have been mapped on the State of California Seismic Hazard Maps (Ventura County, 2011). According to the Ventura County *Initial Study Assessment Guidelines*, the threshold for landslide/mudslide hazard is determined by the Public Works Agency Certified Engineering Geologist based on the location of the site or project within, or outside of mapped landslides, potential earthquake induced landslide zones, and geomorphology of hillside terrain.

Proposed Project Impacts: The project area is relatively flat to gently sloping, is not included on any landslide or mudflow hazard maps, and no mapped landslides are near to the SCR-3 Project, thus it would not be subject to landslide hazards such as rock fall, soil creep, soil failures, dry raveling, rotational and transitional slides, slumps, and mudflows. Consequently, there would be no impacts related to landslides or mudslides.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. The hazards from landslides/mudslides will affect each project individually; and no cumulative landslide/mudslide hazard would occur as a result of other approved, proposed or probable projects. Additionally, as addressed above, the proposed project would not contribute to impacts related to landslides or mudslides.

C.15 EXPANSIVE SOILS

Expansive soils are characterized by their ability to undergo significant volume change (shrink and swell) due to variation in soil moisture content. Changes in soil moisture could result from a number of factors, including rainfall, landscape irrigation, utility leakage, and/or perched groundwater. Expansive soils are typically very fine grained with a high to very high percentage of clay. The amount and type of clay minerals in the soil influence volume change. Shrinking and swelling of expansive soils can cause damage to buildings, roads, and other structures and to plant roots (NRCS, 2008). Special design commonly is needed in areas with expansive soils. Expansive soils are scattered throughout Ventura County (Ventura County, 2011). Historically, expansive soils have caused considerable damage in Ventura County. In the early 1960's, numerous homes had to be torn down and many more were severely damaged in the Shadow Oaks Tract, adjacent to the City of Thousand Oaks, as a result of expansive soils. The Shadow Oaks case was primarily responsible for the development of design techniques and procedures that provide for safe and economical construction on expansive soils and the establishment of more stringent building code (Ventura County, 2013).

Based on National Resources Conservation Service (NRCS) soil mapping for the Ventura area, the proposed project area is primarily underlain by five soil units: the Metz loamy sand, the Corralitos loamy sand, Riverwash, Sandy alluvial land, and Pits and Dumps (NRCS, 2008). The Metz sandy loam consists of deep, somewhat excessively drained soil on alluvial fans and floodplains and formed in stratified alluvium derived from sedimentary rock. The Corralitos loamy sand consists of deep, somewhat excessively drained soil on alluvial fans and in small drainages and is formed in recent sandy alluvium (NRCS, 2014). The Riverwash, Sandy alluvial land, and Pits and Dumps units are termed as “miscellaneous areas” by the NRCS and are areas that have little or no soil material and support little or no vegetation (NRCS, 2014). Riverwash is primarily found in drainage ways and is alluvium consisting of sand and stratified coarse sand to sandy loam. Sandy alluvial land is found on flood plains and is alluvium consisting of loamy sand, stratified sand to loamy sand, and stratified sand to silt loam. The Pits

and Dumps unit is described as areas of smoothed or uneven accumulations or piles of refuse and excavations from which soil and commonly underlying material have been removed. The shrink-swell potential of all of these soils ranges from none to low (NRCS, 2014). The existing and proposed engineered fill of the SCR-3 levee system would have low to no shrink-swell potential.

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

2.8.1 Minimize the risk of damage to structures from the effects of expansive soils.

Policies

2.8.2-1 Construction must conform to established standards of the Ventura County Building code, adopted from the California Building Code.

2.8.2-2 A geotechnical report, prepared by a registered civil engineer and based upon adequate soil testing of the materials to be encountered at the sub-grade elevation, shall be submitted to the County Surveyor, Environmental Health Division, and Building and Safety for every applicable subdivision and Building Permit application (as required by the California Building Code).

2.8.2-3 No habitable structures or individual sewage disposal systems shall be placed on or in expansive soils unless suitable mitigation measures to prevent the adverse effect of these conditions are incorporated into the project.

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, the determination of a significant soils expansion effect shall be based upon an inquiry of whether a proposed project will expose people or structures to potential adverse effects, including the risk of loss, injury, or death involving soil expansion if it is located within a soils expansive hazard zone or where soils with an expansion index greater than 20 are present (Ventura County, 2011).

Proposed Project Impacts: Both the levee and the adjacent soils where project improvements would occur have low to no shrink-swell potential. Therefore, no impacts would occur from expansive soils.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. As discussed above, the proposed project would not be located within an area of expansive soils. As indicated in the Ventura County *Initial Study Assessment Guidelines*, the hazards from expansive soils will affect each project individually; and no cumulative expansive soils hazard would occur as a result of other approved, proposed, or probable projects. Consequently, no cumulative impacts would occur.

C.16 SUBSIDENCE

Subsidence is a general term for the slow, long-term regional lowering of the ground surface with respect to sea level. It can be caused by natural forces such as the consolidation of recently deposited sediments or by man-induced changes such as the withdrawal of oil field fluids or the dewatering of an aquifer. The best known and documented example of subsidence in Ventura County is occurring in the Oxnard Plain, where water wells have caused ground subsidence on the order of 0.05 foot per year over a wide area (Ventura County, 2011). Subsidence that results from groundwater withdrawal or oil and gas

extraction can be responsible for numerous structural effects. Most seriously affected are long, linear surface infrastructure facilities that are sensitive to slight changes in gradient or slope such as pipelines, drainage courses, rail lines, etc. As water, oil, or gas is removed from the subsurface, the total weight of the sediments that the water, oil, or gas used to help support is placed on the sedimentary structure and the sediments can then become compressed. This compression and compaction produces a net loss in volume and hence a depression in the land surface. Subsidence is also occurring along the Santa Clara River due to the accumulation and hydrocompaction of sediments within its present course while no longer adding deposits to the remainder of the Oxnard Plain (Ventura County, 2013).

Figure 2.8 of the *Ventura County General Plan Hazards Appendix* shows the limits of the subsidence zones (Ventura County, 2013). The most severe area of subsidence reaches roughly from Pierpont in the north to the Mugu Lagoon in the south and extends east on the Oxnard Plain to the junction of Highways 1 and 101. Areas of lesser subsidence extend inland from the more severe subsidence on the Oxnard Plain up along the Santa Clara River to a point just east of Piru. The proposed project area is included in its entirety in the most severe subsidence area.

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

2.9.1 Minimize the risk of damage to structures, transportation corridors, and infrastructure from the effects of subsidence.

Policies

2.9.2-1 Potential subsidence shall be evaluated prior to approval of new oil, gas, water, or other extraction well drilling permits.

2.9.2-2 Structural design of buildings and other structures shall recognize the potential for hydro-compaction subsidence and provide mitigation recommendations for structures that may be affected.

2.9.2-3 No structure which is needed for public safety or emergency services shall be located where an interruption in service could result from structural failure due to subsidence. If such location in an area subject to potential subsidence is unavoidable, the structure shall be designed to mitigate the hazard.

Significance Criteria: As indicated in the Ventura County *Initial Study Assessment Guidelines*, the determination of a significant subsidence effect shall be based upon an inquiry of whether a proposed project will expose people or structures to potential adverse effects, including the risk of loss, injury, or death involving subsidence if it is located within a subsidence hazard zone (Ventura County, 2011).

Proposed Project Impacts: Although the SCR-3 Project is located in a subsidence zone, it would not be expected to experience differential subsidence or offset due to crossing the edge of a subsidence zone or area of significantly differing subsidence. Any slight changes in the gradient or height of the levee would be reflected in the surrounding area, including the Santa Clara River drainage, and would therefore not affect the ability of the levee to function in its intended capacity. Additionally, the proposed project would not involve extraction of oil or gas to contribute to subsidence issues and would not be sensitive to slight changes in surface gradients. Some groundwater extraction may occur when excavation is required during construction, but this would be temporary. Impacts related to subsidence would not be significant.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. As indicated in the Ventura County *Initial Study Assessment Guidelines,* hazards from subsidence will affect each project individually; and no cumulative subsidence hazard would occur as a result of other approved, proposed or probable projects. As discussed above, although the proposed project area would be located within a probable subsidence zone, impacts would be not be significant. Therefore, the project would not contribute to cumulative impacts related to subsidence.

C.17 HYDRAULIC HAZARDS

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

2.10.1-1 Minimize the risk of loss of life, injury, damage to property, and economic and social dislocations resulting from flood hazards.

2.10.1-2 Design and construct appropriate surface drainage and flood control facilities as funding permits.

2.10.1-3 Prevent incompatible land uses and development within floodplains.

Policies

2.10.2-1 Land use in the regulatory floodway should be limited to open space, agriculture, or passive to low intensity recreational uses, subject to the approval of the County Public Works Agency. The floodway's principal use is for safely conveying floodwater away from people and property.

2.10.2-2 Within areas subject to flooding as determined by FEMA on the latest available Digital Flood Insurance Rate Maps (DFIRMs), the County shall require the recordation of a Notice of Flood Hazard or dedication of a flowage easement with the County Recorded for all divisions of land and discretionary permits.

2.10.2-3 Development proposed within the floodplain shall be designed and built to standards intended to mitigate to the extent possible the impacts from the one percent annual chance storm.

2.10.2-4 The design of any structures which are constructed in floodplain areas as depicted on the Hazards Protection Maps shall be governed by Federal regulations, specifically Title 44 Code of Federal Regulations Sections 59 through 70, as well as the County Floodplain Management Ordinance and shall incorporate measures to reduce flood damage to the structure and to eliminate any increased potential flood hazard in the general area due to such construction.

C.17A Non-FEMA

In the context of flood control and drainage, non-FEMA hydraulic hazards consist of the wearing away (erosion) or deposition (sedimentation) of land surface by wind or water. Erosion occurs naturally from weather or runoff, but can be intensified by land clearing practices. Flooding is an overflow of water onto land that is normally dry (Ventura County, 2011).

Significance Criteria: Erosion/siltation hazards and flooding hazards are ubiquitous throughout Ventura County and are addressed by the Ventura County Public Works Agency-Watershed Protection District's Standards and Specifications Design Manual. Erosion/siltation hazards and the effects of flooding hazards are required to be considered within the existing framework of grading and building code ordinances, which apply to all sites and projects. As such, threshold criteria are determined on a case-by-case basis pursuant to a variety of documents, including but not limited to the following: Ventura County ordinances and standards, Porter-Cologne Water Quality Control Act permit requirements, and NPDES permit requirements, which stipulate that project-specific BMPs are implemented to avoid or minimize erosion and sedimentation effects (Ventura County, 2011).

Proposed Project Impacts: Fluvial morphology and sedimentation in the project area is characterized by cyclic behavior of degradation (erosion) and aggradation (sedimentation) which generally coincides with large floods followed by a succession of smaller events and underlying periods of base flow; these conditions exist regardless of the proposed project, and would continue to exist following implementation of the proposed levee improvements because they are dictated by natural hydrologic processes. The proposed project would introduce the potential for site-specific erosion to occur in the areas of project disturbance during the construction period, particularly if a precipitation event were to occur during periods of soil disturbance associated with construction. However, compliance with applicable laws and regulations would ensure that project-specific BMPs are implemented to avoid or minimize the potential for erosion and sedimentation.

Regarding the potential for flooding hazards to increase as a result of the project, as described in Section A.4.3 (Project Objectives), the proposed project would provide flood protection and public safety for a portion of the City of Oxnard which is currently subject to flooding due to deficiencies in the existing levee system; therefore, the project would decrease the potential for flooding hazards in the project area. Non-FEMA hydraulic hazards associated with erosion and sedimentation would be temporary and not significant.

Cumulative Impacts: The introduction to Chapter C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. Other projects in the cumulative scenario could introduce or increase potential hazards associated with erosion and sedimentation, particularly as a result of earth-disturbing activities during construction; however, because this potential effect of the proposed project would be temporary and localized, and would comply with applicable laws and regulations to ensure implementation of project-specific BMPS, the project's impacts on erosion, sedimentation, and/or flooding hazards would not be significant and, as a result, the project would not make a substantial contribution to cumulative impacts.

C.17B FEMA

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, a proposed development that is located in part or in whole within the boundaries of a Special Flood Hazard Area, but outside of the boundaries of the Regulatory Floodway, would not result in significant impact under FEMA hydraulic hazards. A Special Flood Hazard Area is the area subject to a one percent chance of flooding in any given year, as defined on a Flood Insurance Rate Map (FIRM) as Zone A, and a Regulatory Floodway is the channel of a river or other watercourse and the adjacent land areas where floodwaters generally are the deepest, swiftest, and most hazardous, where floodwaters carry debris, potential

projectiles and cause erosion, and where there is a high risk of loss of life and property damage (Ventura County, 2011).

As listed in the Ventura County *Initial Study Assessment Guidelines*, significance criteria for FEMA Hydraulic Hazards, as relevant to the proposed project, are provided below (Ventura County, 2011).

- A proposed development that is located, in part or in whole, within the boundaries of a Special Flood Hazard Area (SFHA), but outside the boundaries of the Regulatory Floodway, will result in a "Less Than Significant Project-Specific and Cumulative Impact (LS)" under the issue area of Hydraulic Hazards – FEMA, when it can be demonstrated that the proposed development can be designed and constructed, as part of the Floodplain Development Permit and Building Permit processes, to be in compliance with all applicable floodplain management standards and measures such as, but not limited to: relocating the proposed development elsewhere on the property where the risk of flood damage is potentially lower; and implementing FEMA-supported building construction and grading technologies that mitigate flood damage and thereby reducing the risk of the flood hazard. The *Initial Study Assessment Guidelines* define the SFHA as "an area in the floodplain subject to a one percent or greater chance of flooding in any given year," and the Regulatory Floodway as "the channel of a river or other watercourse and the adjacent land areas where floodwaters generally are the deepest, swiftest and most hazardous; where floodwaters carry debris, potential projectiles and cause erosion; and where there is a high risk of loss of life and property damage."
- A proposed development that is located, in part or in whole, within the boundaries of a Regulatory Floodway will result in a "Potentially Significant Project-Specific and Cumulative Impact (PS)" under the issue area of Hydraulic Hazards – FEMA. New habitable and non-habitable development will not be allowed within the Regulatory Floodway, and development in these areas cannot be mitigated to a less-than-significant level.

Flooding hazards are ubiquitous throughout Ventura County. Design and construction of proposed structures is required to comply with the Ventura County Floodplain Management Ordinance, General Plan, Building Code, Flood Control District Design Manual, and Watershed Protection District Hydrology Manual. The effects of flooding hazards are required to be considered within the existing framework of grading and building code ordinances which apply to all sites and projects (Ventura County, 2011).

Proposed Project Impacts: The proposed project is located along the southern boundary of the Santa Clara River Regulatory Floodway. However, the proposed project is not a new development, but rather a series of improvements to and extension of existing infrastructure. In addition, the purpose of the project is to provide flood hazard protection for existing developed areas in order to obtain levee certification from FEMA through a Letter of Map Revision (LOMR), a document that officially revises a portion of the effective FIRM under the National Flood Insurance Program (NFIP), without the need to physically revise and reprint the entire map panel. Due to the nature of the proposed project to provide flood hazard protection designed and constructed in accordance with federal, State and local standards, and the fact that the proposed project is required for the LOMR and FEMA certification, it is not anticipated that significant adverse effects to FEMA hydraulic hazards would occur as a result of the project.

Cumulative Impacts: The introduction to Chapter C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. As described above,

the proposed project would not result in significant adverse flooding hazard impacts, although other projects in the cumulative scenario may result in flooding hazard impacts.

The Olivas Park Drive Extension project, located approximately 1,500 feet north of the proposed project site (within the City of Ventura), would include a levee/floodwall along the southern and eastern boundaries of the proposed development. This levee/floodwall would be approximately 5,400 feet long and situated along the north side of the Santa Clara River, terminating 350 feet south of the Southern Pacific Railroad. The purpose of the Olivas Park Drive Extension levee/floodwall would be to protect the proposed Extension project from hydraulic hazards, particularly associated with large flood events, and would be implemented as a completely separate flood control improvement from the proposed project. However, both the Olivas Park Drive Extension levee/floodwall and the proposed project levees/floodwalls would provide flood control to the area. Additionally, it is anticipated that the construction of the Olivas Park Drive Extension and Reach 4 of the proposed project would coincide; as such, there is potential that cumulative effects to hydraulic hazards could occur.

A Final EIR for Olivas Park Drive Extension project was prepared by the City of Ventura in June of 2014 (City of Ventura, 2014), and includes a mitigation measure to provide flood hazard protection. This measure, titled Mitigation Measure HWQ-3(b), "Project Timing," requires that adequate flood protection is provided for both the Olivas Park project area and potentially affected areas along the south side of the Santa Clara River in the City of Oxnard prior to construction of the Olivas Park project (not counting the extension of Olivas Park Drive) (City of Ventura, 2014). Flood protection measures included as part of the Olivas Park Extension project would be designed to avoid an increase in surface water elevation of more than one foot during a 100-year flood event. Flood control measures associated with the proposed project would also be designed and implemented to minimize hydraulic hazards associated with large flood events. Therefore, although the Olivas Park Drive Extension project and Reach 4 of the proposed project could be implemented at the same time, potential effects would not be cumulatively considerable.

C.18 FIRE HAZARDS

Fire hazard is defined as the potential loss of life and/or property due to fire. The City of Oxnard Fire Department and Ventura County Fire Department provide fire protection to the project area. The closest fire station to the proposed project area is the City of Oxnard Fire Department Station 4, which is located at 230 West Vineyard Avenue, approximately 0.80 mile (4,200 feet) southeast of the proposed project. The City of Oxnard Fire Department provides fire protection and emergency medical services to the City of Oxnard and is staffed by 87 uniformed members (City of Oxnard Fire Department, 2014).

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

2.13.1-1 Minimize the risk of loss of life, injury, damage to structures, and economic and social dislocations resulting from fire hazards.

2.13.1-2 Ensure that development in high fire hazard areas is designed and constructed in a manner that minimizes the risk from fire hazards.

Policies

2.13.2-1 All applicants for discretionary permits shall be required, as a condition of approval, to provide adequate water supply and access for fire protection and evacuation purposes.

2.13.2-2 All discretionary permits in fire hazard areas shall be conditioned to include fire-resistant vegetation, cleared firebreaks, or a long-term comprehensive fuel management program as a condition of approval. Fire hazard reduction measures shall be incorporated into the design of any project in a fire hazard area.

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, a determination of no impact will be made when a project is not located in a High Fire Hazard Area/Fire Hazard Severity Zone or Hazardous Watershed Fire Area (Ventura County, 2011).

Proposed Project Impacts: According to Figure 2.13.2b within the *Ventura County General Plan Hazards Appendix*, the proposed project would not be located within a designated High Fire Hazard Area/Fire Hazard Severity Zone or Hazardous Watershed Fire Area (Ventura County, 2013). Therefore, the proposed project will have no impact related to fire hazards.

The *Ventura County General Plan Hazards Appendix* discusses measures for overall fire hazard management of the County. The specific management tools employed are often quite simple. As applicable, Ventura County's Fire Protection District requires annual 100-foot brush clearance around structures in the chaparral/sage areas, as required under the California Health and Safety Code, Division 12 Part 2.7, and Division 12 Part 5.

As discussed in Section A.4.5 (Proposed Project), O&M activities associated with the proposed project would adhere to local fire abatement requirements by conducting annual brush clearance in the District right-of-way adjacent to residential areas. Furthermore, environmental commitments that would be implemented as part of the proposed project include those identified for fire hazard protection as FR-1 (refer to Section A.5). As required by FR-1, all project activities would be in compliance with the applicable sections of the California Uniform Fire Code and adopted Ventura County Fire Protection District ordinances, standards and regulations. Adherence to the standard requirements listed in Section A.5 (Environmental Commitment FR-1) would occur throughout the project construction and operational periods, thereby minimizing the potential for wildfire ignition. Therefore, the proposed project would have no impact related to fire hazards and would be consistent with all applicable goals and policies of the *Ventura County General Plan*.

Cumulative Impacts: Nearby cumulative projects involving construction activities are those most likely to combine with the proposed project for a potential cumulative impact related to fire hazards. In reviewing the list of cumulative projects provided in Table C-1, The Village development and Bailard Landfill Gas Field Project would have the greatest potential to result in cumulative fire hazard impacts, as construction activities from these projects (should they occur at the same time) would be in close proximity to the proposed project. However, these projects are not located within a designated High Fire Hazard Area/Fire Hazard Severity Zone or Hazardous Watershed Fire Area (Ventura County, 2013). Furthermore, all cumulative projects identified in Figure C-1 would not be located within a designated High Fire Hazard Area/Fire Hazard Severity Zone or Hazardous Watershed Fire Area (Ventura County,

2013). Therefore, the proposed project would not contribute to cumulative impacts related to fire hazards.

C.19 AVIATION HAZARDS

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

2.14.1-1 Minimize the loss of life, injury, damage to structures, and economic and social dislocations resulting from hazards created by proximity to airports, railroads, and truck routes.

Policies

2.14.2-2 The following policies apply to airports and land in proximity to airports:

(1) To avoid accidents, land located within Airport Hazard Zones shall be designated Agriculture or Open Space on the General Plan Land Use Map and shall be limited to the following uses: agriculture and agricultural operations; cemeteries; energy production from renewable resources; mineral resource development; public utility facilities; temporary storage of building materials; waste treatment and disposal; water production and distribution facilities.

(2) Development within the Airport Hazard Zones shall comply with Part 77 of the Federal Aviation Regulations (objects affecting navigable airspace).

(3) Private airstrips and agricultural landing fields shall be sited so as not to conflict with the flight paths of existing airports and outside of areas that would present significant hazard or an annoyance to existing or planned uses.

(4) Discretionary development within the Airport Hazard Zones shall be reviewed by the Ventura County Transportation Commission (VCTC) for consistency with the Ventura County Comprehensive Airport Land Use Plan.

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, a review of aviation hazards, as those hazards relate to proposed development of properties near county public airports, will focus on compliance with the County's Airport Comprehensive Land Use Plan and pre-established federal criteria set forth in Federal Aviation Regulation Part 77 (Obstruction Standards), as well as those recommendations for good land-use planning made by State and county governments (Ventura County, 2011). Aviation hazards refer to the potential loss of life and/or property due to an aircraft accident, including any action that may cause an increase in the potential for an aircraft accident (Ventura County, 2011).

Proposed Project Impacts: The nearest civil airport is Oxnard Airport, located 2.0 miles south of the proposed project alignment. The proposed project is located within the Oxnard Airport sphere of influence but is not located within the airport land use plan boundary (Ventura County, 2011). Oxnard Airport has one runway in an east-west configuration. The project site is located to the north and therefore is not within the designated flight path of this airport facility. As discussed in Section A.4.5 (Proposed Project), the project does not involve any above-ground equipment or structures that could

obstruct or interfere with aviation activities or navigable airspace. Furthermore, the project would not directly or indirectly result in an increase of persons or structures within the Oxnard Airport land use plan, or within the designated flight path of any civil airport facility. Neither implementation nor O&M activities associated with the proposed project would affect flight paths or introduce an aviation hazard. No impact to aviation hazards would occur.

Cumulative Impacts: The proposed project would be cumulatively significant if it would contribute an incrementally adverse impact to aviation hazards, taking into consideration other projects in the area. However, as described above, the proposed project would result in no impacts associated with aviation hazards. Consequently, the proposed project would have no potential to combine with similar impacts of other projects and, therefore, the proposed project would not contribute to any cumulative impacts related to aviation hazards.

C.20 HAZARDOUS MATERIALS/WASTE

Hazardous materials means any material that, because of its quantity, concentration, physical or chemical characteristics poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, and any material that the administering certified unified program agency (CUPA) determines to be potentially injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment (Ventura County, 2011).

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR) for a 0.5-mile radius/buffer of the proposed project alignment to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) for identifying hazardous material/waste sites. This report is included as Appendix 3 of this Initial Study (EDR, 2014).

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

2.15.1-1 Minimize the risk of loss of life, injury, serious illness, damage to property, and economic and social dislocations resulting from the use, transport, treatment, and disposal of hazardous materials and hazardous wastes.

2.15.1-2 Locate potentially hazardous facilities and operations in areas that would not expose the public to a significant risk of injury, loss of life, or property damage.

Policies

2.15.2-1 Hazardous wastes and hazardous materials shall be managed in such a way that waste reduction through alternative technology is the first priority, followed by recycling and on site treatment, with disposal as the last resort.

2.15.2-2 Site plans for discretionary development that will generate hazardous wastes or utilize hazardous materials shall include details on hazardous waste reduction, recycling, and storage.

2.15.2-3 Any business that handles a hazardous material shall establish a plan for emergency response to a release or threatened release of a hazardous material. The County Fire Protection District is designated as the agency responsible for implementation of this policy.

2.15.2-4 Applicants shall provide a statement indicating the presence of any hazardous wastes on a site, prior to development. The applicant must demonstrate that the waste site is properly closed, or will be closed before the project is inaugurated.

2.15.2-5 Commercial and industrial uses which generate, store, or handle hazardous waste and/or hazardous materials shall be located in compliance with the County Hazardous Waste Management Plan's siting criteria.

C.20A Hazardous Materials

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, a project that is designed to meet all of the applicable requirements set forth in the following authorities shall not be considered to have a significant impact in this environmental area (Ventura County, 2011):

- **Underground Storage Tanks** - California Health and Safety Code, Division 20, Chapter 6.7 and the California Code of Regulations Title 23, Division 3, Chapter 16.
- **Business Plan** - California Health and Safety Code, Division 20, Chapter 6.95, Article 1.
- **Risk Management Plan** - California Health and Safety Code, Division 20, Chapter 6.95, Article 2.
- **CUPA** - California Health and Safety Code, Division 20, Chapter 6.11.
- **Fire Code** - The Fire Code adopted by the VCFPD in regards to aboveground hazardous materials. Reference California Health and Safety Code, Division 12, part 2.7.

As addressed in Section 20a.E of the Ventura County *Initial Study Assessment Guidelines*, the methodology for determining hazardous material impacts of a project shall entail the following (Ventura County, 2011):

1. Determine if the proposed project will utilize hazardous materials in a quantity that is subject to regulation by the Environmental Health Division and/or VCFPD.
2. Determine if the project will utilize and require the installation of underground hazardous materials storage tanks.
3. Determine if existing underground storage tanks are on-site, and if they are in compliance with the testing and monitoring requirements set forth in the California Health and Safety Code, Division 20, Chapter 6.7 and the California Code of Regulations Title 23, Division 3, Chapter 16. Consult with the Ventura County Environmental Health Division Hazardous Materials Program and determine if any enforcement or compliance actions are pending. A site assessment must be completed on active LUFT sites before the application is deemed complete.
4. Determine if existing tanks are to be permanently closed.

Proposed Project Impacts: The equipment and vehicles required for project construction and routine maintenance would be powered by either diesel fuel or gasoline. Construction vehicles and equipment would be re-fueled onsite within the designated work areas on the levee or on the landside of the levee. No on-site fuel storage would occur. Therefore, implementation of the proposed project would have the potential to cause small-scale hazardous materials spills related to fuels and other automotive and

equipment fluids such as oils, lubricants, and hydraulic fluids. Should any hazardous material(s) be spilled or encountered during project construction and O&M, the material(s) would be contained, removed and treated in accordance with standard VCWPD contract specifications and requirements, as well as federal, State, and local laws, regulations, and ordinances. Herbicides would be used for occasional vegetation removal, as specified in the VCWPD's Ongoing Routine Operations and Maintenance Program EIR, and BMPs would be followed (VCWPD, 2008). Additionally, as noted in Section A.7 (Other Agencies Whose Approval May Be Required), prior to project implementation the VCWPD would consult with the Ventura County Environmental Health Division to ensure that concerns related to hazardous materials are fully addressed.

The proposed project will not utilize or require the installation of underground hazardous materials storage tanks. The nearest underground storage tanks are located about one mile south of the project site (Gonzalez Road) and about one mile east (State Highway 1). As shown in Appendix 3, there are six leaking underground storage tank sites located within 0.5 miles of the project alignment. All of the leaking tank sites have received case closed status by the Los Angeles RWQCB, including three on the north side of the Santa Clara River in the commercial/industrial area along Ventura Road in the City of Ventura. Three former leaking tank sites occur on the south side of the Santa Clara River, one near Highway 101 and State Highway 1 (2705 Wagon Wheel Road, Oxnard), one at the east end of the Santa Clara Landfill (2501 Ventura Road, Oxnard), and another about 0.5 mile to the south (2201 Ventura Road, south of West Vineyard Ave.). As described in Appendix 3, four historical underground storage tanks are located within approximately 0.4 mile of the proposed project. These are located at (1) former Ventura County Road Maintenance, located northeast of the project site at 682 El Rio Road (Oxnard); (2) former L.W.T.F. Wastewater Treatment Facility located on the north side of the Santa Clara River at 3555 Ventura Road (Ventura), (3) Martin V. Smith & Associates (vacant warehouse) located east of the project site at 358 Winchester Drive (Oxnard), and (4) Santa Clara Landfill located adjacent to the project site at 2501 N. Ventura Road (Oxnard) (EDR, 2014).

Based on information provided in Appendix 3, these existing and former/historic underground storage tanks are not located near or impede upon project implementation; consequently, the likelihood of encountering such facilities would be extremely low. Furthermore, the nearest former leaking tank site, at 2501 Ventura Road, Oxnard, is not located within the project area. Therefore, no significant impacts related to the use of hazardous materials or disruption of existing underground hazardous materials tanks are anticipated to occur.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects in the project area. All of these projects are, or would be, subject to compliance with all applicable State, federal and local laws, regulations, and ordinances regarding hazardous materials. As discussed above, no conflicts with hazardous materials associated with implementation of the proposed project are anticipated to occur. Therefore, the proposed project contribution to potential impacts associated with hazardous materials would not be cumulatively considerable.

In reviewing the list of cumulative projects provided in Table C-1, The Village (a.k.a. Wagon Wheel Development Project) development activities and Bailard Landfill Gas Field Project would have the greatest potential to contribute to cumulative impacts as development could occur at the same time as construction of the proposed project and in close proximity. It is assumed that all projects identified

within Table C-1, as supported by Appendix 1, would consult with the Ventura County Environmental Health Division to ensure that concerns related to hazardous materials are fully addressed. Furthermore, as discussed above, the proposed project would not be collocated with or impeded upon any underground storage tanks or hazardous materials storage facilities. Therefore, the proposed project's contribution to potential impacts associated with upset of underground storage tanks or hazardous materials facilities would not be cumulatively considerable.

C.20B Hazardous Waste

Significance Criteria: "Hazardous wastes" include the following (Ventura County, 2011):

- A waste, or combination of wastes, which because of quantity, concentration, physical or chemical characteristics, may cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or may pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, or disposed of, or otherwise managed.
- A waste that meets any of the criteria for the identification of a hazardous waste adopted by the State Department of Toxic Substances Control pursuant to Division 20, Chapter 6.5 of the California Health and Safety code.

According to the Ventura County *Initial Study Assessment Guidelines*, the storage, handling and disposal of potentially hazardous waste shall be in conformance with the requirements set forth in the following regulations (Ventura County, 2011):

- California Code of Regulations (CCR), Title 22, Division 4.5.
- California Health and Safety Code, Division 20, Chapter 6.5.
- Ventura County Ordinance Code, Division 4, Chapter 5 (Hazardous Substances), Article 1, (CUPA).

The above State Legislation and local ordinances have been enacted for the purpose of preventing contamination from improper storage, handling, and disposal of hazardous wastes. It is also the intent of these regulations to establish procedures so that the generators of hazardous wastes will be encouraged to employ reduction technology and destruction of their hazardous wastes prior to disposal.

Proposed Project Impacts: The proposed project would generate used motor oil, which is considered a hazardous waste, during construction activities. The proposed project would be subject to compliance with State regulations governing hazardous waste generation, including those defined by the Department of Toxic Substances Control, which require the safe disposal of all hazardous waste. Based on the equipment expected to be used for project construction, no other hazardous wastes would be generated as part of project implementation.

Soil spoils associated with the project would occur from excavation of the levee to prepare the foundation for raising the levee in Reaches 1-3, which may include removal of landfill cover soils at the Bailard Landfill (Options 1A and 1B), Coastal Landfill (Option 1B), and Santa Clara Landfill (Option 1B) to allow for levee tie-ins (Los Angeles RWQCB, 2002). Landfill cover soil or waste is not located near the proposed excavations for the golf course maintenance yard retaining wall footing (Reach 2, Option 1B), the sheet pile scour protection work area (Reach 3, Options 1A and 1B), or the floodwall footings (Reach 4). Other soil spoils would be attributed to vegetation removal. Soils containing landfill waste would be

disposed of at an appropriate, approved nearby landfill. Clean soils could be reused on-site for levee fill, or transported to a nearby landfill.

As noted in Section A.7 (Other Agencies Whose Approval May Be Required), prior to project implementation the VCWPD would consult with the Ventura County Environmental Health Division to ensure that concerns related to hazardous waste are fully addressed. This coordination would include obtaining all necessary authorizations from the Ventura County Environmental Health Division and conformance with regards to applicable State Legislation and local ordinances for the purpose of preventing contamination from improper storage, handling, and disposal of hazardous wastes prior to initiating any construction activities on the project site. Therefore, project impacts associated with hazardous wastes would not be significant.

As noted above, the proposed project alignment is located directly adjacent to three closed landfills (Figure A-1). Reach 1 of the project begins at the northeast corner of the Bailard Landfill and would include constructing a levee tie in to the existing landfill levee (Options 1A and 1B). The remainder of Reach 1 extending to North Victoria Avenue is adjacent to agricultural land where no landfill waste occurs. Reaches 2 and 3 of the project parallel the north boundary of the Coastal and Santa Clara Landfills. For Option 1A, construction in Reaches 2 and 3 is generally located on top of the existing levee and would not directly tie in to the existing landfill cover soils and therefore waste material should not be encountered. For Option 1B, tie-ins to the existing Coastal and Santa Clara Landfills would be required such that waste material may be encountered, potentially resulting in a significant impact.

Contaminated groundwater and landfill gas are known to occur at the margins of all three landfills (VRSD, 2008; VRSD, 2011; VRSD, 2012; VRSD, 2013a; VRSD, 2013b; VRSD, 2013c; VRSD, 2013d; VRSD, 2014a; VRSD, 2014b; VRSD, 2014c). Excavations are planned for the project and include excavating the levee to prepare the foundation for raising the levee in Reaches 1-3, along with vegetation removal (Options 1A and 1B). Groundwater or landfill gas would not be encountered during these excavation activities near the top of the levee, which is 20 to 40 feet above the groundwater table and 50 to 150 feet north of the landfill margins. Shallow groundwater and landfill gas may, however, be encountered during construction of the retaining wall in Reach 2 at the landside of the existing levee adjacent to the River Ridge Golf Course maintenance yard (Option 1A), which could result in a significant impact. Deep excavations, primarily the installation of the scour protection sheet piling, are planned for the eastern end of Reach 3. However, no landfill waste, contaminated groundwater, or landfill gas are present at this location. No known landfill waste, contaminated groundwater, or landfill gas occur along Reach 4.

Due to the known hazardous wastes and concerns in the project area, impacts related to hazardous waste will be analyzed in detail in the EIR.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects in the project area. All of these projects, including The Village development project and the Bailard Landfill Gas Field Project, would be required to comply with all applicable State and local laws and regulations regarding the disposal of hazardous waste, and may be required to implement additional safety measures for the handling and disposal of hazardous waste if warranted by project-specific regulatory reviews and approvals. As discussed above, the VCWPD would consult with the Ventura County Environmental Health Division to ensure that concerns related to hazardous waste are fully addressed. Therefore, the proposed project would not make a cumulatively considerable contribution to impacts associated with hazardous wastes.

C.21 NOISE AND VIBRATION

Noise is defined as any unwanted sound that is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise is annoying (Ventura County, 2011). Because the effects of noise accumulate over time, it is necessary to address both the intensity and duration of sound. As such, the thresholds of significance for noise take both of these elements into account.

General Information on Noise

A brief background on the fundamentals of environmental acoustics is helpful in understanding how humans perceive various sound levels. Although extremely loud noises can cause temporary or permanent damage, the primary environmental impact of noise is annoyance. The objectionable characteristic of noise often refers to its loudness. Loudness represents the intensity of the sound wave, or the amplitude of the sound wave height measured in decibels (dB). Decibels are calculated on a logarithmic scale; thus, a 10-dB increase represents a 10-fold increase in acoustic energy or intensity, while a 20-dB increase represents a 100-fold increase in intensity. Decibels are the preferred measurement of environmental sound because of the direct relationship between a sound's intensity and the subjective "noisiness" of it. The A-weighted decibel system (dBA) is a convenient sound measurement technique that weights selected frequencies based on how well humans can perceive them.

Noise Effects on Humans. The range of human hearing spans from the minimal threshold of hearing (approximately 3 dBA) to that level of noise that is past the threshold of pain (approximately 120 dBA). In general, human sound perception is such that a change in sound level of 3 dB is just noticeable, while a change of 5 dB is clearly noticeable. A change of 10 dB is perceived as a doubling (or halving) of sound level. Noise levels are generally considered low when they are below 45 dBA, moderate in the 45 to 60 dBA range, and high above 60 dBA. Noise levels greater than 85 dBA can cause temporary or permanent hearing loss if exposure is sustained.

Ambient environmental noise levels can be characterized by several different descriptors. Energy Equivalent or Energy Average Level (Leq) describes the average or mean noise level over a specified period of time. Leq provides a useful measure of the impact of fluctuating noise levels on sensitive receptors over a period of time. Other descriptors of noise incorporate a weighting system that accounts for human's susceptibility to noise irritations at night. Community Noise Equivalent Level (CNEL) is a measure of cumulative noise exposure over a 24-hour period, where a five (5) dB penalty is added to evening hours (7:00 p.m. to 10:00 p.m.) and a 10 dB penalty is added to night hours (10:00 p.m. to 7:00 a.m.). Day/Night Average Noise Level (Ldn) is essentially the same as CNEL, with the exception that the evening penalty is dropped.

Noise Propagation. In air, sound from a point source radiates according to inverse square laws either spherically or hemispherically from the source, depending upon whether the noise source is near a reflecting surface such as the ground. Consequently, sound will decrease at a rate of 6 dB per doubling of distance from a point source. Additional decreases will occur due to sound absorption in the air, interaction with the ground, and shielding by intervening obstacles. A noise source which is relatively long, such as a constant stream of traffic, is called a line source, and the sound spreads cylindrically, at a rate of 3 dB per doubling of distance.

General Information on Vibration

Vibration from objects in contact with the ground will propagate energy through the ground and can be perceptible by humans and animals in the form of perceptible movement or in the form of rumbling sound caused by the vibration of room surfaces. The latter is described as ground-borne noise. High levels of vibration can result in architectural damage and structural damage depending upon the amplitude of the vibration and the fragileness of the building or structure.

Vibration is an oscillatory motion through a solid medium, in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. When assessing damage potential, vibration is often measured and reported in terms of peak particle velocity (PPV). For evaluating human response, the accepted manner to measure and report vibration is in terms of the root mean square (RMS) amplitude. Like noise, vibration is normally expressed in terms of decibels (VdB) with a reference velocity of $1x10^{-6}$ inches per second.

Noise Environment of the Proposed Project Area

The dominant noise sources in the proposed project area are street traffic, specifically along the major roadways in the area, including Highway 101, Ventura Road, and Victoria Avenue, as well as general residential noises, such as dogs barking and household maintenance activities. Additionally, periodic increases in noise levels occur from occasional aircraft over-flights and when trains (Amtrak and Metrolink) pass along the UPRR railroad bridge paralleling Highway 101 in the eastern portion of the project area (Reach 4 crosses beneath the UPRR bridge).

To quantify the existing noise conditions of the project area, 24-hour noise measurements were taken using a Type 1 environmental noise monitor (Larson Davis Model 870) at two locations along the SCR-3 Project. Figure C.21-1 provides the locations where sound measurements were taken.

Table C.21-1 provides the recorded ambient noise conditions in the proposed project area. As demonstrated in Table C.21-1, the existing average ambient noise levels in the vicinity of proposed project area range between 54 and 72 dBA Leq(1-hr), with a Ldn/CNEL between 67 and 71 dBA.

Sensitive Receptors

According to the *Ventura County General Plan* (Section 2.16 - Noise), land uses considered to be noise sensitive include residential, educational and health facilities, research institutions, certain recreational and entertainment facilities (typically, indoor theaters and parks for passive activities), and churches (Ventura County, 2013). However, it is stated in the *General Plan* (Section 2.16.2) that construction noise shall be evaluated in accordance with the County's *Construction Noise Threshold Criteria and Control Plan* (Ventura County, 2010).

Figure C.21-1 Sound Measurement Locations (Acentech, 2014 – Figure 3)

Per the County's *Construction Noise Threshold Criteria and Control Plan*, noise-sensitive receptors and their periods of greatest sensitivity to construction noise are presented in Table C.21-2. As such, noise-sensitive receptors in the project area would include residential homes along the SCR-3 alignment (City of Oxnard), as well as the Residence Inn Oxnard River Ridge (2101 West Vineyard Avenue, Oxnard), if construction is occurring outside of daytime hours (7:00 a.m. to 7:00 p.m. Monday through Friday, and 9:00 a.m. to 7:00 p.m. Saturday, Sunday, and local holidays); and the local schools and churches, when in use, including Rio del Norte Elementary School (2500 Lobelia Drive, Oxnard), National University (1000 Town Center Drive, Suite 125, Oxnard), and the Church of Jesus Christ of Latter-Day Saints (6085 King Drive, Ventura).

Table C.21-1. Ambient Noise Levels Representative of the Project Area

Time [1]	Hourly Leq(1-hr), dBA	
	Location 1: NW corner of Subdivision, east of N. Ventura Rd. 140 ft from center of Ventura Rd. and 1,180 ft from center of Highway 101	Location 2: SW corner of Subdivision, east of N. Ventura Rd. 73 ft from center of Ventura Rd. and 2,660 ft from center of Highway 101
15:00	60	68
16:00	60	68
17:00	58	68
18:00	60	68
19:00	59	67
20:00	66	66
21:00	57	65
22:00	54	65
23:00	56	60
0:00	57	59
1:00	57	57
2:00	59	55
3:00	61	57
4:00	65	61
5:00	64	66
6:00	61	69
7:00	59	72
8:00	58	69
9:00	60	66
10:00	58	67
11:00	57	66
12:00	60	68
13:00	58	67
14:00	61	67
15:00	61	68
16:00	---	69
Ldn	67	71
CNEL	67	71

Source: Acentech, 2014 – Table 9.
Note: (1) Daytime hours are shaded (Ventura County, 2013).

Table C.21-2. Noise-Sensitive Receptors

Receptor Description	Typical Sensitive Time Period
Hospitals, Nursing Homes (quasi-residential)	24 hours
Single-Family and Multi-Family Dwellings (residential)	Evening/Night
Hotels/Motels (quasi-residential)	Evening/Night
Schools, Churches, Libraries (when in use)	Daytime/Evening

Source: County of Ventura, 2010 – Figure 3.

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

2.16.1 To protect the health, safety, and general welfare of County residents by elimination or avoidance of adverse noise impacts on existing and future noise sensitive uses.

Policies

2.16.2-1 All discretionary development shall be reviewed for noise compatibility with surrounding uses. Noise compatibility shall be determined from a consistent set of criteria based on the standards listed below. An acoustical analysis by a qualified acoustical engineer shall be required of discretionary developments involving noise exposure or noise generation in excess of the established standards. The analysis shall provide documentation of existing and projected noise levels at on-site and off-site receptors, and shall recommend noise control measures for mitigating adverse impacts.

(4) Noise generators, proposed to be located near any noise sensitive use, shall incorporate noise control measures so that ongoing outdoor noise levels received by the noise sensitive receptor, measured at the exterior wall of the building, does not exceed any of the following standards:

a. L_{eq} 1H of 55dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour from 6:00 a.m. to 7:00 p.m.

b. L_{eq} 1H of 50dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour from 7:00 p.m. to 10:00 p.m.

c. L_{eq} 1H of 45dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour from 10:00 p.m. to 6:00 a.m.

Section 2.16.2(4) is not applicable to increased traffic noise along any of the roads identified within the 2020 Regional Roadway Network Public Facilities Appendix of the Ventura County General Plan. In addition, State and Federal highways, all railroad line operations, aircraft in flight, and public utility facilities are noise generators having Federal and State regulations that preempt local regulations.

(5) Construction noise shall be evaluated and, if necessary, mitigated in accordance with the County Construction Noise Threshold Criteria and Control Plan.

2.16.2-2 Discretionary development which would be impacted by noise, or generate project-related noise which cannot be reduced to meet the standards prescribed in Policy 2.16.2-1, shall be prohibited. This policy does not apply to noise generated during the construction phase of a project.

2.16.2-3 The priorities for noise control shall be as follows:

(1) Reduction of noise emissions at the source.

(2) Attenuation of sound transmission along its path, using barriers, landforms modification, dense plantings, and the like.

(3) Rejection of noise at the reception point via noise control building construction, hearing protection, or other means.

Significance Criteria

Noise. The proposed project involves the construction/modification and maintenance of the existing SCR-3 levee downstream of Highway 101 adjacent to the City of Oxnard, California. The Ventura County's *Construction Noise Threshold Criteria and Control Plan* would apply for construction during daytime hours. According to the County's *Construction Noise Threshold Criteria and Control Plan*, "daytime hours" are defined as 7:00 a.m. to 7:00 p.m., Monday through Friday, and 9:00 a.m. to 7:00 p.m., Saturday, Sunday and local holidays. Since construction would last longer than eight (8) weeks, and would occur only during daytime hours (7:00 a.m. to 7:00 p.m.), the following significance criteria will be used for noise sensitive receivers, which would be limited to residences, hospitals, nursing homes, schools, churches, and libraries (when in use):

- Leq(1-hr) of 55 dBA for construction or the measured ambient Leq(1-hr) plus 3 dB.
- Instantaneous maximum Levels of 75 dBA or the measured ambient Leq(1-hr) plus 20 dB during construction (no more than eight times per daytime hour).

Based on the Ventura County General Plan (Ventura County, 2013), the significance criteria for operational noise impacts will be as follows:

- Leq(1-hr) of 55dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour from 6:00 a.m. to 7:00 p.m.

Vibration. The County references vibration criteria used by the Federal Transit Administration (FTA) in its *Transit Noise and Vibration Impact Assessment* (FTA, 2006) to assess potentially significant impact from construction vibration (Ventura County, 2011).

- Maximum PPV vibration levels of 0.2 in/sec for structural damage to non-engineered timber and masonry buildings.
- RMS vibration levels of 72 VdB for annoyance in residences and buildings where people sleep, such as hotels and hospitals.
- RMS vibration levels of 75 VdB for annoyance in institutional land uses.

The same vibration criteria will be used for operational impacts.

Proposed Project Impacts

Construction

Construction of the proposed project is anticipated to occur over a 27-month period, and would proceed sequentially from Reach 1 upstream to Reach 4. Typical noise and vibration levels from representative pieces of equipment are listed in Table C.21-3 (FTA, 2006).

Table C.21-3. Typical Noise Levels for Construction Equipment

Equipment	Typical Noise Level (dBA) 50 feet from Source	Typical PPV at 25 feet	Typical Vibration Level (VdB) at 25 feet
Backhoe/Front-end Loader	80	0.003 [1]	58 [1]
Pile Driver (Impact)	101	0.644	104
Loaded Dump Truck	88	0.076	86
Large Dozer	85	0.089	87
Vibratory Roller/Compactor	82	0.210	94

Source: FTA, 2006 (Acentech, 2014 – Table 10).
Note: (1) Vibration levels for smaller dozer assumed.

To assess the potential noise and vibration concerns, a general screening process is performed. The noise screening process is designed to identify locations where a project may cause noise impact. The screening distance for community noise can be estimated by assuming 6 dB per doubling of distance (hemispherical propagation), a 10 decibel drop due to shielding by property walls and intervening structures, and a usage factor of 50 percent (FTA, 2006). The screening process for vibration identifies projects that have little possibility of creating significant adverse impacts. The screening distance for vibration can be estimated using 9 dB per doubling of distance (FTA, 2006).

Table C.21-4. Screening Distance for Impact Assessment

	Screening Distance (ft) [1]				
Noise Source	Noise Impact Assessment		Vibration Impact Assessment [4]		
	Lmax = 75 dBA [2]	Leq(1-hr) = 55 dBA [3]	Damage	Category 2 Annoyance	Category 3 Annoyance
Backhoe	30	150	10	10	10
Pile Driver	320	3,160	60	300	240
Loaded Truck	80	290	20	80	60
Large Dozer	50	250	20	80	70
Vibratory Roller/Compactor	40	180	30	140	110

Source: FTA, 2006 (Acentech, 2014 – Table 11).
Definitions: Category 2: Residences and buildings where people normally sleep, such as hotels and hospitals; Category 3: Institutional land uses with primarily daytime use.
Note(s):
(1) Measured from center of noise/vibration generating activity, rounded up to nearest ten feet.
(2) Assumes intervening walls and/or buildings.
(3) Assumes intervening walls and/or buildings and usage factor of 100 percent; Loaded Trucks at 40 percent.
(4) Based upon "frequent events."

Table C.21-5. Distances to Sensitive Receptors/Land Uses

Receptor/Land Use	Distance from Work Area (feet)	Distance from Truck Route (feet)
Nearest Residential Structure (South Side of Ventura Rd.)	0-55 [1,2]	35-115 [3]
Rio del Norte Elementary School	1,185 [1]	1,125
Thurgood Marshal Elementary School	4,440	4,950
Sierra Linda Elementary School	3,960	3,365
Pacific Shores Hospital	3,975	3,420
Residence Inn Oxnard River Ridge	1,475 [1]	2,100
National University	1,750 [1]	215 [3]
Rio Vista Middle School	5,480	3,200
Oxnard High School	5,295	5,250
Church of Jesus Christ of LDS, W. Gonzales Rd.	4,735	4,770
Mission Church	3,330	3,270

Source: Acentech, 2014 – Table 12.

Note(s):

(1) Potentially impacted by pile driving activities.

(2) Potentially impacted by non-pile driving construction activities.

(3) Potentially impacted by haul route noise.

Comparing Table C.21-4 screening distances to the distance to various land uses in Table C.21-5 indicates that it is unlikely that construction vibration will cause structural damage to nearby buildings and no impact is anticipated. However, residents within 240 feet of pile driving activities may experience annoyance from ground borne vibration. The comparison of screening distances for noise indicates that noise levels would potentially exceed the thresholds at some locations. These potential impacts will be evaluated further in the EIR.

Operations

O&M activities would include routine inspections and repair, as needed over the lifetime of the project. It is anticipated that the intensity of post-construction O&M activities would not differ substantially from pre-construction (existing) conditions (although Reach 4 would be a new area for O&M), and would include many of the same noise and vibration sources. Ambient noise conditions in the project area are as low as 57 dBA Leq (1-hr), as shown in Table C.21-1. As such, a threshold of 60 dBA (55 dBA or ambient + 3 dBA, whichever is greater) would apply. The noise levels resulting from O&M activities would potentially exceed this threshold, especially for the nearest residences. These potential impacts will be evaluated further in the project EIR.

As part of the project a floodwall would be placed along the top of the levee on the river side of N. Ventura Road for approximately 950 feet, and would have a visible height of approximately six feet. The floodwall would then split across N. Ventura Road at the high point in the road. The floodwall would continue along the top of the existing slope on the south side (land side) of N. Ventura Road for approximately 860 feet, and would vary in height from six feet down to four feet near the El Rio Drain. The distance between the river side floodwall and the property/garden wall on the south side of N. Ventura Road varies from approximately 110 feet to about 130 feet . The reflective parallel floodwall

could potentially reduce the acoustical performance of this existing property/garden wall. Typically this degradation in performance of a noise barrier is less than three dBA when the ratio of distance between the walls and the average wall height is greater than ten. The degradation is the result of reelections from the hard surfaces of the wall. Where the walls are not parallel or the effective height of the wall is partially made up of non-reflective surfaces the degradation would be slightly less. When there are non-reflective surfaces, the acoustic energy is partially absorbed by the non-reflective surface. Non-reflective surfaces include landscaped areas that the property/garden wall is built upon. In the case of non-parallel walls or non-parallel wall surfaces, the acoustic energy is scattered toward other directions. The evaluation of the potential degradation in the effectiveness of the existing property/garden wall as a result of the proposed floodwall in Reach 4 will be further addressed in the EIR.

Cumulative Impacts: Based upon the potential for project construction and operations to result in significant noise and vibration impacts, the EIR will evaluate the project's potential for resulting in a cumulatively considerable increase in ambient noise levels in the project area.

C.22 DAYTIME GLARE

Relevant General Plan Goals and Policies

None.

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, a project will be considered to have a significant project-specific glare impact if the project would create a new source of disability glare or discomfort glare for motorists travelling along any road of the County Regional Road Network (Ventura County, 2011).

Proposed Project Impacts: As described in Section A.4.5 (Proposed Project), no daytime lighting would be required during construction of the project, including at the staging area(s); however, nighttime lighting would be required if the contractor chooses to work after sunset until 7:00 p.m. during the fall and winter. If any of the nighttime lighting is located along the major roads, such Ventura Road or N. Victoria Avenue, potential glare from the lights may affect motorists or the residents across the street from the Reach 4 site. Mitigation Measure DG-1, below, would implement standards to avoid this potential impact. In addition, during construction of the proposed project, vehicles and equipment that would be present and in use at the project site may provide a source of reflection or glare in direct sunlight. Two staging areas have been identified by the VCWPD for the staging of construction vehicles. The staging area at the west end of SCR-3 would be located in the northeast corner of the Bailard Landfill immediately west of the western end of SCR-3 levee Reach 1, which is approximately a quarter mile from N. Victoria Avenue The staging area at the east end of SCR-3 would be located immediately east of the River Ridge Golf Course/Santa Clara Landfill near the eastern end of the existing SCR-3 levee, which is approximately 800 feet from N. Ventura Road. As such, construction vehicles and equipment that may be a source of glare would be located in areas that are not immediately adjacent to major roads, and therefore, would not result in a significant source of daytime glare for motorists. Construction of Reach 4 would result in a floodwall along the north and south sides of N. Ventura Road. This structure would likely consist of concrete, which would not create glare for drivers.

During the operation period, O&M activities would include routine inspections and repair, which would be temporary and would occur along the length of the levee. As with construction activities, parking

areas for maintenance vehicles would be in areas off of the main roads (N. Victoria Avenue and N. Ventura Road). As such, O&M activities would not create a new permanent source of glare for motorists. No daytime glare impacts during construction and operation of the proposed project would occur.

Due to the potential glare and lighting impacts discussed above, the following mitigation measure would be implemented to reduce impacts to a less-than-significant level:

MM DG-1 All nighttime lighting shall be shielded or positioned to avoid direct illumination onto any nearby roads or private homes.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. Construction and operation of other projects in the cumulative scenario could reasonably include the use of equipment and installation of features which could create glare. However, as discussed above, there would be no glare impacts associated with the proposed project with implementation of Mitigation Measure DG-1; therefore, the project's contribution to cumulative impacts associated with glare would be mitigated.

C.23 PUBLIC HEALTH

Relevant General Plan Goals and Policies

None.

Significance Criteria: The issue of Public Health entails human health related issues such as, but not limited to, landfill gas, contaminated groundwater, vectors, bioaerosols and other pathogens or environmental factors that may pose a substantial present or potential hazard to public health (Ventura County, 2011).

According to the Ventura County *Initial Study Assessment Guidelines*, significance must be determined on a case by case basis and is related to project type, location and other environmental factors (Ventura County, 2011).

Proposed Project Impacts: The proposed project consists of implementing improvements to the existing SCR-3 levee between the northeast corner of the Bailard Landfill and N. Ventura Road (Reaches 1-3) and construction of a new flood wall atop an existing levee within Reach 4 along N. Ventura Road to just north of the UPRR. The active channel of the river comprises the area north of SCR-3, and landfill, golf course, agricultural, residential, and commercial areas are located south of the existing levee. The project would affect two groups of the general public: the workers undertaking project-related construction activities; and users of the project area. Members of the public that potentially could be within the project area would include the following:

- Residents, golf course workers, and agricultural workers living or working near the project site; and
- Recreationists using the golf course and bike trail along Ventura Road.

As noted in Section A.4.5 (Proposed Project), the proposed project would not involve significant subsurface disturbances and would generally avoid the landfill cover soils and landfill waste. The only soil spoils associated with the project would be from the Bailard Landfill levee tie-in (Options 1A and 1B), Coastal and Santa Clara landfill tie-ins (Option 1B), and footing excavations for retaining walls (Option 1A) and flood walls (Reach 4). An on-site raw material excavation and re-use/export plan would be

implemented for each work task. Soils containing landfill waste would be disposed of at an appropriate, approved nearby landfill. Clean soils could be reused on-site for levee fill, or transported to a nearby landfill. Solid waste generated during construction of the project would be disposed in accordance with Ventura County Ordinance #4421, which requires submittal of a recycling plan (Form B) prior to beginning construction, compliance with the plan during construction, and submittal of a Form C report and receipts upon conclusion of work documenting that at least 60 percent of materials generated by the project were recycled and reused. The VCWPD would incorporate the requirements of this ordinance into the project's contract specifications requirements.

Landfill gas may be present in areas where excavations occur near the landfill boundary along Reaches 1-3. Monitoring for landfill gas before and during excavation of the landfill tie-ins and the retaining wall footings at the golf course maintenance yard (Option 1A only) would be required to evaluate the potential hazard and develop appropriate mitigation measures. Landfill gas at these locations would potentially result in a significant impact and will be evaluated further in the EIR.

As noted in the Section C.1 (Air Quality), Ventura County is located within a suspected endemic area for Valley Fever. As such, workers digging in the soil could become exposed; although, not all exposed individuals become symptomatic or experience respiratory illness. The risk of construction workers and adjacent residences contracting Valley Fever will be analyzed in the EIR as part of the Air Quality analysis. Additionally, mechanical equipment utilized during construction would emit air pollutants that have the potential to cause health effects. These emissions and associated impacts will be evaluated in the EIR as part of the Air Quality analysis (see Section C.1, Air Quality).

No other public health impacts are anticipated from the proposed project. The primary recipients benefiting from the proposed project include residents of the City of Oxnard that are currently located within the inundation area on the landward side of SCR-3. People who own property and/or businesses within this area would also benefit from the flood hazard protection that would be introduced with implementation of the proposed project.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects in the project area. Although these projects may involve the use or transport of materials that could pose a threat to public health, or involve other activities which could place public health at risk, these projects would be required to mitigate for such impacts. Dust generated during grading of The Village development project could increase the risk of Valley Fever for the public and residents in the area, resulting in a cumulative impact. The Bailard Landfill Gas Field Project would also have the potential to intercept landfill gas. Consequently, significant cumulative public health impacts within the project area include dust generated during project construction, the increased risk of Valley Fever if excavation or grading of the proposed project and The Village development project were to occur at the same time, and potential exposure to landfill gas. As addressed above, public health impacts associated with the proposed project could potentially be significant and therefore could be cumulatively considerable. The potential for cumulative impacts will be evaluated in detail in the EIR.

C.24 GREENHOUSE GASES

Greenhouse Gases (GHGs) and climate change are a globally cumulative issue. The California Air Resources Board (CARB) and United States Environmental Protection Act (USEPA) regulate GHG emissions within the State of California and the United States, respectively. While the CARB has the primary regulatory responsibility within California for GHG emissions, local agencies can also adopt policies for GHG emission reduction.

The background and regulatory information summarized in this section was obtained from federal, State, and local air quality agency websites and other publically available resources. The GHG emissions estimate was derived by comparing construction cost of the proposed project to that of the recently approved and similar Sespe Creek Levee Improvements Project.

Based on this comparison, GHG emissions were estimated (in scale) for the proposed project from those calculated for the Sespe Creek Levee Improvements Project. Therefore, a semi-quantitative GHG analysis is presented.

Greenhouse Gases and Climate Change

In the early 1960s, scientists recognized that carbon dioxide (CO_2) levels in the atmosphere were rising every year. It was also noted that several other gases, including methane (CH_4) and nitrous oxides (N_2O) were also increasing. Levels of these gases have increased by about 25 percent since large-scale industrialization began around 150 years ago, according to the USEPA. After numerous computer-simulated model runs on the effects of these increases in the atmosphere, it was concluded that the rising concentrations almost always resulted in an increase of average global temperatures. Rising temperatures may, in turn, produce changes in weather, sea levels, and land use patterns, commonly referred to as “climate change.” The general scientific consensus is that climate change is occurring and that man-made GHG emissions contribute in some measure to that change.

GHG emissions in the United States come mostly from energy use. Energy emissions stem largely from economic growth, vehicle transportation, fuels for electricity generation, and weather patterns that secondarily affect heating and cooling needs. Energy-related CO_2 emissions result from fossil fuel exploration and combustion, which account for three-quarters of the human-generated GHG emissions in the United States. More than half the energy-related emissions come from large stationary sources such as power plants; a third comes from transportation; while industrial processes, agriculture, forestry, other land uses, and waste management make up a majority of the remainder of sources (USEPA, 2014a).

The principal GHGs that enter and accumulate in the atmosphere as the result of human activity are listed below.

- **Carbon Dioxide (CO_2).** CO_2 enters the atmosphere through combustion of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, chemical reactions (e.g., the manufacturing of cement), and organismal respiration. CO_2 is also removed from the atmosphere (or “sequestered”) when plants absorb it as part of the biological carbon cycle. CO_2 has an atmospheric lifetime of up to 200 years and, therefore, is a more important GHG than water vapor, which has an atmospheric residence time of only a few days. CO_2 provides the reference point for the global warming potential of other gases; thus, the Global Warming

Potential (GWP)[4] of CO_2 is equal to one (1). Based on this reference point, the concentration of CO_2 that would cause the same level of radiative forcing as a given type and concentration of greenhouse gas is expressed as Carbon Dioxide Equivalent (CO2e). Examples of such greenhouse gases are methane, nitrous oxide, and perfluorocarbons.

- **Methane (CH_4).** CH_4 is emitted during the production and transport of coal, natural gas, and oil. CH_4 emissions also result from livestock and other agricultural practices, and the decay of organic waste in municipal solid waste landfills and wastewater treatment plants. The chemical lifetime of CH_4 in the atmosphere is 12 years. CH_4 is about 25 times more powerful at warming the atmosphere than CO_2, and therefore has a GWP of 25.
- **Nitrous Oxide (N_2O).** N_2O is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste. N_2O has a long atmospheric lifetime (120 years) and heat trapping effects about 298 times more powerful than CO_2 on a per-molecule basis, and therefore has a GWP of 298.
- **Fluorinated Gases.** Hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6) are synthetic, powerful GHGs emitted during a variety of industrial processes. Fluorinated gases are often used as substitutes for ozone-depleting substances (i.e., chlorofluorocarbons, hydrochlorofluorocarbons, and halons). These gases are typically emitted in smaller quantities, but because they are potent GHGs, they are sometimes referred to as high GWP gases.

Greenhouse Gas Regulations

Federal

The U.S. Supreme Court decision (Massachusetts v. EPA (2007) 549 U.S. 497) gave the USEPA the authority to regulate CO_2 or GHG emissions as an air pollutant under the federal Clean Air Act (42 U.S.C. §7602(g)). The USEPA adopted *40 CFR Part 98 – Mandatory Reporting of Greenhouse Gases Rule,* which requires mandatory reporting of GHG emissions for facilities that emit more than 25,000 metric tons of CO2e emissions per year (USEPA, 2014b), and *40 CFR Part 52 – Proposed Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule,* which mandates Prevention of Significant Deterioration (PSD) permitting to facilities whose stationary source CO2e emissions exceed 75,000 tons per year (USEPA, 2014b).

Neither of these regulations is applicable to the proposed project because it has no operating stationary emission sources that are subject to these regulations. However, they are identified as background for GHG emission regulations at a federal level.

California

In September 2006, Governor Schwarzenegger signed AB 32, also known as California's Global Warming Solutions Act of 2006, to mandate the quantification and reduction of GHGs to 1990 levels by 2020. The CARB promulgated regulations for mandatory GHG emission reporting to comply with AB 32, and has recently approved GHG emissions cap-and-trade regulations that have been designed to achieve the State's GHG emission reduction goals (CARB, 2008a).

[4] GWP is a relative measure of how much heat a greenhouse gas traps in the atmosphere. It compares the amount of heat trapped by a certain mass of the gas in question to the amount of heat trapped by a similar mass of carbon dioxide. A GWP is calculated over a specific time interval, commonly 20, 100, or 500 years. GWP is expressed as a factor of carbon dioxide (whose GWP is standardized to 1).

Senate Bill 97, enacted in 2007, amends the CEQA Statute to clearly establish that GHG emissions and the effects of GHG emissions are appropriate subjects for CEQA analysis. According to GHG amendments to the State CEQA Guidelines, each public agency that is a CEQA lead agency needs to develop its own approach to performing a climate change analysis for projects that generate GHG emissions.

A consistent approach should be applied for the analysis of all such projects, and the analysis must be based on best available information. For these projects, compliance with CEQA entails the assessment of three basic factors:

- Identify and quantify Greenhouse Gas Emissions;
- Assess the significance of the impact on climate change; and
- If the impact is found to be significant, identify alternatives and/or mitigation measures that will reduce the impact below significance.

Currently, the *Ventura County General Plan* does not include any specific policies related to greenhouse gas emissions/climate change (Ventura County, 2013a).

Significance Criteria: Based upon the Ventura County *Initial Study Assessment Guidelines* (Ventura County, 2011) and CEQA Guidelines Sections 15064(h)(3), 15064.4, 15130(b)(1)(B) and (d), and 15183.5, a project would have significant impacts on GHG emissions if it would:

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

With respect to quantitative GHG emission thresholds, currently the Ventura County APCD has no formally adopted GHG pollutant thresholds of significance or specific methodologies established for determining impacts related to a project's potential contribution to global climate change in CEQA documents. On November 8, 2011, the Ventura County APCD published the revised "Greenhouse Gas Thresholds of Significance Options for Land Use Development Projects in Ventura County" (VCAPCD, 2011). While this paper lists potential options for establishing significance thresholds, it does not include specific significance threshold recommendations for land use development projects or any other project types.

In 2008, CARB published a preliminary draft staff proposal that contains interim significance thresholds for GHGs (CARB, 2008b). The thresholds consist of performance standards and a quantitative threshold of 7,000 metric tons CO2e/year from non-transportation related GHG sources, which include combustion-related components/equipment, process losses, and indirect emissions from purchased electricity, water usage, and wastewater discharge. Additionally, the South Coast Air Quality Management District has published draft significance criteria for its own use that provides a quantitative threshold of 10,000 metric tons CO2e/year for industrial projects. Both of these quantitative thresholds include the amortization of project construction emissions over the project life. To be conservative, the lower CARB quantitative standard of 7,000 metric tons CO2e/year has been selected as the GHG emissions significance threshold for use in assessing the GHG emission impacts of the proposed project.

Proposed Project Impacts – Emissions

Construction

The proposed project would generate GHG emissions during construction from use of off-road equipment (such as graders, dozers, excavators, and rollers) and from on-road construction vehicle trips (such as heavy haul trips for excavated material fill and export, delivery of construction materials and equipment, and commute driving by construction employees).

The summary of proposed project CO2e total and amortized emissions estimate is shown in Table C.24-1. As discussed earlier, GHG emissions for the proposed project were derived from a quantitative linear incremental comparison against those calculated for the similar and recently approved Sespe Creek Levee Improvements Project. The Sespe Creek Levee Improvements Project CO2e project life annualized emissions were calculated to be 3.6 metric tons per year, with construction costs estimated at $1.53 million. The cost of the proposed project is estimated at approximately $20.19 million (Option 1A+4).

Therefore, the proposed project CO2e project life annualized emissions are estimated to be 47.5 metric tons per year (linearly interpolating based on construction cost differential). The direct proposed project construction GHG emissions are amortized over the project life of 50 years for comparison with the utilized GHG emissions significance threshold within Table C.24-1.

Table C.24-1. Summary of Project Greenhouse Gas Emission Estimates (Metric Tons/year)

Emissions Type	CO2e, metric tons
Construction On-Road Emissions	2,045
Construction Off-Road Emissions	315
Total Construction Emissions	2,360
50-Year Amortized Construction Emissions	47.5
O&M Annual Emissions	Negligible
Total Annual Emissions	47.5
Significance Criteria	7,000

Source: Ventura County 2013b; Ventura County 2014.

Table C.24-1 shows that the proposed project would not exceed the GHG emissions significance criteria; therefore, the project would not have significant GHG emissions impacts.

Operation

O&M activities associated with the proposed project would include routine inspections and repair, as needed over the lifetime of the project (50 years). Proposed O&M activities would nominally differ from those currently occurring for the existing flood control facility through additional vegetation management along Reaches 1-3 and new vegetation management along Reach 4. Any emissions generated by this new O&M activity would be offset over the life of the project through the reduction of future flooding events. Without the project, criteria pollutant emissions are assumed likely from potential future flood damage cleanup and repair actions. Therefore, the project is not expected to generate any new net operational emissions over the life of the project. Additionally, as discussed in Section A.4.5 (Proposed Project), VCWPD implements BMPs during routine maintenance activities, many

of which would reduce pollutant emissions. Therefore, GHG emissions that would occur as part of proposed project operations would be negligible.

Proposed Project Impacts – Conformance with Regulations and Policies/Strategies

A summary of project compliance with all potentially applicable GHG plans, policies, and regulations is provided in Table C.24-2. As shown, the project would be in compliance with those identified adopted plans, polices, and regulations pertaining to GHG.

Table C.24-2. Project Consistency with Applicable Plans, Policies, and Regulations for GHG Emissions

Adopted Plan, Policy, or Regulation	Consistency Determination	Proposed Project Consistency
Federal		
40 CFR Part 98. Mandatory Reporting of Greenhouse Gases Rule.	Not Applicable	The project would not have emissions sources subject to this regulation.
40 CFR Part 52. Proposed Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule.	Not Applicable	The project would not have emissions sources subject to this regulation.
State		
AB 32. Annual GHG Emissions Reporting	Not Applicable	The project does not include emissions sources subject to this regulation.
AB 32. Cap-and-trade	Not Applicable	The project does not include emissions sources subject to this regulation.

Table C.24-3 identifies current California emission reduction strategies that would reduce GHGs, and identifies the applicability of each strategy and the project design feature that would ensure compliance with the applicable strategies.

Table C.24-3. California GHG Reduction Strategies

Strategy	Project Design/Mitigation to Comply with Strategy
Vehicle Climate Change Standards	These are CARB enforced standards; vehicles that access the project and are required to comply with the standards, would comply with these strategies.
Limit Idling Time for Commercial Vehicles	The construction contractors would be required to comply with applicable idling regulations.
Use of Alternative Fuels	Not directly applicable to the proposed project, as construction and O&M vehicles are not expected to utilize biodiesel or other alternative fuels.
Waste Reduction/Increase Recycling (including construction and demolition waste reduction)	Solid waste generated during construction of the project would be disposed of in accordance with Ventura County Ordinance #4421, which requires submittal of a recycling plan (Form B) prior to beginning construction, compliance with the plan during construction, and submittal of a Form C report and receipts upon conclusion of work documenting that at least 60 percent of materials generated by the project were recycled and reused.
Increase Water Use Efficiency	Not directly applicable to the proposed project, as the incremental water and electricity used for construction and O&M of the project would be minimal.

Sources: OPR, 2008; CAPCOA, 2009.

In summary, the proposed project will conform to GHG emissions/climate change regulations and policies/strategies. Therefore, the proposed project would not have a significant impact on GHG.

Feasible Mitigation. CEQA, as well as the *Ventura County General Plan* and *County of Ventura Initial Study Assessment Guidelines*, requires that all feasible mitigation be applied to the project to reduce

significant impacts. It has been determined that the project's minimal GHG emissions would not have a significant impact on global warming or climate change, and that the project would conform with State and local GHG/climate change regulations and policies/strategies. Therefore, no GHG emissions mitigation is recommended for this project beyond BMPs and other features identified in Section A (Project Description).

Cumulative Impacts: Greenhouse gas emissions create long-term globally cumulative climate change impacts. There are no project-specific localized impacts from greenhouse gas emissions. Therefore, the assessment presented above is a cumulative impacts assessment.

C.25 COMMUNITY CHARACTER

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

3.1.1-3 Promote appropriate and orderly growth and development while protecting desirable existing land uses and a desired quality of life.

3.1.1-4 Ensure that land uses are appropriate and compatible with each other, and guide development in a pattern that will minimize land use conflicts between adjacent land uses.

3.1.1-5 Ensure that Countywide growth and development is consistent with the Guidelines for Orderly Development.

3.2.1-3 Recognize and plan for low density rural residential and recreational development, while preserving resources, avoiding hazards, and providing adequate public facilities and services.

3.2.1-4 Agricultural:

(1) Identify the farmlands within the County that are critical to the maintenance of the local agricultural economy and which are important to the State and Nation for the production of food, fiber, and ornamentals.

(2) Preserve and protect agricultural lands as a nonrenewable resource to assure their continued availability for the production of food, fiber, and ornamentals.

(3) Maintain agricultural lands in parcel sizes which will assure that viable farming units are retained.

(4) Establish policies and regulations which restrict agricultural land to farming and related uses rather than other development purposes.

(5) Restrict the introduction of conflicting uses into farming areas.

3.2.1-5 Open Space:

(1) Preserve for the benefit of all the County's residents the continued wise use of the County's renewable and nonrenewable resources by limiting the encroachment into such areas of uses which would unduly and prematurely hamper or preclude the use or appreciation of such resources.

(2) Acknowledge the presence of certain hazardous features which urban development should avoid for public health and safety reasons, as well as for the possible loss of public improvements in these areas and the attendant financial costs to the public.

(3) Retain open space lands in a relatively undeveloped state so as to preserve the maximum number of future land use options.

(4) Retain open space lands for outdoor recreational activities, parks, trails, and for scenic lands.

(5) Define urban areas by providing contrasting but complementary areas which should be left generally undeveloped.

(6) Recognize the intrinsic value of open space lands and not regard such lands as "areas waiting for urbanization."

Policies

3.1.2-11 Discretionary development shall be consistent with the Guidelines for Orderly Development.

3.2.2-5 Open Space:

(1) Open Space should include areas of land or water which are set aside for the preservation of natural resources, including, but not limited to, areas required for the preservation of plant and animal life, including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, bays, and estuaries; and coastal beaches, lakeshores, banks of rivers and streams, and important watershed lands.

(2) Open Space should also include areas set aside for managed production of resources, including, but not limited to, forest lands, rangeland, agricultural lands not otherwise designated Agricultural; areas required for the recharge of groundwater basins; bays, estuaries, marshes, rivers, and streams which are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply.

(3) Open Space should also include areas within which recreational activities can be pursued, including, but not limited to, areas of outstanding scenic, historic, and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams; and areas which serve as links between major recreation and open space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors.

(4) Open Space should also include areas of land or water which are set aside for public health and safety, thereby safeguarding humans and property from certain natural hazards, including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs, and areas required for the protection and enhancement of air quality.

Significance Criteria: Community character refers to the distinctive physical quality, attributes, or features of a community that sets it apart from other communities or areas. According to the Ventura County *Initial Study Assessment Guidelines*, significant impacts would occur when: (1) a project that is inconsistent with any of the policies or development standards relating to community character of the *Ventura County General Plan Goals, Policies and Programs* or applicable Area Plan, is regarded as having a potentially significant environmental impact; and/or (2) a project has the potential to have a significant impact on community character, if it either individually or cumulatively (when combined with recently approved, current, and reasonably foreseeable probable future projects) would introduce physical development that is incompatible with existing land uses, architectural form or style, site design/layout, or density/parcel sizes within the community in which the project site is located. (Ventura County, 2011)

Proposed Project Impacts: As discussed in Section A.5 (Project Site Zoning and General Plan Land Use Designations), SCR-3 is located on unincorporated County of Ventura lands adjacent to the City of Oxnard. The proposed project is subject to the management direction of the *Ventura County General Plan*, as well as the *City of Oxnard General Plan* for the flood gates and landside portion of Reach 4 only. Per the *Ventura County General Plan*, the proposed project site, with the exception of those elements on and south of N. Ventura Road (City of Oxnard), is zoned as Open Space (Ventura County, 2010). The project site is not located within any County Area Plan (Ventura County, 2008). As a development for flood control improvements, the proposed project would not conflict with the existing development patterns or surrounding land uses. Therefore, the proposed project would not conflict with the development standards relating to community character. Furthermore, as noted above, the project area is designated as Open Space and, according to the County's *Non-Coastal Zoning Ordinance,* public works projects are allowed within an Open Space Zone and are exempt from zoning clearance. As such, the proposed project would not conflict with the County's *General Plan* or *Zoning Ordinance* (Ventura County, 2013). As further discussed in Section A.5 (Project Site Zoning and General Plan Land Use Designations), the proposed project is considered to be consistent with the *General Plan* goals and policies in Section A.5.

In Reach 4, the floodwall would split across N. Ventura Road at the high point in the road. A six-foot flood gate would be installed within N. Ventura Road and the floodwall would continue on the south side of N. Ventura Road within or adjacent to the City's roadway until the floodwall ends at the UPRR embankment. As the floodwall would be adjacent to the road right-of-way, coordination with the City of Oxnard's Public Works Department would be required, as noted in Section A.7 (Other Agency Approvals That May Be Required). Potential impacts to the road right-of-way will be analyzed in the Transportation and Circulation section of the EIR.

Construction and operation of Reaches 1-3 would occur entirely along the existing levee. Therefore, the activities associated with construction and operation of the levee within these reaches would not introduce a physical development that is incompatible with existing land uses, architectural form or style, site design/layout, or density/parcel sizes within the community. Reach 4 would include construction of an approximately 950-foot-long floodwall along the river side of N. Ventura Road from the east end of Reach 3 (Station 217+50) to a high point on N. Ventura Road (Station 227+00). The floodwall would vary in height from 4 to 6 feet. Although the river side portion of Reach 4 would present a new, taller linear structure atop an existing levee along the south end bank of the Santa Clara River, it

would be constructed in an area that is currently characterized by residential and commercial development and existing flood control and railroad infrastructure. Therefore, it would be compatible with the existing land uses and would not introduce development that is incompatible with the existing community character. The flood gate and land side portion of the floodwall would be constructed within the City of Oxnard. Construction along the south side of N. Ventura Road, from the flood gate to the UPRR embankment, would be adjacent to backyards of single-family homes located on Yearling Place and the east end of Northbrook Drive. Proposed features within the City of Oxnard would not introduce development that is incompatible with the existing community character.

The potential visual impacts to the local community as a result of the floodwall will be addressed in the Visual Resources section of the EIR. Similarly, the potential for temporary disruptions to the local community as a result of construction traffic and noise impacts will be addressed in the Traffic and Circulation and Noise sections of the EIR.

Cumulative Impacts: As discussed in the Ventura County *Initial Study Assessment Guidelines*, significant impacts would primarily occur when a project is found inconsistent with the policies or development standards relating to community character, or if a project introduces a physical development that is incompatible with the existing community character (Ventura County, 2011). The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the proposed project area. The majority of projects presented in Table C-1 are new developments that require discretionary actions. These projects may create adverse impacts to community residents from increased environmental impacts, as well as proposing incompatible uses with existing land uses, architectural form or style, site design/layout, or density/parcel sizes within the community.

While cumulative activities would permanently alter the existing character of the surrounding communities, the proposed project activities would not result in a cumulatively considerable contribution to this impact as they would be consistent with *General Plan* goals and policies and would not introduce a physical development that is incompatible with the existing community character. Therefore, as related to community character, the proposed project would not contribute to impacts in a manner that would be cumulatively considerable.

C.26 HOUSING

Relevant General Plan Goals and Policies

None.

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, any project that meets one of the following criteria would result in a significant impact related to housing (Ventura County, 2011).

- Eliminate existing dwelling units.
- Introduce a long-term demand for housing by full-time employees.

Proposed Project Impacts: As discussed in Section A.4.5 (Proposed Project), the proposed project would neither remove existing housing nor prevent the future construction of homes in the project area. As described in Section A.4.3 (Project Objectives), one objective of the project is to provide flood protection

and enhance public safety for existing developed properties and infrastructure located within the City of Oxnard.

According to the Ventura County *Initial Study Assessment Guidelines*, construction worker housing demand would not be a significant impact because construction work is short term and a sufficient pool of construction workers is available within Ventura County and the Los Angeles metropolitan regions (Ventura County, 2011). Therefore, no impacts to housing demand from temporary construction employment would occur.

According to the Ventura County *Initial Study Assessment Guidelines*, pursuant to *General Plan* Policy 3.4.2-9, only projects that result in 30 or more new full-time-equivalent lower-income employees would have a significant impact on the demand for housing, as the *General Plan* shows that there is potentially insufficient inventory of land to develop lower-income housing (Ventura County, 2011). As discussed in Section A.4.5, O&M activities would include routine inspections and repair, as needed over the lifetime of the project (50 years). It is anticipated that the intensity of post-construction O&M activities would only slightly differ from pre-construction (existing) conditions. No increase to existing full-time VCWPD employment is expected from implementation of the proposed project. Therefore, no impacts to housing demand from full-time operational employment would occur.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects in the project area. Some identified projects may require the removal or disruption to existing or planned housing. However, as the proposed project would have no impacts related to the removal of housing, it would not contribute to cumulative impacts associated with the removal or elimination of dwelling units.

While a number of cumulative projects identified in Table C-1 would include extensive construction workforce(s), as discussed within the Ventura County *Initial Study Assessment Guidelines*, construction worker housing demand would not contribute to a cumulative impact because construction work is short term and there is a sufficient pool of construction workers within Ventura County and the Los Angeles metropolitan regions (Ventura County, 2011). Furthermore, no increase to existing full-time VCWPD employment is expected from implementation of the proposed project. Since the proposed project would require no additional operational employment, it could not contribute to cumulative housing demand impacts.

C.27 TRANSPORTATION/CIRCULATION

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

2.14.1-2 Reduce or mitigate the effects of marine oil spills or onshore oil pipeline spills upon the population and environment.

4.2.1-1 Facilitate the safe and efficient movement of persons and goods by encouraging the design, construction, and maintenance of an integrated transportation and circulation system consisting of regional and local roads, bus transit, bike paths, ridesharing, rail transit and freight service, airports, and harbors.

4.2.1-2 Facilitate the safe and efficient movement of persons and goods by designing, construction, and maintaining a Regional Road Network and Local Road Network that is consistent with the County road standards and that will function at an acceptable Level of Service (LOS).

4.2.1-4 Ensure that as discretionary development creates the need, existing roads within the Regional Road Network and Local Road Network are improved, and additional roads needed to complement the above networks are constructed, so as to keep all such roads safe and functioning at an acceptable LOS.

4.2.1-5 Ensure that development which would contribute to the cumulative need for improvements or additions to the Regional Road Network bears its pro-rata share of the costs of all such improvements or additions.

4.2.1-6 Promote measures to reduce vehicle miles traveled and disperse peak traffic to better utilize the existing transportation infrastructure.

4.2.1-7 Promote the expansion of a safe, efficient, convenient, integrated, and economical community, intercommunity, and countywide bus transit system.

4.2.1-8 Encourage transit providers and the Ventura County Transportation Commission to increase ridership and meet the needs of the commuting public and the special transportation needs of the elderly, school children, low income, physically handicapped, other low mobility groups, and bicyclists.

4.2.1-9 Encourage the use of bicycling and ridesharing as a percentage of total employee commute trips throughout the County in order to reduce vehicular trips and miles traveled and consequently vehicular emissions, traffic congestion, energy usage, and ambient noise levels.

4.2.1-10 In cooperation with the ten cities and the Ventura County Transportation Commission, plan a system of bicycle lanes and trails linking all county cities, unincorporated communities, and CSUCI.

4.2.1-11 Support the continued expanded operation and use of a rail system that offers efficient, safe, convenient, and economical transport of people and commodities throughout the region.

4.8.1 Strive to reduce the loss of life and property by providing effective fire prevention, suppression, and rescue services and facilities.

Policies

2.14.2-4 The County's Planning Division shall review and analyze all permit applications for compliance with local, state, and federal oil spill prevention regulations.

4.2.2-3 The minimum acceptable Level of Service (LOS) for road segments and intersections within the Regional Road Network and Local Road Network shall be as follows:

(a) LOS-D for all County thoroughfares, Federal and State highways in the unincorporated area of the County, except as otherwise provided in subparagraph (b);

(b) LOS-E for State Route 33 between the northerly end of the Ojai Freeway and the City of Ojai, Santa Rosa Road, Moorpark Road north of Santa Rosa Road, State Route 34 north of the City of Camarillo, and State Route 118 between Santa Clara Avenue and the City of Moorpark;

(c) LOS-C for all County-maintained local roads; and

(d) The LOS prescribed by the applicable city for all Federal and State highways, city thoroughfares, and city-maintained local roads located within that city, if the city has formally adopted General Plan policies, ordinances, or a reciprocal agreement with the County respecting development in the city that would individually or cumulatively affect the LOS of Federal and State highways, County thoroughfares, and County-maintained local roads in the unincorporated area of the County.

At any intersection between two roads, each of which has a prescribed minimum acceptable LOS, the lower LOS of the two shall be the minimum acceptable LOS for that intersection.

4.2.2-4 Discretionary development shall be evaluated for its individual impact on existing and future roads, with special emphasis on the following:

(a) Whether the project would cause existing roads within the Regional Road Network or Local Road Network that are currently functioning at an acceptable LOS to function below an acceptable LOS;

(b) Whether the project would add traffic to existing roads within the Regional Road Network or Local Road Network that are currently functioning below an acceptable LOS; and

(c) Whether the project could cause future roads planned for addition to the Regional Road Network or Local Road Network to function below an acceptable LOS.

4.2.2-5 Discretionary development that would individually cause any of the impacts identified in subparagraphs (a) through (c) of Policy 4.2.2-4 shall be prohibited unless feasible mitigation measures are adopted that would ensure that the impact does not occur or unless a project completion schedule and full funding commitment for road improvements are adopted which ensure that the impact will be eliminated within a reasonable period of time. This policy does not apply to city thoroughfares, city-maintained local roads, or Federal or State highways located within a city unless the applicable city has formally adopted General Plan policies, ordinances, or a reciprocal agreement with the County (similar to Policies 4.2.2-3 through 4.2.2-6) respecting development in the city that would affect the LOS of County thoroughfares, County-maintained local roads, and Federal and State highways located within the unincorporated area of the County.

4.2.2-6 Development that would generate additional traffic shall pay its pro rata share of the costs of necessary improvements to the Regional Road Network per the County's Traffic Impact Mitigation Fee Ordinance as amended time to time.

4.2.2-8 Discretionary development shall be conditioned, where feasible, to minimize traffic impacts by incorporating pedestrian and bicycle pathways, bicycle racks and lockers, ridesharing programs, transit improvements (bus turnouts, shelters, benches) and/or transit subsidies for employees or residents of the proposed development.

4.2.2-10 Discretionary development that would endanger the efficient, safe operation of an airport or would result in significant land use incompatibility with an airport shall be prohibited.

4.8.2-1 Discretionary development shall be permitted only if adequate water supply, access, and response time for fire protection can be made available.

C.27A(1) Roads and Highways - Level of Service

There are two primary categories of traffic impacts that would occur as a result of the proposed levee improvement project. The first category would be the impacts associated with construction traffic on the roadways that provide access to the project site. During the construction activities, a number of vehicles would be traveling to and from the project site, including trucks delivering materials to the site, trucks transporting waste material away from the site, and construction workers' vehicles commuting to and from the site. The second category of traffic impacts would be the impacts associated with the operation and maintenance of the project after construction is complete.

Environmental Setting/Existing Baseline Conditions. The study area roadways that would primarily be affected by the proposed project are shown in Table C.27-1. The table shows the roadway segments, the responsible agency that has jurisdiction for each roadway, and the existing number of lanes on each roadway segment.

Table C.27-1. Study Area Roadways

Roadway	Jurisdiction	No. of Lanes
Ventura Road		
North of Vineyard Avenue	City of Oxnard	4
Southwest of US 101	Ventura County	4
Northeast of US 101	City of Oxnard	4
Victoria Avenue		
South of US 101	Ventura County	4
North of Gonzales Road	Ventura County	4
Oxnard Boulevard		
North of US 101	City of Oxnard	4
Towne Center Drive		
East of Ventura Road	City of Oxnard	5
Wagon Wheel Road		
East of Ventura Road	City of Oxnard	2-4
US 101 – Ventura Freeway		
Northwest of Oxnard Boulevard	Caltrans	8-10
Southeast of Oxnard Boulevard	Caltrans	8

There are eight intersections in the study area that could potentially be affected by the proposed project. The eight intersections, the responsible jurisdiction, and the type of traffic control currently in place at each intersection are listed in Table C.27-2.

Table C.27-2. Study Area Intersections		
Intersection	Jurisdiction	Type of Traffic Control
Ventura Road @ Vineyard Avenue	City of Oxnard	Traffic Signal
Ventura Road @ Wagon Wheel Road	City of Oxnard	Traffic Signal
Ventura Road @ Town Center Drive	City of Oxnard	Traffic Signal
Oxnard Boulevard @ Town Center Drive	City of Oxnard	Traffic Signal
Oxnard Boulevard @ US 101 Northbound On/Off Ramps	Caltrans	Traffic Signal
Oxnard Boulevard @ US 101 Southbound On/Off Ramps	Caltrans	Traffic Signal
Wagon Wheel Road @ US 101 Southbound Off Ramp	Caltrans	Traffic Signal
Victoria Avenue @ Gonzales Road	Ventura County	Traffic Signal

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines* (Ventura County, 2011), the minimum acceptable level of service (LOS) for County thoroughfares and State highways within the unincorporated area of the County is LOS D and the minimum acceptable LOS for all County maintained local roads is LOS C. A significant adverse project-specific traffic impact would occur if the project would cause the existing LOS on a roadway segment to fall to an unacceptable level or if the project would add one or more peak hour trips to a roadway segment that is currently operating at an unacceptable LOS. A significant adverse project-specific traffic impact would occur at an intersection if the project would exceed the thresholds shown in Table C.27-3.

Table C.27-3. Thresholds of Significance for Changes in LOS at Intersections	
Intersection LOS (Existing)	Increase in V/C (ICU) or Trips Greater Than
A	0.20
B	0.15
C	0.10
D	10 Peak Hour Trips [1]
E	5 Peak Hour Trips [1]
F	1 Peak Hour Trip [1]

Source: Ventura County, 2011. Definitions: V/C = volume-to-capacity ratio; ICU = Intersection Capacity Utilization
Note: (1) To critical movements. These are the highest combination of left and opposing through/right-turn peak hour turning movements.

The City of Oxnard's standards indicate that LOS C is the minimum acceptable LOS. A project would have a significant impact if the project traffic would cause an intersection that operates at an acceptable LOS to operate at an unacceptable LOS. A significant impact would occur at an intersection if the addition of project generated traffic would increase the volume-to-capacity (V/C) ratio by two percent or more (>0.020) at an intersection that is already rated at LOS D, E, or F. (City of Oxnard, 2009)

According to the Caltrans guidelines, Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on State highway facilities. If an existing State highway facility is operating at less than the appropriate target LOS, the existing measure of effectiveness (MOE) should be maintained. (Caltrans, 2002)

Proposed Project Impacts: Due to the amount of material anticipated to support construction, impacts of project-generated traffic on roadway levels of service could potentially be significant. As such, traffic impacts associated with construction and operation of the proposed facilities will be evaluated in the EIR for the affected roadways and intersections noted above in Tables C.27-1 and C.27-2. To evaluate the impacts on the roads and highways, the existing and future baseline traffic conditions will be quantified

in terms of daily traffic volumes, peak hour traffic volumes, V/C ratios, and LOS on the most-directly affected roadway links and intersections. The volumes of traffic that would be generated by the project during construction and operation will then be quantified and added to the baseline traffic conditions to determine the traffic conditions with and without the project. The findings will be used to determine if the traffic generated by the project would result in a significant impact in accordance with the significance criteria of Ventura County, the City of Oxnard, and Caltrans, as appropriate.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. The traffic that would be generated by these projects will be considered in the EIR traffic analysis to establish the future baseline traffic conditions for the affected roadways and intersections. The results of the analysis will be used to determine if the traffic generated by the project and the other proposed projects in the area would result in a significant cumulative impact in accordance with the significance criteria of Ventura County, the City of Oxnard, and Caltrans, as appropriate.

C.27A(2) Roads and Highways – Safety and Design of Public Roads

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, "most development projects affect the public road system through access encroachments, improving or widening existing roads, and/or constructing new road sections" (Ventura County, 2011). Projects that comply with the County's road standards are generally considered to have less-than-significant impacts on the safety and design of the public road system, and projects that impact intersections in a manner that exceeds the State's accident guidelines for signalization are considered significant. The County's guidelines also state that project-specific impacts to any intersection that has been identified in the Substandard Impact Areas Vicinity shall be considered significant. While the City of Oxnard and Caltrans do not have CEQA-related significance criteria for evaluating impacts associated with the safety and design of public roads, these agencies do have standard specifications for the design of roadways and intersections. Any deviation from these design standards would be considered a significant impact.

Proposed Project Impacts: Project construction vehicles would utilize Victoria Avenue and Ventura Road for direct access to the project site within Reaches 1-3 and the two identified staging areas, which are located on the west sides of these two roadways south of the Santa Clara River. Existing driveways would provide access to these staging areas from Victoria Avenue and Ventura Road, and no modifications to the driveways would be required for the proposed project. Access to Reach 4 would be provided from N. Ventura Road via existing unpaved roads on the north side of the road and directly from the N. Ventura Road right-of-way to the proposed floodwall alignment on the north and south sides of the roadway. In addition, as the volumes of project-generated traffic are relatively low as compared to the minimum vehicle volume thresholds for warranting a traffic signal (Caltrans, 2012), and as the project-generated traffic would primarily occur during the 27-month construction period, the project would not result in the need for a new traffic signal. Left turn movements into the staging area can be accommodated by an existing left-turn pocket on Ventura Road and right turn movements can be accommodated by an existing right-turn pocket on Ventura Road. Exiting vehicles could turn right or left onto Ventura Road. Left turns would be prohibited at the staging area adjacent to Victoria Avenue because a concrete barrier is in place in the median. Only right turns into and out of this driveway could be accommodated. Observations at the driveway locations indicate that visibility is adequate for these movements.

Prior to project implementation, VCWPD will coordinate with the City of Oxnard Public Works Department and the Ventura County Public Works Agency Transportation Department regarding the use of these driveways, as well as all potential haul routes, access points, project-related parking, and bicycle and pedestrian access and restrictions. Impacts to safety and design of the public road system from construction and operations of the project would not be significant.

As the proposed project would not require access encroachments or roadway improvements and is not located in a Substandard Impact Area, it would comply with the County, City of Oxnard, and Caltrans road standards and would not have a significant impact on the safety and design of the public road system.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. The projects closest to the project site are The Village (Wagon Wheel Development Project), Bailard Landfill Gas Field Project, Ventura/Vineyard Homes (Casden Properties), Olivas Drive Extension, Santa Clara River Levee (SCR-1), and Santa Clara River Bridge Mitigation Planting Project. Because of the proximity of these projects to the project site, the impacts of these projects relative to roadway safety and design issues could potentially coincide with the construction of the proposed project. According to the Ventura County *Initial Study Assessment Guidelines*, if it is determined that a project would not have the potential to cause a significant impact on a particular issue, then the project would have no cumulative impacts relative to that issue (Ventura County, 2011). As it has been determined that the proposed project would not have a significant impact on the safety and design of the public road system, then the project would not have a significant cumulative impact relative to this issue.

C.27A(3) Roads and Highways – Safety and Design of Private Access

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, private road guidelines are typically applicable to subdivisions of land for residential use and the impacts associated with the safety and design of a private road involve the physical configuration of the road and its conformance with applicable State and local fire guidelines and ordinances (Ventura County, 2011).

Proposed Project Impacts: The proposed project would not require the construction of, or modification to, any private roads. As no private roads are proposed, there would be no impacts relative to the safety and design of private access roads.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. These projects include private development, which could result in private roadway safety and design impacts that are cumulatively considerable. However, as addressed above, the proposed project would not require the construction of, or modification to, any private roads. Consequently, it would not incrementally contribute to any private road safety and design impacts that would be cumulatively considerable.

C.27A(4) Roads and Highways – Tactical Access

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, a project would have a significant impact if there is a single access and the access road exceeds 800 feet in length (Ventura County, 2011).

Proposed Project Impacts: Although the project has no public roads, it does have an access road for authorized maintenance vehicles to access the levee along Reaches 1-3. This road is gated and is not accessible to the general public. Access to Reach 4 is provided for pedestrians and bicyclists, but vehicular access is not provided to the public. As access is provided from both ends of the County's maintenance road in Reaches 1-3, a 15-foot-wide maintenance road would be created for the river side floodwall that could be accessed from the upstream and downstream ends, and access to the full length of the land side floodwall would be available directly from N. Ventura Road, tactical access is in conformance with the guidelines. The project would, therefore, have no impacts relative to tactical access.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. In general, these projects would have no effect on access to the project site. One potential cumulative project, the Bailard Landfill Gas Field Project, could potentially result in access conflicts if construction were to occur simultaneously with the Reaches 1-3 work; however, the VCWPD would work closely with the VRSD to prevent conflicts. Furthermore, the proposed project would not contribute to cumulative impacts relative to tactical access.

C.27B Pedestrian/Bicycle Facilities

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, a project that will cause actual or potential barriers to existing or planned pedestrian/bicycle facilities may have a significant impact. In addition, projects that generate or attract pedestrian/bicycle traffic volumes meeting requirements for protected highway crossings or pedestrian and bicycle facilities may have a significant impact. (Ventura County, 2011)

Proposed Project Impacts: Construction of the proposed project would result in the temporary closure of an existing informal pedestrian trail along Reach 4 during the project's construction period. Temporary exclusionary fencing and signage would be erected at the entrances to this section of the pedestrian trail notifying the public of the temporary closure. A temporary detour for pedestrians would be available along N. Ventura Road. The impacts of this temporary detour of the pedestrian trail would not be significant. There are no existing pedestrian or bicycle facilities in Reaches 1-3.

The City of Oxnard's Bicycle and Pedestrian Master Plan (City of Oxnard, 2011) indicates that a multi-use bicycle/pedestrian path is proposed along the alignment of the SCR-3 Project, either on top of and/or adjacent to the levee and adjacent to the floodwall. The proposed project is compatible with this plan as it would provide the opportunity for such a facility to be implemented. In Reach 4, the proposed floodwall would be located approximately 17.5 feet from the edge of the existing roadway pavement of N. Ventura Road to provide sufficient space to accommodate the future bikeway and a curb-and-gutter along the roadway. Where curb-and-gutter is already in place, the floodwall would be positioned 16 feet from the roadway. In Reaches 1-3, a bikeway is not proposed; however, the design of the levee (CMB maintenance road) would be compatible with the future possibility of installing a bikeway, as planned by the City of Oxnard. These planned features could potentially generate or attract additional pedestrians and bicyclists to the trail system; however, they are not a component of the proposed project, as the project would not increase local population and therefore demand for pedestrian/bicycle facilities. The proposed project would not increase bicycle or pedestrian volumes, and therefore would not result in a

traffic-related safety issue or increase the demand for a protected highway crossing. The project's impacts relative to pedestrian/bicycle facilities would not be significant.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. These projects would have no adverse effects on pedestrian or bicycle facilities or access in the immediate vicinity of the proposed project site. The projects could, however, result in an increase in pedestrian/bicycle volumes in the area. According to the Ventura County *Initial Study Assessment Guidelines*, if it is determined that a project would not have the potential to cause a significant impact on a particular issue, then the project would have no cumulative impacts relative to that issue (Ventura County, 2011). As it has been determined that the proposed project would not have a significant impact on pedestrian/bicycle facilities, then the project would not have a significant cumulative impact relative to pedestrian/bicycle facilities.

C.27C Bus Transit

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, a project will normally have a significant impact on bus transit if it would substantially interfere with existing bus transit facilities or routes, or if it would create a substantial demand for bus transit facilities/services (Ventura County, 2011).

Proposed Project Impacts: The bus agencies that serve the project area are Gold Coast Transit and VISTA (Ventura Intercity Service Transit Authority) transit. Gold Coast Transit operates fixed-route buses and paratransit services in Oxnard, Ojai, Port Hueneme, Ventura, and unincorporated County areas between these cities. In the project vicinity, Gold Coast Transit has bus routes on Victoria Avenue, Gonzales Road, Ventura Road (south of Vineyard Avenue), Oxnard Boulevard, and Highway 101 (Gold Coast Transit, 2013). VISTA transit operates an inter-city bus service that provides connections between cities in Ventura County. In the project vicinity, VISTA transit operates buses on Highway 101 (Ventura County Transportation Commission, 2014). There are no bus routes on N. Ventura Road adjacent to the SCR-3 alignment; Gold Coast Transit operates a bus route on Victoria Avenue that crosses the SCR-3 alignment. The bus route on Victoria Avenue would not be impacted because the project's construction activities would not directly encroach on this roadway. While the project could encroach on N. Ventura Road during construction of the floodwall adjacent to the roadway and flood gate across the roadway, these construction activities would not impact a transit route because there are no bus routes operating on this segment of N. Ventura Road. Therefore, the proposed project would not interfere with any bus transit facilities or routes.

The construction activities could potentially generate a minor increase in the demand for bus ridership if one or more of the construction workers would ride the bus to and from the project site. For example, Gold Coast Transit has bus stops on Victoria Avenue north and south of the project site, on Ventura Road south of Vineyard Avenue, and on Oxnard Boulevard at Town Center Drive. These bus stops are in the vicinity of the project site, but are not located adjacent to the project site. The increased ridership demand, if any, would not be substantial and would not result in an adverse impact. Since the proposed project would not interfere with any public bus routes or bus transit facilities and would not create a substantial demand for bus transit facilities/services, there would be no project impacts associated with bus transit.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. These projects could result in impacts related to bus transit because they could generate a demand for increased bus ridership. The proposed project, however, would not impact bus transit, as addressed above. Consequently, the proposed project would not incrementally contribute to bus transit impacts that would be cumulatively considerable.

C.27D Railroads

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, a project will normally have a significant impact on a railroad if it would substantially interfere with an existing railroad's facilities or operations (Ventura County, 2011).

Proposed Project Impacts: The Union Pacific Transportation Company railroad tracks cross the north end of the project alignment within Reach 4. The tracks at this location are on an elevated earthen embankment, which connects to a bridge structure crossing over N. Ventura Road and the Santa Clara River. Amtrak passenger trains, Metrolink passenger trains, and freight trains operate regularly on this segment of the rail system (Ventura County, 2007). Although the railroad tracks pass through the project site, the construction and operation of the levee system and floodwall would not directly affect the operation of the rail line or any rail crossings. The project would be designed to avoid/minimize impacts to the railroad infrastructure. In Reach 4, the floodwall would terminate west of the railroad tracks and fill material would be installed abutting the embankment on the northeast and southwest sides of the railroad tracks, to complete the gap between the floodwall and the railroad embankment (southwest side) and the railroad embankment and any future flood protection measure implemented as part of The Village development (northeast side). This fill material would avoid impacts to the railroad infrastructure during construction of the floodwall by providing sufficient distance between the floodwall/Village improvements and the railroad tracks. Reach 4 would require encroachment permits from UPRR because the construction activities would occur within the railroad right-of-way.

The construction and operation of the project would not, however, affect train movements or activity. As implementation of the proposed project would not substantially interfere with any existing railroad facilities or operations, less-than-significant impacts would occur.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. It is not anticipated that these projects would substantially interfere with an existing railroad's facilities or operations. Some projects may be located near a rail line and could potentially result in impacts; however, these impacts would not be significant. According to the Ventura County *Initial Study Assessment Guidelines*, if it is determined that a project would not have the potential to cause a significant impact on a particular issue, then the project would have no cumulative impacts relative to that issue (Ventura County, 2011). As it has been determined that the proposed project would not have a significant impact on railroad facilities or operations, then the project would not have a significant cumulative impact relative to this issue.

C.27E Airports

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, a project could potentially be incompatible with the operation of an airport if it is within the sphere of influence of an airport and if it includes features such as high buildings, residential units, refineries, churches, or schools (Ventura County, 2011).

Proposed Project Impacts: The nearest civil airport to the project site is the Oxnard Airport, which is located approximately two miles south of the proposed project alignment. This airport is operated by the Ventura County Department of Airports (Ventura County, 2007). The runway at this airport is aligned in an east-west configuration, while the project is located to the north of the airport. Take-off and landing activities do not pass above the project site. In addition, the proposed project does not have any features that are high enough to interfere with regular aviation operations. Although the proposed project is within the sphere of influence of the airport, it does not have any incompatible features or structures that would interfere with aviation activities or navigable airspace. No airport-related impacts would occur.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. Distant projects with the potential to be located near airport facilities could result in aviation impacts that are cumulatively significant. However, as addressed above, no airport facilities are located in the immediate vicinity of the proposed project. The proposed project would not incrementally contribute to aviation impacts in a manner that is cumulatively considerable.

C.27F Harbor Facilities

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, a project would have an impact on a harbor if the construction or operation of the project will increase the demand for commercial boat traffic and/or adjacent commercial boat facilities (Ventura County, 2011).

Proposed Project Impacts: There are three harbors in the general vicinity of the project site. Channel Islands Harbor and Port of Hueneme are located approximately three to four miles south of the project site and Ventura Harbor is located approximately four miles northwest of the project site. As the proposed project site is not located near these harbors and implementation of the project would not affect the demand for boat traffic or facilities, the proposed project would not interfere with harbor facilities or operations. No impacts would occur.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. While these projects may induce growth and thus increase harbor usage at a regional scale, their incremental contributions to direct or indirect cumulative impacts to the operation of a harbor or the demand for new or expanded harbor facilities are expected to be negligible. As addressed above, the proposed project would have no impacts to harbors, and would therefore not contribute to cumulative impacts to harbors.

C.27G Pipelines

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, a project would have a significant impact if it would substantially interfere with, or compromise the integrity or affect the operations of, an existing pipeline (Ventura County, 2011).

Proposed Project Impacts: As detailed in the "Santa Clara River Levee System (SCR-3) Reaches 1-4 Evaluation and Design Report" (Wood Rodgers, 2013), a 6-inch high-pressure gas line is located along the landside of the existing levee in Reaches 1-3 and continues along N. Ventura Road west of Highway 101 in Reach 4. Portions of this gas line that are within the footprint of the proposed levee or within 10 feet of the levee toe would require relocation and/or modification. For Option 1B, some gas monitoring or collection system lines associated with the Bailard, Coastal, and Santa Clara Landfills, which are currently located along the landside of the levee, would be relocated in the areas where the landside fills or new levees would interfere with these pipelines. Additionally, a number of drains are located along the levee alignment that will require modification. To install the floodwall in Reach 4, four high-pressure gas valves associated with the above-mentioned gas line along the north side of N. Ventura Road would be relocated. Additionally, installation of the proposed flood gate across N. Ventura Road would require the relocation of numerous utilities under the roadway. These utilities include gas, water, and sewer lines as well as storm drains. The utility lines would be lowered to provide space for the construction and operation of the flood gate. As the project would interfere with these pipeline facilities, the impacts could be significant. These impacts will be further addressed and analyzed in the EIR.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. Some of these projects could potentially have an effect on pipelines. According to the Ventura County *Initial Study Assessment Guidelines*, there may be a cumulative impact on pipelines if, when considered with other pending and recently approved projects, the total effect of the projects causes interference with, or affects the operation of, an existing pipeline. To address this issue, the cumulative effects of the proposed project and other projects in the area will be evaluated in the EIR for the affected pipelines.

C.28 WATER SUPPLY

In accordance with the Ventura County *Initial Study Assessment Guidelines*, this environmental issue area addresses domestic water supply, or a supply of potable water used for human consumption or connected to domestic plumbing fixtures in which the supply is obtained from an approved individual water supply system or a public water system operating with an unrevoked permit from the Ventura County Environmental Health Division or the California Department of Public Health (Ventura County, 2011).

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

4.3.1-1 Ensure the provision of water in quantities sufficient to satisfy current and projected demand.

4.3.1-2 Encourage the employment of water conservation measures in new and existing development.

Policies

4.3.2-3 Discretionary development shall be conditioned to incorporate water conservation techniques and the use of drought resistant native plants pursuant to the County's Guide to Landscape Plans.

C.28A Quality

Significance Criteria: Water quality refers to the chemical, biological, and physical quality of water used for human consumption (Ventura County, 2011). According to the Ventura County *Initial Study Assessment Guidelines*, a potential water supply impact may occur if a project requires a supply of domestic water (Ventura County, 2011).

Proposed Project Impacts: The proposed project would require a water supply for dust suppression during the approximately 27-month-long construction period, but the project would not include the development of any habitable structures or bathroom facilities, and would not require a source of domestic water supply. Portable toilets would be provided for workers during the project construction period, and would be serviced by an approved provider, as well as an approved liquid waste hauler responsible for regularly pumping out the toilets and disposing of waste materials; any water associated with portable toilets, including cleaning and maintenance, would be obtained and delivered by the service provider and would have no appreciable effect on water supply. No impacts to water supply quality would occur.

Cumulative Impacts: As described above, the proposed project would not require a supply of domestic water. Therefore, it would not combine with the other past, present or reasonably foreseeable cumulative projects to contribute to a cumulative water supply quality impact. No cumulative impacts would occur.

C.28B Quantity

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, the purpose of assessing this issue area is to ensure consistent and complete assessment of any direct and indirect impacts resulting from the *Ventura County General Plan* requirement that each legal parcel requiring a domestic water source have a permanent supply of water for the project (Ventura County, 2011).

Proposed Project Impacts: As described above, the proposed project would not introduce a permanent water supply requirement and would not require a source of domestic water supply. Therefore, no impacts to water supply quantity would occur.

Cumulative Impacts: As described above, the proposed project would not require a water source and would result in no impact to water supply quantity. Therefore, it would not combine with the other past, present or reasonably foreseeable cumulative projects to contribute to a cumulative water supply quantity impact. No cumulative impacts to water supply quantity would occur.

C.28C Fire Flow

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, a project will be considered to have a significant impact associated with fire flow if one of the criteria listed below is met during project construction or operation (Ventura County, 2011).

- It cannot meet the required fire flow as determined by:
    - The Insurance Services Office, Inc. Guide for Determination of Required Fire Flow;
    - The Ventura County Waterworks Manual;
    - Ventura County Fire Protection District (VCFPD) Fire Code; and
    - Fire Prevention Standard 14.5.1, 14.5.2, and 14.5.3.
- If it cannot provide an acceptable mitigation factor, i.e., fire sprinklers to allow for a reduction in the required fire flow.
- A private water system cannot meet flow, duration, or reliability requirements as defined in the Ventura County Waterworks Manual and VCFPD Fire Code.

Fire flow is defined as the number of gallons per minute of water available from a fire hydrant for a designated duration in the event of an emergency situation. Per the Ventura County *Initial Study Assessment Guidelines,* VCFPD staff responsible for a proposed project will review information submitted by the applicant relative to water availability, and may require plans for a private water system if an acceptable water purveyor has not been identified. No impact to fire flow would occur if a project would have no requirements for fire flow, or if a project is served by a water purveyor that can provide the required fire flow in accordance with the Ventura County Waterworks Manual and VCFPD Fire Code.

Proposed Project Impacts: Section A.4.5 (see the discussion under "Materials and Waste") describes that water for soil compaction and dust abatement during project construction would be provided by the City of Oxnard, via a water meter placed on a fire hydrant in the project area. As discussed in Section C.2A, a variety of other methods may also be used to protect against erosion and fugitive dust during construction, such as use of groundwater pumped to create dry excavation conditions, a surface tackifier, temporary vegetation, rolled erosion control products, and weather-triggered work stoppages. The City of Oxnard is considered an acceptable water purveyor for the project, and the VCFPD would not require plans for a private water system. The project's water requirements would be temporary and minimal, limited to dust abatement during the approximately 27-month-long construction period. The proposed project would result in no impacts associated with fire flow.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. As described above, the proposed project would not result in an impact related to fire flow requirements. Therefore, it would not combine with the other past, present or reasonably foreseeable cumulative projects to contribute to a cumulative impact to fire flow requirements. No cumulative impacts to fire flow requirements would occur.

C.29 WASTE TREATMENT/DISPOSAL

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

4.4.1-1 Ensure the provision of adequate individual and public sewage/waste collection, treatment, and disposal facilities to meet the County's current and future needs in a manner which will protect the natural environment and ensure protection of the public's health, safety, and welfare.

4.4.1-2 Ensure continuous waste disposal capacity to meet the County's current and projected waste disposal needs.

Policies

4.4.2-4 Discretionary development adjacent to existing and proposed waste treatment, transfer, and disposal sites, as identified in the Countywide Integrated Waste Management Plan, shall not conflict with the current and anticipated future use of these waste facilities.

4.4.2-6 Applicants for discretionary development shall be encouraged to employ practices that reduce the quantities of wastes generated and shall be requested to engage in recycling activities to further reduce the volume of waste disposed of in landfills.

C.29A Individual Sewage Disposal System

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, compliance with applicable sections of the following documents must be demonstrated to ensure no significant impact (Ventura County, 2011):

- Ventura County Building Code, Articles 1 and 6
- Ventura County Sewer Policy
- Ventura County Ordinance Code, Division 4
- Uniform Plumbing Code
- Environmental Health Division Onsite Wastewater Treatment System Technical Information Manual
- California Regional Water Quality Control Board Basin Plans.

Proposed Project Impacts: An individual sewage disposal system can be defined as a system which disposes of domestic waste (sewage) generated by individual residences and businesses located in areas without access to public sewer service (Ventura County, 2011). During construction, the proposed project contractor would supply portable toilets for workers and would be responsible for the disposal of generated sewage. As the number of on-site workers would be minimal (estimated at a maximum of 5 heavy equipment operators and 15 laborers), with all workers anticipated to come from within the Ventura County area, no impacts to existing sewage treatment facilities are expected to occur from project construction. Once operational, the project would not include any toilet facilities or require the construction, modification, or use of any on-site or existing sewage disposal structures or systems. Therefore, no individual sewage disposal system impacts would occur.

Cumulative Impacts: As discussed above, the proposed project would not require an on-site sewage disposal system. Therefore, it would not combine with the approved, current, and reasonably foreseeable projects outlined in the introduction to Section C (as supported by Appendix 1) or contribute to sewage disposal system impacts. No contribution to cumulative impacts would occur.

C.29B Sewage Collection/Treatment Facilities

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, any project which would individually or cumulatively generate sewage effluent which would be discharged to and exceed the capacity of an existing facility or ancillary facilities would have a potentially significant

impact; however, if the project incorporates project conditions and mitigation measures for improvements required by the sewer entity or Regional Water Board, there would not be a significant impact (Ventura County, 2011).

Proposed Project Impacts: Sewage collection/treatment facilities are those which collect wastewater from domestic, commercial, industrial and institutional uses, treat it to remove organic and inorganic hazardous or noxious waste materials, and discharge the treated effluent (Ventura County, 2011). As discussed above in Section C.29A, the proposed project would not affect sewage treatment facility capacity during construction and does not include any on-site sewage disposal facilities for operation, and thus would not generate sewage effluent requiring the generation or use of any new or existing sewer mains or sewage treatment plants. Furthermore, the project would not be connected to a sewage collection facility. Therefore, no impacts to sewage collection/treatment facilities would occur.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. These projects include retail development that may induce growth and thus increase demand on sewage collection/treatment facility use, at a regional scale. However, as addressed above, the proposed project would not affect, directly or indirectly, sewage collection/treatment facilities. Therefore, the proposed project would not contribute to cumulative impacts.

C.29C Solid Waste Management

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, any project that generates solid waste such that it impairs a landfill's disposal capacity in terms of reducing its useful life to less than 15 years would have a potentially significant impact on the demand for solid waste disposal capacity in Ventura County (Ventura County, 2011).

Proposed Project Impacts: Material would be excavated for preparing the levee foundation in Reaches 1-3, and vegetation would be removed. Most or all excavated materials would be reused on-site as levee fill. Asphalt and concrete rubble would be recycled. Clear and grub green wastes generated during construction of the proposed project would be hauled to the nearest green waste recycling facility for appropriate processing and reuse. As noted in Section C.20B (Hazardous Waste), soils containing landfill waste would be disposed of at an appropriate, approved nearby landfill. An on-site raw material excavation and re-use/export plan would be implemented for each work task. Furthermore, the VCWPD would incorporate into the project's contract specifications requirements to comply with Ventura County Ordinance #4421, which requires submittal of a recycling plan (Form B) prior to beginning construction, compliance with the plan during construction, and submittal of a Form C report and receipts upon conclusion of work documenting that at least 60 percent of materials generated by the project were recycled and reused.

Routine operation and maintenance activities may include clearing debris, removal of vegetation (weed and wild growth) that has accumulated on the levee, maintaining clear access on the riverward access road, and re-grading as needed. These activities would generate minimal solid waste and would not affect existing landfill capacities. Routine inspections would continue to ensure that only minimal solid waste is produced. This impact would not be significant.

Construction Materials – Recycling and Reuse. The proposed project's contract specifications shall include a requirement that recyclable construction materials (i.e., metal, concrete, asphalt, rebar, wood) generated during construction of the proposed project must be diverted from the landfill and be recycled at a permitted recycling facility. All non-recyclable materials must be disposed of at a permitted disposal facility. Illegal disposal or landfilling recyclable construction materials is prohibited. A comprehensive list of permitted recyclers, haulers, and solid waste and recycling facilities in Ventura County is located at: www.wasteless.org/construction&demolitionrecyclingresources.

Sediment and Soil – Recycling and Reuse. The proposed project's contract specifications shall include a requirement that sediment and soil not reused on site will be transported to a permitted facility for recycling or reuse. Illegal disposal and landfilling of soil is prohibited. Excavated soil materials in Reaches 1-3 could be used to offset some of the import needed for levee work, as well as for filling the drainage swale in the golf course (Option 1B). Within Reach 4, excess soil material would be generated from excavation of the floodwall foundation, flood gate, utility relocations, and other facilities. Most or all of this excavated material would be reused on site, but a fraction may be exported.

Organic Materials – Recycling and Reuse. The proposed project's contract specifications shall include a requirement that wood waste and vegetation removed during the construction phase of the proposed project must be diverted from the landfill. This can be accomplished by on-site chipping and land application or by transporting the material(s) to an authorized or permitted green waste facility in the County. Illegal disposal and landfilling of recyclable organic materials is prohibited. A complete list of permitted green waste facilities is located at: www.wasteless.org/greenwasterecyclingfacilities.

Recyclable Construction and Demolition Debris – Required Reports. The proposed project's contract specifications shall include a requirement that the construction contractor must submit a Form B – Recycling Plan to the County of Ventura Public Works Department, Integrated Waste Management Division (IWMD), for approval prior to issuance of the Notice to Proceed. The Recycling Plan must specify how all recyclable materials generated by the proposed project (e.g., metal, concrete, wood, green waste, soil) will be diverted from the landfill. A copy of Form B – Recycling Plan is available at: www.wasteless.org/recycling/greenbuildingCD. Furthermore, contractors shall submit a Form C – Recycling Report to the IWMD for approval prior to the engineer's preparation of the final estimate. The Form C – Recycling Report must have original recycling facility receipts and/or other documentation attached to verify recycling, on site reuse, or salvage occurred. A copy of Form C – Recycling Report is available on-line at: www.wasteless.org/recycling/greenbuildingCD.

The amount of non-recyclable waste generated by the proposed project would be a relatively small quantity. Therefore, the proposed project would not have significant impacts on solid waste management and collection.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. These cumulative projects include retail development that may induce growth and thus increase demand on solid waste management and collection, at a regional scale. However, as addressed above, the proposed project would not have significant impacts on solid waste management and would not make a cumulatively considerable contribution to cumulative impacts related to solid waste.

C.29D Solid Waste Facilities

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, solid waste facilities shall be in compliance with the following statutes and regulations and are subject to enforcement by the County of Ventura Resource Management Agency, Environmental Health Division (EHD) (Ventura County, 2011):

- California Health and Safety Code, Division 104, Part 13, Chapter 4, Article 7
- California Health and Safety Code, Division 104, Part 14
- California Code of Regulations, Title 14, Division 7
- California Code of Regulations, Title 27, Division 2
- California Public Resources Code, Division 30
- Ventura County Ordinance Code, Division 4, Chapter 7

Solid waste operations and facilities are those projects that involve solid waste handling, storage, processing and disposal activities that are subject to solid waste regulations enforced by the Local Enforcement Agency/EHD. Solid waste facilities operate under the authority of the Local Enforcement Agency, which under the proposed project would be the Ventura County EHD. Per the Ventura County *Initial Study Assessment Guidelines*, if a proposed project does not involve a solid waste operation or facility, it would have no impact (Ventura County, 2011).

Proposed Project Impacts: The proposed project does not involve the construction or operation of solid waste facilities. Clear and grub green wastes generated during construction of the proposed project would be hauled to the nearest green waste recycling facility for appropriate disposal. An on-site raw material excavation and re-use/export plan would be implemented for each work task. Solid waste generated during construction of the proposed project would be disposed of in accordance with Ventura County Ordinances #4421, which requires submittal of a recycling plan (Form B) prior to beginning construction, compliance with the plan during construction, and submittal of a Form C report and receipts upon conclusion of work documenting that at least 60 percent of materials generated by the project were recycled and reused. The VCWPD would incorporate the requirements of this ordinance into the proposed project's contract specifications requirements. The proposed project is anticipated to generate a minimal amount of solid waste material and is not anticipated to impact the available capacity of waste disposal facilities serving the proposed project area. Since the proposed project does not involve the construction or operation of solid waste facilities, no impacts to solid waste facilities would occur under the proposed project.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. These cumulative projects include retail development that may induce growth and thus increase demand on solid waste disposal facilities, at a regional scale. However, as addressed above, the proposed project is anticipated to generate a minimal amount of solid waste material and is not anticipated to involve the construction or operation of solid waste disposal facilities. As such, the project would not impact solid waste facilities.

C.30 UTILITIES

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

4.5.1 Promote the efficient distribution of public utility facilities and transmission lines to assure that public utilities are adequate to service existing and projected land uses, avoid hazards, and are compatible with the natural and human resources.

Policies

4.5.2-1 New gas, electric, cable television, and telephone utility transmission lines shall use or parallel existing utility rights-of-way where feasible and avoid scenic areas when not in conflict with the rules and regulations of the California Public Utilities Commission. When such areas cannot be avoided, transmission lines should be designed and located in a manner to minimize their visual impact.

4.5.2-2 All transmission lines should be located and constructed in a manner which minimizes disruption of natural vegetation and agricultural activities and avoids unnecessary grading of slopes when not in conflict with the rules and regulations of the California Public Utilities Commission.

4.5.2-3 Discretionary development shall be conditioned to place utility service lines underground wherever feasible.

Significance Criteria: A proposed project could result in impacts to utilities if it would cause a disruption or re-routing of an existing utility facility, or increase demand on a utility that results in expansion of an existing utility facility which has the potential for secondary environmental impacts (Ventura County, 2011). These facilities include: electrical generation plants, transmission substations and transmission lines; fixed natural gas transmission and distribution systems; and, structures such as radio and television transmitting and receiving antennas, radar stations, microwave towers and cellular and hard line telephone facilities (Ventura County, 2011).

Proposed Project Impacts: During construction, all equipment would be gasoline or diesel powered and would not consume any electricity or natural gas. However, construction would require a minimal amount of electricity for minor form work, an electric saw, and a grinder for work on the retaining wall; electricity would be obtained from a local source. No disruptions to overhead electrical lines are anticipated to occur from project construction activities. However, disruptions to the gas monitoring system associated with the landfills in Reaches 1-3 and buried utility lines along and in N. Ventura Road in Reach 4 are expected during construction as a result of levee foundation preparation, floodwall construction, and installation of the flood gate in N. Ventura Road. Therefore, impacts and disruptions to existing utility infrastructure will be evaluated in the EIR.

Once constructed, the proposed project would not require or include the use of any electricity, natural gas, or communications infrastructure for daily operations. Therefore, operation of the proposed project would not increase demand on any existing electrical, natural gas, or communications facilities. No operational impact would occur.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. These cumulative

projects include retail development that may induce growth and thus increase demand on electrical, natural gas, and communications facilities, at a regional scale. As addressed above, the proposed project would not increase demand on any existing electrical, natural gas, or communications facilities, resulting in no cumulative contribution to utility facilities. However, the proposed project would potentially disrupt existing electrical, natural gas, or communications facilities, resulting in a cumulative impact to these facilities. Therefore, cumulative impacts resulting from the potential disruption of utility facilities will be evaluated in the EIR.

C.31 FLOOD CONTROL/ DRAINAGE

The proposed project is located in the lower portion of the Santa Clara River Watershed, within a FEMA-designated Flood Hazard Area. The VCWPD maintains a series of flood protection facilities in this area to protect developed areas from flooding hazards associated with flood peaks. Following is a discussion of potential impacts of the proposed project associated with the VCWPD facilities, as well as facilities that are owned and maintained by persons or agencies other than the VCWPD.

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

2.10.1-1 Minimize the risk of loss of life, injury, damage to property, and economic and social dislocations resulting from flood hazards.

2.10.1-2 Design and construct appropriate surface drainage and flood control facilities as funding permits.

4.6.1 Provide adequate and appropriate flood control and drainage facilities to protect life and property from damage or destruction from flood and storm waters.

Policies

2.10.2-2 Within areas subject to flooding as determined by FEMA on the latest available DFIRMs, the County shall require the recordation of a Notice of Flood Hazard or dedication of a flowage easement with the County Recorder for all divisions of land and discretionary permits.

2.10.2-4 The design of any structures which are constructed in floodplain areas as depicted on the Hazards Protection Maps shall be governed by Federal regulations, specifically Title 44 Code of Federal Regulations Sections 59 through 70, as well as the County Floodplain Management Ordinance and shall incorporate measures to reduce flood damage to the structure and to eliminate any increased potential flood hazard in the general area due to such construction.

4.6.2-1 All necessary flood control and drainage facilities shall be constructed to meet the minimum standards of the Public Works Agency (PWA) and VCWPD consistent with the goals, policies, and programs of the General Plan.

4.6.2-2 Discretionary development shall be conditioned to provide flood control and drainage facilities deemed by the PWA and VCWPD as necessary for the development, and shall be required to contribute toward flood control facilities necessitated by cumulative development.

C.31A WPD Facilities/Watercourses

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, a project will be considered to have a significant impact associated with VCWPD flood control facilities/watercourses if one of the criteria listed below is met during project construction or operation (Ventura County, 2011).

- Any project that will, either directly or indirectly, impact flood control facilities and watercourses by obstructing, impairing, diverting, impeding, or altering the characteristics of the flow of water, resulting in exposing adjacent property and the community to increased risk for flood hazards, shall be considered to have a potentially significant impact. Examples are listed below.
    - Reducing the capacity of flood control facilities and watercourses. This includes the planting of any vegetation within the watercourse or on the banks thereof.
    - Eroding watercourse bed and banks due to high velocities, changes in adjacent land use, encroachments into the channel such as bridges, and loading the top of the channel embankment with structures.
    - Deposition of any material of any kind in a watercourse.
    - Placement of a structure that encroaches on a flood control facility or that does not have sufficient setback from a watercourse.

Proposed Project Impacts: The proposed project would improve existing flood control features, and would decrease existing flood hazards to developed areas within the City of Oxnard. The location of proposed project actions within an existing Flood Hazard Area is necessary in order to provide the needed improvements to the SCR-3 levee system. Although potential effects of the proposed project on flood control and drainage would generally be positive, resulting in increased flood control in the project area, the placement of proposed facilities may also redirect flows to other areas across from or downstream of the project area. Because the extent to which the proposed project would adjust existing drainage patterns to new areas is unknown, VCWPD will prepare a hydrology study. This potential impact will be evaluated in the EIR.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. As discussed above and in Section C.17 (Hydraulic Hazards), construction of the Olivas Park Drive Extension project may coincide with construction of Reach 4 of the proposed project. Both projects would include flood control measures and BMPs to avoid adverse effects; however, it is uncertain how the proposed project would change drainage patterns downstream. Therefore, the VCWPD will prepare a hydrology study and further evaluate the potential combined effects to flood control/drainage facilities. This will be addressed in the EIR.

C.31B Other Facilities/Watercourses

In some areas, flood control and drainage facilities that are owned and maintained by entities other than the VCWPD provide for removal of accumulated stormwater flows from land through both man-made drainage facilities and natural channels. Flow of waters in channels can lead to erosion of channel beds and banks by high velocities of flow or deposition of materials where velocities are low. Existing

channels may be of sufficient size to contain regulatory flow rates or they may be inadequate to contain all storm flows and expose adjacent lands to flood hazards. (Ventura County, 2011)

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, the Ventura County Flood Insurance Study and associated maps define Areas of Special Flood Hazard that are subject to the authority of the Ventura County Flood Plain Management Ordinance. The natural channels and facilities not designated within these source documents and the impacts thereon are the focus of review under this guideline (Ventura County, 2011). In reviewing a project for impacts, the following are to be given consideration:

- The possibility of deposition of sediment and debris materials within existing channels and allied obstruction of flow,
- The capacity of the channel and the potential for overflow during design storm conditions, and
- The potential for increased runoff and the effects on Areas of Special Flood Hazard and regulatory channels both on and off site (Ventura County, 2011).

Any increase in flow to and from natural and man-made drainage channels and facilities is required to be considered within the existing framework of grading and building code ordinances, and any project that does not comply with the requirements of such regulations, manuals, and standards is considered as having a potentially significant project and cumulative impact. Impacts to flood control and drainage facilities that are owned and maintained by an entity other than the VCWPD would occur if a project affects the extent of the floodplain, the capacity of a drainage facility or channel, or the velocity of flow within a drainage facility or channel. (Ventura County, 2011)

Proposed Project Impacts: The vast majority of actions under the proposed project would occur along SCR-3, and would have no effect on flood control and drainage facilities maintained by an entity other than the VCWPD.

As discussed in the Project Description, there is an existing swale within the River Ridge Golf Course, approximately at the mid-point of Reach 2. Under Option 1B of the proposed project, this swale would be filled in using approximately 15,500 CY of fill material (imported to the site) to eliminate low-lying/depressed areas and tie into existing high ground located along stretches of the existing levee. This would provide the needed flood protection from high flow conditions, and essentially eliminate proposed levee improvements along Reach 2. With implementation of this option, a pipe would be installed beneath the new fill to maintain flows that currently pass through the swale to the river; a flap gate would be installed over the end of the pipe to prevent river flows from entering the pipe during flood events. Conversely, Option 1A would not fill in the existing golf course swale, but would install levee improvements in order to provide the necessary level of flood protection to local developed areas, and in doing so would also alter localized drainage patterns. Implementation of either Option 1A or Option 1B would result in the alteration of non-VCWPD facilities, towards the purpose of providing flood control to a level that can be certified by FEMA.

Several other drainage facilities also penetrate the existing SCR-3 levee along Reaches 1 through 3. As previously described in Section A.4.2, Reaches 1 through 3 were originally constructed by different agencies over many years, with different sections completed at different times for different purposes. Section A.4.5 describes under “Interior Drainage System” that along Reaches 1 through 4, there are eight existing gravity drain outlets (openings) that outfall into the Santa Clara River, as shown in Figure

A-5 and detailed in Table A-1 (Existing Levee Openings and Closure Devices). Based on generally accepted practices, modifications may include the addition of automatic flap or duckbill gates on small existing openings up to 48-inch diameter, and installation of both an automatic flap or duckbill gate and a manual slide-type gate on larger existing openings. The purpose of these modifications would be to maintain low flows into the Santa Clara River while preventing waters during high-flow events in the Santa Clara River from flowing through the levee(s) and flooding these tributary drains.

Two potential staging areas would be used during project construction, including one located in the northeast corner of the Bailard Landfill immediately west of the western end of SCR-3 levee Reach 1, and one located immediately east of the River Ridge Golf Course/Santa Clara Landfill near the eastern end of SCR-3 levee Reach 3 (see Section A.4.5 for details). Use of these sites for construction staging would be temporary, limited to the construction period, and would have no effect on drainage in the area. As described above, the project would alter existing facilities, including the golf course swale and drainage features that penetrate the existing levee system; these alterations would be necessary to achieve the project's desired level of flood protection, and all project features/modifications would be designed and implemented to minimize or avoid adverse effects to flood control and drainage facilities. Therefore, potential impacts associated with construction and operation of the proposed project on flood control and drainage facilities not maintained by VCWPD would not be significant.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. As discussed above, the proposed project would not result in significant adverse impacts to flood control/drainage facilities. However, there are other projects in the cumulative scenario, such as the Olivas Park Drive Extension project, that would also include flood control improvements and may be constructed at or near the same time as the proposed project. Therefore, there is potential that cumulative effects to flood control facilities not maintained by the VCWPD could occur. Due to the nature of these facilities being intended to protect the public and properties from adverse effects associated with large storm events, and the fact that the project would not result in significant adverse effects to flood control features not maintained by VCWPD, it is anticipated that effects would not be cumulatively considerable.

C.32 LAW ENFORCEMENT/EMERGENCY SERVICES

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

4.7.1-1 Provide for the protection of the public through effective law enforcement and emergency services.

4.7.1-2 Ensure that discretionary development provides adequate private security for the prevention of local crime.

4.7.1-7 The overall goal of the Ventura County Sheriff's Department Office of Emergency Services is to save lives and protect property by developing programs and emergency operational capabilities that mitigate, prepare for, respond to, and recover from any emergency or disaster.

Policies

4.7.2-1 The Sheriff's Department shall continue to review discretionary permits to ensure that an adequate level of law enforcement can be provided.

4.7.2-2 Discretionary development shall be conditioned to provide adequate site security during the construction phase (e.g., licensed security guard and/or fencing around the construction site, and all construction equipment, tools, and appliances to be properly secured and serial number recorded for identification purposes).

4.7.2-4 Discretionary development shall be conditioned to avoid landscaping which interferes with police surveillance.

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, public safety depends on the timely availability of law enforcement and emergency service personnel. Projects that increase demand for law enforcement or emergency services may have a significant adverse impact on public safety unless mitigated. (Ventura County, 2011)

Law enforcement and emergency service personnel consist of all individuals, both sworn and not sworn, who are used by the Ventura County Sheriff's Department to protect the County's citizens. A project that directly or indirectly contributes to a population increase or does not include adequate measures to address increased demand would have the potential to impact law enforcement and emergency service personnel and equipment.

Proposed Project Impacts: During construction, security would be provided by the contractor; therefore, impacts to law enforcement would not occur.The proposed project would not increase the population of the project area and would not involve development of habitable structures. Therefore, the proposed project would not cause a change in established officer-to-population ratios. No impacts to law enforcement and emergency services would occur.

As discussed in Section A.4.5 (Proposed Project), during the winter season, VCWPD personnel are continually monitoring flow conditions in channels and inspecting facilities for identification of problem areas. Work conducted during storm events is usually not routine maintenance, but instead, is considered emergency activity. Graffiti on the floodwall would be removed as a part of regular maintenance. The VCWPD promptly removes graffiti with obscene comments or scenes; less offensive graffiti, such as tags, are removed as the VCWPD's budget allows. The VCWPD also implements the following BMP: Gates, fences, and "no trespassing" signs are kept in working order to discourage dumping and vandalism.

The river side floodwall section in Reach 4 could create opportunities for homeless camps, which are a known issue along this area of the Santa Clara River, as the area behind the wall would not be visible from the existing road system and would not likely receive regular law enforcement patrol. The levee security gates can be opened by authorized maintenance personnel and the law enforcement, such that any homeless camps would be noticed during regular maintenance or occasional law enforcement patrol. The existence of homeless camps would be reported to the local law enforcement agency immediately. Additionally, "no trespassing" and "private property" signs would be included to deter the homeless or any other unauthorized personnel. Construction and operation of the proposed project would, therefore, not result in a significant impact on law enforcement and emergency services.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. The proposed project is not growth inducing and would not result in significant impacts on law enforcement or emergency services. As a result, the proposed project would not make a cumulatively considerable contribution to impacts on law enforcement and emergency services. This issue will not be further addressed in the EIR.

C.33 FIRE PROTECTION

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

4.8.1 Strive to reduce the loss of life and property by providing effective fire prevention, suppression, and rescue services and facilities.

Policies

4.8.2-1 Discretionary development shall be permitted only if adequate water supply, access, and response time for fire protection can be made available.

4.8.2-2 Fire stations shall be sited in locations central to the area served and on or near arterial highways so as to minimize call response time.

C.33A Distance/Response Time

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, project distance from a full time paid fire department is considered a significant impact if the project is in excess of five (5) miles, measured from the apron of the fire station to the structure or pad of the proposed structure (Ventura County, 2011).

Proposed Project Impacts: Fire protection services for the proposed project area are provided by the Ventura County Fire Department (VCFD) and the City of Oxnard Fire Department. The nearest fire station to the proposed project area is City of Oxnard Fire Department Station 4, which is located approximately one mile south of the proposed project site at 230 West Vineyard Avenue. As the proposed project is located within five miles of the nearest fire station, no impacts with regard to the distance and response time of fire protection services would occur.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. As discussed above, proposed construction activities would be located within five miles of the nearest fire station; therefore, the proposed project would not combine with other past, present and reasonably foreseeable projects to contribute to an impact to fire protection services (distance and response) that would be cumulatively considerable.

C.33B Personnel/Equipment/Facilities

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, one firefighter is required for every 3,000 to 4,000 persons, depending on density (Ventura County, 2011).

Proposed Project Impacts: The proposed project would not increase the population of the proposed project area; consequently, it would not increase the demand for fire protection service personnel, equipment, or facilities. In addition, the proposed project would not involve any type of structural development that would require an increase in long-term fire protection service. No impacts with regard to the personnel, equipment, or facilities of fire protection services would occur.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. As discussed above, the proposed project would not increase the population of the proposed project area and does not involve any structural development; therefore, the proposed project would not combine with other past, present and reasonably foreseeable projects to contribute to an impact to fire protection services that would be cumulatively considerable.

C.34 EDUCATION

Relevant General Plan Goals and Policies

None.

C.34A Schools

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, any project that substantially interferes with the operations of an existing school facility would result in a significant impact under this issue area (Ventura County, 2011).

Proposed Project Impacts: The Rio Del Norte Elementary School is the closest educational institution, located at 2500 Lobelia Drive, Oxnard and is approximately 0.2 mile (1,060 feet) south of the proposed project area near Southbank Park. The proposed project would not involve the construction or removal/displacement of any residences; consequently, it would not affect the demand for schools within Ventura County or more specifically within the City of Oxnard. No impacts to schools would occur.

Any potential impact on school facilities (public or private) that is not related to demand is discussed and analyzed under the appropriate subject area (e.g., noise, traffic) of this Initial Study.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. As discussed above, the proposed project would not interfere with the operation of educational facilities and would not affect the demand for schools in the County. As such, the proposed project would not combine with other past, present of reasonably foreseeable projects to contribute to an impact to educational facilities that would be cumulatively considerable.

C.34B Libraries

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, any project that meets one of the following criteria would result in a significant impact under this issue area (Ventura County, 2011).

- Substantially interfere with the operations of an existing public library facility.
- Put additional demands on a public library facility that is currently deemed overcrowded.

- Limit the ability of individuals to access public library facilities by private vehicle or alternative transportation modes.

Proposed Project Impacts: The nearest public library to the proposed project area is the Albert H. Soliz Library, located at 2820 Jourdan Street, Oxnard, approximately 1.2 miles (6,389 feet) east of the proposed project site. As the proposed project would not involve the in-migration or removal of any residents, temporarily or permanently, it would not affect the demand for public library facilities; and given the distance of the Albert H. Soliz Library from the proposed project site, construction and operation activities would not interfere with the operations of this library or limit the ability of individuals to access this public library by private vehicle or alternative transportation modes. No impacts to library facilities and services would occur.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. As discussed above, the proposed project would neither affect the demand for public library facilities, nor interfere with the operations of or accessibility to the Albert H. Soliz Library. As such, the proposed project would not combine with other past, present or reasonably foreseeable projects to contribute to an impact to public libraries that would be cumulatively considerable.

C.35 RECREATION

As described in the Ventura County *Initial Study Assessment Guidelines*, a project will have a significant impact on recreation if it would cause an increase in the demand for recreation, parks, and/or trails and corridors or would cause a decrease in recreation, parks, and/or trails or corridors when measured against the standards discussed below.

Relevant General Plan Goals and Policies (Ventura County, 2013)

Goals

4.10.1-1 Acquire, develop, and operate a system of recreation facilities to meet the recreation needs of County residents.

4.10.1-2 Pursue an equitable, independent, and reliable method of financing the planning, acquisition, development, operation, and maintenance of recreation facilities.

4.10.1-3 Promote a coordinated effort by all government entities to assure the provision of a complete range of recreational opportunities for all ages and interests in all areas of Ventura County.

4.10.1-4 Promote the multi-use of existing physical resources through coordination with other public and quasi-public agencies (i.e., utility easements, flood control easements, school district facilities, etc.).

4.10.1-5 Establish or assist in the establishment of a Countywide network of trails which will meet the needs of equestrians, bicyclists, hikers, and other trail user groups.

4.10.1-6 Provide, or encourage the provision of, local park and recreation facilities and programs to serve the residents of the unincorporated territory of Ventura County where an equitable financing plan can be established with minimal use of County General Fund revenues.

4.10.1-7 Ensure compatibility between recreation facilities and adjoining land uses.

Policies

4.10.2-1 The County shall maintain and enforce the local parkland dedication requirements (Quimby Ordinance) to acquire and develop neighborhood and community recreation facilities. Parkland dedication shall be based on a standard of five acres of local parkland per thousand population, including neighborhood and community parks.

4.10.2-2 Discretionary development which would obstruct or adversely impact access to a public recreation resource shall be conditioned to provide public access as appropriate.

4.10.2-3 Developers shall be encouraged to make unused open space available for recreation.

4.10.2-5 County facilities (e.g., flood control channels and easements) shall be made available for recreational use as appropriate.

4.10.2-6 New recreation facilities shall be consistent with the General Plan and Zoning Ordinance.

C.35A Local Parks/Facilities

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, a project would result in a significant impact if it would cause an increase in the demand for or a decrease in the availability of recreation when measured against the following standard (Ventura County, 2011).

- Local Parks/Facilities - 5 acres of developable land (less than 15% slope) per 1,000 population.

Proposed Project Impacts: The purpose of the proposed project is to provide flood protection to the City of Oxnard for the one percent annual chance flood event by implementing improvements to the SCR-3 levee system. As such, construction and operation of this project would not include a growth-inducing development that would increase the demand for local recreation facilities.

The local park closest to the proposed project area is the Southbank Park within the City of Oxnard. This park is approximately 830 feet southeast of Reach 4 and consists of open space and a playground on a 6-acre lot. In Reach 4, approximately 860 feet of the floodwall would be constructed along the south side of N. Ventura Road. This portion of the floodwall would be located approximately 770 feet from the park. Existing development includes numerous homes and local streets that would provide a buffer between the park and the proposed construction and operation activities. Therefore, construction and operation activities associated with the proposed project would not interfere with recreation activities occurring at the park. There would be no impacts to local parks and facilities.

West of Reach 1, there is a paintball park operated by Paint Ball USA, a private company. Based on site reconnaissance, it appears that paintball activities occur within the open space areas surrounding the Santa Clara River. As these are unauthorized activities, potential disruptions due to construction and operation would not be considered a significant impact.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. The impacts associated with the proposed project would not increase the demand for local parks or facilities; consequently, the project would not result in a cumulatively considerable contribution to local park or facility impacts.

C.35B Regional Parks/Facilities

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, a project would result in a significant impact if it would cause an increase in the demand for recreation when measured against the following standards (Ventura County, 2011).

- Regional Parks/Facilities - 5 acres of developable land per 1,000 population.

In addition, a project will have a significant impact on recreation if it would impede future development of recreation parks/facilities (Ventura County, 2011).

Proposed Project Impacts: The purpose of the proposed project is to provide flood protection to the City of Oxnard for the one percent annual chance flood event by implementing improvements to the SCR-3 levee system. Therefore, construction and operation of this project would not induce a population growth that would increase the demand for regional recreation facilities.

Construction of Reach 2 under Option 1A would provide a continuous raised earthen levee adjacent to the entire northern boundary of the River Ridge Golf Course in the City of Oxnard. The Ventura Municipal Golf Course is located on the north side of the river in the City of Ventura directly across from Reach 2. A retaining wall, approximately 375-feet long along the levee roadway, would also be required to support the levee adjacent to the River Ridge Golf Course maintenance yard. Construction and operation activities would result in visual and noise impacts to recreation users (refer to Sections C.6 [Scenic Resources] and C.21 [Noise and Vibration] for impacts); however, these activities would not permanently disrupt recreation users, nor would the activities impede future development of either golf course. Therefore, impacts would not be significant.

Construction of Option 1B would the eliminate levee improvements proposed for Reach 2; however, the drainage swale within the River Ridge Golf Course, located at the mid-point of Reach 2, would be filled in to eliminate Reach 2 as a levee and avoid the construction requirements to improve the levee to meet FEMA criteria. The filling of the drainage swale would temporarily disrupt recreation activities at the golf course for approximately one month. In order to avoid interference with the activities at the River Ridge Golf Course, the following mitigation measure is recommended:

MM REC-1 The VCWPD shall coordinate with the River Ridge Golf Course thirty (30) days prior to the start of construction to minimize disruptions to activities within the golf course.

With implementation of MM REC-1, impacts to the River Ridge Golf Course would be temporary and not significant.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. These projects may affect regional recreational facilities as a result of either their construction or operation. However, the proposed project would be not be growth-inducing and thus would not affect the long-term operation of any regional recreational parks or facilities. Consequently, the proposed project's incremental contribution to impacts associated with regional parks/facilities would not be cumulatively considerable.

C.35C Regional Trails/Corridors

Significance Criteria: According to the Ventura County *Initial Study Assessment Guidelines*, a project would result in a significant impact if it would cause an increase in the demand for recreation when measured against the following standards (Ventura County, 2011).

- Regional Trails/Corridors - 2.5 miles per 1,000 population.

In addition, a project will have a significant impact on recreation if it would impede future development of Regional Trails/Corridors (Ventura County, 2011).

Proposed Project Impacts: The *Santa Clara River Trail Master Plan (Master Plan)* has been approved by the City of Oxnard's City Council. As shown within the *Master Plan*, the proposed route of the trail would be located along the proposed levee path (City of Oxnard, 2011). The design of Reaches 1-3 would include a CMB levee road, which would facilitate the City's future creation of the Santa Clara River Trail (SCRT) along this section of the SCR-3 levee. The *Master Plan* has been approved by the City Council, but the City does not have funding for this portion of the trail and cannot move forward until the flood control solution is reached (City of Oxnard, 2014). In addition, as stated in the Project Description, the river side portion of the floodwall along Reach 4 would be located approximately 17.5 feet from the existing roadway pavement of N. Ventura Road. This distance will accommodate the future bikeway (16-feet wide), planned as part of the *Master Plan*, and a curb and gutter along the roadway. Therefore, construction activities associated with Reaches 1-4 of the proposed project would not impact the proposed trail.

Access to the levee and associated maintenance road would remain restricted following completion of the proposed project, as is the case under existing conditions. Six-foot chain link fencing (approximately 1,800 feet) and three "swing" gates would be added to maintain security. However, public access may be permitted after the City of Oxnard completes its SCRT. During the operation period, construction of the river side flood wall would limit the community's access to the river and to the informal trail from N. Ventura Road. However, access from the Reach 4 area is already limited since the turnout on the north side of N. Ventura Road is narrow and there is no formal parking available. As such, construction of the river side flood wall would not preclude access from a commonly used access point, and impacts would not be significant. In addition, in the future when the Santa Clara River Trail is constructed and available for public use, routine maintenance activities during the operation period of the proposed project may temporarily disrupt recreational activities within the trail. However, O&M activities would be temporary and impacts to the trail users would not be significant.

The floodwall would cross N. Ventura Road at the high point in the road. Construction of the six-foot flood gate and the portion of the floodwall on the south side of N. Ventura Road may disrupt the existing bike lane located on the south side of N. Ventura Road for approximately six months. Therefore, this disruption would be temporary, and would not cause a significant long-term impact. In addition, as noted above, the proposed project would not induce growth in the project area; thus, it would not increase the long-term demand for recreational facilities, including trails and corridors. Therefore, impacts to regional trails or corridors would not be significant.

Cumulative Impacts: The introduction to Section C, as supported by Appendix 1, provides a list of approved, current, and reasonably foreseeable projects located in the project area. As discussed above,

the proposed project would not increase the demand for recreational trails or corridors or impede the development of future trails/corridors. Therefore, the proposed project would not combine with other past, present, or reasonably foreseeable projects in a manner that is cumulatively considerable.

D. INITIAL STUDY FINDINGS AND DETERMINATION

MANDATORY FINDINGS OF SIGNIFICANCE		YES/ MAYBE	NO
Based on the information contained within Sections B and C:			
1.	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	X	
2.	Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one that occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future).	X	
3.	Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effect of other current projects, and the effect of probable future projects. (Several projects may have relatively small individual impacts on two or more resources, but the total of those impacts on the environment is significant).	X	
4.	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	X	

DISCUSSION

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

As described in Section C.1 (Air Quality), the construction-related emissions, including fugitive dust, from the SCR-3 Project activities would have the potential to conflict with or obstruct implementation of the Ventura County AQMP, violate air quality standards or contribute to an existing or projected air quality violation, and expose the public to substantial pollutant concentrations, which would result in a degradation of the quality of the existing environment. These impacts may also be cumulatively considerable. These potential impacts, which may be significant, will be fully evaluated within the EIR.

As described in Section C.4 (Biological Resources), the SCR-3 Project would have the potential to degrade the quality of the environment through the removal of existing vegetation along Reaches 1-4 during construction and as part of O&M. In addition, the proposed project has the potential to disturb wildlife during construction and O&M. These impacts may also be cumulatively considerable. These issues will be addressed in detail in the EIR.

With regards to paleontological and cultural resources, it is considered unlikely that environmental impacts would occur as a result of the proposed project; however, mitigation measures have been identified to ensure that if such impacts arise, they would remain less than significant. Initial Study Sections C.8A (Archaeological Resources) and C.8B (Historic Resources) describe that no previously

recorded prehistoric or historic archaeological resources that meet eligibility or significance criteria under the National Register of Historic Places, or appear eligible as State, county or local landmarks, exist within the boundaries of the proposed project site. One historic property, the Southern Pacific Railroad trestle over the Santa Clara River, is a significant historic resource eligible for placement on the National and California Registers and for listing as a Ventura County Landmark. Implementation of the proposed project would not involve the modification or demolition of any existing structures, other than the SCR-3 levee, and while it would include the placement of fill against the railroad embankment southeast of the railroad trestle, this would not adversely affect the existing setting integrity or the eligibility of the resource for special designation. The project would therefore have no significant adverse physical or visual impacts on known prehistoric and historic archaeological resources. However, in the unlikely event that a potentially significant cultural or historic resource is encountered during ground-disturbing activities associated with the proposed project, mitigation measures have been identified to ensure that customary caution is utilized during earth-disturbing activities within the project area; project-specific mitigation measures relevant to cultural and historic resources are summarized below.

- **MM CUL-1.** If archaeological resources are encountered during project implementation, an approved archaeological consultant will be contacted immediately and project-related activities will be diverted until the discovery has been evaluated and properly addressed to ensure that potential impacts to archaeological resources would not be significant.
- **MM CUL-2.** If human remains are encountered during excavations associated with this project, all work must halt, and the County Coroner will determine whether the remains are of forensic interest, and the Native American Heritage Commission will be consulted if the remains are prehistoric, in order to ensure that potential impacts to historic resources would not be significant.

With implementation of the mitigation measures summarized above, the proposed project would not result in a significant impact to cultural, historic, or archaeological resources. Neither construction nor operation and maintenance of the project would eliminate important examples of the major periods of California history or prehistory. No impacts to paleontological resources would occur as a result of project construction or operational activities.

2. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one that occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future).

The proposed project would result in potential short-term impacts during the 27-month construction period that may be significant under the following environmental issue areas: Air Quality (Section C.1), Biological Resources (Section C.4), Scenic Resources (C.6), Cultural Resources (Section C.8), Hazardous Waste (C.20B), Noise and Vibration (Section C.21), Daytime Glare (C.22), Public Health (C.23), Transportation/Circulation (C.27), Utilities (C.30), and Recreation (C.35). Of these, Cultural Resources, Daytime Glare, and Recreation have been mitigated to a less-than-significant level within this Initial Study. Additionally, there is a long-term potential for liquefaction impacts (C.12), as well as downstream flooding effects from the proposed flood control facilities (C.31A). Those topics require additional review and analysis to determine level of significance and thus have not been mitigated; therefore, they will be addressed further in the EIR. Based on this analysis, it will be determined whether the flood protection provided by the SCR-3 Project to the City of Oxnard would outweigh the environmental impacts that would occur as a result of the project.

3. Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effect of other current projects, and the effect of probable future projects. (Several projects may have relatively small individual impacts on two or more resources, but the total of those impacts on the environment is significant).

All of the environmental issue area analyses provided in Chapter C of this Initial Study assess the proposed project's potential impacts, both individually and cumulatively. Cumulative impact significance determinations are summarized in the Initial Study checklist table provided in Section B. The SCR-3 project has the potential to result in cumulatively considerable impacts for the following environmental issue areas: Air Quality, Biological Resources, Scenic Resources, Noise and Vibration, Public Health, Transportation/Circulation, Utilities, and Flood Control/Drainage.

4. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

While implementation of the SCR-3 Project would result in beneficial impacts associated with flood hazard protection to human beings located in the developed areas behind the SCR-3 levee, the project would have the potential to cause substantial adverse effects to air quality during construction, degrade the aesthetics of the project area (visual and community character), impact public health in the event hazardous waste materials associated with the local landfills are encountered, impact underground utilities in the project area, result in increased noise and traffic during construction, and potentially result in long-term liquefaction and downstream flooding effects. These issues will be analyzed further in the EIR.

DETERMINATION OF ENVIRONMENTAL DOCUMENT	
On the basis of this initial evaluation:	
[ ]	I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION should be prepared.
[ ]	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measure(s) described in Chapter C of the Initial Study will be applied to the project. A MITIGATED NEGATIVE DECLARATION should be prepared.
[X]	I find the proposed project, individually and/or cumulatively, MAY have a significant effect on the environment and an ENVIRONMENTAL IMPACT REPORT is required.
[ ]	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
[ ]	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Luigia Vargas (ACTING)

Date 2/23/2015

Tully Clifford, Director
Ventura County Watershed Protection District

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F. INITIAL STUDY LIST OF PREPARERS AND REVIEWERS

In accordance with CEQA Guidelines Section 15063(d)(6), the following tables list the individuals that assisted with or are anticipated to assist with the preparation and review of this Initial Study.

Table F-1. Ventura County Initial Study Reviewers

Name	Affiliation	Role
Angela Bonfiglio Allen	Ventura County Watershed Protection District	Project Environmental Planner
Masood Jilani	Ventura County Watershed Protection District	Project Engineer
Peter Sheydayi	Ventura County Watershed Protection District	Design and Construction Deputy Director
Gerard Kapuscik	Ventura County Watershed Protection District	Strategic Decision Support Group Manager
Brian Trushinski	Ventura County Watershed Protection District	Floodplain Manager
Sergio Vargas	Ventura County Watershed Protection District	Planning and Regulatory Deputy Director
Rick Viergutz	Ventura County Watershed Protection District	Groundwater Resources Manager
Ewelina Mutkowska	Ventura County Watershed Protection District	County Stormwater Quality Program Manager
Melinda Talent	Ventura County Resource Management Agency Environmental Health Division	Local Enforcement Agency Environmental Planner
Theresa Lubin	Ventura County General Services Agency	Parks Maintenance
Shelley Sussman	Ventura County Resource Management Agency Planning Department	Planner
Ray Gutierrez	Ventura County Public Works Agency	Development Services – Grading & Drainage
Jim O-Tousa	Ventura County Public Works Agency	Development Services – Soils & Geology
Ben Emami	Ventura County Public Works Agency Transportation Department	Transportation Engineering Manager
Derrick Wilson	Ventura County Public Works Agency Integrated Waste Management Division	Environmental Resource Analyst
Ryan Kraii	Ventura County Fire Protection District	Senior Fire Inspector
Alicia Stratton	Ventura County Air Pollution Control District	Air Quality Analyst
Korinne Bell	Office of the Agricultural Commissioner	Agricultural Land Use Planner
Todd McNamee	Ventura County Department of Airports	Airports Project Manager
Laura Hernandez	Ventura County Sheriff's Department	Law Enforcement Officer

Table F-2. Initial Study Preparers

Name	Affiliation	Role
Jon Davidson	Aspen Environmental Group	Project Manager
Lisa Blewitt	Aspen Environmental Group	Deputy Project Manager, Project Description, Noise, Mandatory Findings of Significance
Aubrey Mescher	Aspen Environmental Group	Water Resources, Hydraulic Hazards, Water Supply, Flood Control/Drainage
Susanne Huerta	Aspen Environmental Group	Scenic Resources, Daytime Glare, Mineral Resources, Agricultural Resources, Coastal Beaches and Sand Dunes, Community Character, Recreational Facilities
Will Walters	Aspen Environmental Group	Air Quality, Greenhouse Gases (Supervisor)
Scott DeBauche	Aspen Environmental Group	Air Quality, Greenhouse Gases, Fire Hazards, Aviation Hazards, Housing
Chris Huntley	Aspen Environmental Group	Biological Resources (Supervisor)
Jared Varonin	Aspen Environmental Group	Biological Resources
Matthew Braun	Aspen Environmental Group	Cultural Resources
Stan Yeh	Aspen Environmental Group	Waste Treatment & Disposal, Utilities, Law Enforcement/ Emergency Service, Fire Protection, Education
SUBCONTRACTORS		
Aurie Patterson	Geotechnical Consultants, Inc. (G.T.C.)	Paleontological Resources, Seismic Hazards, Geologic Hazards, Public Health, Hazardous Materials / Waste
Robert Wlodarski	Historical Environmental Archaeological Research Team (H.E.A.R.T.)	Phase 1 Archaeological Study (Appendix 2)
Ray Nugent	Acentech Inc.	Noise and Vibration
Richard Garland	Garland & Associates	Transportation & Circulation