Salt and Nutrient Management Plan for the Lower Santa Clara River Groundwater Basin

Draft
Substitute Environmental Document

rincon

April 2015

Environmental Scientists Planners Engineers

DRAFT
SUBSTITUTE ENVIRONMENTAL DOCUMENT

SALT AND NUTRIENT MANAGEMENT PLAN FOR THE LOWER SANTA CLARA RIVER GROUNDWATER BASIN

Prepared under the California Environmental Quality Act (CEQA)
Requirements of a Certified Regulatory Program

Prepared for:

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Salt and Nutrient Management for the Lower Santa Clara River Groundwater Basin

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1.0 EXECUTIVE SUMMARY

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) is the lead agency for evaluating the environmental impacts of the proposed Salt and Nutrient Management Plan (SNMP) for the Lower Santa Clara River Groundwater Basins.

This Substitute Environmental Document (SED) analyzes environmental impacts that may occur from reasonably foreseeable methods of implementing the Salt and Nutrient Management Plan for the Lower Santa Clara River. This SED is based on a proposed Salt and Nutrient Management Plan that will be considered by the Regional Board and, if approved by the Regional Board, will be revise the implementation plan to the California Water Quality Control Plan, Los Angeles Region (Basin Plan) consistent with Water Code Section 13242. The proposed Salt and Nutrient Management Plan is described in the Staff Report, Tentative Board Resolution, and Tentative Basin Plan Amendment available on the Regional Board website. This SED analyzes foreseeable methods of compliance with the Salt and Nutrient Management Plan and provides the public information regarding environmental impacts, mitigation, and alternatives in accordance with the California Environmental Quality Act (CEQA).

The SNMP was developed through a collaborative process involving major stakeholders in the Lower Santa Clara River Groundwater Basin, including the City of Ventura, City of Fillmore, City of Santa Paula, Ventura County Water Works District 16, United Water Conservation District, Farm Bureau of Ventura County and Ventura County Public Works Agency/Watershed Protection District. . The Lower Santa Clara River Groundwater Basin stakeholders worked in close consultation with the Los Angeles Regional Water Quality Control Board (Regional Board) to develop the SNMP and SED.

The SED will be considered by the Regional Board when the Regional Board considers adoption of the Salt and Nutrient Management Plan as a Basin Plan Amendment. Approval of the SED is separate from approval of a specific project alternative or a component of an alternative. The approval process for the SED includes (1) addressing public comments received during the 45 day comment period, (2) confirming that the Regional Board considered the information in the SED, and (3) affirming that the SED reflects independent judgment and analysis by the Regional Board (CEQA Guidelines Section 15090 (Title 14 of CCR), Division 6, Chapter 3).

In November 2008, the State Water Resources Control Board (State Board) adopted the Statewide Recycled Water Policy (Policy). The goal of the Policy is to increase the use of recycled water over 2002 levels by at least one million acre-feet per year (AFY) by 2020 and at least two million AFY by 2030 in accordance with state and federal water quality laws. Since recycled water contains salts and nutrients that may cause or contribute to exceedances of water quality objectives established by the basin planning process, management of these constituents in recycled water projects is necessary.

Recognizing that there are various sources of salts and nutrients within groundwater basins, the Policy requires that, "salts and nutrients from all sources be managed on a basin-wide or watershed-wide basis in a manner that ensures attainment of water quality objectives and protection of beneficial uses." Therefore, rather than imposing requirements on individual recycled water projects, the Policy requires preparation of regional or sub-regional salt and nutrient management plans for all groundwater basins in California.

The project area is located in central Ventura County, within the Santa Clara River Valley. The Lower Santa Clara River (LSCR) is a portion of the Santa Clara River. The LSCR Groundwater Basin consists of five sub-basins: Piru basin, Fillmore basin, Santa Paula basin, Mound basin, and Oxnard Forebay basin. Each of the five sub-basins has water quality objectives set in the *Water Quality Control Plan Los Angeles Region- Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* prepared by the Regional Board (1994).

The proposed Salt and Nutrient Management Plan for the Lower Santa Clara River is intended to fulfill the requirements of the Statewide Recycled Water Policy and provide the framework for the environmentally safe disposal of salts and nutrients that occur in the Lower Santa Clara River groundwater basins in compliance with the Basin Plan. This would be achieved through the implementation of management measures in areas of the groundwater basin where the salt and nutrient loads would exceed the water quality objectives for the sub-basin if recycled water projects were to be implemented.

This SED analyzes three Program Alternatives and both structural and non-structural Implementation Alternatives (see Sections 4 and 5 of this SED for a description of the alternatives) that encompass actions within the jurisdiction of the Regional Board and implementing municipalities and agencies. A No Project Alternative is analyzed to compare the impacts of approving a proposed alternative and its components compared with the impacts of not approving the proposed alternative. The SED analyzes the potential environmental impacts in accordance with significance criteria. CEQA requires the Regional Board to conduct a program level analysis of environmental impacts (Public Resources Code §21159(d)). This analysis is a program-level analysis. Public Resources Code Section 21159(c) requires that the environmental analysis take into account <u>a reasonable range</u> of:

(1) Environmental, economic, and technical factors,
(2) Population and geographic areas, and
(3) Specific sites.

A "reasonable range" does not require an examination of every site, but a reasonably representative sample of them. The statute specifically states that the section shall not require the agency to conduct a "project-level analysis" (Public Resources Code § 21159(d)). Rather, a project-level analysis must be performed by the local agencies that are required to implement the requirements of the Salt and Nutrient Management Plan (Public Resources Code §21159.2). Notably, the Regional Board is prohibited from specifying the manner of compliance with its regulations (Water Code §13360), and accordingly, the actual environmental impacts will necessarily depend upon the compliance strategy selected by the local agencies and municipalities who intend to provide recycled water within the groundwater basin.

Municipalities and agencies that will implement recycled water projects resulting in the need for management measures to address salt and nutrient loading in the Lower Santa Clara River groundwater basin may use this SED to help with the selection and approval of project alternatives.

Approval of projects (i.e., project alternatives or components of project alternatives) refers to the decision of either the implementing municipalities or agencies to select and carry out an alternative or a component of an alternative. (Section 5 of this SED summarizes the components

that comprise the project alternatives analyzed in this SED). In most cases the components assessed at a project-level do not have specific locations at this time; the specific locations will be determined by implementing municipalities and agencies. The project-level components will be subject to additional environmental review, including review by cities and municipalities implementing the management measures (Implementation Alternatives) identified in the Salt and Nutrient Management Plan.

Many of the specific projects and BMPs analyzed in this SED will involve infrastructure projects that will reduce salt and nutrient loading in the groundwater basin. Construction and operation of infrastructure projects generate varying degrees of environmental impacts. The potential impacts can include, for example, noise associated with construction, air emissions associated with vehicles to deliver materials during construction, traffic associated with increased vehicle trips and where construction or attendant activities occur near or in thoroughfares, additional light and glare. Additionally, operation of infrastructure, such as water recycling or other water treatment facilities (e.g. desalination, regional water softening) would result in additional air and greenhouse gas emissions, primarily through an increase in energy use. These foreseeable impacts are analyzed in detail in Section 6 of this SED.

To address the potential environmental impacts from construction and operation of the management measures identified in the Salt and Nutrient Management Plan, responsible parties can employ a variety of techniques, BMPs, and other mitigation measures to minimize potential impacts on the environment. Mitigation measures for construction projects include implementation of BMPs to reduce noise impacts, developing detailed traffic plans in coordination with police or fire protection authorities, using sound barriers, and using lower emission vehicles to reduce air pollutant emissions. Operational mitigation measures include use of renewable energy sources, noise reducing equipment and other BMPs.

Many of the mitigation measures identified in the SED are common practices currently employed to reduce impacts associated with construction and operation of infrastructure projects. These mitigation methods are discussed in detail in Section 6 of this SED. Mitigation measures are suggested to minimize site specific impacts to less than significant levels. Mitigation of adverse environmental impacts is strictly within the discretion of the individual implementing agency. It is the obligation of responsible parties to mitigate adverse environmental impacts associated with reasonably foreseeable means of compliance when impacts are deemed significant (14CCR§15091(a)(2)).

This SED finds that foreseeable methods to comply with the Salt and Nutrient Management Plan, including both nonstructural and structural management measures, would not cause significant impacts that cannot be mitigated through commonly used construction, design and operational practices. The SED identifies mitigation methods for impacts with potentially significant effects and finds that these methods can mitigate potentially significant impacts to levels that are less than significant. To the extent that there are significant adverse effects on the environment due to the implementation of this Salt and Nutrient Management Plan, there are feasible alternatives and/or feasible mitigation measures that would substantially lessen significant adverse impacts in most cases. The SED can be used by implementing municipalities and agencies to assist with any additional environmental analysis of specific projects required to comply with the Salt and Nutrient Management Plan.

The regulatory requirements and the program objectives for the Salt and Nutrient Management Plan for the Lower Santa Clara River groundwater basin are provided in Section 2 and Section 3, respectively. Section 4 discusses the program-level alternatives for the Salt and Nutrient Management Plan. Section 5 provides a detailed description of implementation alternatives available to achieve compliance with the water quality objectives listed in the Basin Plan. Section 6 contains the CEQA Checklist and Determination with in-depth analysis of each resource area. Other environmental considerations are discussed in Section 7. A statement of overriding considerations and the CEQA findings are included in Sections 8 and 9, respectively. A list of references is included in Section 10.

1.1 ORGANIZATION OF THE SED

This SED is organized into an Executive Summary, and 9 sections as summarized below.

1.0 Executive Summary – provides an executive summary of the objectives and development process for the SNMP as well as the analysis included in the SED.
2.0 Regulatory Requirements – Describes regulatory requirements and objectives of the SNMP and SED.
3.0 Program Overview and Benefits – provides a description of the proposed SNMP and its individual components.
4.0 Program-Level Alternatives – Presents the three program alternatives that were developed by the Regional Board and LSCR stakeholders based on the primary objectives of the SNMP and Recycled Water Policy.
5.0 Implementation Alternatives - Summarizes the SNMP Implementation Plan, including the implementation measures and planned recycled water projects in the LSCR
6.0 Settings, Impacts and Mitigation – Describes the baseline environmental conditions in the LSCR, against which the analysis of potential environmental impacts was conducted. Contains the CEQA Checklist with an analysis of potential direct and indirect impacts for each identified environmental resource
7.0 Other Environmental Considerations – Describes other environmental considerations for the proposed SNMP, including cumulative environmental impacts and growth-inducing effects.
8.0 Statement of Overriding Considerations – Provides the statement of overriding considerations.
9.0 Findings – Provides the CEQA findings
10.0 References - Provides a list of references citied in this SED

Supporting materials are attached as the following appendices to this SED.

Appendix A – State Water Resources Control Board *Recycled Water Policy for Water Quality Control for Recycled Water* (Recycled Water Policy), Resolution No. 2013-0003, Revised January 22, 2013 and Effective April 25, 2013 (originally approved as Resolution No. 2009-0011 on May 14, 2009)

Appendix B – Los Angeles Regional Water Quality Control Board, June 28, 2012, *Regional Water Board Assistance in Guiding Salt and Nutrient Management Plan Development in the Los Angeles Region*

2.0 REGULATORY REQUIREMENTS

This section presents the regulatory requirements for assessing environmental impacts of a Salt and Nutrient Management Plan (SNMP) developed for a groundwater basin and/or sub-basin.

2.1 BASIN PLANNING AND STATE RECYCLED WATER POLICY

California is divided into nine hydrogeologic regions, each of which is overseen by a Regional Water Quality Control Board (Regional Board), which in turn are overseen by the State Water Resources Control Board (State Board). Each of these nine regions has an adopted water quality control plan known as a Basin Plan. Delineated within the Basin Plan is a list of beneficial uses for every ground and surface water basin that require protection. The Basin Plans also contain water quality standards developed to protect these beneficial uses; these standards include both numeric and narrative water quality objectives.

In February 2009, the State Board adopted a Recycled Water Policy, the purpose of which is to increase the use of recycled water in a manner that implements state and federal water quality laws. The Policy requires that SNMPs be completed to facilitate basin-wide management of salts and nutrients from all sources in a manner that optimizes recycled water use while ensuring protection of groundwater supply and beneficial uses, agricultural beneficial uses, and human health. Once developed, the Recycled Water Policy requires that the SNMPs be adopted by the individual Regional Boards as amendments to their existing Basin Plans.

The Regional Board's goal in adopting this Basin Plan Amendment is to incorporate regional salt and nutrient management strategies rather than relying on the past approach of imposing requirements on individual projects with no consideration of the relative and cumulative impacts when all projects and loading sources are considered. The Lower Santa Clara River SNMP Basin Plan Amendment may allow for streamlined permitting and elimination of separate anti-degradation analyses for the vast majority of projects, allowing the Regional Board to focus their limited resources on projects that require substantial regulatory review due to unique site-specific conditions.

2.2 LOS ANGELES REGIONAL BOARD GUIDANCE

The Recycled Water Policy also requires that the SNMP comply with CEQA. CEQA requirements that are applicable to the SNMP are described in the *Regional Water Board Assistance in Guiding Salt and Nutrient Management Plan Development in the Los Angeles Region* (http://www.swrcb.ca.gov/rwqcb4/water_issues/programs/salt_and_nutrient_management/Stakeholder_Outreach/Regional%20Water%20Board%20SNMP%20Assistance%20Document.PDF) that was issued by the Regional Board on June 28, 2012. The SNMP Assistance Document provides guidance for preparation of SNMPs within the Los Angeles Region and outlines the CEQA requirements for Regional Board adoption of an Implementation Plan based on the SNMP into the Basin Plan. The SNMP Assistance Document, provided as Appendix B, was used as guidance to prepare this SED. As stated in the SNMP Assistance Document, the environmental analysis of the SNMP will be conducted primarily by the basin stakeholders with oversight and review by Regional Board. Following the release of the Draft SED for public review, it is anticipated that there will be comments on its technical and regulatory aspects. The

Regional Board will take the lead in responding to the comments that reference the regulatory process, while the basin stakeholders will be the lead for responding to technical comments. It will be necessary for stakeholders and the Regional Board to work in collaboration to make necessary revisions to the SED in response to public comments.

Once the SNMP has been approved and specific projects are to be implemented, the stakeholders will be responsible for conducting project-specific environmental analyses, when applicable, in accordance with CEQA while meeting all other applicable regulatory requirements. Public agencies and other entities that carry out or implement projects associated with the SNMP are considered the lead agencies under CEQA for these individual projects. However, in addition, the implementation measures identified in a SNMP may be adopted as amendments to the Basin Plan by the Regional Water Board, and CEQA analysis is a required part of the adoption process in accordance with the SWRCB's Certified Regulatory Program, as noted in the following section. As such, for the purpose of the Regional Board adoption of a Basin Plan Amendment, the Regional Board will be the lead agency for purposes of CEQA. Thus, preparation of the environmental documentation for consideration and adoption by the Regional Board will be the responsibility of the Regional Board.

As stated in the SNMP Assistance Document, the SED will be considered by the Regional Board as part of the adoption of the SNMP. Approval of the SED is separate from approval of a specific project or a component of a program alternative. Approval of the SED refers to the process of: (1) addressing comments, (2) confirming that the Regional Board considered the information in the SED, and (3) affirming that the SED reflects independent judgment and analysis by the Regional Board (California Code of Regulations [CCR], Title 14, Division 6, Chapter 3 Guidelines for Implementation of the California Environmental Quality Act [CEQA Guidelines], Sections 10590 and 15090).

2.3 EXEMPTION FROM CERTAIN CEQA REQUIREMENTS

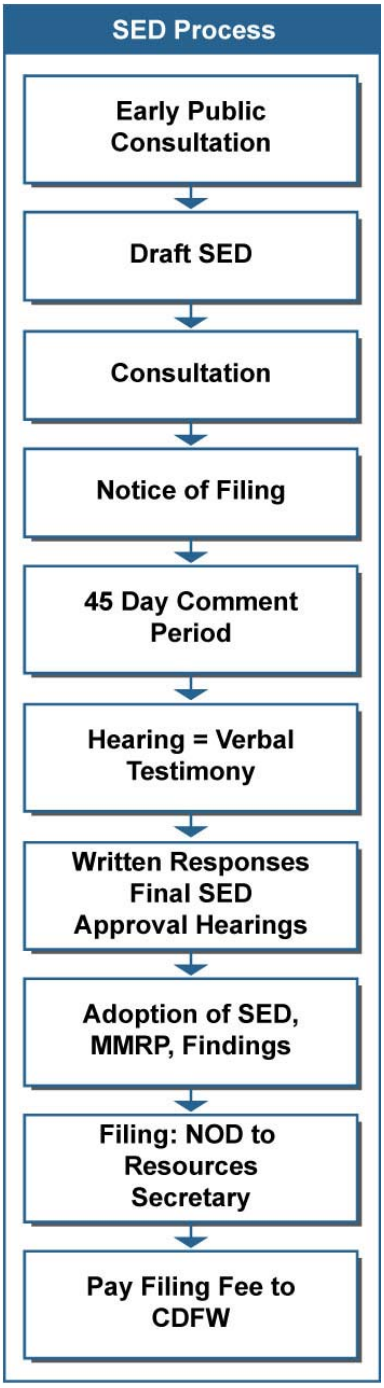
The California Secretary of Natural Resources has certified the State and Regional Boards' basin planning processes as exempt from certain requirements of the California Environmental Quality Act (CEQA). As a certified program, the basin planning process is exempt from the requirement to prepare an environmental impact report, negative declaration, and/or initial study (Title 14, California Code of Regulations (CCR), Section 15241(g)). However, as a certified program, the basin planning process is subject to other provisions in CEQA (Public Resources Code (PRC), Section 21000 et seq.), such as the requirement to avoid significant adverse effects to the environment, where feasible. As such, the State and Regional Boards are required to comply with State Board regulations set forth in CCR, Title 23, Sections 3775 et. seq, and PRC Section 21159. PRC 21159 Section requires that when specified agencies are considering adoption of a rule or regulation requiring the installation of pollution control equipment, or a performance standard or treatment requirement that those agencies conduct an environmental analysis of the foreseeable methods of compliance with the rule or regulation proposed for adoption.

The Recycled Water Policy requires that the SNMP development process comply with the requirements of CEQA, as applicable. As development of the proposed SNMP for the LSCR is part of the basin planning process, the environmental information developed for, and included

within, the SNMP is considered a substitute for an initial study, negative declaration, and/or environmental impact report. The environmental documentation provided as part of the SNMP is termed a Substitute Environmental Document or SED. The regulatory requirements for information contained in a SED are described in Section 2.4, below.

2.4 CALIFORNIA CODE OF REGULATIONS AND PUBLIC RESOURCES CODE REQUIREMENTS FOR SUBSTITUTE ENVIRONMENTAL DOCUMENTS

While the State and Regional Boards' basin planning process is exempt from certain CEQA requirements, due to its status as a "certified regulatory program", it is subject to the substantive requirements of CCR, Title 23, Section 3777(a) - Documentation Required for Adoption or Approval of Standards, Rules, Regulations, or Plans.



CCR Section 3777(a) requires that any water quality control plan, state policy for water quality control, and any other components of California's water quality management plan as defined in CFR, title 40, sections 130.2(k) and 130.6, proposed for State Board approval or adoption must include or be accompanied by a SED and supported by substantial evidence in the administrative record. The process to develop and adopt an SED is displayed to the right. The Draft SED may be comprised of a single document or a compilation of documents and shall consist of:

a) A written report prepared for the State Board, containing an environmental analysis of the project;
b) A completed Environmental Checklist. The issues identified in the Environmental Checklist must be evaluated in the checklist or elsewhere in the SED; and
c) Other documentation as the Board may include.

Section 3777(b) requires the Draft SED to include the following information, at a minimum:

1) A brief description of the project, in this case the proposed SNMP;
2) An identification of any significant or potentially significant adverse environmental impacts of the proposed project;
3) An analysis of reasonable alternatives to the project and mitigation measures to avoid or reduce any significant or potentially significant adverse environmental impacts;
4) An environmental analysis of the reasonable foreseeable methods of compliance;

5) An analysis of any reasonably foreseeable significant adverse environmental impacts associated with those methods of compliance;
6) An analysis of reasonably foreseeable alternative methods of compliance that would have less significant adverse environmental impacts; and
7) An analysis of reasonably foreseeable mitigation measures that would minimize any unavoidable significant adverse environmental impacts of the reasonably foreseeable methods of compliance.

PRC Section 21159 has the same minimum requirements for the environmental analysis which the Regional Board is also required to fulfill along with the same considerations.

2.5 PROGRAM- AND PROJECT-LEVEL ANALYSES

The level of detail provided in this SED is appropriate to the programmatic nature of the proposed SNMP. In the preparation of the environmental analysis required by CCR Section 3777(b), the State Board may utilize numerical ranges or averages where specific data are not available; however, the State Board is not required to engage in speculation or conjecture. As per the requirements of PRC Section 21159(c), the environmental analysis is required to take into account a reasonable range of: environmental, economic, and technical factors; population and geographic areas; and specific sites. However, PRC Section 21159(d) specifically states that the public agency is not required to conduct a "project-level analysis", which CEQA may otherwise require of those agencies that are responsible for complying with the plan or policy when they determine the manner in which they will comply. Notably, the Regional Board is prohibited from specifying the manner of compliance within its regulations (California Water Code Section 13360). Accordingly, the actual environmental impacts of compliance with the plan or policy, in this case the SNMP, will necessarily depend upon the compliance strategy selected by stakeholders responsible for management of salts and nutrients in the watershed.

This SED identifies the reasonably foreseeable environmental impacts of the ***reasonably foreseeable*** methods of compliance (PRC Section 21159(a)(1)), based on information developed before, during, and after the CEQA scoping process that is specified in PRC Section 21083.9. This analysis is a program-level (i.e., macroscopic) analysis as required by CEQA and PRC Section 21159(d), as described above. At this time it is not known what salt and nutrient management measures would be built or implemented in the future by local lead agencies. Therefore, this SED identifies and analyzes programmatically the reasonably foreseeable alternative means of compliance with the SNMP.

2.6 PURPOSE OF CEQA

CEQA's basic purposes are to:

1) Inform the decision makers and public about the potential significant environmental effects of a proposed project;
2) Identify ways that environmental damage may be mitigated;
3) Prevent significant, avoidable damage to the environment by requiring changes in projects, through the use of alternatives or mitigation measures, when feasible; and

4) Disclose to the public why an agency approved a project if significant effects are involved (CCR Title 14, Section 15002(a)).

In this document, the Regional Board has performed a good faith effort at full disclosure of the reasonably foreseeable environmental impacts that could be attendant with the proposed LSCR SNMP.

2.7 CEQA SCOPING MEETING

Pursuant to PRC Section 21083.9, a CEQA Scoping Meeting must be held to receive comments on the appropriate scope and content of the SED supporting any amendments to the Basin Plan. The purpose of this public meeting is to describe the proposed SNMP that was developed by the LSCR stakeholders for groundwater basin management and to determine, with input from interested agencies and persons, if those means could result in significant adverse impacts to the environment. Information garnered from this process shall be considered during development of the Draft SED and, where applicable, may be incorporated into the Final SED.

In the LSCR area, the CEQA process was initiated after the implementation measures and planned recycled water projects were proposed by the stakeholders during the SNMP development process. The CEQA Scoping Meeting for the LSCR SNMP was held jointly by the Regional Board and basin stakeholders on February 26, 2015 at the United Water Conservation District Board Room at 106 N. 8th Street, Santa Paula, CA. At this public meeting, the Regional Board, the stakeholders and their consultant team gave presentations describing the Recycled Water Policy, key SNMP features, including implementation measures and planned recycled water projects, general CEQA process, and environmental criteria for the CEQA evaluation. This meeting was attended by the LSCR stakeholders, consultants, and Regional Board staff.

As the lead agency for the CEQA process, the Regional Board prepared and issued the Notification of the CEQA Scoping Meeting to all interested parties and was designated as the entity to receive all public comments regarding the proposed SED scope and content. A 30-day public comment period was established by the Regional Board and comments were also solicited during the February 26th CEQA Scoping Meeting. No comments regarding the proposed environmental analysis were received by LARWQCB and thus, there are no responses to public comments presented in this SED.

Although not required as part of the CEQA process, the LSCR stakeholders also prepared a Project Summary that concisely presented the key details of the SNMP. The Project Summary was distributed during the February 26, 2015 CEQA Scoping Meeting and was also distributed by the Regional Board along with the Notification of the CEQA Scoping Meeting to all interested parties. Documents associated with the CEQA Scoping Meeting, including the meeting notification, presentations, sign-in sheet, and Project Summary, can be downloaded from the Regional Board website:
http://www.swrcb.ca.gov/rwqcb4/water_issues/programs/salt_and_nutrient_management/index.shtml

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3.0 PROGRAM OVERVIEW AND BENEFITS

3.1 INTRODUCTION

3.1.1 Legal Background

In November 2008, the State Water Resources Control Board (State Board) adopted the Statewide Recycled Water Policy (Policy). The goal of the Policy is to increase the use of recycled water over 2002 levels by at least one million acre-feet per year (AFY) by 2020 and at least two million AFY by 2030 in accordance with state and federal water quality laws. Since recycled water contains salts and nutrients that may cause or contribute to exceedances of water quality objectives established by the basin planning process, management of these constituents in recycled water projects is necessary. However, the Policy also recognizes that recycled water projects are not the only source of salt and nutrient inputs in groundwater basins. In addition to use of recycled water, activities such as irrigation using imported water can potentially add salts and nutrients. When added to groundwater basins, salts are typically measured as total dissolved solids (TDS). Other sources of salts/nutrients can include natural soil conditions, atmospheric deposition, discharges of waste, soil amendments and water supply augmentation using surface water. Excessive concentrations of salts and nutrients in the groundwater can damage environmental and economic resources and impair the ability to use groundwater for domestic, industrial and agricultural uses.

Recognizing that there are various sources of salts and nutrients within groundwater basins, the Policy requires that, "salts and nutrients from all sources be managed on a basin-wide or watershed-wide basis in a manner that ensures attainment of water quality objectives and protection of beneficial uses." Therefore, rather than imposing requirements on individual recycled water projects, the Policy requires preparation of regional or sub-regional salt and nutrient management plans (SNMPs) for all groundwater basins in California.

In addition to the Policy, the Los Angeles Regional Water Quality Control Board (Regional Board) developed a guidance document to be used during development of SNMPs for the groundwater basins in the Los Angeles Region. The Regional Board SNMP Guidance includes a number of technical elements that go beyond the requirements of the Policy, based on recommended elements prepared by the State Board. The Policy and Regional Board Guidelines provide the regulatory context for the proposed SNMP.

3.1.2 Lower Santa Clara River Groundwater Basin

The project area is located in central Ventura County, within the Santa Clara River Valley. The Lower Santa Clara River (LSCR) is a portion of the Santa Clara River. The LSCR Groundwater Basin consists of five sub-basins: Piru basin, Fillmore basin, Santa Paula basin, Mound basin, and Oxnard Forebay basin (refer to Figure 3-1 *Regional Location Map)*. The individual sub-basin boundaries are based on the boundaries defined in the Department of Water Resources' (DWR) Bulletin 118. The project area encompasses approximately 72,875 acres from the Piru area west to the Pacific Ocean. The project boundaries include the unincorporated community of Piru, the cities of Fillmore, Oxnard, Santa Paula, and Ventura, and unincorporated areas of Ventura County. The majority of the land uses in the project area are agricultural with some urban uses

in the existing communities of the region. The individual sub-basins are described in further detail in Section 6.1.3.

Each of the five sub-basins has water quality objectives set in the *Water Quality Control Plan Los Angeles Region- Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* prepared by the Regional Board (1994), hereafter referred to as the Basin Plan. These water quality objectives are summarized in Table 3-1 below. The available assimilative capacity within each sub-basin has also been calculated based on the water quality objectives identified in the Basin Plan and current water quality conditions.[1] In addition to the constituents listed in Table 3-1 other constituents of concern in the Lower Santa Clara watershed include DDT and PCBs (Regional Board, 2012).

As shown in Table 3-1, the only area with no assimilative capacity is the Mound basin where the existing TDS groundwater quality exceeds the water quality objectives. Chloride and nitrate-N do have assimilative capacity in the Mound basin; and all the other basins and subareas have available assimilative capacity for chloride, TDS, and nitrate-N.

3.2 PROJECT DESCRIPTION

The proposed LSCR SNMP is intended to fulfill the requirements of the Statewide Recycled Water Policy and Regional Board Guidelines and provide the framework for the environmentally safe disposal of salts and nutrients that occur in the LSCR groundwater basin.

3.2.1 Lead Agency

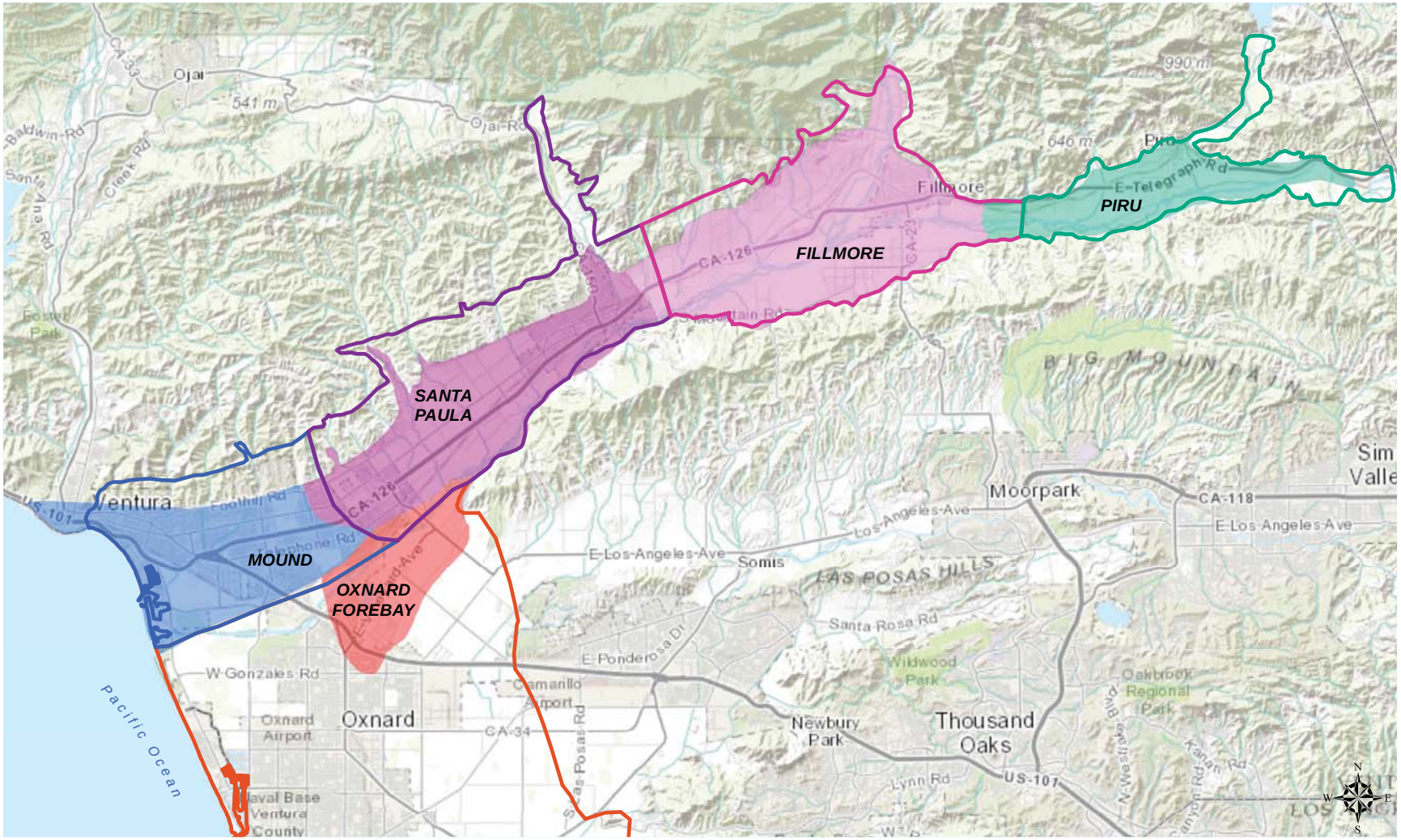
California Regional Water Quality Control Board, Los Angeles Region
320 West Fourth Street, Suite 200
Los Angeles, CA 90013

3.2.2 Project Stakeholder(s)

As set forth in the Policy, stakeholders will fund SNMP development including any necessary analysis and documentation to comply with CEQA. For the LSCR groundwater basin, stakeholders involved in development of the SNMP are:

- Ventura County Watershed Protection District
- County of Ventura – Waterworks District #16
- City of Fillmore
- City of Santa Paula
- City of Ventura
- United Water Conservation District
- Farm Bureau of Ventura County

[1] *Assimilative capacity specifically refers to the capacity for a water body to absorb constituents without exceeding a specific concentration, such as a water quality objective. As defined in the SNMP, the available assimilative capacity for each subarea is the difference between the established water quality objective and the existing groundwater quality.*



DWR Groundwater Basins from Bulletin 118
Subbasin Name, Number
- Oxnard, 4-4.02
- Mound, 4-4.03
- Santa Paula, 4-4.04
- Fillmore, 4-4.05
- Piru, 4-4.06

UCWD Groundwater Basins
- Oxnard Forebay Basin
- Mound Basin
- Santa Paula Basin
- Fillmore Basin
- Piru Basin

0 2 4 Miles

Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community

Source: HydroMetrics WRI

Regional Location Map

Figure 3-1

Table 3-1
Water Quality Objectives and Available Assimilative Capacity for Lower Santa Clara River Basins

Basin	Subarea	TDS, mg/L			Chloride, mg/L			Nitrate-N, mg/L		
		Water Quality Objective	Current Quality	Available Assimilative Capacity	Water Quality Objective	Current Quality	Available Assimilative Capacity	Water Quality Objective	Current Quality	Available Assimilative Capacity
Piru	Upper Area below Lake Piru	1,100	No data	NA	200	No data	NA	10	No data	NA
	Lower Area East of Piru Creek	2,500	1,000	1,500	200	118	82	10	2.6	7.4
	Lower Area West of Piru Creek	1,200	992	208	100	69	31	10	3.6	6.4
Fillmore	Pole Creek Fan Area	2,000	1,101	899	100	59	41	10	2.9	7.1
	South Side of Santa Clara River	1,500	1,411	89	100	74	26	10	5.6	4.4
	Remaining Fillmore	1,000	846	154	50	44	6	10	6.7	3.3
Santa Paula	East of Peck Road	1,200	953	247	100	39	61	10	5.0	5.0
	West of Peck Road	2,000	1,444	556	110	97	13	10	2.0	8.0
Oxnard Forebay		1,200	1,079	123	150	57	93	10	4.5	5.5
Mound		1,200	1,230	-30	150	76	74	10	4.0	6.0

Source: Table 5-1, Draft Lower Santa Clara River Salt and Nutrient Management Plan, Ventura County Watershed Protection District, 2014

3.2.3 Salt and Nutrient Management Plan Characteristic

The required elements of a SNMP, as specified by the Policy include:

a) Development of a basin-wide monitoring plan;
b) Annual monitoring of Constituents of Emerging Concern (CEC);
c) Source identification/Source loading and assimilative capacity estimates;
d) Consideration of Water Recycling/Stormwater Recharge/Use;
e) Implementation measures; and
f) Anti-degradation analyses.

Each of these individual elements is described below.

Basin/Sub-Basin Wide Monitoring Plan. As set forth in the Policy Part 6(b)(3)(a), each SNMP shall include "a basin/sub-basin wide monitoring plan that includes an appropriate network of monitoring locations." The objective of this requirement is to allow for a comprehensive assessment of basin water quality in relation to beneficial uses supported by the basin and applicable water quality objectives.

As part of development of the Monitoring Plan, parties currently engaged in water quality monitoring and data collection within the Basin were identified and existing programs were reviewed to reduce the potential for redundancy and identify data gaps to be addressed.

The proposed Monitoring Plan primarily relies on existing groundwater wells to fulfill the goals of the monitoring program. Additional wells would be considered for critical areas of the LSCR Basin where spatial data gaps exist. Each sub-basin of the LSCR Basin (Piru, Fillmore, Santa Paula, Mound, and the Oxnard Forebay) is further divided into one or more subareas based on Water Quality Objectives established in the Basin Plan. Monitoring will establish one to two monitoring locations within each Water Quality Objective subarea. Priorities and requirements in the Basin may change over time; therefore a framework for designing targeted monitoring has been created to allow all the stakeholders to adaptively manage the monitoring program to meet future needs. Also, information generated by the proposed Monitoring Plan will be used to refine the assimilative capacity information for the LSCR Basin.

Where groundwater movement is ambiguous additional monitoring locations in each subarea have been established to increase spatial resolution. Well locations would be selected based on the additional information and stakeholder input to maximize efficiency, maximize quality, and minimize costs.

The proposed LSCR SNMP monitoring program primarily relies on wells monitored by the Ventura County Groundwater Monitoring Program and UWCD's Water Quality Monitoring Program. Wells monitored by other programs in the LSCR basin are used to supplement the monitoring program in subareas without appropriate County or UWCD wells. The existing monitoring programs are sufficient for this purpose at this time, but modifications to those programs should consider the SNMP data needs.

The Recycled Water Policy requires monitoring of salts, nutrients, and consideration of monitoring for constituents other than salt and nutrients that adversely affect groundwater quality. Constituents were selected for the LSCR Monitoring Program based on the established salt and nutrient Water Quality Objectives, historic monitoring that establishes a baseline, and constituents of interest in the basin. The proposed water quality constituents for all basin-wide monitoring locations are TDS, Sulfate, Chloride, Boron, and Nitrate as N.

Monitoring of Constituents of Emerging Concern. As stated in the Policy, *"[e]ach Salt and Nutrient Management Plan shall include a provision for annual monitoring of Emerging Constituents/Constituents of Emerging Concern (CECs) consistent with recommendations by CDPH and consistent with any actions by the State Water Board taken pursuant to paragraph 10(b) of this Policy."*

Constituents of emerging concerns (CECs) include several types of chemicals that may be classified as (i) persistent organic pollutants (ii) pharmaceuticals and personal care products, (iii) veterinary medicines, (iv) endocrine disruptors, and others. Such constituents present water quality concerns due to their large number and variety, their prevalence in the environment, and their potential for harmful effects on aquatic life. Much less is known about their potential effects on humans. Increasing recycled water use has the potential to increase the occurrence of CECs in ground water basins through indirect potable reuse via surface spreading and subsurface injection into potable aquifers, as well as urban landscape irrigation.

The Policy provides a list of required health-based and performance-based parameters that are required for all recycled water monitoring programs specific to recycled water used for groundwater recharge reuse by surface and subsurface application methods.[2] Health-based CECs are of toxicological relevance to human health. Performance-based CECs do not have relevance to human health but are useful for monitoring treatment process effectiveness because the removal of these CECs from a treatment process provides an indication of success in removing CECs with similar properties. Surrogate parameters are also required. Surrogates are to be proposed for a project on a case-by-case basis appropriate for the treatment process or processes. A surrogate is a measurable physical or chemical property that can be used to measure the effectiveness of trace organic compound removal. A list of health-based and performance-based CECs is provided in Table 3-2. Table 3-3 provides a list of surrogate parameters.

[2] *Groundwater recharge by surface application is the controlled application of water to a spreading area for infiltration resulting in the recharge of a groundwater basin. Subsurface application is the controlled application of water to a groundwater basin or aquifer by a means other than surface application, such as direct injection through a well. Monitoring of CECs is not required for recycled water used for landscape irrigation.*

Table 3-2
Chemicals Identified as Health or Performance CECs

Compound	Relevance/Indicator Type*	Reporting Limit (ng/L)
17ß-estradiol	Health	1
NDMA	Health(Surface Application) Health & Performance (Sub-Surface Application)	2
Caffeine	Health & Performance	50
Triclosan	Health	50
Sucralose	Performance	100
Iopromide	Performance	50
DEET	Performance	50
Gemfibrozil	Performance	50

Source: Table 10-2, Proposed Salt and Nutrient Management Plan

** Unless otherwise indicated Relevance/Indicator Type is for Surface and Sub-Surface Application as defined in Attachment A of the Statewide Recycled Water Policy*

Table 3-3
Chemicals Identified as Surrogate Parameters

Surrogates	Groundwater Recharge Reuse
Ammonia	Surface application
Total Organic Carbon	Surface application Subsurface application
Nitrate	Surface application
Ultraviolet (UV) Light Absorption	Surface application
Electrical Conductivity	Subsurface application

Source: Table 10-3, Proposed Salt and Nutrient Management Plan

Parameters for CECs as identified in Tables 3-2 and 3-3 will be monitored at all targeted area monitoring sites where groundwater recharge reuse will occur near surface or subsurface application projects. In addition, targeted monitoring locations may also add constituents for monitoring based on project needs. This may include monitoring for CECs in areas other than those corresponding to groundwater recharge applications if other information indicates monitoring is warranted.

Salt and Nutrient Analysis. As stated in the Policy, *"[e]ach SNMP shall include salt and nutrient source identification, basin/sub-basin assimilative capacity and loading estimates, together with fate and transport of salts and nutrients…"* in order to *"… address and implement provisions, as appropriate, for all sources of salt and/or nutrients to groundwater basins, including recycled water irrigation projects and groundwater recharge reuse projects."*

Identification of existing and potential sources of salts, nutrients, and other pollutants of concern is an essential part of the LSCR SNMP. At this time, the anthropogenic sources of salts and nutrients associated with irrigation and fertilizer amendment, septic systems, and wastewater treatment plant percolation ponds have been estimated for the LSCR SNMP. Using this information, groundwater concentrations for TDS, chloride and nitrate-N have been

calculated for each sub-basin or subarea. Groundwater concentrations calculated for each of these parameters in the individual subareas or basins are shown in Table 3-4.[3] For calculations of load inputs from individual sources, see Section 7 of the proposed SNMP.

Table 3-4
Calculated Salt and Nutrient
Groundwater Concentrations by Subarea and/or Sub-Basin

	Concentration		
	TDS (mg/L)	**Chloride (mg/L)**	**Nitrate as N (mg/L)**
Piru Basin – Upper Area below Lake Piru*	NA	NA	NA
Piru Basin – Lower Area East of Piru Creek	940 - 970	60 - 120	7.0 – 3.4
Piru Basin – Lower Area West of Pire Creek	1,000	120	2.5
Fillmore Basin – Pole Creek Fan Area	1,000 – 1,090	60 - 70	3.2 – 3.7
Fillmore Basin – South of Santa Clara River	1,000 – 1,340	60 - 70	2.8 – 5.2
Fillmore Basin – Remaining Area	830 – 1,410	40 - 70	2.8 – 6.0
Santa Paula Basin – East of Peck Road	830 – 1,410	40 - 70	4.9 – 6.7
Santa Paula Basin – West of Peck Road	960	40	4.9
Oxnard Forebay Basin	1,440	100	1.9
Mound Basin	1,080 – 1,440	60 - 100	1.9 – 5.1

Source: Tables 7-5 through 7-12, Draft Salt and Nutrient Management Plan, 2014

** Existing groundwater concentrations for this subarea have not been calculated due to a lack of data*

Water Recycling and Stormwater Recharge Use Goals and Objectives. As stated in the Recycled Water Policy, *"[e]ach SNMP shall include water recycling and stormwater recharge goals and objectives."* With the intent of moving toward sustainable management of surface waters and groundwater, the Recycled Water Policy adopts the goals of increasing the use of recycled water in California over 2002 levels by at least one million acre-feet per year (afy) by 2020 and by at least two million afy by 2030.

The proposed SNMP will include a basin-wide plan for expanding recycled water use, including estimates of projected increase and applications to additional beneficial uses within the Basin.

Another goal of the Recycled Water Policy, with the intent of increasing sustainable local water supplies, is to increase the use of stormwater over 2007 levels by at least 500,000 afy by 2020 and by at least one million afy by 2030. The Recycled Water Policy recognizes that stormwater is typically lower in nutrients and salts and can augment local water supplies and, therefore, encourages inclusion of a significant stormwater use and recharge component within the SNMP.

Stormwater use will be considered as part of the proposed SNMP.

[3] *Steady state concentration is defined as the groundwater concentration that would occur if loadings and flows do not change over the long term*

Implementation Measures. As stated in the Recycled Water Policy, *"[e]ach SNMP shall include implementation measures to manage salt and nutrient loading in the basin on a sustainable basis."*

Implementation strategies will integrate water quantity and quality, groundwater and surface water, and recharge area protection in order to maintain a sustainable long-term supply for multiple beneficial uses. These strategies will be dictated to a large degree by basin-specific characteristics and conditions and will generally be geared toward:

a) Pollution prevention;
b) Source load reductions to groundwater basins;
c) Treatment and management of areas of impaired water quality;
d) Boosting or stabilizing declining water levels where water quality is not affected;
e) Increasing groundwater recharge by stormwater; and
f) Increasing recycled water use.

Based on water quality conditions within the Basin, and the results of the source loading and linkage analysis described in *Salt and Nutrient Analysis*, above, allowable loads for salts, nutrients and other impairing pollutants (including CECs) will be allocated to all non-point and point sources in a manner that will support attainment of applicable water quality objectives. Implementation strategies that are both technologically and economically feasible will be developed to achieve these assigned loads.

Implementation measures are organized into three categories: Existing Measures, Planned Recycled Water Projects, and Potential Measures and listed in Tables 3-5, 3-6, and 3-7. The Existing Measures are measures in place that manage groundwater percolation, saline intrusion, wastewater reclamation, and other uses that effect the salt and nutrient content of groundwater. The Planned Recycled Water Projects have been compiled from stakeholders with the project area that would contribute to the management of the groundwater basin including assimilative capacity. The Potential Measures are other measures that have been identified that could be implemented if needed to manage salts and nutrients on a sustainable basis.

Table 3-5
Existing Management Measures

Category	Specific Measure	Agency/Action	Description	Effect
Wastewater and reclaimed water quality	Source control - salts	City of Santa Paula - Water Softener Ban	Prohibits replacement or enlargement any apparatus for treating the water supply to a property if the apparatus is of a kind that produces any wastewater with a mineral content higher than that of the water supply of the property.	Fewer self-regenerating water softeners (or other treatment devices that produce a high mineral waste) will reduce the salt load in residential wastewater.
Wastewater and reclaimed water quality	Source control - salts	Ventura County District 16 – Water softener outreach and rebate program	Outreach, removal and incentive program aimed at reducing the number of self-regenerating water softeners in the Piru community.	Fewer self-regenerating water softeners will reduce the salt load in residential wastewater.
Wastewater and reclaimed water quality	Source control - salts	Ventura County Waterworks District 16 –Brine discharge ordinance	Prohibits self-regenerating water softeners discharging to the sanitary sewer.	Prohibits the additional salt load to wastewater from water softener brine.
Wastewater and reclaimed water quality	Source control - salts	City of Fillmore - Water softener rebate program	Outreach and rebate program aimed at reducing the number of self-regenerating water softeners in the Fillmore community. Approximately 85 rebates completed to date.	Fewer self-regenerating water softeners will reduce the salt load in residential wastewater.
Wastewater and reclaimed water quality	Source control - salts	City of Fillmore	Prohibits self-regenerating water softeners discharging to the sanitary sewer.	Prohibits the additional salt load wastewater from water softener brine.
Wastewater and reclaimed water quality	Source control – salts and nutrients	City of Santa Paula – Industrial Discharge Ordinance	Local limits for TDS (2000 mg/L), chloride (110 mg/L) and ammonia nitrogen (30 mg/L).	Provides an upper limit on the concentration of salts and nutrients in industrial contributions to wastewater.
Wastewater and reclaimed water quality	Source control – salts	City of Ventura – Local Limits	Local limit for TDS (4270 mg/L).	Provides an upper limit on the concentration of salts in industrial contributions to wastewater.
Wastewater and reclaimed water quality	Source control - salts	City of Ventura – Ordinances on Industrial discharges	Prohibits discharge of saltwater or brine from commercial or industrial activities. Establishes local limits for industrial/commercial facilities. Establishes permit requirements for non-domestic wastewater discharges.	Prohibits the additional salt load to wastewater from saltwater or brine from commercial or industrial activities.

Table 3-5
Existing Management Measures

Category	Specific Measure	Agency/Action	Description	Effect
Septic system leachate volume and quality	Leachate volume reduction	City of Santa Paula – Septic tank policy	Prohibits installation of new septic tanks in service area and requires tie-in of a septic tank to the sewer if located within 200 feet of a sewer line must tie in. County areas adjacent to the service area also are required to tie in.	Reduces the volume of septic system leachate that percolates into shallow groundwater. Tie-in to a treatment plant ultimately leads to a treated waste stream with a lower nutrient load.
Municipal water quality	Provide treatment of a compromised supply	City of Ventura Water Conditioning Facilities	City of Ventura has two water condition facilities that treat extracted groundwater from the Mound Basin before potable use. The conditioning facilities are designed to reduce iron and manganese in the extracted groundwater and help comply with secondary drinking water standards. The City's current (interim) approach to continued use of this supply is to blend the water from the Mound Basin with water from the Oxnard Plain prior to delivery to customers.	Reduces salt concentration in municipal water supply.
Stormwater runoff management	Increase stormwater recharge through LID and improve quality through BMPs	Ventura County – Municipal Separate Storm Sewer System (MS4) permit	Requires specified New Development and Redevelopment projects to control pollutants, pollutant loads, and runoff volume emanating from impervious surfaces through infiltration, storage for reuse, evapotranspiration, or bioretention/ biofiltration by reducing the percentage of Effective Impervious Area (EIA) to 5% or less of the total project area.	Promotes infiltration of rainwater (low in salt and nutrients) into the groundwater. Through treatment, reduces pollutant loads to groundwater and surface waters (that may recharge groundwater basins).
Stormwater runoff management	Increase stormwater recharge and improve water quality through BMPs	Ventura County – Green Street Demonstrations	Demonstration projects to illustrate stormwater capture and treatment BMPs.	Promotes infiltration of rainwater (low in salt and nutrients) into the groundwater. Through treatment, reduces pollutant loads to groundwater and surface waters (that may recharge groundwater basins).
Non-stormwater discharge control and quality	Source control of non-stormwater discharges	Ventura County – Municipal Separate Storm Sewer System (MS4) permit	Requires discharges of debrominated/dechlorinated swimming pool water to meet water quality standards for salts.	Provides an upper limit on the concentration of salts in non-stormwater contributions to stormwater.

Table 3-5
Existing Management Measures

Category	Specific Measure	Agency/Action	Description	Effect
Agricultural runoff control and quality	Source control through fertilizer BMPs	VCAILG - Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands within the Los Angeles Region	Fertilizers are applied in multiple smaller applications, as opposed to one large application. Fertilizer applications are adjusted to account for other nutrient sources, such as: irrigation water, cover crops, and residuals from previous fertilizations. Fertilization rates are adjusted based on the results of soil fertility measurements.	Reduces the load of nitrogen that is transported by runoff to surface waters and by infiltration to groundwater.
Agricultural runoff control and quality	Source control through salinity/leaching BMPs	VCAILG – Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands within the Los Angeles Region	Leaching is performed only when necessary, as determined by measuring soil solution electrical conductivity (EC). Saline or high selenium wells are decommissioned and other sources of water are used. Fertilizers and amendments with low salt index are used.	Reduces the load of salts to the groundwater from leaching activities.
Wastewater Reuse	Offset supply with reclaimed wastewater	City of Ventura	Urban irrigation of golf courses and landscaping. Recycled water permit establishes nitrate plus nitrite limit of 10 mg/L as N.	Limits the nitrate concentration in the applied irrigation water.
Wastewater Reuse	Offset supply with reclaimed wastewater	City of Fillmore	Urban irrigation of schools, parks and other locations. Recycled water permit establishes concentration limits for irrigation water, including; 5mg/L as N for nitrate plus nitrite 2000 mg/L for TDS, and 155 mg/L for chloride.	Limits the concentrations of salts and nitrate in irrigation water.
Agricultural Water Conservation	Conservation through efficiency criteria	FCGMA Agricultural Pumpers Use Irrigation Efficiency Criteria	Agricultural users may use “Efficiency Criteria” in place of historical groundwater allocations. Must have 20% or less of applied water going to leaching, deep percolation or runoff.	Through conservation, reduces the load of salt associated with irrigation water that is ultimately conveyed in irrigation runoff or in percolation.

Table 3-5
Existing Management Measures

Category	Specific Measure	Agency/Action	Description	Effect
Agricultural Water Conservation	Conservation through irrigation management practices	VCAILG - Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands within the Los Angeles Region	Irrigation is varied to accommodate plant growth stage and weather. Irrigation conducted by personnel who understand and practice irrigation practices related to runoff management. Irrigation is halted if significant runoff occurs.	Through conservation, reduces the load of salt associated with irrigation water that is ultimately conveyed in irrigation runoff or in percolation.
Saline intrusion and groundwater quality	Groundwater quality improvement	City of Fillmore/ Piru Sub-basin – Control of Saline Intrusion and protect groundwater quality	Current programs to achieve basin management goals include: Management of wellhead protection areas, well abandonment and destruction program, overdraft mitigation measures, replenishment of extracted groundwater	Improvement in groundwater quality protection.

Table 3-6
Planned Recycled Water Projects

Category	Specific Measure	Agency/Action	Description	Effect
Wastewater Reuse	Offset supply with reclaimed wastewater	Ventura County Water Works – Piru Wastewater Reclamation Plant	Citrus farm located immediately to the east and northeast of the treatment plant Phased implementation from 225 AFY to 560 AFY (0.2 mgd to 0.5 mgd).	Potentially establishes salt and nutrient concentration limits on irrigation water.
Wastewater Reuse	Offset supply with reclaimed wastewater	City of Fillmore – Fillmore Wastewater Reclamation Facility	Urban landscape irrigation in the City. Agricultural irrigation east of the City limits. Landscape irrigation range up to 0.19 mgd depending on users. Agricultural demands unknown.	Limits the concentrations of salts and nitrate in irrigation water.
Wastewater Reuse	Offset supply with reclaimed wastewater	City of Santa Paula – Santa Paula Water Recycling Facility	Landscape irrigation. Phased implementation from 400 AFY to 1622 AFY (0.4 mgd to 1.45 mgd).	Potentially establishes salt and nutrient concentration limits on irrigation water.
Wastewater Reuse	Offset supply with reclaimed wastewater	City of Ventura – Ventura Wastewater Reclamation	Landscape irrigation in the City's Recycled Water Focus Area. Up to 60 AFY (0.05 mgd)	Limits the concentration of nitrate in irrigation water.

Table 3-6
Planned Recycled Water Projects

Category	Specific Measure	Agency/Action	Description	Effect
Wastewater Reuse	Replace or augment compromised potable water supply	City of Ventura – Ventura Wastewater Reclamation Facility	Groundwater recharge to Mound Basin for indirect potable reuse (IPR) or direct potable reuse (DPR). Potential flows from 2200 – 7800 AFY (2-7 mgd). Treatment will include RO. Compromised	IPR scenario – supply will potentially be improved with reclaimed water with low salt and nutrient concentrations. DPR scenario – supply will be replaced with reclaimed water with low salt and nutrient concentrations.
Wastewater Reuse	Recharge of treated wastewater	UWCD	Recharge of recycled water from Oxnard Advanced Water Purification Facility in surface spreading basins and/or direct use for agricultural irrigation. Treatment will include RO.	Recharge and/or irrigation with reclaimed wastewater with low salt and nutrient concentrations
Municipal Water Quality	Improves municipal water quality	Ventura – RO of Mound Groundwater	If other alternatives including groundwater recharge or direct potable reuse are not implemented, then additional treatment, RO, will be provided water extracted from the Mound Basin.	Improves potable water quality through treatment. Reduces salt load in potable water that is pass through to wastewater. Reduces need for residential water softeners.

Table 3-7
Potential Future Management Measures

Category	Specific Measure	Agency/Action	Description	Effect
Wastewater and reclaimed water quality	Source control - salts	Ventura County - Water Softener Ban	Implementation of a water softener ban in the City of Ventura, and the unincorporated areas of the County that are within the LSCR SNMP project area.	Fewer self-regenerating water softeners will reduce the salt load in residential wastewater.
Wastewater and reclaimed water quality	Source control – industrial control, pretreatment program	Ventura County and Municipalities	Consideration of modified local limits to improve influent wastewater quality.	Limits the pollutant concentrations in influent wastewater.
Septic system leachate	Provide connections to sewer systems	Ventura County and Municipalities	Consideration of a septic system conversion program to reduce the number of septic systems in the basins	Reduces the volume of septic system leachate that percolates into shallow groundwater. Tie-in to a treatment plant ultimately leads to a treated waste stream with a lower nutrient load.

Table 3-7
Potential Future Management Measures

Category	Specific Measure	Agency/Action	Description	Effect
Non-stormwater discharge control and quality	Source control of non-stormwater discharges	Ventura County – Municipal Separate Storm Sewer System (MS4) permit	Ordinance banning installation and discharges of debrominated/dechlorinated swimming pool water.	Reduce primary source of salts in non-stormwater discharges.
Municipal Water Quality	Replace/augment compromised groundwater supplies with surface water sources	Ventura County and Municipalities	Consideration of using SWP allocations to replace or augment compromised groundwater supplies.	Through use of an alternative supply, reduces salt load in potable water that is pass through to wastewater. Reduces need for residential water softeners.
Municipal Water Quality	Softening of groundwater supplies	Water Purveyors	Consideration of water softening to reduce hardness.	Reduces need for the self regenerating residential water softeners. Fewer self-regenerating water softeners will reduce the salt load in residential wastewater.
Municipal Water Quality	Advanced treatment of compromised groundwater supplies	Water Purveyors	Consideration of RO treatment to remove salts from groundwater supplies, with likely participation in development of a regional brine line.	Through treatment, reduces salt load in potable water that is pass through to wastewater. Reduces need for residential water softeners.
Municipal Water Quality	Desalination	Water Purveyors	Consideration of desalination to replace existing groundwater supplies	Through use of an alternative supply, reduces salt load in potable water that is pass through to wastewater. Reduces need for residential water softeners.
Groundwater Recharge	Additional groundwater recharge with surface water	Santa Paula	Recharge of SWP allocation to the Santa Paula Basin.	Provides dilution of groundwater through recharge of water with low salt and low nutrient concentrations.
Agricultural Supply	Improve agricultural irrigation water quality	Ventura County	Consideration of drilling deeper wells to access water with lower salt concentrations.	Improves irrigation water quality through use of an alternative supply. Reduces the load of salt and nutrients attributed to irrigation water.
Stormwater Recharge	Additional groundwater recharge with stormwater	Ventura County and Municipalities	Consideration of capture and recharge of stormwater.	Provides dilution through recharge with surface water (flood and storm flows) with potentially low salt and nutrient concentrations.
Municipal Water Quality	Improves municipal water quality	Ventura – RO of Mound Groundwater	If other alternatives including groundwater recharge or direct potable reuse are not implemented, then additional treatment, RO, will be provided to water extracted from the Mound Basin.	Improves potable water quality through treatment. Reduces salt load in potable water that is pass through to wastewater. Reduces need for residential water softeners.

Anti-degradation Analysis. As stated in the State Recycled Water Policy, "*[e]ach Salt and Nutrient Management Plan shall include an antidegradation analysis demonstrating that the projects included within the plan will, collectively, satisfy the requirements of Resolution No. 68-16.*" [4]

The intent of Resolution No. 68-16 is to preserve the State's high quality waters. Any activity that results in the discharge of waste must be subject to treatment or controls that assure that the discharge will not cause the receiving water to exceed water quality objectives set forth in the Basin Plan or cause pollution or nuisance. In addition, the discharge should be controlled to achieve the highest water quality feasible. Where project(s) within SNMPs have the potential to degrade the water quality within a basin, an anti-degradation analysis is required.

3.3 PROJECT OBJECTIVES

The LSCR SNMP is to be used to guide and regulate the amount of salts and nutrients that are discharged into the groundwater basin. The primary objectives of the LSCR SNMP are to:

- Protect Agricultural and Municipal Drinking Water Beneficial Uses;
- Support increased recycled water use in the Basin;
- Facilitate long term planning and balance use of assimilative capacity and management measures across the basin; and
- Reduce dependence on imported State Water, protect, conserve, and augment water supplies and improve water supply reliability.

3.4 PROJECT APPROVALS

The following describes the list of approvals known, or assumed to be required for one or more components of the proposed project, as required by *State CEQA Guidelines* Section 15124(d).

As set forth in the Recycled Water Policy, the stakeholders identified in Section 2.1 are responsible for preparing the LSCR SNMP, including the required CEQA documentation. As part of the LSCR SNMP, implementation strategies will be developed, which may include projects requiring additional environmental analysis. Public agencies that carry out or implement projects associated with the LSCR SNMP are considered the lead agencies under CEQA for these individual projects. However, in addition, the implementation measures identified in the LSCR SNMP will be adopted as amendments to the Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties by the Los Angeles Regional Water Quality Board.

[4] ***Resolution No. 68-16*** *is the State Anti-degradation Policy, which requires that whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies. Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.*

4.0 PROGRAM-LEVEL ALTERNATIVES

This SED analyzes three Program-Level Alternatives that encompass actions within the jurisdiction of the Regional Board and implementing municipalities and agencies. The program alternatives include: 1) the No Program Alternative in which the SNMP would not be adopted; 2) the Limited Recycled Water Projects Alternative, where location and loading from recycled water projects is based on available assimilative capacity within a sub-basin or sub-area; 3) the Proposed Project Alternative, where management measures are implemented to increase assimilative capacity in a sub-basin or sub-area to increase the number and size of recycled water projects allowed.

Because SNMPs are required by the State Recycled Water Policy, the no Program Alternative is analyzed here only to allow decision makers to compare the impacts of approving a proposed alternative compared with the impacts of not approving a proposed alternative.

An alternative that would allow for development of recycled water projects in the absence of assimilative capacity in order to provide additional water for re-use was considered but rejected by the Regional Board and the LSCR stakeholders. The specific legal requirements of the Recycled Water Policy (Resolution No. 2009-0011) and Policy with Respect to Maintaining High Quality of Waters in California (Resolution 68-16) require the management of salt and nutrients and the maintenance of high water quality. Thus, an alternative that would allow for an unrestricted amount of recycled water projects without management measures and for degradation of the groundwater basins would be considered unlawful because it would not meet water quality standards.

In addition, an alternative that would prohibit recycled water projects within the LSCR groundwater basin was considered but rejected by the Regional Board and the LSCR stakeholders. This alternative would be contrary to the goal of the Recycled Water Policy, which is to increase the statewide use of recycled water over 2002 levels by at least one million acre-feet per year (afy) by 2020 and by at least two million afy by 2030. Thus, an alternative that would completely prohibit development of recycled water projects in the groundwater basin would not contribute to the statewide increase in recycled water, and would be inconsistent with SWRCB's policy.

4.1 DESCRIPTION OF PROGRAM ALTERNATIVES 2 AND 3

Information from the SNMP regarding the number and size of planned recycled water projects was used to develop Program Alternative 2 (Limited Recycled Water Projects) and Program Alternative 3 (Proposed Project Alternative). This information is key as the amount of salt and nutrient loading generated by these projects would determine whether the existing assimilative capacity in a sub-area is sufficient to allow projects to be added without requiring additional management measures. As described in Section 8 of the draft SNMP, the recycled water purveyors in the watershed are in various stages of developing recycled water projects, but none have advanced to the point of identifying specific project locations and/or specifications. As a result, information from planning documents and conversations with stakeholders were used to identify the planned recycled water projects described in Table 4-1. Note that the projects listed in Table 4-1 are the same as those listed in Table 3-6.

Table 4-1
Planned Recycled Water Projects

Basin	Subarea	Agency	Type of Future Use	Volume of Use, AFY	Timing of Use
Piru	Lower Area West of Piru Creek	Ventura County Water Works – Piru Wastewater Treatment Plant[1]	Citrus farm located immediately to the east and northeast of the treatment plant	Phased implementation from 225 to 560 AFY (0.2 to 0.5 mgd)	Delivery of 225 AFY, current treatment plant flows, will begin in 2015
Fillmore	Pole Creek Fan Area	City of Fillmore[2] – Fillmore Wastewater Reclamation Facility	Heritage Valley Park Development – 20 Acre Park, 10 Acre School Sports Field	60 AFY (0.05 mgd)	Unknown – Depends on pipeline construction
			Panam Sat Archard (20 acre avocado orchard)	147 AFY (0.13 mgd)	Unknown – may depend on developing competitive pricing for recycled water
			Baldwin Towne Plaza (5 acre turf)	10 AFY (0.01 mgd)	Unknown – may depend on developing competitive pricing for recycled water.
			Agricultural area located east of the City limits (size not defined)	Unknown	Unknown
Santa Paula	West of Peck Road	City of Santa Paula – Santa Paula Water Recycling Facility	Landscape irrigation	Phased implementation from 400 to 1622 AFY (0.4 to 1.45 mgd)	Phased implementation from 2015 to 2035
	West of Peck Road	Saticoy WWTP	None	NA	NA
	West of Peck Road	Limoneria and Olivelands Sewer Farms	None	NA	NA
		Todd Road Jail WWTP	None	NA	NA
Mound	Mound	Montalvo Water Pollution Control Plant	None	NA	NA
	Mound	City of Ventura – Ventura Wastewater Reclamation Facility	Groundwater recharge to Mound Basin for indirect potable reuse. Direct potable reuse.	2200 – 7800 AFY (2 to 7 mgd)	2025
			Landscape irrigation in the City's Recycled Water Focus Area	60 AFY (0.05 mgd)	Unknown –implement with new development
Oxnard Forebay	Oxnard Forebay	UWCD	Recharge of recycled water (from the Oxnard AWPF) in surface spreading basins and/or direct use for Ag irrigation	Unknown	Unknown

Source: Table 8-1, Draft Salt and Nutrient Management Plan, 2014
Notes:1. The County plans to implement 100% reuse of effluent from the Piru Wastewater Treatment Facility. Upgrades to the treatment facility to produce Title 22 recycled water are currently being designed. It is anticipated that the citrus farm will provide sufficient demands for all of the recycled water from the treatment facility (from current treatment plant flows of 0.2 mgd, up to 0.5 mgd, which is the buildout flow of the treatment facility).
2. The City of Fillmore's goal is to implement effluent reuse of 100%. Annual average effluent flows are approximately 1 mgd (1,120 AFY). Approximately 25% (0.25 mgd, 280 AFY) of effluent is currently being recycled. Therefore, the City would need to implement 0.75 mgd (840 AFY) of reuse in the future, provided that there is not a substantial increase in WWTP effluent flow.

While the projects shown in Table 4-1 are currently planned, the recycled water volume goals outlined in Section 1 of the SNMP and shown in Table 4-2, are in some cases higher than would be provided by implementation of the currently planned projects.

Table 4-2
Current and Future Recycled Water Use

Stakeholder	Current Recycled Water Use (AFY)	Projected Recycled Water Use (AFY)
City of Fillmore	280	2,651 (by 2020)
City of Ventura	672	7,800 (by 2035)
City of Santa Paula	N/A	1,622 (by 2035)
Piru (Ventura County Water Works)	N/A	225-560 (Beginning 2015)

Source: Table 1-2, Draft Salt and Nutrient Management Plan, 2014

In order to account for this discrepancy in the amount of recycled water planned versus the amount of recycled water desired in the LSCR groundwater basin, three different recycled water volumes were considered in the SNMP. As described in Section 8 of the SNMP, the alternative recycled water scenarios are based on three different discharge volumes with the maximum discharge volume set at the design capacities of the treatment plants. These scenarios represent the range of possible recycled water scenarios that may need to be covered by the SNMP based on current information. These scenarios are:

1. **Low planned recycled water volume**. This scenario represents the low estimates of planned recycled water project volume, as presented in Table 4-3.
2. **High planned recycled water volume**. This scenario represents the high estimates of planned recycled water project volume as presented in Table 4-3.
3. **Maximum volume**. This scenario represents the maximum amount of recycled water that could be used in the LSCR groundwater basin (see Table 4-3). The maximum volume scenario would meet or exceed the recycled water use goals listed in Table 4-2.

Table 4-3
Recycled Water Volume Scenarios

Discharger	Subarea	Low Planned Volume	High Planned Volume	Maximum Volume
Piru	Lower Area West of Piru Creek	225 AFY	560 AFY	560 AFY
Fillmore	Pole Creek Fan Area	217 AFY	1,040 AFY	2,651 AFY
Santa Paula	West of Peck Road and/ or East of Peck Road	400 AFY	1,622 AFY	3,088 AFY
Ventura	Mound	60 AFY	2,200 AFY (indirect groundwater recharge)	7,800 AFY (indirect groundwater recharge)

Source: Table 1-2, Draft Salt and Nutrient Management Plan, 2014

The recycled water volume scenario information included in Table 4-3 as well as information on loading to ground from publicly-owned wastewater treatment facilities and other known

sources was then used to determine whether each of these scenarios would require implementation of management measures to address assimilative capacity shortfalls (see Table 9-6 in Section 9.3 of the SNMP for further detail). Based on that analysis, the scenarios outlined above that would not require additional management measures are:

- Piru - all scenarios;
- Fillmore – planned low and planned high scenarios; and
- Santa Paula – planned low and planned high if applied West of Peck Road and planned low East of Peck Road.

Where no additional management measures would be required in order to implement planned recycled water projects in these sub-basins under the scenarios identified, these projects would comprise Alternative 2, Limited Recycled Water Projects.

Implementation of recycled water projects in any of the other sub-basins would require implementation of management measures to address sub-basin assimilative capacity issues. These recycled water projects, plus those included in Alternative 2, would comprise Alternative 3, Proposed Project Alternative.

4.2 ANALYSIS OF PROGRAM-LEVEL ALTERNATIVES

4.2.1 Alternative 1 – No Program Alternative

The No Program Alternative assumes that the Regional Board does not adopt a SNMP for the LSCR groundwater basin. While cities and municipalities could implement management measures on a discretionary basis as recycled water project are developed, this CEQA analysis is based on the assumption that no additional management measures would be implemented in addition to those that are presently in place and included in the baseline conditions. However, the No Program Alternative is contrary to state law as it is not consistent with the goals and mandates of the State's Recycled Water Policy to increase the use of recycled water in California by 200,000 acre-feet per year (afy) by 2020 and by an additional 300,000 afy by 2030. Therefore, the failure to implement an SNMP would be inconsistent with the State's Recycled Water Policy.

4.2.2 Alternative 2 – Limited Recycled Water Projects

Under the Limited Recycled Water Projects Alternative, projects which create recycled water would only be allowed if the sub-basin has sufficient available assimilative capacity to accommodate the recycled water project without resulting in an exceedance of the water quality objectives for that sub-basin. Development of recycled water projects would be allowed until there is no remaining assimilative capacity. If no assimilate capacity is available, all projects within that sub-basin would be prohibited and no other management measures would be implemented.

As noted above, recycled water projects which treat up to the design capacity of the plants would be allowed in Piru (Lower Area West of Piru Creek) and up to the planned high scenario in Fillmore (Pole Creek Fan Area) under this alternative. Recycled water projects which would

treat the low planned and high planned volumes would also be allowed in Santa Paula if applied West of Peck Road. Projects which treat up to the low planned volume would be allowed East of Peck Road.

This alternative would be consistent with the State's Recycled Water Policy by allowing for the development of recycled water. In addition, this alternative would provide only for the continuing use of existing management measures because it would not allow for the creation of assimilative capacity through implementation of additional management measures, as is proposed in the draft SNMP.

4.2.3 Alternative 3 – Proposed Project Alternative

The Proposed Project Alternative includes a set of management measures meant to allow the development of recycled water projects within parts of the LSCR groundwater basin which do not have available assimilative capacity. This provides for a SNMP that is consistent with the goals of the State's Recycled Water Policy, by allowing an increase in recycled water use while managing salt and nutrient loading.

The components of the Proposed Project Alternative assessed at a program-level consist of the management measures that would be implemented as part of the SNMP to provide for additional assimilative capacity in those sub-basins or sub-areas where existing loadings would not allow provision of recycled water. The management measures vary from specific wastewater reuse projects, stormwater recharge projects and water quality projects to policies that would be adopted and implemented by the governining agency. Specific project locations and design details have not been identified and are therefore not included in the impact analysis. The specific projects that would be implemented as part of the Proposed Project Alternative will be subject to additional future environmental review, including review by lead agencies implementing SNMP management measures.

It is important to note that implementation of recycled water projects in the LSCR groundwater basins can also be considered management measures. In the LSCR SNMP project area, groundwater is the primary source of agricultural and municipal water supply. Recycled water projects provide a mechanism to offset groundwater use and therefore contribute to the availability of groundwater supplies. Additionally, using recycled water to irrigate agricultural fields instead of disposing of the effluent in percolation ponds reduces the loading, particularly of nutrients, that reaches the groundwater through uptake of nutrients and salts by vegetation. However, per the State's Recycled Water Policy, salts and nutrients associated with recycled water projects must also be managed. In this context, recycled water projects are evaluated as projects with the potential to provide new loads or relocated loads of salts and nutrients.

The selection of management measures included in the proposed SNMP considers the relationship between the sources contributing to nutrient loading and the management measures themselves. For example, some management measures prevent loads from entering the basin (e.g. water conservation or water softener bans), others offset loads from another source (e.g., changing the source water for an irrigation project), and others remove loading from the basin (e.g., groundwater treatment). The proposed management measures range from

structural projects (recycled water projects) to policies that would be adopted by implementing agencies. The measures can be organized into the following categories.

- Improve wastewater and reclaimed water quality
- Improve municipal water quality
- Reduce septic system leachate and improve quality
- Manage urban stormwater runoff to support basin water quality
- Improve non-stormwater discharge control and quality
- Improve agricultural runoff control and quality
- Increase recycled water use
- Increase aquifer recharge with lower concentration water sources
- Improve urban and agricultural water efficiency/conservation
- Reduce saltwater intrusion and protect groundwater quality
- Manage groundwater pumping and water levels

The specifics of the many management measures which would comprise the Proposed Project Alternative are discussed in detail in Section 5.

Potential adverse impacts to the environment stem principally from the construction, operation, and maintenance of structural projects. While in most cases project location and design are not identified, this SED analyzes potential environmental impacts from the proposed management measures at the program level. Where appropriate, programmatic mitigation is identified that would minimize or avoid the impacts identified. The level of review is consistent with the level of detail provided in the management measure. It is expected that further environmental review would be required by the project proponents at the time of implementation.

4.2.4 Recommended Program Alternative

This environmental analysis finds that Alternative 2, Limited Recycled Water Project Alternative, is the most environmentally advantageous alternative.

Alternative 1 is not a feasible alternative. While it avoids potential impacts due to construction of recycled water projects or other management measures, management of salt and nutrient loading and provision of recycled water would not occur. Both Alternative 2 and 3 would provide for compliance with the State Recycled Water Policy and manage salts and nutrients within the LSCR groundwater basin at the comparatively small environmental cost of recycled water and other salt and nutrient management projects throughout the watershed. As such, either Alternative 2 or 3 would be a benefit to the environment and the No Program Alternative would allow for degradation of the LSCR groundwater basin by not managing nutrient loading and assimilative capacity in the LSCR groundwater basin.

The key difference between Program Alternatives 2 and 3 is the use of management measures to create assimilative capacity for salts and nutrients in sub-basins where none is currently available. Under the Limited Recycled Water Projects Alternative, the potential for impacts on the environment would be less than under the Proposed Project Alternative, because fewer recycled water projects would be built and no new management measures would be implemented to create assimilative capacity in sub-basins where it is currently unavailable.

However, the contribution of Alternative 2 to achievement of the goals of the State's Recycled Water Policy would be less than the Proposed Project Alternative due to the limited number of recycled water projects that could be built. Additionally, this alternative would not include the management of salt and nutrients from sources other than recycled water projects. Therefore, Alternative 3 is the recommended Program Level Alternative.

4.3 PROJECT-LEVEL ALTERNATIVES

The program alternatives above present several options for composition of the SNMP itself, and do not require implementation of specific projects to allow the SNMP to be integrated into the Basin Plan. The proposed SNMP includes guidance on implementing salt and nutrient management measures, including requirements for maintaining existing management measures, and the process for implementing planned and other future management measures in the context of the assimilative capacity and trend analysis. The initial assimilative capacity analysis indicates that maintaining existing management measures will likely support sustainable management of the sub-basins should the loading sources remain the same. However, future implementation of recycled water projects could alter that analysis in at least some of the sub-basins and the SNMP would provide a mechanism to evaluate that impact and implement management measures, if needed. For sub-basins currently exceeding water quality objectives, the management measures would prevent any additional degradation.

As individual management measures are implemented in compliance with the SNMP, the project proponent would be required to complete project-level environmental analysis (Pub. Res. Code § 21159.2). Notably, the Regional Board is prohibited from specifying the manner of compliance with its regulations (Water Code § 13360), and accordingly, the actual environmental impacts will necessarily depend upon the compliance strategy selected by the local agencies and other permittees.

Although the Regional Board cannot mandate the manner of compliance, foreseeable environmental impacts from methods of compliance are well known, as are feasible mitigation measures. During the development of the proposed SNMP, a SED scoping meeting was held on February 26, 2015 during which the manner of compliance was discussed. At this meeting, the most reasonable means of compliance were discussed and included the existing management measures, planned recycled water projects, and potential management measures proposed in the SNMP.

The specific locations of the components assessed at a project level will be determined by implementing municipalities and agencies. The project-level components will be subject to additional future environmental review, including review by cities and municipalities implementing management measures under the proposed SNMP. Section 5 of this SED includes an extensive discussion of the project alternatives.

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5.0 IMPLEMENTATION ALTERNATIVES

This section of the SED gives a description of the Potential Management Measures included in the SNMP. Existing Management Measures form part of the existing environmental setting for the LSCR groundwater basin and are not included in this section. For a list of Existing Management Measures being implemented in the LSCR groundwater basin see Table 3-5 in Section 3.0, *Program Overview and Benefits*, of this SED.

The measures presented here are strategies that can be used to manage salt and nutrients in the LSCR groundwater basin. Given the level of detail available regarding implementation for each of these, they are necessarily evaluated at a programmatic level which is consistent with the level of detail provided in the proposed measures, including any recycled water projects. A project-level environmental analysis must be performed by the local agencies that are required to implement the requirements of the SNMP (Pub. Res. Code § 21159.2.). Therefore, implementation of the individual management measures will be subject to additional future environmental review.

5.1 MANAGEMENT MEASURES

The objective of the management measures outlined in the proposed SNMP is to manage salt and nutrient loadings on a sustainable basis in order to maintain long term supply for multiple beneficial uses. Per the, *Regional Water Board Assistance in Guiding Salt and Nutrient Management Plan Development in the Los Angeles Region*, these strategies should be tailored to basin specific characteristics and conditions, but should also be geared toward:

- Pollution prevention;
- Source load reductions to groundwater basins;
- Treatment and management of areas of impaired water quality;
- Boosting or stabilizing declining water levels where water quality is not affected;
- Increasing groundwater recharge by stormwater; and
- Increasing recycled water use.

Additionally, the selection of management measures involves consideration of the relationship between the sources and the management measures. For example, some management measures prevent loads from entering the basin (e.g. water conservation or water softener bans), others offset loads from another source (e.g., changing the source water for an irrigation project), and others remove loading from the basin (e.g., groundwater treatment). Through combining the general guidance on management measures with project area-specific understanding of sources and pathways for nutrient and salt transport, several categories of appropriate management measures were developed. These categories of measures include:

- Wastewater reuse (i.e. use of Recycled Water)
- Improve wastewater and reclaimed water quality;
- Improve municipal water quality;
- Reduce septic system leachate and improve quality;
- Improve non-stormwater discharge control and quality;

- Increase aquifer recharge with lower concentration water sources, i.e. with stormwater or surface water supplies; and
- Improve agricultural runoff control and quality.

The potential future management measures include those that were identified as potential measures in planning studies, as well as other measures tailored to the site specific conditions in the LSCR SNMP study area.

A general description of each type of potential management measure is provided below. Table 5-1 provides further detail about specific measures in each of these categories as well as the agency that would be responsible for each measure and identification of the implementation mechanism. In some cases, measures would involve implementation of a policy or ordinance, in other instances specific measures would require upgrades to existing facilities or construction of new infrastructure. The potential future management program represents a menu of potential measures that could be implemented if needed to manage salts and nutrients on a sustainable basis. The list is intended to represent a wide-range of potential options that could be considered during planning of recycled water projects, and do not represent management measures that will definitely be implemented. These measures are conceptual measures, which if implemented, would require additional detail to be developed in the future.

The analysis of impacts arising from each of the implementation measures is provided in Section 6.0 of this SED and is consistent with the level of detail provided in the measure.

5.1.1 Wastewater Reuse

The wastewater reuse measures are the same as the recycled water projects discussed in Section 3.0. Recycled water projects provide a mechanism to offset groundwater use and therefore contribute to the availability of groundwater supplies. In this context, recycled water projects can be considered management measures. However, per the Recycled Water Policy, salts and nutrients associated with recycled water projects need to be carefully managed. In this context, recycled water projects need to be evaluated as projects with the potential to provide new loads or relocated loads of salts and nutrients.

Each of the wastewater reuse measures would require to some extent facility upgrades, if already existing, or development of a new recycled water plant. In addition, installation of new conveyance infrastructure (i.e. pipework) would be required to transport recycled water to the locations where it would be used for irrigation or groundwater recharge. In one instance, development of a new reverse osmosis (RO) facility would be required. The location, size, and other details regarding the design of such a facility have not been identified to date.

5.1.2 Wastewater and Reclaimed Water Quality

Wastewater and reclaimed water quality measures would seek to control salts and nutrient at the source. These measures would be applied through adopted policies, such as a ban on domestic water softeners or modification of quality limits on the influent wastewater.

5.1.3 Septic System Leachate

This measure provides for reduction in the number of septic systems in the basin by providing sewer connections to properties currently using an on-site septic system for disposal of domestic wastewater. This would reduce the volume of septic system leachate that percolates into shallow groundwater.

This measure would require installation of connections from properties to the municipal sewer system. Upgrades to the publicly-owned treatment system (POTW) may also be required depending on the volume of wastewater that would be added to the system and the existing POTW treatment capacity.

5.1.4 Non-stormwater Discharge Control and Quality

This measure would improve non-stormwater quality discharge through a ban on the installation and discharge of debrominated/dechlorinated swimming pool water. This would reduce the primary source of salts in the basin from non-stormwater dischargers. Implementation would be through ordinance adoption.

5.1.5 Municipal Water Quality

Various municipal water quality measures are available to reduce the salt and nutrient loading in the municipal water supply. This would in turn reduce the salt and nutrient load in the wastewater produced by water users. Additionally, this would reduce the need for residential water softeners. These measures vary in type from augmenting the groundwater supply with State Water Project (SWP) water, to regional water softening, to advanced treatment of water with reverse osmosis (RO), to use of desalination to augment the water supply.

In all cases some new treatment infrastructure and the associated conveyance facilities would be required. In the cases of advanced water treatment using RO and desalination, a method to dispose of the brine generated as a waste byproduct of the treatment processes would be required.

5.1.6 Groundwater Recharge

This measure would use SWP water to recharge the Santa Paula groundwater basin. This would provide for dilution of salts and nutrients in the groundwater basin through the addition of low salt and nutrient concentration water. As detailed in the City's 2010 Urban Water Management Plan (2011) the City of Santa Paula has rights to 2,198 AFY of SWP water, through allocations imported by UWCD, though for planning purposes the City currently does not anticipate directly receiving SWP water in the near future.

5.1.7 Agricultural Supply

This measure would utilize deeper groundwater wells for agricultural irrigation. Water extracted using deeper wells might have lower salt and nutrient concentrations, which would

reduce the salt and nutrient load on the system attributed to irrigation water. Drilling of new, deeper wells would be required to implement this measure.

5.1.8 Stormwater Recharge

Stormwater recharge measures would recharge groundwater using captured stormwater runoff providing for dilution of groundwater using stormwater with potentially low salt and nutrient concentrations.

5.2 PROCESS FOR IDENTIFYING NEED FOR MANAGEMENT MEASURES

As stated previously, it is not known exactly when and where the management measures will be implemented, if at all. **T**he SNMP includes procedures for evaluating each recycled water project based upon the assimilative capacity analysis, the loading analysis, and the mixing model. Based on the results of this analysis, implementation of a recycled water project may or may not require the implementation of various management measures. The decision process used to determine if management measures are needed is illustrated in Figure 5-1 below and is based on Figure 9-1 of the draft SNMP. Assimilative capacity of a basin is a key determining factor if the development of a recycled water project will require implementation of management measures.

Table 5-1
Potential Future Management Measures

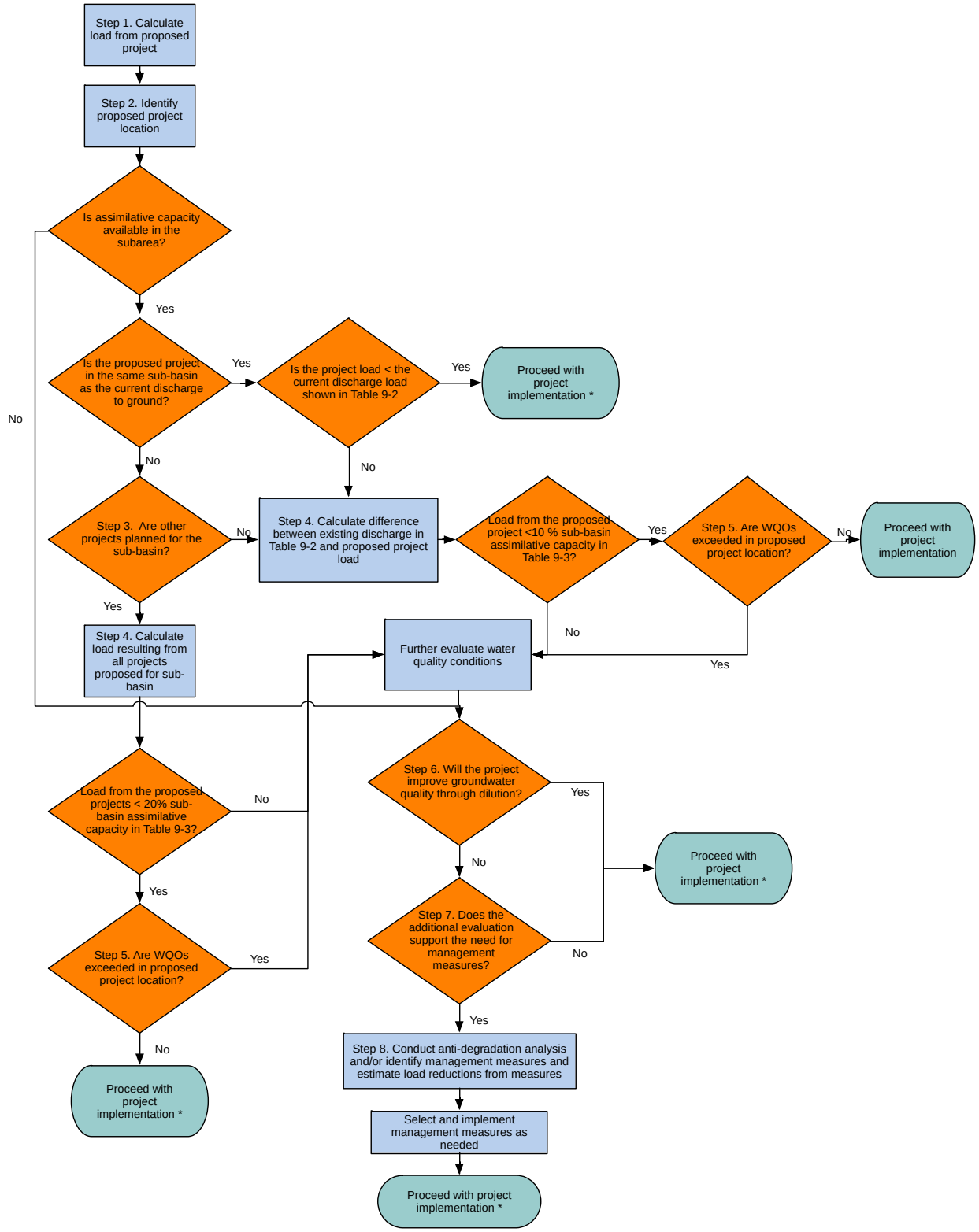
Category	Specific Measure	Agency/Action	Description	Implementation Mechanism
Wastewater Reuse	Offset water supply with reclaimed wastewater	Ventura County Water Works Piru Wastewater Reclamation Plant	Irrigation use	Facility upgrades, installation of new conveyance infrastructure
Wastewater Reuse	Offset water supply with reclaimed wastewater	City of Fillmore – Fillmore Wastewater Reclamation Facility	Urban landscape irrigation and for agricultural irrigation	Facility upgrades, installation of new conveyance infrastructure
Wastewater Reuse	Offset water supply with reclaimed wastewater	City of Santa Paula – Santa Paula Water Recycling Facility	Landscape irrigation	Facility upgrades, installation of new conveyance infrastructure
Wastewater Reuse	Offset water supply with reclaimed wastewater	City of Ventura – Ventura Wastewater Reclamation Facility	Landscape irrigation	Facility upgrades, installation of new conveyance infrastructure
Wastewater Reuse	Replace or augment compromised potable water supply with reclaimed wastewater	City of Ventura – Ventura Wastewater Reclamation Facility	Groundwater recharge and/or direct potable reuse	Facility upgrades, installation of new conveyance infrastructure
Wastewater Reuse	Recharge of treated wastewater into the groundwater basin	United Water Conservation District	Groundwater recharge and/or direct use for agricultural irrigation	Development of new RO treatment facility/groundwater recharge basin
Wastewater and reclaimed water quality	Source control of salts	Ventura County - Water Softener Ban	Water softener ban in the City of Ventura and County unincorporated areas within SNMP project area	Policy or ordinance
Wastewater and reclaimed water quality	Source control through an industrial control, pretreatment program	Ventura County and Municipalities	Modified local limits to improve influent wastewater quality	Policy or ordinance

Table 5-1
Potential Future Management Measures

Category	Specific Measure	Agency/Action	Description	Implementation Mechanism
Septic system leachate	Provide connections to sewer systems	Ventura County and Municipalities	Septic system conversion program to reduce septic systems in the basins	Program and construction of sewer connections
Non-stormwater discharge control and quality	Source control of non-stormwater discharges	Ventura County – Municipal Separate Storm Sewer System (MS4) permit	Adopt and implement ordinance banning installation and discharges of debrominated/ dechlorinated swimming pool water	Policy or ordinance
Municipal Water Quality	Replace/augment compromised groundwater supplies with surface water sources	Ventura County and Municipalities	Use SWP allocations to replace or augment compromised groundwater supplies	Recharge groundwater with surface from SWP
Municipal Water Quality	Softening of groundwater supplies	Water Purveyors	Regional water softening to reduce hardness	Construction of new regional water softening facilities
Municipal Water Quality	Advanced treatment of compromised groundwater supplies	Water Purveyors	RO treatment to remove salts from groundwater supplies; likely participation in development of a regional brine line	Construction of new facilities and conveyance infrastructure
Municipal Water Quality	Desalination	Water Purveyors	Consideration of desalination to replace existing groundwater supplies	Construction of new desalination plant
Municipal Water Quality	Improve municipal water quality	City of Ventura – RO of Mound Groundwater	RO treatment of Mound Basin groundwater	Development of new RO treatment facility
Groundwater Recharge	Additional groundwater recharge with surface water	Santa Paula	Recharge of SWP allocation to the Santa Paula Basin	Construction of new recharge facilities

Table 5-1
Potential Future Management Measures

Category	Specific Measure	Agency/Action	Description	Implementation Mechanism
Agricultural Supply	Improve agricultural irrigation water quality	Ventura County	Drill deeper wells to access water with lower salt concentrations	Drilling of additional groundwater wells
Stormwater Recharge	Additional groundwater recharge with stormwater	Ventura County and Municipalities	Capture and recharge of stormwater into the groundwater basin	Construction of new capture facilities



*Contingent upon compliance with other regulatory requirements

Figure 5-1 SNMP Project Evaluation Process

(Source: Figure 9-1, Draft Salt and Nutrient Management Plan, 2014)

6.0 SETTINGS, IMPACTS, AND MITIGATION

6.1 INTRODUCTION

This section presents the environmental setting, impacts, and mitigation, where applicable, for the proposed implementation alternatives evaluated in this SED. The implementation alternatives for achieving compliance with the requirements of the SNMP, and thus with the State's Recycled Water Policy, are described in detail in Section 5.0 of this document. Each of these implementation alternatives has been independently evaluated in this SED. The environmental setting for the LSCR groundwater basin is described in Section 6.1.3. Section 6.2 provides the required environmental checklist, which includes the potential adverse environmental impacts associated with each of the implementation alternatives considered.

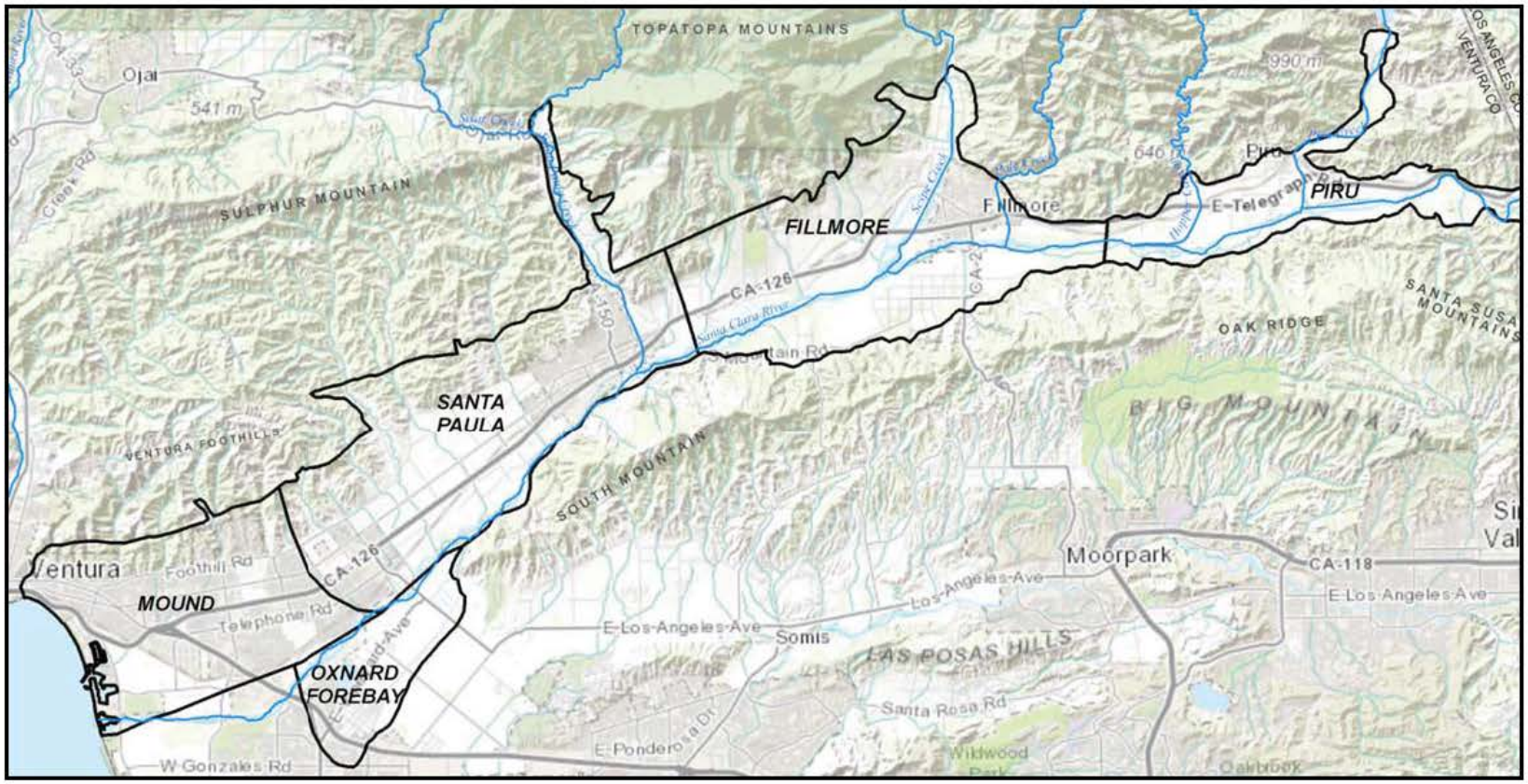
6.1.1 Approach to Environmental Setting and Impact Analysis

The physical scope of the environmental setting and the analysis in this SED is the Lower Santa Clara River and surrounding watershed area as illustrated in Figure 6-1. Potential impacts associated with the proposed implementation alternatives would generally occur within this geographic area.

Potential environmental impacts associated with implementation of the SNMP for the LSCR groundwater basin depend upon the specific implementation alternatives, or management measures, selected by the stakeholders responsible for management of nutrients arising from planned recycled water projects. These stakeholders are public agencies subject to their own environmental review processes and procedures that are in place to comply with CEQA and other environmental laws and regulations.

This CEQA SED identifies broad alternative approaches to salt and nutrient management that can be evaluated at this time. Consistent with PRC§21159, the SED does not engage in speculation or conjecture, but rather considers the reasonably foreseeable environmental impacts of foreseeable methods of compliance, the reasonably foreseeable feasible mitigation measures, and the reasonably foreseeable alternative means of compliance, which would avoid or reduce the identified impacts.

This SED evaluates the impacts of each management measure on the subject environmental resource area at a broad program level of detail. An assumption is made that a more detailed project-level analysis will be conducted by all responsible agencies and jurisdictions that develop recycled water projects and implement management measures, at a time when these projects are better defined and the impacts and mitigation measures can be determined with greater certainty. The analysis in this SED assumes that project proponents will design, install, and maintain management measures following all applicable laws, regulations, ordinances, and formally adopted municipal and/or agency codes, standards, and practices.



Source: Figure 1-1, Draft SNMP, August 2014

Lower Santa Clara River SNMP Area

Figure 6-1

6.1.2 Program-Level Versus Project-Level Analysis

As previously discussed, the Regional Board is the lead agency for the SNMP, while the responsible agencies are the lead agencies for all projects and management measures implemented, within their jurisdiction, to comply with the SNMP. The Regional Board does not specify the actual means of compliance by which responsible agencies choose to comply with the SNMP. Therefore, the implementation alternatives are mostly evaluated at a program level in this draft SED. The alternatives assessed at a program level generally are projects that would be implemented as part of SNMP compliance; PRC §21159 places the responsibility of project-level analysis on the agencies that will implement the Board's SNMP.

6.1.3 Environmental Setting

a. Groundwater Basin Boundaries and Hydrology. The Santa Clara River Valley occurs within the Ventura Basin. The LSCR is the portion of the Santa Clara River that occurs in Ventura County. Figure 6-1 defines the LSCR area which is comprised of the following five groundwater basins:

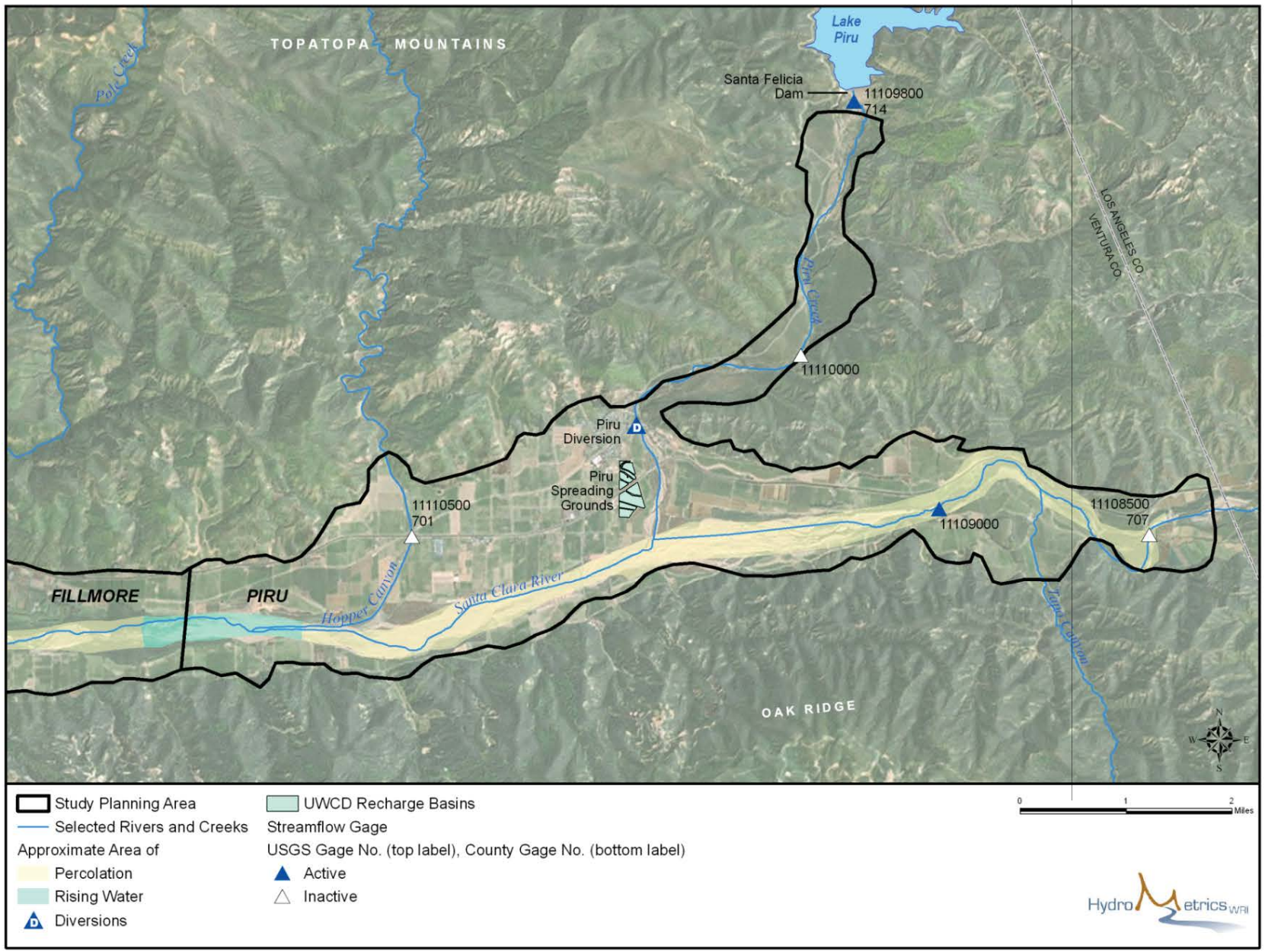
- Piru basin,
- Fillmore basin,
- Santa Paula basin,
- Mound basin, and
- Oxnard Forebay basin.

These sub-basins are hydrologically connected and delineated based on topographic and hydrogeologic features as described below.

Piru Basin. The Piru basin is the uppermost groundwater basin in the LSCR groundwater basin. Its upstream or eastern extent is just downstream of the Ventura/Los Angeles County line. The Piru basin is narrower than the downstream basins and is confined to the north by the Topa Topa Mountains and to the south by the Oak Ridge and Santa Susana Mountains. The basin's western extent is marked by an area of groundwater discharge into the Santa Clara River, approximately two miles east of the City of Fillmore. Locally this is referred to as "rising water", which does not mean groundwater is actually rising up but rather the groundwater level intersects the streambed which causes it to discharge into the river channel. The change in surface elevation on the Santa Clara River from the east to the west of the Piru basin is 315 feet, or on average 32 feet per mile. The Piru basin is approximately 9.8 miles long and 1.8 miles wide at its widest point at the Piru Creek/Santa Clara River confluence, and covers an area of approximately 8,915 acres.

Figure 6-2 illustrates the location and extent of the Piru Basin in the context of the LSCR area.

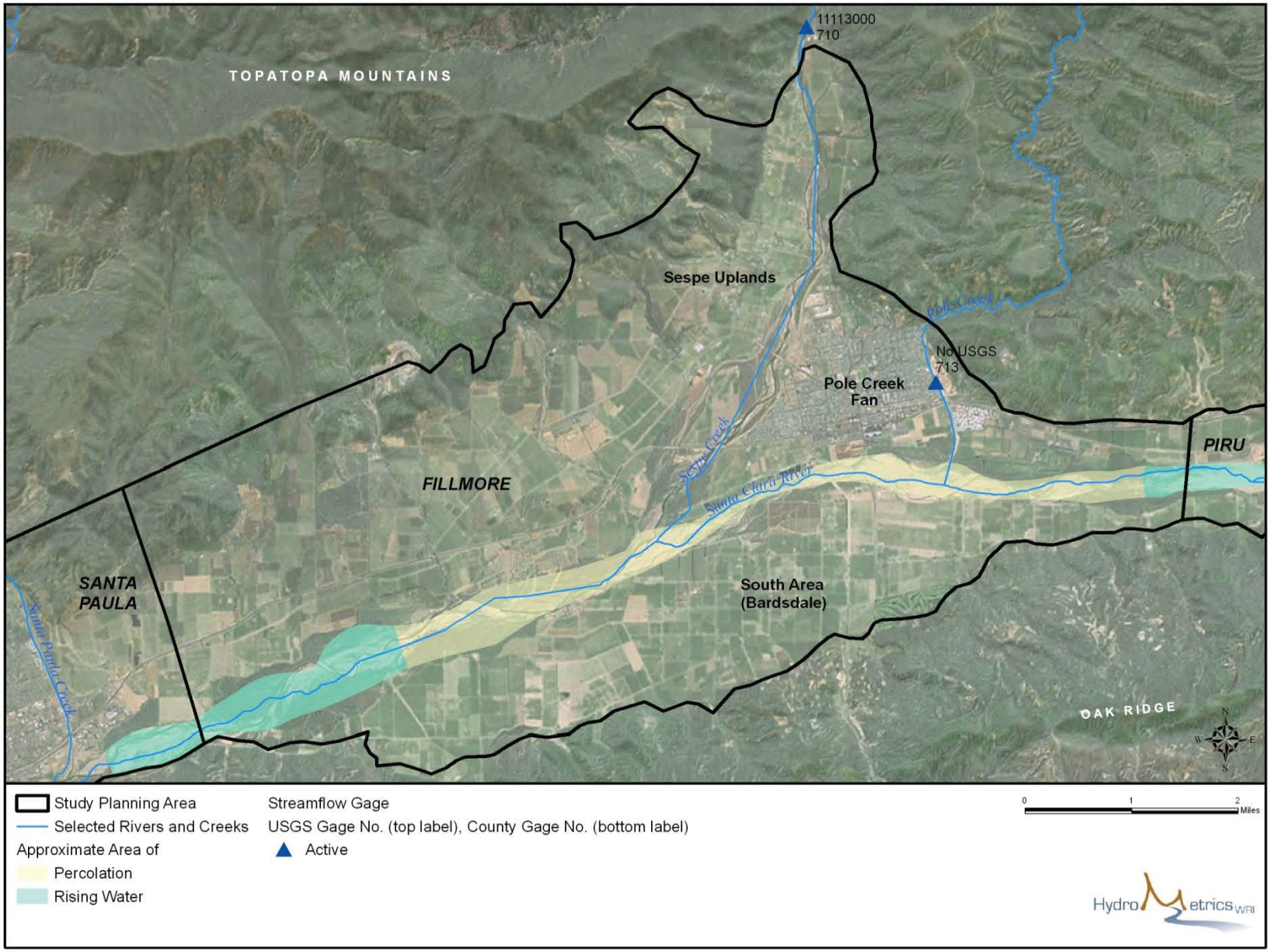
Fillmore Basin. The Fillmore basin is immediately downstream of the Piru basin, sharing its eastern boundary with the Piru basin's western boundary (see Figure 6-3). It is confined to the Santa Clara River Valley by the Topa Topa Mountains on the north and Oak Ridge to the south. Its widest width is 5.2 miles across due to coarse-grained southward-sloping alluvial fan sediments deposited by Sespe Creek in an area called the Sespe Uplands. The basin is



Source: Figure 3-5, Draft SNMP, August 2014

Piru Basin

Figure 6-2



Source: Figure 3-7, Draft SNMP, August 2014

Fillmore Basin

Figure 6-3

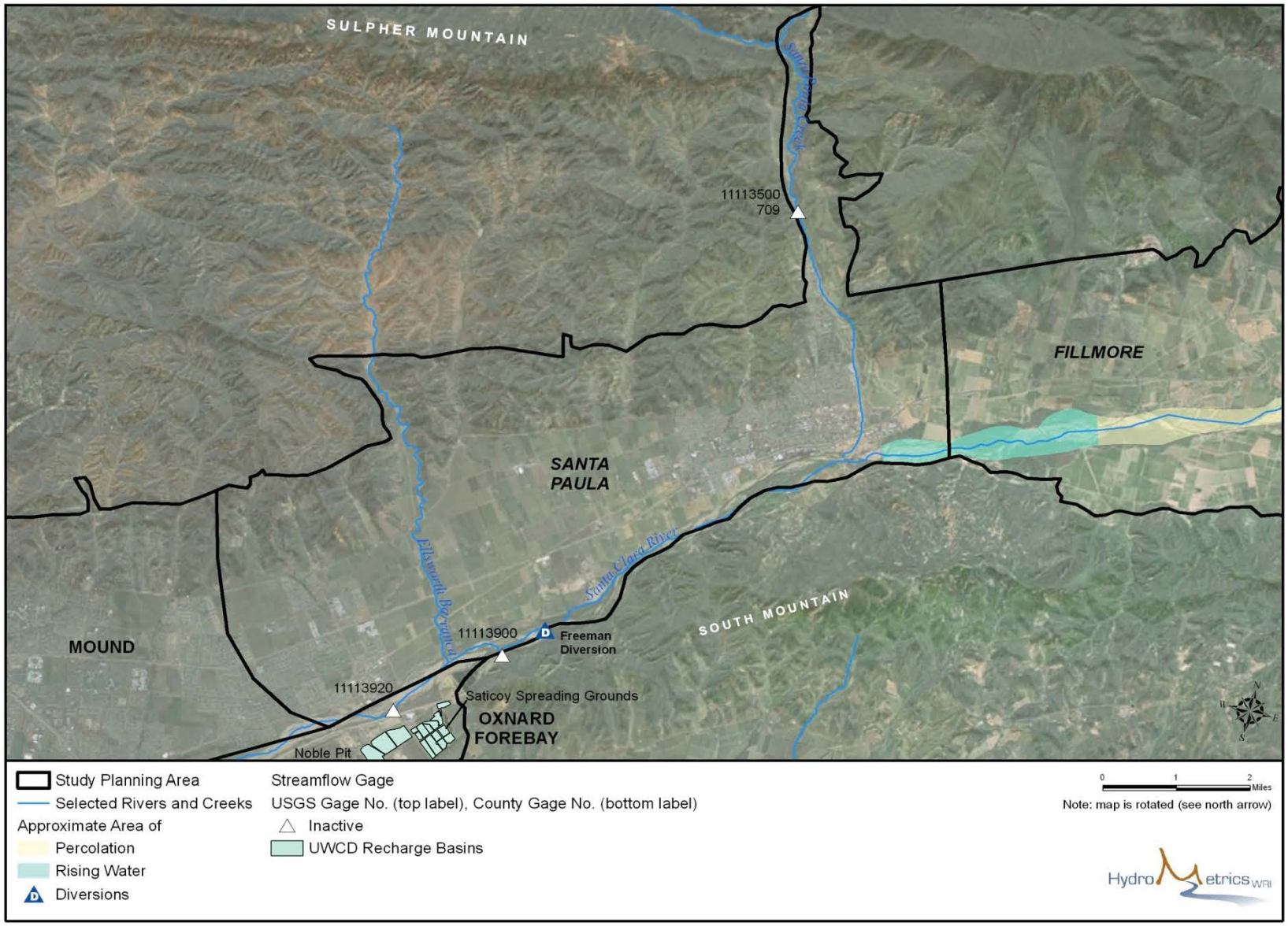
approximately 9.8 miles long and covers an area of approximately 20,840 acres. The basin's western boundary occurs where narrowing of the valley just northeast of the city of Santa Paula, at Willard Road, constricts groundwater flow causing groundwater levels to flatten out and intersect the streambed (rising water). Rising water is clearly seen in aerial photographs where the streambed is highly vegetated. The area of rising water varies based on how full the basin is at any particular time. The change in surface elevation on the Santa Clara River from the east to the west of the Fillmore basin is 240 feet, or an average gradient of 25 feet per mile.

Santa Paula Basin. The Santa Paula basin is downstream of the Fillmore basin, sharing its eastern boundary with the Fillmore basin's western boundary (see Figure 6-4). The basin is bound by the Sulphur Mountain foothills on the north and South Mountain on the south. It is approximately 10.5 miles long and borders the Mound basin to the west and the Oxnard Forebay basin to the south. The western boundary is geologically complex and the aquifers in this portion of the basin are locally uplifted and faulted, with artesian conditions mapped by some investigators (UWCD 2013a). It is uncertain what the degree of hydraulic connection exists between the Santa Paula basin and adjacent Mound and Oxnard Forebay basins (UWCD 2013a). The area of the Santa Paula basin covers approximately 22,900 acres. Surface elevation over the length of the Santa Clara River changes 170 feet, which equates to a gradient of approximately 16 feet per mile.

Mound Basin. The Mound basin, overlying a low lying alluvial plain, is immediately downstream of the Santa Paula basin, sharing its eastern boundary with Santa Paula basin's western boundary (see Figure 6-5). The basin's northern boundary is confined to the valley by the Ventura Foothills, north of the city of Ventura. Its southern boundary coincides approximately with the Montalvo anticline (UWCD 2012), which separates it from the Oxnard Forebay and Oxnard Plain basins to the south. The lowermost portion of the Santa Clara River transects the southern boundary of the Mound basin; this is the only part of the Santa Clara River that flows through the Mound basin. The Pacific Ocean bounds the basin on the west. The Mound basin is approximately 5.5 miles long by four miles wide, with an area of 14,850 acres. Surface elevation along the Santa Clara River changes approximately 100 feet over its length, resulting in a gradient of approximately 18 feet per mile.

Oxnard Forebay Basin. The Oxnard Forebay is bordered by the Santa Paula and Mound basins on its northern boundary and surrounded by the Oxnard Plain basin on its west and south boundary (see Figure 6-5). The nose of the South Mountain occurs at the northeastern extent of the basin. The Oxnard Forebay is delineated as the unconfined portion of the Oxnard Plain basin (UWCD 2008), and is the main source of recharge to the Oxnard Plain. The Oxnard Forebay basin has an approximate area of 5,370 acres[3], with a length of approximately 5.5 miles and width of 2.4 miles. Surface elevation along the SCR changes approximately 40 feet over its length within the basin, resulting in a gentle gradient of approximately 7 feet per mile.

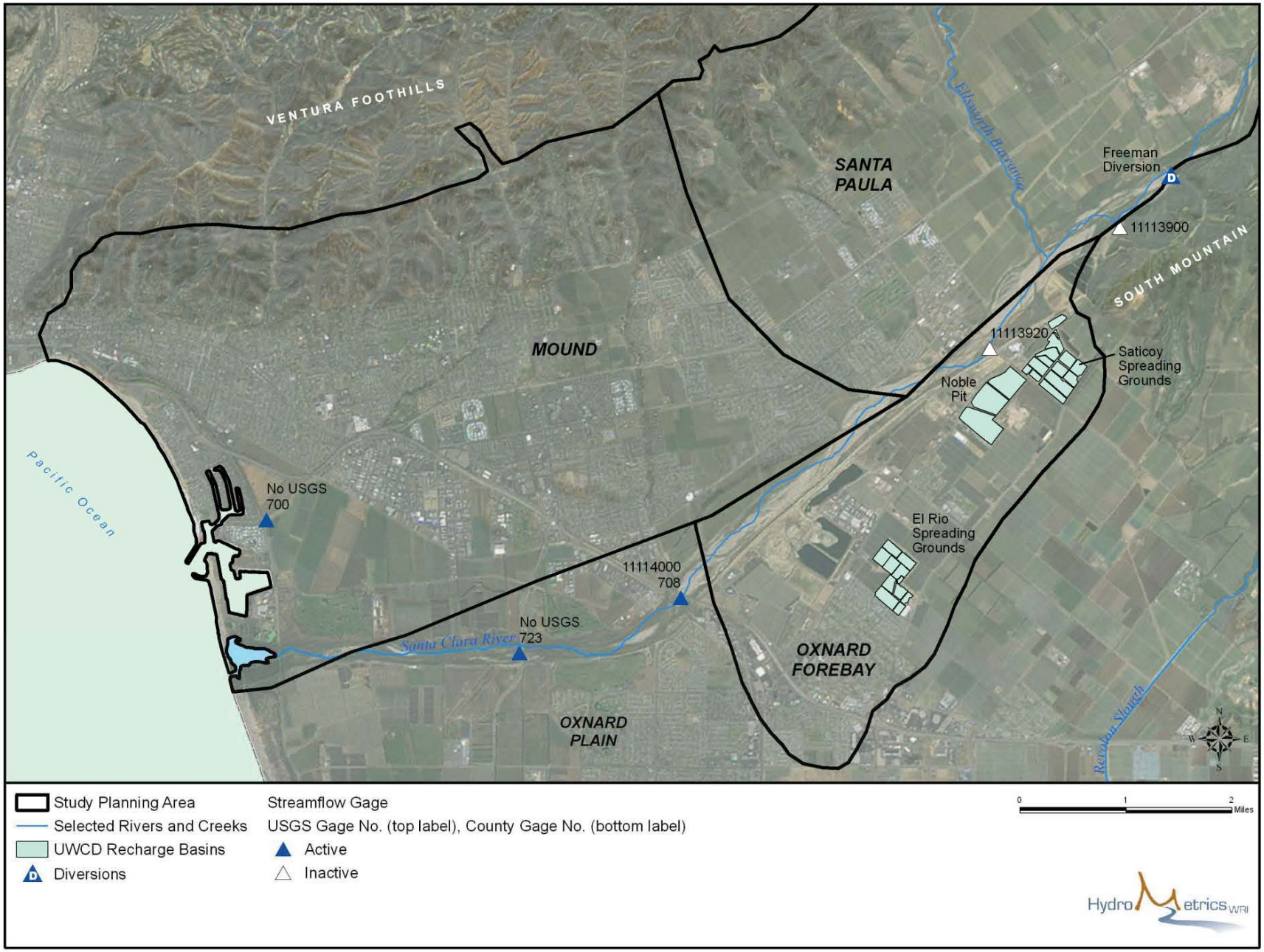
b. Climate. The LSCR area experiences a Mediterranean climate, with mild wet winters and hot dry summers. Seventy-five percent of the annual precipitation falls from December through March. Within the study area, precipitation ranges from 14 inches per year at the coast to over 20 inches per year at higher elevations. Within the study area, the Fillmore basin receives the greatest amount of precipitation. Precipitation close to 40 inches per year falls in the high elevation headwaters of the Santa Clara River's northern tributaries. Precipitation starts to decline in an inland direction at the eastern end of the Piru basin.



Source: Figure 3-9, Draft SNMP, August 2014

Santa Paula Basin

Figure 6-4



Source: Figure 3-11, Draft SNMP, August 2014

Mound and Oxnard Forebay Basins

Figure 6-5

c. Land Use and Land Cover. The Ventura County General Plan (County of Ventura 2011) is used to describe the land use overlying the LSCR groundwater basins. Figure 6-6 shows the land use and crop cover for the study area. Table 6-1 provides percentages of different land use types overlying each groundwater basin.

Table 6-1
Land Uses in the Lower Santa Clara River Study Area

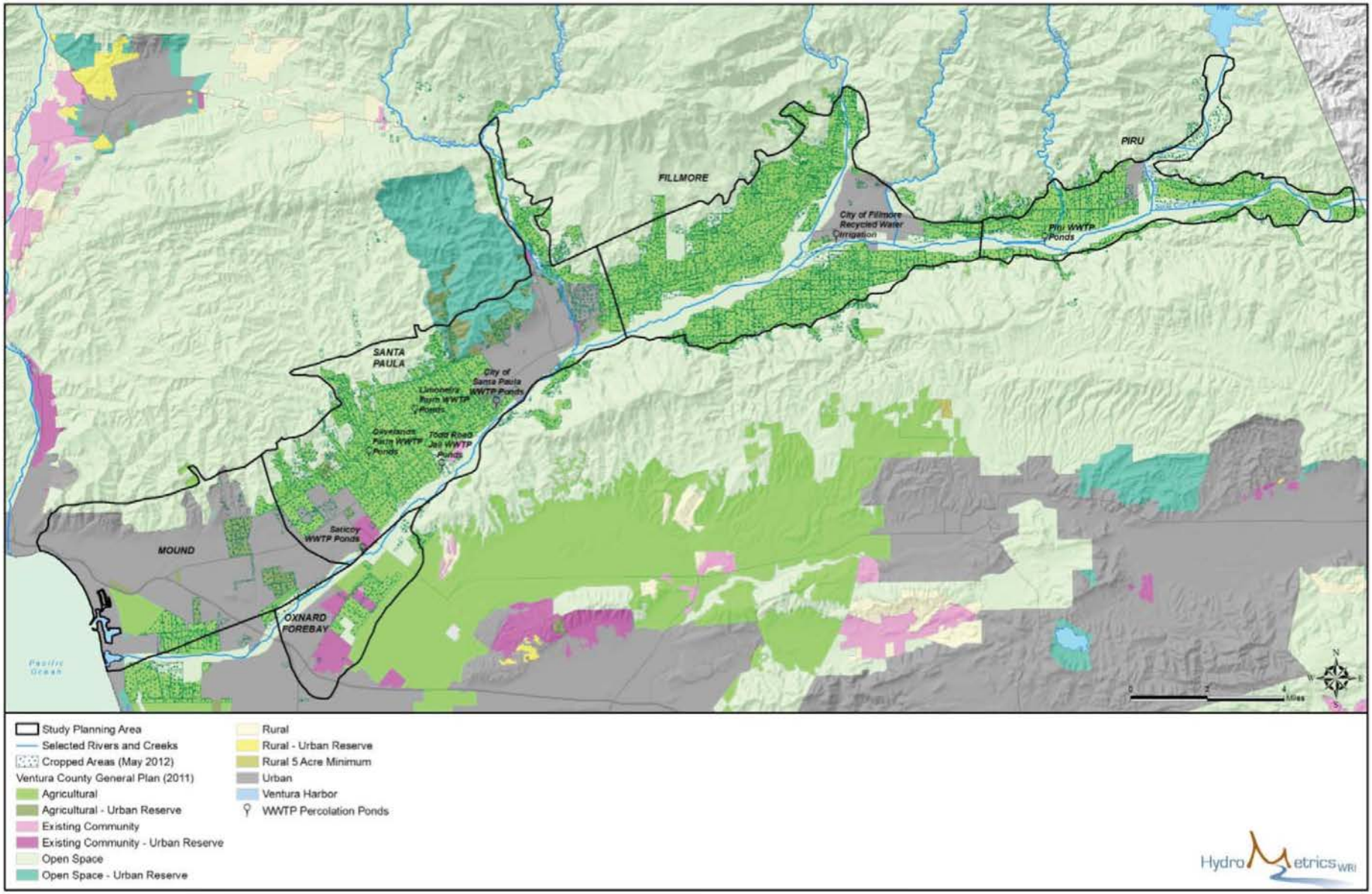
Land Use	Percent Acreage in Groundwater Basin					Study Area
	Piru	Fillmore	Santa Paula	Mound	Oxnard Forebay	
Agricultural	53%	61%	42%	10%	34%	42%
Agricultural – Urban Reserve	-	<1%	4%	6%	1%	2%
Existing Community	<1%	-	<1%	-	<1%	< 1%
Existing Community - Urban Reserve	-	-	1%	-	15%	2%
Open Space	44%	30%	25%	15%	24%	27%
Open Space – Urban Reserve	-	<1%	4%	<1%	-	1%
Rural	-	-	<1%	-	-	<1%
Rural – Urban Reserve	-	-	<1%	-	-	<1%
Rural 5 Acre Minimum	-	-	<1%	-	-	<1%
Urban	3%	9%	22%	69%	26%	26%
Ventura Harbor	-	-	-	<1%	-	<1%

Source: Table 3-4, Draft Salt and Nutrient Management Plan, 2014

The study area can be characterized as rural in the eastern portion of the LSCR area with urban uses increasing westward. The Piru basin is the most rural with the predominate land uses being agriculture and open space. Urban areas account for only 3 percent of the land use in the basin and are primarily concentrated in the community of Piru. The Fillmore basin has a similar land use distribution to the Piru basin, with the majority of land used for agriculture, followed by open space along the Santa Clara River and Sespe Creek, and along the flanks of the Topa Topa Mountains. The city of Fillmore is also within the Fillmore basin. The city encompasses approximately 3.4 square miles and has a population of 15,339 (California Department of Finance 2014).

The Santa Paula basin has almost as much urban area as open space. The city of Santa Paula and the eastern portion of the city of Ventura overlie the basin but agriculture is the basin's primary land use. The city of Santa Paula encompasses approximately 4.7 square miles and has a population of 30,448 (Department of Finance 2014).

The Mound basin underlies the majority of the city of Ventura, resulting in 69 percent of the basin being urbanized. Open space along the flanks of the Ventura Foothills is the second



Source: Figure 3-27, Draft SNMP, August 2014

Lower Santa Clara River Land Use and Crop Cover

Figure 6-6

largest use of land in the basin, followed by 10 percent agricultural use. The city of Ventura encompasses approximately 32 square miles and has a population of 108,961 (Department of Finance 2014). Urban/residential areas are the predominant land use in the Oxnard Forebay basin.

Overall, in the five basins comprising the study area, the predominant land use is agriculture at 42 percent, with open space and urban areas occupying most of the remaining of area at 27 percent and 26 percent, respectively.

d. Water Treatment Facilities. Wastewater treatment and water reclamation/ recycling facilities currently in operation in the basins are described below.

Piru Wastewater Treatment Plant. The Piru Wastewater Treatment Plant (PWTP) is located in the unincorporated portion of Ventura County, north of Highway 126 at 2815 E. Telegraph Road (see Figure 6-7). The plant does not currently provide any recycled water. Surrounding land uses are primarily agricultural with residential development within 0.10 miles.

City of Fillmore Water Recycling Plant. The City of Fillmore operates a newly completed recycled water plant located at the southwest corner of the city limits, just north of the Santa Clara River (see Figure 6-7). Surrounding land uses include agriculture and vacant land zoned Business Park. The total wastewater flow to the Water Recycling Plant (FWRP) of approximately 1.0 million gallons per day (MGD) is treated to Title 22 standards and made available for delivery to irrigation users. Current irrigation uses are less than the amount available. Unused water is discharged to percolation ponds and an underground effluent disposal system that provides groundwater recharge. Full operating capacity of the plant is 2.4 MGD. The current configuration is intended to operate at 1.8 MGD. The plant's peak pumping capacity is 4.146 gallons of effluent per minute. The facility also has a recycled water tank with a storage capacity of 1 million gallons.

City of Santa Paula Water Recycling Facility. In 2010, the City of Santa Paula completed construction of a new Water Recycling Facility (SPWRF) to replace a wastewater treatment plant that was constructed in 1939. The SPWRF is located in the southwest portion of the city adjacent to industrial uses, agricultural uses, and Highway 126 (see Figure 6-7). The facility has a footprint of only 1.5 acres, and is completely enclosed for maximum odor and noise control. The SPWRF produces water that meets California Title 22 regulations for recycled water. Total capacity of the SPWRF is 4.2 MGD, or 4,704 acre-feet per year (AFY). The City of Santa Paula has developed a recycled water program with implementation anticipated by 2015. The WRF would generate 400 AFY of recycled water increasing to 1,622 AFY by 2030. Potential uses for the recycled water are landscape irrigation, groundwater recharge, and agricultural irrigation.

City of Ventura Wastewater Reclamation Facility. The Ventura Wastewater Reclamation Facility (VWRF) is located at 1400 Spinnaker Drive, Ventura, near the mouth of the Santa Clara River and adjacent to the Santa Clara River Estuary and Ventura Harbor (see Figure 6-7). Other surrounding land uses include agriculture and a golf course. According to the 2010 Urban Water Management Plan for the City of Ventura (2011), the VWRF is permitted to produce 14 MGD of recycled wastewater but currently operates at 9 MGD. Approximately 7 percent of the

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Location of Wastewater Treatment Reclamation/
Recycling Facilities in the LSCR Basin

Figure 6-7

treated effluent is currently reused as recycled water; the rest is discharged to the Santa Clara River Estuary. Additionally, the VWRF discharge to the estuary is capped at 9 MGD by the NPDES permit for the VWRF to meet beneficial uses. Recycled water from the VWRF is used for general irrigation of golf courses, parks and similar landscape areas as well as Santa Clara River Estuary beneficial uses. Recycled uses do not include water lost to the estuary through percolation during storage, which is approximately 1 MGD or 1,100 AFY.

6.2 ENVIRONMENTAL CHECKLIST AND DETERMINATION

6.2.1 Environmental Checklist

The following Environmental Checklist has been completed as per the requirements of CCR Section 3777(a).

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
I. **Earth –** Would the project result in:				
a) Unstable earth conditions or in changes in geologic structures?	☐	☒	☐	☐
b) Disruptions, displacements, compaction or overcoming of the soil?	☐	☒	☐	☐
c) Change in topography or ground surface relief features?	☐	☒	☐	☐
d) The destruction, covering or modification of any unique geologic or physical features?	☐	☐	☐	☐
e) Any increase in wind or water erosion of soils, either on or off site?	☐	☒	☐	☐
f) Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?	☐	☒	☐	☐
g) Exposure of people or property to geologic hazard, such as earthquakes, landslides, mudslides, ground failure, or similar hazards?	☐	☒	☐	☐
II. **AIR --** Would the project result in:				
a) Substantial air emissions or deterioration of ambient air quality?	☐	☒	☐	☐
b) The creation of objectionable odors?	☐	☒	☐	☐
c) Alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally?	☐	☒	☐	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
III. WATER– Would the project result in:				
a) Changes in currents, or the course of direction or water movements, in either marine or fresh waters?	☐	☐	☒	☐
b) Changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff?	☐	☒	☐	☐
c) Alteration to the course of flow or flood waters?	☐	☒	☐	☐
d) Change in the amount of surface water in any water body?	☐	☒	☐	☐
e) Discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen, or turbidity?	☐	☐	☒	☐
f) Alteration of the direction or rate of flow of groundwaters?	☐	☐	☒	☐
g) Change in the quantity or quality of groundwaters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?	☐	☐	☒	☐
h) Substantial reduction in the amount of water otherwise available for public water supplies?	☐	☐	☐	☒
i) Exposure of people or property to water related hazards such as flooding or tidal waves?	☐	☒	☐	☐
IV. PLANT LIFE -- Would the project result in:				
a) Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, microflora and aquatic plants)?	☐	☒	☐	☐
b) Reduction of the numbers of any unique, rare or endangered species of plants?	☐	☒	☐	☐
c) Introduction of new species of plants into an area or in a barrier to the normal replenishment of existing species?	☐	☒	☐	☐
d) Reduction in acreage of any agricultural crop?	☐	☒	☐	☐
V. ANIMAL LIFE -- Would the project result in:				
a) Change in the diversity of species, or number of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms, insects or microfauna)?	☐	☒	☐	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
b) Reduction of the number of any unique, rare or endangered species of animals?	☐	☒	☐	☐
c) Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?	☐	☒	☐	☐
d) Deterioration to existing fish or wildlife habitat?	☐	☒	☐	☐
VI. NOISE – Would the project result in:				
a) Increases in existing noise levels?	☐	☒	☐	☐
b) Exposure of people to severe noise levels?	☐	☒	☐	☐
VII. LIGHT AND GLARE – Would the project:				
a) Produce new light or glare?	☐	☒	☐	☐
VIII. LAND USE – Would the project result in:				
a) Substantial alteration of the present or planned land use of an area?	☐	☒	☐	☐
IX. NATURAL RESOURCES – Would the project result in:				
a) Increases in the rate of use of any natural resources?	☐	☐	☒	☐
b) Substantial depletion of any nonrenewable natural resource?	☐	☐	☒	☐
X. RISK OF UPSET - Would the project involve:				
a) A risk of explosion or the release of hazardous substances (including, but not limited to: oil, pesticides, chemicals or radiation) in the event of an accident or upset conditions?	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
XI. POPULATION — Would the project:				
a) Alter the location, distribution, density, or growth rate of the human population of an area?	☐	☐	☐	☒

XII. HOUSING — Would the project:

a) Affect existing housing, or create a demand for additional housing?	☐	☐	☐	☒

XIII. TRANSPORTATION / CIRCULATION — Would the project result in:

a) Generation of substantial additional vehicular movement?	☐	☒	☐	☐
b) Effects on existing parking facilities, or demand for new parking?	☐	☐	☒	☐
c) Substantial impact on existing transportation systems?	☐	☒	☐	☐
d) Alteration to present patterns of circulation or movement of people and/or goods?	☐	☒	☐	☐
e) Alterations to waterborne, rail or air traffic?	☐	☐	☐	☒
f) Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?	☐	☒	☐	☐

XIV. PUBLIC SERVICES – Would the project have an effect upon, or result in a need for new or altered governmental services in any of the following areas:

a) Fire protection?	☐	☐	☒	☐
b) Police protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☐	☒
d) Parks or other recreational facilities?	☐	☐	☐	☒
e) Maintenance of public facilities, including roads?	☐	☒	☐	☐
f) Other governmental services?	☐	☒	☐	☐

XV. ENERGY -- Would the project result in:

a) Use substantial amounts of fuel or energy?	☐	☒	☐	☐
b) Substantial increase in demand upon existing sources of energy, or require the development of new sources of energy?	☐	☒	☐	☐

XVI. UTILITIES AND SERVICE SYSTEMS -- Would the project result in a need for new systems, or substantial alterations to the following utilities:

a) Power or natural gas?	☐	☒	☐	☐
b) Communication systems?	☐	☐	☒	☐
c) Water?	☐	☐	☒	☐
d) Sewer or septic tanks?	☐	☐	☒	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
e) Stormwater drainage?	☐	☐	☒	☐
f) Solid waste and disposal?	☐	☐	☒	☐
XVII. HUMAN HEALTH – Would the project result in:				
a) Creation of any health hazard or potential health hazard (excluding mental health)?	☐	☒	☐	☐
b) Exposure of people to potential health hazards?	☐	☒	☐	☐
XVIII. AESTHETICS – Would the project result in:				
a) The obstruction of any scenic vista or view open to the public?	☐	☒	☐	☐
b) The creation of an aesthetically offensive site open to public view?	☐	☒	☐	☐
XIV. RECREATION – Would the project result in:				
a) Impact upon the quality or quantity of existing recreational opportunities?	☐	☐	☐	☒
XX. ARCHEOLOGICAL/HISTORICAL-- Would the project:				
a) Result in the alteration of a significant archeological or historical site structure, object or building?	☐	☒	☐	☐
XXI. MANDATORY FINDINGS OF SIGNIFICANCE —				
a) **Potential to Degrade:** 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?	☐	☒	☐	☐
b) **Short-Term:** 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 which occurs in a relatively brief, definitive period of time, while long-term impacts will endure well into the future.)	☐	☐	☒	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
c) **Cumulative:** Does the project have impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant.)	☐	☒	☐	☐
d) **Substantial Adverse:** Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

6.2.2 Discussion of Environmental Evaluation

The analysis of potential environmental impacts is based on the numerous alternative means of offsetting salt and nutrient loading in basins with limited or no assimilative capacity where recycled water project are proposed. These include structural management measures such as localized structural measures (i.e., local connections to the municipal sewer system, drilling of deeper wells to access higher quality water), and regional structural measures BMPs (i.e. regional water softening, advanced water treatment, groundwater recharge with imported or diverted water), as well as non-structural management measures such as a ban on domestic water softeners or modification of quality limits on the influent wastewater. Potential impacts are discussed below. As discussed below, mitigation measures and/or alternative means of compliance are available at the project level to address all significant impacts identified. Many of the mitigation measures identified are common practices currently employed by agencies when planning and implementing water infrastructure projects.

Pursuant to section 13360 of the Water Code, the Regional Board cannot dictate which management measures responsible agencies may choose to adopt or which mitigation measures they would employ to implement the SNMP. However, the Regional Board does recommend that appropriate compliance and mitigation measures as discussed herein, which are readily available and generally considered to be consistent with industry standards, be applied in order to reduce, and if possible avoid, potential environmental impacts, such that no significant impact would occur. Since the decision to perform these measures is strictly within the responsibility and jurisdiction of the individual implementing agencies, such measures can and should be adopted by these agencies (Title 14, CCR, Section 15091(a)(2)).

Potential reasonably foreseeable impacts were evaluated with respect to aesthetics, agriculture and forest resources, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation and traffic, utilities and services systems and energy. Additionally, mandatory findings of significance regarding short-term, long-term, cumulative and substantial impacts were evaluated.

The evaluation considered whether the construction and/or implementation of the management measures would cause a substantial, adverse change in any of the physical conditions within the area affected by the management measure. In addition, the evaluation considered environmental effects in proportion to their severity and probability of occurrence.

The following analysis considers a range of non-structural and structural management measures that might be used. When management measures are selected for implementation, a project-level and site-specific CEQA analysis must be performed by the responsible agency.

I. Earth – Would the proposed project result in:

a) Unstable earth conditions or in changes in geologic structures.
b) Disruptions, displacements, compaction or overcoming of the soil?
g) Exposure of people or property to geologic hazard, such as earthquakes, landslides, mudslides, ground failure, or similar hazards

Answer: Less than significant with mitigation incorporated

Similar to the rest of Southern California, active and/or potentially active faults in the region could generate strong groundshaking; therefore, structural management measures which could be implemented under the SNMP would be at risk from seismic activity. In some cases, the management measures would occur at existing wastewater treatment/reclamation facilities (PWTP, FWRP, SPWRF, and VWRF), which are already at risk from seismic activity. Development of new regional facilities (e.g. desalination, regional brine line, regional RO, etc.) could result in the exposure of people or structures to potential substantial adverse effects from seismic events. As the location of these regional facilities is currently unknown, evaluation of the magnitude of risk is not possible at this time. Impacts from individual projects will need to be addressed on a case-by-case basis during project specific environmental review. The following mitigation measure would be required.

GEO-1 Prior to construction of new facilities and infrastructure, a design-level geotechnical investigation, including collection of site specific subsurface data if appropriate, shall be completed. The geotechnical evaluation shall identify all potential seismic hazards including fault rupture, and characterize the soil profiles, including liquefaction potential and expansive soil potential. In addition, the design-level geotechnical investigation shall identify potential geologic hazards, including sinkholes, subsidence, and soil corrosivity, and characterize the soil profiles for their potential to lead to the aforementioned hazards. The geotechnical investigation shall recommend site-specific design criteria to mitigate for seismic and geologic hazards, such as special foundations, avoidance of problem areas, and structural setbacks. These recommendations shall be incorporated into the design of individual proposed projects.

Installation of new pipeline for conveyance of recycled water or provision of groundwater recharge basins would not result in exposure of people or structures to adverse effects from seismic events.

Measures that involve the adoption and implementation of an ordinance or program will have no impact on geology and soils because none of the measures would introduce any physical structures that could be impacted by seismic activity.

c) Change in topography or ground surface relief features?
e) Any increase in wind or water erosion of soils, either on or off site?

Answer: Less than significant with mitigation incorporated

Upgrades to existing facilities to implementing some of the management measures would likely not require soil excavation or grading as these are existing facilities with infrastructure often located indoors or on paved surfaces. However, the installation of new pipeline for conveyance of wastewater or recycled water could require soil excavation and erosion of soils may occur as a short-term impact during construction.

The installation of new pipelines, groundwater recharge basins or development of new regional facilities (e.g. desalination, regional brine line, regional RO, etc.) would likely be placed in areas that are previously undisturbed and would have a greater potential to result in the loss of top soil or soil erosion. Because the location of potential new pipelines or regional facilities (e.g. desalination plant or regional RO facility) are unknown a precise, evaluation of impacts from potential soil erosion or loss of top soil is not possible at this time.

Impacts from individual projects will need to be addressed on a case-by-case basis during project specific environmental review. Impacts can be minimized by proper siting, design, and construction practices. Construction BMPs should be used to minimize sediment runoff. Construction plans should also minimize clearing and grading activities and phase construction to limit soil exposure, stabilize exposed soils immediately, protect steep slopes and cuts, and install sediment controls. Greater utilization of low impact development (LID) can further mitigate the potential for erosion. Construction sites are required to retain sediment on site, both under general construction storm water permits and through the construction program of the Ventura County MS4, both of which are designed to minimize or eliminate erosion impacts on the receiving waters. In addition to compliance with the regulatory framework the following mitigation measure would apply:

GEO-2 Prior to construction of new facilities and infrastructure, a grading and drainage plan shall be prepared that identifies anticipated changes in flow that would occur on site and minimizes any potential increases in discharge, erosion, or sedimentation potential in accordance with applicable regulations and requirements for the County of Ventura and/or the city in which the facility would be located. In addition, all new drainage facilities shall be designed in accordance with applicable requirements in the jurisdiction in which it is proposed. The

grading and drainage plan shall identify and implement retention basins, best management practices, and other measures to ensure that potential increases in stormwater flows and erosion would be minimized, in accordance with regulatory requirements.

Measures that involve the adoption and implementation of an ordinance or program would involve no change to the physical environment either directly or indirectly and would have no potential to result in soil erosion or the loss or soil.

d) The destruction, covering or modification of any unique geologic or physical features?

Answer: No impact

None of implementation measures included in the proposed SNMP would be of the size or scale to result in destruction, covering, or modification of any unique geologic or physical features.

f) Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?

Answer: Less than significant with mitigation incorporated

Stormwater capture and runoff management projects have the potential to reduce surface water flows and sediment loads and improve runoff water quality. As such, the proposed SNMP may reduce flows along the Santa Clara River and its tributaries; however, flow quality would be improved.

As noted above, construction of the management measures included in the proposed SNMP could result in increases in erosion. However, compliance with the existing regulatory framework including the MS4 for Ventura as well as Mitigation Measure GEO-2 would address these impacts.

II. Air – Would the proposed project result in:

Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with an adequate margin of safety, to protect public health and welfare. They are designed to protect that segment of the public, referred to as "sensitive receptors", most susceptible to respiratory distress, such as children under 14; the elderly over 65; persons engaged in strenuous work or exercise; and people with cardiovascular and chronic respiratory diseases. Sensitive receptors include health care facilities, retirement homes, school and playground facilities, and residential areas.

The study area is located in the Ventura County portion of the South Central Coast Air Basin (Basin). The Ventura County Air Pollution Control District (VCAPCD) is the designated air quality control agency in the Ventura County portion of the Basin. According to the VCAPCD's

2007 Air Quality Management Plan (AQMD) (2008), the Ventura County portion of the Basin is a state and federal non-attainment area for ozone and a state non-attainment area for suspended particulates (PM_{10} and $PM_{2.5}$). Additionally, although the Ventura County portion of the Basin is in attainment of state and federal CO standards, CO can potentially be a problem at heavily congested intersections. Ventura County was listed as "moderate nonattainment" for the federal eight-hour ozone standard in 2004, with a required attainment date of June 2010. In 2008, ARB formally requested that EPA reclassify Ventura County to a serious 8-hour ozone nonattainment area. This means that Ventura County must meet the federal 8-hour ozone standard by June 15, 2013. Although Ventura County will have more time to attain the 8-hour standard, the serious classification requires the County to meet the requirements for that higher classification, many of which are more stringent than for moderate areas. Accordingly, in anticipation of becoming a serious area, the 2007 AQMP was prepared to satisfy the CAAA planning requirements for that classification.

a) Substantial air emissions or deterioration of ambient air quality?

Answer: Less than significant with mitigation incorporated

Construction of new or upgraded wastewater reclamation or water recycling facilities, pipelines, or regional facilities (e.g. desalination, regional brine line, regional RO, etc.) and groundwater recharge basins would generate pollutant emissions from the following activities: dust generation from soil disturbance during grading/excavation activities; travel by construction workers to and from the construction sites; delivery and hauling of construction materials and supplies to and from the construction sites; fuel combustion by on-site construction equipment; and the application of architectural coatings and other building materials that release ROC. The following mitigation measures would be required to reduce construction related emissions.

AQ-1 The construction contractor shall maintain and properly tune all construction equipment in accordance with manufacturer's specifications.

AQ-2 The construction contractors shall minimize idling times either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.

AQ-3 The construction contractor shall use off-road diesel-powered construction equipment (greater than 50 horsepower) that meets the Tier 3 emission standards, where available. In the event equipment that meets Tier 3 emission standards is not available, diesel-powered construction equipment shall meet a minimum of Tier 2 emission standards.

AQ-4 The construction contractor shall use alternative fueled (e.g., compressed natural gas, liquefied natural gas, propane), or electric-powered construction equipment, as available.

AQ-5 The construction contractor shall implement activity management (e.g. rescheduling activities to avoid overlap of construction phases, which would reduce short-term impacts).

AQ-6 All on-road heavy-duty diesel trucks used during construction with a gross vehicle weight rating greater than 14,000 pounds shall have a 2007 model year engine or newer, or be equipped with a particulate matter trap.

AQ-7 All trucks hauling loose material, such as debris or fill, shall fully cover their loads while operating off-site.

AQ-8 Construction trucks shall be routed away from congested streets or sensitive receptor areas to the greatest extent possible.

Operation of a wastewater reclamation/recycling facility generates air emissions from energy consumption and operation of vehicles. Because the PWTP, FWRP, SPWRF, and VWRF are existing facilities, emissions currently being generated are considered part of the baseline. Implementation of the management measures could require upgrades to PWTP, FWRP, SPWRF, and VWRF which could generate additional air emissions. Additionally, operation of regional treatment facilities (e.g. desalination, RO, water softening) could generate substantial air emissions depending on the size and energy sources used to power these facilities.

Because the details regarding the size and specifications of individual projects have not been identified, construction and operational emissions have not been quantified. Impacts from individual development projects will need to be addressed on a case-by-case basis during project specific environmental review. The following mitigation would be required.

AQ-9 Implementing agency shall ensure that the proposed project meets the VCAPCD operational air emissions standards at the time of development. Where a project would potentially exceed these standards, VCAPCD approved BMPs shall be incorporated into project design to reduce emissions below these thresholds. This could include, but is not limited to, use of energy efficient equipment and/or use of non-carbon based energy to reduce emissions from combustion of fossil fuels.

Measures that involve the adoption and implementation of an ordinance or program would have no impact on air quality because none of the measures would introduce any physical effects on the environment.

b) Creation of objectionable odors?

Answer: Less than significant with mitigation incorporated

Individuals have greatly varying sensitivity to odors, and continual exposure to an odor tends to decrease sensitivity. Therefore, determining the significance of odor impacts is difficult. Any place or process in which wastewater is collected, conveyed or treated has the potential to generate and release nuisance odors to the surrounding area.

Because the PWTP, FWRP, SPWRF, and VWRF are existing facilities, odors currently being generated, if any, are considered part of the baseline. Upgrades to facilities to generate recycled water could generate additional odors from the sulfides often contained in the recycled water, if the design does not include measures to control odor emissions. Development of a new RO treatment facility could also generate and expose people to new odor sources. However, BMPs to control odor from wastewater treatment plants are available and are in common use. Use of these is required by mitigation measure AQ-10. Recharge basins could be a source of objectionable odors if they allow for water stagnation. Because the details of specific projects have not been identified, the exact level of impact cannot be identified. Impacts from individual development projects will need to be addressed on a case-by-case basis during project specific environmental review. The following mitigation measures would be required:

AQ-10 Where a project has the potential to create objectionable odor affecting a substantial number of people, the implementing agency shall ensure that project designs includes appropriate odor control measures. These can include, but are not limited to, enclosure of odor-generating equipment/areas, use of air scrubbers and aeration of ponds.

AQ-11 Where a recharge basin has the potential to create objectionable odor affecting a substantial number of people, the implementing agency shall require project design to include BMPs to eliminate odors from standing water with covers, aeration, filters, and barriers. To ensure their efficacy, BMPs should be inspected regularly to ensure that systems are not clogged, pooling water, or odorous. During maintenance, odorous sources should be uncovered for as short of a time period as possible. To the extent possible, BMPs should be designed to minimize stagnation of water (e.g., allow for complete drainage within 48 hours) and installed to increase the distance to sensitive receptors in the event of any stagnation.

Measures that involve the adoption and implementation of an ordinance or program will have no impact on odor because none of the measures would introduce any physical effects that could generate odor.

c) Alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally?

Answer: Less than significant with mitigation incorporated

It is not anticipated that the management measures included in the proposed SNMP would result in the alteration of air movement, moisture or temperature. However, several of the proposed projects may generate greenhouse gases (GHG) from a variety of sources, and GHG emissions are known to cause climate changes at various scales including local and regional.

Structural management measures listed in the SNMP include projects which would require expansion or construction of water reclamation/recycling facilities, installation of new pipelines, construction of new regional facilities (e.g. desalination, regional brine line, regional RO, etc.) and/or construction of groundwater recharge basins. In all cases construction activities would have the potential to sources of short term greenhouse gas emissions. In

addition, operation of the new or expanded facilities would be a source of long term greenhouse gas emissions due to the increase in energy required. While in some cases the capacity of the facilities may not be expanded, the higher level of treatment (e.g. RO) that may be implemented to achieve Title 22 standards for recycled water could require the use of additional energy resources. In particular operation of a desalination facility would be expected to generate high levels of GHG emissions due to the large amount of energy required to operate such a facility. Conversely, the increase in use of recycled water could potentially reduce GHG emissions through the offset of energy needed to create or transport water from other sources such as desalination of seawater or conveyance of imported water, use of which for recharge is also a management measures included in the SNMP (California Sustainability Alliance, 2008).

Because specific design details for these measures are not defined at this time, the level of construction and operational energy requirement are not known. Therefore, quantification of the amount of GHG emissions generated by individual projects is not possible at this time. Impacts from individual projects will need to be addressed on a case-by-case basis during project specific environmental review. New industrial facilities would be required to comply with the requirements of AB 32 and any adopted climate action plans or other local, state, or federal regulation in place at the time the project is implemented. The following mitigation measure would be required:

AQ-12 Where required to achieve compliance with the GHG reduction policy framework in place at the time of facility development, the implementing agency shall utilize energy efficient equipment, non-carbon based energy and carbon dioxide offsets to reduce the project's contribution to GHG emissions, to the extent feasible.

Measures that involve the adoption and implementation of an ordinance or program would involve no change to the physical environment either directly or indirectly and would have no potential to result in the generation of GHG emissions.

III. Water – Would the proposed project result in:

a) Changes in currents, or the course of direction or water movements, in either marine or fresh waters?

Answer: Less than significant

The management measures included in the proposed SNMP would allow the increased use of recycled water while maintain groundwater quality. Several management measures would use recycled/reclaimed water for groundwater recharge and thus, these management measures are not expected to cause changes in current groundwater flow.

However, increased groundwater pump and treat such as by regional facilities utilizing RO would affect localized groundwater flows, specifically around the extraction wells. However, treated water is anticipated to be used in the same basin from which it was extracted and would offset current use of groundwaters from the same sub-basin. These types of measures would remove salts and nutrients from the system and thus, improve groundwater quality.

Accordingly, this proposed project is considered an environmental benefit. The proposed SNMP also includes stormwater capture and runoff management measures, which would reduce surface water flows, but would not affect the current, course, or direction of surface water flows.

b) Changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff?
c) Alteration to the course of flow or flood waters?
d) Change in the amount of surface water in any water body?

Answer: Less than significant with mitigation

Implementation of a number of structural management measures would occur at existing facilities (PWTP, FWRP, SPWRF and VWRF) and, therefore, would not be sited where they could alter the existing drainage pattern or course of direction or water movements. These projects could require the installation of new pipeline for conveyance of wastewater or recycled water which would require minor grading and excavation to install, but are not expected to result in substantial erosion or siltation following implementation of construction BMPs.

Implementation of management measures that would involve development of new regional use facilities, such as a desalination plant or regional RO facility, would require grading and excavation. However, because the details, including the location, of the potential new regional facilities are unknown, a precise, evaluation of impacts related to drainage and erosion is not possible at this time. Impacts from individual projects will need to be addressed on a case-by-case basis during project specific environmental review. The following mitigation measures would be required:

WATER-1 Implementing agency shall prepare a stormwater pollution prevention plan (SWPPP) to address the potential for contaminated surface water resulting from construction activities to be discharged from the site. Where applicable, use of products that are safe for use in and around aquatic environments shall be required during construction activities.

WATER-2 Implementing agency shall ensure that facility designs direct runoff into subsurface percolation basins and traps which would remove of urban pollutants, fertilizers, pesticides, and other chemicals from surface water runoff prior to discharge from the site.

The structural management measures also include projects which would increase groundwater recharge. These measures would involve the construction of facilities to capture stormwater and surface water for recharge and therefore would not be expected to contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems. These represent an environmental benefit.

Measures that involve the adoption and implementation of an ordinance or program would involve no change to the physical environment either directly or indirectly and would, therefore

would not contribute to stormwater runoff, altered drainage patterns, flooding or otherwise degrade water quality.

e) Discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen, or turbidity?

Answer: Less than significant impact

The purpose of the SNMP is to manage salts and nutrients in the LSCR in a manner that ensures attainment of water quality objectives and protection of beneficial uses even with an increase in the production of recycled water. The measures proposed in the SNMP provide programmatic management of salt and nutrient loading from wastewater reclamation facilities, recycled water facilities, and other projects which result in the discharge of salts or nutrients. Therefore, while the measures in the SNMP include projects that could generate additional discharges to surface waters in the form of wastewater effluent, implementation of the proposed SNMP would ensure that effluent does not exceed the water quality objective requirements of the Basin Plan.

Measures that involve the adoption and implementation of an ordinance or program would involve no change to the physical environment either directly or indirectly and would, therefore not have the potential to generate effluent which exceeds the requirements of the Regional Water Quality Control Board.

f) Alteration of the direction or rate of flow of groundwaters?

Answer: Less than significant impact

See Response III.a., above

g) Change in the quantity or quality of groundwaters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?

Answer: Less than significant impact

Recycled water projects proposed in the LSCR groundwater basin are listed in Table 3-6 in Section 3.0, *Program Overview and Benefits*. These recycled water projects were proposed by LSCR groundwater basin stakeholders to meet one of the main goals of the Recycled Water Policy, which is to increase the use of recycled water in order to reduce reliance on existing water sources in the basin, protect groundwater quality and preserve beneficial uses. The PWTP, FWRP, SPWRF and VWRF are all permitted wastewater treatment plants and/or water reclamation facilities. Facility upgrades at these sites would be required to comply with these permit requirements.

The SNMP assesses the impacts of salts and nutrients from the proposed recycled water projects in terms of groundwater quality. Various scenarios are evaluated in Section 9 of the SNMP to determine the water quality impacts of these projects in the individual sub-basins. The analysis shows that in most sub-basins cases sufficient assimilative capacity exists to accommodate the recycled water scenarios evaluate in the SNMP. For sub-basins where the assimilative capacity

thresholds established in the SNMP are exceeded, implementation measures would be required by the SNMP to maintain groundwater quality. The implementation measures listed in Table 3-7, by definition, are expected to improve groundwater quality and preserve beneficial uses by managing salt and nutrients in the groundwater consistent with the requirements of the State's Recycled Water Policy. For this reason, the measures would not degrade groundwater quality but in fact would provide a beneficial environmental impact.

As such, the SNMP would ensure that the combination of proposed recycled water projects and implementation measures, where required, would result in groundwater quality remaining below the water quality objectives for salts and nutrients in the Basin Plan, thereby preserving beneficial uses. In addition, the proposed management measures include actions that would generate additional recycled water and provide additional recharge to the groundwater basin. Therefore, the management measures in the SNMP would not deplete or negatively interfere with groundwater quantity. Overall impacts to groundwater quality and quantity would be less than significant.

h) Substantial reduction in the amount of water otherwise available for public water supplies?

Answer: No impact

The SNMP is being prepared in response to the State's Recycled Water Policy which has set a goal to increase the use of recycled water over 2002 levels by at least one million acre-feet per year (AFY) by 2020 and at least two million AFY by 2030 in accordance with state and federal water quality laws. Implementation of the measures in the SNMP would result in the addition and/or expansion of wastewater reclamation facilities and recycled water facilities in the LSCR groundwater basin and would generate additional recycled water supplies for use by the public. Therefore no impact to public water supplies would occur.

Measures that involve the adoption and implementation of an ordinance or program would involve no change to the physical environment either directly or indirectly and would, therefore not have the potential to negatively impact water or wastewater facilities.

i) Exposure of people or property to water related hazards such as flooding or tidal waves?

Answer: Less than significant with mitigation incorporated

Implementation of a number of structural management measures would occur at existing facilities and would not increase exposure of structures or people to risks from flooding, dam or levee failure, or tsunamis.

The only inland body of water within proximity of the SNMP planning area is Piru Lake. Given the distance of this water body from the PWTP (>5 miles), the risk of inundation from seiche would be low.

Design details, including the location, regarding construction of regional RO treatment facility(ies), regional desalination plant or regional water softening facility are unknown. However, depending on where these facilities are located they could be subject to risks from flooding and tsunamis. In particular if these facilities are located along or in proximity to the Santa Clara River or near the coastline. Impacts from individual projects will need to be addressed on a case-by-case basis during project specific environmental review. The following mitigation measure would be required:

WATER-3 Implementing agency shall ensure that new facilities are designed to be elevated at least one foot above the 100-year flood zone elevation, that bank stabilization and erosion control measures are implemented along creek crossings, and facilities are sited outside of tsunami hazard zones.

In addition, the proposed SNMP includes stormwater capture and runoff management projects, which would reduce the rate and amount of surface water flows in existing channelized surface waterways. These projects would reduce flood flows. Accordingly, these management measures are considered an environmental benefit.

Measures that involve the adoption and implementation of an ordinance or program would involve no change to the physical environment either directly or indirectly and would, therefore not expose new structures or people to risks from floods, damn or levee failure, mudslides, or tsunamis.

IV. Plant Life – Would the proposed project result in:

a) Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, microflora and aquatic plants)?
b) Reduction of the numbers of any unique, rare or endangered species of plants?

Answer: Less than significant with mitigation incorporated

The study area contains numerous special status species as identified on Figure 6-10 as defined by the California Natural Diversity Database. There are 26 sensitive plant species located within the study area and surrounding 5 mile buffer (see Figure 6-8).

Depending on the implementation method chosen, it is possible that direct or indirect impacts to candidate, sensitive or special status species may occur. Implementing agencies should consult with the CDFW and USFWS prior to implementing management measures that pose a potentially significant impact to any of the above listed biological resources. Implementing agencies may also choose to implement compliance strategies that incur less impact on sensitive species.

Most of the management measures would consist of minor expansions, additions, or alterations of existing facilities that would not involve construction in environmentally sensitive habitat areas. However, installation of new infrastructure, such as pipelines, has the potential to impact special status and other types of plant species during construction. Specifically, the VWRF is

located near the mouth of the Santa Clara River and adjacent to the Santa Clara River Estuary and Ventura Harbor. Upgrades to the VWRF or installation of new pipeline to implement recycled water projects could potentially affect the Santa Clara River and Santa Clara River Estuary. However, recycled water produced at the VWRF is also used, and would likely continue to be used, for wildlife enhancement in the Santa Clara River estuary which provides a beneficial impact.

Finally, development of a new regional facilities (e.g. desalination, regional brine line, regional RO, etc.) could be sited in a location that would have impacts to environmentally sensitive habitat areas. Because the details of these facilities have not been identified, including location and size, the exact level of impact cannot be identified. Impacts from individual development projects will need to be addressed on a case-by-case basis during project specific environmental review. Mitigation could include a biological resources screening and assessment, botanical surveys, restoration and monitoring, and avoidance. The following mitigation measures would apply:

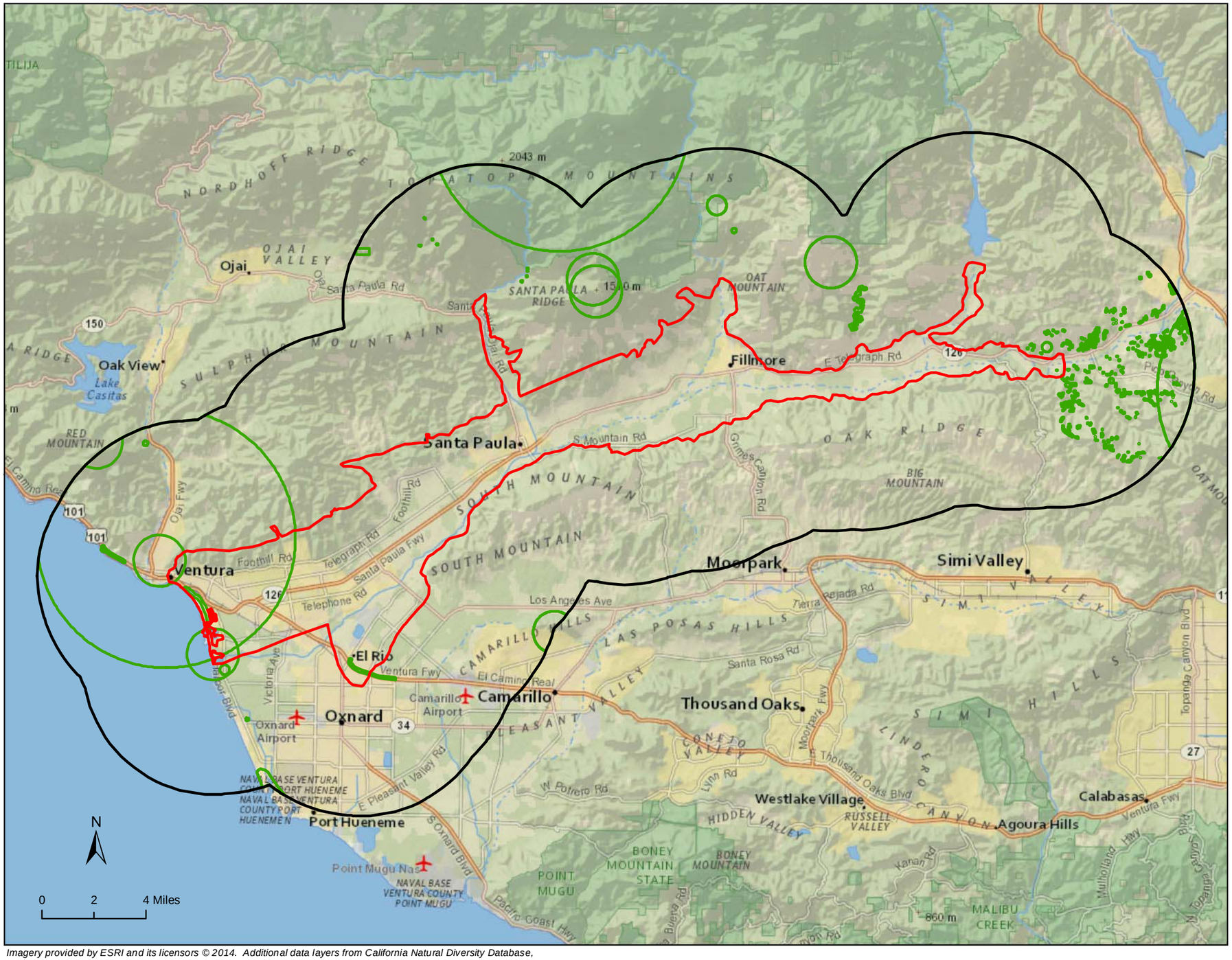
PLANT-1 Prior to construction in areas that could support special-status plants, a qualified biologist shall conduct a pre-construction floristic inventory and, if deemed necessary, a focused rare plant survey of project areas to determine and map the location and extent of special-status plant species populations within disturbed areas. This survey shall be conducted during the typical blooming periods of the identified potentially-occurring special-status plants. The plant survey shall follow the CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW, 2009).

PLANT-2 The limits of construction shall be staked, flagged, fenced, or otherwise clearly delineated to avoid and minimize impacts on adjacent habitats that have been determined to support special-status plant species.

PLANT-3 To the extent feasible, the implementing agencies shall avoid and/or reduce the footprint of construction and staging areas in areas having potential occurrences of special status plant species.

PLANT-4 Earth-moving equipment shall avoid maneuvering in areas outside the identified limits of construction in order to avoid disturbing areas that would remain undeveloped. Where natural open space areas are located adjacent to construction areas, the limits of construction shall be identified on the site plans.

PLANT-5 Once projects are completed, vegetated areas disturbed due to construction activity shall be restored to pre-construction conditions. Re-vegetation plans shall be developed and included in project design specifications. The plant palette shall include native plants, when feasible, and exotic or invasive plants shall be avoided.



Lower Santa Clara River SNMP Study Planning Area

5-Mile Radius

Plants

57 - Orcutt's pincushion
58 - Newhall sunflower
59 - Coulter's goldfields
60 - Greata's aster
61 - Palmer's grapplinghook
62 - Robinson's pepper-grass
63 - aphanisma
64 - Coulter's saltbush
65 - south coast saltscale
66 - Davidson's saltscale
67 - Ventura Marsh milk-vetch
68 - round-leaved filaree
69 - Ross' pitcher sage
70 - white-veined monardella
71 - southern curly-leaved monardella
72 - Davidson's bush-mallow
73 - San Fernando Valley spineflower
74 - Abrams' oxytheca
75 - slender-horned spineflower
76 - Ojai navarretia
77 - umbrella larkspur
78 - salt marsh bird's-beak
79 - slender mariposa-lily
80 - Plummer's mariposa-lily
81 - late-flowered mariposa-lily
82 - Ojai fritillary
83 - California Orcutt grass

Sensitive Elements
(Plants)
Reported by the
California Natural Diversity Database

Imagery provided by ESRI and its licensors © 2014. Additional data layers from California Natural Diversity Database, September 2014. Additional suppressed records reported by the CNDDB known to occur or potentially occur within this search radius include: Monarch Butterfly and Prairie Falcon. For more information please contact the Department of Fish and Wildlife.

Figure 6-8

PLANT-6 If permanent unavoidable impacts to special-status plant populations are identified within a disturbance area, the implementing agencies shall retain a qualified biologist to develop and implement a plant mitigation and restoration program. This program shall contain the following items: responsibilities and qualifications of the personnel to implement and supervise the program; site selection; site preparation and planting implementation; schedule; maintenance plan/guidelines; monitoring plan; long-term preservation; and performance standards.

PLANT-7 If temporary construction-related impacts to special-status plant populations are identified within a disturbance area, the implementing agencies shall retain a qualified biologist to prepare and implement a special-status species salvage and replanting plan. The salvage and replanting plan shall include measures to salvage (if feasible), replant, and monitor the disturbance area until native vegetation is re-established, in accordance with requirements of the CDFW and United States Fish and Wildlife Service (USFWS).

PLANT-8 If trees could be impacted by project construction, an arborist shall conduct a tree survey. If any Oak trees or other protected trees will be impacted by a proposed project under the SNMP, the required county or city permits shall be obtained, as directed by the arborist. All terms and conditions of the permits shall be implemented.

Measures that involve the adoption and implementation of an ordinance or program will have no impact on special status plant species because none of the measures would introduce any physical effects.

c) Introduction of new species of plants into an area or in a barrier to the normal replenishment of existing species?

Answer: Less than significant with mitigation incorporated

The construction of projects associated the proposed SNMP has the potential to spread invasive species by the entering and exiting of construction equipment contaminated by invasive species, the inclusion of invasive species in seed mixtures and mulch, and the improper removal and disposal of invasive species so that its seed is spread during transport. Invasive species can move on vehicles and in the loads they carry. Invasive plants can be moved from site to site during spraying and mowing operations. There are likely exotic plant species in the LSCR basins within non-native plant communities, within patches of native plant communities, and in areas that have been disturbed by human activity.

Exotic plant species are typically more numerous adjacent to roads and developed areas and frequently border ornamental landscape. The plant palette used for re-vegetation of disturbed areas shall not include exotic or invasive species, as described by Mitigation Measure BIO-5.

Therefore, the proposed SNMP would not introduce invasive or exotic plants into the project areas or create a barrier to the normal replenishment of existing plant species.

d) Reduction in acreage of any agricultural crop?

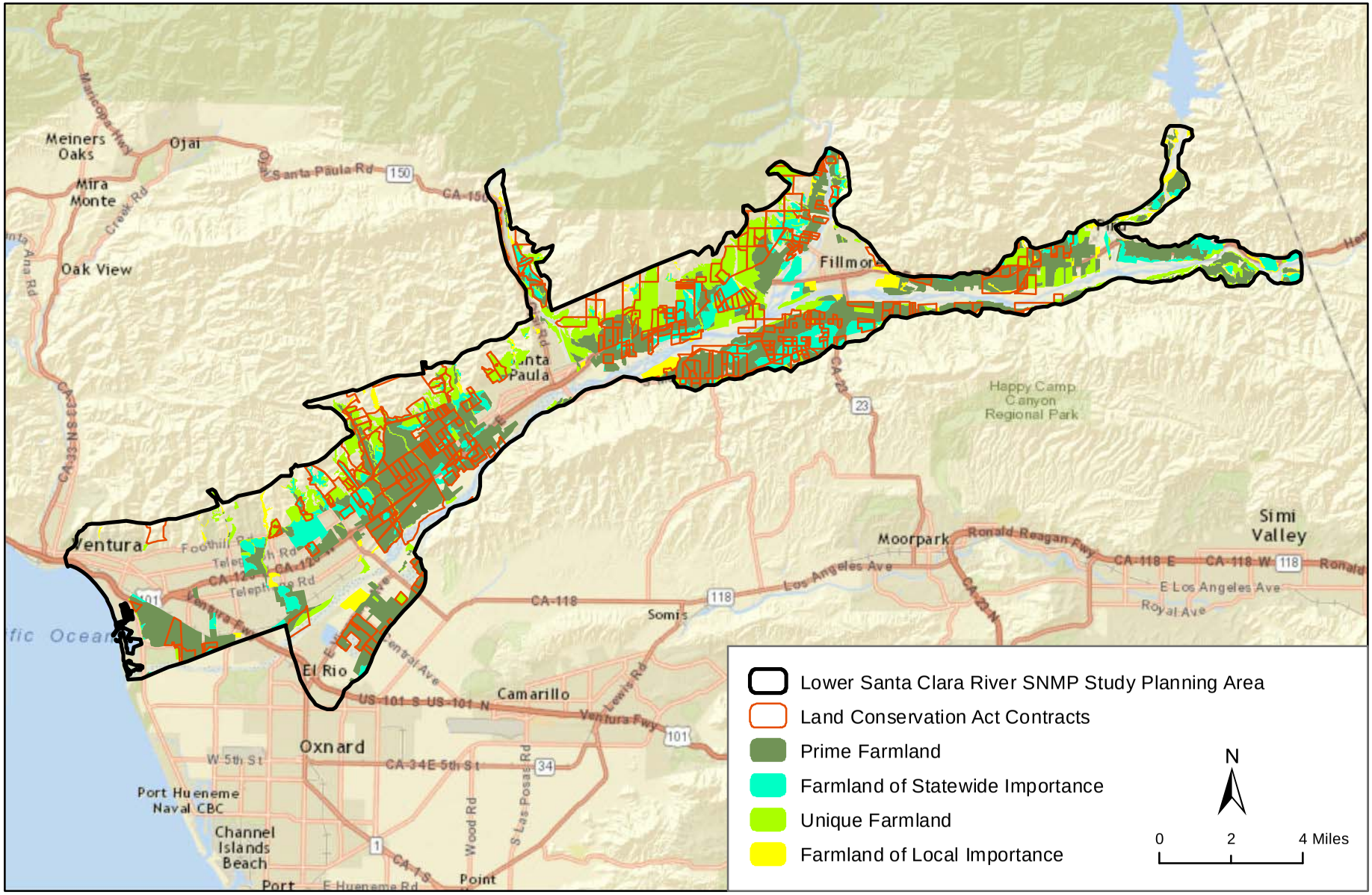
Answer: Less than significant with mitigation incorporated

According to the Department of Conservation there are approximately 19,000 acres of Prime Farmland, 6,200 acres of Farmland of Statewide Importance, and 8,000 acres of Unique Farmland in the SNMP planning area. Additionally, the total amount of Williamson Act contracted land in the SNMP planning area is approximately 17,900 acres. The majority of this land is located outside city limits and urban areas and increases from west to east (see Figure 6-9).

Development of new upgrades to wastewater treatment facilities or water treatments facilities, installation of new pipelines, development of new regional facilities (e.g. desalination, regional brine line, regional RO, etc.) recycled water projects could include the construction of additional infrastructure for treatment and conveyance of the water and wastewater. Additionally, the new RO treatment facility for the Mound Basin and UWCD groundwater recharge basin would require the construction of new facilities. With a large amount of agricultural land located in Ventura County, construction projects could result in the direct conversion of farmland to non-agricultural uses. Additionally, all existing wastewater treatment facilities and recycled water plants discussed in this SED (PWTP, FWRP, SPWRF, VWRF) are adjacent to agricultural uses. Specifically, the PWTP is located in a rural area and surrounded by agricultural uses. The other facilities are located adjacent to or within more urbanized areas and the potential impact of agricultural land conversion to wastewater or recycled water infrastructure would be minimal. However, impacts to agricultural lands could result from the installation of wastewater and water conveyance pipelines. Impacts from individual development projects will need to be addressed on a case-by-case basis during project specific environmental review. Nevertheless, because the actual magnitude of impacts from individual projects cannot be determined at this time, the overall impact to Prime Farmland, Unique Farmland, Farmland of Statewide Importance and Williamson Act contracted land would be potentially significant. The following mitigation measure would be required.

PLANT-9 Wherever feasible, implementing agencies shall ensure placement of pipeline alignments and siting of facilities to reduce or avoid impacts to Prime Farmland, Unique Farmland, Farmland of Statewide Importance and Williamson Act contracted land including placement of pipeline alignments along property lines. The implementing agencies should assure that project-specific environmental reviews consider alternative alignments or locations that reduce or avoid impacts to Prime Farmlands.

PLANT-10 Implementing agencies should consider buffer zones, setbacks, and fencing to reduce conflict between agricultural lands and neighboring uses.



Imagery provided by ESRI and its licensors © 2014. Additional data layers from California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, 2012, Ventura County Geographical Information System (GIS), 2012 and Larry Walker and Associates, 2014.

Mapped Agricultural Land and Williamson Act Contracts

Figure 6-9

PLANT-11 Implementing agencies should quantify potential for direct conversion of Prime Farmland, Unique Farmland, Farmland of Statewide Importance and Williamson Act using the LESA model or a similar quantitative tool.

PLANT 12 Compensate for conversion impacts to Prime Farmland, Unique Farmland, Farmland of Statewide Importance and Williamson Act by purchasing agricultural conservation easements (ACE) or funding the acquisition of agricultural mitigation lands through an appropriate land trust.

Measures that involve the adoption and implementation of an ordinance or program will not convert agricultural lands because none of the measures would introduce any physical effects to agriculture.

V. Animal Life – Would the proposed project result in:

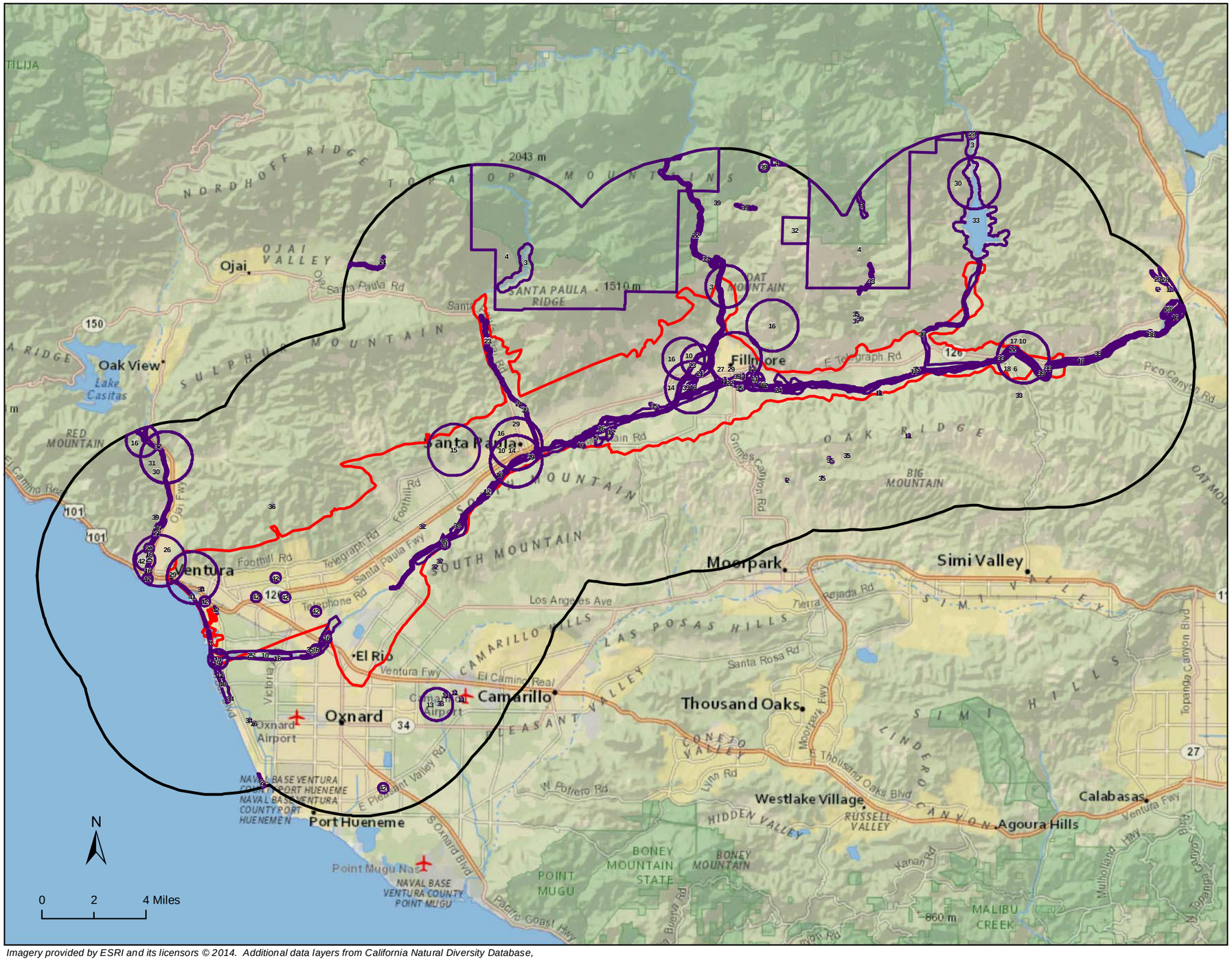
a) Change in the diversity of species, or number of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms, insects or microfauna)?
b) Reduction of the number of any unique, rare or endangered species of animals?

Answer: Less than significant with mitigation incorporated

The study area contains numerous special status species as identified on Figures 6-10a and 6-10b as defined by the California Natural Diversity Database. There are 42 sensitive animal species which have been identified to be located within the study area and surrounding 5 mile buffer (see Figure 6-10).

Depending on the implementation method chosen, it is possible that direct or indirect impacts to candidate, sensitive, special status species, riparian habitat or other sensitive natural communities may occur. Implementing agencies should consult with the CDFW and USFWS prior to implementing management measures that pose a potentially significant impact to any of the above listed biological resources. Implementing agencies may also choose to implement compliance strategies that incur less impact on sensitive species.

Most of the management measures would consist of minor expansions, additions, or alterations of existing facilities that would not involve construction in environmentally sensitive habitat areas. However, installation of new infrastructure, such as pipelines, has the potential to impact special status and other species during construction. Specifically, the VWRF is located near the mouth of the Santa Clara River and adjacent to the Santa Clara River Estuary and Ventura Harbor. Upgrades to the VWRF or installation of new pipeline to implement recycled water projects could potentially affect the Santa Clara River and Santa Clara River Estuary. However, recycled water produced at the VWRF is also used, and would likely continue to be used, for wildlife enhancement in the Santa Clara River estuary which provides a beneficial impact.



Lower Santa Clara River SNMP Study Planning Area

5-Mile Radius

Animals

1 - arroyo toad
2 - western spadefoot
3 - foothill yellow-legged frog
4 - California condor
5 - white-tailed kite
6 - Cooper's hawk
7 - prairie falcon
8 - western snowy plover
9 - California least tern
10 - western yellow-billed cuckoo
11 - burrowing owl
12 - southwestern willow flycatcher
13 - California horned lark
14 - bank swallow
15 - coastal California gnatcatcher
16 - least Bell's vireo
17 - yellow warbler
18 - yellow-breasted chat
19 - Belding's savannah sparrow
20 - tricolored blackbird
21 - southern steelhead - southern California DPS
22 - arroyo chub
23 - Santa Ana sucker
24 - unarmored threespine stickleback
25 - tidewater goby
26 - Mexican long-tongued bat
27 - hoary bat
28 - spotted bat
29 - pallid bat
30 - western mastiff bat
31 - Dulzura pocket mouse
32 - American badger
33 - western pond turtle
34 - silvery legless lizard
35 - coast horned lizard
36 - coastal whiptail
37 - coast patch-nosed snake
38 - south coast garter snake
39 - two-striped garter snake
40 - sandy beach tiger beetle
41 - globose dune beetle
42 - monarch butterfly

Sensitive Elements
(Animals and Invertebrates)
Reported by the
California Natural Diversity Database

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Figure 6-10

Finally, development of a new regional facilities (e.g. desalination, regional brine line, regional RO, etc.) could be sited in a location that would have impacts to environmentally sensitive habitat areas. Because the details of these facilities have not been identified, including location and size, the exact level of impact cannot be identified. However, direct impacts to wildlife could include increased noise and human presence during construction and operation, as well as increased trash which may attract predators to the project site and discourage wildlife use of surrounding natural habitat. Impacts from individual development projects will need to be addressed on a case-by-case basis during project specific environmental review. Mitigation could include a biological resources screening and assessment, special status species surveys, restoration and monitoring, and avoidance. The following mitigation measures would apply:

ANIMAL-1 Prior to ground disturbing activities in areas that could support sensitive biological resources, a habitat assessment shall be conducted by a qualified biologist to determine the potential for special-status wildlife species to occur within affected areas. If the habitat assessment determines that a special-status wildlife species has the potential to be present within 500 feet of the construction zone, the qualified biologist shall consult with the implementing agency to determine whether a focused survey shall be conducted prior to project implementation to determine the presence or absence of the species.

ANIMAL-2 If the habitat assessment concludes that there is potential for listed special-status wildlife species to occur and the area of potential presence cannot be avoided, appropriate protocol-level surveys shall be conducted by a qualified biologist in accordance with the requirements of the appropriate regulating agency (USFWS or CDFW). If a listed species is determined to have the potential to be present in or adjacent to the area of disturbance, a mitigation plan shall be prepared by a qualified biologist and, if necessary, approved by the USFWS and/or the CDFW prior to any ground disturbing activities.

ANIMAL-3 If a special-status wildlife species is determined present within the limits of construction activities, a qualified biologist shall conduct pre-construction surveys of proposed work zones and the 500-foot buffer around each area within 14 days prior to ground disturbing activities. Any potential habitat capable of supporting a special-status wildlife species, such as burrows, shall be flagged for avoidance, as necessary; any additional habitat features, if any, shall also be identified and flagged as necessary.

ANIMAL-4 Every effort shall be made to avoid potential impacts to special-status wildlife species by eliminating construction activities to the greatest extent possible within areas where those species are detected through surveys. Tunneling or jack and bore construction methods under drainages that may support listed special-status wildlife species shall be recommended in areas

where those species have the potential to occur or where presence has been confirmed.

ANIMAL-5 All construction areas, staging areas, and right-of-ways shall be staked, flagged, fenced, or otherwise clearly delineated to restrict the limits of construction to the minimum necessary near areas that may support special-status wildlife species as determined by a qualified biologist.

ANIMAL-6 Silt fencing or similar impermeable barriers to exclude small wildlife species from entering the active work areas shall be installed around future work areas that occur within or adjacent to undisturbed habitats, or near areas of documented occurrences of special-status wildlife as determined during pre-construction surveys by a qualified biologist. Such impermeable barriers shall be verified by a qualified biologist prior to initiating construction activities.

Measures that involve the adoption and implementation of an ordinance or program will have no impact on wildlife species because none of the measures would introduce any physical effects on wildlife.

c) Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?

Answer: Less than significant with mitigation incorporated

Because of the programmatic nature of the SNMP, a precise, project-level analysis of the specific impacts associated with the structural management measures on wildlife movement and/or corridors is not possible at this time. In general, the management measures envisioned in the SNMP could involve expansion of existing facilities, construction of infrastructure, such as pipelines, and/or development of new regional facilities (e.g. desalination, regional brine line, regional RO, etc.). These facilities could be constructed in agricultural areas or open space where travel routes or regional wildlife corridors exist. A travel route is generally described as a landscape feature (such as a ridgeline, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and provide access to necessary resources such as water, food, or den sites). Wildlife corridors are generally an area of habitat, usually linear in nature, which connect two or more habitat patches that would otherwise be fragmented or isolated from one another. For projects constructed near the Santa Clara River, potential impacts to wildlife corridors in and around the river would need to be examined. The Santa Clara River is a migration corridor for the federally endangered steelhead, among other species.

In the event that any of the structural management measures considered in the SNMP would hinder animals from moving throughout an area, a pathway around the facility could be constructed. Potential project sites in open space areas that might be used to install structural management measures should be evaluated in consultation with CDFW, USFWS, and/or National Marine Fisheries Service to identify potential wildlife travel routes and to determine if impacts to wildlife corridors, including steelhead, would be affected and could be avoided,

minimized, or mitigated. If a wildlife travel route is identified that could be impacted by the installation of structural management measures, then the project should be designed to avoid impacts or include a new wildlife travel route in the same general location.

Some migratory avian species may use portions of potential project sites, including new vegetation, during breeding season and may be protected under the Migratory Bird Treaty Act (MBTA) while nesting. The MBTA includes provisions for protection of migratory birds under the authority of the USFWS and CDFW. The MBTA protects over 800 species including, geese, ducks, shorebirds, raptors, songbirds, and many other relatively common species. If construction occurs during the avian breeding season for special status species and/or MBTA-covered species, generally February through August, then prior (within 2 weeks) to the onset of construction activities, surveys for nesting migratory avian species should be conducted on the project site following USFWS and/or CDFW guidelines. If no active avian nests are identified on or within the appropriate distance of construction areas, further mitigation may not be necessary. Alternatively, to avoid impacts, the agencies implementing the management measures may begin construction after the previous breeding season for covered avian species and before the next breeding season begins. If a protected avian species was to establish an active nest after construction was initiated, the implementing agency would be required to establish a buffer as required by CDFW/USFWS between the construction activities and the nest site.

If active nest(s) for protected avian species are found within the construction footprint or within the prescribed buffer zone, construction would be required to be delayed within the construction footprint and buffer zone until the young have fledged or appropriate mitigation measures responding to the specific situation are developed in consultation with USFWS or CDFW. These impacts are highly site specific, and assuming they are foreseeable, they would require a project level analysis and mitigation plan.

In addition to mitigation measures BIO-2 through 5, 8 and 9, the following mitigation measures would be required:

ANIMAL-7 If construction is initiated or vegetation removal is proposed between February 1 and August 31, then a qualified biologist shall conduct a pre-construction survey for breeding and nesting birds within 500 feet of the construction area limits to determine and map the location and extent of breeding birds that could be affected by the project. Active nest sites located during the pre-construction surveys shall be avoided and a non-disturbance buffer zone shall be established, consisting of 300 feet for any passerine (or similar) species and 500 feet for any raptor or special-status species, or distances otherwise determined by a qualified biologist. Nest sites shall be avoided with approved non-disturbance buffer zones until the adults and young are no longer reliant on the nest site for survival, as determined by a qualified biologist.

ANIMAL-8 All active bird nest buffer areas shall be clearly demarcated with stakes, flags, or fence material. The installation of buffer areas

shall be verified by a qualified biologist prior to the initiation of ground disturbing activities.

ANIMAL-9 A qualified biologist shall conduct a survey for bat roost sites prior to the initiation of any construction activities in areas where potential roost sites may occur, such as abandoned structures, bridges, or hollow trees. If a bat roost is identified, a minimum 300- foot buffer shall be established by a qualified biologist or as otherwise determined in consultation with the CDFW.

Measures that involve the adoption and implementation of an ordinance or program will have no impact on biological because none of the measures would introduce any physical effects on biological resources.

d) Deterioration to existing fish or wildlife habitat?

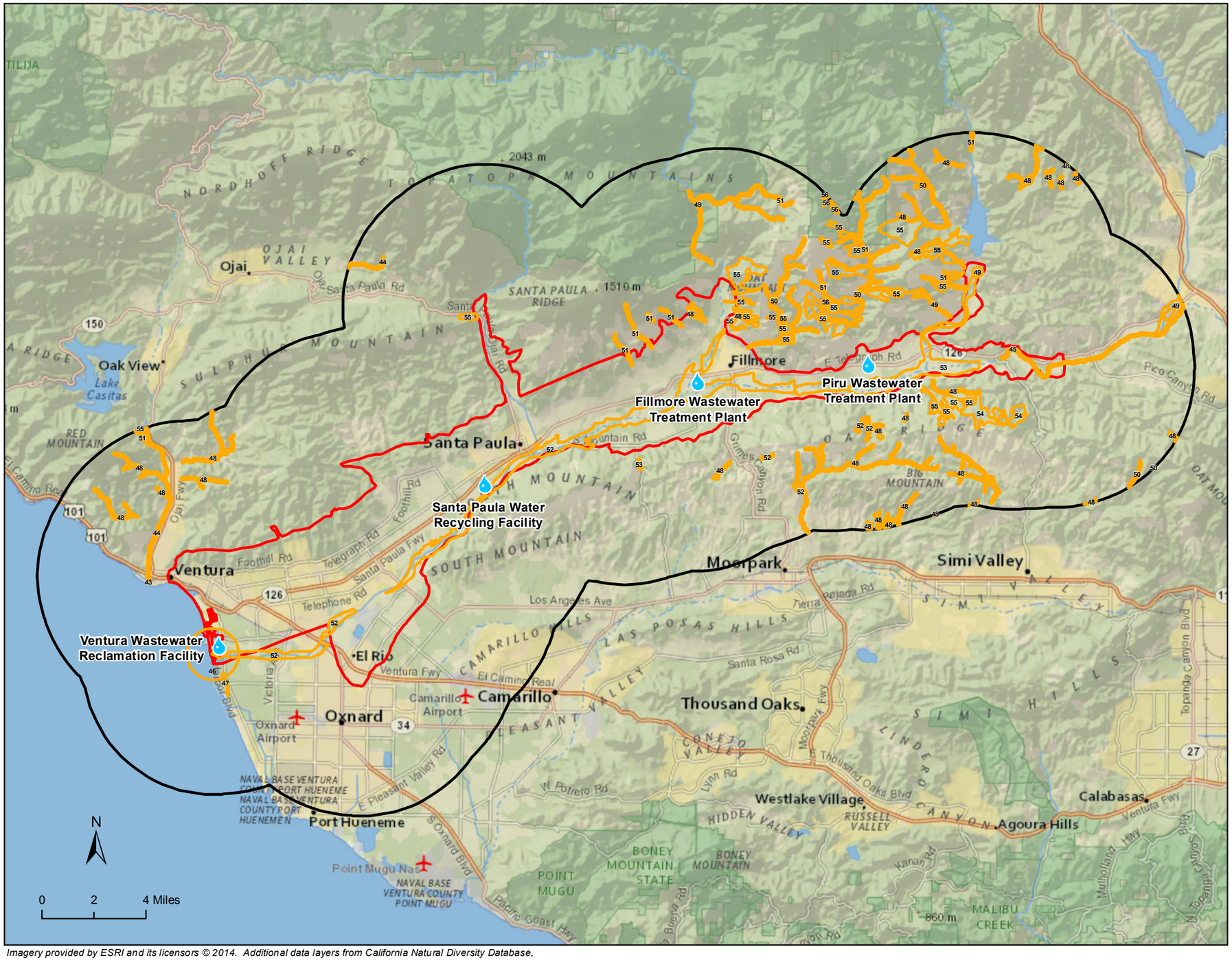
Answer: Less than significant with mitigation incorporated

Because of the programmatic nature of the SNMP, a precise, project-level analysis of the specific impacts associated with structural management measures on sensitive habitats. Figures 6-11a and 6-11b identify natural communities and critical habitat located with the study area and a surrounding 5 mile buffer.

The VWRF is located near the mouth of the Santa Clara River and adjacent to the Santa Clara River Estuary. In addition the SPWRF and FWRP are located adjacent to the Santa Clara River. Upgrades to these facilities or installation of new pipeline to implement recycled water projects would have to potential to affect the Santa Clara River and Santa Clara River Estuary. In addition potential upgrades to wastewater treatment facilities or water treatments facilities, installation of new pipelines, development of new regional facilities (e.g. desalination, regional brine line, regional RO, etc.) have the potential to impact sensitive habitats, including wetlands.

Because the details of the implementation of most measures are not known at this time, including in some cases facility location or size, the exact level of impact cannot be identified. Impacts from individual development projects will need to be addressed on a case-by-case basis during project specific environmental review. Compensatory mitigation would be determined by CDFW, USFWS, and USACE as approved during permit negotiations for specific projects. The following mitigation measure would be required.

ANIMAL-15 Prior to initiation of construction of creek modifications and the by-pass channel, a jurisdictional determination shall be conducted by a qualified biologist. The jurisdictional determination shall clearly delineate the jurisdictional extents for the USACE, RWQCB, CDFW, CCC and the VCWPD. The results shall be summarized in a preliminary jurisdictional determination report which should be submitted to the appropriate agencies for review and approval along with a Wetland Mitigation Plan consistent with the requirements of the agency. Permits should be obtained from each agency where applicable prior to initiation of construction activities.



Wastewater Treatment Facility

Lower Santa Clara River SNMP Study Planning Area

5-Mile Radius

Natural Communities

43 - Southern California Coastal Lagoon
44 - Southern California Steelhead Stream
45 - Southern California Threespine Stickleback Stream
46 - Southern Coastal Salt Marsh
47 - Coastal and Valley Freshwater Marsh
48 - Southern Coast Live Oak Riparian Forest
49 - Southern Cottonwood Willow Riparian Forest
50 - Southern Mixed Riparian Forest
51 - Southern Sycamore Alder Riparian Woodland
52 - Southern Riparian Scrub
53 - Southern Willow Scrub
54 - Valley Oak Woodland
55 - California Walnut Woodland
56 - Walnut Forest

Sensitive Elements
(Natural Communities)
Reported by the
California Natural Diversity Database

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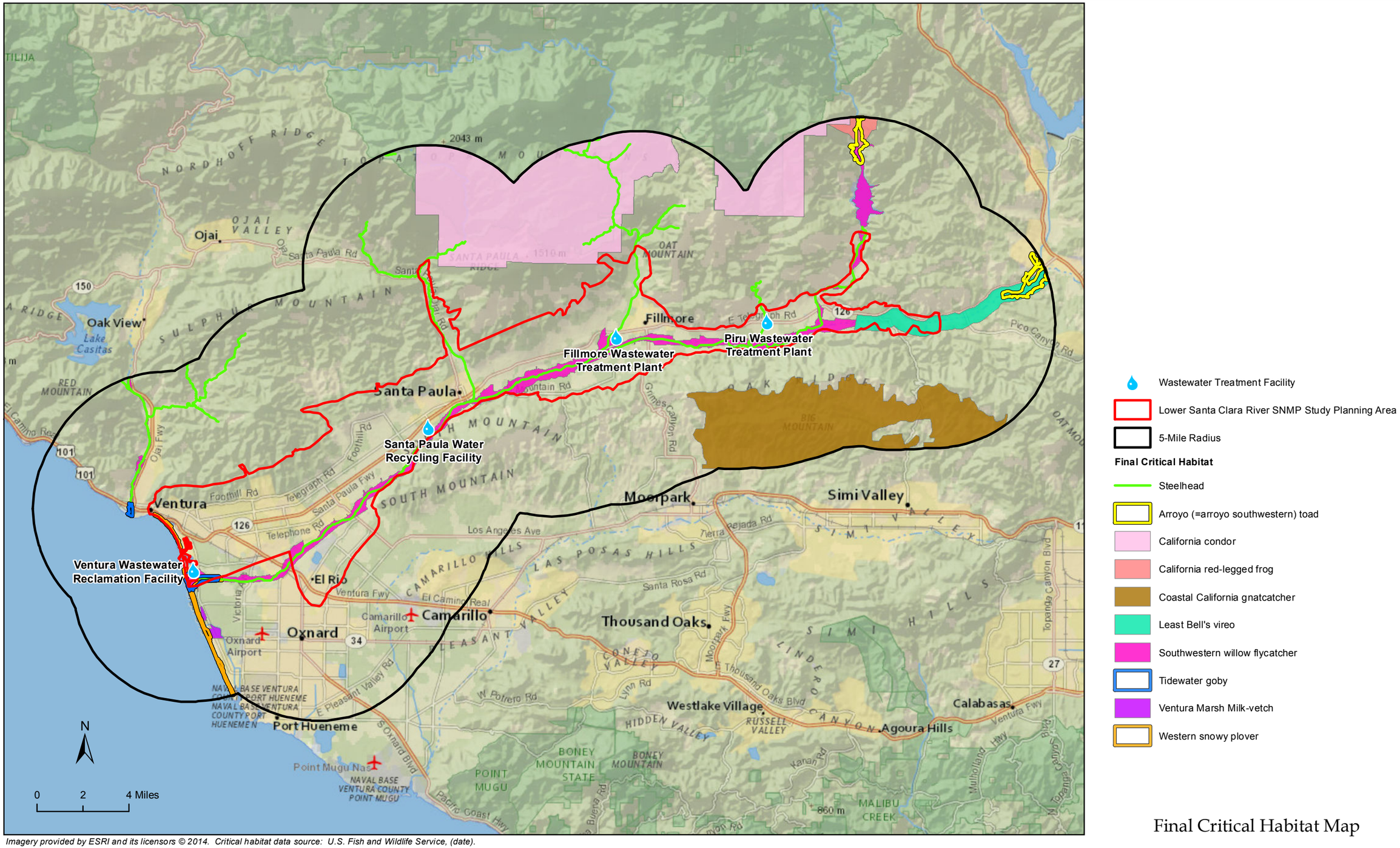
Figure 6-11a



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Final Critical Habitat Map

Figure 6-11b

Measures that involve the adoption and implementation of an ordinance or program will have no impact on biological resources because none of the measures would introduce any physical effects on biological resources.

VI. Noise – Would the project result in:

a) Increases in existing noise levels?
b) Exposure of people to severe noise levels?

Answer: Less than significant with mitigation incorporated

CONSTRUCTION NOISE

Construction of new or upgraded wastewater reclamation/recycling facilities, pipelines, new regional water treatment facilities, or groundwater recharge basins would result in temporary increases in existing noise levels and possible exposure of people to groundborne vibrations, but this would be short term and only exist until construction is completed. Because the details, including the location, of the potential new regional facilities (e.g. desalination plant, regional RO facility, regional softening facility) are unknown, a precise, evaluation of impacts related to construction noise is not possible at this time. Impacts from individual projects will need to be addressed on a case-by-case basis during project specific environmental review. However, the noise and groundborne vibrations associated with the construction of these facilities would be the same as typical construction activities in urbanized areas, such as ordinary road and infrastructure maintenance and building activities. Table 6-2, below, provides typical noise levels generated by construction and installation of industrial equipment.

Table 6-2
Typical Installation Equipment Noise Emission Levels

Equipment	Maximum Noise Level, (dBA) 50 feet from source	Equipment Usage Factor	Total 8-hr Leq exposure (dBA) at various distances	
			50ft	100ft
Foundation Installation			83	77
Concrete Truck	82	0.25	76	70
Front Loader	80	0.3	75	69
Dump Truck	71	0.25	65	59
Generator to vibrate concrete	82	0.15	74	68
Vibratory Hammer	86	0.025	80	74
Equipment Installation			83	77
Forklift	80	0.27	74	69
Large Crane	85	0.5	82	76

Source: Caltrans, 2002

Construction or demolition activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. Operation of construction equipment causes ground vibrations which spread through the ground and diminish in strength with

distance. The general human response to different levels of groundborne vibration velocity levels is described in Table 6-3 below.

Table 6-3
Human Response to Different Levels of Groundborne Vibration

Vibration Velocity Level	Human Reaction
65 VdB	Approximate threshold of perception for many people.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.

Source: Federal Transit Administration, 2006

Table 6-4 lists vibration source levels for construction equipment that could be used for construction of facilities proposed in the management measures.

Table 6-4
Vibration Source Levels for Construction Equipment

Equipment	Approximate VdB at 50 feet
Backhoe	80
Loader	94
Dozer	85
Jack hammer	88
Saw	76
Truck	88

Source: Federal Transit Administration, 2006

Severe noise levels could be mitigated by implementing commonly-used noise abatement procedures, such as sound barriers, mufflers, and limiting construction activities to times when these activities have lower impact, such as periods when there are fewer people near the construction area. Applicable and appropriate mitigation measures could be evaluated when specific projects are determined, depending upon proximity of construction activities to sensitive receptors.

Contractors and equipment manufacturers have been addressing noise problems for many years, and through design improvements, technological advances, and a better understanding of how to minimize exposures to noise, noise effects can be minimized. An operations plan for the specific construction activities could be developed to address the variety of available measures to limit the impacts from noise to adjacent homes and businesses. To minimize noise and vibration impacts at nearby sensitive sites, construction activities should be conducted during daytime hours to the extent feasible. There are a number of measures that can be taken to reduce intrusion without placing unreasonable constraints on the construction process or

substantially increasing costs. These include noise and vibration monitoring to ensure that contractors take all reasonable steps to minimize impacts when near sensitive areas; noise testing and inspections of equipment to ensure that all equipment on the site is in good condition and effectively muffled; and an active community liaison program. A community liaison program should keep residents informed about installation plans so they can plan around noise or vibration impacts; it should also provide a conduit for residents to express any concerns or complaints.

The following measures would minimize noise and vibration disturbances at sensitive areas during installation:

NOISE-1 Use newer equipment with improved noise muffling and ensure that all equipment items have the manufacturers' recommended noise abatement measures, such as mufflers, engine covers, and engine vibration isolators intact and operational. Newer equipment will generally be quieter in operation than older equipment. All installation equipment should be inspected at periodic intervals to ensure proper maintenance and presence of noise control devices (e.g., mufflers and shrouding).

NOISE-2 Perform all construction in a manner to minimize noise and vibration. Use construction methods or equipment that will provide the lowest level of noise and ground vibration impact near residences and consider alternative methods that are also suitable for the soil condition. The contractor should select construction processes and techniques that create the lowest noise levels.

NOISE-3 Perform noise and vibration monitoring to demonstrate compliance with the noise limits. Independent monitoring should be performed to check compliance in particularly sensitive areas. Require contractors to modify and/or reschedule their installation activities if monitoring determines that maximum limits are exceeded at residential land uses.

NOISE-4 Conduct truck loading, unloading and hauling operations so that noise and vibration are kept to a minimum by carefully selecting routes to avoid going through residential neighborhoods to the greatest possible extent. Ingress and egress to and from the staging area should be on collector streets or higher street designations (preferred).

NOISE-5 Turn off idling equipment.

NOISE-6 Temporary noise barriers shall be used and relocated, as practicable, to protect sensitive receptors against excessive noise from construction activities. Partial enclosures around continuously operating equipment or temporary barriers along construction boundaries shall be installed where necessary.

NOISE-7 The construction contractor should be required by contract specification to comply with all local noise and vibration ordinances and obtain all necessary permits and variances.

Increases in ambient noise levels from construction activities are expected to be less than significant once mitigation measures have been properly applied.

Measures that involve the adoption and implementation of an ordinance or program would involve no change to the physical environment either directly or indirectly and would, therefore not have any adverse impacts related to exposure to noise levels.

OPERATIONAL NOISE

Implementation of the management measures in the SNMP may result in increased noise levels during operation of upgraded or new wastewater reclamation/recycling facilities or regional treatment facilities (e.g. desalination, RO, water softening). However, because the details, including the design specifics and/or location, of the upgraded or new facilities are unknown, a precise, evaluation of impacts related to operational noise is not possible at this time. Impacts from individual projects will need to be addressed on a case-by-case basis during project specific environmental review. The specific project impacts can be mitigated by standard noise abatement techniques including siting facilities away from receptors, installing sound barriers and insulation to reduce noise from pumps, motors, fans, etc., designing passive BMPs that do not require frequent maintenance, scheduling of maintenance during mid-day hours, and noise monitoring to ensure levels remain below acceptable levels.

NOISE-8 The implementing agency shall design new facilities such that applicable city or county noise level requirements are met at neighboring property lines. Design features to mitigate noise shall include, but are not limited to, locating stationary noise-generating equipment away from noise-sensitive receptors, including acoustical shielding for equipment, and incorporating the use of parapets into building design.

Measures that involve the adoption and implementation of an ordinance or program would involve no change to the physical environment either directly or indirectly and would, therefore not have any adverse impacts related to exposure to noise levels.

VII. Light and Glare – Would the project:

a) Produce new light or glare?

Answer: Less than significant with mitigation incorporated

Implementation of the management measures that involve upgrades to wastewater treatment facilities or water treatments facilities, installation of new pipelines recycled water projects at existing facilities is not likely to produce new light or glare because none of the reasonably foreseeable alternatives involve additional lighting. Development of new regional facilities (e.g. desalination, regional brine line, regional RO, etc.RO treatment facilities could include new

sources of light or glare. Additionally, should nighttime construction activities be proposed, or should lighting be used to increase safety around treatment facilities, potential impacts should be evaluated at the project level. A lighting plan could be prepared to include shielding on all light fixtures and address limiting light trespass and glare through the use of shielding and directional lighting methods, including but not limited to, fixture location and height. Potential mitigation efforts may also include screening and low-impact lighting, performing construction during daylight hours, or designing security measures for installed infrastructure that does not require night lighting.

LIGHT-1 Lighting used during nighttime construction shall be shielded and pointed away from surrounding light-sensitive land uses.

LIGHT-2 As part of project design the implementing agency shall prepare a lighting plan for the proposed project. All new permanent exterior lighting associated with proposed project components shall be shielded and directed downward to avoid any light spill onto neighboring lands or into nighttime skies.

Measures that involve the adoption and implementation of an ordinance or program will not produce new light or glare because none of the measures would introduce any physical effects, i.e. new sources of light or glare, on the environment.

VIII. Land Use – Would the project result in:

a) Substantial alteration of the present or planned land use of an area?

Answer: Less than significant with mitigation incorporated

Implementation of most of the wastewater reuse management measures would occur at existing facilities and therefore are unlikely to substantially alter the present or planned land use of the area in which they are located.

Implementation of the management measures that would involve development of new facilities such as a desalination plant, RO treatment facilities, regional water softening plant, or groundwater recharge basins could create adverse impacts such as introduction of a new visual element, the generation of new noise sources or conflicts with other adopted local regulations. Because the details, including the location, of the potential new regional facilities are unknown, a precise, evaluation of impacts related to land use is not possible at this time. Impacts from individual projects will need to be addressed on a case-by-case basis during project specific environmental review. Mitigation required to address impacts to noise, visual and biological resource impacts as identified in this SED would be required, where applicable and would address potential impacts related to land use incompatibility and potential alterations to present or planned land uses. In addition the following mitigation measure would be required:

LU-1 Implementing agency shall design and site new facilities to be consistent with locally adopted land use plans and zoning ordinances. Where feasible, facilities shall be sited away from sensitive receptors or on the outskirts of existing communities to

avoid land use conflicts consistent with the policies of the applicable land use plan. Conflicts with applicable habitat conservation plans, including the UWCD MSHCP once adopted and if applicable, shall be examined and addressed, as appropriate, prior to project approval.

Measures that involve the adoption and implementation of an ordinance or program would involve no change to the physical environment either directly or indirectly and would, therefore not have any adverse impacts on local land uses.

IX. Natural Resources – Would the project involve:

a) Increases in the rate of use of any natural resources?
b) Substantial depletion of any nonrenewable natural resource?

Answer: Less than significant impact

It is not reasonably foreseeable that construction activities and operations at new or expanded facilities associated with management measures included in the proposed SNMP would significantly increase the rate of use of any natural resources or cause substantial depletion of any nonrenewable natural resource. Rather, the proposed SNMP would increase the rate of use of a renewable natural resource, namely recycled water, while maintaining beneficial uses. The proposed SNMP would not require substantial amounts of quarrying, mining, dredging, or extraction of locally important mineral resources. Some projects may consume electricity to operate infrastructure, but not at levels that would cause significant adverse impacts. Fuel and energy consumption are discussed in greater detail in Section XV, Energy. Thus, impacts to the rate of use of natural resources would be less than significant.

X. Risk of Upset – Would the project involve:

a) A risk of explosion or the release of hazardous substances (including, but not limited to: oil, pesticides, chemicals or radiation) in the event of an accident or upset conditions?
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Answer: Less than significant with mitigation incorporated

During construction of the structural management measures hazardous materials (e.g. oil and gasoline) would be present due to the use of heavy construction equipment. However, potential risks of exposure can be mitigated with proper handling and storage procedures. Risks of exposure would be short term and would be eliminated with the completion of construction. Compliance with the requirements of CalOSHA and local safety regulations during installation would prevent any worksite accidents or accidents involving the release of hazardous materials into the environment, which could harm the public, nearby residents and sensitive receptors such as schools. During installation the site can be properly protected with fencing and signs to prevent accidental health hazards.

Structural management measures at existing facilities are not expected to create new operational risks from the routine handling or reasonably foreseeable upset of hazardous materials given that there are existing processes and procedures for the handling of any hazardous materials used at the facility. However, operation of new facilities, such as a regional RO treatment facility or desalination plant, could require the use of hazardous materials (e.g. disinfectants and caustics) where these substances are not already present.

Impacts from individual projects will need to be addressed and mitigated on a case-by-case basis during project specific environmental review. Proper maintenance and oversight and the use of safer substitute materials in treatment plants could mitigate any risk of escape of hazardous materials. In addition, projects would be required to comply with any applicable regulations pertaining to use, transport, storage, handling or disposal of hazardous materials. The following mitigation measures would be required.

HAZ-1 Prior to commencement of construction activities requiring the storage of hazardous materials on site, the implementing agency shall require its construction contractor to prepare a Hazardous Materials Management Spill Prevention and Control Plan that includes a project specific Contingency Plan for hazardous materials and waste operations. The Contingency Plan shall be applicable to all construction activities, and shall establish policies and procedures according to Federal and California Occupational Safety and Health Administration (OSHA) regulations for hazardous materials. Elements of the Contingency Plan shall include, but not be limited to the following:

- A discussion of hazardous materials management, including delineation of hazardous material storage areas, access and egress routes, waterways, emergency assembly areas, and temporary hazardous waste storage areas;
- Notification and documentation of procedures; and
- Spill control and countermeasures, including employee spill prevention/response training.

HAZ-2 Prior to commencement of any proposed construction activities requiring excavation, the implementing agency shall require its construction contractor to consult with appropriate regulatory agencies to prepare a Contingency Plan that outlines how to dispose of any contaminated soil or groundwater that may be encountered. If contaminated soil and/or groundwater are encountered or if suspected contamination is encountered during project construction, work shall be halted in the area, and the Contingency Plan shall be implemented

Measures that involve the adoption and implementation of an ordinance or program would involve no change to the physical environment either directly or indirectly and would have no potential to result in the generation, transport, or release of hazardous materials.

XI. Population – Would the project:

a) Alter the location, distribution, density, or growth rate of the human population of an area?

Answer: No impact

There are no measures proposed in the SNMP which would directly increase population through the creation of new housing or a substantial number of new permanent sources of employment. Jobs created during construction activities are anticipated to be local hires within the existing marketplace. In addition, the management measures are intended to manage salt and nutrient concentrations in areas where recycled water facilities are proposed and would not be anticipated to indirectly induce population growth through extension of infrastructure. Therefore, implementation of the management measures in the SNMP would have no impact on population growth, location, distribution or density.

XII. Housing – Would the project:

a) Affect existing housing, or create a demand for additional housing?

Answer: No impact

Most of the wastewater reuse management measures would occur at existing facilities and would not displace people or housing. In addition, it is not anticipated that the remaining structural management measures, such as development of a desalination plant, RO treatment facilities, regional water softening plant or groundwater recharge basin, would displace substantial numbers of existing housing or people. As noted in Section XI, Population, the proposed SNMP would not directly or indirectly induce population growth; therefore, it would not create demand for additional housing. No impact would occur.

Measures that involve the adoption and implementation of an ordinance or program would involve no change to the physical environment either directly or indirectly and would, therefore not have the potential to affect existing housing or required new housing be provided.

XIII. Transportation/Circulation – Would the project result in:

a) Generation of substantial additional vehicular movement?
c) Substantial impact on existing transportation systems?

Answer: Less than significant with mitigation incorporated

Implementation of management measures which would require upgrades to existing facilities or installation of pipelines would not generate substantial increases in trip volumes during the operational phase. There may be additional trip volumes added to the roadway network during construction/installation of upgrades and pipeline and during maintenance activities. However, vehicular movement during construction would be temporary, and vehicular movement during maintenance activities would be periodic and only as the vehicle passes through the area.

In order to reduce the impact of construction traffic, a construction traffic management plan should be prepared for traffic control during any street closure, detour, or other disruption to traffic circulation (see mitigation measure TRANS 1). The plan would identify the routes that construction vehicles would use to access the site, hours of construction traffic, and traffic controls and detours. The plan would also include plans for temporary traffic control, temporary signage and stripping, location points for ingress and egress of construction vehicles, staging areas, and timing of construction activity which appropriately limits hours during which large construction equipment may be brought on or off site.

Other management measures which would require the development of new regional facilities (e.g. desalination, regional RO, regional softening, etc.) would also have the same impacts to traffic from construction activities but could also result in long-term traffic impacts associated with operation of the facilities. New facilities would require employees to operate the facility that could generate additional traffic. Depending on the location of these facilities and the size and capacity of the roadway network in the area impacts to the circulation system could occur. However, because the details, including the size and location, of the potential new facilities are unknown, a precise, evaluation is not possible at this time. Impacts from individual projects will need to be addressed on a case-by-case basis during project specific environmental review. Mitigation could include a traffic management plan, installation of new traffic light, implementation of transportation demand management measures, or traffic impact fees.

TRANS-1: A Traffic Control/Management Plan, subject to approval by appropriate local jurisdictions, shall be prepared and implemented by the construction contractor prior to commencement of any construction activities. The Traffic Control/Management Plan shall include the following as applicable.

- Identify hours of construction activities and for associated deliveries.
- Identify roadway segment or lane closures and coordinate appropriate detours.
- Include a discussion of haul routes, limits on the length of open trench where applicable, work area delineation, traffic control and flagging.
- Identify all access and parking restrictions, pavement markings and signage requirements (e.g., speed limit, temporary loading zones, etc.).
- Maintain access to residence and business driveways at all times to the extent feasible; minimize access disruptions to businesses and residences.
- Develop a plan for notifications and a process for communication with affected residents and businesses prior to the start of construction. Advance public notification may include posting of notices and appropriate signage of construction activities. Notification may include the construction schedule, the exact location and duration of activities within each street (i.e., which lanes and access

points/driveways would be blocked on which days and for how long), and a toll-free telephone number for receiving questions or complaints.

- Include a plan to coordinate with emergency service providers in the area at least one month in advance of construction. Emergency service providers shall be notified of the timing, location, and duration of construction activities. All roads shall remain passable to emergency service vehicles at all times.
- Include a plan to coordinate all construction activities with school districts when construction zones would be located within ¼-mile of an occupied school facility. School districts shall be notified of the timing, location, and duration of construction activities. The implementing agencies shall require its construction contractor to maintain vehicle, pedestrian, and school bus service during construction through inclusion of such provisions in the construction contract. The assignment of temporary crossing guards at designated intersections may be needed to enhance pedestrian safety during project construction. Additional provisions of this plan may include:
    - The requirement that all open trenches be covered with metal plates at the end of each workday to accommodate traffic and access; and
    - Street restoration requirements pursuant to agreements with local jurisdictions.

TRANS-2 The implementing agency of the project shall identify all roadway locations where special construction techniques (e.g., horizontal boring, directional drilling or night construction) could be used to minimize impacts to traffic flow, and implement such techniques when feasible.

TRANS-3 The implementing agency of the project shall develop traffic management and detour plans to minimize impacts to local street circulation, including bikeways. This may include the use of signing and flagging to guide vehicles and cyclists through and/or around the construction zone.

TRANS-4 The implementing agency of the project shall encourage construction crews to park at staging areas to limit lane closures in the public ROW.

TRANS-5 **P**eak travel periods shall be avoided where possible when implementing partial road closures.

TRANS-6 The implementing agency of the project shall consult with nearby school districts at least one month prior to construction to coordinate bus stop relocations (if necessary), alternative busing routes, alternative safe routes to school programs, and other traffic

circulation provisions to reduce potential interruption of student transit services.

TRANS-7 The implementing agency of the project shall consult with Caltrans to obtain permits for the transport of oversized loads, and to obtain encroachment permits for any work along roadways.

Measures that involve the adoption and implementation of an ordinance or program would involve no change to the physical environment either directly or indirectly and would, therefore not have the potential to generate traffic that would conflict with adopted plans, policies or standards.

b) Effects on existing parking facilities, or demand for new parking?

Answer: Less than significant impact

Construction of projects associated with the management measures in the proposed SNMP may require staging areas to accommodate demand for parking of equipment, materials, and worker vehicles. However, these parking facilities would be temporary and would cease upon construction completion.

Operations at new and existing facilities would have a less than significant impact on demand for existing and new parking facilities. Operations at new facilities may result in employees requiring parking, but such demand would be anticipated and any additional parking would be included in project designs where needed. Overall, there would be no significant effects on existing parking and any demand for new parking would be accommodated. Thus, impacts to existing parking facilities and demand for new parking would be less than significant.

d) Alteration to present patterns of circulation or movement of people and/or goods?

Answer: Less than significant with mitigation incorporated

A temporary increase in traffic hazards may occur during construction activities due increased vehicular traffic and possible lane closures, affecting present patterns of circulation. The specific project impacts can be addressed through use of appropriate mitigation methods during construction. To the extent that site-specific projects entail excavation in roadways, such excavations should be marked, barricaded, and traffic flow controlled with signals or traffic control personnel in compliance with authorized local police or California Highway Patrol requirements. These methods would be selected and implemented by responsible local agencies considering project level concerns. Standard safety measures should be employed including fencing, other physical safety structures, signage, and other physical impediments designed to promote safety and minimize pedestrian/bicyclists accidents (see mitigation measures TRANS 1 through 7).
Measures that involve the adoption and implementation of an ordinance or program would involve no change to the physical environment either directly or indirectly and would, therefore not have the potential to increase traffic related hazards.

e) Alterations to waterborne, rail or air traffic?

Answer: No impact

Implementation of the management measures which would involve upgrades to existing facilities, or installation of new pipeline would not involve project components that could generate substantial amounts of air, waterborne or rail traffic. In addition, given the nature of the regional facilities that could be constructed as a result of the management measures, it is not anticipated that they would increase air, waterborne or rail traffic levels.

Measures that involve the adoption and implementation of an ordinance or program would involve no change to the physical environment either directly or indirectly and would, therefore not have the potential to alter air, rail or waterborne traffic.

f) Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?

Answer: Less than significant with mitigation incorporated

Implementation of the management measures in the SNMP could require temporary alterations to existing transportation systems during construction activities. The potential impacts would be limited and short-term. Potential impacts could be reduced by limiting or restricting hours of construction so as to avoid peak traffic times and by providing temporary traffic signals and flagging to facilitate traffic movement including bicyclists and pedestrians (see Mitigation Measures TRANS 8 and TRANS 9). Construction activities are not expected to impact public transit such as buses and rail; however, coordination is recommended.

TRANS 8 The implementing agency of the project shall require the construction contractor to consult with local jurisdictions if bicycle or pedestrian facilities would be directly affected by construction activities. If required, the construction contractor shall develop circulation and detour plans to minimize impacts to bikeways and pedestrian facilities. This may include the use of signing and flagging to guide vehicles, cyclists, and pedestrians through and/or around the construction zone. After construction is complete, implementing agencies shall ensure that bicycle or pedestrian facilities are restored to pre-construction conditions.

TRANS 9 The implementing agency of the project shall require the construction contractor to consult and coordinate with VCTC or other local transit agencies at least one month.

Measures that involve the adoption and implementation of an ordinance or program would involve no change to the physical environment either directly or indirectly and would, therefore not have the potential impact alternative forms of transportation.

XIV. Public Services – Would the project have an effect upon, or result in a need for new or altered governmental services in any of the following areas:

a) Fire protection?

Answer: Less than significant impact

During construction and installation of new or expanded treatment facilities, pipelines, groundwater recharge basins or other infrastructure to support the structural management measures, temporary delays in response time of fire vehicles due to road closure/traffic congestion during construction activities may occur. However, any construction activities would be subject to applicable building and safety and fire prevention regulations and codes. The County of Ventura and the cities of Fillmore, Oxnard, Santa Paula and Ventura have established emergency response/emergency preparedness programs and procedures which include procedures to ensure safe passage of emergency vehicles during periods of road maintenance, construction, or other attention to physical infrastructure. These emergency programs or procedures are usually operated through a combination of the jurisdictions fire department, police department or office of emergency services. Impacts would be less than significant.

Measures that involve the adoption and implementation of an ordinance or program would involve no change to the physical environment either directly or indirectly and would, therefore not have the potential for new or altered fire protection services.

b) Police protection?

Answer: Less than significant impact

There is potential for temporary delays in response times of police vehicles due to road closure/traffic congestion during construction of new or upgraded treatment facilities, pipelines, groundwater recharge facilities or other infrastructure to support the structural management measures. As discussed in sub-section "a.i", above, the County of Ventura and the cities of Fillmore, Oxnard, Santa Paula and Ventura have established procedures to ensure safe passage of emergency vehicles during periods of road maintenance, construction, or other attention to physical infrastructure, and there is no evidence to suggest that construction activities associated with these management measures would create any more significant impediments than other such typical activities. Any construction activity would be subject to applicable building and safety codes and permits. Therefore, the potential delays in response times for police vehicles after mitigation are less than significant.

Measures that involve the adoption and implementation of an ordinance or program would involve no change to the physical environment either directly or indirectly and would, therefore not have the potential for new or altered police protection services.

c) Schools?
d) Parks?

Answer: No impact

The management measures proposed in the SNMP will not have an effect upon, or result in a need for new or altered schools or parks or school services because none of the measures would result in an increase in population or introduce any physical effects that could impact these public services categories.

e) Maintenance of other public facilities, including roads?
f) Other governmental services?

Answer: Potentially significant with mitigation incorporated

The new or expanded public facilities listed as management measures in the SNMP, such as a new RO, could potentially cause significant environmental impacts as discussed throughout this document. In all cases mitigation measures have been identified to address the potentially significant impacts identified.

XV. Energy

a) Would the project use substantial amounts of fuel or energy?
b) Substantial increase in demand upon existing sources of energy, or require the development of new sources of energy?

Answer: Less than significant with mitigation incorporated

Construction of upgrades to or new water treatment or conveyance facilities would require energy and fuel for heavy equipment, machinery, and vehicles. Energy demands during construction are temporary. Responsible parties can further mitigate fuel and energy consumption during construction through the use of more energy efficient vehicles and equipment.

Operation of a wastewater reclamation/recycling facility would require an increase in energy consumption. Because the PWTP, FWRP, SPWRF, and VWRF are existing facilities, current energy demands at these facilities are considered part of the baseline. Implementation of the management measures could require upgrades to PWTP, FWRP, SPWRF, and VWRF which could result in additional energy demands at these facilities. Operation of regional treatment facilities (e.g. desalination, RO, water softening) could also result in a substantial increase in energy demand to power these facilities. Furthermore, additional energy demands could be required to pipe and/or pump new recycled water sources to and from these facilities.

Because the details regarding the size and specifications of individual projects have not been identified, energy demands have not been quantified. Impacts from individual development projects will need to be addressed on a case-by-case basis during project specific environmental review. Mitigation could include use of energy efficient equipment and use of alternative energy equipment to reduce use of fossil fuels.

ENERGY-1 Design of management measures under the SNMP (including but not limited to upgrades to the PWTP, FWRP, SPWRF, and VWRF and regional treatment facilities) shall incorporate to the greatest

extent feasible the most energy efficient equipment available at the time. In addition, use of non-carbon based fuels shall be considered and utilized, where feasible.

Measures that involve the adoption and implementation of an ordinance or program would have no impact on air quality because none of the measures would introduce any physical effects on the environment.

XVI. Utilities and Service Systems – Would the project have an effect upon, or result in a need for new or altered governmental services in any of the following areas:

a) Power or natural gas

Answer: Less than significant with mitigation incorporated

Construction activities associated with management measures included the proposed SNMP would require connections to existing power sources, which would slightly increase short-term electricity demand. Most of the construction activities would involve excavation, grading, and drilling, which would be serviced by diesel fuels, not electricity. Construction activities would not result in a substantial increase in energy consumption or wasteful energy consumption or the need for new energy infrastructure at individual sites.

See also Section XV, Energy, for the potential for additional electricity or natural gas sources to be required to serve future facilities during operation. Mitigation measure ENERGY-1 would be required to address impacts.

b) Communication Systems

Answer: Less than significant impact

New systems or alterations to communications systems would likely not be necessary for the management measures including the proposed SNMP. Construction and maintenance crews would employ various existing communication systems such as telephones, cell phones, and radios. These types of communication devices and systems are used daily by construction and maintenance personnel as part of regular business activities.

Construction activities could require temporary disconnecting and reconnecting or relocating existing underground cables for communication. The relocations would be short-term and temporary. Any necessary relocation of utility lines would be coordinated with the local parties or service districts responsible for managing the affected utilities prior to project construction. Thus, impacts to communication systems would be less than significant.

c) Water?
d) Sewer?

Answer: Less than significant impact

The purpose of the SNMP is to manage salts and nutrients in the LSCR in a manner that ensures attainment of water quality objectives and protection of beneficial uses even with an increase in the production of recycled water. The measures proposed in the SNMP provide programmatic management of salt and nutrient loading from wastewater reclamation facilities, recycled water facilities, and other projects which result in the discharge of salts or nutrients. Therefore, while the measures in the SNMP include projects that could generate additional wastewater effluent, implementation of the proposed SNMP would ensure that effluent does not exceed the water quality objective requirements of the Basin Plan.

In addition, the SNMP is being prepared in response to the State's Recycled Water Policy which has set a goal to increase the use of recycled water over 2002 levels by at least one million acre-feet per year (AFY) by 2020 and at least two million AFY by 2030 in accordance with state and federal water quality laws. Implementation of the measures in the SNMP would result in the addition and/or expansion of wastewater reclamation facilities and recycled water facilities in the LSCR groundwater basin. Recycled water projects included in the management measures would involve upgrades to existing facilities and installation of new pipeline for conveyance of recycled water. However, these upgrades do not constitute an expansion of use. The SNMP, including the proposed management measures, in and of itself, would not generate the need for additional wastewater treatment facilities or water facilities.

Measures that involve the adoption and implementation of an ordinance or program would involve no change to the physical environment either directly or indirectly and would, therefore not have the potential to result in the need for new or substantially altered water or wastewater facilities.

e) Storm water drainage?

Answer: Less than significant

In some cases, management measures would be used to capture stormwater flows for use in recharging groundwater and would alleviate pressures on the existing stormwater drainage system. However, implementation of the management measures could increase the amount of impervious surfaces in the region due to the increase in pavement at new facilities. Given that the location of many of these facilities is not known at this time, the capacity and extent of the stormwater drainage system in the vicinity of these projects cannot be determined. Where no stormwater drainage infrastructure currently exists, the environmental impact of installing stormwater drainage infrastructure would be examined and mitigated at the project level. Use of Low Impact Development techniques would address the potential for stormwater flows to exceed the capacity of existing stormwater facilities or provide an alternate means of discharging stormwater flows without construction of a new stormwater drainage system. In addition, each project would be required to comply with the Ventura County MS4 Permit, which requires that no net increase in runoff would occur. Compliance with the existing regulatory framework would reduce impacts to less than significant.

Measures that involve the adoption and implementation of an ordinance or program would involve no change to the physical environment either directly or indirectly and would, therefore not have the potential create the need for new storm water drainage facilities.

f) Solid waste and disposal?

Answer: Less than significant impact

The construction of structural management measures would generate construction debris. For smaller construction projects, such as installation of pipelines, construction of recharge basins or upgrade of existing facilities, no new solid waste or disposal systems would be needed to handle the relatively small volume generated by these projects. Construction debris may be recycled at aggregate recycling centers or disposed of at landfills. Sediment and solid wastes collected can be disposed of at appropriate landfill and/or disposal facilities.

Construction of larger facilities such as regional RO treatment, desalination, or regional water softening, could generate a large amount of construction waste. However, because the details, including the size, location and timing, of the potential new facilities are unknown, a precise, evaluation of from the amount of construction waste that would be generated is not possible at this time. Volumes generated by individual projects will need to be addressed on a case-by-case basis during project specific environmental review and compared against landfill capacities available in the region at the time construction would occur. The California Green Building Code (California Code of Regulation, Title 24, Part II) requires all new construction project to file and implement a Construction and Demolition Waste Management Plan (WMP). The WMP must:

1. Identify the materials to be diverted from disposal by efficient usage, recycling, reuse on the project or salvage for future use or sale.
2. Determine if materials will be sorted on-site or mixed.
3. Identify diversion facilities where material collected will be taken.
4. Specify that the amount of materials diverted shall be calculated by weight or volume, but not by both.

Implementation of a WMP as well as compliance with any local requirements in the jurisdiction in which the projects are being implemented should reduce any potentially significant impacts from individual projects to a less than significant level.

Operation of these facilities would generate waste that would require disposal. Treatment processes at the various facility types have the potential to produce nonhazardous and hazardous solid waste. The amounts of these materials produced would be small and would not be anticipated to exceed the capacity of existing waste disposal and recycling facilities.

Measures that involve the adoption and implementation of an ordinance or program would involve no change to the physical environment either directly or indirectly and would, therefore not have the potential generate solid waste.

XVII. Human Health – Would the project result in:

a) Creation of any health hazard or potential health hazard (excluding mental health)?
b) Exposure of people to potential health hazards?

Answer: Less than significant with mitigation incorporated

As stated previously, construction activities and operations at new and expanded facilities associated with the management measures included in the proposed SNMP could create human health hazards through chemical exposure or accidents involving the release of hazardous materials. The potential exists for accidents to occur during construction activities and through routine operation and maintenance activities.

Construction of proposed projects could result in the exposure of construction workers and nearby residents to potentially contaminated soils or groundwater due to improper use, storage, or disposal of hazardous materials and/or leakage from underground storage tanks or other chemical containers on site. Implementation of Mitigation Measures HAZ-1 and HAZ-2 would reduce these potentially hazardous impacts from construction activities to a less than significant level.

The use of recycled water in the State is regulated under California Code of Regulations, Title 22, Division 4, Chapter 3 Water Recycling Criteria. These requirements were established to protect human health and the environment. Currently in the LSCR, recycled water is used primarily for urban landscape irrigation and agricultural irrigation. Groundwater recharge using recycled water has been and is being performed in many parts of the California and has been proven to be a safe and reliable resource while ensuring the protection of the water supply for humans and the environment. Hence, the proposed management measures that will increase the use of recycled water for irrigation and groundwater recharge are expected to have a less than significant impact to human health.

Some proposed management measures would be considered indirect potable reuse because they are groundwater recharge projects that will replace other sources of water supply imported water with recycled water. These groundwater recharge projects would be required to comply with State recycled water regulations, specifically California Code of Regulations, Title 22, Sections 60301, 60320, and 60323. These regulations not only set limits for recycled water quality and quantity used for recharge, but also establish recycled water and groundwater monitoring requirements and require a minimum retention time for recycled water to remain underground to further protect human health. Public health requirements are established by the SWRCB Division of Drinking Water (formerly the California Department of Public Health) and included in the groundwater recharge permits issued for specific projects by the Regional Water Quality Control Boards.

XVIII. Aesthetics – Would the project result in:

a) The obstruction of any scenic visits or view open to the public?
b) The creation of an aesthetically offensive site open to public view

Answer: Less than significant with mitigation incorporated

Implementation of the management measures could require the installation of new pipelines, upgrades to existing wastewater or water treatment facilities, development of new regional facilities (e.g. desalination, regional brine line, regional RO, etc.), and new groundwater recharge basins. These activities could potentially result in a temporary impairment of a scenic vista or view open to the public and create an aesthetically offensive site open to the public

view depending on where these projects are sited. Project construction would require site grading, construction materials, stockpiling and storage, and the use of construction equipment. This construction impact would be localized and short-term, lasting during the normal working hours at specific locations. Specifically, the Ventura Water Reclamation Facility (VWRF) is located adjacent to the Ventura Harbor and along Harbor Boulevard which is designated in the General Plan FEIR as a scenic corridor. Construction to upgrade the Ventura Water Reclamation Facility or install conveyance infrastructure could have temporary adverse impacts on this scenic corridor.

For the new regional treatment facilities and the groundwater recharge basins, the location and design are unknown and a project specific analysis is not possible at this time. However, these facilities would have the potential to affect a scenic vista or scenic resources and degrade the existing visual character over the long-term depending on their location. Overall impacts would be addressed on a case-by-case basis during project-specific environmental review.

The following mitigation measures would be required:

AES-1 Proposed aboveground buildings/structures shall be designed to be consistent with the aesthetic qualities of existing structures in the vicinity to minimize contrasting features.

AES-2 During project design, the implementing agency shall require preparation of a landscape plan for aboveground facilities that restores disturbed areas and minimizes effects to scenic vistas.

AES-3 Construction best management practices (BMPs) like screening and landscaping can help mitigate aesthetic impacts. Construction materials and equipment shall be removed from the site as soon as they are no longer necessary. After construction, the scenic vista or view would return to the condition it was prior to the construction.

Measures that involve the adoption and implementation of an ordinance or program will not result in the obstruction of any scenic vista or view open to the public because none of the measures would introduce any physical effects that could impact this characteristic.

XIX. Recreation – Would the project result in:

a) Impact upon the quality or quantity of existing recreational opportunities?

Answer: No impact

As discussed previously in Section XI, Population, there are no management measures proposed in the SNMP which would directly or indirectly increase population through the creation of new housing or jobs. Therefore, the proposed measures in the SNMP would not increase the use of existing neighborhood or regional parks. The SNMP management measures do not include creation additional of recreational facilities.

XX. Archaeological/Historical – Would the project:

a) Result in the alteration of a significant archaeological or historical site structure, object or building?

Answer: Less than significant with mitigation incorporated

Implementation of the structural management measures could disturb unknown cultural or historical resources. Upgrades to existing wastewater treatment facilities and recycled water facilities would likely occur where ground disturbance has previously occurred. Depending on the depth of disturbance, it is unlikely that implementation of structural devices would cause a substantial adverse change to historical or archeological resources, destroy paleontological resources, or disturb human remains because these areas are already disturbed.

However, installation of new pipeline to convey wastewater or recycled water, development of new regional facilities (e.g. desalination, regional brine line, regional RO, etc.), could impact cultural resources if they are sited in previously undisturbed locations containing these resources as there is a greater potential for the presence of unknown cultural resources in areas previously undisturbed.

The site-specific presence or absence of these resources is unknown at this time because the specific locations for facilities would be determined by implementing agencies at the project level. Installation of these systems could result in minor ground disturbances, which could encounter cultural resources if they are sited in locations containing these resources and where disturbances have not previously occurred. Impacts from individual projects will need to be addressed on a case-by-case basis during project specific environmental review. As described in the mitigation measures below, mitigation could include preparation of a map to define the Area of Potential Effects, a study of that area to determine if it has been studied under an earlier investigation, complete additional studies as needed, use of a Native American monitor, certified archaeologist, and/or certified paleontologist, as applicable, and use of alternative placement of facilities or pipeline alignments. In the event that prehistoric or historic cultural resources are discovered in project area during construction, all work shall be halted in the vicinity of the archaeological discovery until a qualified archaeologist can visit the site of discovery and assess the significance of the archaeological discovery.

CUL-1 The implementing agency shall retain a qualified archaeologist, defined as an archaeologist meeting the Secretary of the Interior's Standards for professional qualifications in archaeology, to conduct a study of the potentially impacted area(s) for all individual projects that involve ground disturbance. The archaeologist shall conduct a cultural resources inventory designed to identify potentially significant resources. This inventory would be developed based on a cultural resources records search conducted at the South Central Coastal Information Center located at California State University Fullerton and a field survey of the area deemed appropriate by the archaeologist. The archaeologist shall also provide

recommendations for additional work for those resources that may be affected by a proposed project.

CUL-2 For project components that include or affect existing structures that are 50 years old or greater, the implementing agency shall retain a qualified architectural historian, defined as meeting the Secretary of the Interior's Standards for historic preservation, to determine the need for a project-specific historic architectural study. If warranted, the architectural historian shall identify and evaluate potentially affected historic resources (eligible for the National Register, California Register, or local designation) prior to project implementation.

CUL-3 The implementing agency shall avoid impacts, if feasible, to identified cultural resources that are eligible for listing in the National Register, California Register, or local designation, or that qualify as a unique archaeological resource under CEQA, including prehistoric and historic archaeological sites, locations of importance to Native Americans, human remains, and historical buildings, structures and landscapes. Methods of avoidance may include, but should not be limited to, project re-route or re-design, project cancellation, or identification of protection measures such as capping or fencing. If avoidance is determined not to be feasible, then a qualified archaeologist shall develop and implement a cultural resources treatment plan. This treatment plan shall include provisions for analysis of data in a regional context, curation of artifacts and data at an approved facility, and dissemination of reports to Local and State repositories, libraries, and interested professionals.

CUL-4 The implementing agency shall retain archaeological monitors (and Native American monitors, where deemed appropriate) to assess project-related ground-disturbing activities that have the potential to impact significant archaeological resources as determined by a qualified archaeologist. If appropriate, a qualified archaeologist shall develop a Cultural Resources Monitoring and Mitigation Plan (CRMMP). The CRMMP shall specify the location, duration and timing of monitoring and establish emergency procedures applicable upon the potential discovery of unanticipated significant archaeological resources. The CRMMP shall include, at a minimum, procedures for: the re-direction of ground disturbing activities in the event of a discovery of unanticipated significant archaeological resources; the evaluation and protection of archaeological resources encountered; notification protocols; treatment options in the event avoidance is determined to be infeasible; and reporting.

CUL-5 For all individual projects that involve ground disturbance, construction workers will receive paleontological awareness training prior to commencement of fieldwork. This training shall

emphasize applicable State, Federal, and Local laws, and include information on what to do in case an unanticipated discovery is made by a field worker. All construction personnel shall be informed of the possibility of encountering fossils, and instructed to immediately inform the field supervisor if any bones or other potential fossils are unearthed in the project area and a paleontological monitor is not present (for example, if a sensitive formation is encountered subsurface that is not mapped at the surface, thus not necessitating the presence of a paleontological monitor for this work). In such a case, workers shall immediately cease all activity within a 20-foot radius of the discovery site and notify the Construction Manager.

CUL-6 For all individual projects that involve ground disturbance, if human remains are discovered, work in the immediate vicinity of the discovery site shall promptly be suspended and the Ventura County Coroner shall be contacted. If the remains are deemed Native American in origin, the Coroner shall contact the Native American Heritage Commission (NAHC) and identify a Most Likely Descendant (MLD) pursuant to Section 5097.98 of the Public Resources Code and CEQA Guidelines (CCR, Title 14, Section 15064.5). Work may commence only after consultation and treatment have been completed. Work may continue on other parts of the project while consultation and treatment are conducted.

Measures that involve the adoption and implementation of an ordinance or program will have no impact on cultural resources because none of the measures would introduce any physical effects on cultural resources.

XXI. Mandatory Findings of Significance

a) 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?

Answer: Less than significant with mitigation incorporated

Without implementation of recommended mitigation measures, the management measures included in the SNMP could have adverse impacts on biological and cultural resources. The significance of these impacts is discussed in Section IV, Plant Life, Section V, Animal Life, and Section XX, Archaeological/Historical Resources. With the mitigation identified in Sections IV, V and XX, the project will not cause substantial adverse effects on biological and cultural resources.

b) 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 which occurs in a relatively brief, definitive period of time, while long-term impacts will endure well into the future.)

Answer: Less than significant impact

The objective of the proposed SNMP is to manage S/Ns in a sustainable manner that assists attainment of water quality objectives and preservation of beneficial uses over the long-term SNMP planning horizon. Thus, the proposed SNMP does not achieve short-term goals to the disadvantage of long-term goals.

c) Does the project have impacts that are individually limited, but cumulatively considerable?

Answer: Less than significant with mitigation incorporated

Taken together, the potential impacts of plan implementation will not cause a significant degradation to the environment. The implementation of the SNMP will result in management of salt and nutrient loading and provision of additional recycled water within the LSCR groundwater basin, resulting in beneficial impacts to the environment over the long term. In addition, SNMP will require many individual projects be implemented to address salt and nutrient loading. These individual projects may contribute to program-level, and project-level cumulative effects upon the region; however, mitigation measures are available for most of these impacts. Following implementation of mitigation, the contribution of these projects to cumulative impacts in the region would not be cumulatively considerable.

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

Answer: Less than significant with mitigation incorporated

Without implementation of recommended mitigation measures, potentially significant environmental impacts, such as impacts to air, hazards, noise, and transportation, could result from implementation projects. The significance of these impacts is discussed above, as well as elsewhere in this document. The project will not cause substantial adverse effects on human beings.

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7.0 OTHER ENVIRONMENTAL CONSIDERATIONS

This section evaluates several other environmental considerations of reasonably foreseeable methods of complying with the SNMP, specifically:

- 7.1. Cumulative Impacts of the Program Alternatives (as required by CEQA Guidelines Section 15130);
- 7.2. Potential Growth-Inducing Effects of the Program Alternatives (as required by CEQA Guidelines Section 15126); and
- 7.3. Unavoidable Significant Impacts (as required by CEQA Guidelines Section 15126.2).

7.1 CUMULATIVE IMPACTS

Cumulative impacts, defined in Section 15355 of the CEQA Guidelines, refer to two or more individual effects, that when considered together, are considerable or that increase other environmental impacts. Cumulative impact assessment must consider not only the impacts of the proposed SNMP, but also the impacts from other municipal and private projects, which would occur in the LSCR groundwater basin during the period of implementation.

Cumulative impacts analyzed in this section include: (1) the program-level cumulative impacts and (2) the project-level cumulative impacts. On the program-level, the impacts from existing management measures and the proposed management measures are analyzed. On the project-level, while the full environmental analysis of individual projects are the purview of the implementing municipalities or agencies, the cumulative impact analysis included here evaluates construction activities occurring in the vicinity of one another as a result of other projects being built in the same general time frame and location.

7.1.1 Program Cumulative Impacts

Currently there are numerous Existing Management Measures being implemented throughout the LSCR groundwater basin as described in Table 3-5 in Section 3.0, *Program Overview and Benefits*. None of the Existing Management Measures are expected to interfere with any of the Potential Management Measures included in the SNMP. In fact, the Existing and Potential Management Measures should all collectively contribute to more effectively managing salt and nutrient loading in the LSCR groundwater basins.

7.1.2 Project Cumulative Impacts

Specific SNMP management measures must be environmentally evaluated and cumulative impacts considered as the implementing municipality or agency designs and sites the project. However, as examples, SNMP management measures and other construction activities may result in cumulative effects in the following areas:

- Aesthetics - Construction activities associated with other related projects may be ongoing in the vicinity of one or more construction sites. To the extent that combined construction activities do occur, there would be temporary adverse visual effects.

Development of new facilities could alter the visual character of the surrounding area. This impact could be cumulatively significant if sited adjacent to other development projects or in areas with recent growth. The project contribution to this significant effect, could be determined to be cumulatively considerable even though the individual project effect is expected to be less than significant.

- Air Quality - Implementation of the management measures may cause additional emissions of criteria pollutants and slightly elevated levels of carbon monoxide during construction. The SNMP, in conjunction with all other construction activity, may contribute to the region's non-attainment status during the construction period. Additionally, operation of new regional facilities, such as an RO treatment facility or desalination plant, would contribute to the generation of criteria pollutants. In the short term, cumulative impacts could be significant if the combined emissions from the individual SNMP projects exceed the threshold criteria for the individual pollutants. In the long term, cumulative impacts could be significant if emissions from the operation of new facilities combined with existing sources of emissions exceed the threshold criteria for individual pollutants.

- Noise and Vibration - Local residents in the close proximity to construction activities may be exposed to noise and possible vibration. The cumulative effects, both in terms of added noise and vibration at wastewater reclamation facilities, recycled water plants and other facilities proposed as management measures in the SNMP, and in the context of other related projects, are not considered cumulatively significant due to the temporary nature of noise increases. Noise mitigation methods including scheduling of construction or implementation device installation are available as discussed in Section 6.0 to further reduce these temporary effects. Long term increases in noise associated with operation of new facilities along with other development in the region could be potentially cumulative significant, however the contribution of the management measures in the SNMP would not be cumulatively considerable given the nature and type of facilities proposed.

- Transportation and Circulation - Construction activities to develop new or upgrade existing facilities would generate additional traffic. While there are multiple construction projects that could occur under the management measures listed in the SNMP, they are not anticipated to occur at the same time. Significant cumulative impacts are not anticipated because coordination can occur and because transportation mitigation methods are available as discussed in Section 6.0. In addition, the fact that construction activities may be conducted in the same vicinity as other projects will not make mitigation methods less feasible or effective. New facilities would also generate additional vehicle trips through employee commute and maintenance activities. Cumulative impacts could be significant if vehicle trips from the operation of new facilities combined with existing vehicle trips exceed the threshold criteria for traffic. However, given the nature of the facilities and number of employee and delivery trips anticipated to be required at each location the individual facilities would not be expected to generate large increases in peak hour traffic and thus impacts are not anticipated to be cumulatively considerable.

- Public Services - Cumulative effects on public services in the LSCR SNMP planning area would be limited to traffic inconveniences discussed above. These effects from traffic generated from construction and operational activities are not considered cumulatively considerable as discussed above. New traffic that could be generated from operation of new facilities could add to a cumulative significant impact but again would not be expected to be cumulatively considerable.

7.2 GROWTH INDUCING IMPACTS

This section presents the following:

- 7.2.1 An overview of the CEQA Guidelines relevant to evaluating growth inducement,
- 7.2.2 A discussion of the types of growth that can occur in LSCR SNMP planning area,
- 7.2.3 A discussion of obstacles to growth in the LSCR SNMP planning area, and
- 7.2.4 An evaluation of the potential for the SNMP Program Alternatives to induce growth.

7.2.1 CEQA Growth-Inducing Guidelines

Growth-inducing impacts are defined by the State CEQA Guidelines as (CEQA Guidelines, Section 15126.2(d)):

> *The ways in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are impacts which would remove obstacles to population growth. Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects... [In addition,] the characteristics of some projects… may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It is not assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.*

Growth inducement could indirectly result in adverse environmental effects if the induced growth is not consistent with or accommodated by the land use plans and growth management plans and policies. Local land use plans provide for land use development patterns and growth policies that encourage orderly urban development supported by adequate public services, such as water supply, roadway infrastructure, sewer services, and solid waste disposal services.

Public works projects that are developed to address future unplanned needs (i.e., that would not accommodate planned growth) could result in removing obstacles to population growth. Direct growth inducement would result if, for example, a project involved the construction of new wastewater treatment facilities to accommodate populations in excess of those projected by local or regional planning agencies. Indirect growth inducement would result if a project accommodated unplanned growth and indirectly established substantial new permanent employment opportunities (for example, new commercial, industrial, or governmental enterprises) or if a project involved a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional housing and

services. Growth inducement also could occur if the project would affect the timing or location of either population or land use growth, or create a surplus in infrastructure capacity.

7.2.2 Types of Growth

The primary types of growth that occur within the LSCR SNMP planning area are:

1) Development of land, and
2) Population growth (economic growth, such as the creation of additional job opportunities, also could occur; however, such growth generally would lead to population growth and, therefore, is included indirectly in population growth.)

Growth in Land Development. Growth in land development is the physical development of residential, commercial, and industrial structures in the LSCR SNMP planning area. Land use growth is subject to general plans, community plans, parcel zoning, and applicable entitlements and is dependent on adequate infrastructure to support development.

Population Growth. Population growth is growth in the number of persons that live and work in the LSCR SNMP planning area. Population growth occurs from natural causes (births minus deaths) and net emigration to or immigration from other geographical areas. Emigration or immigration can occur in response to economic opportunities, life style choices, or for personal reasons.

Although land use growth and population growth are interrelated, land use and population growth could occur independently from each other. This has occurred in the past where the housing growth is minimal, but population within the area continues to increase. Such a situation results in increasing population densities with a corresponding demand for services, despite minimal land use growth.

Overall, development in Ventura County and LSCR SNMP planning area is governed by the General Plans adopted by the County and individual cities in the region, which are intended to direct land use development in an orderly manner.

The County or individual city's General Plan is the framework under which development occurs, and, within this framework, other land use entitlements (such as variances and conditional use permits) can be obtained. Because the General Plan adopted by a city or the County guides land use development and allows for entitlements, it does not represent an obstacle to land use growth.

7.2.3 Direct and Indirect Growth Inducement

A project can have direct and/or indirect growth inducement potential. An example of direct growth inducement is construction of new housing. An example of indirect growth inducement is a project that establishes substantial new permanent employment opportunities that result in immigration to the project area and in turn stimulate the need for additional housing and services to support the new employment demand. Similarly, a project could indirectly induce growth if it removes an obstacle to growth. Obstacles to growth could include such things as

inadequate infrastructure, such as an inadequate water supply that results in rationing, or inadequate wastewater treatment capacity that results in restrictions in land use development. Policies that discourage either natural population growth or immigration also are considered to be obstacles to growth.

While public services are needed to support growth and community development, they are not the single determinant of such growth. Other factors, including General Plan policies, land use plans, and zoning, also influence business and residential population growth. Economic factors, in particular, greatly affect development rates and locations. Typically, the growth inducing potential of a project, either direct or indirect, would be considered significant if it results in growth or a population increase that exceeds those assumptions included in pertinent master plans, land use plans, or projections made by regional planning authorities.

Growth inducement itself is not necessarily an adverse impact. It is the potential consequences of growth, the secondary effects of growth, which may result in environmental impacts. Potential secondary effects of growth could include increased demand on other public services; increased traffic and noise; degradation of air quality; loss of plant and animal habitats; and the conversion of agriculture and open space to developed uses. Growth inducement may result in adverse impacts if the growth is not consistent with the land use plans and growth management plans and policies for the area, as "disorderly" growth could indirectly result in additional adverse environmental impacts. Thus, it may be important to assess the degree to which the growth accommodated by a project would or would not be consistent with applicable land use plans.

The potential for the proposed SNMP to induce direct and indirect growth was evaluated and is discussed separately in detail below.

7.2.4 Potential for Compliance with the Proposed SNMP to Induce Growth

Direct Growth Inducement. The reasonably foreseeable methods of compliance with the proposed SNMP focus on implementing a mix of management measures in the LSCR SNMP planning area, which would manage salt and nutrients in the groundwater basin through recycled water projects, regional water treatment facilities (e.g. RO treatment, water softening, desalination, etc.), groundwater recharge projects, and policies or programs. Because none of these measures result in the construction of new housing, the SNMP would not directly induce growth.

Indirect Growth Inducement. Two areas of potential indirect growth inducement are relevant to a discussion of the proposed SNMP: (1) the potential for compliance with the SNMP to generate economic opportunities that could lead to additional immigration, and (2) the potential for the proposed SNMP to remove an obstacle to land use or population growth.

The SNMP is a flexible planning document that can guide management and regulation of discharges of salts and nutrients in the LSCR groundwater basin as recycled water projects are implemented in the future. Implementation of management measures will occur as needed to meet the water quality objectives of the groundwater basins as recycled water projects come

online. For this reason, there is no set timeline for when management measures would be implemented.

Implementation of measures that require construction would generate jobs throughout the region and elsewhere where goods and services are purchased or used to develop new facilities or upgrade existing facilities. As a result the alternatives would generate employment opportunities both directly and indirectly.

Although the construction activities associated with implementation of management measures would increase the economic opportunities in the area and region, this construction is not expected to result in or induce substantial or significant population or land use development growth because the majority of the new jobs that would be created by this construction are expected to be filled by persons already residing in the area or region, based on the existing surplus of unemployed persons in the area and region. However, development of new facilities such a regional RO treatment plant or desalination plant would generate new additional jobs to operate and maintain these facilities. This also would not generate substantial or significant population or land use development growth because these facilities are not anticipated to require a large number of employees for operation and maintenance.

The second area of potential indirect growth inducement is through the removal of obstacles to growth. As discussed above, obstacles to growth could include lack of water supply to allow land development or population growth to occur. The objective of the proposed SNMP is management of salt and nutrient loading in the groundwater basin resulting from implementation of recycled water projects. These projects would provide additional sources of water within the LSCR groundwater basin and could remove an obstacle to future growth within the region particularly with cycles of drought. However, in many cases these projects could replace existing sources of water supply, such as groundwater pumping or imported water. As such, while implementation of the proposed SNMP could cause some indirect growth inducement in general it is anticipated that the recycled water projects facilitated by the implementation of the SNMP would provide alternate sources of water to replace some existing supplies.

7.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

The environmental effects of the proposed SNMP are discussed in Section 6 of this SED and are summarized in the executive summary. Section 15126.2(c) of the CEQA Guidelines requires a discussion of potential significant, irreversible environmental changes that could result from a proposed project. Examples of such changes include commitment of future generations to similar uses, irreversible damage that may result from accidents associated with a project, or irretrievable commitments of resources.

Construction and use of the proposed management measures under the SNMP would irreversibly commit construction materials and non-renewable energy resources. These energy resource demands would be used for construction, transportation of people and goods, as well as lighting and other associated energy needs. Non-renewable and slowly renewable resources used by the SNMP management measures would include, but are not limited to, lumber and other forest products; sand and gravel; asphalt; petrochemical construction materials; steel;

copper; lead and other metals, water; etc. Primary impacts would be related to consumption of non-renewable and slowly renewable resources given that several management measures included in the SNMP could require substantial amounts of energy for water treatment purposes (e.g. desalination, water softening). Use of renewable sources of energy would reduce the severity of this impact.

As described in Section 6 under Item VIII, *Hazards/Hazardous Materials,* implementation of the proposed management measures would involve limited quantities of miscellaneous hazardous substances, such as gasoline, diesel fuel, and solvents during construction activities as well as use of hazardous materials, such as disinfectants and caustics, during operation. Considering the types and minimal quantities of hazardous materials that would be used for the proposed project. State and local requirements regarding transport, use and disposal of hazardous materials would reduce the potential for accidental releases to occur as well as the damage to the environment in the unlikely event that they do occur. Therefore, significant irreversible changes from accidental releases are not expected.

However, while the proposed SNMP could result in the commitment of renewable and nonrenewable resources required for construction and operation of the proposed management measures as well as the commitment of land to infrastructure projects, implementation of the proposed SNMP does not represent a substantial irreversible commitment of resources. In accordance with the Recycled Water Policy and the Governor's recent drought proclamations, implementation of the proposed SNMP is both necessary and beneficial because it assists in reducing reliance on limited potable water supplies by increasing the use of recycled water in the LSCR Groundwater Basin in a manner that prevents exceedances of WQOs and preserves beneficial uses.

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8.0 STATEMENT OF OVERRIDING CONSIDERATIONS AND DETERMINATION

The Regional Board staff has balanced the economic, legal, social, technological, and other benefits of this proposed Salt and Nutrient Management Plan (SNMP) for the Lower Santa Clara River (LSCR) groundwater basin against the unavoidable environmental risks in determining whether to recommend that the Regional Board approve this project. Upon review of the environmental information generated for this project and in view of the entire record supporting the SNMP, staff has determined that the specific economic, legal, social, technological, and other benefits of this proposed SNMP outweigh the unavoidable adverse environmental effects, and that such adverse environmental effects are acceptable under the circumstances.

The implementation of this Basin Plan amendment will fulfill the requirements of the Statewide Recycled Water Policy and Regional Board Guidelines and provide the framework for the environmentally safe disposal of salts and nutrients in the LSCR groundwater basin over the long term.

Specific projects employed to implement the Basin Plan amendment may have adverse significant impacts to the environment, but these impacts are generally expected to be limited, short-term or may be mitigated through implementation of the measures described throughout this document.

The Staff Report and the Basin Plan amendment, and this SED provide the necessary information pursuant to Public Resources Code section 21159 to conclude that properly designed and implemented management measures generally should not foreseeably have a significant adverse effect on the environment. Potential impacts could be mitigated at the subsequent project level when specific sites and designs have been identified, and responsible agencies can and should implement the recommended mitigation measures. These mitigation measures in most cases are routine measures to ease the expected and routine impacts attendant with construction projects and infrastructure operation in urbanized and rural environments. Routine construction and maintenance of infrastructure projects as well as construction and maintenance of linear conveyance facilities, such as sewers, streets, etc., are regular and expected incidents of living in urban environments. Sewer and power line maintenance, street sweeping, traffic alterations, and environmental impacts from them already occur and are expected. This project will foreseeably require many more such projects, but their individual impacts are not expected to be extraordinary in the magnitude or severity of impacts. Specific projects, that may have a significant impact, would therefore be subject to a separate environmental review. The lead agency for subsequent projects would be obligated to mitigate any impacts they identify, for example by mitigating potential traffic impacts by implementing traffic control measures during construction activities. Notably, in almost all circumstances, where unavoidable or unmitigable impacts would present unacceptable hardship upon nearby receptors or venues, the local agencies have a variety of alternative implementation measures available instead. Cumulatively, implementation of the individual management measures combined with other development projects in the region may have a significant effect upon life and the environment throughout the region; however the contribution of these projects would not be cumulatively considerable.

In February 2009, the State Water Resources Control Board adopted the Recycled Water Policy, which requires the development of regional or sub-regional salt and nutrient management plans for groundwater basins in California by 2014. The purpose of the salt and nutrient management plans is to manage salt and nutrient loading that may contribute to or cause an exceedance of water quality objectives, while assisting in achievement of the State's goal to increase the use of recycled water over 2002 levels by at least one million acre-feet per year (AFY) by 2020 and at least two million AFY by 2030 in accordance with state and federal water quality laws.

The implementation of this SNMP will assist in achievement of the State's recycled water goal by providing a mechanism for recycled water projects to proceed in those areas where salt and nutrient concentrations would exceed the water quality objectives for groundwater established in the Basin Plan, but it may result in short-term localized significant adverse impacts to the environment as a variety of projects may be undertaken at many places throughout the watershed as these recycled water projects are implemented. Individually, these impacts are generally expected to be limited, short-term or may be mitigated through careful design and siting. The Staff Report for the SNMP for the LSCR and this checklist provide the necessary information pursuant to Public Resources Code section 21159 to conclude that properly designed and implemented structural or non-structural management measures to comply with the SNMP should mitigate and generally avoid significant adverse effects on the environment, and all agencies responsible for implementing the SNMP should ensure that their projects are properly designed and implemented.

All of the potential impacts must, however, be mitigated at the subsequent, project level because they involve specific sites and designs not specified or specifically required by the Basin Plan Amendment to implement the SNMP. At this stage, any more particularized conclusions would be speculative. The Regional Board does not have legal authority to specify the manner of compliance with its orders or regulations (Wat. C. § 13360), and thus cannot dictate that an appropriate location be selected for any particular project, that it be designed consistent with standard industry practices, or that specific mitigation measures be employed. These measures are all within the jurisdiction and authority of the agencies that will be responsible for implementing this SNMP, and those agencies can and should employ those alternatives and mitigation measures to reduce any impacts as much as feasible. (14 Cal. Code Regs., § 15091(a)(2).)

Implementation of the SNMP is both necessary and beneficial. To the extent that the alternatives, mitigation measures, or both, that are examined in this analysis are not deemed feasible by those local agencies, the necessity of implementing the required SNMP and managing salt and nutrient loads associated with recycled water projects (an action required by the State's Recycled Water Policy) remains.

9.0 FINDINGS

On the basis of this initial evaluation and staff report for the Lower Santa Clara River Salt and Nutrient Management Plan (LSCR SNMP), which collectively provide the required information:

☐ I find the proposed Basin Plan amendment could not have a significant effect on the environment.

☒ I find that the proposed Basin Plan amendment could have a significant adverse effect on the environment. However, there are feasible alternatives and/or feasible mitigation measures that would substantially lessen any significant adverse impact. These alternatives are discussed above and in the staff report for the LSCR SNMP.

☐ I find the proposed Basin Plan amendment may have a significant effect on the environment. There are no feasible alternatives and/or feasible mitigation measures available which would substantially lessen any significant adverse impacts. See the attached written report for a discussion of this determination.

DATE: _____

_____ _____
INSERT NAME INSERT TITLE

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