

**DRAFT**

**Salt/Nutrient Management Plan  
for the Antelope Valley**



**November 2012**

**Prepared By:**

**The Los Angeles County, Department of Public Works  
Waterworks District No. 40**

**The Los Angeles County, Sanitation Districts  
Nos. 14 and 20**

# Section 1: Introduction

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The Salt/Nutrient Management Plan for the Antelope Valley (SMP) has been prepared as an Appendix to the updated 2007 Antelope Valley Integrated Regional Water Management Plan (AVIRWMP) in cooperation with the water and wastewater agencies, the cities of Lancaster and Palmdale, Edwards Air Force Base, private home owners, and other stakeholders in the Antelope Valley. It fulfills the State Water Resources Control Board (State Water Board) requirements of the Recycled Water Policy (Policy), which encourages every region in California to develop a SMP by 2014 that is sustainable on a long-term basis.

The purpose of the Policy is to provide direction to the Regional Water Quality Control Boards (RWQCB), proponents of water use and recycled water projects, and the public regarding the appropriate criteria to be used by the State and Regional Water Boards in issuing permits for recycled water projects. The intent of the Policy is to address salt/nutrient loading in an entire region through the development of a management plan by the collaborative stakeholder process rather than imposing requirements on individual recycled water projects by the regional regulating agency.

## 1.1 The Salt/Nutrient Management Plan

On February 3, 2009, the State Water Board adopted a Policy that addressed the concern for protecting the quality of California's groundwater basins. In response to this Policy, Los Angeles County Waterworks Districts and Sanitation Districts of Los Angeles County have, with support of the Lahontan RWQCB staff, initiated efforts to organize a group to develop a regional SMP for the Antelope Valley. The Policy requires every basin and sub-basin in California to develop a SMP by 2014 that is designed to protect the region's water quality.

The purpose of the Policy is to provide direction to the RWQCB, proponents of water use and recycled water projects, and the public regarding the appropriate criteria to be used by the State and Regional Water Boards in issuing permits for recycled water projects.

Activities, such as irrigation using imported water, groundwater or recycled water can potentially add salts, typically measured as total dissolved solids (TDS), and nutrients to groundwater basins. Other sources of salts/nutrients can include natural soil conditions, atmospheric deposition, discharges of waste, soil amendments and water supply augmentation using surface water or recycled water.

## **1.2 Purpose of the Plan**

The purpose of developing a regional SMP for the Antelope Valley is to manage salts and nutrients (and possibly other constituents of concern) from all sources within the basin to maintain water quality objectives and support beneficial uses. The intention is to involve all surface water and groundwater users and wastewater dischargers in the Antelope Valley basin to participate in efforts to protect these waters from accumulating concentrations of salt and nutrients that would degrade the quality of water supplies in the Antelope Valley to the extent that it may limit their use.

## **1.3 Goals**

One goal is to address salt/nutrient loading in the Antelope Valley basin region through the development of a management plan by the collaborative stakeholder process rather than the regional regulating agency imposing requirements on individual water projects. The process shall involve participation by Lahontan RWQCB staff and be in compliance with California Environmental Quality Act (CEQA) regulations. The involvement of local agencies in a SMP may lead to more cost-effective means of protecting and enhancing groundwater quality, quantity, and availability.

Another goal is to assess impacts resulting from all activities with potential long-term basin-wide effects on groundwater quality, such as surface water, groundwater, imported water, and recycled water irrigation projects and groundwater recharge projects, as well as other salt/nutrient contributing activities through regional groundwater monitoring.

The design and implementation of a regional groundwater monitoring program must involve all stakeholders, including, but not limited to, water importers, purveyors, stormwater management agencies, wastewater agencies, Lahontan RWQCB, and other significant salinity/nutrient contributors, in addition to the recycled water stakeholders.

The completion of the SMP may lead to the potential for enhanced partnering opportunities and potential project funding between water and wastewater agencies, or other stakeholders, for developing and protecting water supplies.

## 1.4 Definitions

The stakeholder group established the definitions early in the SMP process and reached consensus on the definitions below.

**Salts:** Observed by measuring total dissolved solids

**Nutrients:** Nitrogenous species (i.e. nitrate, nitrite, ammonia, organic)

**Constituents of emerging concern (CECs):** To be determined by “blue ribbon” advisory panel, approved by State Water Resources Control Board (and California Department of Public Health)

**Water Quality Objectives:** Allowable level of a water quality constituent that is established for the reasonable protection of beneficial use(s) of water or the prevention of nuisance within a specific area

**Current ambient conditions:** Average concentration of constituent measured in water (surface or groundwater) for past 10 years

**Assimilative capacity:** Difference between the objective and current quality is the amount of assimilative capacity available. If the current quality of a water is the same or poorer than the water quality objective, assimilative capacity does not exist. If the current quality is better than the water quality objective, then assimilative capacity exists.

assimilative capacity = (water quality objective) – (current ambient condition)

**Antidegradation:** State Board Antidegradation Policy (Resolution 68-16)

**Basin and Sub-Basin boundaries:** coverage to be determined

**Sources of salts/nutrients include, but not limited to:**

- Imported Water
- Recycled Water Use
- Runoff
- Septic Tanks
- Agricultural Return
- Soil Amendments

# Section 2: Data Collection & Assessment

## 2.1 Stakeholder Participation

The Salt/Nutrient Management Planning Stakeholder meetings were held periodically to raise awareness and engage stakeholders and other interested parties on salinity and nutrient issues and management plan development efforts in the Antelope Valley region. The meetings were open to the public and were geared toward water, groundwater, and wastewater agency representatives, regulators, and community stakeholders. A list of stakeholders can be found in Table 2-1.

**Table 2-1: Stakeholder List**

| Last Name  | First Name | Title                          | Organization                      |
|------------|------------|--------------------------------|-----------------------------------|
| Argo       | Wayne      | Representative                 | ARTC                              |
| Barnes     | Tom        | Resources Manager              | AVEK Water                        |
| Bevins     | Michael    | Public Works Director          | City of California City           |
| Blank      | Laura      | Executive Director             | LA County Farm Bureau             |
| Bunker     | Jessica    | Associate Civil Engineer       | LA County Waterworks Districts    |
| Campbell   | Richard    | Director                       | AV Resource Conservation District |
| Caulkins   | Richard    | Senior Engineer                | LACSD                             |
| Charlton   | David      | Environmental Engineer         | Edwards AFB                       |
| Copeland   | Patrice    | Senior Engineering Geologist   | Lahontan RWQCB                    |
| Dassler    | Steve      | Utility Services Manager       | City of Lancaster                 |
| Deans      | Dawn       |                                | Palmdale Water District           |
| De Hollan  | Erika      | Project Engineer               | LACSD                             |
| Dietrick   | Brian      | Environmental Engineer         | RMC Water and Environment         |
| Everett    | Lauren     | Environmental Planner          | Kennedy Jenks                     |
| Flood      | Mike       |                                | AVEK                              |
| Fowler     | Virginia   | Water Conservation Coordinator | LA County Waterworks Districts    |
| Frost      | Amy        | Chief Asset Optimization - CE  | Edwards AFB                       |
| Fuller     | Peggy      | Representative                 | Leona Valley Town Council         |
| Gutierrez  | Gretchen   |                                | Antelope Valley BIA               |
| Jurkevics  | Lauma      | Staff Environmental Scientist  | DWR (Southern Region)             |
| Knudson    | Matthew    | Engineer Manager               | Palmdale Water District           |
| Ko         | James      |                                | California Dept. of Public Health |
| Krzys      | Greg       |                                | US Bureau of Reclamation (USBR)   |
| Lafferty   | Dan        | Principal Engineer             | Los Angeles Waterworks District   |
| Large      | Bob        | Representative                 | Lake Town Council                 |
| Lopez      | Peter      | General Manager                | Boron Community Services District |
| Malikowski | Yvonne     | Treasurer                      | Lake Los Angeles Park Association |

|                  |                    |  |  |
|------------------|--------------------|--|--|
| <b>Mann</b>      | <b>Josh</b>        | Executive Director                       | AV Board of Trade  |
| <b>Marshall</b>  | <b>Doug</b>        | Property Owner                           | Public   |
| <b>Medina</b>    | <b>Vicki</b>       | Executive Director                       | AV Board of Trade  |
| <b>Mele</b>      | <b>Thomas</b>      | Environmental Engineer                   | Edwards AFB  |
| <b>Mosher</b>    | <b>Jeff</b>        |  | Nation Water Research Institute                                |
| <b>Nelson</b>    | <b>Vanessa</b>     | General Manager                          | Sundale Mutual Water   |
| <b>Nelson</b>    | <b>Vickie</b>      | Antelope Acres Town Council<br>President | Antelope Acres Town Council                                    |
| <b>Ng</b>        | <b>Chuen</b>       | Associate Planner                        | City of Lancaster  |
| <b>Ojeda</b>     | <b>Jose</b>        | Superintendent                           | California Water Service Company                               |
| <b>Ospina</b>    | <b>Lorena</b>      | Sr. Water Quality Consultant             | GEI Consultants/RCSD   |
| <b>Park</b>      | <b>Matthew</b>     | Executive Director                       | Kern County Farm Bureau  |
| <b>Paxton</b>    | <b>Curtis</b>      | Assistant GM                             | Palmdale Water District  |
| <b>Pernula</b>   | <b>Jon</b>         | Water & Energy Resources<br>Manager      | Palmdale Water District  |
| <b>Phair</b>     | <b>Gordon</b>      | Utilities Services Manager               | City of Palmdale   |
| <b>Plaziak</b>   | <b>Mike</b>        | Supervising Engineering<br>Geologist     | Lahontan RWQCB   |
| <b>Reed</b>      | <b>Chad</b>        | General Manager                          | Quartz Hill Water District                                     |
| <b>Rizzo</b>     | <b>David</b>       | Director                                 | AVEK   |
| <b>Rizzo</b>     | <b>Nicole</b>      |  | City of Lancaster  |
| <b>Rydman</b>    | <b>Dave</b>        | Civil Engineer                           | LA County Waterworks Districts                                 |
| <b>Stewart</b>   | <b>Jack</b>        |  | RCSD   |
| <b>Thibault</b>  | <b>Leo</b>         |  | Little Rock Creek Irrigation District                          |
| <b>Tremblay</b>  | <b>Ray</b>         |  | LACSD  |
| <b>Tyler</b>     | <b>Larry</b>       | Property Owner                           | Leona Valley Resident  |
| <b>Ukkostan</b>  | <b>John</b>        |  | AV United Water Purveyors/White<br>Fence Farms Mutual Water Co |
| <b>Vidal</b>     | <b>Christopher</b> |  | Palmdale Water District /Interim RCSD<br>Representative        |
| <b>Wells</b>     | <b>Dick</b>        | Director of Public Works<br>AVSWCA       | Palmdale Water District  |
| <b>West</b>      | <b>Tom</b>         | Principal                                | RMC Water and Environment                                      |
| <b>Wise</b>      | <b>Cindy</b>       | Staff Environmental Scientist            | Lahontan RWQCB   |
| <b>Witherall</b> | <b>Amy</b>         | Water Resources Planner                  | Bureau of Reclamation  |
| <b>Wong</b>      | <b>Jennifer</b>    | Engineer-water resources                 | California Department of Water<br>Resources                    |
| <b>Workman</b>   | <b>Carlyle</b>     | Utilities Services Manager               | City of Lancaster  |
| <b>Yazdani</b>   | <b>Jamshed</b>     | Associate Engineer                       | City of Lancaster  |
| <b>Zimmerman</b> | <b>Jan</b>         | Geologist                                | Lahontan RWQCB   |

## 2.2 Groundwater Basin

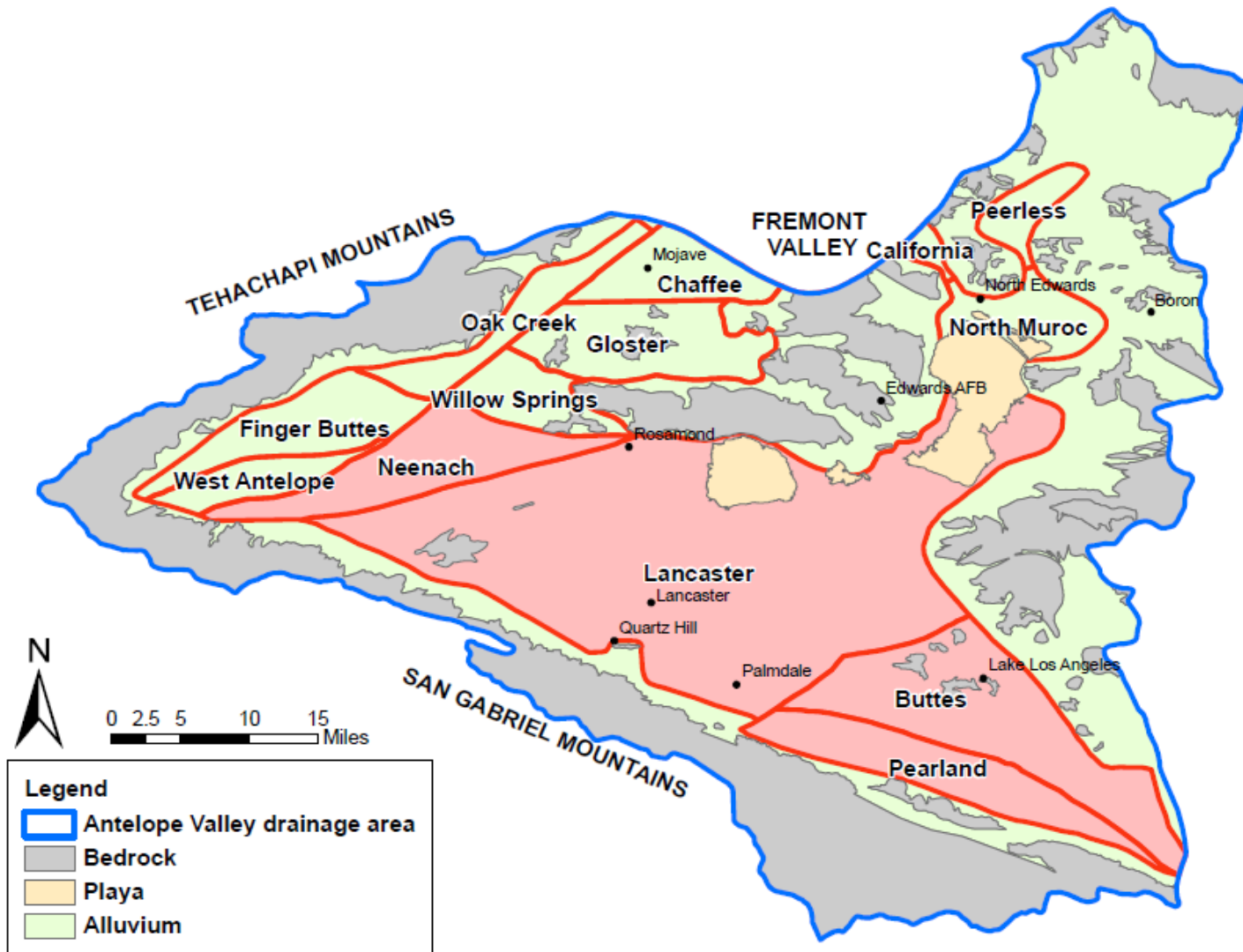
The Antelope Valley Basin is comprised of two primary aquifers: (1) the principal aquifer and (2) the deep aquifer. The principal aquifer is an unconfined aquifer. Separated from the principal aquifer by clay layers, the deep aquifer is generally considered to be confined. In general, the principal aquifer is thickest in the southern portion of the Valley near the San Gabriel Mountains, while the deep aquifer is thickest in the vicinity of the dry lakes on Edwards Air Force Base. The Antelope Valley Basin is divided into twelve subunits. The subunits are Finger Buttes, West Antelope, Neenach, Willow Springs, Gloster, Chaffee, Oak Creek, Pearland, Buttes, Lancaster, North Muroc, and Peerless. The description of each of these sub-basins characteristics can be found in Section 2 of the AVIRWMP. The Antelope Valley Basin is principally recharged by deep percolation of precipitation and runoff from the surrounding mountains and hills.

### 2.2.1 SMP Area Boundaries

Figure 2-1 depicts the groundwater sub-basin boundaries for the SMP. The objective was to use existing wells to determine water quality throughout the sub-basin and to determine the boundary limits for the salt/nutrient management efforts. The shaded sub-basins: Neenach, Lancaster, Buttes, Pearland, and Edwards Air Force Base indicate the coverage in the SMP. The addition of sub-basins included in the scope of work boundary limits were dependent upon the willingness of users, water and waste water agencies, regulators, and stakeholders to participate and provide data.

Any sub-basin was welcomed to be included in the SMP, with the understanding that there needed to be sufficient applicable water quality information. The water quality data enabled the stakeholder group to assess impacts from all activities with potential long-term basin-wide effects on groundwater quality and the ability to implement a groundwater monitoring program.

Figure 2-1: Groundwater Sub-Basin Boundary Map





## 2.3 Current and Future Basin Uses

### 2.3.1 Data Collection and Assessment

Figure 3-2 was compiled using existing well locations throughout the groundwater sub-basin boundary map. Water quality and monitoring data was obtained to determine where the spatial gaps, within the boundary limits, were located in order to have a complete analysis of data and to determine the monitoring plan for the SMP. The stakeholder group provided and analyzed any surface and/or groundwater quality data. The agencies that provided available water quality data within the boundary map included: The Sanitation Districts of Los Angeles County, Los Angeles County Waterworks District No. 40, Rosamond Community Services District, Palmdale Water District, Antelope Valley-East Kern Water Agency, Quartz Hill Water District, Edwards Air Force Base, City of Palmdale, and City of Lancaster.

There was reluctance from the agriculture community to share their existing well water quality information due to privacy issues, even though the water quality information would solely be used for the purpose of baseline and/or monitoring information. The stakeholder group determined that there was sufficient water quality data between all the agencies that participated to achieve agreeable data results in the region. The Sanitation District of Los Angeles County, as the SMP representative, presented an overview of the SMP and the efforts in the Antelope Valley to the Los Angeles County Farm Bureau to determine if they were willing to provide their well water quality data. The aim of this outreach effort was to update the members of the agricultural community on the development of the SMP and encourage their contribution to the plan. The stakeholder group reached out to the agricultural representative for the AVIRWMP, and did not receive any information. The stakeholder group continued to send e-mail notifications of the SMP meetings to the Farm Bureau.

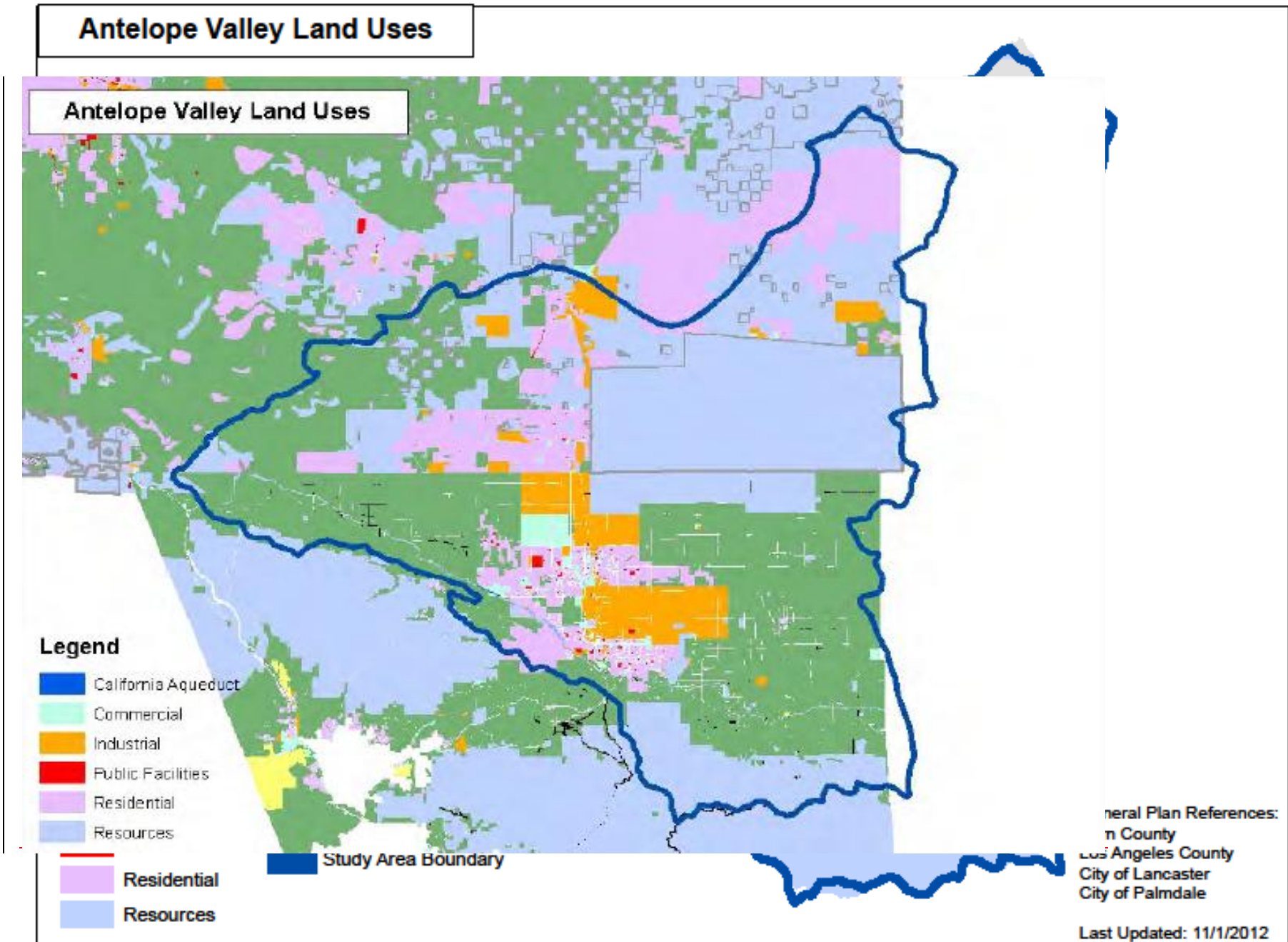
Table 2.2 shows current and future projects contributing to potential salt/nutrient impacts to the basin.

**Table 2-2: Project List**

| Agency                  | Project Name  | Project Type                                 |
|-------------------------|---|--|
| AVEK/LACWWD40           | Water Supply Stabilization Project (WSSP-2 Project)             | Groundwater Banking                          |
| Edwards Air Force Base  | EAFB Irrigation Project   | Landscape Irrigation                         |
| Edwards Air Force Base  | Main Base Evaporation Ponds                                     | Evaporation Pond/ RW Management              |
| Edwards Air Force Base  | AFRL Treatment Plant (Air Force Research Laboratory)            | Wastewater Treatment Plant                   |
| LACWWD40                | Aquifer Storage and Recovery Project                            | Groundwater Banking                          |
| LACWWD40                | In-Situ Arsenic Removal on Unsaturated Alluvium (pilot-project) | Groundwater Treatment/Recharge               |
| LACWWD40/Palm./Lanc.    | North LA/Kern County Regional Recycled Water Project            | Landscape Irrigation (may include other M&I) |
| LACSD 14                | Apollo Park   | Recreational Impoundments/Landscape Irrig.   |
| LACSD 14                | Piute Ponds   | Recreational Impoundments/Landscape Irrig.   |
| LACSD 14                | Agricultural Reuse Project                                      | Agricultural Irrigation                      |
| LACSD 14                | Lancaster Water Reclamation Plant                               | Wastewater Treatment Plant                   |
| LACSD 20                | Agricultural Reuse Project                                      | Agricultural Irrigation                      |
| LACSD 20                | Palmdale Water Reclamation Plant                                | Wastewater Treatment Plant                   |
| Lancaster               | Amargosa Water Banking & Stormwater Retention Project           | Groundwater Banking/Recharge/Recreation      |
| Lancaster               | eSolar Power Plant at Division and Avenue G                     | Evaporation Pond/ RW Management              |
| Palmdale                | Barrel Springs Detention Basin and Wetlands                     | Groundwater Recharge                         |
| Palmdale                | Hunt Canyon Groundwater Recharge & Flood Control Basin          | Groundwater Recharge                         |
| Palmdale/LACWWD40       | Amargosa Creek Recharge Project                                 | Groundwater Recharge                         |
| Palmdale                | Palmdale Hybrid Power Plant Project                             | Evaporation Pond/ RW Management              |
| Palmdale Water District | Groundwater Recharge - Recycle Water Project                    | Groundwater Recharge                         |
| Rosamond                | Antelope Valley Water Bank                                      | Groundwater Banking                          |
| Rosamond                | Evaporation Ponds   | Evaporation Pond/ RW Management              |
| Rosamond                | Golden Queens Mining Project                                    | Agricultural Irrigation                      |
| Rosamond                | RCSD Wastewater Treatment Plant Expansion                       | Wastewater Treatment Plant                   |

Figure 2-2 shows a land use map that reflects zoning information from Kern County, City of Lancaster, City of Palmdale, and the Los Angeles County Regional Planning websites. The land use map shows the rural/urban residential areas and agricultural areas.

Figure 2-2: Antelope Valley Land Uses **(update map)**



## 2.4 Groundwater Quality Database

The Lahontan RQWB mentioned that water quality changes with depth levels and suggested to take different monitoring depths into consideration. The stakeholder group determined that the information would be included in the analysis as it was readily available. A comprehensive guideline for groundwater data descriptions shown on Table 2-3 was distributed as a starting point to indicate what type of information may need to be obtained from the existing wells. When the well data information was collected from the different agencies, the depth levels were not noted when samples were taken.

**Table 2-3: Guidelines for Groundwater Data**

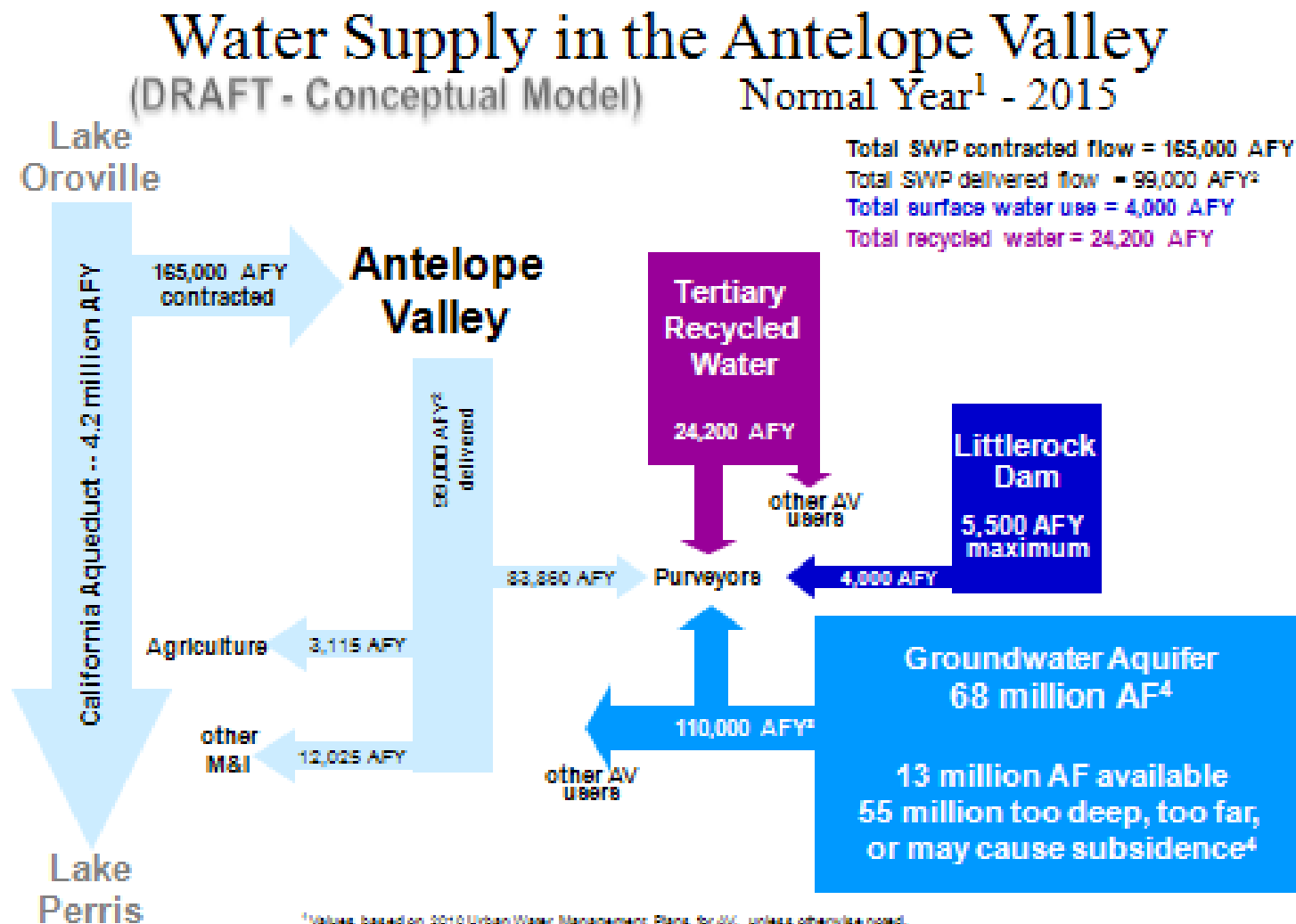
| <b>Groundwater Data Descriptions by Data Type</b> |   |
|---|---|
| <b>General Well Information</b>                   | <b>Description</b>  |
| Well Name   | Unique well name and/or identifiers used by well owner  |
| Well Status                                       | e.g. active, inactive, abandoned, destroyed   |
| Well Location                                     | Geographic coordinates (X,Y) and description of well location   |
| Well Elevations                                   | Ground surface and water level measurement point elevations   |
| Geographic Information                            | Datum of coordinates, coordinate units (e.g. degrees, meters), name and parameters of coordinate projection, elevation units and vertical datum, method used to determine well elevations |
| Perforated Interval                               | "From" and "To" fields (depth in feet-below ground surface)   |
| <b>Groundwater Level Information</b>              | <b>Description</b>  |
| Date and Time Measured                            | Date and time of water level measurement  |
| Depth to Water                                    | Distance from measurement point to groundwater level (including units)  |
| Measurement Point Description                     | Physical description of water level measurement point (e.g. top of well casing)   |
| Measurement Point Elevation                       | Elevation of water level measurement point  |

|  |  |
|--|--|
| Well Activity at Time of Measurement   | Description and comments related to the well activity at the time of measurement (e.g. was the well pumping or was the well turned off?) |
| <b>Groundwater Quality Information</b> | <b>Description</b>   |
| Date and Time Sampled                  | Date and time water quality sample collected   |
| Chemical Name or Code                  | Name or code of constituent analyzed   |
| Detection Limit                        | Detection limit of the sample method used  |
| Result                                 | Concentration/value and units of analysis  |
| Analytical Method                      | Analytical method used by laboratory   |
| Analytical Laboratory                  | Laboratory used for sample analysis  |

## 2.5 Data Analysis

Figure 2-3 shows a flow chart of the water balance in the Antelope Valley based on the 2010 Urban Water Management Plan and other resources. The purpose of the flow chart is to demonstrate the contributions and withdrawals of salts and nutrients to the basin by showing the amount of State Water Project water entering the basin and surface water, groundwater, and recycled water use in the area. After applying water quality to these water sources, the flow chart was used to develop general basin-wide salt balance.

Figure 2-3: Water Balance Flow Chart



Total SWP contracted flow = 165,000 AFY  
 Total SWP delivered flow = 99,000 AFY<sup>2</sup>  
 Total surface water use = 4,000 AFY  
 Total recycled water = 24,200 AFY

<sup>1</sup> Values based on 2010 Urban Water Management Plans for AV, unless otherwise noted.  
<sup>2</sup> Based on 60% reliability per 2009 SWP Delivery Reliability Report.  
<sup>3</sup> Based on Judge Roman's ruling on the basin's safe yield. Subject to future refinements.  
<sup>4</sup> Based on California Department of Water Resources, Southern District: Planned Utilization of Water Resources in Antelope Valley, 1990.

# Section 3: Characterization of the Basin

## 3.1 Salt and Nutrient Characterization

Table 3-2 shows the potential constituents of concern and source water quality. This information was used in determining the basin’s salt mass balance and water quantity projections to determine the amount of water and salts/nutrients going into and leaving the basin for the 25-year projection period.

**Table 3-2: Source Water Quality**

| 2010 Concentration         | Units | Detection Limit | California Aqueduct <sup>(a)</sup> | Acton Plant <sup>(a)</sup> | Eastside Plant <sup>(a)</sup> | Quartz Hill Plant <sup>(a)</sup> | Rosamond Plant <sup>(b)</sup> | Recycled Water <sup>(c)</sup> | EAFB AFRL WWTP <sup>(d)</sup> | RCSD Treatment Plant <sup>(e)</sup> | RWQCB Stormwater Database <sup>(f)</sup> |
|----------------------------|-------|-----------------|------------------------------------|----------------------------|-------------------------------|----------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------------|--|
| Total Dissolved Solids     | mg/L  | NA              | 350                                | 260                        | 250                           | 260                              | 260                           | 550                           | 520                           | 600                                 |  |
| Ammonia <sup>(g)</sup> - N | mg/L  |                 |                                    |                            |                               |                                  |                               | 1                             | 4                             | 1                                   |  |
| Nitrate - N                | mg/L  | 0.5             | 0.5                                | 0                          | 0.5                           | 0.6                              | 0.6                           | 4                             | 5.7                           | 4                                   |  |
| Nitrite - N                | mg/L  | 0.4             | 0                                  | 0                          | 0                             | 0                                | 0                             | 1                             | NA                            | 1                                   |  |
| Nitrate+Nitrite - N        | mg/L  | 0.4             | 1.0                                | 0.0                        | 1.0                           | 1.0                              | 1.0                           | 8                             | NA                            | 8                                   |  |
| Chloride                   | mg/L  | NA              | 82                                 | 91                         | 89                            | 86                               | 89                            | 140                           | 75                            | 140                                 |  |
| Fluoride                   | mg/L  | 0.1             | 0                                  | 0.12                       | 0                             | 0.12                             | 0                             | 0.3                           | NA                            | 1                                   |  |
| Arsenic                    | µg/L  | 2               | 0                                  | 0                          | 0                             | 0                                | 0                             | 1                             | 814                           | 1                                   |  |
| Boron <sup>(h)</sup>       | µg/L  | 100             | 150                                | 240                        | 180                           | 170                              | 160                           | 500                           | 330                           | 500                                 |  |
| Chromium                   | µg/L  | 10              | 0                                  | 0                          | 0                             | 0                                | 0                             | 1                             |                               |                                     |  |

(a) Antelope Valley-East Kern Water Agency 2010 Annual Water Quality Report - Los Angeles County System  
 (b) Antelope Valley-East Kern Water Agency 2010 Annual Water Quality Report - Kern County System  
 (c) Predicted water quality for tertiary treatment at Lancaster and Plamdale WRPs (LACSD)  
 (d) Air Force Research Laboratory (AFRL) 2010 Annual Monitoring Report (average values provided)  
 (e) Predicted water quality for tertiary treatment at the Rosamond Community Services District (RCSD) Treatment Plant  
 (f) Regional Water Quality Control Board database for average stormwater concentration values  
 (g) COC's not reported in water quality reports or sample results  
 (h) Boron is not a reported COC in Antelope Valley-East Kern Water Agency 2010 Annual Water Quality Report. Use concentrations from AVEK 2009 Water Quality Report.  
 (i) 0 is used for all the COCs concentration below the detection limit.  
 \*Convert nitrate (NO3) to nitrate as N: molecular weight of NO3 = 62, atomic weight of N = 14, 62/14=4.42

Based on the constituents analyzed in Table 3-3, the values are shown to be within acceptable limits.

**Table 3-3: Concentration Levels within the Sub-Basins**

| Sub Basin      | Constituent      | # Data Points | # Wells | Mean    | Units  | Limit    | Dates       |
|----------------|------------------|---------------|---------|---------|--------|----------|-------------|
| Buttes         | Arsenic          | 1             | 1       | 2       | ug/L   | 10       | Jul-00      |
|                | TDS              | 4             | 1       | 374     | mg/L   | 500/1000 | 7/91-7/02   |
|                | Ammonia          | 4             | 1       | < 0.02  | mg-N/L |          | 7/91-7/02   |
|                | Nitrite          | 4             | 1       | < 0.01  | mg-N/L | 10*      | 7/91-7/02   |
|                | Nitrate          | 4             | 1       | < 1.7   | mg-N/L | 10*      | 7/91-7/02   |
| Gloster        | Arsenic          | 2             | 1       | 78      | ug/L   | 10       | 7/98-9/03   |
|                | TDS              | 4             | 1       | 498     | mg/L   | 500/1000 | 8/92-9/03   |
|                | Ammonia          | 4             | 1       | < 0.028 | mg-N/L |          | 8/92-9/03   |
|                | Nitrite          | 4             | 1       | < 0.01  | mg-N/L | 10*      | 8/92-9/03   |
|                | Nitrate          | 4             | 1       | < 0.16  | mg-N/L | 10*      | 8/92-9/03   |
| Neenach        | Arsenic          | 1             | 1       | < 1     | ug/L   | 10       | Jul-98      |
|                | TDS              | 3             | 1       | 230     | mg/L   | 500/1000 | 8/92-7/98   |
|                | Ammonia          | 3             | 1       | < 0.017 | mg-N/L |          | 8/92-7/98   |
|                | Nitrite          | 3             | 1       | < 0.010 | mg-N/L | 10*      | 8/92-7/98   |
|                | Nitrate          | 3             | 1       | 2.24    | mg-N/L | 10*      | 8/92-7/98   |
| North Muroc    | Arsenic          | 1             | 1       | 39      | ug/L   | 10       | Jul-98      |
|                | TDS              | 1             | 1       | 603     | mg/L   | 500/1000 | May-90      |
|                | Ammonia          | 0             | 0       |         | mg-N/L |          |             |
|                | Nitrite          | 5             | 2       | < 0.03  | mg-N/L | 10*      | 5/90-10/2   |
|                | Nitrate          | 8             | 2       | < 0.80  | mg-N/L | 10*      | 5/90-10/2   |
| Pearless       | Arsenic          | 0             | 0       |         | ug/L   | 10       |             |
|                | TDS              | 0             | 0       |         | mg/L   | 500/1000 |             |
|                | Ammonia          | 0             | 0       |         | mg-N/L |          |             |
|                | Nitrite          | 0             | 0       |         | mg-N/L | 10*      |             |
|                | Nitrate          | 0             | 0       |         | mg-N/L | 10*      |             |
| West Antelope  | Arsenic          | 3             | 1       | 8.9     | ug/L   | 10       | 7/98-8/06   |
|                | TDS              | 5             | 1       | 363     | mg/L   | 500/1000 | 11/92-8/06  |
|                | Ammonia          | 5             | 1       | < 0.038 | mg-N/L |          | 11/92-8/06  |
|                | Nitrite          | 9             | 2       | < 0.016 | mg-N/L | 10*      | 11/92-8/06  |
|                | Nitrate (well 1) | 5             | 1       | < 0.2   | mg-N/L | 10*      | 11/92-8/06  |
|                | Nitrate (well 2) | 6             | 1       | 3.3     | mg-N/L | 10*      | 10/99-10/02 |
| Willow Springs | Arsenic          | 4             | 1       | 2.3     | ug/L   | 10       | 7/98-8/09   |
|                | TDS              | 6             | 1       | 395     | mg/L   | 500/1000 | 8/92-8/09   |
|                | Ammonia          | 6             | 1       | < 0.018 | mg-N/L |          | 8/92-8/09   |
|                | Nitrite          | 6             | 1       | < 0.01  | mg-N/L | 10*      | 8/92-8/09   |
|                | Nitrate          | 6             | 1       | 3.7     | mg-N/L | 10*      | 8/92-8/09   |

\*nitrate + nitrite

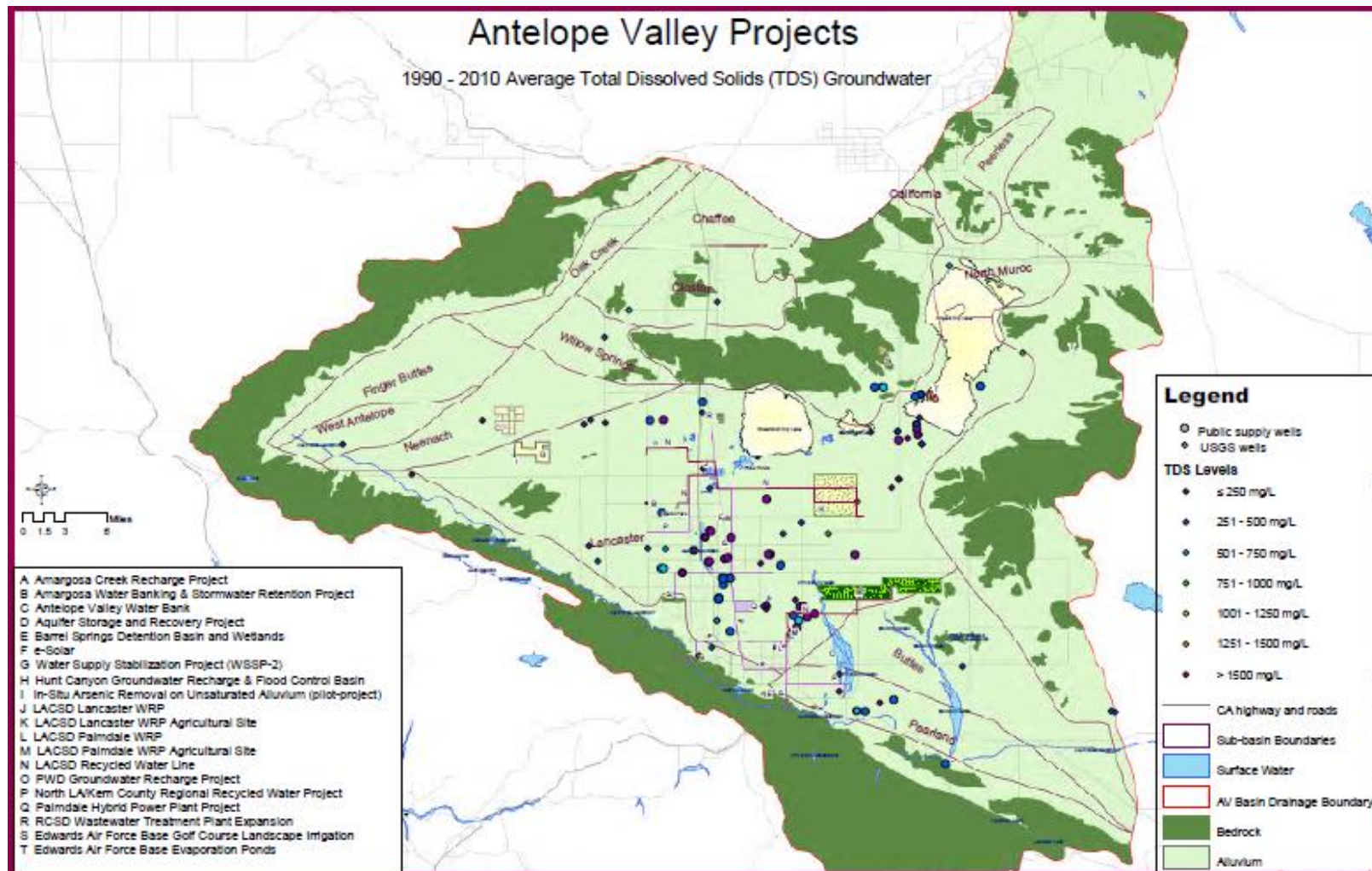


**Table 3-1: Maximum Contaminant Levels, According to California Department of Public Health (Title 22)**

| Constituent            | Level | Units                   |
|------------------------|-------|-------------------------|
| Total Dissolved Solids | 1000  | mg/L                    |
| Ammonia                | ---   |                         |
| Nitrate                | 45    | mg/L as NO <sup>3</sup> |
| Nitrite                | 1     | mg/L as N               |
| Nitrate + Nitrite      | 10    | mg/L as N               |
| Chloride               | 500   | mg/L                    |
| Fluoride               | 2     | mg/L                    |
| Arsenic                | 0.010 | mg/L                    |
| Boron                  | ---   |                         |
| Chromium               | 0.05  | mg/L                    |

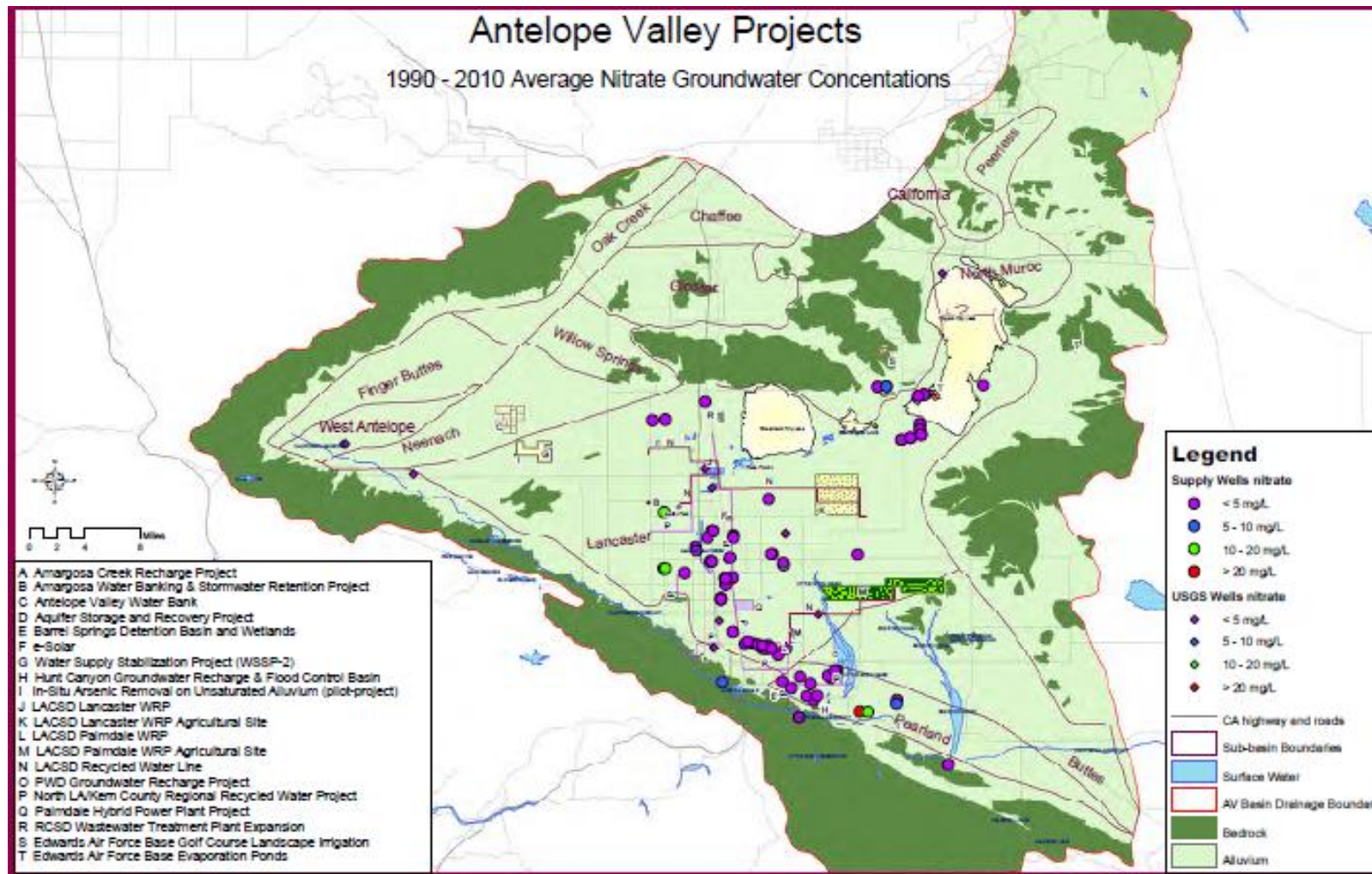
Figures 3-1 through 3-6 were created to show existing well locations within each sub-basin. The data points indicate a 10-year average (ranging from 1990-2010) for Total Dissolved Solids (TDS), Nitrates, Boron, Arsenic, Chloride, and Fluoride groundwater concentrations. The wells shown on the Figure 3-1 are all supply wells, except for the USGS monitoring wells. The purpose of these maps is to show where the wells are located in relation to the SMP projects and to show the concentration limits in those wells. For water quality values where the limit was ND (non-detect), zero was used for the analysis.

**Figure 3-1: Water Quality Data for TDS**



The water quality objective/limit for TDS is 1000 mg/l.

Figure 3-2: Water Quality Data for Nitrate



The water quality objective/limit for Nitrate is 45 mg/l as NO<sup>3</sup>.

Figure 3-3: Water Quality Data for Boron

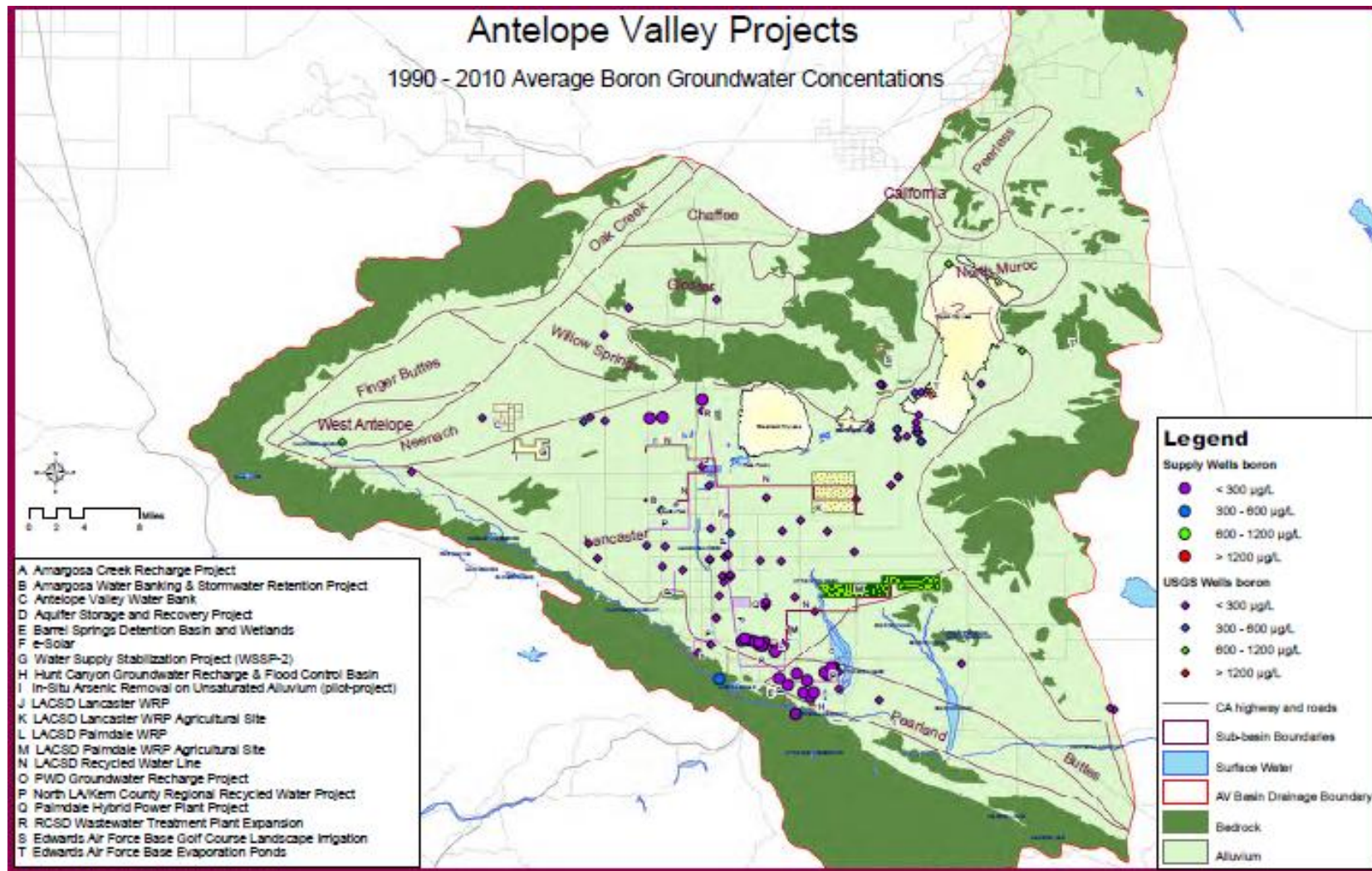
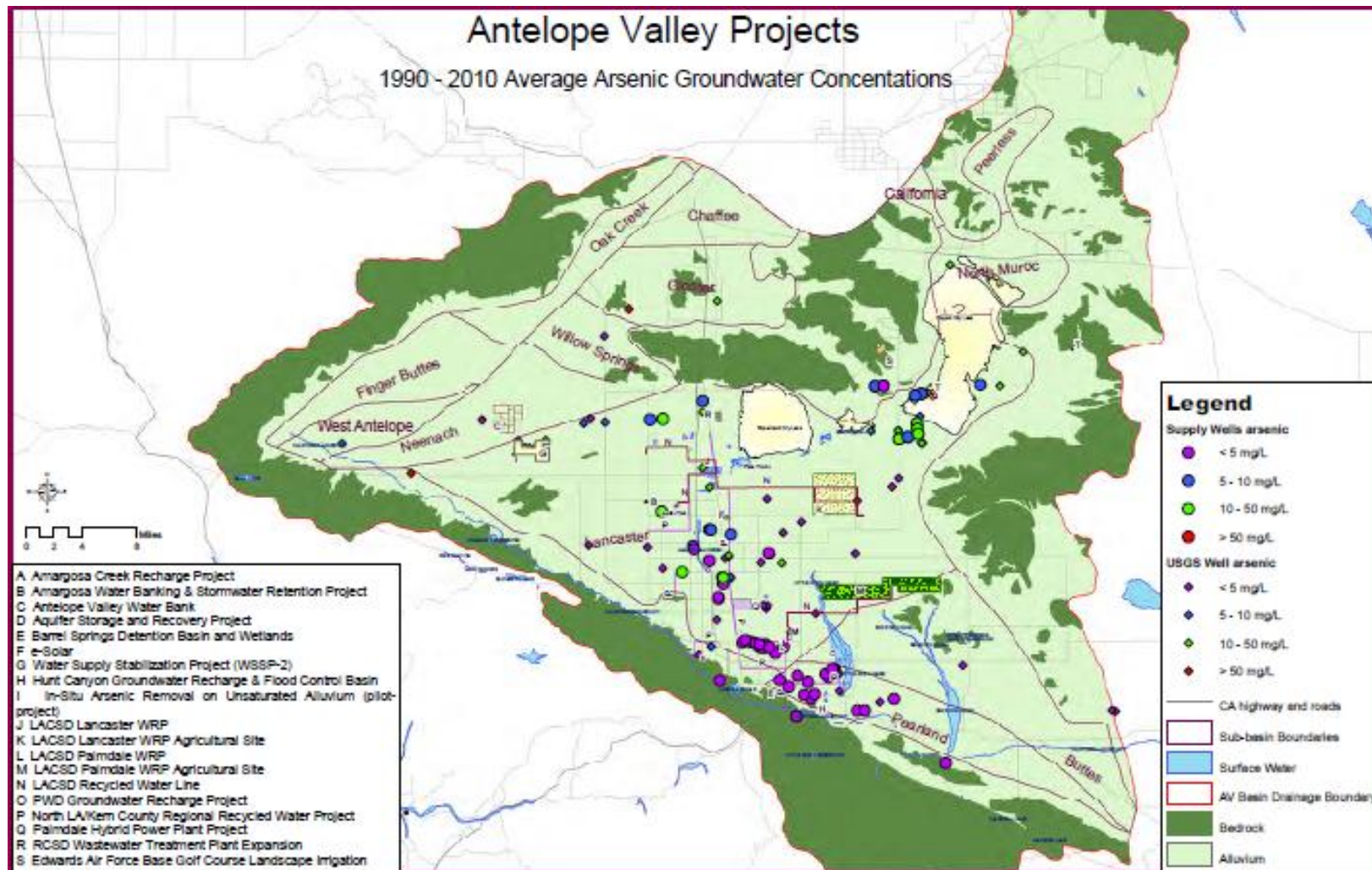
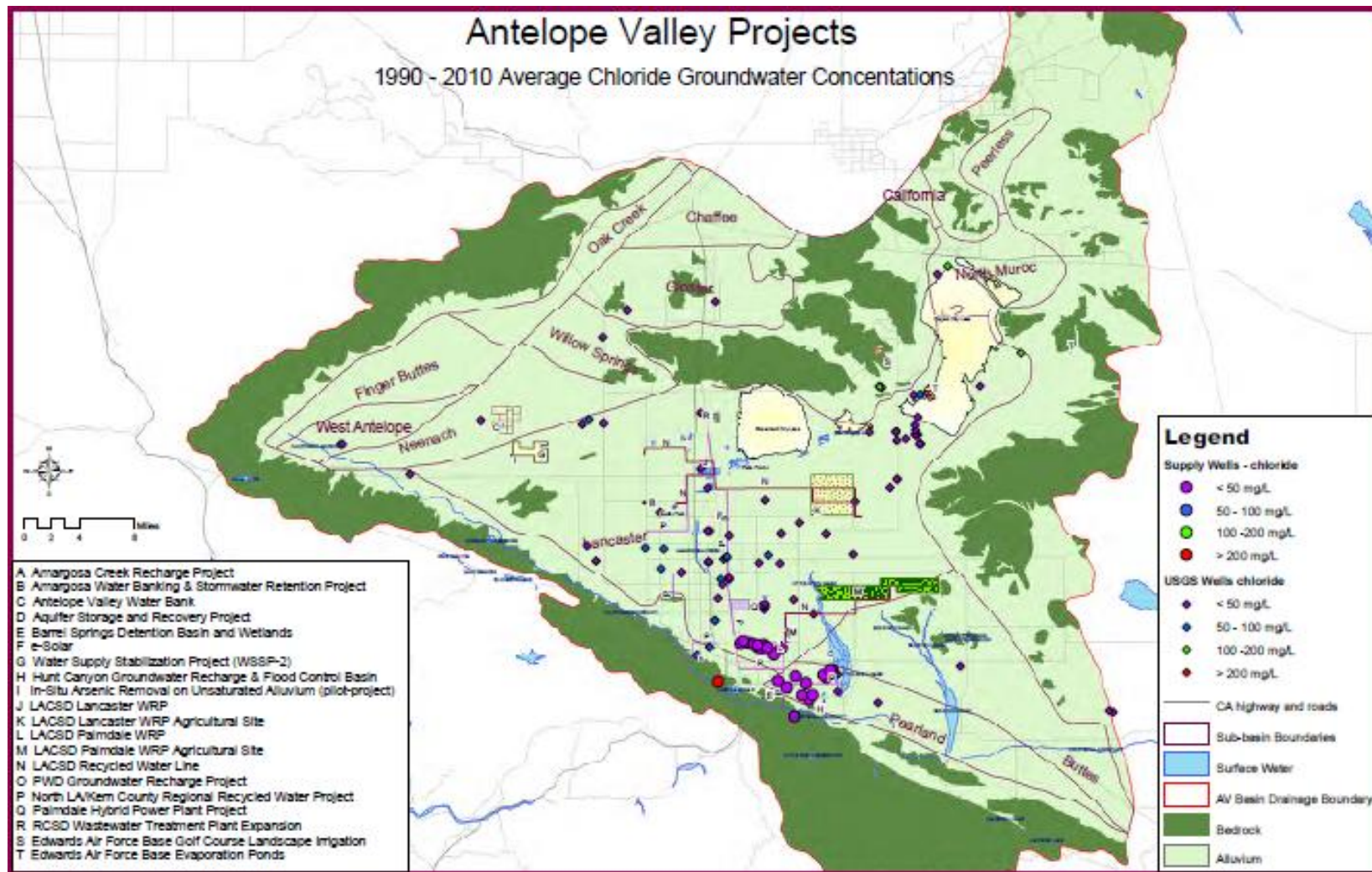


Figure 3-4: Water Quality Data for Arsenic



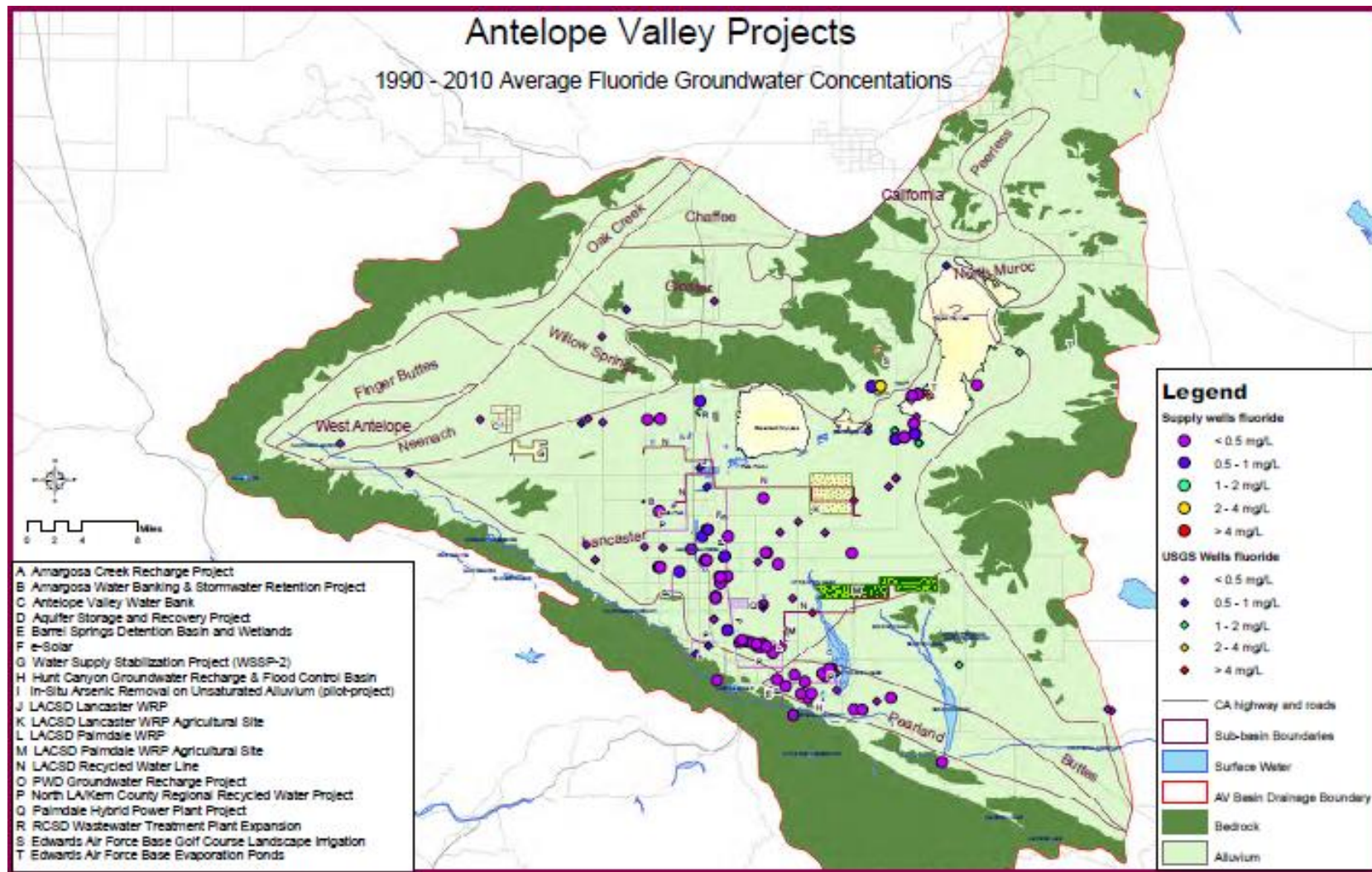
The water quality objective/limit for Arsenic is 0.010 mg/l.

**Figure 3-5: Water Quality Data for Chloride**



The water quality objective/limit for Chloride is 500 mg/l.

Figure 3-6: Water Quality Data for Fluoride



The water quality objective/limit for Fluoride is 2 mg/l.

### 3.1.1 Current and Future Projects

Table 3-4 shows the current and future projects contributing to potential salt/nutrient impacts to the basin.

Table 3-5 shows water quantity projection forecast for the next 25 years to be in line with the projection timeline for the Urban Water Management Plan. These projections will allow the stakeholder group to analyze the salt/nutrient impacts the projects may have on the basin. This analysis will eventually help to determine the basin's assimilative capacity. Water quantity volumes were discussed for all proposed groundwater banking projects and determined that the extraction volumes should reflect the typical 10% leave behind in the groundwater banks.

Tables 3-6 through 3-15 analyzed the amount of TDS, Ammonia, Nitrate, Nitrite, Nitrate+Nitrite, Chloride, Fluoride, Arsenic, Boron, and Chromium that the proposed projects could potentially contribute to or take out of the basin. There was limited stormwater data from the Antelope Valley region, it was difficult to determine the appropriate stormwater quality values for analysis. Concentrations values for each SMP constituent associated with stormwater have not been included (*waiting on Lahontan RWQCB for information – GAMA website*).

Figure 3-7 was created showing current and future projects and existing well locations within each sub-basin.



**Table 3-4: Current and Future Projects Contributing to Potential Salt/Nutrient Impacts**

| Agency                  | Project Name  | Project Type                                 | IRWMP Project | Source/Type of Water<br>(imported/ sw/ gw/ rw) | Expected Implementation Date |
|-------------------------|---|--|---------------|--|------------------------------|
| AVEK/LACWWD40           | Water Supply Stabilization Project (WSSP-2 Project)             | Groundwater Banking                          | Y             | imported                                       | 2015                         |
| Edwards Air Force Base  | EAFB Irrigation Project   | Landscape Irrigation                         | N             | recycle  | implemented                  |
| Edwards Air Force Base  | Main Base Evaporation Ponds                                     | Evaporation Pond/ RW Management              | N             | recycle  | implemented                  |
| Edwards Air Force Base  | AFRL Treatment Plant (Air Force Research Laboratory)            | Wastewater Treatment Plant                   | N             | recycle  | implemented                  |
| LACWWD40                | Aquifer Storage and Recovery Project                            | Groundwater Banking                          | Y             | Imported                                       | 2010                         |
| LACWWD40                | In-Situ Arsenic Removal on Unsaturated Alluvium (pilot-project) | Groundwater Treatment/Recharge               | N             | groundwater                                    | 2010-2012                    |
| LACWWD40/Palm./Lanc.    | North LA/Kern County Regional Recycled Water Project            | Landscape Irrigation (may include other M&I) | Y             | recycle  | 2009-2020                    |
| LACSD 14                | Apollo Park   | Recreational Impoundments/Landscape Irrig.   | N             | recycle  | implemented                  |
| LACSD 14                | Piute Ponds   | Recreational Impoundments/Landscape Irrig.   | N             | recycle  | implemented                  |
| LACSD 14                | Agricultural Reuse Project                                      | Agricultural Irrigation                      | N             | recycle  | implemented                  |
| LACSD 14                | Lancaster Water Reclamation Plant                               | Wastewater Treatment Plant                   | Y             | recycle  | 2012                         |
| LACSD 20                | Agricultural Reuse Project                                      | Agricultural Irrigation                      | N             | recycle  | implemented                  |
| LACSD 20                | Palmdale Water Reclamation Plant                                | Wastewater Treatment Plant                   | Y             | recycle  | 2011                         |
| Lancaster               | Amargosa Water Banking & Stormwater Retention Project           | Groundwater Banking/Recharge/Recreation      | Y             | imported / sw/ rw                              | on hold                      |
| Lancaster               | eSolar Power Plant at Division and Avenue G                     | Evaporation Pond/ RW Management              | N             | recycle  | 2012                         |
| Palmdale                | Barrel Springs Detention Basin and Wetlands                     | Groundwater Recharge                         | Y             | stormwater                                     | 2035                         |
| Palmdale                | Hunt Canyon Groundwater Recharge & Flood Control Basin          | Groundwater Recharge                         | Y             | stormwater                                     | 2035                         |
| Palmdale/LACWWD40       | Amargosa Creek Recharge Project                                 | Groundwater Recharge                         | Y             | imported / sw                                  | 2015                         |
| Palmdale                | Palmdale Hybrid Power Plant Project                             | Evaporation Pond/ RW Management              | N             | recycle  | 2015                         |
| Palmdale Water District | Groundwater Recharge - Recycle Water Project                    | Groundwater Recharge                         | Y             | rw/ imported/ sw                               | 2015                         |
| Rosamond                | Antelope Valley Water Bank                                      | Groundwater Banking                          | Y             | imported                                       | implemented                  |
| Rosamond                | Evaporation Ponds   | Evaporation Pond/ RW Management              | N             | recycle  | implemented                  |
| Rosamond                | Golden Queens Mining Project                                    | Agricultural Irrigation                      | N             | recycle  | 2012                         |
| Rosamond                | RCSD Wastewater Treatment Plant Expansion                       | Wastewater Treatment Plant                   | N             | recycle  | 2012                         |

**Table 3-5: Water Quality Projections (AFY) for Current and Future Projects**

| Agency  | Project   | Source of Water<br>(imported/ sw/ gw/ rw) | Expected Implementation Date | Water Quantity Projections (AFY) |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |
|---|---|---|------------------------------|----------------------------------|------------|----------|------------|----------|------------|----------|------------|----------|------------|----------|------------|----------|------------|----------|------------|----------|------------|----------|------------|
|   |   |   |                              | 2010                             |            | 2011     |            | 2012     |            | 2013     |            | 2014     |            | 2015     |            | 2020     |            | 2025     |            | 2030     |            | 2035     |            |
|   |   |   |                              | Recharge                         | Extraction | Recharge | Extraction | Recharge | Extraction | Recharge | Extraction | Recharge | Extraction | Recharge | Extraction | Recharge | Extraction | Recharge | Extraction | Recharge | Extraction | Recharge | Extraction |
| <b>Groundwater Recharge/Banking</b>   |   |   |                              |                                  |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |
| AVEK/LACWWD40   | Water Supply Stabilization Project (WSSP-2 Project)             | imported                                  | 2015                         | 10,000                           | 9,000      | 10,000   | 9,000      | 10,000   | 9,000      | 10,000   | 9,000      | 10,000   | 9,000      | 25,000   | 22,500     | 25,000   | 22,500     | 25,000   | 22,500     | 25,000   | 22,500     | 25,000   | 22,500     |
| LACWWD40  | Aquifer Storage and Recovery Project                            | imported                                  | 2010                         | 53                               | 53         | 53       | 53         | 53       | 53         | 53       | 53         | 53       | 53         | 6,800    | 6,800      | 6,800    | 6,800      | 6,800    | 6,800      | 6,800    | 6,800      | 6,800    | 6,800      |
| LACWWD40  | In-Situ Arsenic Removal on Unsaturated Alluvium (pilot-project) | groundwater                               | 2010-2012                    | 100                              | 100        | 100      | 100        | 100      | 100        | 100      | 100        | 100      | 100        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        |
| Lancaster   | Amargosa Water Banking & Stormwater Retention Project           | imported / sw/ rw                         | on hold                      | N/A                              | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        | 50,000   | 45,000     | 50,000   | 45,000     | 50,000   | 45,000     | 50,000   | 45,000     |
| Palmdale  | Barrel Springs Detention Basin and Wetlands                     | stormwater                                | 2035                         | N/A                              | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        | 878      | 0          |
| Palmdale  | Hunt Canyon Groundwater Recharge & Flood Control Basin          | stormwater                                | 2035                         | N/A                              | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        | 3,000    | 0          |
| Palmdale/LACWWD40   | Amargosa Creek Recharge Project                                 | imported / sw                             | 2015                         | N/A                              | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        | 25,000   | 0          | 25,000   | 0          | 25,000   | 0          | 25,000   | 0          | 25,000   | 0          |
| Palmdale Water District   | Groundwater Recharge - Recycle Water Project                    | rw/ imported/ sw                          | 2015                         | N/A                              | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        | 10,000   | 0          | 10,000   | 0          | 10,000   | 0          | 10,000   | 0          | 10,000   | 0          |
| Rosamond  | Antelope Valley Water Bank                                      | imported                                  | implemented                  | 1,300                            | 0          | 1,300    | 0          | 1,300    | 0          | 1,300    | 0          | 1,300    | 0          | 22,000   | 19,900     | 22,000   | 19,900     | 22,000   | 19,900     | 22,000   | 19,900     | 22,000   | 21,200     |
| Agency  | Project   | Source of Water<br>(imported/ sw/ gw/ rw) | Expected Implementation Date | Water Quantity Projections (AFY) |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |
|   |   |   |                              | 2010                             |            | 2011     |            | 2012     |            | 2013     |            | 2014     |            | 2015     |            | 2020     |            | 2025     |            | 2030     |            | 2035     |            |
|   |   |   |                              | flow                             | flow       | flow     | flow       | flow     | flow       | flow     | flow       | flow     | flow       | flow     | flow       | flow     | flow       | flow     | flow       | flow     | flow       | flow     |            |
| <b>Irrigation/Impoundments</b>  |   |   |                              |                                  |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |
| Edwards Air Force Base  | EAFB Irrigation Project   | recycle                                   | implemented                  | 650                              | 650        | 650      | 650        | 650      | 650        | 650      | 650        | 650      | 650        | 650      | 650        | 650      | 650        | 650      | 650        | 650      | 650        | 650      | 650        |
| LACSD 14  | Apollo Park   | recycle                                   | implemented                  | 250                              | 250        | 250      | 250        | 250      | 250        | 250      | 250        | 250      | 250        | 250      | 250        | 250      | 250        | 250      | 250        | 250      | 250        | 250      | 250        |
| LACSD 14  | Plute Ponds   | recycle                                   | implemented                  | 5,000                            | 5,000      | 5,000    | 5,000      | 5,000    | 5,000      | 5,000    | 5,000      | 5,000    | 5,000      | 5,000    | 5,000      | 5,000    | 5,000      | 5,000    | 5,000      | 5,000    | 5,000      | 5,000    | 5,000      |
| LACSD 14  | Agricultural Reuse Project*                                     | recycle                                   | implemented                  | 1,100                            | 1,100      | 1,100    | 1,100      | 1,100    | 1,100      | 1,100    | 1,100      | 1,100    | 1,100      | 9,500    | 10,500     | 11,500   | 11,500     | 12,500   | 12,500     | 13,500   | 13,500     | 13,500   | 13,500     |
| LACSD 20  | Agricultural Reuse Project**                                    | recycle                                   | implemented                  | 8,500                            | 8,500      | 8,500    | 8,500      | 8,500    | 8,500      | 8,500    | 8,500      | 8,500    | 8,500      | 9,500    | 10,500     | 11,500   | 11,500     | 12,500   | 12,500     | 13,500   | 13,500     | 13,500   | 13,500     |
| LACWWD40/Palm/Lanc.   | North LA/Kern County Regional Recycled Water Project            | recycle                                   | 2011                         | N/A                              | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | 7,121      | 8,673    | 10,225     | 11,777   | 11,777     | 13,330   | 13,330     | 13,330   | 13,330     | 13,330   | 13,330     |
| Rosamond  | Golden Queens Mining Project                                    | recycle                                   | 2012                         | 1,000                            | 1,000      | 1,000    | 1,000      | 1,000    | 1,000      | 1,000    | 1,000      | 1,000    | 1,000      | 1,000    | 1,000      | 1,000    | 1,000      | 1,000    | 1,000      | 1,000    | 1,000      | 1,000    | 1,000      |
| Agency  | Project   | Source of Water<br>(imported/ sw/ gw/ rw) | Expected Implementation Date | Water Quantity Projections (AFY) |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |
|   |   |   |                              | 2010                             |            | 2011     |            | 2012     |            | 2013     |            | 2014     |            | 2015     |            | 2020     |            | 2025     |            | 2030     |            | 2035     |            |
|   |   |   |                              | flow                             | flow       | flow     | flow       | flow     | flow       | flow     | flow       | flow     | flow       | flow     | flow       | flow     | flow       | flow     | flow       | flow     | flow       | flow     |            |
| <b>Treatment</b>  |   |   |                              |                                  |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |
| Edwards Air Force Base  | AFRL Treatment Plant  | recycle                                   | implemented                  | 37                               | 37         | 37       | 37         | 37       | 37         | 37       | 37         | 37       | 37         | 37       | 37         | 37       | 37         | 37       | 37         | 37       | 37         | 37       | 37         |
| LACSD 14  | Lancaster Water Reclamation Plant                               | recycle                                   | 2011 (upgrades)              | N/A                              | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | 20,000     | 22,000   | 24,000     | 24,000   | 26,000     | 26,000   | 28,000     | 28,000   | 28,000     | 28,000   | 28,000     |
| LACSD 20  | Palmdale Water Reclamation Plant                                | recycle                                   | 2011 (upgrades)              | N/A                              | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | N/A        | N/A      | 15,000     | 16,500   | 18,000     | 18,000   | 19,500     | 19,500   | 21,000     | 21,000   | 21,000     | 21,000   | 21,000     |
| Rosamond  | RCSD Wastewater Treatment Plant Expansion                       | recycle                                   | 2012                         | 1,000                            | 1,000      | 1,000    | 1,000      | 1,000    | 1,000      | 1,000    | 1,000      | 1,000    | 1,000      | 1,000    | 1,000      | 1,000    | 1,000      | 1,000    | 1,000      | 1,000    | 1,000      | 1,000    | 1,000      |
| Agency  | Project   | Source of Water<br>(imported/ sw/ gw/ rw) | Expected Implementation Date | Water Quantity Projections (AFY) |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |
|   |   |   |                              | 2010                             |            | 2011     |            | 2012     |            | 2013     |            | 2014     |            | 2015     |            | 2020     |            | 2025     |            | 2030     |            | 2035     |            |
|   |   |   |                              | flow                             | flow       | flow     | flow       | flow     | flow       | flow     | flow       | flow     | flow       | flow     | flow       | flow     | flow       | flow     | flow       | flow     | flow       | flow     |            |
| <b>Evaporation/Export</b>   |   |   |                              |                                  |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |
| Edwards Air Force Base  | Main Base Evaporation Ponds                                     | recycle                                   | implemented                  | 80                               | 80         | 80       | 80         | 80       | 80         | 80       | 80         | 80       | 80         | 80       | 80         | 80       | 80         | 80       | 80         | 80       | 80         | 80       | 80         |
| Lancaster   | eSolar Power Plant at Division and Avenue G                     | recycle                                   | 2011                         | 80                               | 80         | 80       | 80         | 80       | 80         | 80       | 80         | 80       | 80         | 80       | 80         | 80       | 80         | 80       | 80         | 80       | 80         | 80       | 80         |
| Palmdale  | Palmdale Hybrid Power Plant Project                             | recycle                                   | 2011                         | 400                              | 400        | 400      | 400        | 400      | 400        | 400      | 400        | 400      | 3,400      | 3,400    | 3,400      | 3,400    | 3,400      | 3,400    | 3,400      | 3,400    | 3,400      | 3,400    | 3,400      |
| Rosamond  | Evaporation Ponds   | recycle                                   | 2012                         | 500                              | 500        | 500      | 500        | 500      | 500        | 500      | 500        | 500      | 500        | 500      | 500        | 500      | 500        | 500      | 500        | 500      | 500        | 500      | 500        |
| * Estimated Flow = (recycled water produced at Lancaster WRP) - (M&I use) - (Apollo Park flow) - (Plute Ponds flow) |   |   |                              |                                  |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |
| ** Estimated Flow = (recycled water produced at Palmdale WRP) - (M&I use)   |   |   |                              |                                  |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |          |            |

**Table 3-6: Potential Salt/Nutrient Impacts – Total Dissolved Solids**

| Potential Salt/Nutrient Impacts - TOTAL DISSOLVED SOLIDS |  |   |                      |                                    |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |         |         |
|--|--|---|----------------------|------------------------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|---------|---------|
| Agency   | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Total Dissolved Solids (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |         |         |
|  |  |   |                      | 2010 <sup>1</sup>                  |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>4</sup> |            | 2014 <sup>4</sup> |            | 2015 <sup>4</sup> |            | 2020 <sup>4</sup> |            | 2025 <sup>4</sup> |            | 2030 <sup>4</sup> |            | 2035 <sup>4</sup> |            |         |         |
|  |  |   |                      | Recharge                           | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction |         |         |
| <b>Groundwater Recharge/Banking</b>                      |  |   |                      |                                    |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |         |         |
| AVEK/LACWWD40  | Water Supply Stabilization Project (WSSP-2 Project)              | imported                                  | California Aqueduct  | 4,759                              | 4,283      | 1,768             | 1,591      | 4,759             | 4,283      | 4,759             | 4,283      | 4,759             | 4,283      | 11,897            | 10,707     | 11,897            | 10,707     | 11,897            | 10,707     | 11,897            | 10,707     | 11,897            | 10,707     |         |         |
| LACWWD40   | Aquifer Storage and Recovery Project                             | Imported                                  | Quartz Hill Plant    | 19                                 | 19         | 10                | 10         | 19                | 19         | 19                | 19         | 19                | 19         | 2,404             | 2,404      | 2,404             | 2,404      | 2,404             | 2,404      | 2,404             | 2,404      | 2,404             | 2,404      |         |         |
| LACWWD40   | In-Situ Arsenic Removal on Unsaturated Alluvium† (pilot-project) | groundwater                               | Groundwater Samples  | N/A                                | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        |         |         |
| Lancaster  | Amargosa Water Banking & Stormwater Retention Project            | imported / sw / rw                        | Recycled Water       | N/A                                | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | 37,391     | 33,652            | 37,391     | 33,652            | 37,391     | 33,652            | 37,391     | 33,652  |         |
| Palmdale   | Barrel Springs Detention Basin and Wetlands                      | stormwater                                | RWOCB Database       | N/A                                | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A     |         |
| Palmdale   | Hunt Canyon Groundwater Recharge & Flood Control Basin           | stormwater                                | RWOCB Database       | N/A                                | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A     |         |
| Palmdale/LACWWD40  | Amargosa Creek Recharge Project                                  | imported / sw                             | Quartz Hill Plant    | N/A                                | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 8,838             | 0          | 8,838             | 0          | 8,838             | 0          | 8,838             | 0          | 8,838             | 0          | 8,838   | 0       |
| Palmdale Water District                                  | Groundwater Recharge - Recycle Water Project                     | rw / imported / sw                        | Recycled Water       | N/A                                | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 7,478             | 0          | 7,478             | 0          | 7,478             | 0          | 7,478             | 0          | 7,478             | 0          | 7,478   | 0       |
| Rosamond   | Antelope Valley Water Bank                                       | imported                                  | California Aqueduct  | 619                                | 0          | 230               | 0          | 619               | 0          | 619               | 0          | 619               | 0          | 10,469            | 9,470      | 10,469            | 9,470      | 10,469            | 9,470      | 10,469            | 9,470      | 10,469            | 9,470      | 10,469  | 10,089  |
| Agency   | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Total Dissolved Solids (ton/year)  |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |         |         |
|  |  |   |                      | 2010 <sup>1</sup>                  |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>4</sup> |            | 2014 <sup>4</sup> |            | 2015 <sup>4</sup> |            | 2020 <sup>4</sup> |            | 2025 <sup>4</sup> |            | 2030 <sup>4</sup> |            | 2035 <sup>4</sup> |            |         |         |
|  |  |   |                      | flow                               | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       |         |         |
| <b>Irrigation/Impoundments</b>                           |  |   |                      |                                    |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |         |         |
| Edwards Air Force Base                                   | EAFB Irrigation Project  | recycle                                   | AFRL Treatment Plant | 460                                | 380        | 460               | 460        | 460               | 460        | 460               | 460        | 460               | 460        | 460               | 460        | 460               | 460        | 460               | 460        | 460               | 460        | 460               | 460        | 460     |         |
| LACSD 14   | Apollo Park  | recycle                                   | Recycled Water       | 187                                | 0          | 187               | 187        | 187               | 187        | 187               | 187        | 187               | 187        | 187               | 187        | 187               | 187        | 187               | 187        | 187               | 187        | 187               | 187        | 187     |         |
| LACSD 14   | Piute Ponds  | recycle                                   | Recycled Water       | 3,739                              | 0          | 3,739             | 3,739      | 3,739             | 3,739      | 3,739             | 3,739      | 3,739             | 3,739      | 3,739             | 3,739      | 3,739             | 3,739      | 3,739             | 3,739      | 3,739             | 3,739      | 3,739             | 3,739      | 3,739   |         |
| LACSD 14   | Agricultural Reuse Project*                                      | recycle                                   | Recycled Water       | 823                                | 0          | 823               | 823        | 823               | 823        | 823               | 823        | 823               | 823        | 7,104             | 7,852      | 8,600             | 9,348      | 10,095            | 10,843     | 11,591            | 12,339     | 13,087            | 13,835     | 14,583  |         |
| LACSD 20   | Agricultural Reuse Project**                                     | recycle                                   | Recycled Water       | 6,356                              | 0          | 6,356             | 6,356      | 6,356             | 6,356      | 6,356             | 6,356      | 6,356             | 6,356      | 7,104             | 7,852      | 8,600             | 9,348      | 10,095            | 10,843     | 11,591            | 12,339     | 13,087            | 13,835     | 14,583  |         |
| LACWWD40/Palm/Lanc.                                      | North LA/Kern County Regional Recycled Water Project             | recycle                                   | Recycled Water       | N/A                                | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 5,325             | 6,486      | 7,646             | 8,807      | 9,968             | 11,129     | 12,289            | 13,450     | 14,610            | 15,771     | 16,931  |         |
| Rosamond   | Golden Queens Mining Project                                     | recycle                                   | RCSD Treatment Plant | 816                                | 0          | 816               | 816        | 816               | 816        | 816               | 816        | 816               | 816        | 816               | 816        | 816               | 816        | 816               | 816        | 816               | 816        | 816               | 816        | 816     |         |
| Agency   | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Total Dissolved Solids (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |         |         |
|  |  |   |                      | 2010 <sup>1</sup>                  |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>4</sup> |            | 2014 <sup>4</sup> |            | 2015 <sup>4</sup> |            | 2020 <sup>4</sup> |            | 2025 <sup>4</sup> |            | 2030 <sup>4</sup> |            | 2035 <sup>4</sup> |            |         |         |
|  |  |   |                      | outflow                            | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow | outflow |
| <b>Treatment</b>   |  |   |                      |                                    |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |         |         |
| Edwards Air Force Base                                   | AFRL Treatment Plant   | recycle                                   | AFRL Treatment Plant | 26                                 | 22         | 26                | 26         | 26                | 26         | 26                | 26         | 26                | 26         | 26                | 26         | 26                | 26         | 26                | 26         | 26                | 26         | 26                | 26         | 26      |         |
| LACSD 14   | Lancaster Water Reclamation Plant                                | recycle                                   | Recycled Water       | N/A                                | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 14,956            | 16,452     | 17,948            | 19,443     | 20,939            | 22,434     | 23,930            | 25,426     | 26,921            | 28,417     | 29,913  |         |
| LACSD 20   | Palmdale Water Reclamation Plant                                 | recycle                                   | Recycled Water       | N/A                                | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 11,217            | 12,339     | 13,461            | 14,582     | 15,704            | 16,825     | 17,947            | 19,068     | 20,189            | 21,310     | 22,431  |         |
| Rosamond   | RCSD Wastewater Treatment Plant Expansion                        | recycle                                   | RCSD Treatment Plant | 816                                | 0          | 816               | 816        | 816               | 816        | 816               | 816        | 816               | 816        | 816               | 816        | 816               | 816        | 816               | 816        | 816               | 816        | 816               | 816        | 816     |         |
| Agency   | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Total Dissolved Solids (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |         |         |
|  |  |   |                      | 2010 <sup>1</sup>                  |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>4</sup> |            | 2014 <sup>4</sup> |            | 2015 <sup>4</sup> |            | 2020 <sup>4</sup> |            | 2025 <sup>4</sup> |            | 2030 <sup>4</sup> |            | 2035 <sup>4</sup> |            |         |         |
|  |  |   |                      | inflow                             | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow  | inflow  |
| <b>Evaporation/Export</b>                                |  |   |                      |                                    |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |         |         |
| Edwards Air Force Base                                   | Main Base Evaporation Ponds                                      | recycle                                   | AFRL Treatment Plant | 57                                 | 47         | 57                | 57         | 57                | 57         | 57                | 57         | 57                | 57         | 57                | 57         | 57                | 57         | 57                | 57         | 57                | 57         | 57                | 57         | 57      |         |
| Lancaster  | eSolar Power Plant at Division and Avenue G                      | recycle                                   | Recycled Water       | 60                                 | 0          | 60                | 60         | 60                | 60         | 60                | 60         | 60                | 60         | 60                | 60         | 60                | 60         | 60                | 60         | 60                | 60         | 60                | 60         | 60      |         |
| Palmdale   | Palmdale Hybrid Power Plant Project                              | recycle                                   | Recycled Water       | 299                                | 0          | 299               | 299        | 299               | 299        | 299               | 299        | 299               | 299        | 2,543             | 2,543      | 2,543             | 2,543      | 2,543             | 2,543      | 2,543             | 2,543      | 2,543             | 2,543      | 2,543   |         |
| Rosamond   | Evaporation Ponds  | recycle                                   | RCSD Treatment Plant | 408                                | 0          | 408               | 408        | 408               | 408        | 408               | 408        | 408               | 408        | 408               | 408        | 408               | 408        | 408               | 408        | 408               | 408        | 408               | 408        | 408     |         |

\* Estimated Flow = (recycled water produced at Lancaster WRP) - (M&I use) - (Apollo Park flow) - (Piute Ponds flow)  
 \*\* Estimated Flow = (recycled water produced at Palmdale WRP) - (M&I use)

**Table 3-7: Potential Salt/Nutrient Impacts – Ammonia**

| Potential Salt/Nutrient Impacts - AMMONIA   |  |   |                      |                     |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|---|--|---|----------------------|---------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|
| Agency  | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Ammonia (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|   |  |   |                      | 2010 <sup>1</sup>   |            | 2011 <sup>2</sup> |            | 2012 <sup>3</sup> |            | 2013 <sup>4</sup> |            | 2014 <sup>5</sup> |            | 2015 <sup>6</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>6</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>6</sup> |            |
|   |  |   |                      | Recharge            | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction |
| <b>Groundwater Recharge/Banking</b>   |  |   |                      |                     |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| AVEK/LACWWD40   | Water Supply Stabilization Project (WSSP-2 Project)              | imported                                  | California Aqueduct  | 0                   | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 |            |
| LACWWD40  | Aquifer Storage and Recovery Project                             | Imported                                  | Quartz Hill Plant    | 0                   | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 |            |
| LACWWD40  | In-Situ Arsenic Removal on Unsaturated Alluvium* (pilot-project) | groundwater                               | Groundwater Samples  | N/A                 | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               |            |
| Lancaster   | Amargosa Water Banking & Stormwater Retention Project            | imported / sw / rw                        | Recycled Water       | N/A                 | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | 68         | 61                | 68         | 61                | 68         | 61                | 68         | 61                |            |
| Palmdale  | Barrel Springs Detention Basin and Wetlands                      | stormwater                                | RWQCB Database       | N/A                 | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               |            |
| Palmdale  | Hunt Canyon Groundwater Recharge & Flood Control Basin           | stormwater                                | RWQCB Database       | N/A                 | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               |            |
| Palmdale/LACWWD40   | Amargosa Creek Recharge Project                                  | imported / sw                             | Quartz Hill Plant    | N/A                 | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 |            |
| Palmdale Water District   | Groundwater Recharge - Recycle Water Project                     | rw/ imported/ sw                          | Recycled Water       | N/A                 | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 14                | 0          | 14                | 0          | 14                | 0          | 14                | 0          | 14                |            |
| Rosamond  | Antelope Valley Water Bank                                       | imported                                  | California Aqueduct  | 0                   | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 |            |
| Agency  | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Ammonia (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|   |  |   |                      | 2010 <sup>1</sup>   |            | 2011 <sup>2</sup> |            | 2012 <sup>3</sup> |            | 2013 <sup>4</sup> |            | 2014 <sup>5</sup> |            | 2015 <sup>6</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>6</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>6</sup> |            |
|   |  |   |                      | flow                | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       |
| <b>Irrigation/Impoundments</b>  |  |   |                      |                     |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| Edwards Air Force Base  | EAFB Irrigation Project  | recycle                                   | AFRL Treatment Plant | 4                   | 2          | 4                 | 4          | 4                 | 4          | 4                 | 4          | 4                 | 4          | 4                 | 4          | 4                 | 4          | 4                 | 4          | 4                 | 4          | 4                 |            |
| LACSD 14  | Apollo Park  | recycle                                   | Recycled Water       | 0                   | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 |            |
| LACSD 14  | Piute Ponds  | recycle                                   | Recycled Water       | 7                   | 0          | 7                 | 7          | 7                 | 7          | 7                 | 7          | 7                 | 7          | 7                 | 7          | 7                 | 7          | 7                 | 7          | 7                 | 7          | 7                 |            |
| LACSD 14  | Agricultural Reuse Project*                                      | recycle                                   | Recycled Water       | 1                   | 0          | 1                 | 1          | 1                 | 1          | 1                 | 13         | 14                | 16         | 17                | 17         | 18                | 18         | 18                | 18         | 18                | 18         | 18                |            |
| LACSD 20  | Agricultural Reuse Project**                                     | recycle                                   | Recycled Water       | 12                  | 0          | 12                | 12         | 12                | 12         | 12                | 13         | 14                | 16         | 17                | 18         | 18                | 18         | 18                | 18         | 18                | 18         | 18                |            |
| LACWWD40/Palm/Lanc.   | North LA/Kern County Regional Recycled Water Project             | recycle                                   | Recycled Water       | N/A                 | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | 10         | 12                | 14         | 16                | 16         | 18                | 18         | 18                | 18         | 18                | 18         | 18                |            |
| Rosamond  | Golden Queens Mining Project                                     | recycle                                   | RCSD Treatment Plant | 1                   | 0          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 |            |
| Agency  | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Ammonia (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|   |  |   |                      | 2010 <sup>1</sup>   |            | 2011 <sup>2</sup> |            | 2012 <sup>3</sup> |            | 2013 <sup>4</sup> |            | 2014 <sup>5</sup> |            | 2015 <sup>6</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>6</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>6</sup> |            |
|   |  |   |                      | outflow             | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    |
| <b>Treatment</b>  |  |   |                      |                     |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| Edwards Air Force Base  | AFRL Treatment Plant   | recycle                                   | AFRL Treatment Plant | 0                   | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 |            |
| LACSD 14  | Lancaster Water Reclamation Plant                                | recycle                                   | Recycled Water       | N/A                 | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | 27         | 30                | 33         | 35                | 38         | 38                | 38         | 38                | 38         | 38                | 38         | 38                |            |
| LACSD 20  | Palmdale Water Reclamation Plant                                 | recycle                                   | Recycled Water       | N/A                 | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | 20         | 22                | 24         | 27                | 29         | 29                | 29         | 29                | 29         | 29                | 29         | 29                |            |
| Rosamond  | RCSD Wastewater Treatment Plant Expansion                        | recycle                                   | RCSD Treatment Plant | 1                   | 0          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 |            |
| Agency  | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Ammonia (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|   |  |   |                      | 2010 <sup>1</sup>   |            | 2011 <sup>2</sup> |            | 2012 <sup>3</sup> |            | 2013 <sup>4</sup> |            | 2014 <sup>5</sup> |            | 2015 <sup>6</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>6</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>6</sup> |            |
|   |  |   |                      | inflow              | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     |
| <b>Evaporation/Export</b>   |  |   |                      |                     |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| Edwards Air Force Base  | Main Base Evaporation Ponds                                      | recycle                                   | AFRL Treatment Plant | 0                   | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 |            |
| Lancaster   | eSolar Power Plant at Division and Avenue G                      | recycle                                   | Recycled Water       | 0                   | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 |            |
| Palmdale  | Palmdale Hybrid Power Plant Project                              | recycle                                   | Recycled Water       | 1                   | 0          | 1                 | 1          | 1                 | 1          | 1                 | 5          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 |            |
| Rosamond  | Evaporation Ponds  | recycle                                   | RCSD Treatment Plant | 1                   | 0          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 |            |
| * Estimated Flow = (recycled water produced at Lancaster WRP) - (M&I use) - (Apollo Park flow) - (Piute Ponds flow) |  |   |                      |                     |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| ** Estimated Flow = (recycled water produced at Palmdale WRP) - (M&I use)   |  |   |                      |                     |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |

**Table 3-8: Potential Salt/Nutrient Impacts – Nitrate**

| Potential Salt/Nutrient Impacts - NITRATES |   |   |                      |                                 |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |     |
|--|---|---|----------------------|---------------------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-----|
| Agency                                     | Project   | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Nitrate (tons/year as nitrogen) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |     |
|  |   |   |                      | 2010 <sup>1</sup>               |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>1</sup> |            | 2014 <sup>1</sup> |            | 2015 <sup>5</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>5</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>5</sup> |            |     |
|  |   |   |                      | Recharge                        | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction |     |
| <b>Groundwater Recharge/Banking</b>        |   |   |                      |                                 |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |     |
| AVEK/LACWWD40                              | Water Supply Stabilization Project (WSSP-2 Project)             | imported                                  | California Aqueduct  | 7                               | 6          | 7                 | 6          | 7                 | 6          | 7                 | 6          | 7                 | 6          | 17                | 15         | 17                | 15         | 17                | 15         | 17                | 15         | 17                | 15         |     |
| LACWWD40                                   | Aquifer Storage and Recovery Project                            | Imported                                  | Quartz Hill Plant    | 0                               | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 6                 | 6          | 6                 | 6          | 6                 | 6          | 6                 | 6          | 6                 | 6          |     |
| LACWWD40                                   | In-Situ Arsenic Removal on Unsaturated Alluvium (pilot-project) | groundwater                               | Groundwater Sample   | N/A                             | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        |     |
| Lancaster                                  | Amargosa Water Banking & Stormwater Retention Project           | imported / sw / rw                        | Recycled Water       | N/A                             | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | 272        | 245               | 272        | 245               | 272        | 245               | 272        | 245 |
| Palmdale                                   | Barrel Springs Detention Basin and Wetlands                     | stormwater                                | RWQCB Database       | N/A                             | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               |            |     |
| Palmdale                                   | Hunt Canyon Groundwater Recharge & Flood Control Basin          | stormwater                                | RWQCB Database       | N/A                             | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               |            |     |
| Palmdale/LACWWD40                          | Amargosa Creek Recharge Project                                 | imported / sw                             | Quartz Hill Plant    | N/A                             | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 20                | 0          | 20                | 0          | 20                | 0          | 20                | 0          | 20                | 0          |     |
| Palmdale Water District                    | Groundwater Recharge - Recycle Water Project                    | rw/imported/ sw                           | Recycled Water       | N/A                             | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 54                | 0          | 54                | 0          | 54                | 0          | 54                | 0          | 54                | 0          |     |
| Rosamond                                   | Antelope Valley Water Bank                                      | imported                                  | California Aqueduct  | 1                               | 0          | 1                 | 0          | 1                 | 0          | 1                 | 0          | 1                 | 0          | 15                | 14         | 15                | 14         | 15                | 14         | 15                | 14         | 15                | 14         |     |
| Agency                                     | Project   | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Nitrate (tons/year as nitrogen) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |     |
|  |   |   |                      | 2010 <sup>1</sup>               |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>1</sup> |            | 2014 <sup>1</sup> |            | 2015 <sup>5</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>5</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>5</sup> |            |     |
|  |   |   |                      | flow                            | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       |     |
| <b>Irrigation/Impoundments</b>             |   |   |                      |                                 |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |     |
| Edwards Air Force Base                     | EAFB Irrigation Project   | recycle                                   | AFRL Treatment Plant | 5                               | 3          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 | 5          |     |
| LACSD 14                                   | Apollo Park   | recycle                                   | Recycled Water       | 1                               | 0          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          |     |
| LACSD 14                                   | Piute Ponds   | recycle                                   | Recycled Water       | 27                              | 0          | 27                | 27         | 27                | 27         | 27                | 27         | 27                | 27         | 27                | 27         | 27                | 27         | 27                | 27         | 27                | 27         | 27                | 27         |     |
| LACSD 14                                   | Agricultural Reuse Project*                                     | recycle                                   | Recycled Water       | 6                               | 0          | 6                 | 6          | 6                 | 6          | 6                 | 6          | 6                 | 6          | 52                | 57         | 63                | 68         | 68                | 68         | 68                | 68         | 68                | 68         |     |
| LACSD 20                                   | Agricultural Reuse Project**                                    | recycle                                   | Recycled Water       | 46                              | 0          | 46                | 46         | 46                | 46         | 46                | 46         | 46                | 46         | 52                | 57         | 63                | 68         | 68                | 68         | 68                | 68         | 68                | 68         |     |
| LACWWD40/Palm/Lanc.                        | North LA/Kern County Regional Recycled Water Project            | recycle                                   | Recycled Water       | N/A                             | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 39                | 47         | 56                | 64         | 64                | 64         | 64                | 64         | 64                | 64         |     |
| Rosamond                                   | Golden Queens Miring Project                                    | recycle                                   | RCSD Treatment Plant | 5                               | 0          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 |            |     |
| Agency                                     | Project   | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Nitrate (tons/year as nitrogen) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |     |
|  |   |   |                      | 2010 <sup>1</sup>               |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>1</sup> |            | 2014 <sup>1</sup> |            | 2015 <sup>5</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>5</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>5</sup> |            |     |
|  |   |   |                      | outflow                         | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    |     |
| <b>Treatment</b>                           |   |   |                      |                                 |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |     |
| Edwards Air Force Base                     | AFRL Treatment Plant  | recycle                                   | AFRL Treatment Plant | 0                               | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |     |
| LACSD 14                                   | Lancaster Water Reclamation Plant                               | recycle                                   | Recycled Water       | N/A                             | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 109               | 120        | 131               | 141        | 141               | 141        | 141               | 141        | 141               | 152        |     |
| LACSD 20                                   | Palmdale Water Reclamation Plant                                | recycle                                   | Recycled Water       | N/A                             | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 82                | 90         | 98                | 106        | 106               | 106        | 106               | 106        | 106               | 114        |     |
| Rosamond                                   | RCSD Wastewater Treatment Plant Expansion                       | recycle                                   | RCSD Treatment Plant | 5                               | 0          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 |            |     |
| Agency                                     | Project   | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Nitrate (tons/year as nitrogen) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |     |
|  |   |   |                      | 2010 <sup>1</sup>               |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>1</sup> |            | 2014 <sup>1</sup> |            | 2015 <sup>5</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>5</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>5</sup> |            |     |
|  |   |   |                      | inflow                          | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            |            |     |
| <b>Evaporation/Export</b>                  |   |   |                      |                                 |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |     |
| Edwards Air Force Base                     | Main Base Evaporation Ponds                                     | recycle                                   | AFRL Treatment Plant | 1                               | 0          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          |     |
| Lancaster                                  | eSolar Power Plant at Division and Avenue G                     | recycle                                   | Recycled Water       | 0                               | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |     |
| Palmdale                                   | Palmdale Hybrid Power Plant Project                             | recycle                                   | Recycled Water       | 2                               | 0          | 2                 | 2          | 2                 | 2          | 2                 | 2          | 2                 | 2          | 18                | 18         | 18                | 18         | 18                | 18         | 18                | 18         | 18                | 18         |     |
| Rosamond                                   | Evaporation Ponds   | recycle                                   | RCSD Treatment Plant | 3                               | 0          | 3                 | 3          | 3                 | 3          | 3                 | 3          | 3                 | 3          | 3                 | 3          | 3                 | 3          | 3                 | 3          | 3                 | 3          | 3                 | 3          |     |

\* Estimated Flow = (recycled water produced at Lancaster WRP) - (M&I use) - (Apollo Park flow) - (Piute Ponds flow)  
 \*\* Estimated Flow = (recycled water produced at Palmdale WRP) - (M&I use)

**Table 3-9: Potential Salt/Nutrient Impacts – Nitrite**

| Potential Salt/Nutrient Impacts - NITRITES  |  |   |                      |                                 |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|---|--|---|----------------------|---------------------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|
| Agency  | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Nitrite (tons/year as nitrogen) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|   |  |   |                      | 2010 <sup>1</sup>               |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>3</sup> |            | 2014 <sup>3</sup> |            | 2015 <sup>5</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>5</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>5</sup> |            |
|   |  |   |                      | Recharge                        | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction |
| <b>Groundwater Recharge/Banking</b>   |  |   |                      |                                 |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| AVEK/LACWWD40   | Water Supply Stabilization Project (WSSP-2 Project)              | imported                                  | California Aqueduct  | 0                               | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| LACWWD40  | Aquifer Storage and Recovery Project                             | Imported                                  | Quartz Hill Plant    | 0                               | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| LACWWD40  | In-Situ Arsenic Removal on Unsaturated Alluvium† (pilot-project) | groundwater                               | Groundwater Sample   | N/A                             | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        |                   |            |
| Lancaster   | Amargosa Water Banking & Stormwater Retention Project            | imported / sw/ rw                         | Recycled Water       | N/A                             | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 68                | 61         | 68                | 61         | 68                | 61         |                   |            |
| Palmdale  | Barrel Springs Detention Basin and Wetlands                      | stormwater                                | RWQCB Database       | N/A                             | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        |                   |            |
| Palmdale  | Hunt Canyon Groundwater Recharge & Flood Control Basin           | stormwater                                | RWQCB Database       | N/A                             | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        |                   |            |
| Palmdale/LACWWD40   | Amargosa Creek Recharge Project                                  | imported / sw                             | Quartz Hill Plant    | N/A                             | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 |            |                   |            |
| Palmdale Water District   | Groundwater Recharge - Recycle Water Project                     | rw/ imported/ sw                          | Recycled Water       | N/A                             | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | 14         | 0                 | 14         | 0                 | 14         | 0                 | 14         | 0                 |            |                   |            |
| Rosamond  | Antelope Valley Water Bank                                       | imported                                  | California Aqueduct  | 0                               | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 |            |                   |            |
| Agency  | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Nitrite (tons/year as nitrogen) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|   |  |   |                      | 2010 <sup>1</sup>               |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>3</sup> |            | 2014 <sup>3</sup> |            | 2015 <sup>5</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>5</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>5</sup> |            |
|   |  |   |                      | flow                            | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              |            |
| <b>Irrigation/Impoundments</b>  |  |   |                      |                                 |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| Edwards Air Force Base  | EAFB Irrigation Project  | recycle                                   | AFRL Treatment Plant | #VALUE!                         | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    |                   |            |
| LACSD 14  | Apollo Park  | recycle                                   | Recycled Water       | 0                               | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| LACSD 14  | Piute Ponds  | recycle                                   | Recycled Water       | 7                               | 0          | 7                 | 7          | 7                 | 7          | 7                 | 7          | 7                 | 7          | 7                 | 7          | 7                 | 7          | 7                 | 7          | 7                 | 7          |                   |            |
| LACSD 14  | Agricultural Reuse Project*                                      | recycle                                   | Recycled Water       | 1                               | 0          | 1                 | 1          | 1                 | 1          | 13                | 14         | 16                | 17         | 18                |            |                   |            |                   |            |                   |            |                   |            |
| LACSD 20  | Agricultural Reuse Project**                                     | recycle                                   | Recycled Water       | 12                              | 0          | 12                | 12         | 12                | 12         | 13                | 14         | 16                | 17         | 18                |            |                   |            |                   |            |                   |            |                   |            |
| LACWWD40/Palm/Lanc.   | North LA/Kern County Regional Recycled Water Project             | recycle                                   | Recycled Water       | N/A                             | N/A        | N/A               | N/A        | N/A               | N/A        | 10                | 12         | 14                | 16         | 18                |            |                   |            |                   |            |                   |            |                   |            |
| Rosamond  | Golden Queens Mining Project                                     | recycle                                   | RCSL Treatment Plant | 1                               | 0          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 |            |                   |            |                   |            |                   |            |                   |            |
| Agency  | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Nitrite (tons/year as nitrogen) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|   |  |   |                      | 2010 <sup>1</sup>               |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>3</sup> |            | 2014 <sup>3</sup> |            | 2015 <sup>5</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>5</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>5</sup> |            |
|   |  |   |                      | outflow                         | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           |            |
| <b>Treatment</b>  |  |   |                      |                                 |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| Edwards Air Force Base  | AFRL Treatment Plant   | recycle                                   | AFRL Treatment Plant | #VALUE!                         | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    |                   |            |
| LACSD 14  | Lancaster Water Reclamation Plant                                | recycle                                   | Recycled Water       | N/A                             | N/A        | N/A               | N/A        | N/A               | N/A        | 27                | 30         | 35                | 38         |                   |            |                   |            |                   |            |                   |            |                   |            |
| LACSD 20  | Palmdale Water Reclamation Plant                                 | recycle                                   | Recycled Water       | N/A                             | N/A        | N/A               | N/A        | N/A               | N/A        | 20                | 22         | 24                | 27         | 29                |            |                   |            |                   |            |                   |            |                   |            |
| Rosamond  | RCSL Wastewater Treatment Plant Expansion                        | recycle                                   | RCSL Treatment Plant | 1                               | 0          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 |            |                   |            |                   |            |                   |            |                   |            |
| Agency  | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Nitrite (tons/year as nitrogen) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|   |  |   |                      | 2010 <sup>1</sup>               |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>3</sup> |            | 2014 <sup>3</sup> |            | 2015 <sup>5</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>5</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>5</sup> |            |
|   |  |   |                      | inflow                          | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     |                   |            |
| <b>Evaporation/Export</b>   |  |   |                      |                                 |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| Edwards Air Force Base  | Main Base Evaporation Ponds                                      | recycle                                   | AFRL Treatment Plant | #VALUE!                         | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    |                   |            |
| Lancaster   | eSolar Power Plant at Division and Avenue G                      | recycle                                   | Recycled Water       | 0                               | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |                   |            |                   |            |                   |            |                   |            |
| Palmdale  | Palmdale Hybrid Power Plant Project                              | recycle                                   | Recycled Water       | 1                               | 0          | 1                 | 1          | 1                 | 1          | 5                 | 5          | 5                 | 5          | 5                 |            |                   |            |                   |            |                   |            |                   |            |
| Rosamond  | Evaporation Ponds  | recycle                                   | RCSL Treatment Plant | 1                               | 0          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 |            |                   |            |                   |            |                   |            |                   |            |
| * Estimated Flow = (recycled water produced at Lancaster WRP) - (M&I use) - (Apollo Park flow) - (Piute Ponds flow) |  |   |                      |                                 |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| ** Estimated Flow = (recycled water produced at Palmdale WRP) - (M&I use)   |  |   |                      |                                 |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |

**Table 3-10: Potential Salt/Nutrient Impacts – Nitrate+Nitrite**

| Potential Salt/Nutrient Impacts - NITRATE + NITRITE |  |   |                      |   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |     |
|---|--|---|----------------------|---|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-----|
| Agency  | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Nitrate + Nitrite (tons/year as nitrogen) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |     |
|   |  |   |                      | 2010 <sup>1</sup>                         |            | 2011 <sup>2</sup> |            | 2012 <sup>3</sup> |            | 2013 <sup>4</sup> |            | 2014 <sup>5</sup> |            | 2015 <sup>6</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>5</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>5</sup> |            |     |
|   |  |   |                      | Recharge                                  | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction |     |
| <b>Groundwater Recharge/Banking</b>                 |  |   |                      |   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |     |
| AVEK/LACWWD40                                       | Water Supply Stabilization Project (WSSP-2 Project)              | imported                                  | California Aqueduct  | 14  | 12         | 14                | 12         | 14                | 12         | 14                | 12         | 14                | 12         | 34                | 31         | 34                | 31         | 34                | 31         | 34                | 31         | 34                | 31         |     |
| LACWWD40  | Aquifer Storage and Recovery Project                             | imported                                  | Quartz Hill Plant    | 0   | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 9                 | 9          | 9                 | 9          | 9                 | 9          | 9                 | 9          | 9                 | 9          |     |
| LACWWD40  | In-Situ Arsenic Removal on Unsaturated Alluvium* (pilot-project) | groundwater                               | Groundwater Sample   | N/A                                       | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        |     |
| Lancaster   | Amargosa Water Banking & Stormwater Retention Project            | imported / sw / rw                        | Recycled Water       | N/A                                       | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | 544        | 489               | 544        | 489               | 544        | 489               | 544        | 489 |
| Palmdale  | Barrel Springs Detention Basin and Wetlands                      | stormwater                                | RWQCB Database       | N/A                                       | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        |     |
| Palmdale  | Hunt Canyon Groundwater Recharge & Flood Control Basin           | stormwater                                | RWQCB Database       | N/A                                       | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        |     |
| Palmdale/LACWWD40                                   | Amargosa Creek Recharge Project                                  | imported / sw                             | Quartz Hill Plant    | N/A                                       | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 34                | 0          | 34                | 0          | 34                | 0          | 34                | 0          | 34                | 0          |     |
| Palmdale Water District                             | Groundwater Recharge - Recycle Water Project                     | rw/ imported/ sw                          | Recycled Water       | N/A                                       | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 109               | 0          | 109               | 0          | 109               | 0          | 109               | 0          | 109               | 0          |     |
| Rosamond  | Antelope Valley Water Bank                                       | imported                                  | California Aqueduct  | 2   | 0          | 2                 | 0          | 2                 | 0          | 2                 | 0          | 2                 | 0          | 30                | 27         | 30                | 27         | 30                | 27         | 30                | 27         | 30                | 29         |     |
| Agency  | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Nitrate + Nitrite (tons/year as nitrogen) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |     |
|   |  |   |                      | 2010 <sup>1</sup>                         |            | 2011 <sup>2</sup> |            | 2012 <sup>3</sup> |            | 2013 <sup>4</sup> |            | 2014 <sup>5</sup> |            | 2015 <sup>6</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>5</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>5</sup> |            |     |
|   |  |   |                      | flow                                      | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       |     |
| <b>Irrigation/Impoundments</b>                      |  |   |                      |   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |     |
| Edwards Air Force Base                              | EAFB Irrigation Project  | recycle                                   | AFRL Treatment Plant | #VALUE!                                   | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    |     |
| LACSD 14  | Apollo Park  | recycle                                   | Recycled Water       | 3   | 0          | 3                 | 0          | 3                 | 0          | 3                 | 0          | 3                 | 0          | 3                 | 3          | 3                 | 3          | 3                 | 3          | 3                 | 3          | 3                 | 3          |     |
| LACSD 14  | Piute Ponds  | recycle                                   | Recycled Water       | 54  | 0          | 54                | 0          | 54                | 0          | 54                | 0          | 54                | 0          | 54                | 54         | 54                | 54         | 54                | 54         | 54                | 54         | 54                | 54         |     |
| LACSD 14  | Agricultural Reuse Project*                                      | recycle                                   | Recycled Water       | 12  | 0          | 12                | 0          | 12                | 0          | 12                | 0          | 12                | 0          | 103               | 114        | 125               | 136        | 147               | 158        | 169               | 180        | 191               | 202        |     |
| LACSD 20  | Agricultural Reuse Project**                                     | recycle                                   | Recycled Water       | 92  | 0          | 92                | 0          | 92                | 0          | 92                | 0          | 92                | 0          | 103               | 114        | 125               | 136        | 147               | 158        | 169               | 180        | 191               | 202        |     |
| LACWWD40/Palm/Lanc.                                 | North LA/Kern County Regional Recycled Water Project             | recycle                                   | Recycled Water       | N/A                                       | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 77                | 94         | 111               | 128        | 145               | 162        | 179               | 196        | 213               | 230        |     |
| Rosamond  | Golden Queens Mining Project                                     | recycle                                   | RCSD Treatment Plant | 11  | 0          | 11                | 0          | 11                | 0          | 11                | 0          | 11                | 0          | 11                | 11         | 11                | 11         | 11                | 11         | 11                | 11         | 11                | 11         |     |
| Agency  | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Nitrate + Nitrite (tons/year as nitrogen) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |     |
|   |  |   |                      | 2010 <sup>1</sup>                         |            | 2011 <sup>2</sup> |            | 2012 <sup>3</sup> |            | 2013 <sup>4</sup> |            | 2014 <sup>5</sup> |            | 2015 <sup>6</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>5</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>5</sup> |            |     |
|   |  |   |                      | outflow                                   | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    |     |
| <b>Treatment</b>                                    |  |   |                      |   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |     |
| Edwards Air Force Base                              | AFRL Treatment Plant   | recycle                                   | AFRL Treatment Plant | #VALUE!                                   | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    |     |
| LACSD 14  | Lancaster Water Reclamation Plant                                | recycle                                   | Recycled Water       | N/A                                       | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 218               | 239        | 261               | 283        | 305               | 327        | 349               | 371        | 393               | 415        |     |
| LACSD 20  | Palmdale Water Reclamation Plant                                 | recycle                                   | Recycled Water       | N/A                                       | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 163               | 179        | 196               | 212        | 228               | 244        | 260               | 276        | 292               | 308        |     |
| Rosamond  | RCSD Wastewater Treatment Plant Expansion                        | recycle                                   | RCSD Treatment Plant | 11  | 0          | 11                | 0          | 11                | 0          | 11                | 0          | 11                | 0          | 11                | 11         | 11                | 11         | 11                | 11         | 11                | 11         | 11                | 11         |     |
| Agency  | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Nitrate + Nitrite (tons/year as nitrogen) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |     |
|   |  |   |                      | 2010 <sup>1</sup>                         |            | 2011 <sup>2</sup> |            | 2012 <sup>3</sup> |            | 2013 <sup>4</sup> |            | 2014 <sup>5</sup> |            | 2015 <sup>6</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>5</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>5</sup> |            |     |
|   |  |   |                      | inflow                                    | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     |     |
| <b>Evaporation/Export</b>                           |  |   |                      |   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |     |
| Edwards Air Force Base                              | Main Base Evaporation Ponds                                      | recycle                                   | AFRL Treatment Plant | #VALUE!                                   | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    |     |
| Lancaster   | eSolar Power Plant at Division and Avenue G                      | recycle                                   | Recycled Water       | 1   | 0          | 1                 | 0          | 1                 | 0          | 1                 | 0          | 1                 | 0          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          |     |
| Palmdale  | Palmdale Hybrid Power Plant Project                              | recycle                                   | Recycled Water       | 4   | 0          | 4                 | 0          | 4                 | 0          | 4                 | 0          | 4                 | 0          | 37                | 37         | 37                | 37         | 37                | 37         | 37                | 37         | 37                | 37         |     |
| Rosamond  | Evaporation Ponds  | recycle                                   | RCSD Treatment Plant | 5   | 0          | 5                 | 0          | 5                 | 0          | 5                 | 0          | 5                 | 0          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 | 5          |     |

\* Estimated Flow = (recycled water produced at Lancaster WRP) - (M&I use) - (Apollo Park flow) - (Piute Ponds flow)

\*\* Estimated Flow = (recycled water produced at Palmdale WRP) - (M&I use)

**Table 3-11: Potential Salt/Nutrient Impacts – Chloride**

| Potential Salt/Nutrient Impacts - CHLORIDE |  |   |                      |                      |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|--|--|---|----------------------|----------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|
| Agency                                     | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Chloride (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|  |  |   |                      | 2010 <sup>1</sup>    |            | 2011 <sup>2</sup> |            | 2012 <sup>3</sup> |            | 2013 <sup>4</sup> |            | 2014 <sup>5</sup> |            | 2015 <sup>6</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>6</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>6</sup> |            |
|  |  |   |                      | Recharge             | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction |
| <b>Groundwater Recharge/Banking</b>        |  |   |                      |                      |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| AVEK/LACWWD40                              | Water Supply Stabilization Project (WSSP-2 Project)              | imported                                  | California Aqueduct  | 1,115                | 1,003      | 299               | 269        | 1,115             | 1,003      | 1,115             | 1,003      | 1,115             | 1,003      | 2,787             | 2,509      | 2,787             | 2,509      | 2,787             | 2,509      | 2,787             | 2,509      | 2,787             | 2,509      |
| LACWWD40                                   | Aquifer Storage and Recovery Project                             | Imported                                  | Quartz Hill Plant    | 6                    | 6          | 2                 | 2          | 6                 | 6          | 6                 | 6          | 6                 | 6          | 795               | 795        | 795               | 795        | 795               | 795        | 795               | 795        | 795               | 795        |
| LACWWD40                                   | In-Situ Arsenic Removal on Unsaturated Alluvium† (pilot-project) | groundwater                               | Groundwater Samples  | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        |
| Lancaster                                  | Amargosa Water Banking & Stormwater Retention Project            | imported / sw / rw                        | Recycled Water       | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 9,518             | 8,566      | 9,518             | 8,566      | 9,518             | 8,566      | 9,518             | 8,566      |
| Palmdale                                   | Barrel Springs Detention Basin and Wetlands                      | stormwater                                | RWQCB Database       | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        |
| Palmdale                                   | Hunt Canyon Groundwater Recharge & Flood Control Basin           | stormwater                                | RWQCB Database       | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        |
| Palmdale/LACWWD40                          | Amargosa Creek Recharge Project                                  | imported / sw                             | Quartz Hill Plant    | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 2,923             | 0          | 2,923             | 0          | 2,923             | 0          | 2,923             | 0          | 2,923             | 0          |
| Palmdale Water District                    | Groundwater Recharge - Recycle Water Project                     | rw/imported/ sw                           | Recycled Water       | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 1,904             | 0          | 1,904             | 0          | 1,904             | 0          | 1,904             | 0          | 1,904             | 0          |
| Rosamond                                   | Antelope Valley Water Bank                                       | imported                                  | California Aqueduct  | 145                  | 0          | 39                | 0          | 145               | 0          | 145               | 0          | 145               | 0          | 2,453             | 2,219      | 2,453             | 2,219      | 2,453             | 2,219      | 2,453             | 2,219      | 2,453             | 2,364      |
| Agency                                     | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Chloride (ton/year)  |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|  |  |   |                      | 2010 <sup>1</sup>    |            | 2011 <sup>2</sup> |            | 2012 <sup>3</sup> |            | 2013 <sup>4</sup> |            | 2014 <sup>5</sup> |            | 2015 <sup>6</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>6</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>6</sup> |            |
|  |  |   |                      | flow                 | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              |            |
| <b>Irrigation/Impoundments</b>             |  |   |                      |                      |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| Edwards Air Force Base                     | EAFB Irrigation Project  | recycle                                   | AFRL Treatment Plant | 66                   | 44         | 66                | 66         | 66                | 66         | 66                | 66         | 66                | 66         | 66                | 66         | 66                | 66         | 66                | 66         | 66                | 66         | 66                | 66         |
| LACSD 14                                   | Apollo Park  | recycle                                   | Recycled Water       | 48                   | 0          | 48                | 48         | 48                | 48         | 48                | 48         | 48                | 48         | 48                | 48         | 48                | 48         | 48                | 48         | 48                | 48         | 48                | 48         |
| LACSD 14                                   | Piute Ponds  | recycle                                   | Recycled Water       | 952                  | 0          | 952               | 952        | 952               | 952        | 952               | 952        | 952               | 952        | 952               | 952        | 952               | 952        | 952               | 952        | 952               | 952        | 952               | 952        |
| LACSD 14                                   | Agricultural Reuse Project*                                      | recycle                                   | Recycled Water       | 209                  | 0          | 209               | 209        | 209               | 209        | 209               | 209        | 209               | 209        | 1,808             | 1,999      | 2,189             | 2,379      | 2,570             | 2,760      | 2,950             | 3,140      | 3,330             | 3,520      |
| LACSD 20                                   | Agricultural Reuse Project**                                     | recycle                                   | Recycled Water       | 1,618                | 0          | 1,618             | 1,618      | 1,618             | 1,618      | 1,618             | 1,618      | 1,618             | 1,618      | 1,808             | 1,999      | 2,189             | 2,379      | 2,570             | 2,760      | 2,950             | 3,140      | 3,330             | 3,520      |
| LACWWD40/Palm.Lanc.                        | North LA/Kern County Regional Recycled Water Project             | recycle                                   | Recycled Water       | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 1,356             | 1,651      | 1,946             | 2,242      | 2,537             | 2,833      | 3,129             | 3,425      | 3,721             | 4,017      |
| Rosamond                                   | Golden Queens Mining Project                                     | recycle                                   | RCSL Treatment Plant | 190                  | 0          | 190               | 190        | 190               | 190        | 190               | 190        | 190               | 190        | 190               | 190        | 190               | 190        | 190               | 190        | 190               | 190        | 190               | 190        |
| Agency                                     | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Chloride (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|  |  |   |                      | 2010 <sup>1</sup>    |            | 2011 <sup>2</sup> |            | 2012 <sup>3</sup> |            | 2013 <sup>4</sup> |            | 2014 <sup>5</sup> |            | 2015 <sup>6</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>6</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>6</sup> |            |
|  |  |   |                      | outflow              | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    |
| <b>Treatment</b>                           |  |   |                      |                      |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| Edwards Air Force Base                     | AFRL Treatment Plant   | recycle                                   | AFRL Treatment Plant | 4                    | 3          | 4                 | 4          | 4                 | 4          | 4                 | 4          | 4                 | 4          | 4                 | 4          | 4                 | 4          | 4                 | 4          | 4                 | 4          | 4                 | 4          |
| LACSD 14                                   | Lancaster Water Reclamation Plant                                | recycle                                   | Recycled Water       | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 3,807             | 4,188      | 4,568             | 4,949      | 5,330             | 5,711      | 6,092             | 6,473      | 6,854             | 7,235      |
| LACSD 20                                   | Palmdale Water Reclamation Plant                                 | recycle                                   | Recycled Water       | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 2,855             | 3,141      | 3,426             | 3,712      | 3,997             | 4,283      | 4,568             | 4,854      | 5,139             | 5,425      |
| Rosamond                                   | RCSL Wastewater Treatment Plant Expansion                        | recycle                                   | RCSL Treatment Plant | 190                  | 0          | 190               | 190        | 190               | 190        | 190               | 190        | 190               | 190        | 190               | 190        | 190               | 190        | 190               | 190        | 190               | 190        | 190               | 190        |
| Agency                                     | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Chloride (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|  |  |   |                      | 2010 <sup>1</sup>    |            | 2011 <sup>2</sup> |            | 2012 <sup>3</sup> |            | 2013 <sup>4</sup> |            | 2014 <sup>5</sup> |            | 2015 <sup>6</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>6</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>6</sup> |            |
|  |  |   |                      | inflow               | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            |            |
| <b>Evaporation/Export</b>                  |  |   |                      |                      |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| Edwards Air Force Base                     | Main Base Evaporation Ponds                                      | recycle                                   | AFRL Treatment Plant | 8                    | 5          | 8                 | 8          | 8                 | 8          | 8                 | 8          | 8                 | 8          | 8                 | 8          | 8                 | 8          | 8                 | 8          | 8                 | 8          | 8                 | 8          |
| Lancaster                                  | eSolar Power Plant at Division and Avenue G                      | recycle                                   | Recycled Water       | 15                   | 0          | 15                | 15         | 15                | 15         | 15                | 15         | 15                | 15         | 15                | 15         | 15                | 15         | 15                | 15         | 15                | 15         | 15                | 15         |
| Palmdale                                   | Palmdale Hybrid Power Plant Project                              | recycle                                   | Recycled Water       | 76                   | 0          | 76                | 76         | 76                | 76         | 76                | 76         | 76                | 76         | 647               | 647        | 647               | 647        | 647               | 647        | 647               | 647        | 647               | 647        |
| Rosamond                                   | Evaporation Ponds  | recycle                                   | RCSL Treatment Plant | 95                   | 0          | 95                | 95         | 95                | 95         | 95                | 95         | 95                | 95         | 95                | 95         | 95                | 95         | 95                | 95         | 95                | 95         | 95                | 95         |

\* Estimated Flow = (recycled water produced at Lancaster WRP) - (M&I use) - (Apollo Park flow) - (Piute Ponds flow)  
 \*\* Estimated Flow = (recycled water produced at Palmdale WRP) - (M&I use)



**Table 3-12: Potential Salt/Nutrient Impacts – Fluoride**

| Potential Salt/Nutrient Impacts - FLUORIDE |   |   |                      |                      |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|--|---|---|----------------------|----------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|
| Agency                                     | Project   | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Fluoride (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|  |   |   |                      | 2010 <sup>1</sup>    |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>2</sup> |            | 2014 <sup>2</sup> |            | 2015 <sup>5</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>5</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>5</sup> |            |
|  |   |   |                      | Recharge             | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction |
| <b>Groundwater Recharge/Banking</b>        |   |   |                      |                      |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| AVEK/LACWWD40                              | Water Supply Stabilization Project (WSSP-2 Project)             | imported                                  | California Aqueduct  | 0                    | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| LACWWD40                                   | Aquifer Storage and Recovery Project                            | Imported                                  | Quartz Hill Plant    | 0                    | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          |                   |            |
| LACWWD40                                   | In-Situ Arsenic Removal on Unsaturated Alluvium† (plot-project) | groundwater                               | Groundwater Samples  | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        |                   |            |
| Lancaster                                  | Amargosa Water Banking & Stormwater Retention Project           | imported / sw / rw                        | Recycled Water       | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 20                | 18         | 20                | 18         | 20                | 18         |                   |            |
| Palmdale                                   | Barrel Springs Detention Basin and Wetlands                     | stormwater                                | RWQCB Database       | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        |                   |            |
| Palmdale                                   | Hunt Canyon Groundwater Recharge & Flood Control Basin          | stormwater                                | RWQCB Database       | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        |                   |            |
| Palmdale/LACWWD40                          | Amargosa Creek Recharge Project                                 | imported / sw                             | Quartz Hill Plant    | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 4                 | 0          | 4                 | 0          | 4                 | 0          | 4                 | 0          |                   |            |
| Palmdale Water District                    | Groundwater Recharge - Recycle Water Project                    | rw / imported / sw                        | Recycled Water       | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 4                 | 0          | 4                 | 0          | 4                 | 0          | 4                 | 0          |                   |            |
| Rosamond                                   | Antelope Valley Water Bank                                      | imported                                  | California Aqueduct  | 0                    | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| Agency                                     | Project   | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Fluoride (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|  |   |   |                      | 2010 <sup>1</sup>    |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>2</sup> |            | 2014 <sup>2</sup> |            | 2015 <sup>5</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>5</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>5</sup> |            |
|  |   |   |                      | flow                 | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              |            |
| <b>Irrigation/Impoundments</b>             |   |   |                      |                      |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| Edwards Air Force Base                     | EAFB Irrigation Project   | recycle                                   | AFRL Treatment Plant | #VALUE!              | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    |                   |            |
| LACSD 14                                   | Apollo Park   | recycle                                   | Recycled Water       | 0                    | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| LACSD 14                                   | Piute Ponds   | recycle                                   | Recycled Water       | 2                    | 0          | 2                 | 2          | 2                 | 2          | 2                 | 2          | 2                 | 2          | 2                 | 2          | 2                 | 2          | 2                 | 2          | 2                 | 2          |                   |            |
| LACSD 14                                   | Agricultural Reuse Project*                                     | recycle                                   | Recycled Water       | 0                    | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 4                 | 4          | 5                 | 5          | 5                 | 5          | 6                 | 6          |                   |            |
| LACSD 20                                   | Agricultural Reuse Project**                                    | recycle                                   | Recycled Water       | 3                    | 0          | 3                 | 3          | 3                 | 3          | 3                 | 3          | 3                 | 4          | 4                 | 5          | 5                 | 5          | 5                 | 5          | 6                 | 6          |                   |            |
| LACWWD40/Palm./Lanc.                       | North LA/Kern County Regional Recycled Water Project            | recycle                                   | Recycled Water       | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | 3          | 4                 | 4          | 4                 | 5          | 5                 | 5          | 5                 | 5          |                   |            |
| Rosamond                                   | Golden Queens Mining Project                                    | recycle                                   | RCSD Treatment Plant | 1                    | 0          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          |                   |            |
| Agency                                     | Project   | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Fluoride (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|  |   |   |                      | 2010 <sup>1</sup>    |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>2</sup> |            | 2014 <sup>2</sup> |            | 2015 <sup>5</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>5</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>5</sup> |            |
|  |   |   |                      | outflow              | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           |            |
| <b>Treatment</b>                           |   |   |                      |                      |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| Edwards Air Force Base                     | AFRL Treatment Plant  | recycle                                   | AFRL Treatment Plant | #VALUE!              | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    |                   |            |
| LACSD 14                                   | Lancaster Water Reclamation Plant                               | recycle                                   | Recycled Water       | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | 8          | 9                 | 10         | 11                | 11         | 11                | 11         | 11                | 11         |                   |            |
| LACSD 20                                   | Palmdale Water Reclamation Plant                                | recycle                                   | Recycled Water       | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | 6          | 7                 | 7          | 7                 | 8          | 8                 | 9          | 9                 | 9          |                   |            |
| Rosamond                                   | RCSD Wastewater Treatment Plant Expansion                       | recycle                                   | RCSD Treatment Plant | 1                    | 0          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          |                   |            |
| Agency                                     | Project   | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Fluoride (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|  |   |   |                      | 2010 <sup>1</sup>    |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>2</sup> |            | 2014 <sup>2</sup> |            | 2015 <sup>5</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>5</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>5</sup> |            |
|  |   |   |                      | inflow               | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            |            |
| <b>Evaporation/Export</b>                  |   |   |                      |                      |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| Edwards Air Force Base                     | Main Base Evaporation Ponds                                     | recycle                                   | AFRL Treatment Plant | #VALUE!              | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    | #VALUE!           | #VALUE!    |                   |            |
| Lancaster                                  | eSolar Power Plant at Division and Avenue G                     | recycle                                   | Recycled Water       | 0                    | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| Palmdale                                   | Palmdale Hybrid Power Plant Project                             | recycle                                   | Recycled Water       | 0                    | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          |                   |            |
| Rosamond                                   | Evaporation Ponds   | recycle                                   | RCSD Treatment Plant | 1                    | 0          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          |                   |            |

<sup>1</sup> Estimated Flow = (recycled water produced at Lancaster WRP) - (M&I use) - (Apollo Park flow) - (Piute Ponds flow)  
<sup>2</sup> Estimated Flow = (recycled water produced at Palmdale WRP) - (M&I use)

**Table 3-13: Potential Salt/Nutrient Impacts – Arsenic**

| Potential Salt/Nutrient Impacts - ARSENIC |  |   |                      |                     |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|---|--|---|----------------------|---------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|
| Agency                                    | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Arsenic (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|   |  |   |                      | 2010 <sup>1</sup>   |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>3</sup> |            | 2014 <sup>5</sup> |            | 2015 <sup>5</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>5</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>5</sup> |            |
|   |  |   |                      | Recharge            | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction |
| <b>Groundwater Recharge/Banking</b>       |  |   |                      |                     |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| AVEK/LACWWD40                             | Water Supply Stabilization Project (WSSP-2 Project)              | imported                                  | California Aqueduct  | 0                   | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| LACWWD40                                  | Aquifer Storage and Recovery Project                             | imported                                  | Quartz Hill Plant    | 0                   | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| LACWWD40                                  | In-Situ Arsenic Removal on Unsaturated Alluvium† (pilot-project) | groundwater                               | Groundwater Samples  | N/A                 | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        |                   |            |
| Lancaster                                 | Amargosa Water Banking & Stormwater Retention Project            | imported / sw/ rw                         | Recycled Water       | N/A                 | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| Palmdale                                  | Barrel Springs Detention Basin and Wetlands                      | stormwater                                | RWQCB Database       | N/A                 | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               |            |                   |            |
| Palmdale                                  | Hunt Canyon Groundwater Recharge & Flood Control Basin           | stormwater                                | RWQCB Database       | N/A                 | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               |            |                   |            |
| Palmdale/LACWWD40                         | Amargosa Creek Recharge Project                                  | imported / sw                             | Quartz Hill Plant    | N/A                 | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| Palmdale Water District                   | Groundwater Recharge - Recycle Water Project                     | rw/ imported/ sw                          | Recycled Water       | N/A                 | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| Rosamond                                  | Antelope Valley Water Bank                                       | imported                                  | California Aqueduct  | 0                   | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| Agency                                    | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Arsenic (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|   |  |   |                      | 2010 <sup>1</sup>   |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>3</sup> |            | 2014 <sup>5</sup> |            | 2015 <sup>5</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>5</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>5</sup> |            |
|   |  |   |                      | flow                | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              |            |
| <b>Irrigation/Impoundments</b>            |  |   |                      |                     |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| Edwards Air Force Base                    | EAFB Irrigation Project  | recycle                                   | AFRL Treatment Plant | 1                   | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          |                   |            |
| LACSD 14                                  | Apollo Park  | recycle                                   | Recycled Water       | 0                   | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| LACSD 14                                  | Piute Ponds  | recycle                                   | Recycled Water       | 0                   | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| LACSD 14                                  | Agricultural Reuse Project*                                      | recycle                                   | Recycled Water       | 0                   | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| LACSD 20                                  | Agricultural Reuse Project**                                     | recycle                                   | Recycled Water       | 0                   | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| LACWWD40/Palm./Lanc.                      | North LA/Kern County Regional Recycled Water Project             | recycle                                   | Recycled Water       | N/A                 | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| Rosamond                                  | Golden Queens Mining Project                                     | recycle                                   | RCSD Treatment Plant | 0                   | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| Agency                                    | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Arsenic (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|   |  |   |                      | 2010 <sup>1</sup>   |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>3</sup> |            | 2014 <sup>5</sup> |            | 2015 <sup>5</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>5</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>5</sup> |            |
|   |  |   |                      | outflow             | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           |            |
| <b>Treatment</b>                          |  |   |                      |                     |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| Edwards Air Force Base                    | AFRL Treatment Plant   | recycle                                   | AFRL Treatment Plant | 0                   | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| LACSD 14                                  | Lancaster Water Reclamation Plant                                | recycle                                   | Recycled Water       | N/A                 | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| LACSD 20                                  | Palmdale Water Reclamation Plant                                 | recycle                                   | Recycled Water       | N/A                 | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| Rosamond                                  | RCSD Wastewater Treatment Plant Expansion                        | recycle                                   | RCSD Treatment Plant | 0                   | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| Agency                                    | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Arsenic (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|   |  |   |                      | 2010 <sup>1</sup>   |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>3</sup> |            | 2014 <sup>5</sup> |            | 2015 <sup>5</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>5</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>5</sup> |            |
|   |  |   |                      | inflow              | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            |            |
| <b>Evaporation/Export</b>                 |  |   |                      |                     |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| Edwards Air Force Base                    | Main Base Evaporation Ponds                                      | recycle                                   | AFRL Treatment Plant | 0                   | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| Lancaster                                 | eSolar Power Plant at Division and Avenue G                      | recycle                                   | Recycled Water       | 0                   | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| Palmdale                                  | Palmdale Hybrid Power Plant Project                              | recycle                                   | Recycled Water       | 0                   | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| Rosamond                                  | Evaporation Ponds  | recycle                                   | RCSD Treatment Plant | 0                   | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |

\* Estimated Flow = (recycled water produced at Lancaster WRP) - (M&I use) - (Apollo Park flow) - (Piute Ponds flow)  
 \*\* Estimated Flow = (recycled water produced at Palmdale WRP) - (M&I use)

**Table 3-14: Potential Salt/Nutrient Impacts – Boron**

| Potential Salt/Nutrient Impacts - BORON |  |   |                      |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|---|--|---|----------------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|
| Agency                                  | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Boron (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|   |  |   |                      | 2010 <sup>1</sup> |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>1</sup> |            | 2014 <sup>2</sup> |            | 2015 <sup>5</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>6</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>6</sup> |            |
|   |  |   |                      | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction |
| <b>Groundwater Recharge/Banking</b>     |  |   |                      |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| AVEK/LACWWD40                           | Water Supply Stabilization Project (WSSP-2 Project)              | imported                                  | California Aqueduct  | 2                 | 2          | 0                 | 0          | 2                 | 2          | 2                 | 2          | 2                 | 2          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 | 5          | 5                 |            |
| LACWWD40                                | Aquifer Storage and Recovery Project                             | imported                                  | Quartz Hill Plant    | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 2                 | 2          | 2                 | 2          | 2                 | 2          | 2                 | 2          | 2                 |            |
| LACWWD40                                | In-Situ Arsenic Removal on Unsaturated Alluvium† (pilot-project) | groundwater                               | Groundwater Samples  | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               |            |
| Lancaster                               | Amargosa Water Banking & Stormwater Retention Project            | imported / sw / rw                        | Recycled Water       | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 34                | 31         | 34                | 31         | 34                | 31         | 34                |            |
| Palmdale                                | Barrel Springs Detention Basin and Wetlands                      | stormwater                                | RWQCB Database       | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               |            |
| Palmdale                                | Hunt Canyon Groundwater Recharge & Flood Control Basin           | stormwater                                | RWQCB Database       | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               |            |
| Palmdale/LACWWD40                       | Amargosa Creek Recharge Project                                  | imported / sw                             | Quartz Hill Plant    | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 6                 | 0          | 6                 | 0          | 6                 | 0          | 6                 | 0          | 6                 |            |
| Palmdale Water District                 | Groundwater Recharge - Recycle Water Project                     | rw/ imported/ sw                          | Recycled Water       | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 7                 | 0          | 7                 | 0          | 7                 | 0          | 7                 | 0          | 7                 |            |
| Rosamond                                | Antelope Valley Water Bank                                       | imported                                  | California Aqueduct  | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 4                 | 4          | 4                 | 4          | 4                 | 4          | 4                 | 4          | 4                 |            |
| Agency                                  | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Boron (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|   |  |   |                      | 2010 <sup>1</sup> |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>1</sup> |            | 2014 <sup>2</sup> |            | 2015 <sup>5</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>6</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>6</sup> |            |
|   |  |   |                      | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       |
| <b>Irrigation/Impoundments</b>          |  |   |                      |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| Edwards Air Force Base                  | EAFB Irrigation Project  | recycle                                   | AFRL Treatment Plant | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 |            |
| LACSD 14                                | Apollo Park  | recycle                                   | Recycled Water       | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 |            |
| LACSD 14                                | Piute Ponds  | recycle                                   | Recycled Water       | 3                 | 0          | 3                 | 3          | 3                 | 3          | 3                 | 3          | 3                 | 3          | 3                 | 3          | 3                 | 3          | 3                 | 3          | 3                 | 3          | 3                 |            |
| LACSD 14                                | Agricultural Reuse Project*                                      | recycle                                   | Recycled Water       | 1                 | 0          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 6          | 7                 | 8          | 8                 | 8          | 8                 | 8          | 8                 | 8          | 9                 |            |
| LACSD 20                                | Agricultural Reuse Project**                                     | recycle                                   | Recycled Water       | 6                 | 0          | 6                 | 6          | 6                 | 6          | 6                 | 6          | 6                 | 6          | 7                 | 8          | 8                 | 8          | 8                 | 8          | 8                 | 8          | 9                 |            |
| LACWWD40/Palm/Lanc.                     | North LA/Kern County Regional Recycled Water Project             | recycle                                   | Recycled Water       | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | 5          | 6                 | 7          | 7                 | 8          | 8                 | 8          | 8                 | 9          | 9                 |            |
| Rosamond                                | Golden Queens Mining Project                                     | recycle                                   | RCSD Treatment Plant | 1                 | 0          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 |            |
| Agency                                  | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Boron (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|   |  |   |                      | 2010 <sup>1</sup> |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>1</sup> |            | 2014 <sup>2</sup> |            | 2015 <sup>5</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>6</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>6</sup> |            |
|   |  |   |                      | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    |
| <b>Treatment</b>                        |  |   |                      |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| Edwards Air Force Base                  | AFRL Treatment Plant   | recycle                                   | AFRL Treatment Plant | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 |            |
| LACSD 14                                | Lancaster Water Reclamation Plant                                | recycle                                   | Recycled Water       | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | 14         | 15                | 16         | 16                | 18         | 18                | 18         | 18                | 19         | 19                |            |
| LACSD 20                                | Palmdale Water Reclamation Plant                                 | recycle                                   | Recycled Water       | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | 10         | 11                | 12         | 12                | 13         | 13                | 13         | 13                | 14         | 14                |            |
| Rosamond                                | RCSD Wastewater Treatment Plant Expansion                        | recycle                                   | RCSD Treatment Plant | 1                 | 0          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 | 1          | 1                 |            |
| Agency                                  | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source | Boron (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|   |  |   |                      | 2010 <sup>1</sup> |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>1</sup> |            | 2014 <sup>2</sup> |            | 2015 <sup>5</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>6</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>6</sup> |            |
|   |  |   |                      | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     |
| <b>Evaporation/Export</b>               |  |   |                      |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| Edwards Air Force Base                  | Main Base Evaporation Ponds                                      | recycle                                   | AFRL Treatment Plant | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 |            |
| Lancaster                               | eSolar Power Plant at Division and Avenue G                      | recycle                                   | Recycled Water       | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 |            |
| Palmdale                                | Palmdale Hybrid Power Plant Project                              | recycle                                   | Recycled Water       | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 2          | 2                 | 2          | 2                 | 2          | 2                 | 2          | 2                 | 2          | 2                 |            |
| Rosamond                                | Evaporation Ponds  | recycle                                   | RCSD Treatment Plant | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 |            |

\* Estimated Flow = (recycled water produced at Lancaster WRP) - (M&I use) - (Apollo Park flow) - (Piute Ponds flow)

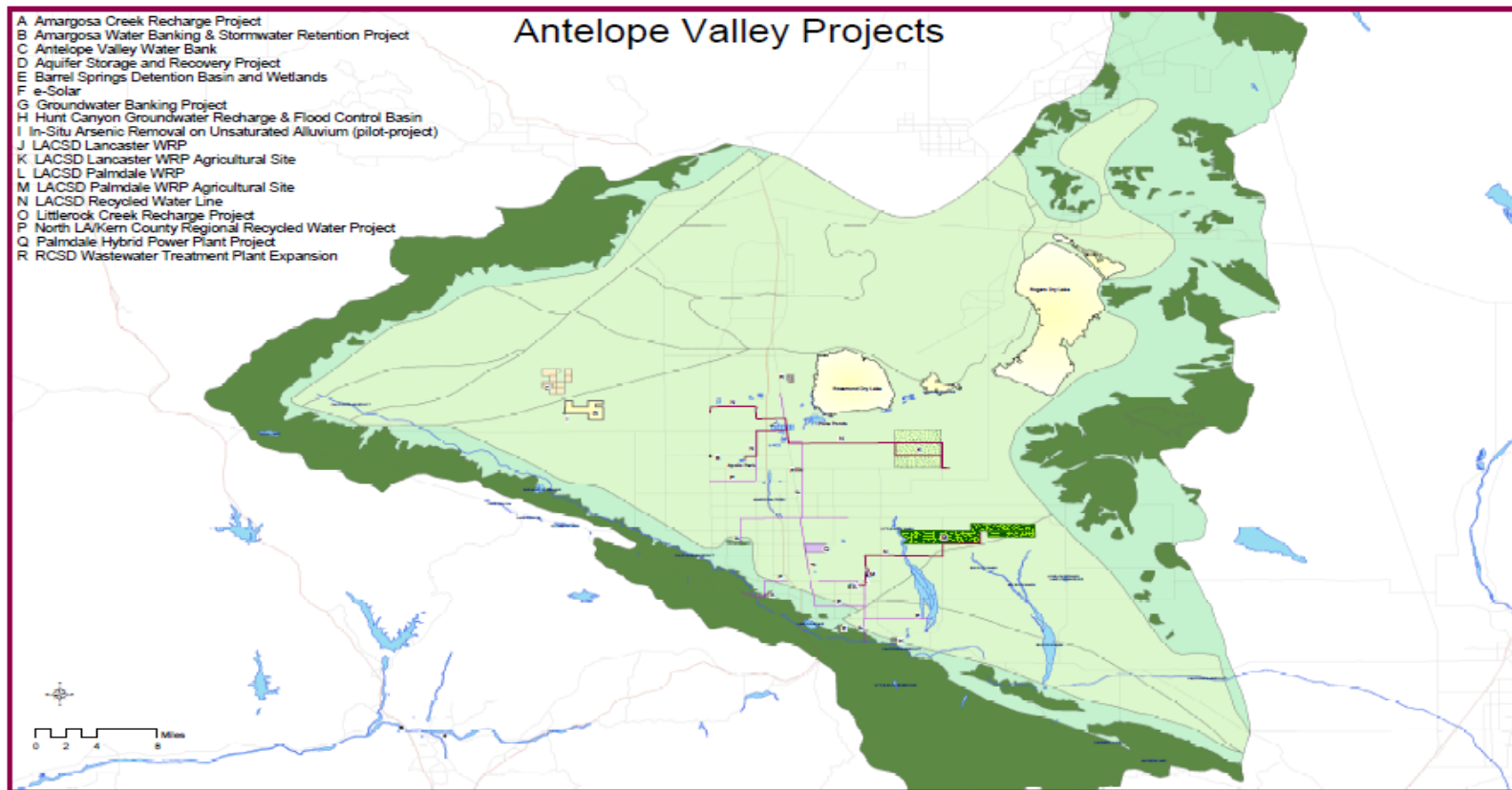
\*\* Estimated Flow = (recycled water produced at Palmdale WRP) - (M&I use)

**Table 3-15: Potential Salt/Nutrient Impacts – Chromium**

| Potential Salt/Nutrient Impacts - CHROMIUM |  |   |                       |                      |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|--|--|---|-----------------------|----------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|
| Agency                                     | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source  | Chromium (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|  |  |   |                       | 2010 <sup>1</sup>    |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>1</sup> |            | 2014 <sup>3</sup> |            | 2015 <sup>6</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>6</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>6</sup> |            |
|  |  |   |                       | Recharge             | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction | Recharge          | Extraction |
| <b>Groundwater Recharge/Banking</b>        |  |   |                       |                      |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| AVEK/LACWWD40                              | Water Supply Stabilization Project (WSSP-2 Project)              | imported                                  | California Aqueduct   | 0                    | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| LACWWD40                                   | Aquifer Storage and Recovery Project                             | Imported                                  | Quartz Hill Plant     | 0                    | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| LACWWD40                                   | In-Situ Arsenic Removal on Unsaturated Alluvium† (pilot-project) | groundwater                               | Groundwater Samples   | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        |                   |            |
| Lancaster                                  | Amargosa Water Banking & Stormwater Retention Project            | imported / sw/ rw                         | Recycled Water        | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| Palmdale                                   | Barrel Springs Detention Basin and Wetlands                      | stormwater                                | RWQCB Database        | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        |                   |            |
| Palmdale                                   | Hurt Canyon Groundwater Recharge & Flood Control Basin           | stormwater                                | RWQCB Database        | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        |                   |            |
| Palmdale/LACWWD40                          | Amargosa Creek Recharge Project                                  | imported / sw                             | Quartz Hill Plant     | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| Palmdale Water District                    | Groundwater Recharge - Recycle Water Project                     | rw/ imported/ sw                          | Recycled Water        | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| Rosamond                                   | Antelope Valley Water Bank                                       | imported                                  | California Aqueduct   | 0                    | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| Agency                                     | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source  | Chromium (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|  |  |   |                       | 2010 <sup>1</sup>    |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>1</sup> |            | 2014 <sup>3</sup> |            | 2015 <sup>6</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>6</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>6</sup> |            |
|  |  |   |                       | flow                 | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              | flow       | flow              |            |
| <b>Irrigation/Impoundments</b>             |  |   |                       |                      |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| Edwards Air Force Base                     | EAFB Irrigation Project  | recycle                                   | AFRL Treatment Plant  | 0                    | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| LACSD 14                                   | Apollo Park  | recycle                                   | Recycled Water        | 0                    | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| LACSD 14                                   | Piute Ponds  | recycle                                   | Recycled Water        | 0                    | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| LACSD 14                                   | Agricultural Reuse Project*                                      | recycle                                   | Recycled Water        | 0                    | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| LACSD 20                                   | Agricultural Reuse Project**                                     | recycle                                   | Recycled Water        | 0                    | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| LACWWD40/Palm/Lanc.                        | North LA/Kern County Regional Recycled Water Project             | recycle                                   | Recycled Water        | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| Rosamond                                   | Golden Queens Mining Project                                     | recycle                                   | RCS D Treatment Plant | 0                    | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| Agency                                     | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source  | Chromium (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|  |  |   |                       | 2010 <sup>1</sup>    |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>1</sup> |            | 2014 <sup>3</sup> |            | 2015 <sup>6</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>6</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>6</sup> |            |
|  |  |   |                       | outflow              | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    | outflow           | outflow    |
| <b>Treatment</b>                           |  |   |                       |                      |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| Edwards Air Force Base                     | AFRL Treatment Plant   | recycle                                   | AFRL Treatment Plant  | 0                    | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| LACSD 14                                   | Lancaster Water Reclamation Plant                                | recycle                                   | Recycled Water        | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| LACSD 20                                   | Palmdale Water Reclamation Plant                                 | recycle                                   | Recycled Water        | N/A                  | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | N/A               | N/A        | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| Rosamond                                   | RCS D Wastewater Treatment Plant Expansion                       | recycle                                   | RCS D Treatment Plant | 0                    | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| Agency                                     | Project  | Source of Water<br>(imported/ sw/ gw/ rw) | Water Quality Source  | Chromium (tons/year) |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
|  |  |   |                       | 2010 <sup>1</sup>    |            | 2011 <sup>2</sup> |            | 2012 <sup>2</sup> |            | 2013 <sup>1</sup> |            | 2014 <sup>3</sup> |            | 2015 <sup>6</sup> |            | 2020 <sup>6</sup> |            | 2025 <sup>6</sup> |            | 2030 <sup>6</sup> |            | 2035 <sup>6</sup> |            |
|  |  |   |                       | inflow               | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            | inflow     | inflow            |            |
| <b>Evaporation/Export</b>                  |  |   |                       |                      |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |                   |            |
| Edwards Air Force Base                     | Main Base Evaporation Ponds                                      | recycle                                   | AFRL Treatment Plant  | 0                    | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| Lancaster                                  | eSolar Power Plant at Division and Avenue G                      | recycle                                   | Recycled Water        | 0                    | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| Palmdale                                   | Palmdale Hybrid Power Plant Project                              | recycle                                   | Recycled Water        | 0                    | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |
| Rosamond                                   | Evaporation Ponds  | recycle                                   | RCS D Treatment Plant | 0                    | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          | 0                 | 0          |                   |            |

\* Estimated Flow = (recycled water produced at Lancaster WRP) - (M&I use) - (Apollo Park flow) - (Piute Ponds flow)  
 \*\* Estimated Flow = (recycled water produced at Palmdale WRP) - (M&I use)

Figure 3-7: Current and Future Project Map



# Section 4: Monitoring

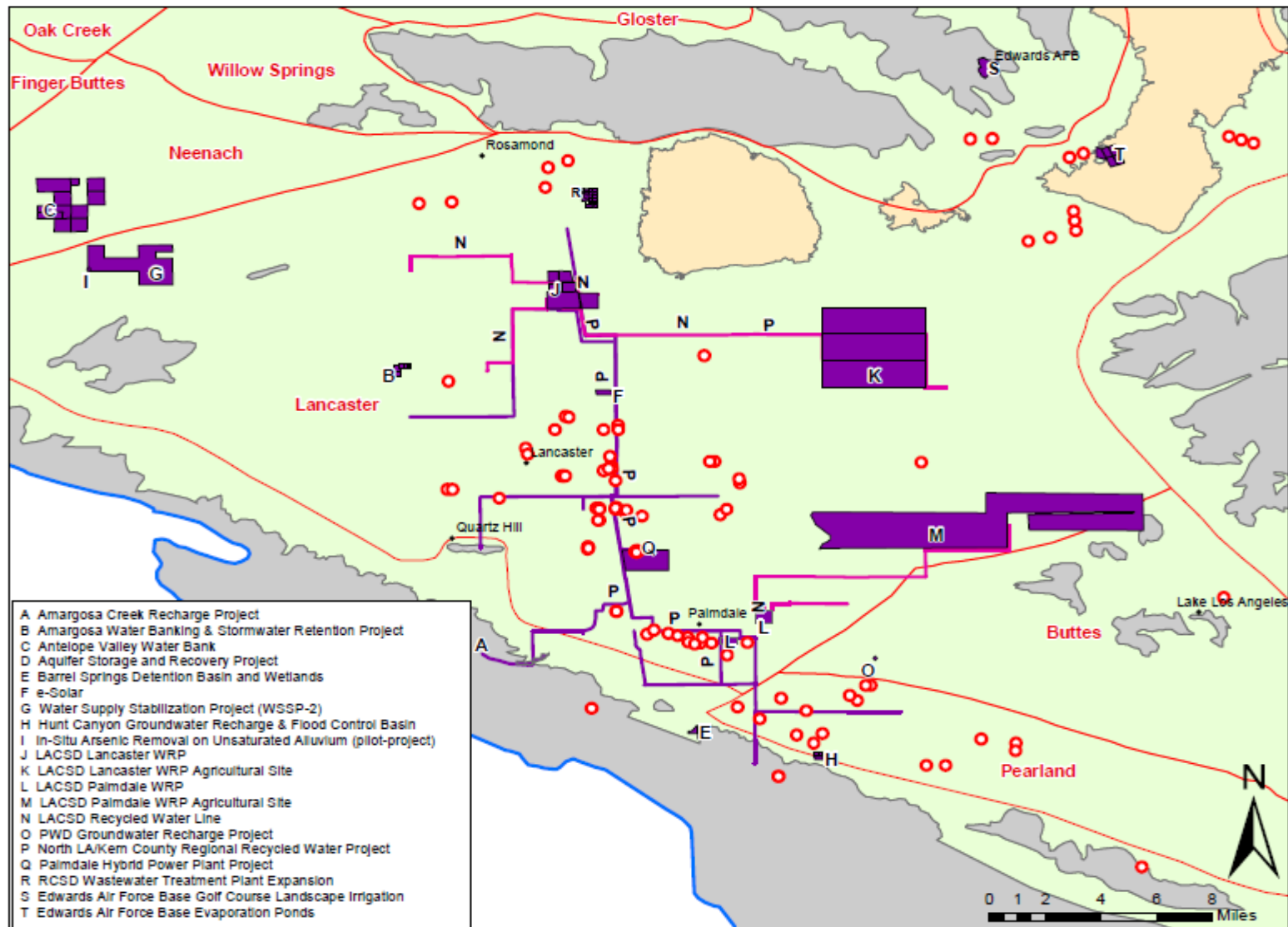
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## 4.1 Develop a Monitoring Plan

The stakeholder group used the available municipal wells from Los Angeles County Waterworks No. 40, Palmdale Water District, Rosamond Community Services District, and Edwards Air Force Base. The stakeholder group strategically selected several wells for the Salt Management Monitoring Plan based on adequate proximity of the well(s) to current and future projects and an even distribution of available existing wells within the region.

Figure 4-1 shows all the municipal wells from Los Angeles County Waterworks District No. 40, Palmdale Water District, Rosamond Community Services District, and Edwards Air Force Base. These wells are monitored every three years and reported to California Department of Public Health. The Lahontan RWQCB's Groundwater Ambient Monitoring and Assessment Program (GAMA) compiles these test results with existing groundwater quality data from several agencies into a publicly-accessible internet database, GeoTracker GAMA. The stakeholders analyzed the current basin water quality by using the data from the wells provided and then determined how the current and future projects affected the assimilative capacity over time.

**Figure 4-1: Project and Well Locations**



## **4.2 Monitoring Implementation and Data Management**



# Section 5: Implementation Measures

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## 5.1 Manage Salt/Nutrient Loadings on a Sustainable Basis

# Section 6: Antidegradation Analysis

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## 6.1 State Antidegradation Policy

# Section 7: Adoption of the SMP

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## 7.1 Approval/Adoption/Acceptance

## 7.2 California Environmental Quality Analysis