

Appendix E

**Antelope Valley Salt and Nutrient Management Plan
Project Identification Form**

Project Name: _____

Project Sponsor: _____

Project Contact Person: _____

Project Contact Phone: _____

Project Contact Email: _____

Project Location (include name of sub-basin): _____

Project Description: _____

Water Volume Projections (fill in applicable rows)

	2010	2015	2020	2025	2030	2035
Recycled Water (acre-feet/year)						
Groundwater						
Stormwater						
Imported Water, raw						
Imported Water, treated						
Surface Water						

Anticipated Implementation Year: _____

Project Status (check status):

- ___ Concept
- ___ Planning
- ___ Design
- ___ Construction

**Antelope Valley Salt and Nutrient Management Plan
Project Identification Form**

Project Name: Amargosa Creek Recharge Project

Project Sponsor: City of Palmdale

Project Contact Person: Gordon Phair

Project Contact Phone: (661) 267-5310

Project Contact Email: gphair@cityofpalmdale.org

Project Location (include name of sub-basin): 20 acres along Amargosa Creek near Elizabeth Lake Road and 25th St W. Located outside, but upstream of the Lancaster sub-basin.

Project Description: Recharge component that is a part of a larger project, "Upper Amargosa Creek Flood Control, Recharge and Habitat Restoration Project." The project includes eight basins to recharge groundwater using raw State Water Project water and stormwater runoff from the Amargosa Creek Watershed. Recharge volumes dependent on available supply and annual precipitation. Anticipated averages provided below.

Water Volume Projections (fill in applicable rows)

	2010	2015	2020	2025	2030	2035
Recycled Water (acre-feet/year)						
Groundwater						
Stormwater	-	400	400	400	400	400
Imported Water, raw	-	24,300	24,300	24,300	24,300	24,300
Imported Water, treated						
Surface Water						

Anticipated Implementation Year: 2015

Project Status (check status):

Concept

Planning

Design

Construction

**Antelope Valley Salt and Nutrient Management Plan
Project Identification Form**

Project Name: Antelope Valley Water Bank

Project Sponsor: Antelope Valley Water Storage

Project Contact Person: Mark Beuhler

Project Contact Phone: (323) 860-4829

Project Contact Email: MBeuhler@avwaterbank.com

Project Location (include name of sub-basin): Property is located west of Rosamond (Neenach sub-basin)

Project Description: The project is owned by the Valley Mutual Water Company, which operates the bank within the structure of the Semitropic-Rosamond Water Bank Authority. At full build-out, the water banking project will provide up to 500,000 acre-feet of storage and the ability to recharge and recover up to 100,000 AFY of water for later use when needed. The project recharges water from the State Water Project into storage using recharge basins and will use new and existing wells to recover water for delivery and regional conveyances. The project is being constructed in phases and currently has 320 acres of operational percolation pond capacity.

Water Volume Projections (fill in applicable rows)

	2010	2015	2020	2025	2030	2035
Recycled Water (acre-feet/year)						
Groundwater						
Stormwater						
Imported Water, raw	1,300	22,000	22,000	22,000	22,000	22,000
Imported Water, treated						
Surface Water						

Anticipated Implementation Year: 2010

Project Status (check status):

Concept

Planning

Design

Construction

**Antelope Valley Salt and Nutrient Management Plan
Project Identification Form**

Project Name: Eastside Banking and Blending Project

Project Sponsor: Antelope Valley East Kern Water Agency (AVEK)

Project Contact Person: Dwayne Chisam

Project Contact Phone: (661) 943-3201

Project Contact Email: dchisam@avek.org

Project Location (include name of sub-basin): Lancaster sub-basin

Project Description: Operational water recharge and recovery site providing a supplemental potable source of water for the AVEK Eastside Water Treatment Plant. The project will involve State Water Project water spread over local recharge basins, storing water for future recovery during dry or drought years. This alternative potable water supply will be used for periodic substitution or supplementation to the Eastside plant.

Water Volume Projections (fill in applicable rows)

	2010	2015	2020	2025	2030	2035
Recycled Water (acre-feet/year)						
Groundwater						
Stormwater						
Imported Water, raw	-	5,000	10,000	10,000	10,000	10,000
Imported Water, treated						
Surface Water						

Anticipated Implementation Year: 2015

Project Status (check status):

Concept

Planning

Design

Construction

**Antelope Valley Salt and Nutrient Management Plan
Project Identification Form**

Project Name: Edwards Air Force Base (EAFB) Air Force Research Laboratory Treatment Plant

Project Sponsor: Edwards Air Force Base

Project Contact Person: Amy Frost

Project Contact Phone: (661) 277-1419

Project Contact Email: amy.frost@edwards.af.mil

Project Location (include name of sub-basin): Edwards Air Force Base

Project Description: Secondary wastewater treatment plant. All the effluent is discharged to the onsite evaporation ponds.

Water Volume Projections (fill in applicable rows)

	2010	2015	2020	2025	2030	2035
Recycled Water (acre-feet/year)	46	46	46	46	46	46
Groundwater						
Stormwater						
Imported Water, raw						
Imported Water, treated						
Surface Water						

Anticipated Implementation Year: _____

Project Status (check status):

___ Concept

___ Planning

___ Design

___ Construction

**Antelope Valley Salt and Nutrient Management Plan
Project Identification Form**

Project Name: Edwards Air Force Base (EAFB) Main Base Wastewater Treatment Plant

Project Sponsor: Edwards Air Force Base

Project Contact Person: Amy Frost

Project Contact Phone: (661) 277-1419

Project Contact Email: amy.frost@edwards.af.mil

Project Location (include name of sub-basin): Edwards Air Force Base

Project Description: The plant discharges treated domestic wastewater. The facility can collect, treat and dispose of a design 24-hour daily average flow of 2.5 million gallons per day (mgd) and a design peak daily flow of 4.0 mgd from the EAFB areas. The facility is designed to produce tertiary treated effluent and has the capacity to hold up to 3,000 gallons per day of seepage.

Water Volume Projections (fill in applicable rows)

	2010	2015	2020	2025	2030	2035
Recycled Water (acre-feet/year)	511	511	511	511	511	511
Groundwater						
Stormwater						
Imported Water, raw						
Imported Water, treated						
Surface Water						

Anticipated Implementation Year: _____

Project Status (check status):

Concept

Planning

Design

Construction

**Antelope Valley Salt and Nutrient Management Plan
Project Identification Form**

Project Name: Edwards Air Force Base (EAFB) Evaporation Ponds

Project Sponsor: Edwards Air Force Base

Project Contact Person: Amy Frost

Project Contact Phone: (661) 277-1419

Project Contact Email: amy.frost@edwards.af.mil

Project Location (include name of sub-basin): Edwards Air Force Base (Lancaster sub-basin)

Project Description: The evaporation ponds receive effluent from the EAFB Air Force Research Laboratory Treatment Plant and EAFB Main Base Wastewater Treatment Plant.

Water Volume Projections (fill in applicable rows)

	2010	2015	2020	2025	2030	2035
Recycled Water (acre-feet/year)	174	174	174	174	174	174
Groundwater						
Stormwater						
Imported Water, raw						
Imported Water, treated						
Surface Water						

Anticipated Implementation Year: _____

Project Status (check status):

Concept

Planning

Design

Construction

**Antelope Valley Salt and Nutrient Management Plan
Project Identification Form**

Project Name: Edwards Air Force Base (EAFB) Golf Course Irrigation

Project Sponsor: Edwards Air Force Base

Project Contact Person: Amy Frost

Project Contact Phone: (661) 277-1419

Project Contact Email: amy.frost@edwards.af.mil

Project Location (include name of sub-basin): Edwards Air Force Base. Located above becrock.

Project Description: The golf course is the largest user of recycled water at the EAFB. It receives tertiary effluent from the EAFB Main Base Wastewater Treatment Plant as irrigation water during warmer months of the year. The golf course is located over bedrock and will have limited influence groundwater quality. The inclusion of the site is conservative.

Water Volume Projections (fill in applicable rows)

	2010	2015	2020	2025	2030	2035
Recycled Water (acre-feet/year)	383	383	383	383	383	383
Groundwater						
Stormwater						
Imported Water, raw						
Imported Water, treated						
Surface Water						

Anticipated Implementation Year: _____

Project Status (check status):

___ Concept

___ Planning

___ Design

___ Construction

**Antelope Valley Salt and Nutrient Management Plan
Project Identification Form**

Project Name: Lancaster Water Reclamation Plant Upgrade and Expansion

Project Sponsor: Los Angeles County Sanitation District No. 14

Project Contact Person: Erika DeHollan

Project Contact Phone: (562) 908-4288

Project Contact Email: edehollan@lacsds.org

Project Location (include name of sub-basin): City of Lancaster (Lancaster sub-basin)

Project Description: The upgrade and expansion project was completed in 2012. The major components were upgraded wastewater treatment facilities, recycled water management facilities, and municipal reuse. Wastewater treatment processes were upgraded to meet tertiary recycled water requirements prescribed in CDPH's Title 22.

Water Volume Projections (fill in applicable rows)

	2010	2015	2020	2025	2030	2035
Recycled Water (acre-feet/year)	-	17,000	18,500	20,000	21,500	23,000
Groundwater						
Stormwater						
Imported Water, raw						
Imported Water, treated						
Surface Water						

Anticipated Implementation Year: _____

Project Status (check status):

Concept

Planning

Design

Construction

**Antelope Valley Salt and Nutrient Management Plan
Project Identification Form**

Project Name: Lancaster Water Reclamation Plant Eastern Agricultural Site

Project Sponsor: Los Angeles County Sanitation District No. 14

Project Contact Person: Erika DeHollan

Project Contact Phone: (562) 908-4288

Project Contact Email: edehollan@lacsds.org

Project Location (include name of sub-basin): City of Lancaster (Lancaster sub-basin)

Project Description: Existing agricultural site using recycled water produced by the Lancaster Water Reclamation Plant. Per Regional Board requirements, recycled water is applied to the crops at agronomic rates, based on the needs of the crop plant, with respect to water and nitrogen, to minimize deep percolation from the root zone to the groundwater table of the applied recycled water.

Water Volume Projections (fill in applicable rows)

	2010	2015	2020	2025	2030	2035
Recycled Water (acre-feet/year)	1,000	10,500	11,500	11,200	11,700	10,900
Groundwater						
Stormwater						
Imported Water, raw						
Imported Water, treated						
Surface Water						

Anticipated Implementation Year: _____

Project Status (check status):

Concept

Planning

Design

Construction

**Antelope Valley Salt and Nutrient Management Plan
Project Identification Form**

Project Name: Lancaster Water Reclamation Plant environmental maintenance reuse

Project Sponsor: Los Angeles County Sanitation District No. 14

Project Contact Person: Erika DeHollan

Project Contact Phone: (562) 908-4288

Project Contact Email: edehollan@lacsds.org

Project Location (include name of sub-basin): Lancaster sub-basin

Project Description: Disinfected tertiary recycled water produced by the Lancaster WRP is used for environmental maintenance at Apollo Community Regional Park (Apollo Park) and Piute Ponds. Since 1972, Apollo Park has been using recycled water to fill a series of lakes that are used for recreational fishing and boating. Piute Ponds are located on Edwards Air Force Base Property and uses recycled water to maintain marsh-type habitat. Flows below do not include water from Apollo Park lakes that is used for landscape irrigation within the park.

Water Volume Projections (fill in applicable rows)

	2010	2015	2020	2025	2030	2035
Recycled Water (acre-feet/year)	(plant upgrades were completed in 2012)	5,700	5,700	5,700	5,700	5,700
Groundwater						
Stormwater						
Imported Water, raw						
Imported Water, treated						
Surface Water						

Anticipated Implementation Year: _____

Project Status (check status):

Concept

Planning

Design

Construction

**Antelope Valley Salt and Nutrient Management Plan
Project Identification Form**

Project Name: Multi-use/Wildlife Habitat Restoration Project

Project Sponsor: Wagas Land Company, LLC.

Project Contact Person: Ed Renwick

Project Contact Phone: (213) 628-7131

Project Contact Email: erenwick@hanmor.com

Project Location (include name of sub-basin): Northern LA County bounded by Avenue A, 35th St W, Avenue A-8 and the Interstate 14 Freeway (Lancaster sub-basin).

Project Description: AV Duck Hunting Club in both Kern/LA County, started in 1925. The AV region is a flyaway zone for many migratory birds flying south and the Wagas Land Company has been preserving habitat. The Club is proposing to replace their potable water use with recycled water. The Club would allow Waterworks to use a portion of the property for banking.

Water Volume Projections (fill in applicable rows)

	2010	2015	2020	2025	2030	2035
Recycled Water (acre-feet/year)	-	-	2000	2000	2000	2000
Groundwater	1000	1000	-	-	-	-
Stormwater						
Imported Water, raw						
Imported Water, treated						
Surface Water						

Anticipated Implementation Year: 2016

Project Status (check status):

Concept

Planning

Design

Construction

**Antelope Valley Salt and Nutrient Management Plan
Project Identification Form**

Project Name: North Los Angeles/Kern County Regional Recycled Water Project

Project Sponsor: LA County Waterworks District No. 40, City of Lancaster, City of Palmdale

Project Contact Person: _____

Project Contact Phone: _____

Project Contact Email: _____

Project Location (include name of sub-basin): Lancaster and Pearland Sub-basins

Project Description: The recycled water project is the backbone for a regional recycled water distribution system in the Antelope Valley. The proposed system is sized to distribute recycled water throughout the service area and also deliver recycled water for recharge areas. Construction is phased over time and portions are already complete. The first phase (1A) was implemented in 2009. The flow projection below is based on project components being complete and excludes flows to the Palmdale Hybrid Power Plant (3,100 AFY) and groundwater recharge.

Water Volume Projections (fill in applicable rows)

	2010	2015	2020	2025	2030	2035
Recycled Water (acre-feet/year)	3	700	1,800	3,600	4,700	7,100
Groundwater						
Stormwater						
Imported Water, raw						
Imported Water, treated						
Surface Water						

Anticipated Implementation Year: 2009

Project Status (check status):

Concept

Planning

Design

Construction

**Antelope Valley Salt and Nutrient Management Plan
Project Identification Form**

Project Name: Palmdale Hybrid Power Plant Project

Project Sponsor: City of Palmdale

Project Contact Person: Gordon Phair

Project Contact Phone: (661) 267-5310

Project Contact Email: gphair@cityofpalmdale.org

Project Location (include name of sub-basin): City of Palmdale, Lancaster Sub-basin

Project Description: Construction of 570 Mega-Watt electricity generating facility. The power plant will be a hybrid design, utilizing natural gas combined cycle technology and solar thermal technology. The plant is projected to use approximately 3,400 AFY of recycled water and will employ "zero liquid discharge" design.

Water Volume Projections (fill in applicable rows)

	2010	2015	2020	2025	2030	2035
Recycled Water (acre-feet/year)	-	-	3,400	3,400	3,400	3,400
Groundwater						
Stormwater						
Imported Water, raw						
Imported Water, treated						
Surface Water						

Anticipated Implementation Year: 2016

Project Status (check status):

- Concept
- Planning
- Design
- Construction

**Antelope Valley Salt and Nutrient Management Plan
Project Identification Form**

Project Name: Palmdale Recycled Water Authority Recycled Water Project

Project Sponsor: Palmdale Recycled Water Authority

Project Contact Person: _____

Project Contact Phone: _____

Project Contact Email: _____

Project Location (include name of sub-basin): Lancaster, Buttes, and Pearland Sub-basins

Project Description: The recycled water project is the recycled water distribution system for the Palmdale Recycled Water Authority (PRWA). Construction is phased over time and the first portion to serve McAdam Park was completed and implemented in 2012.

Water Volume Projections (fill in applicable rows)

	2010	2015	2020	2025	2030	2035
Recycled Water (acre-feet/year)	0	80	1000	1000	2300	3500
Groundwater						
Stormwater						
Imported Water, raw						
Imported Water, treated						
Surface Water						

Anticipated Implementation Year: 2012

Project Status (check status):

Concept

Planning

Design

Construction

**Antelope Valley Salt and Nutrient Management Plan
Project Identification Form**

Project Name: Palmdale Water Reclamation Plant Upgrade and Expansion

Project Sponsor: Los Angeles County Sanitation District No. 20

Project Contact Person: Erika DeHollan

Project Contact Phone: (562) 908-4288

Project Contact Email: edehollan@lacsds.org

Project Location (include name of sub-basin): City of Palmdale (Lancaster sub-basin)

Project Description: The upgrade and expansion project was completed in 2011. The major components were upgraded wastewater treatment facilities, recycled water management facilities, and municipal reuse. Wastewater treatment processes were upgraded to meet tertiary recycled water requirements prescribed in CDPH's Title 22.

Water Volume Projections (fill in applicable rows)

	2010	2015	2020	2025	2030	2035
Recycled Water (acre-feet/year)	-	11,000	12,000	12,000	13,000	13,000
Groundwater						
Stormwater						
Imported Water, raw						
Imported Water, treated						
Surface Water						

Anticipated Implementation Year: _____

Project Status (check status):

- Concept
- Planning
- Design
- Construction

**Antelope Valley Salt and Nutrient Management Plan
Project Identification Form**

Project Name: Palmdale Water Reclamation Plant Agricultural Site

Project Sponsor: Los Angeles County Sanitation District No. 20

Project Contact Person: Erika DeHollan

Project Contact Phone: (562) 908-4288

Project Contact Email: edehollan@lacsds.org

Project Location (include name of sub-basin): City of Palmdale (Lancaster sub-basin)

Project Description: Existing agricultural site using recycled water produced by the Palmdale Water Reclamation Plant. Per Regional Board requirements, recycled water is applied to the crops at agronomic rates, based on the needs of the crop plant, with respect to water and nitrogen, to minimize deep percolation of the applied recycled water from the root zone to the groundwater table. Additional land acquired for future agricultural operations with infrastructure in place, but not currently used.

Water Volume Projections (fill in applicable rows)

	2010	2015	2020	2025	2030	2035
Recycled Water (acre-feet/year)	7,600	10,200	6,400	7,400	4,100	800
Groundwater						
Stormwater						
Imported Water, raw						
Imported Water, treated						
Surface Water						

Anticipated Implementation Year: _____

Project Status (check status):

Concept

Planning

Design

Construction

**Antelope Valley Salt and Nutrient Management Plan
Project Identification Form**

Project Name: Rosamond Community Services District Wastewater Treatment Plant

Project Sponsor: Rosamond Community Services District (RCSD)

Project Contact Person: Mike Gilardone

Project Contact Phone: (661) 816-5184

Project Contact Email: mgilardone@rosamondcsd.com

Project Location (include name of sub-basin): Rosamond (Lancaster sub-basin)

Project Description: The plant, owned and operated by RCSD, produces both secondary and tertiary treated recycled water. The capacity of the secondary treatment is 1.3 mgd, while the tertiary capacity is 0.5 mgd. The design to upgrade the tertiary treatment capacity to 1.0 mgd is complete. However, the construction is on hold indefinitely due to lack of funding.

Water Volume Projections (fill in applicable rows)

	2010	2015	2020	2025	2030	2035
Recycled Water (acre-feet/year)	560	560	560	560	560	560
Groundwater						
Stormwater						
Imported Water, raw						
Imported Water, treated						
Surface Water						

Anticipated Implementation Year: _____

Project Status (check status):

Concept

Planning

Design

Construction

**Antelope Valley Salt and Nutrient Management Plan
Project Identification Form**

Project Name: RCSD Wastewater Treatment Plant Evaporation Ponds

Project Sponsor: Rosamond Community Services District (RCSD)

Project Contact Person: Mike Gilardone

Project Contact Phone: (661) 816-5184

Project Contact Email: mgilardone@rosamondcsd.com

Project Location (include name of sub-basin): Rosamond (Lancaster sub-basin)

Project Description: The evaporation ponds receives effluent from the RCSD Wastewater Treatment Plant.

Water Volume Projections (fill in applicable rows)

	2010	2015	2020	2025	2030	2035
Recycled Water (acre-feet/year)	560	560	560	560	560	560
Groundwater						
Stormwater						
Imported Water, raw						
Imported Water, treated						
Surface Water						

Anticipated Implementation Year: _____

Project Status (check status):

Concept

Planning

Design

Construction

**Antelope Valley Salt and Nutrient Management Plan
Project Identification Form**

Project Name: Water Supply Stabilization Project (WSSP-2)

Project Sponsor: Antelope Valley East Kern Water Agency (AVEK)

Project Contact Person: Dwayne Chisam

Project Contact Phone: (661) 943-3201

Project Contact Email: dchisam@avek.org

Project Location (include name of sub-basin): Lancaster sub-basin

Project Description: Imported water stabilization program that utilizes SWP water delivered to the Antelope Valley Region's west side for groundwater recharge during wet years for supplemental supply required during summer peaking demand and anticipated dry years. This project includes facilities necessary for the delivery of untreated water for direct recharge (percolation basins) and includes wells and pipeline for raw water and treated water conveyance.

Water Volume Projections (fill in applicable rows)

	2010	2015	2020	2025	2030	2035
Recycled Water (acre-feet/year)						
Groundwater						
Stormwater						
Imported Water, raw						
Imported Water, treated						
Surface Water	10,000	25,000	25,000	25,000	25,000	25,000

Anticipated Implementation Year: _____

Project Status (check status):

___ Concept

___ Planning

___ Design

___ Construction