

# LOCAL AGENCY FORMATION COMMISSION COUNTY OF SAN BERNARDINO

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**DATE:** OCTOBER 9, 2009

**FROM:** KATHLEEN ROLLINGS-McDONALD, Executive Officer  
MICHAEL TUERPE, LAFCO Analyst

**TO:** LOCAL AGENCY FORMATION COMMISSION

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**SUBJECT:** Agenda Item #9: Service Review for the Victor Valley Wastewater Reclamation Authority

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**INITIATED BY:**

San Bernardino Local Agency Formation Commission

**RECOMMENDATION:**

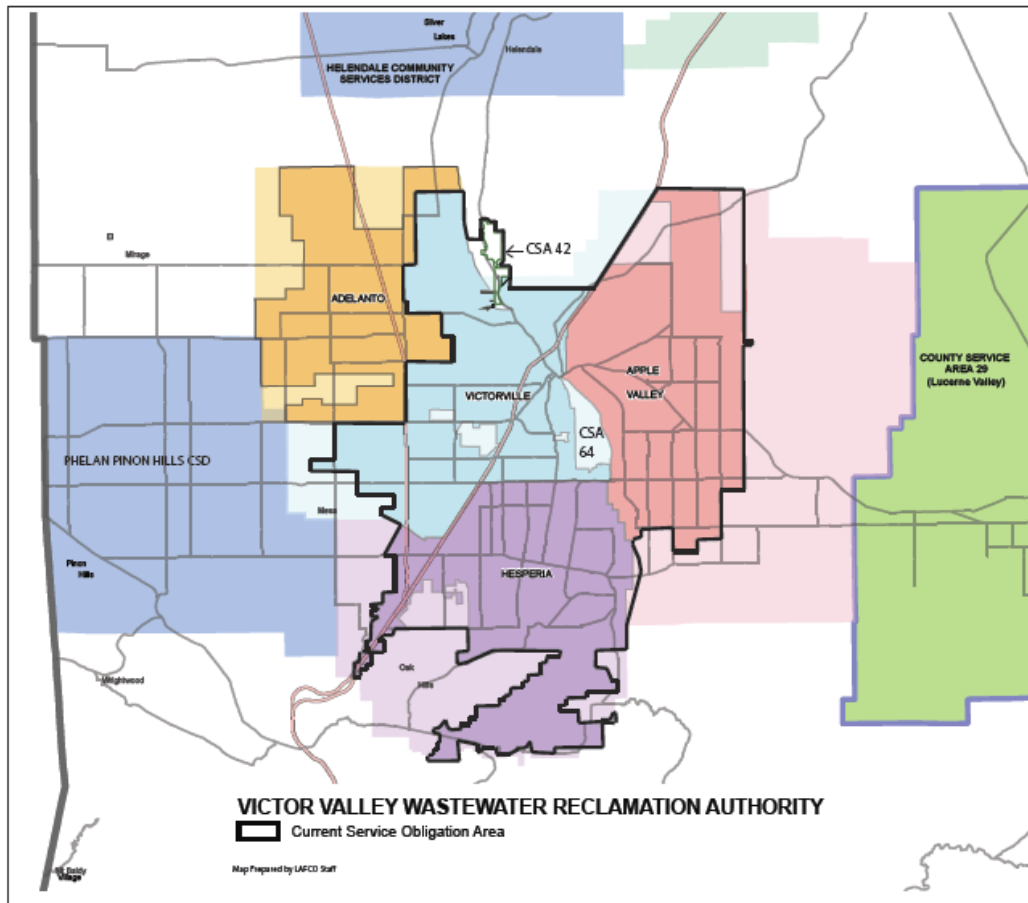
Staff recommends the Commission receive and file the service review for the Victor Valley Wastewater Reclamation Authority.

## INTRODUCTION

At the July 2008 hearing, the Commission directed staff to prepare a service review for the Victor Valley Wastewater Reclamation Authority (hereafter shown as "VWRA" or "Authority") due to questions raised by the local press regarding the Authority. A copy of the minute action initiating the service review is included as Attachment #1. While LAFCO has no direct authority over VWRA, a service review presents information on all the agencies which provide municipal level services within a region. Previous LAFCO service reviews for communities included reviews for private and mutual water companies and improvement zones to county service areas. LAFCO does not assign a sphere of influence designation for a Joint Powers Authority; therefore, only service review information is provided in this report.

VWRA is a joint powers authority, a public agency formed in the late 1970s under Section 6500 et seq. of California Government Code to provide regional wastewater collection and transportation to its member agencies and treatment at its wastewater treatment plant as authorized and permitted by the Lahontan Regional Water Quality Control Board. A map of the JPA's regional location is shown below and included as a part of Attachment #2.

## VVWRA Joint Powers Agreement - Regional Location



The Authority owns and operates a regional treatment plant to treat wastewater for ultimate disposal of treated effluent for the majority of the populated centers in the area known as the Victor Valley region of San Bernardino County. Originally, membership in the Authority was composed of five members: the City of Adelanto, Victorville Sanitary District, County Service Area 42 - Oro Grande, Apple Valley County Water District, and Hesperia County Water District. At some point between 1981 and 1998, County Service Area 64 (Spring Valley Lake) was added as a member agency. In 1998 the Joint Exercise of Powers Agreement was amended and restated to reflect the changes in member agencies to reflect the Town of Apple Valley (successor to the Apple Valley County Water District), the City of Victorville (successor to the Victorville Sanitary District) and to correct the name of the Hesperia Water District. The City of Adelanto, a founding member, removed itself from the Authority in 1998. At some point between the 1998 JPA amendment and the 2005 Service Agreement amendment, the Hesperia Water District membership was transferred to the City of Hesperia. Membership is currently composed of four members: the Cities of Hesperia and Victorville, Town of Apple Valley, and County of San Bernardino on behalf of County Service Area 42 and County Service Area 64.

Over the years, VVWRA has completed treatment plant upgrades and several capacity increases. The regional treatment plant is currently capable of treating a portion of the flow to a tertiary level for discharge to the Mojave River and the remaining flow to a secondary

level for percolation into the Mojave groundwater basin. A lesser amount of treated effluent is currently used to irrigate landscaping at the nearby Westwinds Golf Course. Due to the population boom since 2000 and the anticipated growth through 2030, VVWRA is currently planning for major capital improvements to include additional plant capacity and the construction of additional sub-regional plants. However, as explained in this report, the Authority continues to experience financial challenges and completion of the necessary capital improvements will require supplemental sources of funding under the present time schedules.

### **VVWRA HISTORY:**

The following is a brief history of the major governmental events and infrastructure developments of VVWRA, listed chronologically by start date. The information is taken from previous LAFCO service reviews<sup>1</sup>, submitted materials by VVWRA, and the VVWRA website<sup>2</sup>, unless otherwise cited.

1975-85 To meet the requirements of the federal Clean Water Act and provide wastewater treatment for the growing population, the communities of the Victor Valley requested that the Mojave Water Agency (MWA), being a regional entity, help shepherd the development of a regional wastewater treatment facility. In accepting the request, MWA was designated by the Lahontan Regional Water Quality Control Board as the responsible entity for the design of the Victor Valley Regional Wastewater Reclamation Project and created the MWA Improvement District No. 1 to issue bonds for the project (bond issuance of \$1.75 million) and apply for and receive grants from the Environmental Protection Agency (\$6.96 million) and State of California (\$1.16 million). As described in the Project Service Agreement dated November 23, 1976 (included as a part of Attachment #3) and Mojave Water Agency Resolution 282-75 dated April 22, 1975, MWA also agreed to transfer all assets and authority of the Project to any responsible entity or joint powers agency formed by the communities served.

On December 13, 1977, the communities of the Victor Valley completed the creation of the joint powers authority, which became known as the Victor Valley Wastewater Reclamation Authority (VVWRA). VVWRA was expressly created for the purpose of providing the operation and management of the treatment of wastewater through a regional facility and the ultimate disposal of effluent and solids. On June 1, 1978, VVWRA assumed the assets and authority for the Project, and MWA divested itself from the Project and the provision of sewer service. However, MWA did continue to operate and administer its Improvement District No. 1, which assessed properties within the Victor Valley to pay the bonds for construction of the facility and infrastructure and collected the tax revenues. The MWA Improvement District No. 1 bonds were paid-off during FY 1984-85<sup>3</sup>.

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<sup>1</sup> Town of Apple Valley (LAFCO 3013), City of Hesperia (LAFCO 3035), City of Victorville (LAFCO 3038), CSA 42 (LAFCO 3018), CSA 64 (LAFCO 3024), and Mojave Water Agency (LAFCO 3033).

<sup>2</sup> www.vvwra.com

<sup>3</sup> Mojave Water Agency. Report on Examination. 30 June 1985.

- 1981 The original treatment plant, with supporting pipelines and infrastructure, began operating in 1981, providing secondary level treatment for up to 4.5 million gallons per day (mgd) of wastewater.
- 1983 County Service Area 64 (Spring Valley Lake) owned, operated, and maintained an outfall sewer line, pump station, and related appurtenances which were constructed to provide for the transportation of sewage generated by the properties within CSA 64 to Victorville for treatment by Victorville Sanitary District at its treatment plant. At the time the VVWRA regional treatment plant came on-line the Victorville treatment facility was scheduled to shut down. In 1983, the Victorville treatment facility ceased operating, and the wastewater was conveyed to the VVWRA regional treatment plant.
- The CSA 64 outfall line was “oversized” in order to accommodate a portion of the sewage flows which were anticipated to emanate from future growth in the vicinity of CSA 64. VVWRA and the County believed that the CSA 64 outfall line would be better suited for incorporation into the regional sewer system as a regional interceptor pipeline. VVWRA bought the CSA 64 pipeline and it was transferred to VVWRA. The County Special Districts Department received \$584,057 for the pipeline from VVWRA in 1983.
- The outfall line now owned by VVWRA required an easement for its use. As a condition of CSA 64 granting an easement for the VVWRA pipeline, the County, through the Regional Parks Department, was to have the “right to tie” its local sanitary facilities directly into the VVWRA sewer line, “without charge”. County Counsel determined that “right to tie without charge” meant no connection fee but other fees may apply.
- 1989 The capacity of the treatment plant was increased to 9.5 mgd (discharge of 8.3 mgd to the Mojave River and 1.2 mgd to percolation ponds).
- 1998 The City of Adelanto removed itself from VVWRA membership and constructed its own wastewater treatment plant westerly of the Southern California Logistics Airport.
- 1999 The Lanhontan Regional Water Quality Control Board (Regional Board) adopted Order No. 6-99-58, National Pollutant Discharge Elimination System Permit No. CA 0102822 for VVWRA, setting requirements for the tertiary treated discharge of 8.3 mgd to the Mojave River, and a secondary treated discharge of 1.2 mgd to percolation ponds.
- 2001 From 1983 until 2001, the Mojave Narrows Regional Park’s effluent was conveyed to the VVWRA regional treatment plant for processing at no cost to the County Regional Parks Department. In 2001, VVWRA determined that it needed to recoup the costs for processing the wastewater. The Park was not a member agency, so VVWRA could not directly bill the Park. However, CSA 64 was a member agency. In 2001, the County Regional Parks Department, VVWRA, and CSA 64 entered into an agreement for the purpose of CSA 64

billing the Park for the service. (For further information refer to the Service Review for County Service Area 64 [LAFCO 3024])

2002 The capacity of the treatment plant was increased to 11.0 mgd (discharge of 8.3 mgd to the Mojave River and 2.7 mgd to percolation ponds).

2002-03 In 2002, VVWRA submitted an application to the Regional Board for a master water recycling permit in order to use up to 1,680 acre feet per year of recycled water for irrigation of the Westwinds Golf Course at the Southern California Logistics Airport. At the time, the Golf Course utilized potable groundwater from the underlying Mojave River aquifer. The Department of Fish and Game (DFG) objected to the use of recycled water at the Golf Course as it would reduce stream flow and decrease the amount of flow necessary to maintain riparian habitat in the Alto Transition Zone and decrease the amount that could be extracted from the overdrafted Mojave groundwater basin. In June 2003, the Regional Board approved Order R6V-2003-028, Water Recycling Requirements for VVWRA and City of Victorville, Westwinds Golf Course.

In order to assure the viability of the riparian area in the Transition Zone, the DFG and VVWRA entered into a Memorandum of Understanding (MOU) regarding VVWRA current and future discharges into the Mojave River Transition Zone. The general terms of the MOU are that DFG will not appeal or challenge the Regional Board's Order. In turn, VVWRA will continue to discharge 9,000 acre-feet annually from the regional treatment plant and will also discharge not less than 20% of the amount of recycled water resulting from any increases in the amount of daily influent wastewater flow to the VVWRA Regional Treatment Plant.

2005-06 In April 2005, the No. 10 percolation pond was overfilled and topped the pond containment levee, which caused the levee to fail, resulting in a spill of 8.72 million gallons of unchlorinated secondary effluent into the Mojave River. In response to the spill, in 2006 the Regional Board issued Administrative Civil Liability Order R6V-2006-0055 and imposed a \$500,000 fine, which was settled. The settlement required the Authority to pay a fine in cash (\$117,869), which the Authority has paid, and conduct a Supplemental Environmental Project (SEP). Of the \$500,000 fine, \$383,131 was permanently suspended upon VVWRA compliance with the SEP. The SEP has been produced, but has not yet been concluded (final task due June 2010).

2008 The capacity of the Regional Facility was increased to 14.5 mgd (Phase I Expansion).

In February, concerned about water quality downstream and to address expansion of the treatment plant and new discharge compliance limits, the Regional Board adopted Order No. R6V-2008-04 renewing the NPDES permit for VVWRA and prescribing requirements for the tertiary treated

discharge of 14 mgd to the Mojave River. The Order became effective in April 2008 and expires April 2013.

Adopted concurrently with the Order cited above, the Regional Board issued Cease and Desist Order R6V-2008-005 due to VVWRA discharge affecting the water for municipal and domestic supply. The discharge caused nitrate-nitrogen concentrations in underlying groundwater to exceed or threaten to exceed a water quality objective in the Basin Plan.<sup>4</sup> The Order states that the existing treatment plant does not include wastewater treatment for nitrogen removal and facilities that provide nitrogen removal will not be constructed until 2009-2011. Among the requirements of the Order, interim effluent limitations for ammonia-nitrogen and nitrate-nitrogen were specified. Additionally, the Order specifies facility improvement actions to occur in less than five years. To monitor the situation and progress, beginning in May 2008 quarterly reports are required for submission to the Regional Board.

In August, the Regional Board issued Administrative Civil Liability Complaint R6V-2008-0036. The Complaint alleged discharge and reporting violations by the Authority. The reporting violations, which constituted a large bulk of the Complaint, dated back to 2006. After negotiations, the Authority and the Regional Board reached a proposed settlement of the claims in the Complaint. The proposed settlement represents a mutually agreed upon resolution of the claims. Under the terms of the settlement, the Authority has agreed to administrative civil liability in the amount of \$324,000. The Authority will pay a fine of \$170,380 and \$153,620 will be permanently suspended provided the Authority completes an agreed upon Supplemental Environmental Project described in a September 23, 2008 SEP Proposal provided by the Authority. If the Authority fails to meet the requirements and reporting dates pursuant to the settlement, the entire suspended amount of \$153,620 will become immediately due.

2009            The capacity of the Regional Facility was increased to 18.0 mgd (Phase II Expansion).

### **JURISDICTION, BOUNDARIES, AND SERVICE AREA:**

VVWRA is located in the north desert portion of the County and includes the majority of the populated centers of the region commonly known as the Victor Valley, with the exception of the City of Adelanto. As stated in VVWRA Ordinance 001 (Rules and Regulations for Sewer Service), the member entities collect wastewater through locally owned and operated collector systems within their respective boundaries which are a part of VVWRA and transmit the wastewater to the Authority's treatment plant, owned and operated by the Authority, through the Authority's interceptor pipelines for treatment and ultimate disposition

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<sup>4</sup> The Water Quality Control Plan for the Lahontan Region (Basin Plan) adopted by the Regional Board (and effective 31 March 1995) establishes water quality objectives for the protection beneficial uses. The Basin Plan requires that ground waters designated as a Municipal and Domestic Supply do not contain concentration of chemical constituents in excess of the Maximum Contaminant Level (MCL) based upon drinking water standards specified in provisions of Title 22, California Code of Regulations. The MCL for nitrate is specified in CCR, Title 22, Section 64431, Table 64431-A.

of treated effluent. The member entities have jurisdiction and control over their respective collector systems and the Authority has jurisdiction and control over the regional system.

#### 1976 Original Boundaries to 1998

According to the 1976 Service Agreement and 1977 Joint Exercise of Powers Agreement (JPA), the original boundaries of the Authority were coterminous with the boundaries of the Mojave Water Agency Improvement District No. 1 plus all the real property owned or utilized for the construction and operation of the Victor Valley Wastewater Reclamation Project. The original JPA from 1977 outlined formal terms for annexation to VVWRA. Between 1977 and 1998 the VVWRA Board approved 14 annexations (such annexations not subject to LAFCO approval).

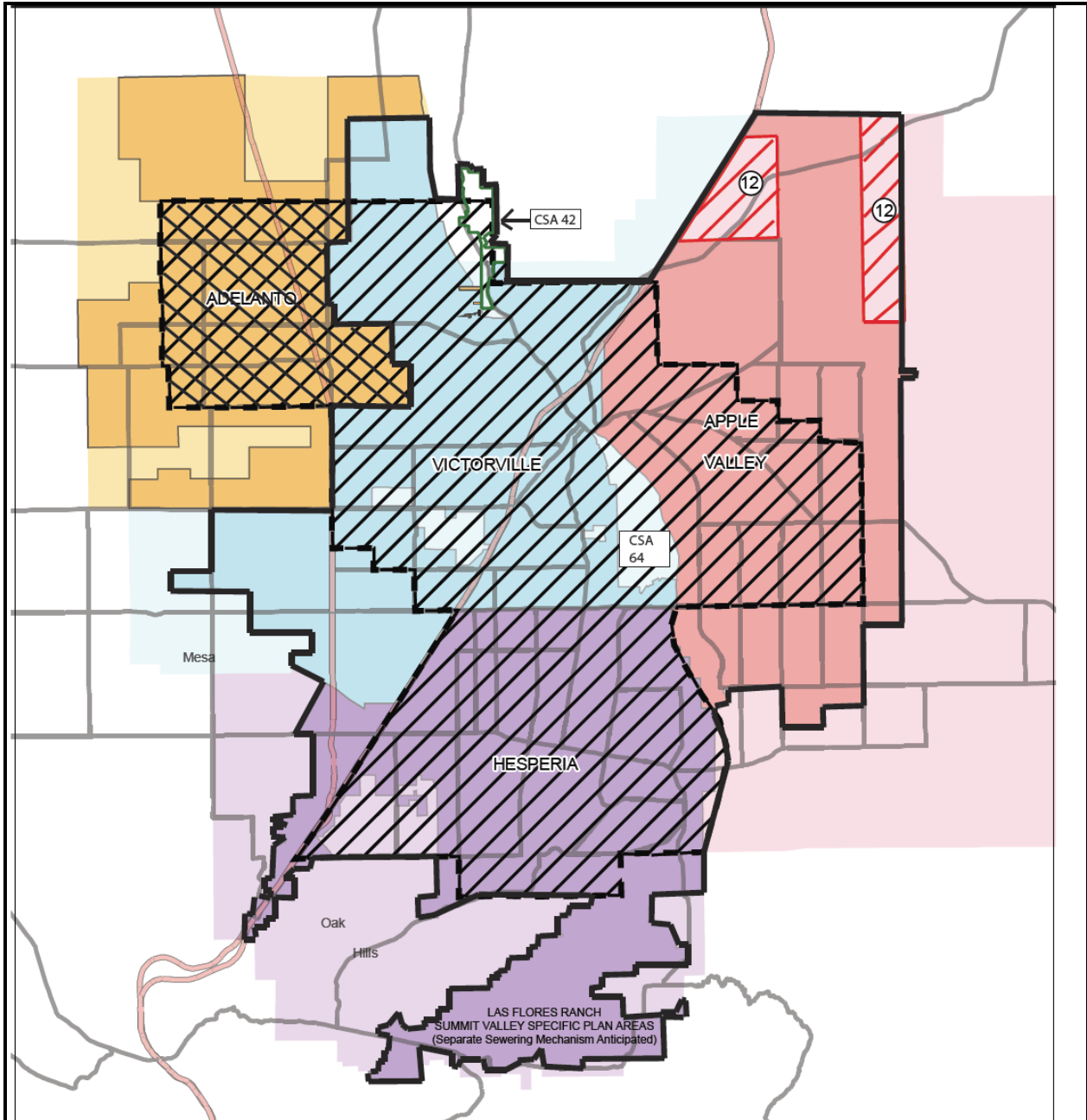
#### Annexations since 1998 and Current Boundaries

The JPA was amended in 1998 and included a revision to remove the requirement for formal annexation. Before the 1998 JPA amendment, each time that properties were added for service the JPA was amended to reflect the annexation. This process became cumbersome and the revision was requested by member agencies and approved by the Board.





With a formal annexation process no longer required since 1998, the ultimate service area of VVWRA would be to the entirety of the boundaries of the member agencies. When a member agency annexes territory to its boundaries, at the same time the ultimate service area of VVWRA expands. Further, if a member agency is able to construct collectors to a structure and send the effluent to the VVWRA interceptor, then VVWRA is obligated to accept the flow because the area is within a member agency. Upon connection to the system, the area is annexed to VVWRA, which expands the boundaries of VVWRA.

Based on the legal descriptions included in the sources referenced above, LAFCO staff has mapped the original boundaries of VVWRA and service obligation area as shown on the map below and included as a part of Attachment #2. As described above, the service obligation area of VVWRA is to the entirety of the boundaries of the member agencies. Also, a few annexations prior to 1998 included territory that remains outside the boundaries of a member agency. VVWRA is also obligated to service these areas since they have been previously annexed.

### Map of Current Service Obligation Area



### VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY

-  Current Service Obligation Area  
(Original Boundary, Member Agencies, & Annexation #12)
-  Original Boundary (VVWRA Joint Powers Agreement Exhibit A)
-  VVWRA Annexation 12 (Amended Agreement)
-  City of Adelanto portion of original boundary; removed itself in 1998

Map Prepared by LAFCO Staff



Additionally, the map shows areas that were a part of VVWRA's original boundaries (Mojave Water Agency Improvement District No. 1 - financing mechanism for initial system development) that are not within the boundary of a member agency. These areas historically have been within the sphere of influence of a member agency. LAFCO staff's concern with these areas is that:

1. The landowners have already paid for the initial development of the system,
2. Since they have already paid for the initial system development, the properties have a right to connect to the existing VVWRA system, if accessible through a member agency collector.
3. If the property owners requested or were required to connect they would be subject to connection fees although they have already paid the initial capital cost.

#### Possible Inclusion of County Service Area 70

During the processing of this service review, VVWRA informed LAFCO staff that the joint powers agreement is in the process of being revised to include County Service Area 70 (CSA 70) as a member entity (included as a part of Attachment #5). The joint powers agreement identifies the roles and responsibilities of VVWRA and the member entities to provide sewage treatment within its boundaries. However, the revision to the agreement has not yet been finalized or adopted. According to the VVWRA staff, the reason for CSA 70 inclusion (similar to CSA 42 and CSA 64) is because VVWRA has received two requests to provide sewer service to unincorporated areas outside its boundaries and by including CSA 70, VVWRA will not require separate agreements for each development that wishes to use its facilities or is in proximity to such facilities.

LAFCO staff expressed its concern regarding the inclusion of CSA 70 for three reasons. First, CSA 70 encompasses the entirety of the unincorporated County area. Being so, VVWRA could theoretically serve anywhere in the unincorporated area of the North Desert. Second, CSA 70 does not provide direct service; rather, it provides service through the creation of improvement zones. Third, it appears that this action would enable VVWRA to operate package treatment plants in areas not able to connect to the VVWRA main lines.

In response to LAFCO staff's queries (a part of Attachment #5), VVWRA states the intent for CSA 70 inclusion is that parcels within CSA 70 immediately adjacent, or at least close to VVWRA existing facilities, would be served without requiring a separate agreement for each one if they are not within CSA 42 or CSA 64. It is not VVWRA's intent to provide sewage treatment to outlying service areas which the County intends to serve. VVWRA staff further states that the operation of package plants (facilities which would operate separately from the existing collection system) are not currently considered in its business plan.

While the VVWRA response provides more information, it does not resolve the remaining LAFCO staff questions related to CSA 70. Staff would question how the addition of CSA 70 as a member agency would alleviate the need for separate agreements since CSA 70 only provides service through the creation of improvement zones, not the parent district. The County has identified the individual improvement zones as separate legal entities, not a part of the County or CSA 70.

**SERVICE REVIEW**

VVWRA prepared a service review consistent with San Bernardino LAFCO policies and procedures. The Authority's response to LAFCO's original and updated requests for materials includes, but is not limited to, the Authority's narrative response to LAFCO staff's request for information, financial documents, 2005 Sewer Facilities Master Plan Update, Annual Reports, Joint Powers Agreement, and 2007 Flow Projection Study. Additional material was obtained by LAFCO staff available through the VVWRA website and California State Controller reports for special districts. The Authority's response is included as Attachment #5 and supporting materials are included as subsequent attachments and are incorporated in the information below.

**I. GROWTH AND POPULATION PROJECTIONS FOR THE AFFECTED AREA.**

From 2000 to 2005 the population within the member agencies of VVWRA increased by 45,234, or 23%. From 2000 to 2009, Victorville has been the 16<sup>th</sup> fastest growing city in the state in percentage growth (70.9%), Hesperia the 44<sup>th</sup> (40.9%), and Apple Valley the 75<sup>th</sup> (28.8%). As of January 2009, there were 111,351 registered voters within the member agencies. By 2010, the result will be a 52% increase in population since 2000, making this area one of the fastest growing in the state since 2000. Past and current population figures for the cities were obtained from the State Department of Finance<sup>5</sup> and population projections, which were developed using the Southern California Association of Government (SCAG) projections<sup>6</sup>, are listed in five-year increments, as shown on the chart below.

**Population Projections through 2030**

Agency	2000	2005	2010	2015	2020	2025	2030	Population Change 2000 to 2030	Percent Change 2000 to 2030
Apple Valley	54,239	63,754	71,630	77,115	82,005	86,749	91,311	37,072	68%
Victorville	64,029	86,345	106,649	122,205	138,023	153,376	168,134	104,105	163%
Hesperia	62,590	75,983	102,895	126,456	148,751	170,384	191,186	128,596	205%
CSA 42	422	432	445	458	472	486	501	79	19%
CSA 64	11,844	11,844	12,283	12,722	13,161	13,600	13,600	1,756	15%
<b>Total</b>	<b>193,124</b>	<b>238,358</b>	<b>293,902</b>	<b>338,956</b>	<b>382,412</b>	<b>424,595</b>	<b>464,732</b>	<b>271,608</b>	<b>141%</b>

\* There is overlap of portions of CSA 42 and 64 with the City of Victorville and/or Town of Apple Valley. However, the figures are not excluded as they are not statistically significant to the overall total.

By 2030, the population of the member agencies is projected to increase by 141% since 2000. This growth is significant; further, each of the cities and CSA 64 has spheres of influence that extend beyond their respective current boundaries, and the sphere of influence is defined as the probable future boundary of an agency. For the areas of discussion, it is assumed that the member agency service boundaries will be expanded to ultimately include these areas, which would expand the service obligation area of VVWRA. Therefore, the population under build-out conditions within the current boundary and current spheres is provided to show the potential population of an expanded VVWRA. Build-out figures were obtained from the city and County general plans and adjusted to include

<sup>5</sup> State of California, Department of Finance, E-4 Population Estimates for Cities, Counties and the State, 2001–2009, with 2000 Benchmark. Sacramento, California, May 2009 and State of California, Department of Finance, *January 2009 Cities and Counties Ranked by Size, Numeric, and Percent Change*. Sacramento, California, May 2009.

<sup>6</sup> Southern California Association of Governments. *Final 2008 Regional Transportation Plan*, May 2008.

development proposals, some which include general plan amendments, which LAFCO staff has received from the County of San Bernardino Land Use Services Department since 2005. As shown in the chart below, the build-out populations within the current boundaries are 672,188 and the current spheres are 253,135. Under the current general plans, the total potential build-out potential is roughly 925,000.

**Population Projections under Buildout Conditions**

Agency	Buildout: Current Boundary	Buildout: Current Sphere & Developments	Buildout – Combined
<b>Apple Valley</b>	177,000	72,338	249,338
<b>Victorville</b>	227,119	81,635	308,755
<b>Hesperia</b>	253,968	79,162	333,130
<b>CSA 42</b>	501	0	501
<b>CSA 64</b>	13,600	20,000	33,600
<b>Total</b>	<b>672,188</b>	<b>253,135</b>	<b>925,324</b>

Population Receiving Sewer Service

Not all those within the boundaries of VVWRA are connected to sewer systems; unsewered customers utilize private septic tanks. In 2005, the range of the population that received sewer collection service varied greatly: CSA 42 and CSA 64 – 100%, City of Victorville – 97%, Town of Apple Valley – 37%, and City of Hesperia – 24%. According to VVWRA, Apple Valley and Hesperia have lower sewer connection rates because sewer systems are not available in all areas and the failure of on-site systems is often remedied by constructing new on-site system, rather than connecting to the sewer system. New developments in many cases are designed with on-site systems since wastewater collection facilities are not available in proximity to the site. However, the need for sewer service in unincorporated territory has been altered through adoption of the new County General Plan and Development Code in 2007 which specifies a methodology for distance to connect to a system based upon the number of units in a project.

Projections for the sewer population in five year increments are shown in the chart below. Of the projected population growth, almost 100% is anticipated to receive sewer collection service: CSA 42, CSA 64, and City of Victorville – 100%; Town of Apple Valley - from 60% in 2005 to 100% in 2020; City of Hesperia – from 65% in 2005 to 96% in 2024.

**Sewered Population Projections**

Member Agency	2005	2010	2015	2020	2025
<b>Victorville w/ SCLA</b>	87,859	112,853	131,272	152,625	177,379
<b>CSA 42</b>	774	774	774	774	774
<b>CSA 64</b>	12,193	14,135	16,386	17,058	17,058
<b>Apple Valley</b>	22,863	27,493	33,521	41,279	50,423
<b>Hesperia</b>	17,382	28,131	39,131	54,312	74,942
<b>TOTAL</b>	<b>141,071</b>	<b>183,385</b>	<b>221,084</b>	<b>266,047</b>	<b>320,576</b>

source: 2005 Sewer Facilities Plan Update, Table 1-2

In the chart above, the Authority does not anticipate growth within CSA 42, which does not result in an increase in wastewater flow. However, the Southern California Association of Government (SCAG) projections for transportation analysis zones take into account nominal growth in terms of raw numbers (see figure Population Projections through 2030). This growth will not contribute to significant increases in wastewater flow.

## **II. PRESENT AND PLANNED CAPACITY OF PUBLIC FACILITIES AND ADEQUACY OF PUBLIC SERVICES, INCLUDING INFRASTRUCTURE NEEDS OR DEFICIENCIES.**

The following section includes information obtained from the following sources: the Authority's narrative response to LAFCO staff's request for information, FY 2009-10 Budget including capital improvement budget, 2005 Sewer Facilities Master Plan Update, 2007 and 2008 Annual Reports, 2009 Financial Plan, and 2009 Flow Projection Update. VVWRA is in the process of preparing its Sewer Master Plan, anticipated for completion in fall 2009.

### Treatment System

The Authority owns and operates a regional wastewater system which includes collection interceptors, a treatment plant, and related appurtenances. The system is the largest public infrastructure in the north desert region of the county. Member agencies collect and transport wastewater generated within their respective boundaries to the VVWRA collection interceptors where the wastewater flows to the regional wastewater treatment plant. The treatment plant is currently capable of treating a portion of the effluent to a tertiary level for discharge into the Mojave River and the remaining flow to a secondary level for percolation in the Mojave groundwater basin. A lesser amount of treated effluent is currently used to irrigate landscaping at the nearby Westwinds Golf Course. VVWRA and the City of Victorville have entered into a memorandum of understanding regarding VVWRA providing recycled water to the Westwinds Golf Course along with other uses at the Southern California Logistics Airport.

### *Collection Interceptors*

VVWRA owns and operates 41.5 miles of collection interceptors that receive wastewater from the member agencies that range in size from 10 inches to 42 inches in diameter. However, there are large areas within the boundaries of the Town of Apple Valley and City of Hesperia that are not connected to the wastewater collection system. The interceptor system transports wastewater from the member agencies northerly to the treatment plant and extends roughly 15 miles to northern Hesperia, southern Apple Valley, and eastern Adelanto.

VVWRA does not utilize the Adelanto Interceptor following the separation of the City of Adelanto from VVWRA membership in 1998 and the operation of its own wastewater treatment facility. The City of Adelanto did not purchase the interceptor from VVWRA; VVWRA retained ownership. No improvements are currently anticipated at this time for the Adelanto Interceptor. However, when the City of Adelanto experienced pipeline and percolation pond failures, Adelanto has used the interceptor to send treated secondary effluent flow to VVWRA in order to avoid a public health emergency.

Due to the geographical location of portions of the VVWRA main stem of the interceptor (a portion lies underneath the Mojave River), floodwaters have damaged the interceptor several times.

- In 1983, Reach 7 in the Lower Narrows was damaged and 150 feet of pipe was destroyed resulting in a three-day spill of untreated sewage into the Mojave River. A temporary bypass was used for eight months. In response to the draft LAFCO staff report that was provided to VVWRA as a part of the service review process, VVWRA states that this interceptor (from Spring Valley Lake to the treatment plant) is operating at levels which make video inspection impossible. The line was originally constructed on a flat slope and thus the settling of the pipe is inconsequential due to overall flow volumes. VVWRA is currently evaluating the possibility of utilizing new sonar technology to evaluate these sections of the interceptor.
- In 1993, Reach 7 was damaged and an unknown length of pipe destroyed resulting in a one week spill of untreated water into the river. A semi-permanent emergency bypass pipeline and pump station was used for several years. Also, manholes in Reaches 9 and 10 through the Upper Narrows were damaged by floodwater debris. Corrective measures involved cutting and sealing of the manholes below the riverbed. However, a 100-foot section of the pipeline south of the Highway 18 bridge that still is in use has settled in the river, making video inspection difficult at this time.

The system was constructed prior to the operation of the treatment plant and was designed to provide service for approximately 20 years. Much of the interceptor system has been in use for over 20 years, and according to the *2005 Sewer Facilities Plan* and FY 2009-10 Budget, the Hesperia and South Apple Valley interceptors are reaching capacity (estimated to reach capacity between 2012 and 2015 respectively). As identified in the FY 2009-10 Budget, the Hesperia interceptor south of Bear Valley Road is in critical need presently and the Hesperia interceptor north of Bear Valley Road will require improvements this fiscal year to meet capacity needs. As described in the capital improvement discussion of this report, the construction of sub-regional treatment plants in Apple Valley and Hesperia will reduce the hydraulic load on the interceptors.

#### *Wastewater Flow to the Treatment Plant*

As stated in the *Growth and Population Projections* section of this report, of the projected population growth almost 100% is anticipated to require sewer collection service. Moreover, population growth and new connections correlate to an increase in wastewater flow, which will have a direct effect on the capacity of the current system and future capacity requirements. As shown in the chart below, the sharp increase in population from 2000 to 2006 resulted in sharp increases in sewage flow to the treatment plant. Correspondingly, the low growth rate since 2007 has resulted in low increases to overall flow to the treatment plant.

### Historical Average Flow and Population

Year	Avg Flow, mgd <sup>1</sup>	% Growth by Year	Population Estimate <sup>2</sup>	Population Growth, %
2000	8.19		182,169	
2001	8.43	2.8%	188,298	3.3%
2002	8.85	4.7%	195,233	3.6%
2003	9.40	5.9%	203,319	4.0%
2004	10.63	11.6%	217,221	6.4%
2005	12.19	12.8%	232,766	6.7%
2006	12.32	1.1%	248,984	6.5%
2007	12.43	0.9%	263,058	5.4%
2008	12.26	-1.4%	265,320	0.9%

<sup>1</sup> Based on average annual flow recorded at Regional Facility, millions gallons per day

<sup>2</sup> Based on US Census Bureau statistics

Source: VVWRA Flow Projection Update, April 2009. Prepared by RBF Consulting.

In 2008 the treatment plant received an average of 12.26 million gallons per day (mgd) of influent, a decrease from 12.43 mgd in 2007. Additionally, the treatment plant accepts pumped or hauled liquid waste from residences within its boundaries, which is processed for treatment along with the influent wastewater that is received. Septage waste received by the treatment plant in 2007 totaled 2.04 million gallons and increased to 2.41 million gallons in 2008.

The chart below from the *2009 Flow Projection Update* (included as Attachment #6a) accounts for current building activity within the member cities. The data does not include projects not currently active, land that is or will continue to be serviced by septic tanks or leach fields, and land that cannot drain to the treatment plant due to physical constraints. According to the *Flow Projection*, if all of these projects are completed and occupied, flow will increase by 7.38 mgd. With current flow being 12.26 mgd, this would increase total flow by 60%.

### Current Building Activity and Estimated Flow

Land Use	Member Agency (units)			Average Dry Weather Flow (mgd)			Total Flow, mgd
	Victorville	Hesperia	Apple Valley	Victorville	Hesperia	Apple Valley	
SFR	17,476	3,201	2,147	3.31	0.61	0.41	4.33
MFR	2,436	3,074	963	0.38	0.48	0.15	1.01
Commercial/ Industrial, sf	3,538,940	5,032,559	1,331,031	0.71	1.01	0.33	2.05
<b>Totals</b>				<b>4.40</b>	<b>2.09</b>	<b>0.89</b>	<b>7.38</b>

SFR = Single Family Residential

MFR = Multi Family Residential

mgd = millions gallons per day

sf = square feet

Source: VVWRA Flow Projection Update, April 2009. Prepared by RBF Consulting. Data obtained from December 2008 Victorville and Hesperia activity reports and January 2009 Apple Valley activity report.

The chart below shows that from 2009 to 2022, average daily flow is anticipated to increase from 12.46 mgd to 20.79 mgd, an increase of 8.33 mgd or 67%. In addition to the resident population, the wastewater flow projections include commercial business, industries, institutions (schools, hospitals, prisons, etc.), and septic conversions to the sewer system.

**Projected VVWRA Flow based on Historical Growth Rates**  
 (flow shown in million gallons per day)

Year	Victorville		Hesperia		Apple Valley		Spring Valley/Oro Grande		Totals		
	Avg. Daily Flow	EDU Growth	Avg. Daily Flow	EDU Growth	Avg. Daily Flow	EDU Growth	Avg. Daily Flow	EDU Growth	Avg. Daily Flow	EDU Growth	Annual Growth %
2009	7.91	572	1.82	293	1.82	111	0.90	111	12.46	1,088	1.6%
2010	8.02	572	1.87	293	1.84	111	0.92	111	12.65	1,088	1.5%
2015	9.97	2,175	2.88	1,113	2.22	423	1.02	111	16.09	3,822	4.3%
2020	11.93	2,175	3.88	1,113	2.60	423	1.04	0	19.45	3,711	3.4%
2022	12.71	2,175	4.28	1,113	2.75	423	1.04	0	20.79	3,711	3.2%

Source: VVWRA Flow Projection Update, April 2009. Prepared by RBF Consulting.

*Regional Wastewater Treatment Plant*

All wastewater is currently treated at the regional wastewater treatment plant at 20111 Shay Road in Victorville, located in the downstream portion of the VVWRA service area where gravity helps convey wastewater flow to the treatment plant. The treatment plant consists of headworks, primary clarifiers, flow equalization, aeration basins, secondary clarifiers, coagulation/flocculation, filtration, and chlorination/dechlorination, and sludge handling. According to the *2005 Sewerage Facilities Plan* (included as Attachment #6b), the construction of additional capacity should be initiated when the existing facilities reach 80% of the current rated capacity in order for construction to be completed before the facilities reach 90% of rated capacity. As increased flow has decreased available capacity, VVWRA has completed treatment plant upgrades and several capacity increases to meet anticipated population and flow increases:

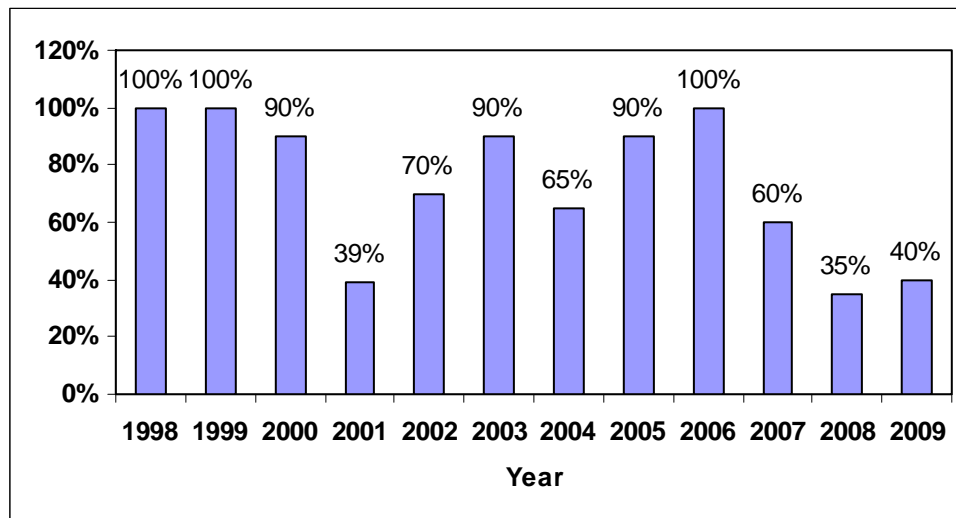
- 1989 - The capacity of the Regional Facility was increased to 9.5 mgd (discharge of 8.3 mgd to the Mojave River and 1.2 mgd to percolation ponds).
- 2002 - The capacity of the Regional Facility was increased to 11.0 mgd (discharge of 8.3 mgd to the Mojave River and 2.7 mgd to percolation ponds).
- 2008 - The capacity of the Regional Facility was increased to 14.5 mgd (Phase I Expansion).
- 2009 - The capacity of the Regional Facility was increased to 18.0 mgd (Phase II Expansion).

## Regional Water Condition and the Role of Treated Effluent and Title 22 Reclaimed Water

As LAFCO staff has stated on many occasions, water is the lifeblood for communities located in the desert. Therefore, the most significant regional issue is present and future water supply. The *2007 State Water Project Delivery Reliability Report* indicates that State Water Project (SWP) deliveries will be impacted by two significant factors. First, it is projected that climate change is altering hydrologic conditions in the State. Second, a ruling by the Federal Court in December 2007 imposed interim rules to protect delta smelt which significantly affects the SWP. Further, the *Report* shows, "...a continued eroding of SWP delivery reliability under the current method of moving water through the Delta" and that "annual SWP deliveries would decrease virtually every year in the future..." The *Report* assumes no changes in conveyance of water through the Delta or in the interim rules to protect delta smelt.

The figure below shows the allocation percentage that State Water Contractors were allowed to purchase for the past twelve years. For example, Mojave Water Agency (MWA) (the State Water Contractor that overlays the VVWRA service area) is entitled to purchase up to 75,800 acre-feet of imported water per year. For 2009 the allocation percentage is 40%; therefore, MWA can purchase up to 30,320 acre-feet in 2009. Since the State Water Project began allocating deliveries in 1968, there have been only three other final allocations lower than this year's: 35% in 2008, 39% in 2001 and 30% in 1991<sup>7</sup>. This sharp reduction in supplemental water supply will reduce the amount of water that MWA can place into the groundwater basin where the community pumps its water.

**Department of Water Resources State Water Project  
Allocation Percentages Statewide (1998-2009)**



source: Department of Water Resources

The water supplied for consumption and/or use within the community is pumped from the local groundwater basin. The high growth rate in the region, coupled with a continued

<sup>7</sup> State of California. Department of Water Resources. "DWR Raises SWP Deliveries to 40 Percent", Press Release. 20 May 2009.



overdraft<sup>8</sup> of the Mojave groundwater basin in its entirety, which is the primary source of supply, is an infrastructure deficiency. The groundwater basin is adjudicated<sup>9</sup> under a stipulated judgment that specifies the amount of groundwater that can be extracted by major groundwater producers (those using over 10 acre-feet per year), the purpose of which is to balance water supply and demand and address the groundwater overdraft. Producers are required to replace any water pumped above their Free Production Allowance by paying the Watermaster to purchase supplemental water or by purchasing unused production rights from another party. Due to the ongoing overdraft of the basin and challenges associated with the State Water Project, future supplies are limited and demand will exceed supplies unless the Department of Water Resources allocates additional amounts. This prompts water purveyors to scale back consumption annually, to aggressively promote water conservation measures, and to buy more expensive imported water. Finding efficiencies in managing limited supply sources is critical for the future of the community.

As the population of the Victor Valley increases (increased demand) coupled with the reduction in State Water Project allocation (decreased supply), the use of recycled water as a supplemental supply of water is paramount to the overall region. Further, the boom in population growth has contributed to the overdraft of the groundwater basin. Therefore, a critical need exists to find alternative solutions to address current and future needs, such as the use of treated effluent and reclaimed water.

#### *MOU with Fish and Game*

In 2002 VVWRA submitted an application to the Lanhontan Regional Water Quality Control Board (Regional Board) for a master water recycling permit in order to use up to 1,680 acre feet per year of recycled water for irrigation of the Westwinds Golf Course at the Southern California Logistics Airport. At the time, the Golf Course utilized potable groundwater from the underlying Mojave River aquifer. The Department of Fish and Game (DFG) objected to the use of recycled water at the golf course as it would reduce stream flow, decrease the amount of flow necessary to maintain riparian habitat in the Alto Transition Zone and decrease the amount of water that could be extracted from the overdrafted Mojave groundwater basin. In June 2003, the Regional Board approved Order R6V-2003-028, Water Recycling Requirements for VVWRA and City of Victorville, Westwinds Golf Course.

In order to assure the viability of the riparian area in the Transition Zone, the DFG and VVWRA entered into a Memorandum of Understanding (MOU) regarding VVWRA current and future discharges into the Mojave River Transition Zone. The general terms of the MOU are that DFG will not appeal or challenge the Regional Board's Order. In turn, VVWRA will continue to discharge 9,000 acre-feet annually from the regional treatment facility and will also discharge not less than 20% of the amount of recycled water resulting from any increases in the amount of daily influent wastewater flow to the VVWRA Regional Treatment Plant.

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<sup>8</sup> Overdraft is defined as "the condition of a groundwater basin in where the amount of water withdrawn exceeds the amount of water replenishing the basin over a period of time". California. Department of Water Resources, *California Water Plan Update - Bulletin 160-98*, pg. G-3 (November 1998).

<sup>9</sup> Adjudication is defined in the *2005 California Water Plan* as the "Act of judging or deciding by law. In the context of an adjudicated groundwater basin, landowners or other parties have turned to the courts to settle disputes over how much groundwater can be extracted by each party to the decision." California. Department of Water Resources, *California Water Plan Update 2005*, Vol 4, Glossary (2005).

### *Future Use of Treated Effluent and Title 22 Reclaimed Water*

Currently, the secondary and tertiary effluent that is discharged or percolates into the groundwater basin enters the Mojave River at the northern most part of the Authority, which is downstream. In order to utilize Title 22 reclaimed water as an alternative source, sub-regional plants are to be constructed in the Town of Apple Valley and the City of Hesperia. More details on these plants are described below. The use of reclaimed water from these plants is planned to irrigate public lands in addition to residential communities and commercial businesses along the I-15 corridor. Use of reclaimed water requires a permit from the Regional Water Quality Control Board. To expedite the permitting process, VVWRA is requesting from the Regional Board a Recycled Water Master Permit. If VVWRA obtains the master permit, it will be responsible for permitting and monitoring recycled water users that use Title 22 reclaimed water requirements within its boundaries.

The City of Victorville/Victorville Water District is anticipated to provide reclaimed water to the High Desert Power Project. The High Desert Power Project is a 830-megawatt, natural gas-fueled generating plant that sells all electricity produced to the California Department of Water Resources. The 2010 estimated water demand for the Project is 3,100 acre-feet and it currently utilizes state water project water from the Mojave Water Agency delivered through the Victorville Water District. However, due to the reduction in available state project water the use of reclaimed water will free up potable water that is being used for non-potable uses. The Project is anticipated to receive up to 1,000 acre-feet beginning in 2009 with an additional 3,000 acre-feet beginning in 2012.

### Wastewater Treatment and Discharge by VVWRA

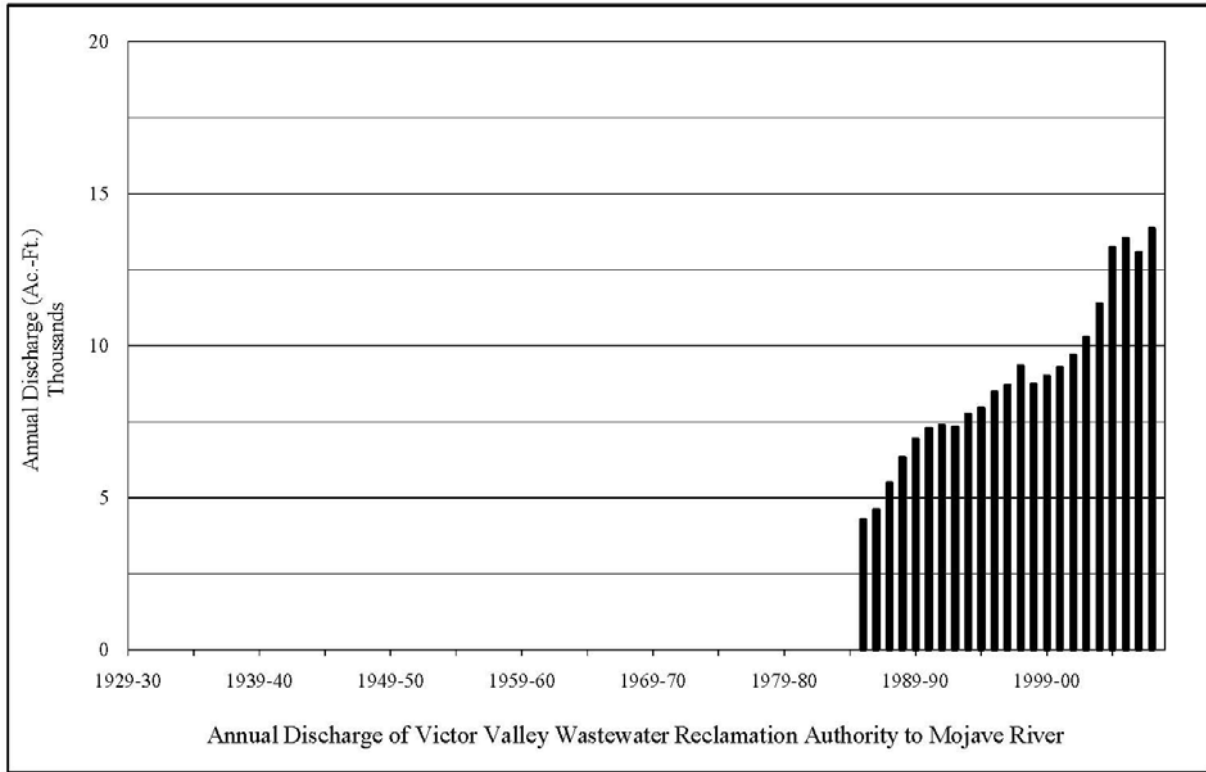
The regional treatment plant is currently capable of treating a portion of the flow to a tertiary level for discharge into the Mojave River and the remaining flow to a secondary level for percolation into the groundwater basin. However, the treatment plant is not designed to remove nitrogen. According to the Lanhontan Regional Water Quality Control Board, because the Mojave River loses its surface flow by percolation into the groundwater, the discharge has likely caused groundwater downstream of the discharge location to have elevated nitrate concentrations. Using an activated biological sludge treatment, VVWRA produces an average of eight million gallons per day of tertiary treatment effluent, which is either released into a marsh tributary of the Mojave River or pumped to the Westwinds Golf Course for landscaping and turf irrigation at Southern California Logistics Airport<sup>10</sup>. The remaining four million gallons per day, secondary treated wastewater, is released into the North and South percolation ponds and ultimately to the Upper Mojave River Valley Groundwater Basin. For 2007 and 2008 the figures are relatively similar - an average of 12.3 mgd of municipal wastewater was treated and disposed as follows:

- 7.8 mgd – tertiary treated effluent to the Mojave River
- 4.2 mgd – undisinfected secondary treated effluent to onsite percolation ponds, and
- 0.3 mgd – recycled water used at Westwinds Golf Course of SCLA and at the California Biomass waste recycling facility located onsite at VVWRA

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<sup>10</sup> VVWRA and the City of Victorville have entered into a MOU regarding VVWRA providing recycled water to the Westwinds Gold Course and other uses at the Southern California Logistics Airport.

VVWRA's discharge of treated effluent downstream from the Lower Narrows contributes to the Alto sub-basin annual flow obligation to the Centro sub-basin and amounted to 13,385 acre-feet (4.36 billion gallons) for Water Year 2007-08. The annual effluent discharge since 1985-86 is shown in the figure below.<sup>11</sup>



source: Mojave Basin Area Watermaster

As an agency that sends treated effluent into a river, the Authority monitors and reports constituents present in its water. According to the 2007 Annual Report submitted to the Lanhontan Regional Water Quality Control Board there were no items that exceeded the maximum contaminant level or the regulatory action level. According to the 2007 and 2008 Annual Reports, effluent removal efficiencies averaged 98.8% for Biological Oxygen Demand (BOD) in 2007 and increased to 99.1% in 2008. Effluent removal efficiency for ammonia averaged 94.85% in 2006 and increased to 99.3% in 2008.

### Orders and Enforcement Actions

Since 2005, VVWRA has violated water discharge requirements as set forth by the Lanhontan Regional Water Quality Control Board (Regional Board). The Regional Board has taken action against VVWRA in response to a percolation pond spill and alleged discharge and reporting violations by the Authority. Below is a synopsis of the actions as identified from the VVWRA FY 2007-08 Comprehensive Annual Financial Report and Regional Board publications.

<sup>11</sup> Mojave Basin Area Watermaster, 15<sup>th</sup> Annual Report of the Mojave Basin Watermaster: Water Year 2007-08, (1 May 2009), Ch. 3.

- April 12, 2005 - The No. 10 percolation pond was overfilled and topped the pond containment levee, which caused the levee to fail, resulting in a spill of 8.72 million gallons of unchlorinated secondary effluent into the Mojave River. In response to the spill, in 2006 the Regional Board issued Administrative Civil Liability Order R6V-2006-0055 and imposed a \$500,000 fine, which was settled. The settlement required the Authority to pay a fine in cash (\$117,869), which the Authority has paid, and conduct a Supplemental Environmental Project (SEP). Of the \$500,000 fine, \$383,131 was permanently suspended upon VVWRA compliance with the SEP. The SEP has been produced since then, but has not yet been concluded (final task due June 2010).
  
- February 14, 2008
  - Concerned about water quality downstream and to address expansion of the treatment plant and new compliance limits, the Regional Board adopted Order No. R6V-2008-04 renewing the NPDES permit for VVWRA and prescribing requirements for the tertiary treated discharge of 14 mgd to the Mojave River. The Order became effective in April 2008 and expires April 2013.
  
  - Adopted concurrently with the Order cited above, the Regional Board issued Cease and Desist Order R6V-2008-005 due to VVWRA discharge affecting the water for municipal and domestic supply. The discharge caused nitrate-nitrogen concentrations in underlying groundwater to exceed or threaten to exceed a water quality objective in the Basin Plan.<sup>12</sup> The Order states that the existing treatment plant does not include wastewater treatment for nitrogen removal and facilities that provide nitrogen will not be constructed until 2009-2011. Among the requirements of the Order, interim effluent limitations for ammonia-nitrogen and nitrate-nitrogen removal were specified. Additionally, the Order specifies facility improvement actions to occur in less than five years. To monitor the situation and progress, beginning in May 2008 quarterly reports are required for submission to the Regional Board.
  
- August 18, 2008 - The Regional Board issued Administrative Civil Liability Complaint R6V-2008-0036. The Complaint alleged discharge and reporting violations by the Authority. The reporting violations, which constituted a large bulk of the Complaint, dated back to the first quarter of 2006. After negotiations, the Authority and the Regional Board reached a proposed settlement of the claims in the Complaint. The proposed settlement represents a mutually agreed upon resolution of the claims. Under the terms of the settlement, the Authority has agreed to an administrative civil liability in the amount of \$324,000. The Authority

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<sup>12</sup> The Water Quality Control Plan for the Lahontan Region (Basin Plan) adopted by the Regional Board (and effective 31 March 1995) establishes water quality objectives for the protection beneficial uses. The Basin Plan requires that ground waters designated as a Municipal and Domestic Supply do not contain concentration of chemical constituents in excess of the Maximum Contaminant Level (MCL) based upon drinking water standards specified in provisions of Title 22, California Code of Regulations. The MCL for nitrate is specified in CCR, Title 22, Section 64431, Table 64431-A.

will pay a fine of \$170,380 and \$153,620 will be permanently suspended provided the Authority completes an agreed upon Supplemental Environmental Project (SEP) described in a September 23, 2008 SEP Proposal provided by the Authority. If the Authority fails to meet the requirements and reporting dates pursuant to the settlement, the entire suspended amount of \$153,620 will become immediately due.

The Authority is now in compliance with Board's requirements and has implemented small and large improvements to the Facility's operations and infrastructure. In doing so, VVWRA has been recognized by the Desert and Mountain Section of the California Water Environment Association as the 2008 Treatment Plant of the Year for medium-sized plants.

### VVWRA Capital Improvements

To meet the current and future needs to treat wastewater, prior financial projections accounted for \$170 million of capital improvements through 2013. However, according to the May 2009 Financial Plan, near-term capital improvements have been substantially reduced. The difficulty in revising the capital improvement plan was the need to adapt to economic conditions while still meeting the requirements of the Regional Board's Order to expand plant capacity and remove nitrates in the discharge. As shown in the figure below, revised financial projections plan for \$28.3 million of "near-term critical path capital improvement projects" for the next two years. The subsequent figure identifies that \$14.6 million of that cost will occur this year with the remainder to follow in FY 2010-11. "Future CIP Projects" have been identified at a cost of \$42.7 to VVWRA.

**Table 7**  
Victor Valley Wastewater Reclamation Authority  
Projected CIP Projects (Excludes Subregional WRPs)

	Estimated Project Cost (Future \$)	% Allocation		\$ Allocation	
		Capacity Fees	User Charges	Capacity Fees	User Charges
<b>NEAR-TERM CRITICAL PATH CIP PROJECTS</b>					
<u>Regulatory Compliance</u>					
UV Disinfect, Filtration, & Gas Scrubber System	\$19,000,000	12.1%	87.9%	2,307,000	16,693,000
Helical Skimmers	1,300,000	12.1%	87.9%	158,000	1,142,000
Recirculation Pumps	<u>300,000</u>	<u>12.1%</u>	<u>87.9%</u>	<u>36,000</u>	<u>264,000</u>
<i>Subtotal</i>	<i>20,600,000</i>	<i>12.1%</i>	<i>87.9%</i>	<i>2,501,000</i>	<i>18,099,000</i>
<u>Other Improvements</u>					
Rebuild 4 Primary Clarifiers	1,200,000	0.0%	100.0%	0	1,200,000
Design HI & AV Subregional WRPs	3,500,000	100.0%	0.0%	3,500,000	0
Santa Fe Interceptor Sewer	<u>3,000,000</u>	<u>90.0%</u>	<u>10.0%</u>	<u>2,700,000</u>	<u>300,000</u>
<i>Subtotal</i>	<i>7,700,000</i>	<i>80.5%</i>	<i>19.5%</i>	<i>6,200,000</i>	<i>1,500,000</i>
<b>Total Near-Term CIP Projects</b>	<b>28,300,000</b>	<b>30.7%</b>	<b>69.3%</b>	<b>8,701,000</b>	<b>19,599,000</b>
<b>FUTURE CIP PROJECTS</b>					
<u>Regulatory Compliance</u>					
Civil Site	1,860,000	12.1%	87.9%	226,000	1,634,000
IFAS System	11,800,000	12.1%	87.9%	1,433,000	10,367,000
Electrical Service & Backup Power	1,480,000	12.1%	87.9%	180,000	1,300,000
Plant Utility Water System	1,464,000	12.1%	87.9%	178,000	1,286,000
Sludge Dewatering	6,970,000	12.1%	87.9%	846,000	6,124,000
Emergency Storage Pond Lining	1,100,000	12.1%	87.9%	134,000	966,000
Secondary Effluent Pump Station Modifications	<u>210,000</u>	<u>12.1%</u>	<u>87.9%</u>	<u>26,000</u>	<u>185,000</u>
<i>Subtotal</i>	<i>24,884,000</i>	<i>12.1%</i>	<i>87.9%</i>	<i>3,023,000</i>	<i>21,862,000</i>
<u>Other Improvements</u>					
Digester Upgrades	2,658,000	12.1%	87.9%	323,000	2,335,000
Grease Receiving Station	1,055,000	100.0%	0.0%	1,055,000	0
Waste Activated Solids (WAS) Thickening	1,405,000	12.1%	87.9%	171,000	1,234,000
Apple Valley Trunk Line Design & Construction	5,875,000	100.0%	0.0%	5,875,000	0
Hesperia - Spring Valley Lake Interceptor	4,973,000	89.6%	10.4%	4,455,000	518,000
Other Miscellaneous Improvements	<u>1,862,000</u>	<u>61.4%</u>	<u>38.6%</u>	<u>1,143,000</u>	<u>719,000</u>
<i>Subtotal</i>	<i>17,828,000</i>	<i>73.0%</i>	<i>27.0%</i>	<i>13,022,000</i>	<i>4,806,000</i>
<u>Subregional WRPs</u>					
Hesperia WRP & Related Facilities	<i>tbd</i>				
Apple Valley WRP & Related Facilities	<i>tbd</i>				
East Side WRP & Related Facilities	<i>tbd</i>				
Reclaimed Water Distribution Systems	<i>tbd</i>				
<b>Total Future CIP Projects</b>	<b>42,712,000</b>	<b>37.6%</b>	<b>62.4%</b>	<b>16,045,000</b>	<b>26,668,000</b>
<b>Total</b>	<b>71,012,000</b>	<b>34.8%</b>	<b>65.2%</b>	<b>24,746,000</b>	<b>46,267,000</b>

Source: Based on VVWRA Capital Budget - Version 5C with 05/12/09 HDR revisions of engineering cost estimates for UV Disinfection Filtration, and Gas Scrubber System as of 05/12/09.

source: Financial Plan, Table 7.

<b>VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY</b>									
<b>Capital Budget</b>									
<b>Fiscal Year Ending June 30, 2010</b>									
<b>EXPENSE</b>	<b>Project</b>	<b>Project Title</b>	<b>Budget</b>	<b>Revised Budget</b>	<b>YTD</b>	<b>Projection</b>	<b>Budget</b>	<b>Projected Budget</b>	<b>% of</b>
<b>Code</b>			<b>6/30/2009</b>	<b>6/30/2009</b>	<b>3/31/2009</b>	<b>6/30/2009</b>	<b>6/30/2010</b>	<b>6/30/2011</b>	<b>Total</b>
C015	14.5 MGD WWTP Expansion: Design		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0.00%
C034	Regional Plant Expansion		-	-	280,928	280,928	\$ -	\$ -	0.00%
C036	18 MGD Regional Plant Expansion		-	-	717,546	950,074	\$ -	\$ -	0.00%
C037	Interceptor System Study		-	-	4,018	4,018	\$ -	\$ -	0.00%
C038	CIP Financing and Bond		20,000	20,000	48,111	148,111	\$ -	\$ -	0.00%
C100	Westside WRP Phase III		9,362,000	9,432,000	716,619	1,475,448	\$ 5,485,755	\$ 13,025,245	37.62%
C101	Hesperia WRP		379,700	379,700	-	-	\$ 1,699,405	\$ -	11.65%
C102	Hesperia Pump Station & Force Main		-	-	1,610	1,610	\$ -	\$ -	0.00%
C103	Apple Valley WRP		50,000	50,000	1,610	1,610	\$ 1,699,405	\$ -	11.65%
C104	Nanticoke Gravity Interceptor		80,000	80,000	-	-	\$ 2,110,932	\$ -	14.48%
C105	Eastside WRP		40,000	40,000	27,029	27,029	\$ -	\$ -	0.00%
C106	Eastside Interceptor		54,900	54,900	-	-	\$ -	\$ -	0.00%
C107	Reclaimed Water Studies		280,000	90,000	150,653	212,115	\$ 171,821	\$ -	1.18%
C108	Sewer Master Plan		600,000	600,000	376,577	493,493	\$ 100,000	\$ -	0.69%
C109	SAFARI Sewer		1,619,756	1,619,756	22,246	30,320	\$ 2,772,000	\$ -	19.01%
C110	Hesperia Interceptor		-	-	-	-	\$ 140,000	\$ -	0.96%
C111	Spring Valley Lake Interceptor		60,000	60,000	-	-	\$ -	\$ -	0.00%
C112	N Apple Valley Interceptor		-	-	-	-	\$ -	\$ -	0.00%
C113	S Apple Valley Interceptor		-	-	4,329	4,329	\$ 200,000	\$ -	1.37%
9999	Expense		1,609,544	1,609,544	(519,034)	(487,994)	\$ 44,529	\$ -	0.31%
	Construction Inspectors		-	-	-	-	\$ 158,112	\$ -	1.08%
	<b>Total</b>		<b>\$ 14,155,900</b>	<b>\$ 14,035,900</b>	<b>\$ 1,832,242</b>	<b>\$ 3,141,092</b>	<b>\$ 14,581,959</b>	<b>\$ 13,025,245</b>	<b>100%</b>
<b>REVENUE</b>									
	Connection Fees						\$3,000,000		
	Interest						191,000		
<b>FUND TRANSFERS</b>									
See Appendix A									
<b>Fund Transfers Out</b>									
	Salary/Benefits to Capital - See Appendix A						(388,919)		
	Admin. Charge to Capital - See Appendix A						(146,015)		
<b>Fund Transfers In</b>									
	Capital Recovery - Septage						92,094		
	Loan Repayment						300,000		
<b>NET FUND TRANSFERS</b>									
							(142,840)		

source: FY 2009-10 Budget, page 29.

*Existing Regional Wastewater Treatment Plant – Phase III Upgrade Project*

Nitrogen removal was not a component of the treatment plant expansions to 14.5 mgd in 2008 (Phase I expansion) and 18.0 mgd in 2009 (Phase II expansion). As described previously, the treatment plant must comply with new regulatory discharge requirements for nitrogen and accommodate the anticipated growth of wastewater flows within its service area. To satisfy the discharge requirements and accommodate projected growth, VVWRA's original plans were to upgrade the existing treatment plant to include an expansion to 22.0 mgd. Regional Board Order R6V-2009-005 contains the following construction and plant performance time schedules:

Begin construction	October 1, 2009
Complete construction	September 1, 2011
Attain compliance with final permit limits	May 1, 2012

However, the flow assumptions that VVWRA previously used were altered in the fall of 2008 due to the items listed below. As a result, the flow projections to the treatment plant were reduced to 14 mgd. Additional detail on these projects, assumptions, and Phase III Upgrade are included as a part of Attachment #5.

- In the summer of 2008, VVWRA decided to construct two upstream reclamation plants, one in Hesperia and one in Apple Valley for a total treatment capacity of 4 mgd (discussed below). It was determined that it would be more cost effective to produce recycled water upstream in the collection system for its use in these communities instead of pumping recycled water for reuse back upstream.
- In the summer of 2008, the City of Victorville approved a project to divert up to 2.0 mgd from its sewage collection system to a new plant to be constructed in Victorville near the Southern California Logistics Airport. The facility will not be owned or operated by VVWRA, thus wastewater will not flow to any VVWRA treatment facility. Instead, the City of Victorville is proposing to:
  - Treat industrial effluent from the anticipated Dr. Pepper/Snapple facility to be located near the Southern California Logistics Airport.
  - Redirect and treat municipal wastewater initially collected from the Victorville collection area (1.5 mgd) that would otherwise be processed by VVWRA.
- Flow projections were adjusted to accommodate for the decline in the real estate market. The 2018 projected flow for treatment by any VVWRA facility was reduced from 22 mgd to 20 mgd.

For the reasons listed above, flow projections to the existing regional treatment facility have been reduced which makes it more feasible to add new equipment into the activated sludge treatment process that would enable the plant to meet imposed regulations. The revised Phase III upgrade project is anticipated to install new equipment, called Integrated Fixed Film Activated Sludge Systems (IFAS), which would include tertiary filtration by cloth filters to reduce nitrogen in the treated effluent but would also reduce the capacity of water that can be processed at the treatment plant. According to VVWRA staff, installation of the IFAS system would de-rate the treatment plant from 18.0 mgd to 14.0 mgd as it will have a lesser capacity to treat influent. In turn, the construction of the two sub-regional plants will be designed to process up to 4 mgd.

Additional components of the Phase III upgrade are: re-evaluating hydraulic modeling of its interceptors in the upper and lower narrows, the addition of ultra-violet disinfection, retrofit the current Traveling Bridge filters, incorporate Integrated Fixed Film Activated Sludge Systems process, sludge dewatering, and concrete lining of emergency storage ponds. When completed, the upgrade will have improved nitrogen removal technology and be able to meet the new permit effluent limits.

#### *Proposed Sub-regional Wastewater Treatment Plants*

As an additional measure to mitigate the reduced capacity, VVWRA is planning to construct sub-regional wastewater treatment plants in Apple Valley and Hesperia. These smaller



plants will recycle water for local landscape irrigation near the site of treatment. In turn, this will reduce the treatment demand on the regional treatment plant and allow for proper operation of the new Sludge System. Moreover, the Hesperia and South Apple Valley interceptors are reaching capacity and the sub-regional plants will provide a long-term solution. Further, the move to constructing sub-regional treatment plants to capture and treat wastewater in Hesperia and Apple Valley would provide capacity at the regional treatment plant for the City of Victorville, CSA 42, and CSA 64. In the long-run, the capacity of the sub-regional plants, pump stations, and percolation ponds will require future expansion in order to meet the processing demands generated by Apple Valley and Hesperia.

In November 2008, the Authority authorized the release of a Request for Proposal process for the pre-design for the sub-regional plants in Apple Valley and Hesperia and a raw sewage pump station and force main to serve the proposed Hesperia wastewater treatment plant. According to the staff report for the RFP dated November 20, 2008, due to financial issues within the Authority, the Town of Apple and City of Hesperia will pay the costs of the pre-design until VVWRA's fiscal shortfall is addressed and VVWRA will reimburse the agencies for costs incurred. Additionally, it is likely that the sub-regional plants will require the same level of regulatory requirements regarding nitrogen as the regional treatment plant. The estimated completion of sub-regional plants is 2012, contingent upon adequate funding. The conceptual details of the plants are:

- Town of Apple Valley – 2 mgd facility located in the Town, adjacent to the Otoe Road Pump Station in the southwest corner of Brewster Park. The facility will be designed with 2 mgd of capacity with 1 mgd of equipment initially installed to provide recycled water to the public parks.
- City of Hesperia – 2 mgd facility located in the City, on city-owned property northwest of the intersection of Interstate 15 and Main Street. The facility will be designed with 2 mgd of capacity with 1 mgd of equipment initially installed to provide recycled water to residential communities and commercial businesses along the I-15 corridor. The facility is expected to reach a master-planned ultimate capacity of 7.4 mgd by 2022, according to the 2007 Hesperia Wastewater Master Plan.
- City of Hesperia – 2 mgd pump station and 3-mile force main located in the City beginning near the intersection of Mauna Loa Street and Maple Avenue and running to the proposed Hesperia wastewater treatment plant. This facility is expected to reach an ultimate capacity of 6.8 mgd by 2022, according to the 2007 Hesperia Wastewater Master Plan.

An additional project identified in the Capital Improvement Plan to begin construction within the next few years is the construction of a relief interceptor along Santa Fe Avenue to carry wastewater from Hesperia to the Regional Treatment Plant.

### **III. FINANCIAL ABILITY OF AGENCIES TO PROVIDE SERVICES.**

The Authority has provided LAFCO staff with the most recent audits conducted, current budget, and May 2009 Financial Plan (included as Attachment #7). LAFCO staff has also obtained financial data from California State Controller reports for special districts.

## Financial Operations

The Authority's two primary sources of revenue are connection fees and charges to member agencies. The FY 2009-10 Budget has forecast total revenues to be roughly \$36.4 million and total expenditures to be \$26.5 million, a net of \$9.9 million. Cash and cash equivalents are forecast to increase to \$25.4 million, up from \$15.5 million available on July 1, 2009. However, included in the \$36.4 million for revenues is the anticipation of \$23.5 million received from debt financing sources (State Revolving Fund or bonds). Should that funding source not be secured, total revenues would be \$11.0 million, a shortfall of \$15.5 million against anticipated expenditures.

The Authority states that its largest variable cost is electricity, natural gas, and chemicals. Capital expenditures comprise \$14.6 million of the \$26.5 million budgeted for total expenditures. Included in the \$14.6 million is the pre-design for the Apple Valley and Hesperia sub-regional plants. However, the Authority has indicated that the pre-design expenditures for these facilities will be borne by the Town of Apple Valley and the City of Hesperia and that these agencies will be refunded the associated costs when VVWRA's financial situation improves.

The Authority operates with four major funds:

- *Operations and Maintenance Fund (O&M Fund)*

The FY 2009-10 budget projected a total cash balance of \$15.5 million for June 30, 2009, an increase of roughly \$700,000 from prior year. Even though revenues are projected to exceed expenditures (albeit by \$63,629), the O&M Fund has a running deficit estimated to be \$2.6 million at the end of the year (described in detail below). However, the running deficit is budgeted to decrease from a negative \$2.6 million to \$1.0 million by the end of FY 2009-10. The primary reason for the increase in O&M revenues is due to the recent rate increase.

- *Repair and Replacement Fund (R&R Fund)*

Looking at the FY 2009-10 Budget, the R&R Fund does not receive revenues but incurs significant expenses each year. Projected expenses for FY 2008-09 are \$641,000 and budgeted expenses for FY 2009-10 are \$2.5 million. This has led to a running deficit for the R&R fund, anticipated to be \$5.4 million by the end of FY 2009-10 (described in detail below).

- *Capital Fund and Debt Service Fund*

Generally, the Capital Fund receives revenues in excess of expenditures since major capital improvement do not occur each year. The projected Capital Fund balance as of June 30, 2009 is \$21.0 million, but the balance is anticipated to decrease to \$8.3 million at the end of FY 2009-10 due to budgeted capital projects. According to the staff report for the RFP for the sub-regional plants dated November 20, 2008, due to financial issues within the Authority, the Town of Apple and City of Hesperia will pay for the costs of the pre-design until VVWRA's fiscal shortfall is addressed and VVWRA will reimburse the agencies for costs incurred.

The Debt Service Fund has no expenses. The only debt of the Authority is comprised of loans from the State Revolving Fund for three capital projects: the plant expansions to 9.5 mgd and 11.0 mgd and the construction of the North Valley Interceptor. These payments have been made from the Capital Fund and not the Debt Service Fund. However, in June 2008 the Authority adopted Resolution No. 2008-12 revising the dedicated source of funds guaranteeing the repayment of the loans. Through this resolution, \$13.2 million of funds in the Capital Outlay Fund and \$118,682 of accrued interest of the funds that were previously dedicated to the repayment of such loans were released from such restriction.

As shown on the figure below, of the total \$19.6 million financed, \$13.2 million in principal remains with annual payments until 2019, 2022, and 2024. VVWRA does not have any bonded debt; however, the Financial Plan identifies bonded debt as a possible source of funding for short-term and long-term capital improvements. The bond rating is to be determined in the fall of 2009. The FY 2009-10 Budget anticipates \$23.5 million received from debt financing sources (State Revolving Fund or bonds). Should that funding source not be secured, total revenues for the year would generally be limited to connection fees and user charges – roughly \$11.0 million.

### Long-term Debt

<b>VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY</b>				
<b>SRF SUMMARY</b>				
<b>March 31, 2009</b>				
	<b>9.5 MGD Capital Improvements</b>	<b>11 MGD Expansion</b>	<b>North Apple Valley Interceptor</b>	<b>Total All SRF Loans</b>
<b>SRF LOANS</b>				
Original Amount Financed	\$ 4,069,859.00	\$ 11,430,726.00	\$ 4,084,688.00	\$ 19,585,273.00
SRF Interest Rate (fixed)	2.60%	0.00%	2.50%	Varies
Local Match Amount		1,905,159.00	0.00	1,905,159.00
SRF Amount Borrowed	4,069,859.00	9,525,567.00	4,084,688.00	Varies
Annual Payment Amount	265,049.56	579,869.96	258,151.05	1,103,070.57
Annual Payment Due Date	Sept. 15	April 3	Feb. 13	Varies
Loan Term (years)	20	20	20	20
Years remaining	11	13	15	Varies
<b>DEBT SERVICE</b>				
Current Principal Amount	2,507,640.51	7,538,309.50	3,196,265.65	13,242,215.66
Principal Paid to Date	1,562,218.49	3,892,416.50	888,422.35	6,343,057.34
Interest Paid to Date	766,289.20	0.00	402,332.90	1,168,622.10
First Payment Date	Sept. 15, 2000	April 3, 2003	Feb. 13, 2005	Varies
Final Payment Date	Sept. 15, 2019	April 3, 2022	Feb. 13, 2024	Varies
"Buy Down" effective interest rate		1.95%	2.34%	Varies

source: FY 2009-10 Budget, Appendix C, page 34.

### Rates and Charges

VVWRA historically has not been able to generate enough revenue to cover operations and maintenance.<sup>13</sup> According to VVWRA staff reports regarding connection and user fees from

<sup>13</sup> Financial Plan, pg 1.

2008 and 2009<sup>14</sup>, the single most significant difficulty for VVWRA is overcoming 14 years with only one rate increase of 3% which occurred in FY 2005/06. VVWRA user charges to its member agencies are charged per million gallon of wastewater received. The chart below shows the user charges for the past four years.

**Previous User Charges with Estimated Charge per EDU**

	2005/06	2006/07	2007/08	2008/09
User Charges (\$ per MG)	\$1,064.50	\$1,064.50	\$1,353.00	\$1,614.00
Rate Increase %	3.1%	0.0%	10.08%	12.03%
Est. Charge per EDU (245 gpd)	\$7.93	\$7.93	\$10.08	\$12.03

Source: VVWRA. FY 2009-10 Financial Plan, Table 1. 15 May 2009.

The lack of incremental rate increases has contributed to the Operations & Maintenance and Repair & Replacement budgets exceeding user fees for the past seven years. During those seven years, VVWRA relied on interfund transfers from the Adelanto Separation Fund and the Capital Fund to supplement the funding requirements of the Operations & Maintenance and Repair & Replacement funds. However, the Capital Fund receives revenues through connection fees which according to the Joint Powers Agreement are “used exclusively for capital improvements...” Although that practice has been curtailed, the Capital Fund lost revenue gained for the dedicated purpose of capital improvement. This practice has contributed to the O&M and R&R funds having negative net available reserves as identified on pages 13 and 14 of the FY 2009-10 budget, and both funds are anticipated to end the year with total cash and equivalents with a negative balance, as identified in the budgets and audits. LAFCO staff questions how a fund can have a running negative balance, yet continue activity. Further complicating this position, in the current economic climate connection receipts have been reduced, and the Authority is faced with significant regulatory requirements and interceptor capacity issues, as detailed previously in this report.

Due to the requirement from the Regional Water Quality Control Board to expand plant capacity and the need to restore financial stability, rate increases have been adopted for the next two years. Even if there is no population growth for two years, generally resulting in a constant flow to the treatment plant, projected user charges need to increase to fund the discharge requirements set forth by the Regional Board. To get a sense of an estimated charge per equivalent dwelling unit (edu) depends on the gallons per day coefficient utilized for each edu. The chart below shows current and projected rates and fees VVWRA charges to its member agencies with an estimated per edu charge by either 180 gpd or 245 gpd.

**Current and Projected Charges with Estimated Charge per EDU**

	2008/09	2009/10	2010/11
Projected User Charges (\$ per MG)	\$1,614	\$2,100	\$2,600
Rate Increase %		30.1%	23.8%
Est. Charge per EDU (245 gpd)	\$12.03	\$15.65	\$19.38
Est. Charge per EDU (180 gpd)	\$8.84	\$11.50	\$14.24

Source: VVWRA. FY 2009-10 Financial Plan, Table 19. 15 May 2009.

<sup>14</sup> “VVWRA User Fees” dated 23 October 2008 and “Connection and User Charges” dated 16 April 2009.

The chart below shows what each of the member agencies is anticipated to pay through FY 2010-11. Incorporation of any or all of the VVWRA rate increase into the adopted rates of the member agencies will be subject to the process established by Proposition 218. Further, should VVWRA secure bonds or State Revolving Fund Loans, the legal covenants would require rates and fees to be sufficient to fund operations and at least 120% of annual debt service. Moreover, should the bond market or State Revolving Fund loan credit review process deem rates to be insufficient, VVWRA may have to again consider raising rates.

**Current and Projected Charges with Total Member Agency Cost**

Table 20 Victor Valley Wastewater Reclamation Authority Projected User Charges by Member Agency		<i>Based on 2008/09 Estimated Flow</i>		
	2008/09	2009/10	2010/11	
<b>Projected User Charges (\$ per MG)</b>	\$1,614	\$2,100	\$2,600	
<b>Wastewater Flow (MG)</b>				
<i>Based on 2008/09 Estimated Flow, Assumes No Growth</i>				
Apple Valley	774	774	774	
Hesperia	583	583	583	
Victorville	2,918	2,918	2,918	
SB County	<u>213</u>	<u>213</u>	<u>213</u>	
Total	4,488	4,488	4,488	
<i>Total (mgd)</i>	<i>12.30</i>	<i>12.30</i>	<i>12.30</i>	
<b>Projected User Charges<sup>1</sup></b>				
Apple Valley	\$1,250,000	\$1,625,000	\$2,012,000	
Hesperia	941,000	1,224,000	1,516,000	
Victorville	4,710,000	6,128,000	7,587,000	
SB County	<u>343,000</u>	<u>447,000</u>	<u>554,000</u>	
Total	7,244,000	9,424,000	11,669,000	
 1 Excludes High-Strength Surcharges and other fees or charges.				

source: VVWRA. FY 2009-10 Financial Plan, Table 20. 15 May 2009.

Interfund Loans or Transfers from O&M to Capital

As stated above, for the past seven years the Capital Fund has supplemented the funding needs of the Operations and Maintenance Fund. This occurred even though the Capital Fund receives revenues through connection fees which, according to the Joint Powers Agreement, are to be “used exclusively for capital improvements...” The supplemental funding was loaned, not given, to the Operations and Maintenance Fund. According to the FY 2007-08 audit, the recorded loans in the chart below have no stipulated due dates and all have an interest rate of 5%. Total interfund loans and recorded loans total approximately \$11.7 million. Included in the annual budgets is a \$300,000 transfer from the O&M fund to the Capital fund for Loan Repayment. In response to the draft LAFCO staff report that was provided to VVWRA as a part of the service review process, VVWRA states the numbers in the figure below, sourced from the May 2009 Financial Plan, were a best estimate at the time. VVWRA further states that its staff is currently reviewing the numbers and anticipates discussing final figures with the VVWRA Board at its October or November board meeting.

**Interfund Loans or Transfers from O&M Fund to Capital Fund**

Table 12 Victor Valley Wastewater Reclamation Authority Interfund Loans or Transfers from O&M to Capital	
Description	Amount 06/30/08
<b>INTERFUND LOAN AMOUNTS FROM FY2008 CAFR</b>	
<u>Cash &amp; Investments Overdraft from page 32 of FY2008 CAFR</u>	
Operations & Maintenance Fund Overdraft	\$1,341,387
Repairs & Replacements Fund Overdraft	<u>2,381,894</u>
Subtotal	3,723,281
<u>Interfund Receivables from page 40 of FY2008 CAFR</u>	
Due to Capital Fund from combined the O&M and R&R Funds	4,628,793
<b>Total</b>	<b>8,352,074</b>
<b>RECORDED LOANS</b>	
Resolution No. 2006-16*      Adopted 11/20/06	2,767,677
<i>Purpose: For Adelanto Separation Fund misallocation to O&amp;M</i>	
Resolution No. 2007-7      Adopted 04/20/07	307,848
<i>Purpose: To account for budgeted O&amp;M deficit in 2006/07</i>	
<i>Interest Rate: 5%</i>	
Resolution No. 2008-7      Adopted 12/21/07	259,473
<i>Purpose: To account for budgeted O&amp;M deficit in 2007/08</i>	
<i>Interest Rate: 5%</i>	
<b>Total Recorded Loans</b>	<b>3,334,998</b>

source. Financial Plan. Table 12

However, these loans and their annual repayment are separate from the expenses allocated from the Operations and Maintenance Fund to the Capital Fund (as identified in the FY 2009-10 Budget on pages 14 and 30). These transfers are for the allocated expenses for salaries and benefits and administrative charges related to capital projects. For FY 2009-10, the allocated expenses total \$534,934, with \$388,919 comprising salaries and \$146,015 comprising administrative charges.

### Financing the Projects

Funding for capital projects will come from existing funds in the Capital Fund, outside funds (loans, bonds, grants), and through the Town of Apple Valley and City of Hesperia for pre-design of the sub-regional treatment plants.

As of July 1, 2009, the balance in the Capital Fund was \$20.9 million (an increase of \$1.2 million from previous year). Through FY 2009/10, revenue is anticipated to be \$3.0 million with expenditures at \$15.7 million. Of the \$15.7 million, capital improvements total \$14.6 million. The remaining amount of \$1.1 million is the payments for the three State Revolving Fund loans.

The Financial Plan identifies bonded debt as a possible source of funding for short-term and long-term capital improvements. Included in the \$36.4 million for budgeted revenues is the anticipation of \$23.5 million received from debt financing sources (State Revolving Fund or

bonds). Without this additional source of funding, total revenues would decrease to \$11.0 million which could reduce the capital improvement budget.

The April 16, 2009 VVWRA staff report states that Authority currently does not have the ability to obtain long-term debt or stimulus monies for two reasons:

1. Lenders will not loan to entities which do not obtain sufficient revenue to address their operational expenses. In response to the draft LAFCO staff report that was provided to VVWRA as a part of the service review process, VVWRA states that bond investors are reluctant to invest when an operational deficit exists. VVWRA, however, has started the process to address that issue with new rate increases.
2. The Member Agencies are currently drafting a revised Joint Powers Agreement. Until this documents is finalized lenders will not loan to an entity with an undefined funding source for repayment. In response to the draft LAFCO staff report that was provided to VVWRA as a part of the service review process, VVWRA states that the current JPA provides for no diversions of flows from the main plant unless it is through subregional facilities. Bond investors require certainty in operational revenues and VVWRA's revenues are based primarily on flows. The member entities are currently working on a JPA amendment to provide investors certainty while also allowing for certain diversions for purposes of industrial development.

The reasons above have contributed to why the pre-design expenditures for Apple Valley and Hesperia sub-regional plants will be borne by the Town of Apple Valley and the City of Hesperia and that these agencies will be refunded the associated costs when VVWRA's financial situation improves.

### Procurement Policy

Due to administrative changes requested by the VVWRA Finance Department to enhance internal controls resulting from member agency concerns, the VVWRA Board approved a number of resolutions in July 2009. They are:

- Resolution 2009-12, To Adopt a Procurement Policy and Rescind a Purchasing Policy. The new Procurement Policy also includes policies regarding:
  - bid limitations to bring bid limits into line with current practices and with other government agencies,
  - establishes guidelines for the use of capital improvement funds, repair and replacement funds, and operations and maintenance funds,
  - travel and petty cash policies,
  - purchasing card agreement for employees
- Resolution 2009-15, Regarding the Receipt and Distribution Policy of Tickets and/or Passes in the Furtherance of the Authority's Reasonably Defined Public Purposes,
- Resolution 2009-16, To Adopt an Asset Management Policy,

- Resolution 2009-17, Electing to Become Subject to the Uniform Public Construction Cost Accounting Procedures and Ordinance 005
- Resolution 2009-21, To Adopt a Computer Network Usage Policy

**IV. STATUS OF, AND OPPORTUNITIES FOR, SHARED FACILITIES.**

In 1999, VVWRA entered into an agreement to lease 50 acres of its 600-acre property to California Bio Mass, Inc., a company that recycles organic waste materials. Under the terms of the agreement, VVWRA receives monthly rent of \$1 per acre. In turn, the regional compost facility must accept and process, at no cost, all biosolids generated by VVWRA. The lease agreement covers an initial five-year term followed by three successive five year option periods. Fiscal Year 2009-10 will begin the second five year option period.

VVWRA does not utilize the Adelanto Interceptor since the City of Adelanto separated from VVWRA membership in 1998 and began operating its own wastewater treatment facility. The City of Adelanto did not purchase the interceptor; VVWRA retained ownership. However, when the City of Adelanto experienced pipeline and percolation pond failures, Adelanto has used the interceptor to send secondary effluent flow to VVWRA for treatment in order to avoid a public health emergency.

**V. ACCOUNTABILITY FOR COMMUNITY SERVICE NEEDS, INCLUDING GOVERNMENTAL STRUCTURE AND OPERATIONAL EFFICIENCIES.**

Local Government Structure and Accountability for Community Service Needs

The constituency of VVWRA is both the member agencies and the residents and landowners within the member agencies. Regular meetings for the Board of Commissioners are held the third Thursday of each month at 9:00am at the VVWRA headquarters located at 15776 Main Street in Hesperia. The Authority complies with the Brown Act and legal counsel is present at all publicly announced meetings.

There are four members on the Board of Commissioners, with each member agency selecting a representative for a seat on the Board. A primary board member and an alternate are appointed from each of the member agencies by the respective member agency. CSA 42 and CSA 64 share a single representative; therefore, they have a single vote between them. Below is the composition of the board and their member agency:

<b>Primary Board Member</b>	<b>Alternate Board Member</b>	<b>Member Agency</b>
Rudy Cabriales	Jim Cox	City of Victorville
Robert Sagona	Peter Allan	Town of Apple Valley
Thurston Smith	Rita Vogler	City of Hesperia
Brad Mitzelfelt	Jeff Rigney	County of San Bernardino (CSA 42 & CSA 64)

As of April 2009, staffing consisted of 44 positions (Administration – 12; Operations – 20; Maintenance – 11; Construction – 1). Management consists of the General Manager,



Director of Administrative Services, Director of Operations, and Project Construction Manager. The general manager is responsible for carrying out the policies and ordinances of the Authority Board and for overseeing day-to-day operations. According to the documentation provided for this review by the Authority, staffing levels and organization structure are constantly reviewed dependent upon wastewater flow and programs pertaining to the member agencies and regulatory requirements. As additional facilities are completed it may be necessary to increase staffing levels.

In addition to the Board of Commissioners and staff, the Strategic Advisory Committee provides advice to the Board and management. The Committee is composed of the head administrators for each member agency – city/town managers and the director for the County Special Districts Department.

Office hours are from 8am to 5pm, Monday through Friday. There is a 24-hour emergency hotline for after-hours emergencies. VVWRA maintains a website, [www.vvwra.com](http://www.vvwra.com), which contains regulatory documents, archived agendas with staff reports, and ordinances and resolutions. Each month Commissioners receive a monthly budget update and operations and maintenance report, and at the February regular meeting staff presents a mid-year budget review.

### Operational Efficiency

The Authority was awarded Outstanding Financial Reporting for the year ending June 30, 2008 by the California Society of Municipal Finance Officers and has been recognized by the Desert and Mountain Section of the California Water Environment Association as the 2008 Treatment Plant of the Year for medium-sized plants. Additionally, In August 2009 VVWRA's investment policy was certified by the Association of Public Treasurers of the United States and Canada.

Operational efficiencies are realized through several practices, for example:

- VVWRA and the City of Victorville have entered into a memorandum of understanding regarding VVWRA providing recycled water to the Westwinds Golf Course along with other uses at the Southern California Logistics Airport.
- Alliance for Water Awareness (AWAC). The Authority, as an AWAC member, participates in workshops, outreach events, and public education to communicate the conservation message.
- The Authority plans on capturing gas from its digesters for use at the treatment plant. With the largest variable costs being electricity, natural gas, and chemicals, the capturing of this latent energy source will help reduce operating costs.<sup>15</sup>

Due to recent fiscal issues being addressed by VVWRA, the member agencies have expressed concern about the efficiency of the Authority. To address the concerns of the member agencies, the Authority conducted a benchmarking analysis to identify areas where

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<sup>15</sup> Town of Apple Valley. Regular meeting 9 June 2009. Presentation by Logan Olds. website [www.applevalley.org](http://www.applevalley.org). Accessed 23 July 2009.

VVWRA could improve efficiency. The report was presented to the VVWRA Commission in a staff report dated June 20, 2008. Specifically, the report evaluated performance efficiency against other similar sized agencies in the state and nation (served population of 100,000 to 500,000). The comparison results are shown in the chart below:

**Performance Efficiency of VVWRA, Benchmarking**

Comparison Measure	Top Quartile	Median	Bottom Quartile	VVWRA
1. Sewer Overflow Rate	1.7	3.16	9.73	5.9
2A. O&M Cost per MG Processed*	\$1,453	\$2,025	\$2,597	\$1,862
2B. O&M Cost per MG Processed**	\$1,453	\$2,025	\$2,597	\$2,088
3. Direct Cost of Treatment per MG	\$634	\$851	\$1,463	\$606
4. MGD Wastewater Processed per Employee (FTE)	0.35	0.22	0.15	0.28
5. Debt Ratio	9.20%	21.80%	31.20%	14.92%
* Traditional performance index which excludes Professional Services, Environmental Compliance and Construction Department personnel costs ** Includes all expenses FY 2008-09 Budget, also includes projected cost of 18 mgd O&M expenses  Source: VVWRA. Staff Report. "Performance Efficiency of VVWRA, Benchmarking, 20 June 2008.				

The VVWRA staff report provides qualitative explanations to the comparison results, which are summarized as follows:

1. Sewer Overflow Rate – VVWRA is performing below the median value. The Capital Improvement Plan has specific projects to address those issues once funded.
2. Operation and Maintenance Cost per Million Gallons Processed - VVWRA performs above median value, and performs slightly below median value when all expenses are included (includes environmental compliance and remainder of plant expansion).
3. Direct Cost of Treatment per Million Gallons – Efficiency of processing treatment is in the top quartile.
4. Million Gallons per Day (mgd) Processed per Employee - Efficiency of processing treatment per employee is in the top quartile.
5. Debt Ratio – The debt of VVWRA is above the median.

Adding to VVWRA staff's analysis of the comparison results, LAFCO staff points out that the debt of VVWRA is likely to increase due to the requirement to increase capacity due to overflow issues.

Government Structure Options

There are two types of government structure options:

1. Areas served by the agency outside its boundaries through "out-of-agency" service contracts;

2. Other potential government structure changes such as consolidations, reorganizations, dissolutions, etc.

*Out-of-Agency Service Agreements:*

The Joint Powers Agreement does not allow for such service arrangements.

*Government Structure Options:*

While the discussion of some government structure options may be theoretical, a service review should address possible options.

- Expansion of the Authority's boundaries. With a formal annexation process no longer required, the ultimate service area of VVWRA would be the entirety of the boundaries of the member agencies. When a member agency annexes territory to its boundaries, at the same time the ultimate service area of VVWRA expands. Further, if a member agency is able to construct collectors to a structure and send the effluent to the VVWRA interceptor, then VVWRA is obligated to accept the flow because the area is within a member agency.
- During the processing of this service review, VVWRA informed LAFCO staff that the joint powers agreement is in the process of being revised to include CSA 70 as a member agency. However, the revision to the agreement has not yet been finalized and adopted. According to the VVWRA staff, the reason for CSA 70 inclusion within the County's membership (similar to CSA 42 and CSA 64) is because VVWRA has received two requests to provide sewer service to unincorporated areas outside its boundaries. VVWRA staff identified that by including CSA 70, VVWRA will not require separate agreements for each development that wishes to use its facilities and is in proximity to such facilities. As noted in other parts of this report, CSA 70 provides service only through the creation of improvement zones which are considered separate legal entities. Hence, LAFCO staff questions whether this inclusion will fulfill its stated purpose.

LAFCO staff is not aware of any other peripheral community requesting or interested in membership.

- Removal of a member agency. In this scenario, a member agency would remove itself from membership and develop its own wastewater treatment plant. However, this is unlikely because the "Amendment to Victor Valley Regional Wastewater Service Agreement" entered into August 1, 2005 (included as a part of Attachment #3) states that termination of the Agreement requires 30 years written notice to the Authority. Given this long-term notification, removal of a member agency does not seem likely at this time.
- Maintenance of the status quo. The Authority in its response recommends the status quo since it currently serves all the member agencies within its existing jurisdictional boundaries.

**ADDITIONAL DETERMINATION:**

Legal advertisement of the Commission's consideration has been provided through publication in *The Daily Press*, a newspaper of general circulation in the area as required by law.

**CONCLUSION:**

Prior to 2006, the condition of the treatment plant was not up to standard as evidenced by the 2005 spill of 8.72 million gallons of undisinfected secondary treated wastewater and sediments into the Mojave River as outlined in the Administrative Civil Liability Order which resulted in a fine of \$500,000.

Since 2006, the Authority has implemented many corrective actions to improve plant performance efficiencies, investment of millions of dollars for upgrades and plant expansions (over \$55 million since FY 2005-06), the first flow projection conducted in 2007 with three updates since, top to bottom staff evaluations, and fiscal policy formulation and implementation. In addition to corrective actions, the Authority has increased its accountability by meeting with member agencies, providing the first budget on time within five years, and the first comprehensive annual financial review. Today, the plant operates with improved performance, VVWRA has implemented a benchmarking analysis to evaluate performance against other similar sized agencies, and collaborates with member agencies.

However, revenue issues continue to plague the agency. While the current staff is working diligently to address years of not providing rate increases, the capital improvement needs continue to grow. The existing wastewater treatment plant experiences capacity issues and increased discharge requirements. Correcting these deficiencies will require substantial upgrades and development of sub-regional treatment plants anticipated to cost over \$70 million, of which \$28 million has been estimated for near-term critical improvements.

KRM/MT

Attachments:

1. [LAFCO Minute Action from July 2008 Hearing Initiating Service Review for VVWRA](#)
2. [Maps](#)
3. [Service Agreement for Victor Valley Wastewater Reclamation Project dated November 23, 1976 \(with Exhibit C\) and August 1, 2005 Amendment](#)
4. [Amended and Restated Joint Exercise of Powers Agreement](#)
5. [Service Review Response from VVWRA and Follow-up Correspondence](#)
6. Plans and Studies
  - a. [Flow Projection Update III, April 2009 \(without appendices\)](#)
  - b. [2005 Sewer Facilities Plan Update](#)
  - c. [2008 Annual Report \(Section 1 – Annual Summary\)](#)
7. Finance
  - a. [FY 2009-10 Budget](#)
  - b. [May 2009 Financial Plan](#)
  - c. [FY 2007-08 Financial Statement](#)