

# 17. JACKSON VALLEY IRRIGATION DISTRICT

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Jackson Valley Irrigation District (JVID) provides wholesale water supply, distribution of raw water to irrigation, industrial and domestic users, distribution of bottled water to domestic users, and hydroelectric power generation. JVID has an agreement with a private company to operate the Lake Amador recreation facilities. Its recreation concessionaire operates domestic water treatment and wastewater services at Lake Amador.

## AGENCY OVERVIEW

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### Background

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JVID was formed in October of 1956 as an independent special district to provide irrigation services to the Jackson Valley area.<sup>354</sup>

The principal act that governs the District is the Irrigation District Law.<sup>355</sup> The principal act empowers such districts to provide water “for any beneficial use” and may do any act to put to any beneficial use any water under its control. In addition, irrigation districts may provide water-related drainage services and, under certain circumstances, electric and wastewater services. Districts must apply and obtain LAFCO approval to exercise those services authorized by the principal act but not already provided by the district in 2000 (i.e., latent powers).<sup>356</sup>

### Boundary and SOI

The JVID boundary is located in southwestern Amador County, west of the Pardee Reservoir and east of the Amador-San Joaquin County line. Lake Amador is located within the northeast portion of the District. Communities in the vicinity of JVID include Buena Vista and the Buena Vista Rancheria, Camanche Village and Camanche North Shore.<sup>357</sup> The boundary of JVID encompasses the residential community of Buena Vista Estates. The District has a boundary area of approximately 13,665 acres (21 square miles). LAFCO records of the District’s boundary history include four annexations and three detachments, as shown in Figure 17-1.

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<sup>354</sup> Formation date is according to District.

<sup>355</sup> California Water Code §20500-29978.

<sup>356</sup> Government Code §56824.10.

<sup>357</sup> Over the years, LAFCO has not maintained boundary maps for cities and special districts. For purposes of this study, the boundaries of JVID includes those parcels and portions of parcels included in Tax Rate Areas (TRAs) associated with this district and any additional areas not in the TRAs that can be shown through the records to have been legally annexed. Clarification of final boundaries by LAFCO staff is likely to extend beyond the time allowed for completion of the MSR.

**Figure 17 -1: JVID LAFCO Record**

Project Name	Acres	LAFCO Resolution	
		Number	Official Date <sup>1</sup>
Smith Annexation	22	70-35	1/15/1971 (C)
Oliver Detachment		70-34	10/22/1970 (L)
Vimini, et. al. Annexation	10	72-42	3/7/1972 (L)
Fuller and Strohm Annexation		72-44	3/21/1972 (L)
East Bay Municipal Utility District Detachment	91	NA <sup>2</sup>	
Moldrem Annexation	48	79-139	8/23/1979 (C)
Gold Country Mobile Home Detachment	30.5	92-234	9/16/1994 (B)
Notes:			
(1) "L" indicates that the official date is according to the LAFCO resolution, "C" indicates that the official date is according to the Certificate of Completion, and "B" indicates that the official date is according to the Board of Equalization filing.			
(2) No signed LAFCO resolution has been located to date.			

The District's SOI was adopted in 1977, but the resolution does not include any description of the sphere's boundary. Based on the lack of clarity in the LAFCO record for JVID, the Executive Officer surmised that the actual SOI area adopted in 1977 could not be ascertained. After adoption of this MSR, LAFCO will adopt and SOI for the District.

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## Local Accountability and Governance

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JVID is governed by a five-member board of directors. Directors are elected at large by landowners, who are allowed one vote per parcel. In the event of an uncontested election or to fill a vacancy, directors are appointed by the Board of Supervisors. The most recent contested election was held in 2003.

The District informs constituents via direct mailings one week before meetings, and through special notices for vacant positions and election information. The District does not maintain a website where public documents can be accessed.

With regard to customer service, the District reported that complaints most often relate to low water pressure and billing issues. Complaints may be submitted to the general manager via mail, phone, fax, email, or in person. The District reports that it receives less than 20 complaints in an average year.

The District reported that it had no Brown Act violations in recent history.

**Figure 17 -2: JVID Governing Body**

<b>Jackson Valley Irrigation District</b>			
<b>Governing Body</b>			
	Name	Position	Term Ends
<i>Members</i>	George Lambert	Chair	12/31/15
	Henry Willy	Vice President	12/31/15
	Larry Costick	Member	12/31/15
	Ed Gonzalez	Member	12/31/17
	Todd Ohm	Member	12/31/17
<i>Manner of Selection</i>	Elections and appointments at large		
<i>Length of Term</i>	Four years, staggered		
<i>Meetings</i>	Date: First Wednesday at 7 p.m.	Location: 6755 Lake Amador Dr. Ione, CA	
<i>Agenda Distribution</i>	Posted on office door and mailed to district members one week before meetings		
<i>Minutes Distribution</i>	Mailed with agenda as part of district newsletter		
<b>Contact</b>			
<i>Contact</i>	Board President		
<i>Mailing Address</i>	6755 Lake Amador Dr., Ione CA 95640		
<i>Phone</i>	(209)274-2037		
<i>Email/Website</i>	<a href="mailto:jvid@volcano.net">jvid@volcano.net</a>		

The District demonstrated accountability in its disclosure of information and cooperation with LAFCO. The agency responded to LAFCO’s written questionnaires and cooperated with document requests.

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## Management

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The District is managed by a part-time general manager. District staff includes a full-time operations manager and a full-time office manager. The general manager meets with the operations manager on a daily basis, and monitors workload and accomplishments as needed. Employee evaluations are performed on an annual basis.

The District’s planning efforts are limited. The District does not have a master plan for its water system, and does not prepare a capital improvement plan. Capital improvement needs are addressed on an annual basis in the budget. The District does have operation plans and an emergency response plan.

District financial planning efforts include annual preparation of budgets. The District reports that it conducts financial audits on an annual basis. The most recent audited financial statement provided by the District was for calendar year 2012. During the course of the audit, the auditor identified one material weakness and 11 significant deficiencies in the District’s internal control over its financial records. Similar to what was identified in 2006, the limited number of district personnel involved with the accounting process, continues to limit adequate segregation of duties on the part of JVID staff to allow for

sufficient internal control over financial reporting.<sup>358</sup> The auditor recommended that the District develop policies regarding internal control procedures.

Management practices include risk management. The District's insurance includes a commercial package with Special District Risk Management Authority that provides limits of liability of \$2.5 million annually.

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## Service Demand and Growth

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Existing land uses in the District's boundary are primarily agricultural, although there are also scattered residences.

Economic activity in the District's boundary area includes farming, fish farming and rock quarries. Agricultural activity within the District includes alfalfa, walnuts, vineyards, and pasture. Major employers within the District are Fanbasstic, Inc., which runs the recreation area and facilities at Lake Amador, and the various farming operations within the District. A cement factory, Goose Hill Rock, is located within the JVID water service area.

There are approximately 120 to 150 single family homes located within district bounds with 61 homes receiving raw water from the District. The estimated population within district bounds is 345 with approximately 140 receiving service from the District.<sup>359</sup> The District's population has remained constant since the 2008 MSR. The District's population density is 16 per square mile, compared to the countywide density of 64. In addition to residents, visitors frequent the Lake Amador Recreation Area where there are 190 overnight campsites.

The District reported that service demand has been relatively stable in recent years. There has been no significant recent growth. In the 2008 MSR, out of district parcels in Buena Vista Estates were described as showing interest in annexation into JVID due to well drying up; however, no further interest by those parties has been voiced since that time. There are, however, some islands of parcels that are inside JVID's outer boundaries but were excluded from the District upon formation. These parcels receive services from JVID during normal years at a higher rate than parcels within the District; however, during droughts these properties receive no water from the District. Property owners in these areas have approached the District about annexation. Conversely, there are properties on the outer section of JVID that are within bounds but have no connection to the District's system. These parcels are paying assessments into the District, but do not receive services, and would like to be detached from JVID.

Future residential growth is expected to be limited, as there are no planned or proposed housing developments located within the District's bounds. New non-residential development has been proposed for the Flying Cloud Casino project of the Buena Vista Rancheria of Me-Wuk Indians. The proposed casino would be constructed outside of Ione. The County BOS rejected a proposed Intergovernmental Services Agreement regarding the casino proposal in March 2008. The County BOS and revisited the Intergovernmental

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<sup>358</sup> Jackson Valley Irrigation District, *Financial Statements*, December 31, 2012, p. 15.

<sup>359</sup> The population estimate for the District is the product of the number of homes within the boundary area and the average household size (2.3) in Amador County in 2008, according to the California Department of Finance.

Services Agreement in September 2013 and tabled the matter to a later date. As of the drafting of the 2008 MSR, the County was pursuing a federal lawsuit against the Tribe on the grounds that the site is not a legitimate reservation. In 2009, Judge Richard W. Roberts dismissed the lawsuit.<sup>360</sup> The County is now in litigation with the federal government. The commercial square footage is reportedly under negotiation and the status of the casino was pending as of the drafting of this report. If reliant on groundwater, the proposed casino could potentially cause groundwater overdraft in the vicinity; if so, the casino apply to JVID for a water contract.<sup>361</sup> However, JVID does not intend to supply the proposed casino, which is located outside its bounds.<sup>362</sup>

The District is not a land use authority, and does not hold primary responsibility for implementing growth strategies.

### Disadvantaged Unincorporated Communities

LAFCO is required to evaluate disadvantaged unincorporated communities as part of this service review, including the location and characteristics of any such communities. A disadvantaged unincorporated community is defined as any area with 12 or more registered voters, or as determined by commission policy, where the median household income is less than 80 percent of the statewide annual median.<sup>363</sup>

The California Department of Water Resources (DWR) has developed a mapping tool to assist in determining which communities meet the disadvantaged communities median household income definition.<sup>364</sup> DWR identified nine disadvantaged communities within Amador County—three of which are cities and are therefore not considered unincorporated.<sup>365</sup> Two of the identified disadvantaged communities are partially within JVID's bounds. The two disadvantaged communities are Camanche North Shore (population 777) and Buena Vista (population 518).

However, DWR is not bound by the same law as LAFCO to define communities with a minimum threshold of 12 or more registered voters. Because income information is not available for this level of analysis, disadvantaged unincorporated communities that meet LAFCO's definition cannot be identified at this time.

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## Financing

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JVID reports that current financing is sufficient to deliver services. In 2007, the District reported that financing levels, while sufficient, did not cover the cost of supplying treated

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<sup>360</sup> <http://500nations.com/news/California/20090114.asp>

<sup>361</sup> Jones and Stokes, *Final Tribal Environmental Impact Report for the Buena Vista Rancheria of Me-Wuk Indians of California Gaming and Entertainment Facility*, May 2007, p. 3P-14.

<sup>362</sup> Jones and Stokes, *Final Tribal Environmental Impact Report for the Buena Vista Rancheria of Me-Wuk Indians of California Gaming and Entertainment Facility*, May 2007, p. J-3-138.

<sup>363</sup> Government Code §56033.5.

<sup>364</sup> Based on census data, the median household income in the State of California in 2010 was \$57,708, 80 percent of which is \$46,166.

<sup>365</sup> DWR maps and GIS files are derived from the US Census Bureau's American Community Survey (ACS) and are compiled for the five-year period 2006-2010.

water; however, since that time, the District has been able to find grant funding for its treated water project.

The District tracks its finances through a single enterprise fund. The District's fiscal year is the calendar year (CY) beginning on January 1 and ending on December 31.

Total revenue in CY 2012 was \$1.7 million. Revenue sources were grants (80 percent), water sales (nine percent), assessments (four percent), hydroelectric power revenue (three percent), rents from Lake Amador (two percent), bottled water sales (one percent), and interest and property taxes (less than 1 percent).

In CY 12, the District received a one-time grant from Proposition 50 State funds designed for the funding of public water systems. The District intends to use the funds to finance bringing water from the Mokelumne River at Lake Pardee to a treatment plant at Lake Amador and deliver it throughout Jackson Valley. The District has finished the first phase of this project, and the treatment plant came online in 2013. The District will continue to search for funding to extend the treated water to other areas. It is unknown whether the District has capital plans specific to the scope of the future project or the potential cost. The timeline of the project will depend on the availability of funding.

Water sales revenue was composed of sales for agricultural and fish farm uses, as well as sales to the Oaks Mobile Home community within District bounds. The District received approximately \$23,000 in annual revenue from water sales outside District bounds to agricultural users and a cement factory. The District charges an annual assessment of \$2.98-\$17.88 per acre, with the rate varying based on distance to and accessibility of the creek and distribution lines. The annual assessment was originally established to pay for the dam, and now that the dam is paid off, all assessment revenues go towards operation of the dams. Water rates and assessments were last increased in 1991.<sup>366</sup>

The District owns and operates the Jackson Creek Dam Hydroelectric Plant. Hydro Tech, the plant operator gave the facility to the District in 2011 and terminated their operations agreement. The District assumed full ownership and operation responsibility. In 2012, the District entered into an interconnection agreement with PG&E whereby PG&E purchases reactive power generated at the plant.<sup>367</sup>

The District receives rental revenue from its Lake Amador recreation concessionaire, Fanbasstic. Based on the agreement between the two parties, the District receives five percent of the first \$1 million in gross income and six percent of gross income in excess of \$1 million.

Total expenditures for CY 2012 were \$426,147. Costs are primarily composed of administration and general costs (40 percent), operations and maintenance (33 percent), capital depreciation (22 percent), and water purchases (five percent).

The District's capital budget in 2012 of \$11,400 includes maintenance of distribution pipelines. Such capital improvements are financed by rates and assessments by annual budget appropriation. New connections must pay the cost of extending infrastructure.

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<sup>366</sup> Interview with JVID Office Manager, January 24, 2014.

<sup>367</sup> Jackson Valley Irrigation District, Audited Financial Statement, 2012, p. 13.

The District had long-term liabilities of \$19,573 at the end of CY 2012. The liabilities consist of a general obligation loan that was issued in 1979 by the U.S. Bureau of Reclamation for drought relief, and is interest-free. JVID's debt was five percent of its annual expenditures.

The District does not have an adopted policy on its target level for financial reserves, although it generally tries to maintain approximately \$300,000 in operating reserves. JVID had unrestricted net assets of \$509,437 at the close of CY 2012; that amounted to 120 percent of annual expenditures, or 14 months of working capital. Of the unrestricted net assets at the end of CY 2012, 29 percent was reserved for particular capital improvements—pipeline replacement, vehicles, and hydroelectric purposes.<sup>368</sup>

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<sup>368</sup> Jackson Valley Irrigation District, *2013 Budget*, p. 8.



## WATER SERVICES

This section describes the nature, extent and location of the water services provided as well as key infrastructure and water sources. The tables provide further information and indicators of the agency's water service supplies, demand, financing, service adequacy, and facilities.

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### Nature and Extent

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JVID supplies raw water to agricultural, fish farm, industrial and domestic uses. JVID sells bottled water to domestic users that are not connected to private wells. JVID also now directly operates its hydroelectric facility, which was previously operated by a contract company. The hydroelectric facility generates power between May and September.

The County has required residences to connect to private wells for domestic water since the early 1980s; however, previously the County allowed residences to connect to Lake Amador as a water source. As a result, there are approximately 60-62 homes that rely on Lake Amador for domestic water. The water is not suitable for drinking water purposes, as it contains treated wastewater effluent and is not treated to drinking water standards. Under a 2001 order from the California DPH, affected residents are required to buy bottled drinking water. JVID supplies bottled water at cost to the affected customers. In addition, JVID supplies raw water to a mobile home community outside its bounds. Until recently, JVID has not pursued extending domestic water service from the Lake Amador Resort Area; residences generally rely on private water wells for domestic water. However, as of 2013, the District has extended a pipeline and built a replacement treatment plant to serve the Lake Amador Resort Area, which has the potential to serve other areas.

JVID supplies raw water to the Oaks Mobile Home Park.<sup>369</sup> The mobile home park operates its own private water treatment systems. JVID intends to pipe treated water from Pardee Reservoir to supply these customers. The pipeline has been partially constructed, enabling Lake Amador Resort Area to hook up to the treated water system. The pipeline will be extended to the Oaks Mobile Home Park over the next few years and finally be extended to the homes that are relying on raw water from Lake Amador for domestic purposes. It is unknown whether the District has developed capital plans specific to the scope of the future project or the potential cost at this time. The timeline of the project will depend on the availability of funding.

The District does not produce or use recycled water; however, a portion of its water source is wastewater effluent from the City of Jackson treated at tertiary levels. JVID does not practice conjunctive use.

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### Location

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JVID provides water services to a portion of its boundary area, and to some properties outside the bounds. JVID served 3,932 acres inside its bounds in 2006.<sup>370</sup> The area served

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<sup>369</sup> LARA is operated by a private concessionaire, Fanbasstic, under a lease agreement with JVID that expires in 2040. By contract, Fanbasstic is responsible for compliance with regulatory requirements relating to its domestic water and wastewater systems.

<sup>370</sup> Jackson Valley Irrigation District, *2006 Annual Director's Report*, 2007.



composes 29 percent of the 13,665 acres within the boundary area. JVID also serves areas outside its bounds, including 259 agricultural acres, the 209-home Oaks Mobile Home Park and a cement factory located nearby on Jackson Valley Road.<sup>371</sup>

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## Infrastructure

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Key infrastructure includes the District's water supplies, a reservoir, 30 miles of distribution lines, the LARA treatment plant, and hydroelectric generation facilities at Jackson Creek Dam.

The primary water sources are Jackson Creek and the Mokelumne River. A portion of the flows through Jackson Creek are composed of wastewater effluent from the City of Jackson, which is treated to tertiary levels.

JVID has rights to store up to 36,000 af of Jackson Creek flows.<sup>372</sup> It may divert flows to Lake Amador between November and May at a maximum rate of 110 cfs. Due to reservoir capacity constraints, the District typically uses about 10,000 af of this right. The safe yield is 8,500 af. Jackson Creek water quality has declined somewhat in recent years, with a greater portion of the source composed of treated wastewater effluent. Upstream flows in Jackson Creek have declined in recent years as a result of AWA piping the Amador Canal, which had previously leaked significant water into Jackson Creek.<sup>373</sup> Growth in the City of Jackson's wastewater service area has also increased the volume of effluent.<sup>374</sup> Future flows will be affected by the City's evolving plans for wastewater treatment and disposal.

JVID has rights to divert up to 3,850 af of Mokelumne River at a diversion rate of 50 cfs; the diversion is authorized year-round for domestic and stock watering uses, and between March and October for irrigation uses.<sup>375</sup> However, JVID does not hold rights to store this water. JVID's diversion rights are appropriative, based on a 1927 application, and are subject to reversion to upstream needs. Reversion to upstream needs is determined by SWRCB, and any reversion of more than 2,200 af must be accompanied by a substitute water source. AWA applied for reversion of 1,050 af, and is considering substitution of recycled water for a portion of JVID's Mokelumne River water right. AWA proposes to discharge tertiary treated effluent in Jackson Creek during winter months. JVID is evaluating its water rights through a study funded by the County.

Mokelumne River water flows by gravity from Pardee Reservoir to Lake Amador. The District requests and usually receives 3,850 af annually from EBMUD, although it is subject to availability. The water quality of the Mokelumne River is generally good, and is described by EBMUD as snowmelt.

JVID now provides treated water to the Lake Amador Resort Area through water from Pardee Reservoir that is treated at the new LARA treatment plant. The plant is newly

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<sup>371</sup> Ibid.

<sup>372</sup> Water Rights Permits 11224 and 11589.

<sup>373</sup> Regional Water Quality Control Board, Order R5-2007-0133, 2007, p. F-6.

<sup>374</sup> California Department of Public Health, *Preliminary Engineering Report: Jackson Valley Irrigation District*, October 12, 2007.

<sup>375</sup> California State Water Resources Control Board, *Decision 1490*, January 25, 1979.

constructed and considered to be in excellent condition. The plant can treat up to 175 gallons per minute (gpm) at maximum speed, at present the plant is operated at about 150 gpm when necessary. The Resort uses approximately 10,000 gallons of treated water per day. At present, the Resort relies on a temporary storage tank with a storage capacity of 20,000 gallons. Upon completion of all phases of the project, JVID intends to construct a permanent water storage facility with a capacity of 200,000 gallons. The Oaks Mobile Home Park continues to rely on its own treatment services. The District aims to extend the pipeline with treated water from the Pardee Reservoir to the mobile home park over the next few years. Funding for this project is yet to be identified.

Lake Amador is a 22,000 af reservoir that was built in 1965. The dam height is 193 feet. The dam is inspected annually by the State and FERC. Domestic water storage for the LARA facility is inadequate. DPH has estimated it would cost \$100,000 to address this need.

The distribution network consists of 30 miles of pipeline and 2 pump stations. There are 12-15 fire hydrants located throughout the District.

The District's emergency response plan includes inundation maps, and contact flow charts. JVID tests its emergency response to dam failure annually, conducts a functional exercise on dam collapse every five years, and conducts face-to-face updates every year with all parties involved. In the event of emergencies, JVID would rely on existing water sources, groundwater and/or bottled water.

**Figure 17-3: JVID Water Service Profile**

Water Service Configuration & Infrastructure					
Water Service	Provider(s)		Water Service	Provider(s)	
Retail Water	JVID		Groundwater Recharge	None	
Wholesale Water	JVID		Groundwater Extraction	Private	
Water Treatment	JVID/Private		Recycled Water	None	
Service Area Description					
Retail Water	Irrigated areas within District bounds (3,932 acres) and 252 acres outside bounds.				
Wholesale Water	Oaks Mobile Home Park (outside bounds), cement factory (outside bounds) and retail water service area.				
Recycled Water	None				
Boundary Area	21.4	sq. miles	Population (2013)	345	
System Overview					
Average Daily Demand (2007)	9.42	mgd	Peak Demand	July is peak month	
Supply	39,850 af				
Major Facilities					
Facility Name	Type		Capacity	Condition	Yr Built
LARA Plant	treatment		175 gpm	Excellent	2013
Lake Amador	reservoir		22,000 af	Good	1965
Jackson Creek Dam	hydroelectric		0.46 mw	Fair	1982
Other Infrastructure					
Reservoirs	1		Storage Capacity (mg)	7,169	
Pump Stations	2		Pressure Zones	None established	
Production Wells	0		Pipe Miles	30	
Other:	Fish raising facilities Recreation facilities: boat ramp, 190 campsites with water and sewer				
Infrastructure Needs and Deficiencies					
Water supplied to the Oaks Mobile Home Park is not approved by the State for domestic use. A planned pipeline will supply water from Pardee Reservoir. This project is pending funding. LARA needs additional water storage.					
Facility-Sharing and Regional Collaboration					
<b>Current Practices:</b> JVID cooperated with DPH in evaluating alternative water sources for domestic water users in the service area. JVID relies on EBMUD for releases of Mokelumne River water to its service area.					
<b>Opportunities:</b> AWA was previously considering substitution of recycled water for a portion of JVID's Mokelumne River water right, which involves sharing of JVID facilities with AWA for wastewater disposal purposes; however, no plans for this have been discussed in recent years.					
Notes:					
(1) NA means Not Applicable, NP means Not Provided, mg means millions of gallons, af means acre-feet.					

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<b>Water Demand and Supply</b>							
<b>Service Connections, 2006</b>		<b>Total</b>		<b>Inside Bounds</b>		<b>Outside Bounds</b>	
Total		185		173		9	
Irrigation/Landscape		180		170		7	
Domestic		2		1		1	
Commercial/Industrial/Institutional		1		0		1	
Recycled		0		0		0	
Other		2		2		0	
<b>Average Annual Demand Information (Acre-Feet per Year)</b>							
	1995	2000	2005	2010	2015	2020	2025
Total	9,191	9,807	11,450	NP	NP	NP	NP
Residential	NP	56	64	NP	NP	NP	NP
Commercial/Industrial	NP	0	21	NP	NP	NP	NP
Irrigation/Landscape	5,779	7,375	8,289	NP	NP	NP	NP
Fish Farms	NP	2,377	3,075	NP	NP	NP	NP
<b>Water Sources</b>				<b>Supply (Acre-Feet/Year)</b>			
Source	Type			Average		Maximum	Safe/Firm
Jackson Creek	surface			10,000		36,000	8,700
Mokelumne River	surface			3,850		3,850	0
<b>Supply Information (Acre-feet per Year)</b>							
	1995	2000	2005	2010	2015	2020	2025
Total	9,191	9,807	11,450	NP	13,850	13,850	13,850
Imported	0	0	0	0	0	0	0
Groundwater	0	0	0	0	0	0	0
Surface	9,191	9,807	11,450	NP	13,850	13,850	13,850
<b>Drought Supply and Plans</b>							
Drought Supply (af) <sup>1</sup>	Year 1: 8,700		Year 2: NP		Year 3: NP		
Significant Droughts	1976, 1977, 1988-94, 2007-2009						
Storage Practices	Lake Amador						
Drought Plan	Reduce acreage supplied with water, curtail water proportionate to availability. Each connection is being required to install meters over the next year as part of the District's water shortage strategy.						
<b>Water Conservation Practices</b>							
CUWCC Signatory	No						
Metering	No						
Conservation Pricing	Users pay rates based on estimated amount of water used.						
Other Practices	None identified.						

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<b>Water Rates and Financing</b>			
<b>Agricultural &amp; Irrigation Water Rates-Ongoing Charges FY 13-14<sup>1</sup></b>			
<b>Crop</b>	<b>Annual Rate Description</b>		
Alfalfa	\$65.90/acre including water rates and \$17.88/acre assessment (Class 1)		
Pasture	\$63.28/acre including water rates and \$17.88/acre assessment (Class 1) \$58.81/acre including water rates and \$13.41/acre assessment (Class 2) \$54.34/acre including water rates and \$ 8.94/acre assessment (Class 3) \$51.36/acre including water rates and \$ 5.96/acre assessment (Class 4)		
Vineyard	\$32.90/acre including water rates and \$8.94/acre assessment (Class 3)		
Walnuts	\$36.70/acre including water rates and \$8.94/acre assessment (Class 3)		
<b>Special Rates</b>			
Customers pay lower rates if they pump directly from the creek, and pay higher rates for water pumped to a distribution pond through the Kretz line. Customers outside the boundaries pay higher water rates, but do not pay assessments. \$10/month standby charge for parcels within bounds that are not actively served.			
<b>Wholesale Water Rates</b>			
\$30/af for industrial uses. \$42/af for raw domestic water.			
<b>Rate-Setting Procedures</b>			
Policy Description	The District evaluates the need for rate and assessment increases annually through its budget process.		
Most Recent Rate Change	1991	Frequency of Rate Changes	Rarely
<b>Water Development Fees and Requirements</b>			
Connection Fee Approach	New users must pay the cost of connection.		
Connection Fee Timing	Upon application		
Connection Fee Amount	Cost		
Land Dedication Requirements	As needed		
Development Impact Fee	NA		
<b>Water Enterprise Revenues, CY 12<sup>2</sup></b>			<b>Expenditures, CY 12</b>
<b>Source</b>	<b>Amount</b>	<b>%</b>	<b>Amount</b>
Total	\$1,741,630	100%	Total
Rates & charges	\$250,380	14%	Administration
Property tax	\$5,242	0%	O & M
Grants	\$1,401,101	80%	Capital Depreciation
Interest	\$2,608	0%	Debt
Connection Fees	\$0	0%	Purchased Water
Other	\$2,729	0%	Other
Notes:			
(1) Rates include water-related service charges, usage charges, and assessments.			
(2) Other revenue sources include hydroelectric power revenue (3 percent) and rents from Lake Amador (2 percent). Bottled water sales (1 percent) are included in the rates and charges category.			

**continued**

<b>Water Service Adequacy, Efficiency &amp; Planning Indicators</b>			
Water Planning	Description		Planning Horizon
Water Master Plan	None		NA
UWMP	None - not required		NA
Capital Improvement Plan	None		NA
Emergency Response Plan	Contact plan, inundation maps		NA
Service Challenges			
1) Water supply does not meet existing demand, and would not accommodate additional customers requesting connections.			
2) Water pressure tends to drop in high-irrigation summer months.			
Service Adequacy Indicators			
Connections/FTE	185	O&M Cost Ratio <sup>1</sup>	\$14,867
MGD Delivered/FTE	9.4	Distribution Loss Rate	NP
Response Time Policy	15 minutes	Response Time Actual	10-15 minutes
Water Pressure	low and variable in summers	Total Employees (FTEs)	1.0
Water Operator Certification			
The LARA water treatment operator is certified by the State as a T2 operator, which meets the system requirements.			
Drinking Water Quality Regulatory Information <sup>2</sup>			
	#	Description	
Health Violations	0		
Monitoring Violations	0		
DW Compliance Rate <sup>4</sup>	NA	District did not provide treated water in 2012.	
Notes:			
(1) Operations and maintenance costs (exc. purchased water, debt, depreciation) per volume (mgd) delivered.			
(2) Violations since 2000, as reported by the U.S. EPA Safe Drinking Water Information System, on the LARA system.			
(3) Drinking water compliance is percent of time in compliance with National Primary Drinking Water Regulations in 2012.			

## WASTEWATER SERVICES

This section describes the nature, extent and location of the wastewater services provided as well as key infrastructure. The tables provide further information and indicators of the agency's infrastructure capacity, demand, financing, service adequacy, and facilities.

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### Nature and Extent

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In the 2008 MSR, wastewater services were not included as a service offered by JVID. However, it has been since determined that JVID is responsible for wastewater treatment and disposal at the Lake Amador Resort Area (LARA) as the owner of the property. The wastewater system is operated by the resort concessionaire. JVID operates under Waste Discharge Requirements Order No. 99-033.

The campground facilities include the following: an office building for site registration and information, 73 parking sites for recreational vehicles with sewer hook-ups, six separate restroom buildings, a sewage dump station for unsewered RV sites, a fish cleaning service station, and the caretaker's residence.

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## Location

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Wastewater services are offered by JVID in the limited campground area within LARA inside the District's bounds. Wastewater services are not offered by the District outside of this area.

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## Infrastructure

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Primary wastewater infrastructure serving LARA includes seven septic tanks, an oxidation pond, and groundwater monitoring wells. The system was installed in the mid-1990s and is considered to be generally in good condition by the District.

Domestic wastes are discharged into septic tank units provided at each service facility. A total of seven septic tank units are installed at the campground facility with capacities ranging from 1,500 to 5,000 gallons. The wastewater effluent from each septic tank unit is discharged to the oxidation pond either by gravity flow or the use of pumps. The amount of flow from the septic tanks to the pond is tracked via a flow monitor. Solids collected in septic tanks are removed and disposed of by a service contractor. Discharge to surface waters is prohibited.

Wastewater flows into the oxidation pond average 400 gallons per day with a maximum day flow of 500 gallons. During the summer months, when there is higher campground usage, there is greater wastewater flow into the pond. The oxidation pond has a design capacity of 1.3 million gallons.

The District was required to install groundwater monitoring wells in 2003 to ensure that the oxidation pond was not degrading groundwater quality.

The wastewater system operator faces challenges in complying with reporting requirements as evidenced by the number of violations issued by the RWQCB over the period 2007 to 2013. In total, the RWQCB has issued 31 violations during that period, 22 of which were attributable to deficient reporting or monitoring, or a late report. The other nine violations were due to violation of order conditions as outlined in the District's waste discharge requirements. Although there have been multiple violations recorded, there have been no formal or informal enforcement actions taken on the part of the RWQCB during that time period.



**Figure 17 -4: JVID Wastewater Service Profile**

<b>Wastewater Service Configuration and Demand</b>				
<b>Service Configuration</b>				
<b>Service Type</b>	<b>Service Provider(s)</b>			
Wastewater Collection	LARA Concessionaire			
Wastewater Treatment	LARA Concessionaire			
Wastewater Disposal	LARA Concessionaire			
Recycled Water	None			
<b>Service Area</b>				
Collection:	Lake Amador Resort Area			
Treatment:	Lake Amador Resort Area			
Recycled Water	None			
<b>Sewer Connection Regulatory/Policies</b>				
The Resort serves what is considered a transient population. No new residential connections are anticipated to the LARA system.				
<b>Onsite Septic Systems in Service Area</b>				
The District owns seven septic tanks that serve the resort area. There are no other septic systems within the resort.				
<b>Service Demand 2013</b>				
	<b>Connections</b>		<b>Outside</b>	<b>Flow (gpd)</b>
<b>Type</b>	<b>Total</b>	<b>Inside Bounds</b>	<b>Bounds</b>	<b>Average</b>
Total	83	83	0	400
Residential <sup>1</sup>	74	74	0	Unknown
Commercial	9	9	0	Unknown
Industrial	0	0	0	Unknown
<b>Projected Demand (in millions of gallons per day)</b>				
	<b>2005</b>	<b>2012</b>	<b>2025</b>	<b>Build-Out</b>
Avg. dry weather flow	NP	NP	NP	NA
Peak wet weather flow	NP	NP	NP	NA
Notes:				
(1) Those connections that are considered residential for the purposes of this report at the 73 RV connections and the caretaker's residence. All other connections are considered commercial.				
(2) NA: Not Applicable; NP: Not Provided.				

continued

<b>Wastewater Infrastructure</b>			
<b>Wastewater Treatment &amp; Disposal Infrastructure</b>			
<b>System Overview</b>			
Treatment level: Effluent is treated to primary levels.			
Disposal method: Effluent is discharged into an oxidation pond and allowed to percolate into the ground. Solids collected in septic tanks are removed and disposed of by a contractor.			
Facility Name	Capacity	Condition	Yr Built
LARA oxidation pond	1.3 mg	Good	Mid 1990s
Treatment Plant Daily Flow (mgd)	Average Dry	Peak Wet	
LARA oxidation pond	NP	NP	
<b>Infrastructure Needs and Deficiencies</b>			
The District did not identify any imminent infrastructure needs or deficiencies associated with the LARA system.			
<b>Wastewater Collection &amp; Distribution Infrastructure</b>			
<b>Collection &amp; Distribution Infrastructure</b>			
Sewer Pipe Miles	1.5	Sewage Lift Stations	0
Other: None			
<b>Infrastructure Needs and Deficiencies</b>			
Similar to the treatment system, the collection system is considered to be generally in good condition with no known infrastructure needs.			
<b>Infiltration and Inflow</b>			
The contract service provider reported that there was no noticeable difference in flows in the system during wet weather events.			
<b>Wastewater Regional Collaboration and Facility Sharing</b>			
<b>Regional Collaboration</b>			
JVID does not participate in regional collaborative activities related to wastewater services.			
<b>Facility Sharing Opportunities</b>			
No opportunities for facility sharing were identified.			

continued

<b>Wastewater Service Adequacy, Efficiency &amp; Planning</b>			
<b>Regulatory Compliance Record, 2008-13</b>			
Formal Enforcement Actions	0	Informal Enforcement Actions	0
<b>Enforcement Action Type</b>	<b>Date</b>	<b>Description of Violations</b>	
None			
Sewer Overflows 2013 <sup>1</sup>	0	Sewer Overflows 2012 <sup>2</sup>	0
Treatment Effectiveness Rate <sup>3</sup>	NA	Sewer Overflow Rate <sup>4</sup>	0
Total Employees (FTEs)	1.0	Response Time Policy <sup>5</sup>	None
Employees Certified?	Yes	Response Time Actual	Hour or less
<b>Source Control and Pollution Prevention Practices</b>			
None			
<b>Collection System Inspection Practices</b>			
The concessionaire is required by the State to conduct yearly calibrations of the flow meter, monthly inspections on the levees at the pond, and pump the septic tanks once every few years. Inspections of the lines leading from the septic tanks to the pond are not regularly completed.			
<b>Service Challenges</b>			
The District faces a particular challenge in meeting monitoring and reporting requirements, as indicated by the number of violations recorded by the RWQCB.			
<b>Wastewater Planning</b>			
<b>Plan</b>	<b>Description</b>	<b>Planning Horizon</b>	
Wastewater Master Plan	None		
Wastewater Collection Plan	None		
Capital Improvement Plan	Annual budget	1 year	
Sanitary Sewer Management Plan	None		
Emergency Plan	JVID maintains an emergency plan		
Notes:			
(1) Total number of overflows experienced (excluding those caused by customers) in 2013 as reported by the agency.			
(2) Total number of overflows experienced (excluding those caused by customers) in 2012 as reported by the agency.			
(3) Total number of non-compliance days in 2013 per 365 days.			
(4) Sewer overflows (excluding those caused by customers) per 100 miles of collection piping.			
(5) Agency policy, guidelines or goals for response time between service call and clearing the blockage.			

**continued**

## SUMMARY OF DETERMINATIONS

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### Growth and population projections

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- ❖ There has been minimal growth in the District's boundary area in recent years.
- ❖ Service demand has remained relatively stable for irrigation services; the District has started providing treated water delivery, and plans to expand the number of customers over the next few years.
- ❖ Future residential growth is expected to be limited, as there are no planned or proposed developments within the District.
- ❖ District planning efforts may be inadequate given the nature of intended improvements and increasing service complexity.

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### The Location and Characteristics of Disadvantaged Unincorporated Communities Within or Contiguous to the Agency's SOI

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- ❖ There are two disadvantaged unincorporated communities that are partially within the District's service area—Camanche North Shore and Buena Vista—based upon mapping information provided by the State of California Department of Water Resources. However, given the large size of the defined community in the census data used, it cannot be discounted that a smaller community that meets the required income definition and has 12 or more registered voters may exist within or adjacent to the District.
- ❖ District service to these two disadvantaged communities is not provided in a substantially different manner than to other areas.

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### Present and planned capacity of public facilities and adequacy of public services, including infrastructure needs and deficiencies

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- ❖ JVID does not have adequate water supplies or distribution systems to serve its entire boundary area, and serves about 22 percent of the boundary area.
- ❖ JVID's future water supply is uncertain, due to several factors, including a lack of storage rights to Mokelumne River water, the potential for AWA to seek reversion of some water rights, conditions/improvements to the canals channeling water to the District, uncertain regulatory requirements regarding tertiary-treated wastewater effluent, availability of tertiary-treated wastewater effluent.
- ❖ JVID supplies bottled water to homes that rely on untreated surface water from Lake Amador for domestic water. Since the 2008 MSR, a pipeline has been extended to the Lake Amador Resort Area to bring treated water to the area. It is intended that the pipeline will be extended to these 60 homes over the next few years.
- ❖ Year to year planning based on annual appropriations may not be the most appropriate vehicle for district projects of significant size.

- ❖ Since 2008, the District has made significant improvements to the water treatment system at the Lake Amador Resort Area. These improvements will greatly benefit other domestic water users in the area in the near future.
- ❖ As previously identified in 2008, the District is not realizing the benefits of a master plan and capital improvement plan.
- ❖ The District's wastewater facility warrants management improvements to reduce future violations. A long term, integrated plan for wastewater violations, including management policies, is appropriate for this essential service.

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### Financial ability of agencies to provide services

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- ❖ Financing is sufficient to provide existing services at current service levels.
- ❖ The District should adopt policies to ensure fiscal controls are in place to ensure financial transparency and accountability.

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### Status of, and opportunities for, shared facilities

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- ❖ Mokelumne River water is distributed to JVID via EBMUD facilities at Pardee Reservoir. JVID water supplies are affected by City of Jackson wastewater effluent, and potential reversion of Mokelumne River rights to AWA.
- ❖ No further facility sharing opportunities were identified, but may be necessary in the long term.

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### Accountability for community service needs, including governmental structure and operational efficiencies

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- ❖ JVID has sufficient governing body interest to hold contested elections occasionally over recent years.
- ❖ The District's outreach efforts are limited to mailings prior to board meetings and special notices.
- ❖ JVID serves areas outside its bounds, including adjacent agricultural uses, a cement factory and a mobile home park, where users do not participate in District elections. Given that these customers may become disenfranchised, it is recommended that JVID consider annexation of these areas.
- ❖ Alignment of the service area and boundaries will increase fairness of representation and cost of services
- ❖ JVID does not serve large portions of its boundary area due to inadequate water supplies and/or the lack of need for service. For those properties that continue to pay an assessment to the District, one government structure option is detachment of unserved areas to better align the service area and boundaries of the District.
- ❖ There are properties outside of JVID that receive water for irrigation during normal years. Some property owners have expressed interest in annexing into the District to ensure water delivery during drought years, and to better align the boundaries and service area of the District. In conjunction with annexation, the District would

need to demonstrate that it has sufficient water supply to serve these additional customers, particularly during dry periods. Adequacy of water supply may be an impediment to annexation.